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# Bodemonderzoek en actualisatie waterbodemkwaliteitskaart PFAS-verbindingen

## Maasuiterwaarden Demen-Dieden

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# 1 Inleiding

In opdracht van K3Delta heeft Lievense Milieu B.V. een PFAS-onderzoek uitgevoerd ter plaatse van de Maasuiterwaarden Demen-Dieden. Ook is de voor dit gebied eerder vastgestelde waterbodemkwaliteitskaart[1] voor PFAS-verbindingen geactualiseerd. De regionale ligging van de locatie is weergegeven in bijlage 1.

Onder de noemer 'Meer Maas' heeft Vereniging Natuurmonumenten het initiatief genomen om in de Maasuiterwaarden nieuwe riviernatuur te realiseren. Samen met partner Rijkswaterstaat en de baksteenindustrie heeft het initiatief vorm gekregen. Doel is het realiseren van meer riviernatuur door kleiwinning dat leidt tot toename van de hoogwaterveiligheid en de ruimtelijke kwaliteit. Op diverse plaatsen langs de Maas worden plannen uitgewerkt, zoals voor de Maasuiterwaarden tussen Dieden, Demen en Neerlangel (hierna Demen-Dieden). K3Delta Gebiedsontwikkeling b.v. trekt in opdracht van Natuurmonumenten en Van de Wetering de gehele uitwerking en (al dan niet) gedeeltelijke uitvoering van het voorgenomen plan.

Ten behoeve van het voorgenomen grondverzet (waterbodem) is begin 2019 een waterbodemkwaliteitskaart opgesteld. Om deze kaart te gebruiken voor het uit te voeren grondverzet (waterbodem) in de uiterwaard zijn aanvullende gegevens voor PFAS noodzakelijk. Deze rapportage beschrijft de uitgevoerde werkzaamheden en analyseresultaten ter aanvulling van de waterbodemkwaliteitskaart.

In hoofdstuk 2 worden de achtergronden van de onderzoekslocatie weergegeven, evenals de resultaten van het eerder uitgevoerde onderzoeken en de daaruit voortvloeiende onderzoeksstrategie. In hoofdstuk 3 worden de uitgevoerde werkzaamheden, de certificering en de kwaliteitsborging besproken. Vervolgens worden in hoofdstuk 4 de onderzoeksresultaten weergegeven. In hoofdstuk 5 wordt de actualisatie van de eerder opgestelde waterbodemkwaliteitskaart besproken. Hoofdstuk 5 kan gebruikt worden ter vervanging van de eerder opgestelde waterbodemkwaliteitskaart en dient door het bevoegde gezag (RWS) bestuurlijk te worden vastgesteld voordat grondverzet (waterbodem) met de dit document als bewijsmiddel voor de kwaliteit van de waterbodem kan worden uitgevoerd.

Voor een uitleg van de in dit rapport gebruikte begrippen wordt verwezen naar bijlage 5.

[1] Rapportage Waterbodemkwaliteitskaart Maasuiterwaarden Demen-Dieden (LievenseCSO; documentcode 17M7013.Wbkk; 17 januari 2019; definitief).

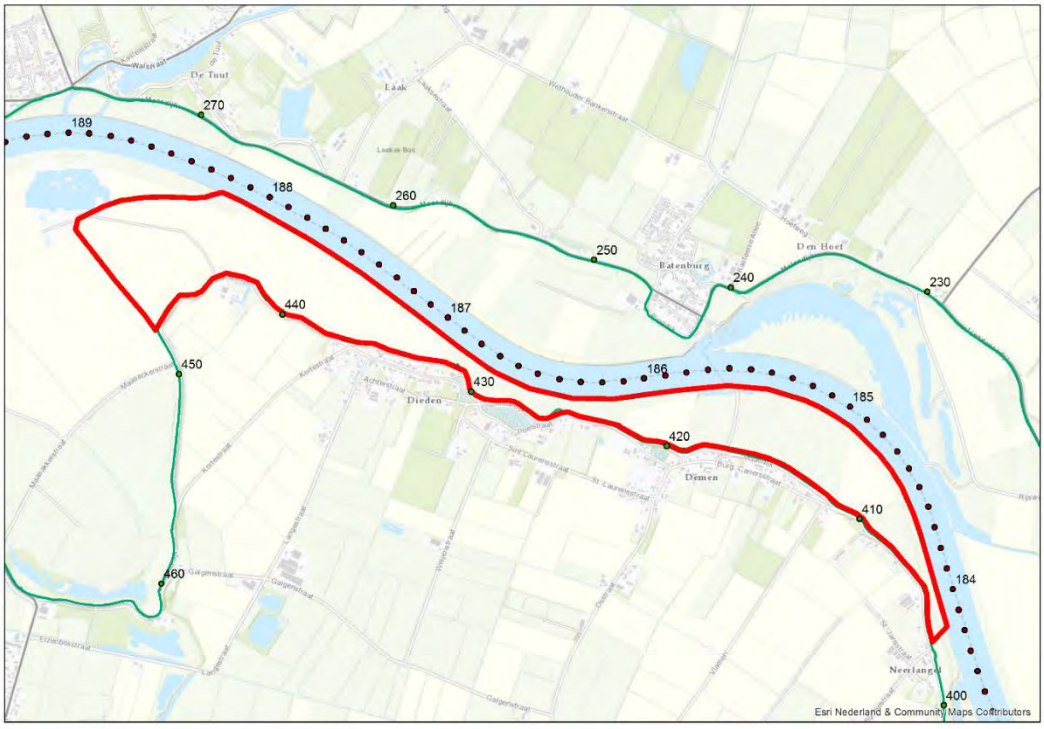
# 2 Achtergronden

De locatiegegevens en achtergronden zijn reeds beschreven in rapportage 17M7013.RAP.WBO (15 februari 2019 definitief v2) en worden voor zover noodzakelijk hieronder herhaald.

Voor het volledige vooronderzoek wordt naar bovengenoemde rapportage verwezen

## 2.1 Locatie-gegevens

De onderzoekslocatie betreft de Maasuiterwaarden en ligt tussen de Maasdijk en de Maas en strekt zich van west naar oost uit van Dieden tot Neerlangel. Het gehele plangebied betreft uiterwaard gelegen in het winterbed van de Maas: dit wordt beschouwd als waterbodem. Het gebied heeft een totale oppervlakte van 110 hectare, het te vergraven gebied heeft een oppervlakte van circa 80 hectare De Maas zelf behoort niet tot de onderzoekslocatie (zie figuur 1).




*Figuur 1: onderzoeksgebied.*

Het gebied is in beheer bij het Waterschap Aa en Maas, de oeverzone is eigendom van Rijkswaterstaat. De uiterwaarden zijn in gebruik als agrarisch gebied (bouwland en grasland). De oevers langs de Maas zijn voorzien van stortsteen. Buitendijks zijn geen watergangen of waterstaatkundige werken op de Legger van Aa en Maas opgenomen. Binnendijks liggen de woonkernen van Demen en Dieden.

In het oostelijk deel van het gebied ligt een weg naar de veerpont (Demense Veerstraat, asfalt). Deze weg is geen onderdeel van de onderzoekslocatie vanwege een mogelijk afwijkende kwaliteit. Ook de dijk zelf behoort niet tot het onderzoeksgebied.

Het gebied is niet onderhevig aan sterke sedimentatie of erosie door overstromingen: de uiterwaard overstroomt eens in de 10 jaar (bron: startdocument MeerMaas project Planontwikkeling Demen-Dieden, LievenseCSO, kenmerk 17M7013.RAP001.BW.LD, september 2017).

In bijlage 2 is een situatietekening van de onderzoekslocatie opgenomen.

### 2.2 Reeds uitgevoerde onderzoeken

Op de locatie hebben in het verleden onder andere de volgende waterbodemonderzoeken plaatsgevonden:
1. Waterbodemonderzoek Maasuiterwaarden Demen-Dieden (LievenseCSO; documentcode 17M7013.RAP.WBO; 15 februari 2019 definitief v2).
2. Rapportage Waterbodemkwaliteitskaart Maasuiterwaarden Demen-Dieden (LievenseCSO; documentcode 17M7013.Wbkk; 15 februari 2019 definitief).

De belangrijkste bevindingen uit het waterbodemonderzoek uit 2019 zijn hieronder weergegeven:
- Ter plaatse van de onderzoekslocatie bestaat de waterbodem uit een rooflaag (klei) met in de ondergrond klei- en zandlagen en enkele grindlagen.
- Ter plaatse van de onderzoekslocatie varieert de kwaliteit van de waterbodem tussen Altijd toepasbaar en Nooit toepasbaar. De bovengrond is in het algemeen meer verontreinigd dan de ondergrondlagen. Er is geen duidelijk kwaliteitsverschil tussen klei- en zandlagen.
- In enkele monsters worden de interventiewaarden overschreden. Er zijn echter geen verontreinigingsbronnen of zintuiglijke afwijkingen aangetroffen.

In 2019 is een waterbodemkwaliteitskaart opgesteld op basis van de bodemopbouw, geomorfologie en vastgestelde waterbodemkwaliteit. In de waterbodemkwaliteitskaart worden de volgende waterbodemkwaliteitszones onderscheiden:
- Toplaag Oeverzone (0 - 0,5 m-wb);
- Toplaag Riviervlakte (0 - 0,5 m-wb);
- Ondergrond zand (0,5 - 7 m-wb);
- Ondergrond klei (0,5 - 7 m-wb).

Alle zones zijn vastgesteld voor de stoffen uit het C2-pakket. In tabel 2.1 is per waterbodemkwaliteitszone een totaaloverzicht gegeven van de te verwachte ontgravingsklasse en toepassingseis. De toe te passen waterbodem dient minimaal dezelfde kwaliteit te hebben als de ontvangende waterbodem. Toepassen van waterbodem die schoner is, is ook toegestaan.

*Tabel 2.1 verwachte ontgravingsklasse en toepassingseis per waterbodemkwaliteitszone*

| Bodemkwaliteitszone | Verwachte ontgravingsklasse | Toepassingseis |
|---|---|---|
| Riviervlakte (0 - 0,5 m-wb) | Klasse B | Klasse B, Klasse A of Altijd toepasbaar |
| Oevergebied (0 - 0,5 m-wb) | Klasse B | Klasse B , Klasse A of Altijd toepasbaar |
| Ondergrond klei (0,5 - 7,0 m-wb) | Klasse A | Klasse A of Altijd toepasbaar |
| Ondergrond zand (0,5 - 7,0 m-wb) | Altijd toepasbaar | Altijd toepasbaar |

**Hergebruik rooflaag**
De kleiige rooflaag, waterbodemkwaliteitsklasse B, kan zonder aanvullende onderzoeken worden hergebruikt binnen het projectgebied. Deze toplaag zal, ook na realisatie van de natuurontwikkeling, als rooflaag worden gebruikt. Het bevoegd gezag Bbk (RWS ZN) zal moeten beoordelen of dergelijk hergebruik past binnen het kader van de ‘op-en-nabij regeling’ uit het Besluit bodemkwaliteit. Wanneer grondverzet voldoet aan de volgende voorwaarden is wellicht geen melding Bbk noodzakelijk: hergebruik zonder bewerking, op of nabij dezelfde plaats en onder dezelfde condities.

**Afvoer van keramische klei**
Klei geschikt voor de keramische industrie wordt afgevoerd naar een industriële verwerker. Er is geen sprake van grondverzet in het kader van het Besluit bodemkwaliteit. De waterbodemkwaliteitskaart wordt gebruikt om te voldoen aan de algemene zorgplicht (Wbb en Wm) en om de kwaliteit aan te verwerker te kunnen tonen. Daarnaast kan de waterbodemkwaliteitskaart gebruikt worden bij de transportbonnen wanneer de klei wordt vervoerd.

**Hergebruik van klei**
De klei binnen het projectgebied kan ook binnen het gebied worden gebruikt. Dit kan ook de buitendijkse zijde van de dijkbekleding zijn (zolang die onderdeel is van de waterbodem).
De kwaliteit van de klei is klasse A. Dat betekent dat deze klei binnen het gebied van de waterbodemkwaliteitskaart kan worden toegepast danwel hergebruikt op andere kleilagen (ook op de rooflaag).

**Hergebruik van zand**
Binnen de natuurontwikkeling komt niet veel zand vrij. Overtollig ontgraven zand wordt binnen het gebied hergebruikt. Het zand is schoon en kan overal binnen het gebied worden gebruikt of toegepast. Het is aan het bevoegd gezag om te beoordelen of er sprake is van hergebruik (geen melding Bbk) of toepassing (wel melding Bbk).
Het zand kan ook worden afgevoerd. Voor de toepassing van zand op andere locaties zal de ontvangende partij moeten beoordelen of zij de waterbodemkwaliteitskaart als bewijsmiddel accepteren.

**Verdachte locaties en uitzonderingen**
De waterbodemkwaliteitskaart is niet geldig voor ophogingen, dempingen of verhardingen. Grondverzet kan daarom niet worden gemeld met deze waterbodemkwaliteitskaart als milieuhygiënische verklaring.

Tijdens het verzamelen van data (veld- en analyseresultaten) zijn in enkele monsters sterk verhoogde gehalten aangetroffen. De analyse van de gegevens voor de waterbodemkwaliteitskaart toont echter aan dat er **geen puntverontreinigingen** in het gebied zijn aangetoond. Verder onderzoek naar deze hogere gehalten is dan ook niet noodzakelijk.

## 2.3 PFAS

Poly- en perfluoralkylstoffen (PFAS) zijn chemische stoffen die van nature niet in het milieu voorkomen. Deze stofgroep bestaat uit ruim 6000 stoffen. Hiertoe behoren onder meer de stoffen perfluoroctaanzuur (PFOA), perfluoroctaansulfonaat (PFOS) en HFPO-DA (GenX). PFAS zijn stoffen die door mensen zijn gemaakt vanwege hun specifieke eigenschappen, zoals brandwerendheid en vuil- en waterafstotendheid. Zij worden al decennia gebruikt in industriële en andere processen en in vele producten. Ze worden toegepast in allerlei alledaagse toepassingen, zoals verf, blusschuim, pannen, kleding en cosmetica. Kenmerkend voor deze stoffen is dat ze persistent, mobiel en nauwelijks biologisch afbreekbaar zijn. Van sommige PFAS is al aangetoond dat ze toxisch zijn. De stoffen PFOS en PFOA behoren tot de zogenaamde Zeer Zorgwekkende Stoffen (ZZS). PFAS kunnen door de aanwezigheid van een puntbron of door luchtdepositie in de bodem terechtgekomen zijn.

Beleid, risicogrenzen en grondverzet (eventueel waterbodem)
Op 8 juli 2019 is een tijdelijk handelingskader in werking getreden voor hergebruik van PFAS-houdende grond en baggerspecie[2]. De initiatiefnemers van grondverzet (eventueel waterbodem) moeten, tot duidelijk is of er onbelaste gebieden zijn in Nederland, in het kader van de zorgplicht het gehalte aan PFAS meten in te verzetten grond en waterbodem, die uit land- en waterbodem wordt ontgraven. Tot dat een (gemeentelijke) achtergrondwaarde is bepaald, mag geen PFAS-houdende grond en baggerspecie worden toegepast. Op 29 november 2019 is het tijdelijk handelingskader geactualiseerd. Met de kennis die tot deze datum is opgedaan, zijn met de actualisatie van het tijdelijk handelingskader enkele voorlopige toepassingsnormen voor PFAS-houdende grond en baggerspecie boven de bepalingsgrens vastgesteld.

Rijkswaterstaat Bodem+ heeft op 12 juli 2019 een advieslijst met PFAS-verbindingen gepubliceerd die moet worden aangehouden als onderzoek naar PFAS wordt gedaan. Er hoeft alleen op GenX onderzocht te worden als sprake is van een directe bron of lozing van GenX. Ter plaatse van onderhavige locatie zijn voor zover bekend geen bekende bronnen van GenX aanwezig.

Om de afvoer van waterbodem naar een verwerker mogelijk te maken, dient de aanwezigheid van PFAS in de waterbodem nagegaan te worden. Hierbij dient te worden opgemerkt dat op de locatie voor zover geen specifieke bronnen voor PFAS aanwezig zijn. De aanwezigheid van PFAS in de waterbodem door atmosferische depositie kan echter niet worden uitgesloten.

[2] Tijdelijke handelingskader voor hergebruik van PFAS-houdende grond en baggerspecie, kenmerk IENW/BSK-2019/131399, 8 juli 2019.

## 2.4 Onderzoeksopzet

In het algemeen stelt de Richtlijn bodemkwaliteitskaarten[3] de volgende minimale eisen aan het aantal en de spreiding van analysegegevens per deelgebied:

- Per deelgebied zijn voor alle stoffen ten minste 20 meetgegevens beschikbaar.
- De analysegegevens liggen voldoende verspreid over het deelgebied:
  - Voor aaneengesloten deelgebieden bij een systematische indeling in 20 vakken zijn in tenminste 10 vakken één of meer analysegegevens beschikbaar.
  - Voor elk niet-aaneengesloten deel van een deelgebied zijn ten minste 3 meetgegevens beschikbaar.

Voor de PFAS-verbindingen wordt aangesloten bij de laatste informatie hierover vanuit Bodem+ (zie daarvoor de veelgestelde vragen over het Besluit bodemkwaliteit, Grond en baggerspecie – PFAS). Hieruit blijkt dat gebruik gemaakt kan worden van de systematiek die in de Richtlijn bodemkwaliteitskaarten is uitgewerkt voor kobalt, molybdeen en PCB. Met deze systematiek kan onder voorwaarden volstaan worden met minimaal 30 meetgegevens per bodemlaag in het gehele beheergebied in plaats van het minimale aantal meetgegevens dat normaal gesproken per bodemkwaliteitszone (20) en per niet-aaneengesloten bodemkwaliteitszone geldt.

Analyseresultaten van PFAS-verbindingen worden alleen gecorrigeerd voor standaardbodem als het organisch stofgehalte hoger is dan 10%. Voor het bodemonderzoek naar PFAS-verbindingen worden de bodemlagen (1) vanaf de bovenzijde van de waterbodem tot 0,5 meter diepte en (2) vanaf 0,5 meter tot 1,0 meter diepte onderscheiden. De bodemlaag dieper dan 1,0 meter wordt vooralsnog als onverdacht voor PFAS beschouwd.

Opgemerkt dient te worden dat de onderzoeksopzet voorafgaand aan de werkzaamheden is voorgelegd aan en op 12 september 2019 goedgekeurd door Rijkswaterstaat (bevoegd gezag waterbodem).

In de navolgende hoofdstukken worden de uitgevoerde werkzaamheden en de onderzoeksresultaten besproken.

[3] Richtlijn bodemkwaliteitskaarten, Ministerie van VROM, Ministerie van Verkeer en Waterstaat, 3 september 2007 en latere wijzigingen.

# 3 Uitgevoerd onderzoek

## 3.1 Onderzoeksopzet

Op basis van de vastgestelde onderzoeksstrategie is het volgende onderzoeksprogramma uitgevoerd:

*Tabel 3.1 Onderzoeksprogramma*

| Deelgebied | Boring | Analyses |
|---|---|---|
| Oeverzone | 20x | 40x PFAS (zonder GenX[1]) en organisch stofgehalte (20x 0,0-0,5 m-wb; 20x 0,5-1,0 m-wb) |
| Rivierzone | 20x | 40x PFAS (zonder GenX[1]) en organisch stofgehalte (20x 0,0-0,5 m-wb; 20x 0,5-1,0 m-wb) |
| **Totaal** | **40x** | **80x PFAS (zonder GenX[1]) en organisch stofgehalte** |

**Toelichting tabel:**

| | |
|---|---|
| *m-wb:* | meter beneden bovenzijde waterbodem |
| *PFAS:* | Poly- en PerFluor Alkylstoffen |
| *[1]:* | Rijkswaterstaat beschouwt het plangebied als niet-verdacht voor GenX |

## 3.2 Veldonderzoek en laboratoriumonderzoek

Lievense Milieu B.V. te Nieuwegein is door Normec Certification gecertificeerd voor de ISO 9001- en 14001-normen, VCA** en in het kader van de Regeling Kwalibo is Lievense Milieu B.V. te Nieuwegein gecertificeerd voor de BRL SIKB 1000, 2000 en 6000. Ten slotte is Lievense Milieu B.V. te Nieuwegein door Normec Certification ook gecertificeerd voor de $CO_2$-prestatieladder trede 5 en voor het uitvoeren van asbestinventarisaties conform de Arbeidsomstandighedenregeling bijlage XIIIa.

Lievense Milieu B.V. heeft het veldwerk voor dit project uitbesteed aan Poelsema Veldwerkbureau. Poelsema Veldwerkbureau is door Normec Certification gecertificeerd voor de ISO 9001-norm, VCA* en in het kader van de Regeling Kwalibo voor de BRL SIKB 1000, 2000, 2100 en 6000.

De veldwerkzaamheden zijn uitgevoerd op 28 en 29 oktober 2019 door Poelsema Veldwerkbureau onder het BRL SIKB 2000-certificaat (protocol 2003) door de erkende veldwerker J. ten Klooster. Alle veld- en analysewerkzaamheden ten behoeve van PFAS zijn tevens uitgevoerd conform het 'Handelingskader Poly- en PerFluor Alkyl Stoffen (PFAS)' [4]. Hierbij wordt voornamelijk aandacht besteed aan het voorkomen van contaminatie tijdens bemonstering.

[4] Bemonsteringsprotocol PFAS-verbindingen in grond- en grondwater, opgesteld door het expertisecentrum PFAS, juli 2019.

Aangezien de onderzoekslocatie geen eigendom is van Lievense Milieu B.V., Poelsema Veldwerkbureau of daaraan gelieerde ondernemingen, is voldaan aan de eisen van onafhankelijkheid uit de BRL SIKB 2000.

Tijdens de uitvoering van het veldwerk zijn geen kritieke afwijkingen opgetreden van de protocollen beschreven in de BRL SIKB 2000.

De verrichte meetpunten zijn ingemeten met behulp van GPS en op de tekening van bijlage 2 weergegeven.

De chemische analyses voor PFAS zijn uitgevoerd door het IEC 17025-geaccrediteerde en AS3000-erkende laboratorium SYNLAB Analytics & Services B.V. te Rotterdam.

De monsters in dit onderzoek zijn zover van toepassing geanalyseerd conform de AS3000 (zie de analysecertificaten in de bijlage).

De selectie van de bodemmonsters voor analyse heeft plaatsgevonden op basis van zintuiglijke waarnemingen en herkomst. De geanalyseerde monsters en de samenstelling daarvan zijn weergegeven in tabel 3.2.

*Tabel 3.2 Analyseprogramma*

| Analyse-Monster | Traject (m-wb) | Deelmonsters | Bodem-soort | Zintuiglijke waarnemingen | Analysepakket |
|---|---|---|---|---|---|
| OZ-01-1 | 0,00 - 0,50 | OZ-01 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-01-2 | 0,50 - 1,00 | OZ-01 (0,50 - 1,00) | Zand | - | PFAS (excl. GenX) + org. stof |
| OZ-02-1 | 0,00 - 0,50 | OZ-02 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-02-2 | 0,50 - 0,90 | OZ-02 (0,50 - 0,90) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-03-1 | 0,00 - 0,50 | OZ-03 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-03-2 | 0,50 - 1,00 | OZ-03 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-04-1 | 0,00 - 0,40 | OZ-04 (0,00 - 0,40) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-04-2 | 0,40 - 0,90 | OZ-04 (0,40 - 0,90) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-05-1 | 0,00 - 0,40 | OZ-05 (0,00 - 0,40) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-05-2 | 0,40 - 0,80 | OZ-05 (0,40 - 0,80) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-06-1 | 0,00 - 0,50 | OZ-06 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-06-2 | 0,50 - 1,00 | OZ-06 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-07-1 | 0,00 - 0,50 | OZ-07 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-07-2 | 0,50 - 0,95 | OZ-07 (0,50 - 0,95) | Zand | - | PFAS (excl. GenX) + org. stof |
| OZ-08-1 | 0,00 - 0,50 | OZ-08 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-08-3 | 0,65 - 1,00 | OZ-08 (0,65 - 1,00) | Zand | - | PFAS (excl. GenX) + org. stof |
| OZ-09-1 | 0,00 - 0,50 | OZ-09 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-09-2 | 0,50 - 0,90 | OZ-09 (0,50 - 0,90) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-10-1 | 0,00 - 0,50 | OZ-10 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-10-2 | 0,50 - 0,90 | OZ-10 (0,50 - 0,90) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-11-1 | 0,00 - 0,30 | OZ-11 (0,00 - 0,30) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-11-3 | 0,80 - 1,15 | OZ-11 (0,80 - 1,15) | Zand | - | PFAS (excl. GenX) + org. stof |

| Analyse-Monster | Traject (m-wb) | Deelmonsters | Bodem-soort | Zintuiglijke waarnemingen | Analysepakket |
|---|---|---|---|---|---|
| OZ-12-1 | 0,00 - 0,40 | OZ-12 (0,00 - 0,40) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-12-3 | 0,85 - 1,00 | OZ-12 (0,85 - 1,00) | Zand | - | PFAS (excl. GenX) + org. stof |
| OZ-13-1 | 0,00 - 0,50 | OZ-13 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-13-2 | 0,50 - 1,00 | OZ-13 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-14-1 | 0,00 - 0,50 | OZ-14 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-14-2 | 0,50 - 1,00 | OZ-14 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-15-1 | 0,00 - 0,50 | OZ-15 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-15-2 | 0,50 - 1,00 | OZ-15 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-16-1 | 0,00 - 0,50 | OZ-16 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-16-2 | 0,50 - 1,00 | OZ-16 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-17-1 | 0,00 - 0,50 | OZ-17 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-17-2 | 0,50 - 1,00 | OZ-17 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-18-1 | 0,00 - 0,50 | OZ-18 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-18-2 | 0,50 - 1,00 | OZ-18 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-19-1 | 0,00 - 0,50 | OZ-19 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-19-2 | 0,50 - 1,00 | OZ-19 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-20-1 | 0,00 - 0,50 | OZ-20 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| OZ-20-2 | 0,50 - 1,00 | OZ-20 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-01-1 | 0,00 - 0,50 | RV-01 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-01-2 | 0,50 - 0,90 | RV-01 (0,50 - 0,90) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-02-1 | 0,00 - 0,50 | RV-02 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-02-2 | 0,50 - 1,00 | RV-02 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-03-1 | 0,00 - 0,50 | RV-03 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-03-2 | 0,50 - 1,00 | RV-03 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-04-1 | 0,00 - 0,50 | RV-04 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-04-2 | 0,50 - 1,00 | RV-04 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-05-1 | 0,00 - 0,50 | RV-05 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-05-2 | 0,50 - 1,00 | RV-05 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-06-1 | 0,00 - 0,50 | RV-06 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-06-2 | 0,50 - 1,00 | RV-06 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-07-1 | 0,00 - 0,50 | RV-07 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-07-2 | 0,50 - 1,00 | RV-07 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-08-1 | 0,00 - 0,40 | RV-08 (0,00 - 0,40) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-08-2 | 0,40 - 0,90 | RV-08 (0,40 - 0,90) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-09-1 | 0,00 - 0,45 | RV-09 (0,00 - 0,45) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-09-2 | 0,45 - 0,95 | RV-09 (0,45 - 0,95) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-10-1 | 0,00 - 0,30 | RV-10 (0,00 - 0,30) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-10-3 | 0,50 - 1,00 | RV-10 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-11-1 | 0,00 - 0,30 | RV-11 (0,00 - 0,30) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-11-3 | 0,50 - 1,00 | RV-11 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-12-1 | 0,00 - 0,50 | RV-12 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-12-2 | 0,50 - 1,00 | RV-12 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |

| Analyse-Monster | Traject (m-wb) | Deelmonsters | Bodem-soort | Zintuiglijke waarnemingen | Analysepakket |
|---|---|---|---|---|---|
| RV-13-1 | 0,00 - 0,50 | RV-13 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-13-2 | 0,50 - 1,00 | RV-13 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-14-1 | 0,00 - 0,50 | RV-14 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-14-2 | 0,50 - 1,00 | RV-14 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-15-1 | 0,00 - 0,50 | RV-15 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-15-2 | 0,50 - 1,00 | RV-15 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-16-1 | 0,00 - 0,20 | RV-16 (0,00 - 0,20) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-16-3 | 0,50 - 1,00 | RV-16 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-17-1 | 0,00 - 0,50 | RV-17 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-17-2 | 0,50 - 1,00 | RV-17 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-18-1 | 0,00 - 0,50 | RV-18 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-18-2 | 0,50 - 1,00 | RV-18 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-19-1 | 0,00 - 0,50 | RV-19 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-19-2 | 0,50 - 1,00 | RV-19 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-20-1 | 0,00 - 0,50 | RV-20 (0,00 - 0,50) | Klei | - | PFAS (excl. GenX) + org. stof |
| RV-20-2 | 0,50 - 1,00 | RV-20 (0,50 - 1,00) | Klei | - | PFAS (excl. GenX) + org. stof |

- = zintuiglijk geen afwijkingen

# 4 Resultaten

## 4.1 Veldonderzoek

Het opgeboorde en opgegraven materiaal is beoordeeld op kleur, textuur, bijmenging en eventuele bijzonderheden. De profielbeschrijvingen en het veldverslag zijn opgenomen in bijlage 3.

In het opgeboorde materiaal zijn geen bodemvreemde materialen aangetroffen. Ook zijn geen asbestverdachte materialen aangetroffen.

## 4.2 Laboratoriumonderzoek

### 4.2.1 Toepassingsnormen PFAS-verbindingen

In het geactualiseerde tijdelijk handelingskader van 29 november 2019 worden voor toepassen van grond en baggerspecie de volgende categorieën en landelijke toepassingsnormen onderscheiden:

*Tabel 4.1 Landelijke toepassingsnormen voor het toepassen van grond en baggerspecie (in µg/kg d.s.)*

| Categorie | Toepassingssituatie | | Toepassingsnorm (in µg/kg ds) (4) (5) |
|---|---|---|---|
| **Op landbodem** | | | |
| 4.1 | Grond en baggerspecie toepassen boven grondwaterniveau(1) | | |
| | **Bodemkwaliteitsklasse** | **Bodemfunctie** | |
| | Wonen of industrie | Wonen of industrie | PFOS = 3<br>PFOA = 7<br>GenX = 3<br>andere PFAS = 3 |
| | Landbouw/natuur | Wonen of industrie | PFAS = 0,8<br>PFOS = 0,9 |
| | Landbouw/natuur, wonen of industrie | Landbouw/natuur | PFAS = 0,8<br>PFOS = 0,9 |
| 4.2 | Baggerspecie toepassen boven grondwaterniveau (1), als bedoeld in artikel 35, onder f, Bbk (verspreiden van baggerspecie op aangrenzend perceel of waterbodem) | | PFOS = 3<br>PFOA = 7<br>GenX = 3<br>andere PFAS = 3 |
| 4.3 | Grond en baggerspecie grootschalig toepassen boven grondwaterniveau(1) | | PFOS = 3<br>PFOA = 7<br>GenX = 3<br>andere PFAS = 3 |
| 4.4 | Grond en baggerspecie toepassen in grondwaterbeschermingsgebieden | | Bepalingsgrens = 0,1 |

| Categorie | Toepassingssituatie | Toepassingsnorm (in µg/kg ds) (4) (5) |
|---|---|---|
| 4.5 | Grond en baggerspecie toepassen onder grondwaterniveau(2), met inbegrip van grootschalig toepassen | PFAS = 0,8<br>PFOS = 0,9 |
| | **In oppervlaktewater** | |
| 4.6 | Grond toepassen | Bepalingsgrens = 0,1 |
| 4.7 | Baggerspecie toepassen in hetzelfde oppervlaktewaterlichaam of aansluitende (sedimentdelende) stroomafwaarts gelegen oppervlaktewaterlichamen als bedoeld in artikel 35, onder g, BBK (verspreiden van baggerspecie in zoet of zout oppervlaktewater) | Toepasbaar, wel meten en toetsen op uitschieters |
| 4.8.1 | Baggerspecie toepassen in hetzelfde oppervlaktewaterlichaam in ophogingen in waterbouwkundige constructies, uitgezonderd de diepe plas, als bedoeld in artikel 35, onder d, Bbk | Toepasbaar, wel meten en toetsen op uitschieters. |
| 4.8.2 | Baggerspecie toepassen in een ander oppervlaktewaterlichaam in ophogingen in waterbouwkundige constructies, uitgezonderd de diepe plas, als bedoeld in artikel 35, onder d, Bbk | Bepalingsgrens = 0,1 |
| 4.9.1 | Baggerspecie toepassen in niet-vrijliggende diepe plassen die in open verbinding staan met een rijkswater, voor zover is voldaan aan de volgende voorwaarde: in de nabijheid van de diepe plas is geen kwetsbaar object gelegen, als bedoeld op p. 26 van de 'Handreiking voor het herinrichten van diepe plassen'(3) | PFAS = 0,8<br>PFOS = 3,7 |
| 4.9.2 | Baggerspecie toepassen in andere diepe plassen dan bedoeld onder 4.9.1 | Bepalingsgrens = 0,1 |

(1) Voor gebieden met een hoge grondwaterstand geldt in plaats van 'boven grondwaterniveau': tot ten hoogste 1 meter onder het maaiveld. Indien de grond als gevolg van zetting op termijn in de verzadigde zone terechtkomt wordt de grond geacht boven grondwater te zijn toegepast.

(2) Voor gebieden met een hoge grondwaterstand geldt in plaats van 'onder grondwaterniveau': op een diepte van 1 meter en meer onder het maaiveld. Indien de grond als gevolg van zetting op termijn in de verzadigde zone terechtkomt wordt de grond geacht boven grondwater te zijn toegepast.

(3) Onder 'diepe plas' wordt verstaan: oppervlaktewaterlichaam, ontstaan als gevolg van zandwinning, grindwinning of kleiwinning of een dijkdoorbraak.
Onder 'vrijliggende diepe plas' wordt verstaan: diepe plas, die niet is gelegen in een oppervlaktewaterlichaam in beheer bij het Rijk en die bovendien boven de spronglaag nauwelijks wordt gevoed door oppervlaktewater van elders (de verblijftijd van het water is voor 90% van het jaar langer dan een maand). Als de diepe plas is gelegen in een groter oppervlaktewaterlichaam wordt de rest van het oppervlaktewaterlichaam beschouwd als oppervlaktewater van elders. Deze plassen zijn aangegeven op de kaart die als bijlage bij dit tijdelijk handelingskader is gevoegd.
Onder 'niet-vrijliggende diepe plas' wordt verstaan: diepe plas, gelegen in een oppervlaktewaterlichaam in beheer bij het Rijk, of diepe plas die niet aan de definitie van vrijliggende plas voldoet.

(4) Op de waarden uit deze tabel hoeft geen bodemtypecorrectie te worden toegepast als het gehalte van organische stof minder dan 10% bedraagt.

(5) Tenzij een lokale maximale waarde is vastgesteld.

### 4.2.2 Analyseresultaten PFAS-verbindingen

De analysecertificaten van de PFAS-verbindingen zijn opgenomen in bijlage 4. Een samenvatting hiervan is opgenomen in navolgende tabel 4.2.

*Tabel 4.2 Analyseresultaten PFAS (samenvatting)*

| Monster-nummer | Traject (m-wb) | Boring | Grond-soort | Org. stof (%) | PFOA gemeten (µg/kg) | PFOS gemeten (µg/kg) | Overige PFAS boven de 3 µg/kg? |
|---|---|---|---|---|---|---|---|
| OZ-01-1 | 0,00 - 0,50 | OZ-01 | Klei | 3.8 | 0.69 | 0.45 | Nee |
| OZ-01-2 | 0,50 - 1,00 | OZ-01 | Zand | <2 | < 0.1 | < 0.1 | Nee |
| OZ-02-1 | 0,00 - 0,50 | OZ-02 | Klei | 4.0 | 0.49 | 0.44 | Nee |
| OZ-02-2 | 0,50 - 0,90 | OZ-02 | Klei | 2.1 | < 0.1 | < 0.1 | Nee |
| OZ-03-1 | 0,00 - 0,50 | OZ-03 | Klei | 11.5 | 0.75 | 0.76 | Nee |
| OZ-03-2 | 0,50 - 1,00 | OZ-03 | Klei | 5.1 | 0.13 | < 0.1 | Nee |
| OZ-04-1 | 0,00 - 0,40 | OZ-04 | Klei | 5.8 | 0.55 | 0.26 | Nee |
| OZ-04-2 | 0,40 - 0,90 | OZ-04 | Klei | 2.8 | < 0.1 | < 0.1 | Nee |
| OZ-05-1 | 0,00 - 0,40 | OZ-05 | Klei | 7.2 | 0.76 | 0.67 | Nee |
| OZ-05-2 | 0,40 - 0,80 | OZ-05 | Klei | 2.8 | < 0.1 | < 0.1 | Nee |
| OZ-06-1 | 0,00 - 0,50 | OZ-06 | Klei | 5.6 | 0.78 | 0.39 | Nee |
| OZ-06-2 | 0,50 - 1,00 | OZ-06 | Klei | 2.6 | < 0.1 | < 0.1 | Nee |
| OZ-07-1 | 0,00 - 0,50 | OZ-07 | Klei | 4.9 | 0.58 | 0.63 | Nee |
| OZ-07-2 | 0,50 - 0,95 | OZ-07 | Zand | <2 | < 0.1 | < 0.1 | Nee |
| OZ-08-1 | 0,00 - 0,50 | OZ-08 | Klei | 5.7 | 0.73 | 0.63 | Nee |
| OZ-08-3 | 0,65 - 1,00 | OZ-08 | Zand | <2 | < 0.1 | < 0.1 | Nee |
| OZ-09-1 | 0,00 - 0,50 | OZ-09 | Klei | 7.8 | 0.86 | 0.72 | Nee |
| OZ-09-2 | 0,50 - 0,90 | OZ-09 | Klei | 5.0 | 0.23 | < 0.1 | Nee |
| OZ-10-1 | 0,00 - 0,50 | OZ-10 | Klei | 5.6 | 1 | 0.63 | Nee |
| OZ-10-2 | 0,50 - 0,90 | OZ-10 | Klei | 5.1 | 0.27 | 0.11 | Nee |
| OZ-11-1 | 0,00 - 0,30 | OZ-11 | Klei | 5.5 | 0.63 | 0.55 | Nee |
| OZ-11-3 | 0,80 - 1,15 | OZ-11 | Zand | <2 | < 0.1 | < 0.1 | Nee |
| OZ-12-1 | 0,00 - 0,40 | OZ-12 | Klei | 5.9 | 0.21 | < 0.1 | Nee |
| OZ-12-3 | 0,85 - 1,00 | OZ-12 | Zand | <2 | < 0.1 | < 0.1 | Nee |
| OZ-13-1 | 0,00 - 0,50 | OZ-13 | Klei | 8.2 | 0.23 | 0.12 | Nee |
| OZ-13-2 | 0,50 - 1,00 | OZ-13 | Klei | 5.6 | < 0.1 | < 0.1 | Nee |
| OZ-14-1 | 0,00 - 0,50 | OZ-14 | Klei | 6.6 | 0.4 | 0.12 | Nee |
| OZ-14-2 | 0,50 - 1,00 | OZ-14 | Klei | 2.5 | < 0.1 | < 0.1 | Nee |
| OZ-15-1 | 0,00 - 0,50 | OZ-15 | Klei | 2.5 | 0.71 | 0.64 | Nee |
| OZ-15-2 | 0,50 - 1,00 | OZ-15 | Klei | <2 | 0.21 | 0.19 | Nee |
| OZ-16-1 | 0,00 - 0,50 | OZ-16 | Klei | 11.2 | 0.95 | 0.52 | Nee |
| OZ-16-2 | 0,50 - 1,00 | OZ-16 | Klei | 9.3 | < 0.1 | < 0.1 | Nee |
| OZ-17-1 | 0,00 - 0,50 | OZ-17 | Klei | 7.0 | 0.6 | 0.76 | Nee |
| OZ-17-2 | 0,50 - 1,00 | OZ-17 | Klei | <2 | < 0.1 | < 0.1 | Nee |
| OZ-18-1 | 0,00 - 0,50 | OZ-18 | Klei | 8.2 | < 0.1 | 1.9 | Nee |
| OZ-18-2 | 0,50 - 1,00 | OZ-18 | Klei | <2 | < 0.1 | 0.2 | Nee |

| Monster-nummer | Traject (m-wb) | Boring | Grond-soort | Org. stof (%) | PFOA gemeten (µg/kg) | PFOS gemeten (µg/kg) | Overige PFAS boven de 3 µg/kg? |
|---|---|---|---|---|---|---|---|
| OZ-19-1 | 0,00 - 0,50 | OZ-19 | Klei | 8.5 | 0.82 | 2 | Nee |
| OZ-19-2 | 0,50 - 1,00 | OZ-19 | Klei | 4.3 | 0.11 | 0.13 | Nee |
| OZ-20-1 | 0,00 - 0,50 | OZ-20 | Klei | 6.9 | 0.61 | 0.9 | Nee |
| OZ-20-2 | 0,50 - 1,00 | OZ-20 | Klei | 4.4 | 0.19 | 0.17 | Nee |
| RV-01-1 | 0,00 - 0,50 | RV-01 | Klei | 6.8 | 0.7 | 0.34 | Nee |
| RV-01-2 | 0,50 - 0,90 | RV-01 | Klei | 3.9 | 0.29 | < 0.1 | Nee |
| RV-02-1 | 0,00 - 0,50 | RV-02 | Klei | 8.2 | 0.52 | 0.51 | Nee |
| RV-02-2 | 0,50 - 1,00 | RV-02 | Klei | <2 | 0.25 | < 0.1 | Nee |
| RV-03-1 | 0,00 - 0,50 | RV-03 | Klei | 6.3 | 0.65 | 0.34 | Nee |
| RV-03-2 | 0,50 - 1,00 | RV-03 | Klei | 2.4 | < 0.1 | < 0.1 | Nee |
| RV-04-1 | 0,00 - 0,50 | RV-04 | Klei | 8.0 | 0.74 | 0.59 | Nee |
| RV-04-2 | 0,50 - 1,00 | RV-04 | Klei | 4.6 | < 0.1 | < 0.1 | Nee |
| RV-05-1 | 0,00 - 0,50 | RV-05 | Klei | 7.5 | 0.58 | 0.57 | Nee |
| RV-05-2 | 0,50 - 1,00 | RV-05 | Klei | 4.8 | 0.17 | < 0.1 | Nee |
| RV-06-1 | 0,00 - 0,50 | RV-06 | Klei | 6.5 | 0.74 | 0.56 | Nee |
| RV-06-2 | 0,50 - 1,00 | RV-06 | Klei | 3.2 | < 0.1 | < 0.1 | Nee |
| RV-07-1 | 0,00 - 0,50 | RV-07 | Klei | 7.1 | 0.42 | 0.5 | Nee |
| RV-07-2 | 0,50 - 1,00 | RV-07 | Klei | 4.2 | 0.11 | < 0.1 | Nee |
| RV-08-1 | 0,00 - 0,40 | RV-08 | Klei | 5.6 | < 0.1 | 0.7 | Nee |
| RV-08-2 | 0,40 - 0,90 | RV-08 | Klei | 2.1 | 0.22 | < 0.1 | Nee |
| RV-09-1 | 0,00 - 0,45 | RV-09 | Klei | 6.0 | 0.14 | 0.31 | Nee |
| RV-09-2 | 0,45 - 0,95 | RV-09 | Klei | 2.2 | 0.21 | < 0.1 | Nee |
| RV-10-1 | 0,00 - 0,30 | RV-10 | Klei | 8.7 | 0.78 | 0.46 | Nee |
| RV-10-3 | 0,50 - 1,00 | RV-10 | Klei | 4.8 | < 0.1 | < 0.1 | Nee |
| RV-11-1 | 0,00 - 0,30 | RV-11 | Klei | 7.9 | < 0.1 | < 0.1 | Nee |
| RV-11-3 | 0,50 - 1,00 | RV-11 | Klei | 4.5 | < 0.1 | < 0.1 | Nee |
| RV-12-1 | 0,00 - 0,50 | RV-12 | Klei | 7.1 | 0.52 | 0.26 | Nee |
| RV-12-2 | 0,50 - 1,00 | RV-12 | Klei | 2.8 | < 0.1 | < 0.1 | Nee |
| RV-13-1 | 0,00 - 0,50 | RV-13 | Klei | 5.6 | 0.14 | < 0.1 | Nee |
| RV-13-2 | 0,50 - 1,00 | RV-13 | Klei | <2 | < 0.1 | < 0.1 | Nee |
| RV-14-1 | 0,00 - 0,50 | RV-14 | Klei | 4.9 | < 0.1 | < 0.1 | Nee |
| RV-14-2 | 0,50 - 1,00 | RV-14 | Klei | 3.5 | 0.11 | < 0.1 | Nee |
| RV-15-1 | 0,00 - 0,50 | RV-15 | Klei | 7.9 | 0.72 | 0.41 | Nee |
| RV-15-2 | 0,50 - 1,00 | RV-15 | Klei | 5.3 | < 0.1 | < 0.1 | Nee |
| RV-16-1 | 0,00 - 0,20 | RV-16 | Klei | 9.9 | 1.5 | 0.61 | Nee |
| RV-16-3 | 0,50 - 1,00 | RV-16 | Klei | 5.3 | 0.15 | < 0.1 | Nee |
| RV-17-1 | 0,00 - 0,50 | RV-17 | Klei | 7.8 | 0.59 | 0.45 | Nee |
| RV-17-2 | 0,50 - 1,00 | RV-17 | Klei | 3.6 | < 0.1 | < 0.1 | Nee |
| RV-18-1 | 0,00 - 0,50 | RV-18 | Klei | 7.8 | 0.22 | 1.2 | Nee |
| RV-18-2 | 0,50 - 1,00 | RV-18 | Klei | <2 | 0.2 | 0.14 | Nee |
| RV-19-1 | 0,00 - 0,50 | RV-19 | Klei | 5.1 | 0.8 | 0.46 | Nee |

| Monster-nummer | Traject (m-wb) | Boring | Grond-soort | Org. stof (%) | PFOA gemeten (µg/kg) | PFOS gemeten (µg/kg) | Overige PFAS boven de 3 µg/kg? |
|---|---|---|---|---|---|---|---|
| RV-19-2 | 0,50 - 1,00 | RV-19 | Klei | <2 | < 0.1 | < 0.1 | Nee |
| RV-20-1 | 0,00 - 0,50 | RV-20 | Klei | 4.2 | 0.33 | 0.13 | Nee |
| RV-20-2 | 0,50 - 1,00 | RV-20 | Klei | <2 | < 0.1 | < 0.1 | Nee |

Gesteld kan worden dat op de locatie tot 1,0 m-wb PFAS aangetroffen wordt. De gehalten aan PFAS nemen af met de diepte. In de ondergrond (0,5-1,0 m-wb) is ter plaatse van 24 van de 40 boringen analytisch geen PFAS aangetroffen.
In de bovengrond (0,0-0,5 m-wb) zijn gehalten aan PFOA tussen < 0,1 en 1,5 µg/kg aangetroffen en gehalten aan PFOS tussen < 0,1 en 2,0 µg/kg.
In de ondergrond (0,5-1,0 m-wb) zijn gehalten aan PFOA tussen 0,1 en 0,29 µg/kg aangetroffen en gehalten aan PFOS tussen < 0,1 en 0,2 µg/kg.

Geconcludeerd kan worden dat de resultaten van onderhavig onderzoek gebruikt kunnen worden als aanvulling op de waterbodemkwaliteitskaart.

# 5 Actualisatie waterbodemkwaliteitskaart voor PFAS-verbindingen

## 5.1 Doelstelling actualiseren waterbodemkwaliteitskaart

Het doel van het actualiseren van de eerder opgestelde waterbodemkwaliteitskaart is om een actueel en dekkend beeld te krijgen van de te verwachten diffuse chemische waterbodemkwaliteit voor PFAS-verbindingen in de Maasuiterwaarden Demen-Dieden.

De achterliggende doelstelling is de wens van de K3Delta om met de geactualiseerde bodemkwaliteitskaart gebruik te kunnen maken van de mogelijkheden die het Besluit biedt:

- als bewijsmiddel voor de chemische kwaliteit van vrijkomende waterbodem en van de ontvangende waterbodem (hierdoor hoeven minder onderzoeken te worden uitgevoerd wat een kosten- en tijdbesparende factor is bij grondverzet (waterbodem));
- bij het toepassen van grond en baggerspecie op en in de waterbodem.
- om achtergrondwaarden voor PFAS-verbindingen te kunnen definiëren.

## 5.2 Actualisatie waterbodemkwaliteitskaart voor PFAS-verbindingen

### 5.2.1 Actualisatie waterbodemkwaliteitskaart

De eerder opgestelde waterbodemkwaliteitskaart is geactualiseerd voor PFAS-verbindingen volgens de Richtlijn bodemkwaliteitskaarten. Hierin zijn verschillende stappen onderscheiden:

- Stap 1: Opstellen programma van eisen.
- Stap 2: Vaststellen onderscheidende kenmerken.
- Stap 3: Gegevensverzameling en gegevensbewerking.
- Stap 4: Indelen beheergebied in deelgebieden.
- Stap 5: Controle indeling van het beheergebied.
- Stap 6: Verzamelen aanvullende informatie.
- Stap 7: Vaststellen bodemkwaliteitszones.
- Stap 8: Opstellen ontgravings- en toepassingskaart.

In de Richtlijn bodemkwaliteitskaarten is aangegeven dat het niet noodzakelijk is de stappen chronologisch te volgen. Het is wel noodzakelijk dat de elementen van de benoemde stappen in de bodemkwaliteitskaart terugkomen. Hierna worden deze stappen kort nader toegelicht.

Bij **Stap 1** zijn in principe hetzelfde programma van eisen gehanteerd als dat van de eerder opgestelde waterbodemkwaliteitskaart. De wijzigingen op dat programma zijn als volgt:

- De waterbodemkwaliteitskaart wordt geactualiseerd voor de waterbodemlaag vanaf de bovenzijde van de waterbodem tot en met 7,0 meter diepte. Er worden 3 bodemlagen onderscheiden:
  - Vanaf de bovenzijde van de waterbodem tot en met 0,5 meter diepte (de waterbodemkwaliteitskaart wordt voor deze bodemlaag ook vastgesteld voor PFAS-verbindingen; zie ook de stappen 2 en 4).
  - Vanaf 0,5 meter tot en met 1,0 meter diepte (de waterbodemkwaliteitskaart wordt voor deze bodemlaag specifiek vastgesteld voor PFAS-verbindingen; zie ook de stappen 2 en 4).
  - Vanaf 1,0 meter tot en met 7,0 meter diepte (de waterbodemkwaliteitskaart wordt voor deze bodemlaag niet vastgesteld voor PFAS-verbindingen). De bodemlaag dieper dan 1 meter is niet verdacht voor verhoogde gehalten aan PFAS-verbindingen.
- Voor de tussenlaag (0,5-1,0 m-wb) en de ondergrond (1,0-7,0 m-wb) is de kwaliteit voor de stoffen arseen, barium, cadmium, chroom, kobalt, koper, kwik, molybdeen, lood, nikkel, zink, minerale olie, PCB, PAK en OCB gelijk gesteld.
- De bodemkwaliteitskaart is gebaseerd op de dataset van de eerder opgestelde bodemkwaliteitskaarten en de gegevens van de in dit rapport gepresenteerde meetgegevens van PFAS-verbindingen.

De gedefinieerde waterbodemkwaliteitszones in de eerder opgestelde bodemkwaliteitskaarten zijn de deelgebieden van de te actualiseren bodemkwaliteitskaarten voor PFAS-verbindingen (**Stappen 2 en 4**). In de Maasuiterwaarden Demen-Dieden worden geen ruimtelijke clusteringen verwacht. Om deze reden is het deelgebied in het horizontale vlak niet gesplitst. Hierdoor is er per onderscheiden bodemlaag sprake van 1 PFAS-deelgebied. In het verticale vlak worden voor de PFAS-verbindingen 2 bodemlagen onderscheiden: (1) vanaf de bovenzijde van de waterbodem tot 0,5 meter diepte en (2) vanaf 0,5 meter tot 1,0 meter diepte onderscheiden. Deze lagen zijn vanwege atmosferische depositie, uitspoeling van de toplaag naar de tussenlaag en eventuele grondroering verdacht op het voorkomen van PFAS-verbindingen.

De in dit waterbodemonderzoek verkregen meetgegevens voor PFAS-verbindingen zijn aan de dataset van de eerder opgestelde waterbodemkwaliteitskaart toegevoegd (**Stap 3**).

Op de PFAS-verbindingen voeren wij de volgende gegevensbewerkingen uit:

1. Analysewaarden beneden de detectiegrens zijn vervangen door een rekenkundige waarde; én
2. Er heeft een controle plaatsgevonden op extra hoge waarden. Deze ontstaan bijvoorbeeld door een meetfout of een lokale bron die niet als zodanig bekend is. De zogenaamde uitbijteranalyse. In de dataset van de PFAS-gegevens zijn geen uitbijters vastgesteld.

Vervolgens heeft een controle plaatsgevonden op de indeling van de PFAS-deelgebieden (**Stap 5**). Omdat geen uitbijters bij de PFAS-gegevens zijn aangetoond, voldoen de deelgebieden aan de minimumeisen (aantal en spreiding) voor PFAS-verbindingen vanuit de Richtlijn bodemkwaliteitskaarten (zie § 2.4). Ook is gecontroleerd of sprake is van ruimtelijke clustering

van lage of juist hoge gehalten. Dit is op stofniveau gecontroleerd. Een hoge variatiecoëfficiënt is een indicatie van een mogelijke ruimtelijke clustering dat kan leiden tot het splitsen van een deelgebied. Voor PFAS-verbindingen heeft Lievense de ruimtelijke clustering onderzocht vanaf een relatief lage variatiecoëfficiënt: 1,5. In de Maasuiterwaarden Demen-Dieden is geen ruimtelijke clustering van hoge of lage gehalten met PFAS-verbindingen vastgesteld.
In de Maasuiterwaarden Demen-Dieden zijn voor PFAS-verbindingen voldoende meetgegevens beschikbaar om de waterbodemkwaliteitskaart te actualiseren. Er zijn daarom geen extra meetgegevens verzameld (**Stap 6**).

Alle PFAS-deelgebieden voldoen aan de minimumeisen van de Richtlijn bodemkwaliteitskaarten en worden daarom definitief vastgesteld.

De definitieve PFAS-deelgebieden worden toegevoegd aan de waterbodemkwaliteitszones in de Maasuiterwaarden Demen-Dieden. Er is hierbij een scheiding gemaakt tussen de Toplaag (traject vanaf de bovenzijde van de waterbodem tot en met 0,5 meter diepte) en de tussenlaag (traject vanaf 0,5 meter diepte tot en met 1,0 meter diepte).

De volgende waterbodemkwaliteitszones zijn onderscheiden:
- Toplaag Riviervlakte (0,0-0,5 m-wb): stoffen van het standaard stoffenpakket voor waterbodems in Rijkswateren (C2-pakket) én PFAS-verbindingen.
- Toplaag Oevergebied (0,0-0,5 m-wb): stoffen van het standaard stoffenpakket voor waterbodems in Rijkswateren (C2-pakket) én PFAS-verbindingen.
- Tussenlaag klei (0,5-1,0 m-wb): stoffen van het standaard stoffenpakket voor waterbodems in Rijkswateren (C2-pakket) én PFAS-verbindingen.
- Tussenlaag zand (0,5-1,0 m-wb): stoffen van het standaard stoffenpakket voor waterbodems in Rijkswateren (C2-pakket) én PFAS-verbindingen.
- Ondergrond klei (1,0-7,0 m-wb): stoffen van het standaard stoffenpakket voor waterbodems in Rijkswateren (C2-pakket).
- Ondergrond zand (1,0-7,0 m-wb): stoffen van het standaard stoffenpakket voor waterbodems in Rijkswateren (C2-pakket).

### 5.2.2 Stap 7: Vaststellen en karakteriseren bodemkwaliteitszones

De gemiddelde gehalten van de waterbodemkwaliteitszones (zie bijlage 6, kolom 'Gem') zijn getoetst aan de normen uit de Regeling bodemkwaliteit[5] én de toepassingsnormen die zijn benoemd in het ‘tijdelijke handelingskader hergebruik van PFAS-houdende grond en baggerspecie’. De bodemkwaliteitszones kunnen vallen in de waterbodemkwaliteitsklasse Vrij Toepasbaar, Klasse A, Klasse B of Nooit toepasbaar.

In tabel 5.1 is aangegeven in welke waterbodemkwaliteitsklasse iedere zone valt. In bijlage 6 zijn de gespecificeerde beoordelingen weergegeven. De waterbodemkwaliteitsklasse wordt gebruikt voor het bepalen van de toepassingseis.

[5] Regeling bodemkwaliteit, publicatie Staatscourant nr. 247, 21 december 2007 en latere wijzigingen.

**Controle saneringscriterium**
In de Richtlijn staat vermeld, dat voor elke (water)bodemkwaliteitszone met een 95-percentielwaarde boven de interventiewaarde een controle op het saneringscriterium nodig is. Echter met de inwerkingtreding van de Waterwet is voor waterbodem de Wbb (Wet bodembescherming) vervallen en dus ook het saneringscriterium. Er is diffuus verspreid wel een overschrijding van de interventiewaarde aangetroffen in de Oeverzone (toplaag 0-0,5 m-wb).

**Heterogeniteit**
Naast de percentielwaarden en variatiecoëfficiënt is ook de heterogeniteit van de analysegegevens berekend, volgens de methodiek zoals beschreven onder het kopje 'Heterogeniteit' in bijlage 5. Een overzicht van de heterogeniteitsindex per stof en per zone is in bijlage 6 opgenomen (kolom 'Heterogeniteit'). Binnen de Maasuiterwaarden Demen-Dieden is voor enkele stoffen sprake van sterke heterogeniteit. Wanneer de diffuse kwaliteit in een (water)bodemkwaliteitszone sterk heterogeen is verdeeld, is de betrouwbaarheid van het gemiddelde gehalte in de zone kleiner. In de betreffende (water)bodemkwaliteitszones zijn voldoende meetgegevens aanwezig om het gemiddelde gehalte goed te beschrijven.

### 5.2.3 Stap 8: Waterbodemkwaliteitskaart

De waterbodemkwaliteitskaart bestaat uit twee hoofdkaarten:
1. Een kaart met de indeling in gebieden.
2. De ontgravingskaart / toepassingskaart

In de volgende paragrafen is nader ingegaan op de hoofdkaarten.

#### 5.2.3.1 Kaart met indeling in gebieden

De waterbodemkwaliteitskaart is opgesteld voor de waterbodem.

De uitgesloten gebieden (zie rapportage eerder opgestelde waterbodemkwaliteitskaart) zijn, voor zover mogelijk afgebeeld op de kaartbijlage. Desondanks zal bij uitvoering van ontgraven en toepassen van waterbodem altijd gekeken moeten worden naar de aanwezigheid van uitgesloten locaties en puntbronnen.

Deze waterbodemkwaliteitskaart mag op de uitgesloten locaties en gebieden niet worden gebruikt als bewijsmiddel voor waterbodem die wordt ontgraven vanuit deze gebieden. Ook mag deze waterbodemkwaliteitskaart niet worden gebruikt om de toepassingseis te bepalen als grond of waterbodem op deze locaties/gebieden wordt toegepast.

#### 5.2.3.2 Ontgravings- en toepassingskaart

De ontgravingskaart geeft de te verwachten kwaliteit aan van de eventueel te ontgraven waterbodem op een voor verontreiniging niet-verdachte locatie. Deze kaart mag onder bepaalde voorwaarden worden gebruikt als bewijsmiddel voor de chemische kwaliteit van de te ontgraven waterbodem, als deze elders nuttig wordt toegepast. De kaart doet alleen een uitspraak over welke kwaliteit in het algemeen verwacht mag worden. De kwaliteit van een individuele partij kan daarvan afwijken.

De ontgravingskwaliteit is gebaseerd op het gemiddelde gehalte van een zone (zie bijlage 6, kolom 'Gem') en getoetst aan de toetsingswaarden uit de Regeling bodemkwaliteit én de toepassingsnormen die zijn benoemd in het ‘tijdelijke handelingskader hergebruik van PFAS-houdende grond en baggerspecie’. In tabel 5.1 is de te verwachten ontgravingsklasse per zone aangegeven. De ontgravingskaart per waterbodemlaag is opgenomen in de kaartbijlagen 8 t/m 10. De kleuren in de tabel komen overeen met de gebruikte kleuren op de kaartbijlagen 8 t/m 10.
Uit tabel 5.1 blijkt dat zonder het definiëren en vaststellen van (gebieds)achtergrondwaarden voor PFAS-verbindingen gebiedseigen waterbodem niet mag worden hergebruikt.

Tabel 5.1 Verwachte ontgravingsklasse en toepassingseis per waterbodemkwaliteitszone

| Waterbodemkwaliteitszone | Verwachte ontgravingsklasse | Toepassingseis |
|---|---|---|
| **Toplaag** | | |
| Riviervlakte (0-0,5 m-wb) | Klasse B * | Klasse B, Klasse A of Altijd toepasbaar ** |
| Oevergebied (0-0,5 m-wb) | Klasse B * | Klasse B, Klasse A of Altijd toepasbaar ** |
| **Tussenlaag** | | |
| Tussenlaag klei (0,5-1,0 m-wb) | Klasse A * | Klasse A of Altijd toepasbaar ** |
| Tussenlaag zand (0,5-1,0 m-wb) | Altijd toepasbaar * | Altijd toepasbaar ** |
| **Ondergrond** | | |
| Ondergrond klei (1,0-7,0 m-wb) | Klasse A | Klasse A of Altijd toepasbaar ** |
| Ondergrond zand (1,0-7,0 m-wb) | Altijd toepasbaar | Altijd toepasbaar |

* Het gemiddelde voor meerdere PFAS-verbindingen is boven de bepalingsgrens vastgesteld. Hierdoor gelden mogelijk aanvullende toepassingseisen.

** Zie § 5.3.

## 5.3 Voorstel beleid bij het voorgenomen grondverzet (waterbodem)

Bij het grondverzet (waterbodem) binnen de plangebiedsgrenzen wordt voor de PFAS-verbindingen voorgesteld aan te sluiten bij categorie 4.8.1 van het ‘geactualiseerde tijdelijke handelingskader hergebruik van PFAS-houdende grond en baggerspecie’ (zie ook tabel 4.1 van deze rapportage). Met het uitgevoerde onderzoek naar PFAS-verbindingen en de geactualiseerde waterbodemkwaliteitskaart is een meer dan representatief aantal meetgegevens van PFAS-gehalten verzameld. Hierbij zijn geen uitbijters vastgesteld. Met deze gegevens kan het grondverzet (waterbodem) binnen de plangebiedsgrenzen plaatsvinden zoals voorgenomen en zonder aanvullende kwaliteitseisen voor PFAS-verbindingen.

Hetzelfde geldt als waterbodem wordt toegepast van buiten het plangebied maar binnen hetzelfde oppervlaktewaterlichaam (categorie 4.7, zie ook tabel 4.1 van deze rapportage).

Als grond (vanuit binnendijks gebied) wordt toegepast binnen het plangebied, geldt voor PFAS de bepalingsgrens (0,1 µg/kg d.s.) als toepassingseis (categorie 4.6 geactualiseerd tijdelijk

handelingskader, zie ook tabel 4.1 van deze rapportage). Verder moet de grond van een vergelijkbare of betere kwaliteitsklasse zijn als de ontvangende bodem.

Als grondverzet vanuit het plangebied naar elders plaatsvindt moet worden aangesloten bij het Besluit bodemkwaliteit en de ‘geactualiseerde tijdelijke handelingskader hergebruik van PFAS-houdende grond en baggerspecie’.

### 5.4 Toekomstige bijstelling van de landelijke (toepassings)normen voor PFAS-houdende waterbodem

Tot en met 2020 wordt er nog veel onderzoek gedaan naar PFAS-verbindingen (bijvoorbeeld naar mobiliteit, uitloging, bioaccumulatie en gedrag in grondwater) en worden er landelijke veel meetgegevens door het RIVM verzameld. Op basis van deze onderzoeken en meetgegevens worden interventiewaarden gedefinieerd en worden mogelijk de toepassingsnormen voor PFAS-verbindingen aangepast.

Als interventiewaarden worden gedefinieerd, worden de landelijke normen gevolgd.

Als de landelijke toepassingsnormen voor PFAS-houdende grond en/of waterbodem worden gewijzigd, worden de gewijzigde normen geëvalueerd met de in deze rapportage gepresenteerde PFAS-gehalten en statistische parameters. Indien van toepassing worden de achtergrondwaarden gewijzigd en bestuurlijk vastgesteld.

# Overzicht bijlagen


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| Bijlage 2 | Situatietekening onderzoekslocatie |
| Bijlage 3 | Profielbeschrijvingen en veldverslag |
| Bijlage 4 | Analysecertificaten PFAS |
| Bijlage 5 | Begrippenlijst |
| Bijlage 6 | Statistische parameters waterbodemkwaliteitszones |
| Kaartbijlage 7 | Beheergebied en uitgesloten locaties |
| Kaartbijlage 8 | Ontgravings- en toepassingskaart toplaag (0-0,5 m-wb) |
| Kaartbijlage 9 | Ontgravings- en toepassingskaart tussenlaag (0,5-1,0 m-wb) |
| Kaartbijlage 10 | Ontgravings- en toepassingskaart ondergrond (1,0-7,0 m-wb) |

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# Bijlage 1 Regionale ligging van de onderzoekslocatie




LEGENDA

Locatie

| | |
|---|---|
| Titel: | Regionale ligging |
| Subtitel: | - |
| Opdrachtgever: | K3Delta |
| Projectnummer: | SOB010398 |
| Locatie: | Angerense Waarden |
| Veldwerker: | J. ten Klooster |
| Datum veldwerk: | 28+29-10-2019 |

Bijlage: 1

Naam tekening: SOB010398


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Tekenaar: B. Ebben

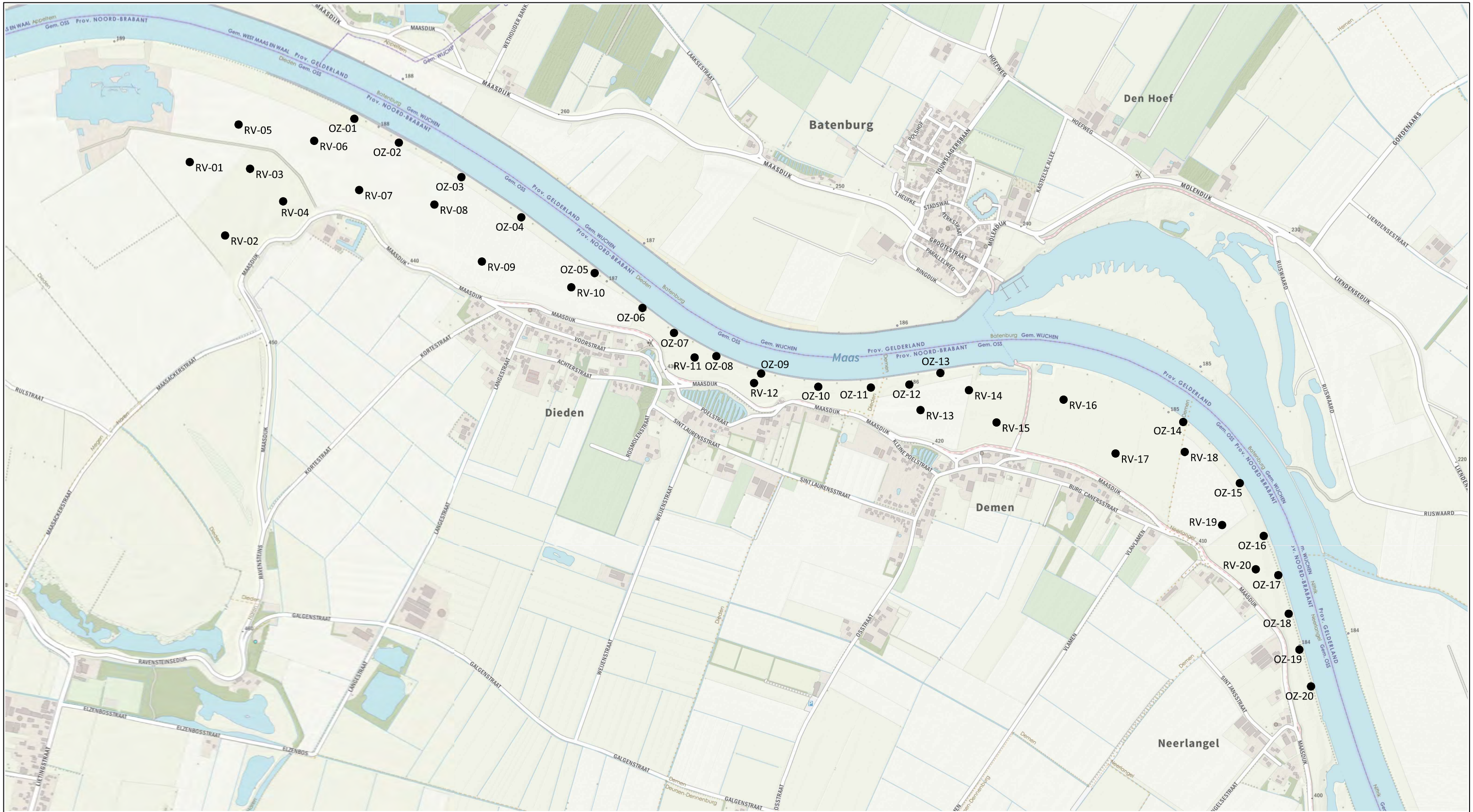
Datum tekening: 11-12-2019

Schaal 1:50.000 Formaat: A4

0 500 1.000 1.500m

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# Bijlage 2 Situatietekening onderzoekslocatie




LEGENDA

- ● Boring tot 1,5 m-mv

| | |
|---|---|
| Titel: | Overzicht |
| Subtitel: | Demen-Dieden |
| Opdrachtgever: | K3Delta |
| Projectnummer: | SOB010398 |
| Locatie: | Demen-Dieden |
| Veldwerker: | J. ten Klooster |
| Datum veldwerk: | 28+29-10-2019 |

Bijlage: 2

Naam tekening: SOB010398


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Datum tekening: 11-12-2019

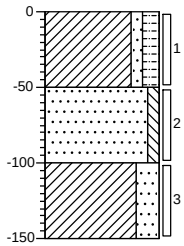
Schaal 1:12.500 Formaat: A3

0 125 250 375m

# Bijlage 3 Profielbeschrijvingen en veldverslag

## Boring: OZ-01

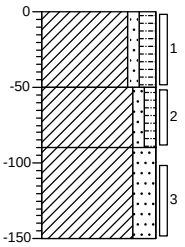
Datum: 28-10-2019




| | |
|---|---|
| 0 | weiland |
| -50 | Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor |
| -100 | Zand, matig fijn, zwak siltig, geen olie-water reactie, lichtbruin, Edelmanboor |
| -150 | Klei, sterk zandig, zwak roesthoudend, geen olie-water reactie, lichtbruin, Edelmanboor |

## Boring: OZ-02

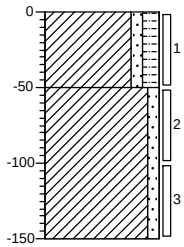
Datum: 28-10-2019




| | |
|---|---|
| 0 | weiland |
| -50 | Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor |
| -90 | Klei, zwak zandig, zwak humeus, geen olie-water reactie, lichtbruin, Edelmanboor |
| -150 | Klei, sterk zandig, zwak roesthoudend, geen olie-water reactie, lichtbruin, Edelmanboor |

## Boring: OZ-03

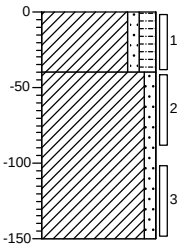
Datum: 28-10-2019




| | |
|---|---|
| 0 | weiland |
| -50 | Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor |
| -150 | Klei, zwak zandig, resten roest, geen olie-water reactie, lichtbruin, Edelmanboor |

## Boring: OZ-04

Datum: 28-10-2019



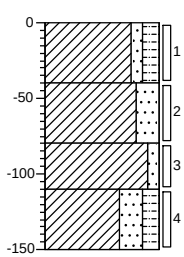

| | |
|---|---|
| 0 | weiland |
| -40 | Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor |
| -150 | Klei, zwak zandig, resten roest, geen olie-water reactie, lichtbruin, Edelmanboor |

| | | |
|---|---|---|
| **Projectcode:** | **SOB010398-A** | getekend volgens NEN 5104 |
| **Projectnaam:** | **Uiterwaarden Demen-Dieden** | |
| | | |

LIEVENSE adviseurs ingenieurs

## Boring: OZ-05

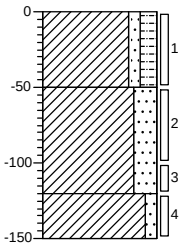
Datum: 28-10-2019




| | |
|---|---|
| 0 | weiland |
| | Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor |
| -40 | |
| | Klei, sterk zandig, resten roest, geen olie-water reactie, lichtbruin, Edelmanboor |
| -80 | |
| -110 | |
| | Klei, zwak zandig, geen olie-water reactie, lichtbruin, Edelmanboor |
| -150 | |
| | Klei, sterk zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor |

## Boring: OZ-06

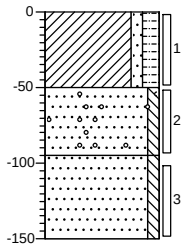
Datum: 28-10-2019




| | |
|---|---|
| 0 | weiland |
| | Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor |
| -50 | |
| | Klei, sterk zandig, resten roest, geen olie-water reactie, grijsbruin, Edelmanboor |
| -120 | |
| | Klei, zwak zandig, geen olie-water reactie, lichtbruin, Edelmanboor |
| -150 | |

## Boring: OZ-07

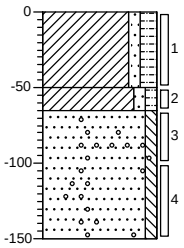
Datum: 28-10-2019




| | |
|---|---|
| 0 | weiland |
| | Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor |
| -50 | |
| | Zand, matig grof, zwak siltig, resten roest, zwak grindhoudend, geen olie-water reactie, grijsbruin, Edelmanboor |
| -95 | |
| -150 | |
| | Zand, matig grof, zwak siltig, geen olie-water reactie, beigebruin, Edelmanboor |

## Boring: OZ-08

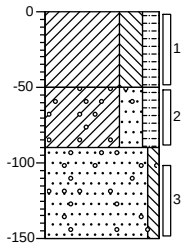
Datum: 29-10-2019




| | |
|---|---|
| 0 | weiland |
| | Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor |
| -50 | |
| -65 | |
| | Klei, zwak zandig, zwak humeus, lichtbruin, Edelmanboor |
| | Zand, matig grof, zwak siltig, resten roest, zwak grindhoudend, geen olie-water reactie, grijsbruin, Edelmanboor |
| -150 | |

## Boring: OZ-09

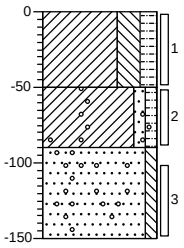
Datum: 29-10-2019




| | |
|---|---|
| 0 | weiland |
| | Klei, sterk siltig, matig humeus, geen olie-water reactie, grijsbruin, |
| -50 | Edelmanboor |
| | Klei, sterk zandig, matig humeus, resten roest, zwak grindhoudend, geen olie-water reactie, grijsbruin, |
| -90 | Edelmanboor |
| | Zand, matig grof, zwak siltig, matig grindhoudend, geen olie-water reactie, |
| -150 | beigebruin, Edelmanboor |

## Boring: OZ-10

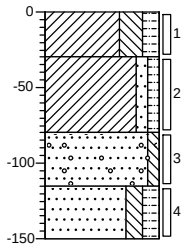
Datum: 29-10-2019




| | |
|---|---|
| 0 | weiland |
| | Klei, sterk siltig, matig humeus, geen olie-water reactie, grijsbruin, |
| -50 | Edelmanboor |
| | Klei, zwak zandig, zwak humeus, resten roest, zwak grindhoudend, geen olie-water reactie, grijsbruin, |
| -90 | Edelmanboor |
| | Zand, matig grof, zwak siltig, matig grindhoudend, geen olie-water reactie, |
| -150 | beigebruin, Edelmanboor |

## Boring: OZ-11

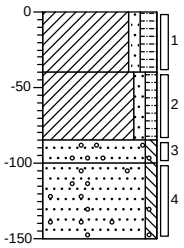
Datum: 29-10-2019




| | |
|---|---|
| 0 | weiland |
| | Klei, sterk siltig, matig humeus, geen olie-water reactie, grijsbruin, |
| -30 | Edelmanboor |
| | Klei, zwak zandig, zwak humeus, resten roest, geen olie-water reactie, grijsbruin, |
| -80 | Edelmanboor |
| -115 | Zand, matig grof, zwak siltig, matig grindhoudend, geen olie-water reactie, |
| -150 | beigebruin, Edelmanboor |
| | Zand, matig fijn, matig siltig, matig humeus, laagjes klei, geen olie-water reactie, donkergrijs, Edelmanboor |

## Boring: OZ-12

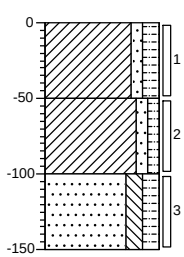
Datum: 29-10-2019




| | |
|---|---|
| 0 | weiland |
| | Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, |
| -40 | Edelmanboor |
| | Klei, zwak zandig, zwak humeus, resten roest, geen olie-water reactie, grijsbruin, |
| -85 | Edelmanboor |
| -100 | Zand, matig grof, zwak siltig, zwak grindhoudend, geen olie-water reactie, |
| -150 | beigebruin, Edelmanboor |
| | Zand, matig grof, zwak siltig, sporen grind, geen olie-water reactie, beigegrijs, River |

## Boring: OZ-13

Datum: 29-10-2019




0 weiland

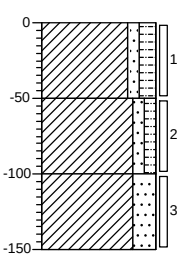
-50 Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor

-100 Klei, zwak zandig, zwak humeus, resten roest, geen olie-water reactie, lichtbruin, Edelmanboor

-150 Zand, matig fijn, matig siltig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor

## Boring: OZ-14

Datum: 29-10-2019




0 weiland

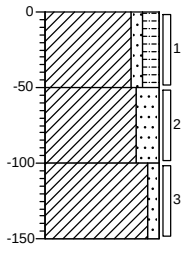
-50 Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor

-100 Klei, zwak zandig, zwak humeus, resten roest, geen olie-water reactie, lichtbruin, Edelmanboor

-150 Klei, sterk zandig, geen olie-water reactie, lichtbruin, Edelmanboor

## Boring: OZ-15

Datum: 29-10-2019




0 weiland

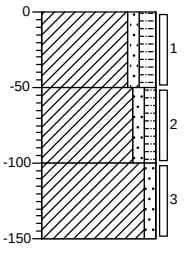
-50 Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor

-100 Klei, sterk zandig, geen olie-water reactie, lichtbruin, Edelmanboor

-150 Klei, zwak zandig, geen olie-water reactie, lichtbruin, Edelmanboor

## Boring: OZ-16

Datum: 29-10-2019




0 weiland

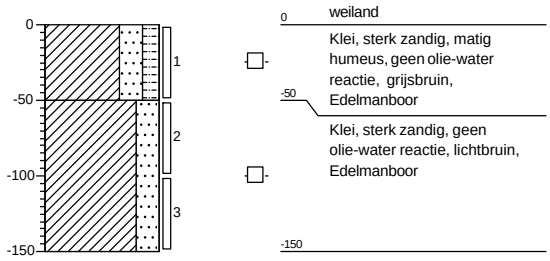
-50 Klei, zwak zandig, matig humeus, geen olie-water reactie, grijsbruin, Edelmanboor

-100 Klei, zwak zandig, zwak humeus, geen olie-water reactie, grijsbruin, Edelmanboor

-150 Klei, zwak zandig, geen olie-water reactie, lichtbruin, Edelmanboor

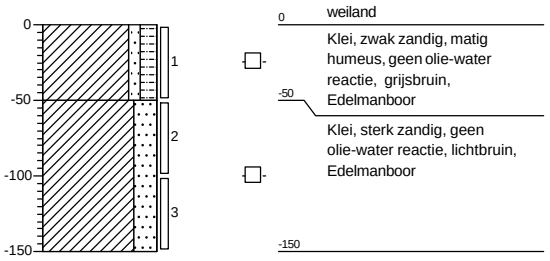
## Boring: OZ-17

Datum: 29-10-2019



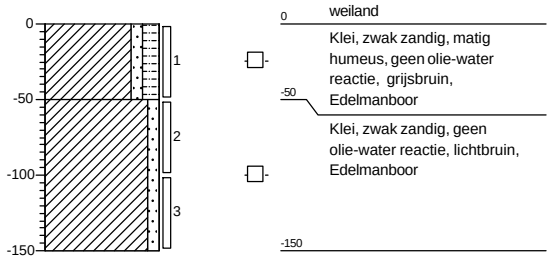

## Boring: OZ-18

Datum: 29-10-2019



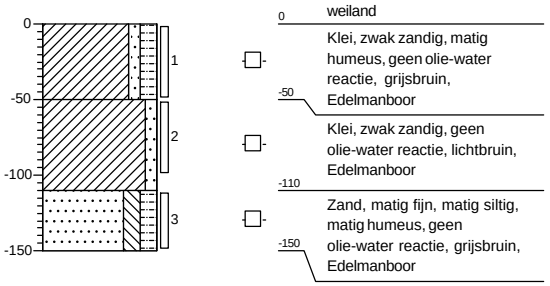

## Boring: OZ-19

Datum: 29-10-2019




## Boring: OZ-20

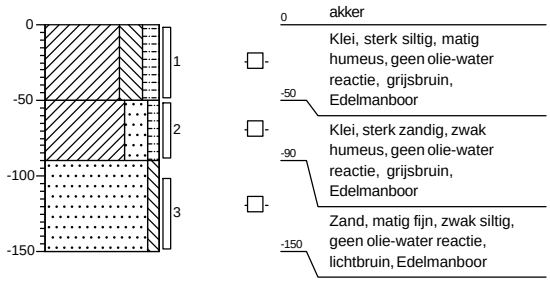
Datum: 29-10-2019




| | | |
|---|---|---|
| **Projectcode:** | **SOB010398-A** getekend volgens NEN 5104 | LIEVENSE adviseurs ingenieurs |
| **Projectnaam:** | **Uiterwaarden Demen-Dieden** | |
| | | |

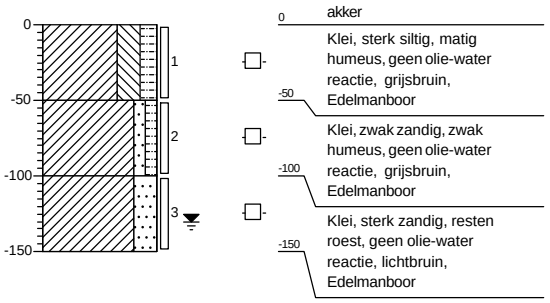
## Boring: RV-01

Datum: 28-10-2019



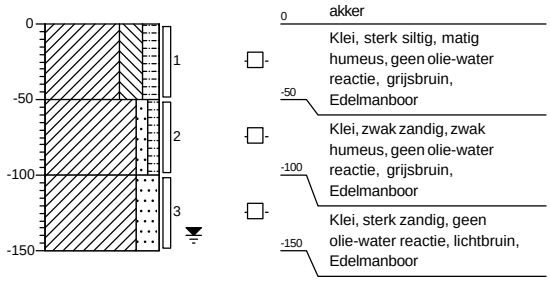

## Boring: RV-02

Datum: 28-10-2019



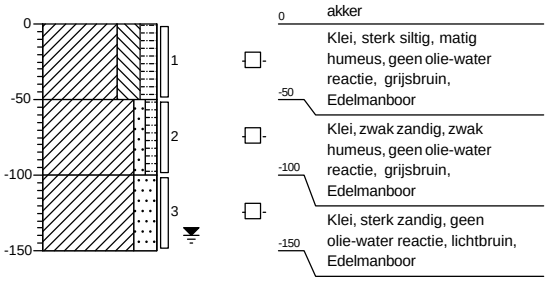

## Boring: RV-03

Datum: 28-10-2019




## Boring: RV-04

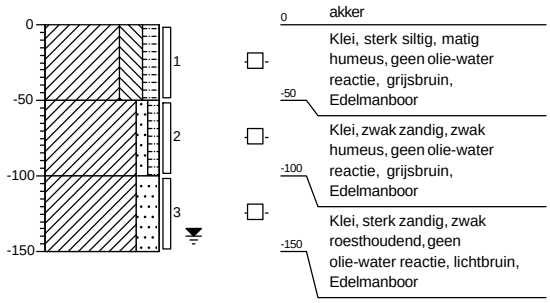
Datum: 28-10-2019




| | | |
|---|---|---|
| **Projectcode:** | **SOB010398-A** getekend volgens NEN 5104 | LIEVENSE adviseurs ingenieurs |
| **Projectnaam:** | **Uiterwaarden Demen-Dieden** | |
| | | |

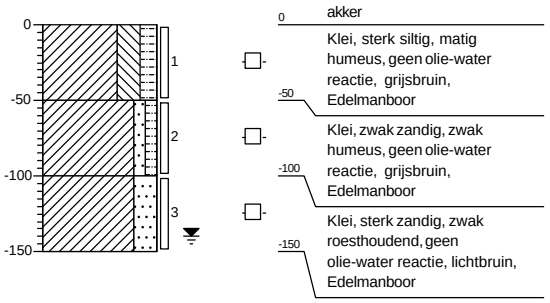
## Boring: RV-05

Datum: 28-10-2019



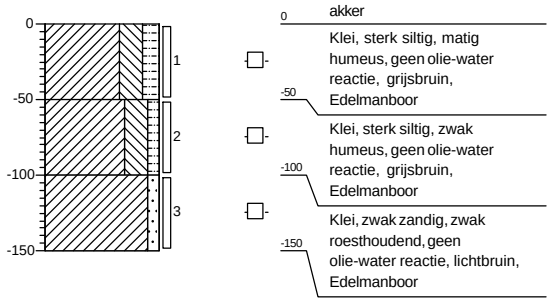

## Boring: RV-06

Datum: 28-10-2019



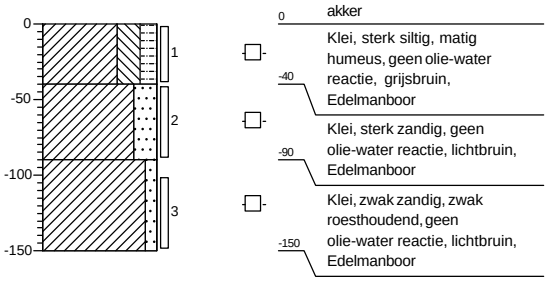

## Boring: RV-07

Datum: 28-10-2019



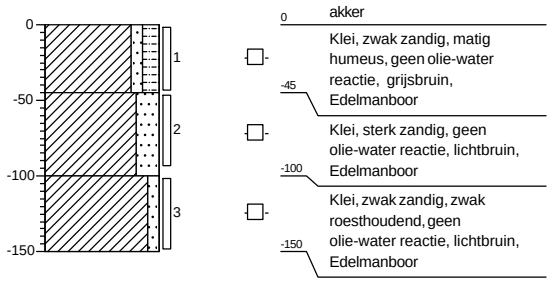

## Boring: RV-08

Datum: 28-10-2019



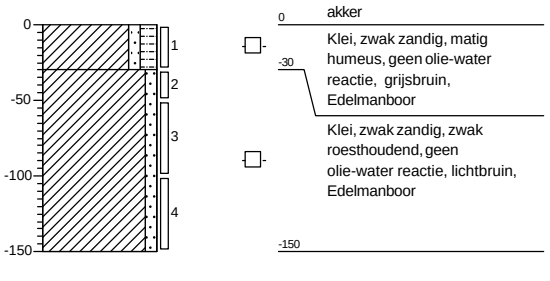
## Boring: RV-09

Datum: 28-10-2019



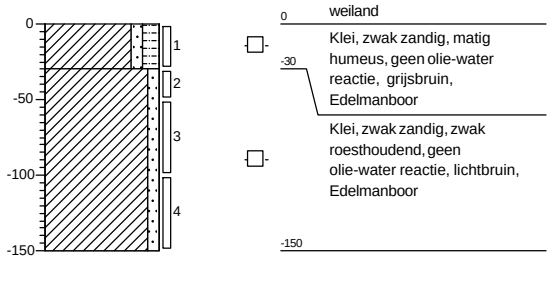

## Boring: RV-10

Datum: 28-10-2019



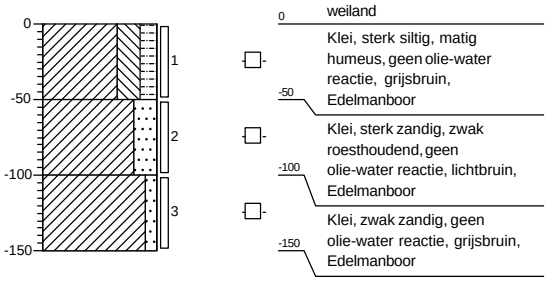

## Boring: RV-11

Datum: 29-10-2019



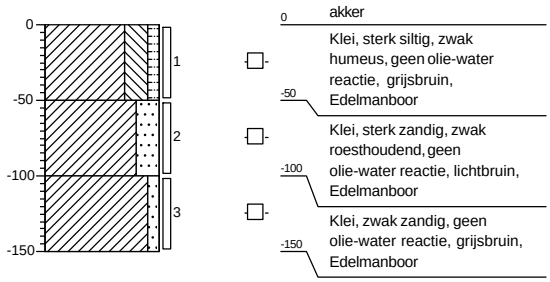

## Boring: RV-12

Datum: 29-10-2019



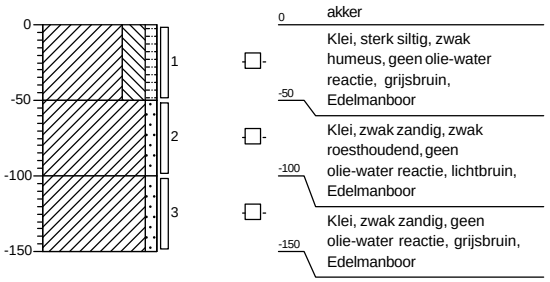
## Boring: RV-13

Datum: 29-10-2019



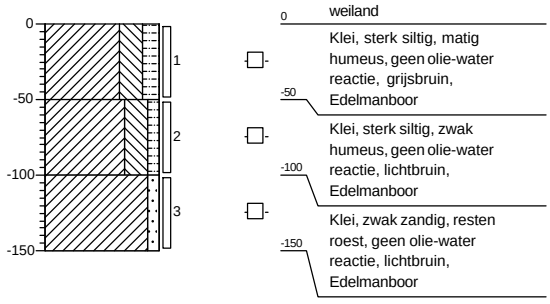

## Boring: RV-14

Datum: 29-10-2019



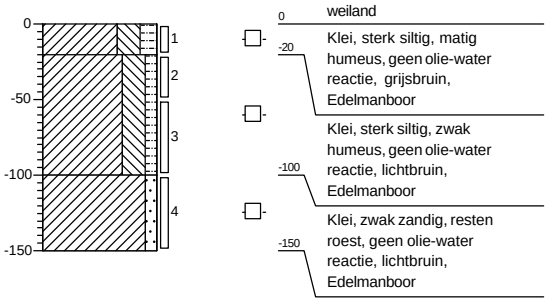

## Boring: RV-15

Datum: 29-10-2019




## Boring: RV-16

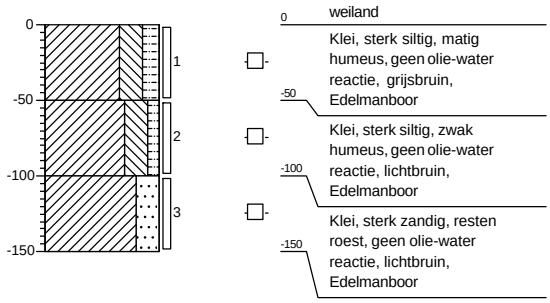
Datum: 29-10-2019




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|---|---|---|
| **Projectcode:** | **SOB010398-A** getekend volgens NEN 5104 | LIEVENSE adviseurs ingenieurs |
| **Projectnaam:** | **Uiterwaarden Demen-Dieden** | |
| | | |

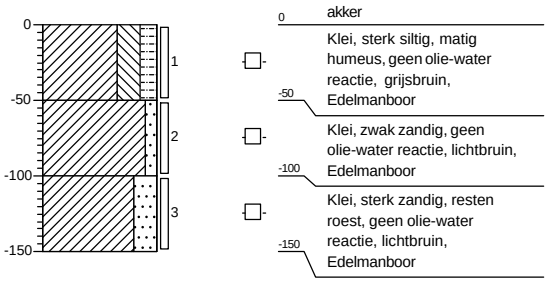
## Boring: RV-17

Datum: 29-10-2019



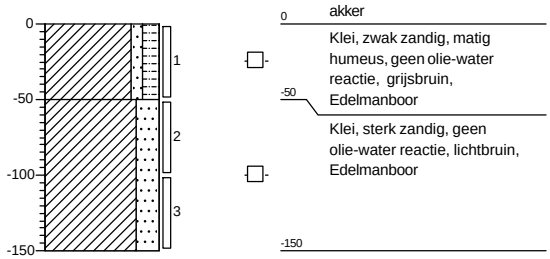

## Boring: RV-18

Datum: 29-10-2019



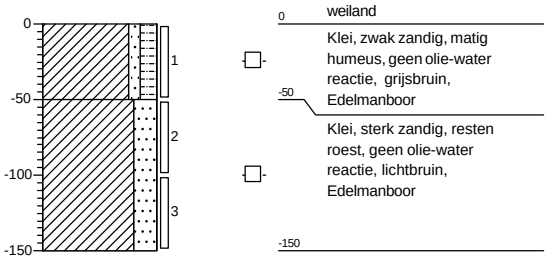

## Boring: RV-19

Datum: 29-10-2019




## Boring: RV-20

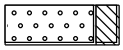
Datum: 29-10-2019

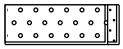


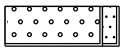

| | | |
|---|---|---|
| **Projectcode:** | **SOB010398-A** getekend volgens NEN 5104 | LIEVENSE adviseurs ingenieurs |
| **Projectnaam:** | **Uiterwaarden Demen-Dieden** | |
| | | |

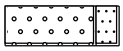
## Legenda (conform NEN 5104)

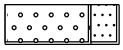
### grind


Grind, siltig

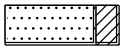

Grind, zwak zandig

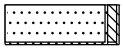

Grind, matig zandig

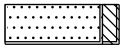

Grind, sterk zandig

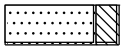

Grind, uiterst zandig

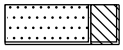
### zand


Zand, kleïig


Zand, zwak siltig


Zand, matig siltig


Zand, sterk siltig


Zand, uiterst siltig

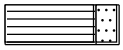
### veen


Veen, mineraalarm

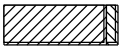

Veen, zwak kleïig

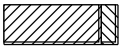

Veen, sterk kleïig

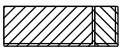

Veen, zwak zandig

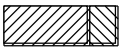

Veen, sterk zandig

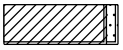
### klei

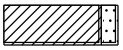

Klei, zwak siltig

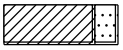

Klei, matig siltig


Klei, sterk siltig

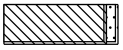

Klei, uiterst siltig

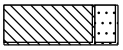

Klei, zwak zandig


Klei, matig zandig


Klei, sterk zandig

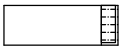
### leem


Leem, zwak zandig

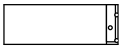

Leem, sterk zandig

### overige toevoegingen


zwak humeus


matig humeus


sterk humeus


zwak grindig


matig grindig


sterk grindig

### geur

- geen geur
- zwakke geur
- matige geur
- sterke geur
- uiterste geur

### olie

- geen olie-water reactie
- zwakke olie-water reactie
- matige olie-water reactie
- sterke olie-water reactie
- uiterste olie-water reactie

### p.i.d.-waarde

- >0
- >1
- >10
- >100
- >1000
- >10000

### monsters

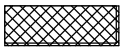

geroerd monster


ongeroerd monster

volumering

### overig

- bijzonder bestanddeel
- Gemiddeld hoogste grondwaterstand
- grondwaterstand
- Gemiddeld laagste grondwaterstand


slib


water

| | | |
|---|---|---|
| **Projectcode:** | **SOB010398-A** getekend volgens NEN 5104 | LIEVENSE adviseurs ingenieurs |
| **Projectnaam:** | **Uiterwaarden Demen-Dieden** | |
| | | |

# Bijlage 4 Analysecertificaten PFAS

**SYNLAB Analytics & Services B.V.**
Correspondentieadres
Steenhouwerstraat 15 · 3194 AG Rotterdam
Tel.: +31 (0)10 231 47 00 · Fax: +31 (0)10 416 30 34
www.synlab.nl

# Analyserapport

Lievense Milieu B.V.
Robin van Rijnsoever
Ringwade 41
3439 LM NIEUWEGEIN



| | |
|---|---|
| Uw projectnaam | : Uiterwaarden Demen-Dieden (PFAS) |
| Uw projectnummer | : SOB010398-A |
| SYNLAB rapportnummer | : 13136554, versienummer: 1 |
| Rapport-verificatienummer | : FHHEIPUH |

Rotterdam, 18-11-2019

Geachte heer/mevrouw,

Hierbij ontvangt u de analyse resultaten van het laboratoriumonderzoek ten behoeve van uw project SOB010398-A. Het onderzoek werd uitgevoerd conform uw opdracht. De gerapporteerde resultaten hebben uitsluitend betrekking op de geteste monsters. De door u aangegeven omschrijvingen voor de monsters, het project en de monsternamedatum (indien aangeleverd) zijn overgenomen in dit analyserapport.

Het onderzoek is uitgevoerd door SYNLAB Analytics & Services B.V., gevestigd aan de Steenhouwerstraat 15 in Rotterdam (NL). Indien het onderzoek is uitgevoerd door derden of het SYNLAB laboratorium in Frankrijk (99-101 Avenue Louis Roche, Gennevilliers) is dit in het rapport aangegeven.

Dit analyserapport bestaat inclusief bijlagen uit 195 pagina's. In geval van een versienummer van '2' of hoger vervallen de voorgaande versies. Alle bijlagen maken onlosmakelijk onderdeel uit van het rapport. Alleen vermenigvuldiging van het hele rapport is toegestaan.

Mocht u vragen en/of opmerkingen hebben naar aanleiding van dit rapport, bijvoorbeeld als u nadere informatie nodig heeft over de meetonzekerheid van de analyseresultaten in dit rapport, dan verzoeken wij u vriendelijk contact op te nemen met de afdeling Customer Support.

Wij vertrouwen er op u met deze informatie van dienst te zijn.

Hoogachtend,



Jaap-Willem Hutter
Technical Director

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

AL ONZE WERKZAAMHEDEN WORDEN UITGEVOERD ONDER DE ALGEMENE VOORWAARDEN GEDEPONEERD BIJ DE KAMER VAN KOOPHANDEL EN FABRIEKEN TE ROTTERDAM INSCHRIJVING HANDELSREGISTER: KVK ROTTERDAM 24265286

# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 001 | Waterbodem (AS3000) | OZ-01-1 OZ-01-1 OZ-01 (0-50) |
| 002 | Waterbodem (AS3000) | OZ-01-2 OZ-01-2 OZ-01 (50-100) |
| 003 | Waterbodem (AS3000) | OZ-02-1 OZ-02-1 OZ-02 (0-50) |
| 004 | Waterbodem (AS3000) | OZ-02-2 OZ-02-2 OZ-02 (50-90) |
| 005 | Waterbodem (AS3000) | OZ-03-1 OZ-03-1 OZ-03 (0-50) |

| Analyse | Eenheid | Q | 001 | 002 | 003 | 004 | 005 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 84.0 | 92.9 | 83.0 | 82.1 | 75.1 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | 3.8 | <2 | 4.0 | 2.1 | 11.5 |
| gloeirest | % vd DS | | 95.8 | 99.1 | 95.6 | 97.5 | 88.1 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

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| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 001 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 002 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 003 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 004 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 005 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :

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# Analyserapport

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|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 006 | Waterbodem (AS3000) | OZ-03-2 OZ-03-2 OZ-03 (50-100) |
| 007 | Waterbodem (AS3000) | OZ-04-1 OZ-04-1 OZ-04 (0-40) |
| 008 | Waterbodem (AS3000) | OZ-04-2 OZ-04-2 OZ-04 (40-90) |
| 009 | Waterbodem (AS3000) | OZ-05-1 OZ-05-1 OZ-05 (0-40) |
| 010 | Waterbodem (AS3000) | OZ-05-2 OZ-05-2 OZ-05 (40-80) |

| Analyse | Eenheid | Q | 006 | 007 | 008 | 009 | 010 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 79.9 | 80.9 | 81.1 | 79.6 | 84.9 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | 5.1 | 5.8 | 2.8 | 7.2 | 2.8 |
| gloeirest | % vd DS | | 94.5 | 93.8 | 96.8 | 92.4 | 96.8 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

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|---|---|---|---|
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| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 006 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 007 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 008 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 009 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 010 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

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# Analyserapport

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|---|---|---|---|
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| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 011 | Waterbodem (AS3000) | OZ-06-1 OZ-06-1 OZ-06 (0-50) |
| 012 | Waterbodem (AS3000) | OZ-06-2 OZ-06-2 OZ-06 (50-100) |
| 013 | Waterbodem (AS3000) | OZ-07-1 OZ-07-1 OZ-07 (0-50) |
| 014 | Waterbodem (AS3000) | OZ-07-2 OZ-07-2 OZ-07 (50-95) |
| 015 | Waterbodem (AS3000) | OZ-08-1 OZ-08-1 OZ-08 (0-50) |

| Analyse | Eenheid | Q | 011 | 012 | 013 | 014 | 015 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 82.8 | 90.2 | 83.7 | 95.2 | 81.1 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 38.3 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | stenen | geen |
| organische stof (gloeiverlies) | % vd DS | S | 5.6 | 2.6 | 4.9 | <2 | 5.7 |
| gloeirest | % vd DS | | 94.0 | 97.0 | 94.7 | 99.4 | 94.0 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

AL ONZE WERKZAAMHEDEN WORDEN UITGEVOERD ONDER DE ALGEMENE VOORWAARDEN GEDEPONEERD BIJ DE KAMER VAN KOOPHANDEL EN FABRIEKEN TE ROTTERDAM INSCHRIJVING HANDELSREGISTER: KVK ROTTERDAM 24265286

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|---|---|---|---|
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| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 011 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
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| 013 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 014 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 015 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :

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# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 016 | Waterbodem (AS3000) | OZ-08-3 OZ-08-3 OZ-08 (65-100) |
| 017 | Waterbodem (AS3000) | OZ-09-1 OZ-09-1 OZ-09 (0-50) |
| 018 | Waterbodem (AS3000) | OZ-09-2 OZ-09-2 OZ-09 (50-90) |
| 019 | Waterbodem (AS3000) | OZ-10-1 OZ-10-1 OZ-10 (0-50) |
| 020 | Waterbodem (AS3000) | OZ-10-2 OZ-10-2 OZ-10 (50-90) |

| Analyse | Eenheid | Q | 016 | 017 | 018 | 019 | 020 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 96.7 | 77.7 | 81.6 | 78.7 | 78.6 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | <2 | 7.8 | 5.0 | 5.6 | 5.1 |
| gloeirest | % vd DS | | 99.2 | 91.8 | 94.6 | 94.0 | 94.5 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

AL ONZE WERKZAAMHEDEN WORDEN UITGEVOERD ONDER DE ALGEMENE VOORWAARDEN GEDEPONEERD BIJ DE KAMER VAN KOOPHANDEL EN FABRIEKEN TE ROTTERDAM INSCHRIJVING HANDELSREGISTER: KVK ROTTERDAM 24265286

# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 016 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 017 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 018 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 019 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 020 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :

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# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 021 | Waterbodem (AS3000) | OZ-11-1 OZ-11-1 OZ-11 (0-30) |
| 022 | Waterbodem (AS3000) | OZ-11-3 OZ-11-3 OZ-11 (80-115) |
| 023 | Waterbodem (AS3000) | OZ-12-1 OZ-12-1 OZ-12 (0-40) |
| 024 | Waterbodem (AS3000) | OZ-12-3 OZ-12-3 OZ-12 (85-100) |
| 025 | Waterbodem (AS3000) | OZ-13-1 OZ-13-1 OZ-13 (0-50) |

| Analyse | Eenheid | Q | 021 | 022 | 023 | 024 | 025 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 80.4 | 85.1 | 79.7 | 93.1 | 76.5 |
| gewicht artefacten | g | S | 8.43 | 0 | 0 | 8.17 | 0 |
| aard van de artefacten | - | S | stenen | geen | geen | stenen | geen |
| organische stof (gloeiverlies) | % vd DS | S | 5.5 | <2 | 5.9 | <2 | 8.2 |
| gloeirest | % vd DS | | 94.1 | 98.7 | 93.7 | 98.4 | 91.4 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

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# Analyserapport

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|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 021 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 022 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 023 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 024 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 025 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

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# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 026 | Waterbodem (AS3000) | OZ-13-2 OZ-13-2 OZ-13 (50-100) |
| 027 | Waterbodem (AS3000) | OZ-14-1 OZ-14-1 OZ-14 (0-50) |
| 028 | Waterbodem (AS3000) | OZ-14-2 OZ-14-2 OZ-14 (50-100) |
| 029 | Waterbodem (AS3000) | OZ-15-1 OZ-15-1 OZ-15 (0-50) |
| 030 | Waterbodem (AS3000) | OZ-15-2 OZ-15-2 OZ-15 (50-100) |

| Analyse | Eenheid | Q | 026 | 027 | 028 | 029 | 030 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 82.6 | 80.0 | 84.3 | 86.0 | 91.5 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | 5.6 | 6.6 | 2.5 | 2.5 | <2 |
| gloeirest | % vd DS | | 94.0 | 93.0 | 97.1 | 97.1 | 98.2 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

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# Analyserapport

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|---|---|---|---|
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| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 026 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 027 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 028 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 029 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 030 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

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# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 031 | Waterbodem (AS3000) | OZ-16-1 OZ-16-1 OZ-16 (0-50) |
| 032 | Waterbodem (AS3000) | OZ-16-2 OZ-16-2 OZ-16 (50-100) |
| 033 | Waterbodem (AS3000) | OZ-17-1 OZ-17-1 OZ-17 (0-50) |
| 034 | Waterbodem (AS3000) | OZ-17-2 OZ-17-2 OZ-17 (50-100) |
| 035 | Waterbodem (AS3000) | OZ-18-1 OZ-18-1 OZ-18 (0-50) |

| Analyse | Eenheid | Q | 031 | 032 | 033 | 034 | 035 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 76.3 | 75.0 | 74.3 | 89.2 | 76.9 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | 11.2 | 9.3 | 7.0 | <2 | 8.2 |
| gloeirest | % vd DS | | 88.5 | 90.3 | 92.7 | 98.5 | 91.4 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

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# Analyserapport

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|---|---|---|---|
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| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 031 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 032 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 033 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 034 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 035 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :

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# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 036 | Waterbodem (AS3000) | OZ-18-2 OZ-18-2 OZ-18 (50-100) |
| 037 | Waterbodem (AS3000) | OZ-19-1 OZ-19-1 OZ-19 (0-50) |
| 038 | Waterbodem (AS3000) | OZ-19-2 OZ-19-2 OZ-19 (50-100) |
| 039 | Waterbodem (AS3000) | OZ-20-1 OZ-20-1 OZ-20 (0-50) |
| 040 | Waterbodem (AS3000) | OZ-20-2 OZ-20-2 OZ-20 (50-100) |

| Analyse | Eenheid | Q | 036 | 037 | 038 | 039 | 040 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 87.6 | 77.5 | 79.9 | 80.5 | 86.0 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | <2 | 8.5 | 4.3 | 6.9 | 4.4 |
| gloeirest | % vd DS | | 97.6 | 91.1 | 95.3 | 92.7 | 95.2 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

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| | | | |
|---|---|---|---|
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| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 036 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 037 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 038 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 039 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 040 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

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# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 041 | Waterbodem (AS3000) | RV-01-1 RV-01-1 RV-01 (0-50) |
| 042 | Waterbodem (AS3000) | RV-01-2 RV-01-2 RV-01 (50-90) |
| 043 | Waterbodem (AS3000) | RV-02-1 RV-02-1 RV-02 (0-50) |
| 044 | Waterbodem (AS3000) | RV-02-2 RV-02-2 RV-02 (50-100) |
| 045 | Waterbodem (AS3000) | RV-03-1 RV-03-1 RV-03 (0-50) |

| Analyse | Eenheid | Q | 041 | 042 | 043 | 044 | 045 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 77.8 | 81.9 | 75.4 | 84.5 | 77.5 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | 6.8 | 3.9 | 8.2 | <2 | 6.3 |
| gloeirest | % vd DS | | 92.8 | 95.7 | 91.4 | 97.7 | 93.3 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

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|---|---|---|---|
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**Monster beschrijvingen**

| | | |
|---|---|---|
| 041 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 042 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
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| 044 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 045 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :

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# Analyserapport

| | | | |
|---|---|---|---|
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| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 046 | Waterbodem (AS3000) | RV-03-2 RV-03-2 RV-03 (50-100) |
| 047 | Waterbodem (AS3000) | RV-04-1 RV-04-1 RV-04 (0-50) |
| 048 | Waterbodem (AS3000) | RV-04-2 RV-04-2 RV-04 (50-100) |
| 049 | Waterbodem (AS3000) | RV-05-1 RV-05-1 RV-05 (0-50) |
| 050 | Waterbodem (AS3000) | RV-05-2 RV-05-2 RV-05 (50-100) |

| Analyse | Eenheid | Q | 046 | 047 | 048 | 049 | 050 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 82.2 | 77.3 | 79.8 | 78.3 | 82.5 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | 2.4 | 8.0 | 4.6 | 7.5 | 4.8 |
| gloeirest | % vd DS | | 97.2 | 91.6 | 95.0 | 92.2 | 94.8 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

AL ONZE WERKZAAMHEDEN WORDEN UITGEVOERD ONDER DE ALGEMENE VOORWAARDEN GEDEPONEERD BIJ DE KAMER VAN KOOPHANDEL EN FABRIEKEN TE ROTTERDAM INSCHRIJVING HANDELSREGISTER: KVK ROTTERDAM 24265286

# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 046 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 047 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 048 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 049 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 050 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :

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# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 051 | Waterbodem (AS3000) | RV-06-1 RV-06-1 RV-06 (0-50) |
| 052 | Waterbodem (AS3000) | RV-06-2 RV-06-2 RV-06 (50-100) |
| 053 | Waterbodem (AS3000) | RV-07-1 RV-07-1 RV-07 (0-50) |
| 054 | Waterbodem (AS3000) | RV-07-2 RV-07-2 RV-07 (50-100) |
| 055 | Waterbodem (AS3000) | RV-08-1 RV-08-1 RV-08 (0-40) |

| Analyse | Eenheid | Q | 051 | 052 | 053 | 054 | 055 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 78.3 | 79.4 | 77.5 | 79.5 | 79.2 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | 6.5 | 3.2 | 7.1 | 4.2 | 5.6 |
| gloeirest | % vd DS | | 93.1 | 96.4 | 92.5 | 95.4 | 94.0 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

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# Analyserapport

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|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 051 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 052 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 053 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 054 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 055 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :

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# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 056 | Waterbodem (AS3000) | RV-08-2 RV-08-2 RV-08 (40-90) |
| 057 | Waterbodem (AS3000) | RV-09-1 RV-09-1 RV-09 (0-45) |
| 058 | Waterbodem (AS3000) | RV-09-2 RV-09-2 RV-09 (45-95) |
| 059 | Waterbodem (AS3000) | RV-10-1 RV-10-1 RV-10 (0-30) |
| 060 | Waterbodem (AS3000) | RV-10-3 RV-10-3 RV-10 (50-100) |

| Analyse | Eenheid | Q | 056 | 057 | 058 | 059 | 060 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 85.9 | 77.1 | 82.8 | 80.3 | 77.8 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | 2.1 | 6.0 | 2.2 | 8.7 | 4.8 |
| gloeirest | % vd DS | | 97.5 | 93.6 | 97.5 | 90.9 | 94.8 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

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# Analyserapport

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|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 056 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 057 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 058 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 059 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 060 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :

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# Analyserapport

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|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 061 | Waterbodem (AS3000) | RV-11-1 RV-11-1 RV-11 (0-30) |
| 062 | Waterbodem (AS3000) | RV-11-3 RV-11-3 RV-11 (50-100) |
| 063 | Waterbodem (AS3000) | RV-12-1 RV-12-1 RV-12 (0-50) |
| 064 | Waterbodem (AS3000) | RV-12-2 RV-12-2 RV-12 (50-100) |
| 065 | Waterbodem (AS3000) | RV-13-1 RV-13-1 RV-13 (0-50) |

| Analyse | Eenheid | Q | 061 | 062 | 063 | 064 | 065 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 80.7 | 79.3 | 73.3 | 81.7 | 78.8 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | 7.9 | 4.5 | 7.1 | 2.8 | 5.6 |
| gloeirest | % vd DS | | 91.7 | 95.1 | 92.6 | 96.8 | 94.0 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

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# Analyserapport

| | | | |
|---|---|---|---|
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| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 061 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 062 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 063 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 064 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 065 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :

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# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 066 | Waterbodem (AS3000) | RV-13-2 RV-13-2 RV-13 (50-100) |
| 067 | Waterbodem (AS3000) | RV-14-1 RV-14-1 RV-14 (0-50) |
| 068 | Waterbodem (AS3000) | RV-14-2 RV-14-2 RV-14 (50-100) |
| 069 | Waterbodem (AS3000) | RV-15-1 RV-15-1 RV-15 (0-50) |
| 070 | Waterbodem (AS3000) | RV-15-2 RV-15-2 RV-15 (50-100) |

| Analyse | Eenheid | Q | 066 | 067 | 068 | 069 | 070 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 88.3 | 79.5 | 82.3 | 79.5 | 80.5 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | <2 | 4.9 | 3.5 | 7.9 | 5.3 |
| gloeirest | % vd DS | | 98.2 | 94.7 | 96.1 | 91.7 | 94.3 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

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# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 066 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 067 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 068 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 069 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 070 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :

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Lievense Milieu B.V.
Robin van Rijnsoever

# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 071 | Waterbodem (AS3000) | RV-16-1 RV-16-1 RV-16 (0-20) |
| 072 | Waterbodem (AS3000) | RV-16-3 RV-16-3 RV-16 (50-100) |
| 073 | Waterbodem (AS3000) | RV-17-1 RV-17-1 RV-17 (0-50) |
| 074 | Waterbodem (AS3000) | RV-17-2 RV-17-2 RV-17 (50-100) |
| 075 | Waterbodem (AS3000) | RV-18-1 RV-18-1 RV-18 (0-50) |

| Analyse | Eenheid | Q | 071 | 072 | 073 | 074 | 075 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 73.8 | 78.1 | 79.2 | 81.2 | 81.2 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | 9.9 | 5.3 | 7.8 | 3.6 | 7.8 |
| gloeirest | % vd DS | | 89.7 | 94.3 | 91.9 | 96.0 | 91.8 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

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# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 071 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 072 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 073 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 074 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 075 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

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# Analyserapport

| | | | |
|---|---|---|---|
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| Nummer | Monstersoort | Monsterspecificatie |
|---|---|---|
| 076 | Waterbodem (AS3000) | RV-18-2 RV-18-2 RV-18 (50-100) |
| 077 | Waterbodem (AS3000) | RV-19-1 RV-19-1 RV-19 (0-50) |
| 078 | Waterbodem (AS3000) | RV-19-2 RV-19-2 RV-19 (50-100) |
| 079 | Waterbodem (AS3000) | RV-20-1 RV-20-1 RV-20 (0-50) |
| 080 | Waterbodem (AS3000) | RV-20-2 RV-20-2 RV-20 (50-100) |

| Analyse | Eenheid | Q | 076 | 077 | 078 | 079 | 080 |
|---|---|---|---|---|---|---|---|
| droge stof | gew.-% | S | 85.3 | 80.1 | 87.2 | 81.8 | 85.8 |
| gewicht artefacten | g | S | 0 | 0 | 0 | 0 | 0 |
| aard van de artefacten | - | S | geen | geen | geen | geen | geen |
| organische stof (gloeiverlies) | % vd DS | S | <2 | 5.1 | <2 | 4.2 | <2 |
| gloeirest | % vd DS | | 97.7 | 94.5 | 98.2 | 95.4 | 98.1 |
| *ANALYSES UITGEVOERD DOOR DERDEN* | | | | | | | |
| Adviespakket PFAS 30 componenten | | | zie bijlage | zie bijlage | zie bijlage | zie bijlage | zie bijlage |

De met S gemerkte analyses zijn geaccrediteerd en vallen onder de AS3000-erkenning.

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

AL ONZE WERKZAAMHEDEN WORDEN UITGEVOERD ONDER DE ALGEMENE VOORWAARDEN GEDEPONEERD BIJ DE KAMER VAN KOOPHANDEL EN FABRIEKEN TE ROTTERDAM INSCHRIJVING HANDELSREGISTER: KVK ROTTERDAM 24265286

# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

**Monster beschrijvingen**

| | | |
|---|---|---|
| 076 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 077 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 078 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 079 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |
| 080 | * | De monstervoorbehandeling en analyses zijn uitgevoerd conform Accreditatieschema AS3000, dit geldt alleen voor de analyses die worden gerapporteerd met het "S" kenmerk. |

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

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# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Analyse | Monstersoort | Relatie tot norm |
|---|---|---|
| droge stof | Waterbodem (AS3000) | Waterbodem: Eigen methode (analyse gelijkwaardig aan ISO-11465 en gelijkwaardig aan NEN-EN 15934 ). AS3000-waterbodem: conform AS3210-1 en conform NEN-EN 15934 |
| gewicht artefacten | Waterbodem (AS3000) | Conform AS3000 en conform NEN-EN 16179 |
| aard van de artefacten | Waterbodem (AS3000) | Idem |
| organische stof (gloeiverlies) | Waterbodem (AS3000) | Conform AS3210-2 (org. stof gecorrigeerd voor 5,4 % lutum) en gelijkwaardig aan NEN 5754. |
| gloeirest | Waterbodem (AS3000) | Gloeirest bepaling is gelijkwaardig aan NEN-EN 12879 |
| Adviespakket PFAS 30 componenten | Waterbodem (AS3000) | Analyse uitbesteed |

| Monster | Barcode | Aanlevering | Monstername | Verpakking |
|---|---|---|---|---|
| 001 | U9091082 | 30-10-2019 | 28-10-2019 | ALC382 |
| 002 | U9091074 | 30-10-2019 | 28-10-2019 | ALC382 |
| 003 | U9091073 | 30-10-2019 | 28-10-2019 | ALC382 |
| 004 | U9096555 | 30-10-2019 | 28-10-2019 | ALC382 |
| 005 | U9091064 | 30-10-2019 | 28-10-2019 | ALC382 |
| 006 | U9091051 | 30-10-2019 | 28-10-2019 | ALC382 |
| 007 | U9096543 | 30-10-2019 | 28-10-2019 | ALC382 |
| 008 | U9096207 | 30-10-2019 | 28-10-2019 | ALC382 |
| 009 | U9091199 | 30-10-2019 | 28-10-2019 | ALC382 |
| 010 | U9091182 | 30-10-2019 | 28-10-2019 | ALC382 |
| 011 | U9091069 | 30-10-2019 | 28-10-2019 | ALC382 |
| 012 | U9091070 | 30-10-2019 | 29-10-2019 | ALC382 |
| 013 | U9091245 | 30-10-2019 | 28-10-2019 | ALC382 |
| 014 | U9091195 | 30-10-2019 | 28-10-2019 | ALC382 |
| 015 | U9096573 | 30-10-2019 | 29-10-2019 | ALC382 |
| 016 | U9092586 | 30-10-2019 | 29-10-2019 | ALC382 |
| 017 | U9096559 | 30-10-2019 | 29-10-2019 | ALC382 |
| 018 | U9092592 | 30-10-2019 | 29-10-2019 | ALC382 |
| 019 | U9091075 | 30-10-2019 | 29-10-2019 | ALC382 |
| 020 | U9091234 | 30-10-2019 | 29-10-2019 | ALC382 |
| 021 | U9096548 | 30-10-2019 | 29-10-2019 | ALC382 |
| 022 | U9091246 | 30-10-2019 | 29-10-2019 | ALC382 |
| 023 | U9091242 | 30-10-2019 | 29-10-2019 | ALC382 |
| 024 | U9091201 | 30-10-2019 | 29-10-2019 | ALC382 |
| 025 | U9096218 | 30-10-2019 | 29-10-2019 | ALC382 |
| 026 | U9091147 | 30-10-2019 | 29-10-2019 | ALC382 |
| 027 | U9096577 | 30-10-2019 | 29-10-2019 | ALC382 |
| 028 | U9091189 | 30-10-2019 | 29-10-2019 | ALC382 |
| 029 | U9096489 | 30-10-2019 | 29-10-2019 | ALC382 |
| 030 | U9091200 | 30-10-2019 | 29-10-2019 | ALC382 |
| 031 | U9092597 | 30-10-2019 | 29-10-2019 | ALC382 |
| 032 | U9091146 | 30-10-2019 | 29-10-2019 | ALC382 |
| 033 | U9091258 | 30-10-2019 | 29-10-2019 | ALC382 |
| 034 | U9096210 | 30-10-2019 | 29-10-2019 | ALC382 |

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

AL ONZE WERKZAAMHEDEN WORDEN UITGEVOERD ONDER DE ALGEMENE VOORWAARDEN GEDEPONEERD BIJ DE KAMER VAN KOOPHANDEL EN FABRIEKEN TE ROTTERDAM INSCHRIJVING HANDELSREGISTER: KVK ROTTERDAM 24265286

# Analyserapport

| | | | |
|---|---|---|---|
| Projectnaam | Uiterwaarden Demen-Dieden (PFAS) | Orderdatum | 30-10-2019 |
| Projectnummer | SOB010398-A | Startdatum | 30-10-2019 |
| Rapportnummer | 13136554 - 1 | Rapportagedatum | 18-11-2019 |

| Monster | Barcode | Aanlevering | Monstername | Verpakking |
|---|---|---|---|---|
| 035 | U9091250 | 30-10-2019 | 29-10-2019 | ALC382 |
| 036 | U9092593 | 30-10-2019 | 29-10-2019 | ALC382 |
| 037 | U9092596 | 30-10-2019 | 29-10-2019 | ALC382 |
| 038 | U9092585 | 30-10-2019 | 29-10-2019 | ALC382 |
| 039 | U9096571 | 30-10-2019 | 29-10-2019 | ALC382 |
| 040 | U9091184 | 30-10-2019 | 29-10-2019 | ALC382 |
| 041 | U9091079 | 30-10-2019 | 28-10-2019 | ALC382 |
| 042 | U9096554 | 30-10-2019 | 28-10-2019 | ALC382 |
| 043 | U9096201 | 30-10-2019 | 28-10-2019 | ALC382 |
| 044 | U9091196 | 30-10-2019 | 28-10-2019 | ALC382 |
| 045 | U9091067 | 30-10-2019 | 28-10-2019 | ALC382 |
| 046 | U9091080 | 30-10-2019 | 28-10-2019 | ALC382 |
| 047 | U9096553 | 30-10-2019 | 28-10-2019 | ALC382 |
| 048 | U9096550 | 30-10-2019 | 28-10-2019 | ALC382 |
| 049 | U9096204 | 30-10-2019 | 28-10-2019 | ALC382 |
| 050 | U9096212 | 30-10-2019 | 28-10-2019 | ALC382 |
| 051 | U9096541 | 30-10-2019 | 28-10-2019 | ALC382 |
| 052 | U9096545 | 30-10-2019 | 28-10-2019 | ALC382 |
| 053 | U9091066 | 30-10-2019 | 28-10-2019 | ALC382 |
| 054 | U9096544 | 30-10-2019 | 28-10-2019 | ALC382 |
| 055 | U9096551 | 30-10-2019 | 28-10-2019 | ALC382 |
| 056 | U9096557 | 30-10-2019 | 28-10-2019 | ALC382 |
| 057 | U9091257 | 30-10-2019 | 28-10-2019 | ALC382 |
| 058 | U9091239 | 30-10-2019 | 28-10-2019 | ALC382 |
| 059 | U9091071 | 30-10-2019 | 28-10-2019 | ALC382 |
| 060 | U9091253 | 30-10-2019 | 28-10-2019 | ALC382 |
| 061 | U9091187 | 30-10-2019 | 29-10-2019 | ALC382 |
| 062 | U9096479 | 30-10-2019 | 29-10-2019 | ALC382 |
| 063 | U9096199 | 30-10-2019 | 29-10-2019 | ALC382 |
| 064 | U9096564 | 30-10-2019 | 29-10-2019 | ALC382 |
| 065 | U9096556 | 30-10-2019 | 29-10-2019 | ALC382 |
| 066 | U9096200 | 30-10-2019 | 29-10-2019 | ALC382 |
| 067 | U9091191 | 30-10-2019 | 29-10-2019 | ALC382 |
| 068 | U9096574 | 30-10-2019 | 29-10-2019 | ALC382 |
| 069 | U9096206 | 30-10-2019 | 29-10-2019 | ALC382 |
| 070 | U9096560 | 30-10-2019 | 29-10-2019 | ALC382 |
| 071 | U9096216 | 30-10-2019 | 29-10-2019 | ALC382 |
| 072 | U9096567 | 30-10-2019 | 29-10-2019 | ALC382 |
| 073 | U9091197 | 30-10-2019 | 29-10-2019 | ALC382 |
| 074 | U9091194 | 30-10-2019 | 29-10-2019 | ALC382 |
| 075 | U9091251 | 30-10-2019 | 29-10-2019 | ALC382 |
| 076 | U9091142 | 30-10-2019 | 29-10-2019 | ALC382 |
| 077 | U9091252 | 30-10-2019 | 29-10-2019 | ALC382 |
| 078 | U9091261 | 30-10-2019 | 29-10-2019 | ALC382 |
| 079 | U9091256 | 30-10-2019 | 29-10-2019 | ALC382 |
| 080 | U9096497 | 30-10-2019 | 29-10-2019 | ALC382 |

Paraaf :

SYNLAB Analytics & Services B.V. IS GEACCREDITEERD VOLGENS DE DOOR DE RAAD VOOR ACCREDITATIE GESTELDE CRITERIA VOOR TESTLABORATORIA CONFORM ISO/IEC 17025:2005 ONDER NR. L 028

AL ONZE WERKZAAMHEDEN WORDEN UITGEVOERD ONDER DE ALGEMENE VOORWAARDEN GEDEPONEERD BIJ DE KAMER VAN KOOPHANDEL EN FABRIEKEN TE ROTTERDAM INSCHRIJVING HANDELSREGISTER: KVK ROTTERDAM 24265286

SYNLAB Analytics & Services Sweden AB
Box 1083, 581 10 Linköping, Sweden
Tel: + 46 13 254 900 · Fax: + 46 13 121 728
Registered 556152-0916 Registered office: Linköping, Sweden

Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT
issued by an Accredited Laboratory



## Report No. 19485367

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-001) OZ-01-1 OZ-01-1 OZ-01 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834045 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 83.7 | ± 8.37 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.24 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.69 | ± 0.21 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.69 | ± 0.21 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.33 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

SYNLAB Analytics & Services Sweden AB
Box 1083, 581 10 Linköping, Sweden
Tel: + 46 13 254 900 · Fax: + 46 13 121 728
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Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT



issued by an Accredited Laboratory

## Report No. 19485367

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-001) OZ-01-1 OZ-01-1 OZ-01 (0-50) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834045 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.12 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.45 | ± 0.14 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 3282 1603 5613 4268

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

SYNLAB Analytics & Services Sweden AB
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Registered 556152-0916 Registered office: Linköping, Sweden

Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT
issued by an Accredited Laboratory



## Report No. 19485368

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-002) OZ-01-2 OZ-01-2 OZ-01 (50-100) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87832409 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 92.5 | ± 9.25 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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SYNLAB Analytics & Services Sweden AB
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Ackred. nr 1006
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ISO/IEC 17025

# REPORT
issued by an Accredited Laboratory



## Report No. 19485368

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-002) OZ-01-2 OZ-01-2 OZ-01 (50-100) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87832409 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

*Comment*

*Increased reporting limit for N-MeFOSAA due to disturbances from other substances in the sample.*

Linköping 2019-11-13
The report has been reviewed and approved by

Emil Johansson
Responsible reviewer
Control numbers 3188 1600 5912 4064

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Ackred. nr 1006
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# REPORT
issued by an Accredited Laboratory



## Report No. 19485369

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-003) OZ-02-1 OZ-02-1 OZ-02 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834494 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 82.8 | ± 8.28 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.49 | ± 0.15 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.49 | ± 0.15 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.32 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485369

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-003) OZ-02-1 OZ-02-1 OZ-02 (0-50) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834494 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.12 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.44 | ± 0.13 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 3086 1602 5016 4366

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485370

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-004) OZ-02-2 OZ-02-2 OZ-02 (50-90) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87832299 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 81.7 | ± 8.17 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485370

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-004) OZ-02-2 OZ-02-2 OZ-02 (50-90) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87832299 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 2981 6104 5219 4765

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485371

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-005) OZ-03-1 OZ-03-1 OZ-03 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834467 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 79.3 | ± 7.93 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.20 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | 0.10 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.75 | ± 0.23 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.75 | ± 0.23 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.61 | ± 0.18 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485371

*Assigner*
SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-005) OZ-03-1 OZ-03-1 OZ-03 (0-50) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834467 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.15 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.76 | ± 0.23 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 2881 6801 5416 4366

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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Registered 556152-0916 Registered office: Linköping, Sweden

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485372

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-006) OZ-03-2 OZ-03-2 OZ-03 (50-100) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834464 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 79.1 | ± 7.91 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.13 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.13 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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Registered 556152-0916 Registered office: Linköping, Sweden

Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT
issued by an Accredited Laboratory



## Report No. 19485372

*Assigner*
SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-006) OZ-03-2 OZ-03-2 OZ-03 (50-100) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834464 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 2781 6106 5918 4661

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485373

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-007) OZ-04-1 OZ-04-1 OZ-04 (0-40) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834475 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.9 | ± 8.09 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.16 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.55 | ± 0.17 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.55 | ± 0.17 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.26 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485373

*Assigner*
SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-007) OZ-04-1 OZ-04-1 OZ-04 (0-40) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834475 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.26 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 2681 6206 5610 4863

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485374

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-008) OZ-04-2 OZ-04-2 OZ-04 (40-90) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87833438 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 81.4 | ± 8.14 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
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## Report No. 19485374

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-008) OZ-04-2 OZ-04-2 OZ-04 (40-90) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87833438 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 2581 6702 5610 4764

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485376

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-009) OZ-05-1 OZ-05-1 OZ-05 (0-40) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87832228 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.1 | ± 8.01 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.30 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | 0.15 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.76 | ± 0.23 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.76 | ± 0.23 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.56 | ± 0.17 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485376

*Assigner*
SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-009) OZ-05-1 OZ-05-1 OZ-05 (0-40) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87832228 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.11 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.67 | ± 0.20 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 2381 6400 5912 4761

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485377

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-010) OZ-05-2 OZ-05-2 OZ-05 (40-80) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87832225 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 85.1 | ± 8.51 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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Ackred. nr 1006
Provning
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# REPORT
issued by an Accredited Laboratory



## Report No. 19485377

*Assigner*
SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-010) OZ-05-2 OZ-05-2 OZ-05 (40-80) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87832225 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 2281 6902 5819 4565

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485378

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-011) OZ-06-1 OZ-06-1 OZ-06 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87832000 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 82.7 | ± 8.27 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.15 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.78 | ± 0.23 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.78 | ± 0.23 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.39 | ± 0.12 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485378

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-011) OZ-06-1 OZ-06-1 OZ-06 (0-50) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87832000 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.39 | ± 0.12 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

*Comment*

*Increased reporting limit for N-MeFOSAA due to disturbances from other substances in the sample.*

Linköping 2019-11-13
The report has been reviewed and approved by

Emil Johansson
Responsible reviewer
Control numbers 2181 6007 5213 4868

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485379

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-012) OZ-06-2 OZ-06-2 OZ-06 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87833345 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 89.8 | ± 8.98 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485379

*Assigner*
SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-012) OZ-06-2 OZ-06-2 OZ-06 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87833345 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 2081 6001 5617 4264

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485380

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-013) OZ-07-1 OZ-07-1 OZ-07 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87832115 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 83.2 | ± 8.32 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.13 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.58 | ± 0.17 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.58 | ± 0.17 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.52 | ± 0.16 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
Page 2 (2)
issued by an Accredited Laboratory

## Report No. 19485380

*Assigner*
SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-013) OZ-07-1 OZ-07-1 OZ-07 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87832115 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.11 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.63 | ± 0.19 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 1916 8909 5412 4963

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Registered 556152-0916 Registered office: Linköping, Sweden

Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT
issued by an Accredited Laboratory



## Report No. 19485381

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-014) OZ-07-2 OZ-07-2 OZ-07 (50-95) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87832227 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 95.8 | ± 9.58 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485381

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-014) OZ-07-2 OZ-07-2 OZ-07 (50-95) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87832227 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 1816 8803 5612 4463

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Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT
issued by an Accredited Laboratory



## Report No. 19485382

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-015) OZ-08-1 OZ-08-1 OZ-08 (0-50) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87833531 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.7 | ± 8.07 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.22 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.73 | ± 0.22 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.73 | ± 0.22 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.46 | ± 0.14 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485382

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-015) OZ-08-1 OZ-08-1 OZ-08 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87833531 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.17 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.63 | ± 0.19 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 1716 8804 5817 4264

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485383

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-016) OZ-08-3 OZ-08-3 OZ-08 (65-100) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87832590 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 96.2 | ± 9.62 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485383

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-016) OZ-08-3 OZ-08-3 OZ-08 (65-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87832590 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 1616 8806 5310 4367

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485384

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-017) OZ-09-1 OZ-09-1 OZ-09 (0-50) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87833717 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 79.3 | ± 7.93 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.13 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.86 | ± 0.26 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.86 | ± 0.26 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.56 | ± 0.17 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485384

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-017) OZ-09-1 OZ-09-1 OZ-09 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87833717 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.16 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.72 | ± 0.22 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 1516 8107 5519 4965

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT



issued by an Accredited Laboratory

## Report No. 19485385

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-018) OZ-09-2 OZ-09-2 OZ-09 (50-90) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87831361 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 79.7 | ± 7.97 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.23 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.23 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485385

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-018) OZ-09-2 OZ-09-2 OZ-09 (50-90) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87831361 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

*Comment*

*Increased reporting limit for some PFAS due to disturbances from other substances in the sample.*

Linköping 2019-11-13
The report has been reviewed and approved by

Emil Johansson
Responsible reviewer
Control numbers 1416 8704 5615 4261

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485386

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-019) OZ-10-1 OZ-10-1 OZ-10 (0-50) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834154 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 78.9 | ± 7.89 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.24 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.88 | ± 0.26 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | 0.12 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 1.0 | ± 0.30 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.45 | ± 0.14 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485386

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-019) OZ-10-1 OZ-10-1 OZ-10 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834154 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.18 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.63 | ± 0.19 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 1316 8707 5013 4866

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485387

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-020) OZ-10-2 OZ-10-2 OZ-10 (50-90) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834375 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 79.5 | ± 7.95 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.27 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.27 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.11 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485387

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-020) OZ-10-2 OZ-10-2 OZ-10 (50-90) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834375 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

*Comment*

*Increased reporting limit for some PFAS due to disturbances from other substances in the sample.*

Linköping 2019-11-13
The report has been reviewed and approved by

Emil Johansson
Responsible reviewer
Control numbers 1216 8707 5718 4963

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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Registered 556152-0916 Registered office: Linköping, Sweden

Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT



issued by an Accredited Laboratory

## Report No. 19485388

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-021) OZ-11-1 OZ-11-1 OZ-11 (0-30) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834887 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.8 | ± 8.08 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.63 | ± 0.19 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.63 | ± 0.19 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.40 | ± 0.12 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485388

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-021) OZ-11-1 OZ-11-1 OZ-11 (0-30) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834887 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.15 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.55 | ± 0.17 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 1116 8100 5810 4062

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485389

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-022) OZ-11-3 OZ-11-3 OZ-11 (80-115) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834835 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 86.1 | ± 8.61 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485389

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-022) OZ-11-3 OZ-11-3 OZ-11 (80-115) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834835 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 1016 8208 5713 4263

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485390

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-023) OZ-12-1 OZ-12-1 OZ-12 (0-40) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87832262 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 79.4 | ± 7.94 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.21 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.21 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
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## Report No. 19485390

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-023) OZ-12-1 OZ-12-1 OZ-12 (0-40) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87832262 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 0169 8604 5811 4663

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485391

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-024) OZ-12-3 OZ-12-3 OZ-12 (85-100) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834528 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 92.5 | ± 9.25 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
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## Report No. 19485391

*Assigner*
SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-024) OZ-12-3 OZ-12-3 OZ-12 (85-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834528 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 0168 8306 5312 4260

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485392

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-025) OZ-13-1 OZ-13-1 OZ-13 (0-50) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834269 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.1 | ± 8.01 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.23 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.23 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.12 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT
issued by an Accredited Laboratory



## Report No. 19485392

*Assigner*
SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-025) OZ-13-1 OZ-13-1 OZ-13 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834269 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.12 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 0167 8202 5910 4965

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Provning
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# REPORT
issued by an Accredited Laboratory



## Report No. 19485393

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-026) OZ-13-2 OZ-13-2 OZ-13 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834105 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 81.7 | ± 8.17 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485393

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-026) OZ-13-2 OZ-13-2 OZ-13 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834105 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 0166 8903 5010 4263

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485394

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-027) OZ-14-1 OZ-14-1 OZ-14 (0-50) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87831891 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.2 | ± 8.02 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.16 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.40 | ± 0.12 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.40 | ± 0.12 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.12 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485394

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-027) OZ-14-1 OZ-14-1 OZ-14 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87831891 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.12 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 0165 8403 5618 4269

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485395

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-028) OZ-14-2 OZ-14-2 OZ-14 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834714 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 84.9 | ± 8.49 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485395

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-028) OZ-14-2 OZ-14-2 OZ-14 (50-100) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834714 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 0164 8007 5115 4664

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Ackred. nr 1006
Provning
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# REPORT



issued by an Accredited Laboratory

## Report No. 19485397

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-029) OZ-15-1 OZ-15-1 OZ-15 (0-50) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834864 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 85.7 | ± 8.57 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.13 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.71 | ± 0.21 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.71 | ± 0.21 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.42 | ± 0.13 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485397

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-029) OZ-15-1 OZ-15-1 OZ-15 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834864 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.22 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.64 | ± 0.19 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 0162 8308 5113 4768

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485398

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-030) OZ-15-2 OZ-15-2 OZ-15 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834806 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 91.8 | ± 9.18 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.21 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.21 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.19 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485398

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-030) OZ-15-2 OZ-15-2 OZ-15 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834806 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.19 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 0161 8205 5012 4464

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485399

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-031) OZ-16-1 OZ-16-1 OZ-16 (0-50) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834465 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 74.9 | ± 7.49 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.24 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | 0.30 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.84 | ± 0.25 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | 0.11 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.95 | ± 0.29 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.40 | ± 0.12 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
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## Report No. 19485399

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-031) OZ-16-1 OZ-16-1 OZ-16 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834465 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.12 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.52 | ± 0.16 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 0160 8200 5015 4060

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485400

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-032) OZ-16-2 OZ-16-2 OZ-16 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87833018 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 76.2 | ± 7.62 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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Registered 556152-0916 Registered office: Linköping, Sweden

Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT



issued by an Accredited Laboratory

## Report No. 19485400

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-032) OZ-16-2 OZ-16-2 OZ-16 (50-100) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87833018 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 9983 0250 1516 4256

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485401

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-033) OZ-17-1 OZ-17-1 OZ-17 (0-50) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834244 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 76.3 | ± 7.63 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.28 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | 0.13 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.60 | ± 0.18 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.60 | ± 0.18 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | 0.10 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.65 | ± 0.20 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485401

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-033) OZ-17-1 OZ-17-1 OZ-17 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834244 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.11 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.76 | ± 0.23 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 9881 0852 1916 4252

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485402

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-034) OZ-17-2 OZ-17-2 OZ-17 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834473 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 89.1 | ± 8.91 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485402

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-034) OZ-17-2 OZ-17-2 OZ-17 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834473 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 9782 0255 1916 4252

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485403

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-035) OZ-18-1 OZ-18-1 OZ-18 (0-50) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834470 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 78.5 | ± 7.85 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.38 | ± 0.11 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | 0.22 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.96 | ± 0.29 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485403

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-035) OZ-18-1 OZ-18-1 OZ-18 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834470 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.96 | ± 0.29 | ug/kg TS |
| Calculated | PFOS, total | 1.9 | ± 0.57 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 9684 0850 1616 4251

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485404

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-036) OZ-18-2 OZ-18-2 OZ-18 (50-100) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834466 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 87.8 | ± 8.78 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.10 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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Ackred. nr 1006
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ISO/IEC 17025

# REPORT



issued by an Accredited Laboratory

## Report No. 19485404

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-036) OZ-18-2 OZ-18-2 OZ-18 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834466 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.10 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.20 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 9581 0353 1916 4752

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Ackred. nr 1006
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# REPORT



issued by an Accredited Laboratory

## Report No. 19485405

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-037) OZ-19-1 OZ-19-1 OZ-19 (0-50) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87833158 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 78.6 | ± 7.86 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.20 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | 0.12 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.72 | ± 0.22 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | 0.10 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.82 | ± 0.25 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 1.5 | ± 0.45 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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Ackred. nr 1006
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# REPORT



issued by an Accredited Laboratory

## Report No. 19485405

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-037) OZ-19-1 OZ-19-1 OZ-19 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87833158 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.47 | ± 0.14 | ug/kg TS |
| Calculated | PFOS, total | 2.0 | ± 0.60 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 9488 0555 1716 4453

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485406

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-038) OZ-19-2 OZ-19-2 OZ-19 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834469 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 79.9 | ± 7.99 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.13 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485406

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-038) OZ-19-2 OZ-19-2 OZ-19 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834469 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.13 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 9385 0553 1916 4255

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485407

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-039) OZ-20-1 OZ-20-1 OZ-20 (0-50) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834437 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 81.7 | ± 8.17 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.32 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.51 | ± 0.15 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | 0.10 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.61 | ± 0.18 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.61 | ± 0.18 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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Ackred. nr 1006
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# REPORT



issued by an Accredited Laboratory

## Report No. 19485407

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-039) OZ-20-1 OZ-20-1 OZ-20 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834437 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.29 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.90 | ± 0.27 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 9283 0453 1616 4558

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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Tel: + 46 13 254 900 · Fax: + 46 13 121 728
Registered 556152-0916 Registered office: Linköping, Sweden

Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT



issued by an Accredited Laboratory

## Report No. 19485408

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-040) OZ-20-2 OZ-20-2 OZ-20 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834301 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 87.5 | ± 8.75 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.19 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.19 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.17 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485408

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-040) OZ-20-2 OZ-20-2 OZ-20 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834301 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.17 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

*Comment*

*Increased reporting limit for N-MeFOSAA due to disturbances from other substances in the sample.*

Linköping 2019-11-13
The report has been reviewed and approved by

Emil Johansson
Responsible reviewer
Control numbers 9186 0857 1816 4356

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Provning
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# REPORT
issued by an Accredited Laboratory



## Report No. 19485409

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

***Sediment***

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-041) RV-01-1 RV-01-1 RV-01 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834689 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 77.9 | ± 7.79 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.16 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.70 | ± 0.21 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.70 | ± 0.21 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.34 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485409

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-041) RV-01-1 RV-01-1 RV-01 (0-50) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834689 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.34 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 9089 0856 1516 4452

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485410

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-042) RV-01-2 RV-01-2 RV-01 (50-90) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834526 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 82.1 | ± 8.21 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.14 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.29 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.29 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485410

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-042) RV-01-2 RV-01-2 RV-01 (50-90) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834526 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 8989 0557 1160 4051

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485411

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-043) RV-02-1 RV-02-1 RV-02 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87832235 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 75.6 | ± 7.56 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.52 | ± 0.16 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.52 | ± 0.16 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.40 | ± 0.12 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485411

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-043) RV-02-1 RV-02-1 RV-02 (0-50) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87832235 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.11 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.51 | ± 0.15 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.5 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

*Comment*

*Increased reporting limit for some PFAS due to disturbances from other substances in the sample.*

Linköping 2019-11-13
The report has been reviewed and approved by

Emil Johansson
Responsible reviewer
Control numbers 8889 0459 1162 4459

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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Ackred. nr 1006
Provning
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# REPORT



issued by an Accredited Laboratory

## Report No. 19485412

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-044) RV-02-2 RV-02-2 RV-02 (50-100) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834722 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 84.6 | ± 8.46 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.13 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.25 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.25 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485412

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-044) RV-02-2 RV-02-2 RV-02 (50-100) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834722 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 8785 0459 1167 4454

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485413

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-045) RV-03-1 RV-03-1 RV-03 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834592 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 77.3 | ± 7.73 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.12 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.65 | ± 0.20 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.65 | ± 0.20 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.34 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485413

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-045) RV-03-1 RV-03-1 RV-03 (0-50) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834592 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.34 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 8688 0755 1168 4855

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485414

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-046) RV-03-2 RV-03-2 RV-03 (50-100) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834789 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 82.3 | ± 8.23 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485414

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-046) RV-03-2 RV-03-2 RV-03 (50-100) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834789 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**

The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**

Control numbers 8582 0354 1163 4154

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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Registered 556152-0916 Registered office: Linköping, Sweden

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485415

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-047) RV-04-1 RV-04-1 RV-04 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834579 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 76.5 | ± 7.65 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.74 | ± 0.22 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.74 | ± 0.22 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.45 | ± 0.14 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485415

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-047) RV-04-1 RV-04-1 RV-04 (0-50) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834579 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.14 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.59 | ± 0.18 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 8486 0958 1166 4359

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485416

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-048) RV-04-2 RV-04-2 RV-04 (50-100) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834589 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.3 | ± 8.03 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485416

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-048) RV-04-2 RV-04-2 RV-04 (50-100) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834589 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 8383 0752 1168 4353

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485418

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-049) RV-05-1 RV-05-1 RV-05 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834739 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 77.9 | ± 7.79 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.58 | ± 0.17 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.58 | ± 0.17 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.47 | ± 0.14 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485418

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-049) RV-05-1 RV-05-1 RV-05 (0-50) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834739 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.10 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.57 | ± 0.17 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 8185 0355 1168 4258

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485419

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-050) RV-05-2 RV-05-2 RV-05 (50-100) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834606 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 82.6 | ± 8.26 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.17 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.17 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485419

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-050) RV-05-2 RV-05-2 RV-05 (50-100) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834606 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 8082 0856 1164 4659

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485420

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-051) RV-06-1 RV-06-1 RV-06 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834521 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 78.6 | ± 7.86 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.14 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.74 | ± 0.22 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.74 | ± 0.22 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.45 | ± 0.14 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485420

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-051) RV-06-1 RV-06-1 RV-06 (0-50) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834521 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.11 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.56 | ± 0.17 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

*Comment*

*Increased reporting limit for some PFAS due to disturbances from other substances in the sample.*

**Linköping 2019-11-13**
The report has been reviewed and approved by

**Emil Johansson**
**Responsible reviewer**
Control numbers 7986 0851 1610 4951

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485421

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-052) RV-06-2 RV-06-2 RV-06 (50-100) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834560 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 79.3 | ± 7.93 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485421

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-052) RV-06-2 RV-06-2 RV-06 (50-100) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834560 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 7888 0950 1611 4357

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485422

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-053) RV-07-1 RV-07-1 RV-07 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834512 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 77.3 | ± 7.73 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.42 | ± 0.13 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.42 | ± 0.13 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.39 | ± 0.12 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485422

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-053) RV-07-1 RV-07-1 RV-07 (0-50) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834512 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.11 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.50 | ± 0.15 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 7780 0856 1611 4551

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485423

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-054) RV-07-2 RV-07-2 RV-07 (50-100) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834556 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 79.5 | ± 7.95 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485423

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-054) RV-07-2 RV-07-2 RV-07 (50-100) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834556 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | - | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.5 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

*Comment*

*Increased reporting limit for some PFAS due to disturbances from other substances in the sample.*

*N-MeFOSAA is excluded due to disturbances from other substances in the sample.*

Linköping 2019-11-13
The report has been reviewed and approved by

Emil Johansson
Responsible reviewer
Control numbers 7689 0657 1619 4857

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485424

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-055) RV-08-1 RV-08-1 RV-08 (0-40) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834300 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.3 | ± 8.03 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.35 | ± 0.11 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485424

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-055) RV-08-1 RV-08-1 RV-08 (0-40) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834300 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.35 | ± 0.11 | ug/kg TS |
| Calculated | PFOS, total | 0.70 | ± 0.21 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 7588 0558 1614 4950

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485425

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-056) RV-08-2 RV-08-2 RV-08 (40-90) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87833670 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 84.3 | ± 8.43 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.22 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.22 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485425

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-056) RV-08-2 RV-08-2 RV-08 (40-90) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87833670 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

*Comment*

*Increased reporting limit for some PFAS due to disturbances from other substances in the sample.*

**Linköping 2019-11-13**
The report has been reviewed and approved by

**Emil Johansson**
**Responsible reviewer**
Control numbers 7480 0657 1618 4451

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485426

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-057) RV-09-1 RV-09-1 RV-09 (0-45) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87833206 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 76.6 | ± 7.66 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.14 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.14 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.31 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
Page 2 (2)
issued by an Accredited Laboratory

## Report No. 19485426

*Assigner*
SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-057) RV-09-1 RV-09-1 RV-09 (0-45) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87833206 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.31 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 7382 0555 1619 4250

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485427

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-058) RV-09-2 RV-09-2 RV-09 (45-95) | | |
| Sampling date | : 2019-10-28 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834450 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 83.4 | ± 8.34 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.14 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.21 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.21 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

SYNLAB Analytics & Services Sweden AB
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Registered 556152-0916 Registered office: Linköping, Sweden

Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT



issued by an Accredited Laboratory

## Report No. 19485427

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-058) RV-09-2 RV-09-2 RV-09 (45-95) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834450 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 7286 0356 1616 4558

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485428

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-059) RV-10-1 RV-10-1 RV-10 (0-30) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87832224 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 78.7 | ± 7.87 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.25 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | 0.16 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.78 | ± 0.23 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.78 | ± 0.23 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.46 | ± 0.14 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485428

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-059) RV-10-1 RV-10-1 RV-10 (0-30) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87832224 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.46 | ± 0.14 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 7188 0353 1614 4956

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485429

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-060) RV-10-3 RV-10-3 RV-10 (50-100) |
| Sampling date | : 2019-10-28 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834541 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 77.5 | ± 7.75 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
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## Report No. 19485429

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-060) RV-10-3 RV-10-3 RV-10 (50-100) | |
| Sampling date | : 2019-10-28 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834541 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 7086 0958 1611 4551

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485430

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

***Sediment***

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-061) RV-11-1 RV-11-1 RV-11 (0-30) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87832833 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 79.2 | ± 7.92 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.16 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485430

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-061) RV-11-1 RV-11-1 RV-11 (0-30) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87832833 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 6988 0251 6211 4754

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485431

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-062) RV-11-3 RV-11-3 RV-11 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834535 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 79.6 | ± 7.96 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485431

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-062) RV-11-3 RV-11-3 RV-11 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834535 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 6885 0451 6515 4953

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485432

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-063) RV-12-1 RV-12-1 RV-12 (0-50) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834270 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 77.1 | ± 7.71 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.19 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.52 | ± 0.16 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.52 | ± 0.16 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.26 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
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## Report No. 19485432

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-063) RV-12-1 RV-12-1 RV-12 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834270 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.26 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 6788 0451 6011 4759

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485433

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-064) RV-12-2 RV-12-2 RV-12 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834410 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 81.4 | ± 8.14 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485433

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-064) RV-12-2 RV-12-2 RV-12 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834410 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 6688 0051 6714 4054

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485434

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-065) RV-13-1 RV-13-1 RV-13 (0-50) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87833856 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 79.0 | ± 7.90 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.14 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.14 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485434

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-065) RV-13-1 RV-13-1 RV-13 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87833856 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 6581 0151 6610 4558

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# REPORT
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## Report No. 19485435

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-066) RV-13-2 RV-13-2 RV-13 (50-100) |
| Sampling date | : 2019-10-30 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87899161 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 88.8 | ± 8.88 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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Ackred. nr 1006
Provning
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SYNLAB Analytics & Services BV
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3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-066) RV-13-2 RV-13-2 RV-13 (50-100) | |
| Sampling date | : 2019-10-30 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87899161 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 6487 0651 6917 4455

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# REPORT



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## Report No. 19485436

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-067) RV-14-1 RV-14-1 RV-14 (0-50) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87831188 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 78.2 | ± 7.82 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-067) RV-14-1 RV-14-1 RV-14 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87831188 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 6389 0351 6813 4554

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485437

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-068) RV-14-2 RV-14-2 RV-14 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87831360 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 82.2 | ± 8.22 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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Rotterdam

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3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-068) RV-14-2 RV-14-2 RV-14 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87831360 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 6289 0351 6714 4659

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485439

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-069) RV-15-1 RV-15-1 RV-15 (0-50) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834468 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.3 | ± 8.03 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.16 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.72 | ± 0.22 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.72 | ± 0.22 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.28 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-069) RV-15-1 RV-15-1 RV-15 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834468 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.13 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.41 | ± 0.12 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 6082 0151 6614 4351

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Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT



issued by an Accredited Laboratory

## Report No. 19485440

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-070) RV-15-2 RV-15-2 RV-15 (50-100) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834451 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.4 | ± 8.04 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485440

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

***Sediment***

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-070) RV-15-2 RV-15-2 RV-15 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834451 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 5982 0416 5311 4053

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Ackred. nr 1006
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# REPORT
issued by an Accredited Laboratory



## Report No. 19485441

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-071) RV-16-1 RV-16-1 RV-16 (0-20) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834911 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 74.5 | ± 7.45 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.24 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 1.3 | ± 0.39 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | 0.21 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 1.5 | ± 0.45 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.37 | ± 0.11 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485441

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-071) RV-16-1 RV-16-1 RV-16 (0-20) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834911 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.24 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.61 | ± 0.18 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 5884 0616 5315 4953

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485442

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-072) RV-16-3 RV-16-3 RV-16 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834693 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 78.4 | ± 7.84 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.15 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.15 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485442

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-072) RV-16-3 RV-16-3 RV-16 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834693 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 5787 0516 5018 4254

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485443

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-073) RV-17-1 RV-17-1 RV-17 (0-50) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834571 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.1 | ± 8.01 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.59 | ± 0.18 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.59 | ± 0.18 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.34 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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Registered 556152-0916 Registered office: Linköping, Sweden

Ackred. nr 1006
Provning
ISO/IEC 17025

# REPORT



issued by an Accredited Laboratory

## Report No. 19485443

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-073) RV-17-1 RV-17-1 RV-17 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834571 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.11 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.45 | ± 0.14 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 5684 0616 5015 4751

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485444

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-074) RV-17-2 RV-17-2 RV-17 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834822 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.9 | ± 8.09 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485444

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-074) RV-17-2 RV-17-2 RV-17 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834822 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 5588 0616 5416 4555

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485445

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-075) RV-18-1 RV-18-1 RV-18 (0-50) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834538 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 81.1 | ± 8.11 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.30 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.11 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | 0.11 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.22 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.62 | ± 0.19 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485445

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-075) RV-18-1 RV-18-1 RV-18 (0-50) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834538 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.62 | ± 0.19 | ug/kg TS |
| Calculated | PFOS, total | 1.2 | ± 0.36 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 5489 0716 5814 4254

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485446

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-076) RV-18-2 RV-18-2 RV-18 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834696 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 86.1 | ± 8.61 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.20 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.20 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.14 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485446

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-076) RV-18-2 RV-18-2 RV-18 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834696 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.14 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.5 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

*Comment*

*Increased reporting limit for some PFAS due to disturbances from other substances in the sample.*

**Linköping 2019-11-13**
The report has been reviewed and approved by

**Emil Johansson**
**Responsible reviewer**
Control numbers 5381 0616 5315 4454

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

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Ackred. nr 1006
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# REPORT



issued by an Accredited Laboratory

## Report No. 19485447

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | |
|---|---|
| Date of Arrival | : 2019-11-06 |
| Time of Arrival | : 1110 |
| Temperature at arrival | : |

| | |
|---|---|
| Sample name | : (13136554-077) RV-19-1 RV-19-1 RV-19 (0-50) |
| Sampling date | : 2019-10-29 |
| Sampling time | : |
| Sampler | : - |
| Depth of sampling | : - |
| Invoice reference | : P91906 |
| Label-id @mis | : 87834718 |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 80.4 | ± 8.04 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.20 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | 0.13 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.80 | ± 0.24 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.80 | ± 0.24 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.33 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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Ackred. nr 1006
Provning
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# REPORT



issued by an Accredited Laboratory

## Report No. 19485447

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

***Sediment***

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-077) RV-19-1 RV-19-1 RV-19 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834718 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | 0.13 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.46 | ± 0.14 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 5288 0016 5918 4154

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485448

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-078) RV-19-2 RV-19-2 RV-19 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834854 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 87.8 | ± 8.78 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485448

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-078) RV-19-2 RV-19-2 RV-19 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834854 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

Linköping 2019-11-12
The report has been reviewed and approved by

Patric Eklundh
Responsible reviewer
Control numbers 5182 0316 5017 4153

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# REPORT
issued by an Accredited Laboratory



## Report No. 19485449

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-079) RV-20-1 RV-20-1 RV-20 (0-50) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834374 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 81.3 | ± 8.13 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | 0.10 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | 0.33 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | 0.33 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | 0.13 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT
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## Report No. 19485449

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-079) RV-20-1 RV-20-1 RV-20 (0-50) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834374 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | 0.13 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 5087 0316 5011 4654

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485450

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | | |
|---|---|---|---|
| | | Date of Arrival | : 2019-11-06 |
| | | Time of Arrival | : 1110 |
| | | Temperature at arrival | : |
| Sample name | : (13136554-080) RV-20-2 RV-20-2 RV-20 (50-100) | | |
| Sampling date | : 2019-10-29 | | |
| Sampling time | : | | |
| Sampler | : - | | |
| Depth of sampling | : - | | |
| Invoice reference | : P91906 | | |
| Label-id @mis | : 87834449 | | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| SS-EN 12880 | Dry substance | 87.9 | ± 8.79 | % |
| DIN 38414-14 mod. | Perfluorbutanoic acid, PFBA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoic acid,PFPeA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoic acid, PFHxA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoic acid,PFHpA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, linear | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOA, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOA, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluornonanoic acid, PFNA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordecanoic acid, PFDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorundec. acid, PFUnDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluordodec. acid, PFDoDA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortridec.acid, PFTrDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluortetradecacid, PFTeDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluorhexadec.acid, PFHxDA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluoroctadec.acid, PFODA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorbutanoicsulphon.PFBS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorpentanoicsulph.PFPeS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorhexanoicsulpho.PFHxS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Perfluorheptanoicsulph.PFHpS | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | PFOS, linear | < 0.1 | ± 0.10 | ug/kg TS |

(*) :Method not accredited by Swedac

PFOA = Perfluoroctane acid PFOS = Perfluoroctane sulfonate

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

(continued)

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# REPORT



issued by an Accredited Laboratory

## Report No. 19485450

*Assigner*

SYNLAB Analytics & Services BV
Rotterdam

Steenhouwerstraat 15
3194AG ROTTERDAM, NL

*Applies to*

*Sediment*

Level 1 : Rotterdam Nautilus Order

### *Information about sample and sampling*

| | | |
|---|---|---|
| | Date of Arrival | : 2019-11-06 |
| | Time of Arrival | : 1110 |
| | Temperature at arrival | : |
| Sample name | : (13136554-080) RV-20-2 RV-20-2 RV-20 (50-100) | |
| Sampling date | : 2019-10-29 | |
| Sampling time | : | |
| Sampler | : - | |
| Depth of sampling | : - | |
| Invoice reference | : P91906 | |
| Label-id @mis | : 87834449 | |

### *Results*

| *Test method* | *Analysis / Investigation of* | *Result* | *Uncertainty* | *Unit* |
|---|---|---|---|---|
| DIN 38414-14 mod. | PFOS, branched | < 0.1 | ± 0.10 | ug/kg TS |
| Calculated | PFOS, total | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Perfluordecanoicsulpho. PFDS | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (4:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (6:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. | Fluortelomersulfo. (8:2 FTS) | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | Fluortelomersulf. (10:2 FTS) | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | N-EtFOSAA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. | Perfluorocta.sulp.amid,PFOSA | < 0.1 | ± 0.10 | ug/kg TS |
| DIN 38414-14 mod. (*) | N-MeFOSA | < 0.1 | | ug/kg TS |
| DIN 38414-14 mod. (*) | 8:2 diPAP | < 0.1 | | ug/kg TS |

(*) :Method not accredited by Swedac

*The stated uncertainty of measurement is calculated using a coverage k = 2. Measurement uncertainty for accredited microbiological analyses are available from the laboratory upon request.*

**Linköping 2019-11-12**
The report has been reviewed and approved by

**Patric Eklundh**
**Responsible reviewer**
Control numbers 4985 0161 5714 4857

Results refer only to the submitted sample. Unless the laboratory has written otherwise, the report may only be reproduced in its entirety.

# Bijlage 5 Begrippenlijst

**Bagger(specie)**
Baggerspecie is materiaal dat is vrijgekomen uit de bodem via het oppervlaktewater of de voor dat water bestemde ruimte en bestaat uit minerale delen met een maximale korrelgrootte van 2 millimeter en organisch stof in een verhouding en met een structuur zoals deze in de bodem van nature wordt aangetroffen, alsmede van nature in de bodem voorkomende schelpen en grind met een korrelgrootte van 2 tot 63 millimeter.
Baggerspecie die in het kader van het Besluit bodemkwaliteit nuttig wordt toegepast mag maximaal 20 gewichtsprocent aan bodemvreemd materiaal bevatten. De gemeente heeft voor het toepassen op of in de landboden hiervoor strenger beleid vastgesteld.

**Barium**
Voor barium bestaat op dit moment geen norm. De destijds voor deze stof geldende normen zijn per 4 april 2009 (Staatscourant nr. 67, publicatie 7 april 2009) ingetrokken omdat de interventiewaarde lager was dan het gehalte dat van nature in de bodem voorkomt. Dit blijft gehandhaafd. De onderzoeksgegevens over barium moeten wel in de bodemkwaliteitskaarten worden meegenomen, aangezien barium onderdeel uitmaakt van het stoffenpakket, met dien verstande dat geen eisen worden gesteld aan het aantal waarnemingen. Deze gegevens kunnen namelijk een indicatie zijn voor de aanwezigheid van antropogene bronnen die ook andere verontreinigingen met zich mee kunnen brengen.
Als verhoogde bariumgehalten ten opzichte van de natuurlijke achtergrondwaarden worden aangetroffen als gevolg van een menselijke activiteit, kan dit gehalte worden beoordeeld op basis van de voormalige interventiewaarde voor barium: 920 mg/kg d.s. (bij standaardbodem lutum 25%, organisch stof 10%).

**Bodembeheergebied**
Een aaneengesloten, door het bestuursorgaan (bijvoorbeeld een gemeente, waterschap of Rijkswaterstaat) afgebakend deel van de oppervlakte van een of meer gemeenten of het beheergebied van een of meer beheerders.

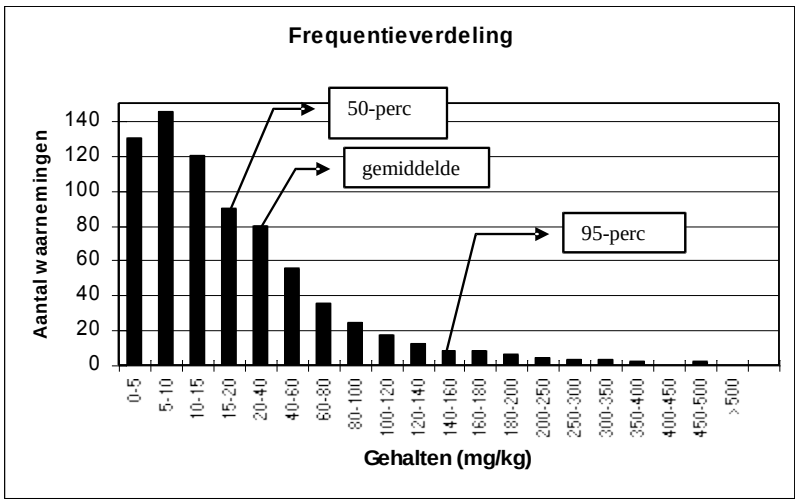
**Bodemkwaliteitszone**
Een deel van een bodembeheergebied waarvoor geldt dat er sprake is van een zelfde gebiedseigen bodemkwaliteit, waarbij zowel de verwachtingswaarde als de mate van variabiliteit van belang zijn. De spreiding van gehalten binnen een bodemkwaliteitszone is relatief laag. Een bodemkwaliteitszone is begrensd in het horizontale vlak én het verticale vlak (diepte). Wanneer een bodemkwaliteitszone uit meerdere gebieden bestaat die niet aan elkaar grenzen, worden de individuele gebieden aangeduid als ‘niet-aaneengesloten bodemkwaliteitszone’.

**Bijzondere omstandigheden**
Voor een binnen een bodemkwaliteitszone liggend gebied geldt dat er sprake is van bijzondere omstandigheden, als er voor dat gebied een afwijkende verwachtingswaarde geldt ten opzichte van de verwachtingswaarde van de betreffende bodemkwaliteitszone. Te denken valt aan voor bodemverontreiniging verdachte locaties, onderzochte locaties, locaties waar een sanering

heeft plaatsgevonden of locaties met onvoorziene visuele waarnemingen (bodemvreemde materialen, kleur, geur). Ook beschermde gebieden zoals bijvoorbeeld voor de ecologie, archeologie, aardkundige waarden en cultuurhistorie vallen onder de bijzondere omstandigheden. In gebieden met bijzondere omstandigheden kunnen vanuit andere wet- en regelgeving aanvullende eisen worden gesteld.

**Deelgebied**
Deel van een bodembeheergebied waarvoor geldt dat dit op eenduidige wijze kan worden gekarakteriseerd door middel van de voor het bodembeheergebied geldende onderscheidende gebiedskenmerken. In tegenstelling tot de bodemkwaliteitszone is er voor het deelgebied nog geen toetsing uitgevoerd of het daadwerkelijk een bodemkwaliteitszone is. Wanneer een deelgebied uit meerdere terreinen bestaat die niet aan elkaar grenzen, worden de individuele gebieden aangeduid als 'niet-aaneengesloten deelgebieden'.

**Diffuse chemische bodemkwaliteit**
De diffuse chemische bodemkwaliteit in een bepaald gebied is de verdeling van gehalten van stoffen in dat gebied waarvoor de bodemkwaliteitskaart is vastgesteld. Deze verdeling kan worden gekwantificeerd door statistische parameters (gemiddelde, percentielwaarden).




**Heterogeniteit**
Wanneer de diffuse bodemverontreiniging in een zone zeer heterogeen is verdeeld, is de betrouwbaarheid van het gemiddelde gehalte in de zone ook kleiner. Bij zones met een hoge heterogeniteit kan de gemeente besluiten dat de bodemkwaliteitskaart in bepaalde situaties niet gebruikt mag worden als bewijsmiddel. Het vastgestelde gemiddelde gehalte heeft naar mening van de gemeente dan een te lage betrouwbaarheid. Een zekere heterogeniteit op zich hoeft overigens geen probleem te zijn zolang er geen sprake is van een gebruiksrisico. De heterogeniteit van een stof in een zone wordt bepaald door een index die volgt uit de volgende formule:

$$heterogeniteit = \frac{(P95 - P5)}{(maximale\ waarde\ industrie - Achtergrondwaarde}$$

De beoordeling van de heterogeniteitsindex is als volgt:

| | |
|---|---|
| Index < 0,2 | : weinig heterogeniteit |
| 0,2 < Index < 0,5 | : beperkte heterogeniteit |
| 0,5 < Index < 0,7 | : er is sprake van heterogeniteit |
| Index > 0,7 | : sterke heterogeniteit |

**Interventiewaarde**
Wanneer een gemeten gehalte hoger is dan de interventiewaarde uit de Wet bodembescherming wordt gesproken over een sterke verontreiniging of een sterk verhoogd gehalte. De interventiewaarden zijn vastgelegd in de Circulaire bodemsanering 2009, zoals gewijzigd op 1 juli 2013 (gepubliceerd in de Staatscourant nr. 16675, d.d. 27 juni 2013).

**Lokale bron (puntbron)**
Duidelijk aanwijsbare bron voor een eventuele bodemverontreiniging zoals bijvoorbeeld een ondergrondse tank voor de opslag van olie, een ontvettingsbad of een afleverzuil voor brandstof(fen).

**PFAS-gehalten en effect op de kwaliteitsklassen**
*(Bron: https://www.bodemplus.nl/onderwerpen/wet-regelgeving/bbk/vragen/grond-baggerspecie-pfas-veldwerk-analyse-toetsing/faq/resultaten-pfas-onderzoek-toetsen-aanvulling/)*
Op dit moment is de toetsing aan de PFAS-verbindingen een aanvullende (losse) toets ten opzichte van de toetsing op de reguliere parameters en indeling in kwaliteitsklassen. Dat betekent dat eerst de toetsing plaatsvindt op basis van de reguliere parameters en op basis daarvan een indeling in kwaliteitsklasse plaatsvindt.

Vervolgens vindt de toetsing aan de toepassingsnormen uit geactualiseerde tijdelijk handelingskader van 29 november 2019 voor de PFAS-verbindingen plaats. Aan de hand van de aanvullende toetsing stel je vervolgens vast in hoeverre beperkingen aan de toepassing gelden, bijvoorbeeld een verbod op het toepassen onder grondwaterniveau of in oppervlaktewater. Voor PFAS zijn de bijzondere toetsregels voor het toetsen aan de Achtergrondwaarde of maximale waarde wonen niet van toepassing, omdat nog geen normen zijn opgenomen in bijlage B van de Regeling bodemkwaliteit. Ook tellen de gemeten PFAS niet mee als gemeten stoffen bij de bijzondere toetsregels voor het toetsen aan de achtergrondwaarde of maximale waarde wonen.

Bij de inbouw van het handelingskader in de Regeling bodemkwaliteit wordt de wijze van toetsen aan normwaarden nader ingevuld.

<u>Voorbeeld</u>
Als een partij baggerspecie op basis van de overige stoffen is gekwalificeerd in de bodemkwaliteitsklasse A, dan moet aanvullend de PFAS-gehalten worden bepaald. Voldoen alle PFAS-gehalten aan de bepalingsgrens (0,1 µg/kg d.s.), dan blijft de indeling in de bodemkwaliteitsklasse A staan en gelden geen toepassingsvoorwaarden. Worden hogere PFAS-gehalten aangetoond, dan kan het zijn dat er toepassingsbeperkingen zijn afhankelijk van de locatie van toepassing en het gekozen toepassingskader. Bij het onder voorwaarden

toepassen van baggerspecie in niet-vrijliggende diepe plassen die in verbinding staan met een Rijkswater geldt het voorlopige herverontreinigingsniveau als toepassingsnorm voor PFAS (3,7 µg/kg ds voor PFOS en 0,8 µg/kg ds voor PFOA en de andere (individuele) PFAS.

**Percentiel/percentielwaarde**
Waarde waar beneden een bepaald percentage van de analyseresultaten gelegen is. Bijvoorbeeld 80-percentiel: 80% van de analyseresultaten ligt beneden deze waarde.

**Uitbijters**
Een uitbijter is een gehalte in het gegevensbestand dat niet representatief is voor de diffuse chemische bodemkwaliteit in een deelgebied. De (potentiële) uitbijters worden met een visuele methode (scatterplots) inzichtelijk gemaakt. Het niet representatieve gehalte is het gevolg van duidelijk aantoonbare menselijke activiteiten: puntverontreinigingen, verdachte locaties, typfouten tijdens invoer.

**Variatiecoëfficiënt**
Maat voor de spreiding in gehalten (standaarddeviatie gedeeld door het gemiddelde).

# Bijlage 6 Statistische parameters waterbodemkwaliteitszones

## Statistische parameters, toetsing aan Besluit Bodemkwaliteit (Waterbodems)

* De norm voor Barium geldt alleen voor die situaties waarbij duidelijke sprake is van antropogene bodemverontreiniging. Voor overige situaties is de norm voor Barium tijdelijk buitenwerking gesteld.
** In verband met 1 of meer gemiddelde gehalten PFAS > 0,0001 mg/kg gelden mogelijk aanvullende toepassingseisen.

- waarde > max. waarde klasse B
- max. waarde klasse A < waarde < max. waarde klasse B
- achtergrondwaarde < waarde < max. waarde klasse A
- waarde < achtergrondwaarde (minimaal 1x >d gemeten)
- waarde < achtergrondwaarde (alleen <d gemeten)
- waarde > hergebruiksnorm conform § 4.8.2 en 4.9.2 uit het Tijdelijk Handelingskader PFAS (versie 29 november 2019) **
- waarde > hergebruiksnorm conform § 4.9.1 uit het Tijdelijk Handelingskader PFAS (versie 29 november 2019) **

**Zone** **Statistische parameters**

| **Oeverzone, toplaag (0 - 0,5 m-wb)** | | | | | | | | | | | Waterbodemkwaliteitsklasse: | | | | Klasse B | | Lut = | 25,0 % | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gezoneerd: | ja | | | | | | | | | | | | | | | | OS = | 10,0 % | |
| Stoffen | N | Min | 5P | 25P | 50P | 75P | 80P | 90P | 95P | Max | 80% MIN | Gem | 80% MAX | VC | Hetero-geniteit | P95> I | achtergrond waarde | klasse A | klasse B / interventie-waarde |
| Arseen | 24 | 7,9 | 12,7 | 15,6 | 18,8 | 22,8 | 22,8 | 26,3 | 35,0 | 54,6 | 18,2 | 20,4 | 22,5 | 0,40 | 0,34 | nee | 20,00 | 29,00 | 85,0 |
| Barium* | 24 | 67,8 | 87,9 | 125,7 | 134,4 | 152,0 | 156,6 | 195,2 | 288,1 | 526,0 | 135,2 | 155,6 | 175,9 | 0,50 | n.v.t. | n.v.t. | 190,00 | n.v.t. | n.v.t. |
| Cadmium | 24 | 1,04 | 1,49 | 2,25 | 2,49 | 3,61 | 4,07 | 6,80 | 10,60 | 20,12 | 3,08 | 3,98 | 4,88 | 0,87 | 0,68 | nee | 0,60 | 4,00 | 14,0 |
| Chroom | 24 | 23,1 | 26,5 | 36,8 | 44,5 | 49,7 | 51,8 | 56,0 | 57,9 | 73,6 | 41,0 | 43,7 | 46,5 | 0,24 | 0,10 | nee | 55,0 | 120,0 | 380,0 |
| Kobalt | 24 | 9,2 | 11,4 | 15,1 | 16,8 | 20,0 | 20,9 | 21,7 | 23,1 | 23,2 | 16,5 | 17,3 | 18,2 | 0,19 | 0,05 | nee | 15,0 | 25,0 | 240,0 |
| Koper | 24 | 22,3 | 26,3 | 37,5 | 46,9 | 51,5 | 57,6 | 98,9 | 154,3 | 234,3 | 49,0 | 59,7 | 70,4 | 0,68 | 0,85 | nee | 40,0 | 96,0 | 190,0 |
| Kwik | 24 | 0,15 | 0,24 | 0,30 | 0,35 | 0,50 | 0,56 | 1,26 | 1,66 | 2,81 | 0,44 | 0,58 | 0,73 | 0,96 | 0,14 | nee | 0,15 | 1,20 | 10,0 |
| Lood | 24 | 85,9 | 90,9 | 133,8 | 167,3 | 203,5 | 247,6 | 433,8 | 608,9 | 892,1 | 186,1 | 230,5 | 274,9 | 0,74 | 0,98 | ja | 50,0 | 138,0 | 580,0 |
| Molybdeen | 24 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | n.v.t. | 1,05 | n.v.t. | 0,00 | 0,00 | nee | 1,5 | 5,0 | 200,0 |
| Nikkel | 24 | 19,5 | 23,3 | 33,0 | 37,8 | 42,4 | 43,8 | 47,8 | 50,1 | 51,6 | 35,4 | 37,3 | 39,2 | 0,20 | 0,15 | nee | 35,0 | 50,0 | 210,0 |
| Zink | 24 | 244,8 | 262,3 | 431,3 | 495,4 | 644,0 | 787,9 | 1247,2 | 1777,5 | 2913,9 | 575,3 | 708,6 | 841,8 | 0,72 | 0,81 | nee | 140,0 | 563,0 | 2000,0 |
| PCB28 | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0018 | 0,0024 | 0,0037 | 0,0013 | 0,0014 | 0,0015 | 0,23 | n.v.t. | nee | 0,0015 | 0,0140 | n.v.t. |
| PCB52 | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | n.v.t. | 0,0012 | n.v.t. | 0,00 | n.v.t. | nee | 0,0020 | 0,0150 | n.v.t. |
| PCB101 | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0020 | 0,0022 | 0,0034 | 0,0041 | 0,0047 | 0,0016 | 0,0018 | 0,0019 | 0,34 | n.v.t. | nee | 0,0015 | 0,0230 | n.v.t. |
| PCB118 | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0014 | 0,0019 | 0,0028 | 0,0035 | 0,0040 | 0,0015 | 0,0016 | 0,0017 | 0,29 | n.v.t. | nee | 0,0045 | 0,0160 | n.v.t. |
| PCB138 | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0032 | 0,0050 | 0,0068 | 0,0101 | 0,0110 | 0,0139 | 0,0037 | 0,0042 | 0,0048 | 0,49 | n.v.t. | nee | 0,0040 | 0,0270 | n.v.t. |
| PCB153 | 24 | 0,0012 | 0,0013 | 0,0024 | 0,0035 | 0,0057 | 0,0066 | 0,0116 | 0,0141 | 0,0156 | 0,0045 | 0,0051 | 0,0057 | 0,45 | n.v.t. | nee | 0,0035 | 0,0330 | n.v.t. |
| PCB180 | 24 | 0,0012 | 0,0012 | 0,0021 | 0,0033 | 0,0053 | 0,0058 | 0,0105 | 0,0115 | 0,0121 | 0,0039 | 0,0044 | 0,0049 | 0,44 | n.v.t. | nee | 0,0025 | 0,0180 | n.v.t. |
| PCB (som 7) | 24 | 0,0086 | 0,0088 | 0,0105 | 0,0147 | 0,0213 | 0,0256 | 0,0407 | 0,0474 | 0,0553 | 0,0177 | 0,0196 | 0,0216 | 0,38 | 0,04 | nee | 0,0200 | 0,1390 | 1,0 |
| PAK (som 10) | 24 | 0,3 | 0,9 | 1,3 | 1,5 | 2,9 | 3,4 | 4,3 | 9,2 | 12,7 | 1,9 | 2,7 | 3,5 | 1,07 | 0,22 | nee | 1,5 | 9,0 | 40,0 |
| Minerale olie | 24 | 43,0 | 43,0 | 43,0 | 43,0 | 43,0 | 50,4 | 75,6 | 159,2 | 386,0 | 55,2 | 66,1 | 77,1 | 0,63 | 0,02 | nee | 190,0 | 1250,0 | 5000,0 |
| Pentachloorbenzeen | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0018 | 0,0012 | 0,0012 | 0,0012 | 0,05 | n.v.t. | n.v.t. | 0,0025 | 0,0070 | n.v.t. |
| Hexachloorbenzeen | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0025 | 0,0039 | 0,0042 | 0,0059 | 0,0063 | 0,0068 | 0,0027 | 0,0030 | 0,0032 | 0,33 | n.v.t. | n.v.t. | 0,0085 | 0,0440 | n.v.t. |
| Pentachloorfenol | 23 | 0,0037 | 0,0037 | 0,0037 | 0,0037 | 0,0037 | 0,0037 | 0,0037 | 0,0037 | 0,0037 | n.v.t. | 0,0037 | n.v.t. | 0,00 | 0,00 | nee | 0,0030 | 0,0160 | 5,0 |
| Chloordaan | 24 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | n.v.t. | 0,0025 | n.v.t. | 0,00 | 0,00 | nee | 0,0020 | n.v.t. | 4,0 |
| DDT | 24 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | n.v.t. | 0,0025 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,2000 | n.v.t. | n.v.t. |
| DDD | 24 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | n.v.t. | 0,0025 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0200 | n.v.t. | n.v.t. |
| DDE | 24 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0032 | 0,0033 | 0,0040 | 0,0042 | 0,0051 | 0,0029 | 0,0030 | 0,0031 | 0,14 | n.v.t. | n.v.t. | 0,1000 | n.v.t. | n.v.t. |
| DDT/DDD/DDE | 24 | 0,0074 | 0,0074 | 0,0074 | 0,0074 | 0,0081 | 0,0082 | 0,0089 | 0,0091 | 0,0100 | 0,0078 | 0,0079 | 0,0080 | 0,05 | n.v.t. | nee | 0,3000 | 0,3000 | 4,0 |
| Aldrin | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | n.v.t. | 0,0012 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0008 | 0,0013 | n.v.t. |
| Dieldrin | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | n.v.t. | 0,0012 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0080 | 0,0080 | n.v.t. |
| Endrin | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | n.v.t. | 0,0012 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0035 | 0,0035 | n.v.t. |
| Drins (som 3) | 24 | 0,0037 | 0,0037 | 0,0037 | 0,0037 | 0,0037 | 0,0037 | 0,0037 | 0,0037 | 0,0037 | n.v.t. | 0,0037 | n.v.t. | 0,00 | 0,00 | nee | 0,0150 | 0,0150 | 4,0 |
| Isodrin | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | n.v.t. | 0,0012 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0010 | n.v.t. | n.v.t. |
| Telodrin | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | n.v.t. | 0,0012 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0005 | n.v.t. | n.v.t. |
| α-Endosulfan | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | n.v.t. | 0,0012 | n.v.t. | 0,00 | 0,00 | nee | 0,0009 | 0,0021 | 4,0 |
| Endosulfansulfaat | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | n.v.t. | 0,0012 | n.v.t. | 0,00 | n.v.t. | n.v.t. | n.v.t. | n.v.t. | n.v.t. |
| α-HCH | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | n.v.t. | 0,0012 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0010 | 0,0012 | n.v.t. |
| β-HCH | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | n.v.t. | 0,0012 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0020 | 0,0065 | n.v.t. |
| γ-HCH | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0039 | 0,0081 | 0,0421 | 0,0021 | 0,0033 | 0,0046 | 1,44 | n.v.t. | n.v.t. | 0,0030 | 0,0030 | n.v.t. |
| δ-HCH | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | n.v.t. | 0,0012 | n.v.t. | 0,00 | n.v.t. | n.v.t. | n.v.t. | n.v.t. | n.v.t. |
| HCH (som 4) | 24 | 0,0049 | 0,0049 | 0,0049 | 0,0049 | 0,0049 | 0,0049 | 0,0076 | 0,0118 | 0,0458 | 0,0058 | 0,0070 | 0,0083 | 0,68 | 0,00 | nee | 0,0100 | 0,0100 | 2,0 |
| Heptachloor | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | n.v.t. | 0,0012 | n.v.t. | 0,00 | 0,00 | nee | 0,0007 | 0,0040 | 4,0 |
| Heptachloorepoxide | 24 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | 0,0025 | n.v.t. | 0,0025 | n.v.t. | 0,00 | 0,00 | nee | 0,0020 | 0,0040 | 4,0 |
| Hexachloorbutadieën | 24 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0012 | 0,0018 | 0,0021 | 0,0012 | 0,0012 | 0,0013 | 0,10 | n.v.t. | n.v.t. | 0,0030 | 0,0075 | n.v.t. |
| OCB's (som) | 24 | 0,0282 | 0,0282 | 0,0282 | 0,0285 | 0,0301 | 0,0305 | 0,0322 | 0,0352 | 0,0691 | 0,0298 | 0,0311 | 0,0323 | 0,15 | n.v.t. | nee | 0,4000 | n.v.t. | n.v.t. |
| **Beoordeling PFAS** | | | | | | | | | | | | | | | | | Hergebruiksnormen | | |
| | | | | | | | | | | | | | | | | | Beperking type 1 | Beperking type 2 | |
| **PFOA som lineair + vertakt** | 40 | 0,00010 | 0,00010 | 0,00038 | 0,00061 | 0,00074 | 0,00076 | 0,00082 | 0,00095 | 0,00150 | 0,0005 | 0,00057 | 0,0000 | 0,52 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| **PFOS som lineair + vertakt** | 40 | 0,00010 | 0,00010 | 0,00033 | 0,00051 | 0,00063 | 0,00068 | 0,00077 | 0,00124 | 0,00200 | 0,0005 | 0,00055 | 0,0000 | 0,74 | n.v.t. | nee | 0,0001 | 0,0037 | |
| perfluoroctaanzuur (PFOA) lineair | 40 | 0,00007 | 0,00007 | 0,00038 | 0,00060 | 0,00074 | 0,00075 | 0,00080 | 0,00086 | 0,00130 | 0,0005 | 0,00055 | 0,0000 | 0,51 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluoroctaanzuur (PFOA) vertakt | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00010 | 0,00011 | 0,00021 | 0,0001 | 0,00008 | 0,0000 | 0,31 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluoroctaansulfonzuur (PFOS) lineair | 40 | 0,00007 | 0,00007 | 0,00030 | 0,00039 | 0,00046 | 0,00053 | 0,00061 | 0,00067 | 0,00150 | 0,0004 | 0,00041 | 0,0000 | 0,63 | n.v.t. | nee | 0,0001 | 0,0037 | |
| perfluoroctaansulfonzuur (PFOS) vertakt | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00011 | 0,00015 | 0,00017 | 0,00030 | 0,00048 | 0,00096 | 0,0001 | 0,00016 | 0,0000 | 1,07 | n.v.t. | nee | 0,0001 | 0,0037 | |
| perfluorbutaanzuur (PFBA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00016 | 0,00023 | 0,00024 | 0,00028 | 0,00030 | 0,00038 | 0,0001 | 0,00016 | 0,0000 | 0,53 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorpentaanzuur (PFPeA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00011 | 0,0001 | 0,00007 | 0,0000 | 0,13 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorhexaanzuur (PFHxA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00008 | 0,00013 | 0,00016 | 0,00030 | 0,0001 | 0,00009 | 0,0000 | 0,52 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorheptaanzuur (PFHpA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00011 | 0,0001 | 0,00007 | 0,0000 | 0,09 | n.v.t. | nee | 0,0001 | 0,0008 | |
| perfluornonaanzuur (PFNA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluordecaanzuur (PFDeA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00010 | 0,0001 | 0,00007 | 0,0000 | 0,07 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorundecaanzuur (PFUnDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluordodecaanzuur (PFDoDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | nee | 0,0001 | 0,0008 | |
| perfluortridecaanzuur (PFTrDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluortetradecaanzuur (PFTeDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorhexadecaanzuur (PFHxDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluoroctadecaanzuur (PFODA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorbutaansulfonzuur (PFBS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorpentaansulfonzuur (PFPeS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorhexaansulfonzuur (PFHxS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorheptaansulfonzuur(PFHpS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluordecaansulfonzuur (PFDS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 4:2 fluortelomeer sulfonzuur (4:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 6:2 fluortelomeer sulfonzuur (6:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 8:2 fluortelomeer sulfonzuur (8:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 10:2 fluortelomeer sulfonzuur (10:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| N-methylperfluoroctaansulfonamide acetaat (MeFOSAA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00035 | 0,00035 | 0,0001 | 0,00009 | 0,0000 | 0,83 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| N-ethylperfluoroctaansulfonamide acetaat (EtFOSAA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00035 | 0,0001 | 0,00008 | 0,0000 | 0,55 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluoroctaansulfonamide (PFOSA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| N-methylperfluoroctaansulfonamide (MeFOSA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 8:2 polyfluoralkyl fosfaat diester (8:2 diPAP) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00035 | 0,0001 | 0,00008 | 0,0000 | 0,55 | n.v.t. | nee | 0,0001 | 0,0008 | |

## Statistische parameters, toetsing aan Besluit Bodemkwaliteit (Waterbodems)

* De norm voor Barium geldt alleen voor die situaties waarbij duidelijke sprake is van antropogene bodemverontreiniging. Voor overige situaties is de norm voor Barium tijdelijk buitenwerking gesteld.
** In verband met 1 of meer gemiddelde gehalten PFAS > 0,0001 mg/kg gelden mogelijk aanvullende toepassingseisen.

- waarde > max. waarde klasse B
- max. waarde klasse A < waarde < max. waarde klasse B
- achtergrondwaarde < waarde < max. waarde klasse A
- waarde < achtergrondwaarde (minimaal 1x >d gemeten)
- waarde < achtergrondwaarde (alleen <d gemeten)
- waarde > hergebruiksnorm conform § 4.8.2 en 4.9.2 uit het Tijdelijk Handelingskader PFAS (versie 29 november 2019) **
- waarde > hergebruiksnorm conform § 4.9.1 uit het Tijdelijk Handelingskader PFAS (versie 29 november 2019) **

**Zone** **Statistische parameters**

| **Riviervlakte, toplaag (0 - 0,5 m-wb)** | | | | | | | | | | | | Waterbodemkwaliteitsklasse: | | | Klasse B | | | Lut = | 25,0 | % | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gezoneerd: | ja | | | | | | | | | | | | | | | | | OS = | 10,0 | % | |
| Stoffen | N | Min | 5P | 25P | 50P | 75P | 80P | 90P | 95P | Max | 80% MIN | Gem | 80% MAX | VC | Hetero-geniteit | P95> I | achtergrond waarde | klasse A | klasse B / interventie-waarde | | |
| Arseen | 27 | 9,5 | 11,6 | 15,8 | 18,9 | 23,6 | 24,2 | 27,9 | 31,9 | 36,8 | 18,5 | 20,1 | 21,6 | 0,31 | 0,31 | nee | 20,0 | 29,0 | 85,0 | | |
| Barium* | 27 | 68,6 | 76,1 | 101,5 | 116,0 | 145,0 | 152,7 | 158,5 | 198,1 | 251,3 | 113,3 | 123,7 | 134,1 | 0,34 | n.v.t. | n.v.t. | 190,00 | n.v.t. | n.v.t. | | |
| Cadmium | 27 | 0,38 | 1,10 | 1,75 | 2,03 | 4,17 | 5,00 | 6,42 | 8,48 | 10,59 | 2,61 | 3,17 | 3,72 | 0,71 | 0,55 | nee | 0,60 | 4,00 | 14,0 | | |
| Chroom | 27 | 25,5 | 27,6 | 38,2 | 43,1 | 49,4 | 50,7 | 54,6 | 55,8 | 57,8 | 40,5 | 42,8 | 45,0 | 0,21 | 0,09 | nee | 55,0 | 120,0 | 380,0 | | |
| Kobalt | 27 | 10,6 | 10,9 | 14,5 | 15,5 | 17,9 | 18,4 | 20,1 | 21,3 | 22,3 | 15,4 | 16,2 | 16,9 | 0,19 | 0,05 | nee | 15,0 | 25,0 | 240,0 | | |
| Koper | 27 | 18,0 | 23,7 | 34,5 | 38,2 | 61,0 | 76,0 | 91,7 | 111,4 | 159,3 | 45,3 | 52,9 | 60,4 | 0,58 | 0,58 | nee | 40,0 | 96,0 | 190,0 | | |
| Kwik | 27 | 0,04 | 0,14 | 0,21 | 0,29 | 0,58 | 0,63 | 0,95 | 1,26 | 1,42 | 0,36 | 0,45 | 0,53 | 0,79 | 0,11 | nee | 0,15 | 1,20 | 10,0 | | |
| Lood | 27 | 57,4 | 89,9 | 125,1 | 146,0 | 292,0 | 327,4 | 431,7 | 568,3 | 636,1 | 188,5 | 225,4 | 262,2 | 0,66 | 0,90 | nee | 50,0 | 138,0 | 580,0 | | |
| Molybdeen | 27 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | n.v.t. | 1,05 | n.v.t. | 0,00 | 0,00 | nee | 1,5 | 5,0 | 200,0 | | |
| Nikkel | 27 | 24,3 | 24,8 | 33,5 | 35,9 | 38,8 | 40,4 | 43,1 | 44,3 | 44,6 | 34,2 | 35,6 | 37,0 | 0,16 | 0,11 | nee | 35,0 | 50,0 | 210,0 | | |
| Zink | 27 | 112,9 | 235,1 | 349,0 | 390,1 | 805,8 | 911,5 | 1147,6 | 1437,1 | 1745,1 | 489,9 | 589,6 | 689,4 | 0,69 | 0,65 | nee | 140,0 | 563,0 | 2000,0 | | |
| PCB28 | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | nee | 0,0015 | 0,0140 | n.v.t. | | |
| PCB52 | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | nee | 0,0020 | 0,0150 | n.v.t. | | |
| PCB101 | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0020 | 0,0013 | 0,0013 | 0,0013 | 0,06 | n.v.t. | nee | 0,0015 | 0,0230 | n.v.t. | | |
| PCB118 | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | nee | 0,0045 | 0,0160 | n.v.t. | | |
| PCB138 | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0023 | 0,0024 | 0,0026 | 0,0014 | 0,0015 | 0,0015 | 0,15 | n.v.t. | nee | 0,0040 | 0,0270 | n.v.t. | | |
| PCB153 | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0025 | 0,0026 | 0,0036 | 0,0041 | 0,0044 | 0,0019 | 0,0020 | 0,0022 | 0,28 | n.v.t. | nee | 0,0035 | 0,0330 | n.v.t. | | |
| PCB180 | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0020 | 0,0023 | 0,0030 | 0,0031 | 0,0039 | 0,0017 | 0,0018 | 0,0019 | 0,23 | n.v.t. | nee | 0,0025 | 0,0180 | n.v.t. | | |
| PCB (som 7) | 27 | 0,0090 | 0,0090 | 0,0090 | 0,0090 | 0,0108 | 0,0113 | 0,0140 | 0,0147 | 0,0165 | 0,0102 | 0,0105 | 0,0108 | 0,12 | 0,01 | nee | 0,0200 | 0,1390 | 1,0 | | |
| PAK (som 10) | 27 | 0,2 | 0,3 | 0,7 | 1,0 | 2,1 | 2,5 | 3,2 | 4,4 | 6,7 | 1,2 | 1,6 | 2,0 | 0,94 | 0,11 | nee | 1,5 | 9,0 | 40,0 | | |
| Minerale olie | 27 | 45,0 | 45,0 | 45,0 | 45,0 | 45,0 | 45,0 | 54,2 | 107,9 | 150,7 | 49,4 | 52,8 | 56,1 | 0,26 | 0,01 | nee | 190,0 | 1250,0 | 5000,0 | | |
| Pentachloorbenzeen | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0025 | 0,0070 | n.v.t. | | |
| Hexachloorbenzeen | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0019 | 0,0024 | 0,0030 | 0,0035 | 0,0016 | 0,0017 | 0,0017 | 0,20 | n.v.t. | n.v.t. | 0,0085 | 0,0440 | n.v.t. | | |
| Pentachloorfenol | 27 | 0,0039 | 0,0039 | 0,0039 | 0,0039 | 0,0039 | 0,0039 | 0,0039 | 0,0039 | 0,0039 | n.v.t. | 0,0039 | n.v.t. | 0,00 | 0,00 | nee | 0,0030 | 0,0160 | 5,0 | | |
| Chloordaan | 27 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | n.v.t. | 0,0026 | n.v.t. | 0,00 | 0,00 | nee | 0,0020 | n.v.t. | 4,0 | | |
| DDT | 27 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | n.v.t. | 0,0026 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,2000 | n.v.t. | n.v.t. | | |
| DDD | 27 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | n.v.t. | 0,0026 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0200 | n.v.t. | n.v.t. | | |
| DDE | 27 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0035 | 0,0039 | 0,0050 | 0,0027 | 0,0028 | 0,0028 | 0,11 | n.v.t. | n.v.t. | 0,1000 | n.v.t. | n.v.t. | | |
| DDT/DDD/DDE | 27 | 0,0077 | 0,0077 | 0,0077 | 0,0077 | 0,0077 | 0,0077 | 0,0086 | 0,0091 | 0,0101 | 0,0078 | 0,0079 | 0,0080 | 0,04 | n.v.t. | nee | 0,3000 | 0,3000 | 4,0 | | |
| Aldrin | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0008 | 0,0013 | n.v.t. | | |
| Dieldrin | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0080 | 0,0080 | n.v.t. | | |
| Endrin | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0035 | 0,0035 | n.v.t. | | |
| Drins (som 3) | 27 | 0,0039 | 0,0039 | 0,0039 | 0,0039 | 0,0039 | 0,0039 | 0,0039 | 0,0039 | 0,0039 | n.v.t. | 0,0039 | n.v.t. | 0,00 | 0,00 | nee | 0,0150 | 0,0150 | 4,0 | | |
| Isodrin | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0010 | n.v.t. | n.v.t. | | |
| Telodrin | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0005 | n.v.t. | n.v.t. | | |
| α-Endosulfan | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | 0,00 | nee | 0,0009 | 0,0021 | 4,0 | | |
| Endosulfansulfaat | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | n.v.t. | n.v.t. | n.v.t. | n.v.t. | | |
| α-HCH | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0010 | 0,0012 | n.v.t. | | |
| β-HCH | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0020 | 0,0065 | n.v.t. | | |
| γ-HCH | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0036 | 0,0049 | 0,0064 | 0,0081 | 0,0019 | 0,0022 | 0,0025 | 0,48 | n.v.t. | n.v.t. | 0,0030 | 0,0030 | n.v.t. | | |
| δ-HCH | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | n.v.t. | n.v.t. | n.v.t. | n.v.t. | | |
| HCH (som 4) | 27 | 0,0051 | 0,0051 | 0,0051 | 0,0051 | 0,0051 | 0,0075 | 0,0087 | 0,0102 | 0,0119 | 0,0058 | 0,0061 | 0,0063 | 0,17 | 0,00 | nee | 0,0100 | 0,0100 | 2,0 | | |
| Heptachloor | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | 0,00 | nee | 0,0007 | 0,0040 | 4,0 | | |
| Heptachloorepoxide | 27 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | 0,0026 | n.v.t. | 0,0026 | n.v.t. | 0,00 | 0,00 | nee | 0,0020 | 0,0040 | 4,0 | | |
| Hexachloorbutadieën | 27 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | 0,0013 | n.v.t. | 0,0013 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0030 | 0,0075 | n.v.t. | | |
| OCB's (som) | 27 | 0,0296 | 0,0296 | 0,0296 | 0,0296 | 0,0303 | 0,0322 | 0,0341 | 0,0359 | 0,0375 | 0,0304 | 0,0307 | 0,0310 | 0,04 | n.v.t. | nee | 0,4000 | n.v.t. | n.v.t. | | |
| **Beoordeling PFAS** | | | | | | | | | | | | | | | | | Hergebruiksnormen | | | | |
| | | | | | | | | | | | | | | | | | Beperking type 1 | Beperking type 2 | | | |
| **PFOA som lineair + vertakt** | 40 | 0,00010 | 0,00010 | 0,00038 | 0,00061 | 0,00074 | 0,00076 | 0,00082 | 0,00095 | 0,00150 | 0,0005 | 0,00057 | 0,0000 | 0,52 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| **PFOS som lineair + vertakt** | 40 | 0,00010 | 0,00010 | 0,00033 | 0,00051 | 0,00063 | 0,00068 | 0,00077 | 0,00124 | 0,00200 | 0,0005 | 0,00055 | 0,0000 | 0,74 | n.v.t. | nee | 0,0001 | 0,0037 | | | |
| perfluoroctaanzuur (PFOA) lineair | 40 | 0,00007 | 0,00007 | 0,00038 | 0,00060 | 0,00074 | 0,00075 | 0,00080 | 0,00086 | 0,00130 | 0,0005 | 0,00055 | 0,0000 | 0,51 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluoroctaanzuur (PFOA) vertakt | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00010 | 0,00011 | 0,00021 | 0,0001 | 0,00008 | 0,0000 | 0,31 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluoroctaansulfonzuur (PFOS) lineair | 40 | 0,00007 | 0,00007 | 0,00030 | 0,00039 | 0,00046 | 0,00053 | 0,00061 | 0,00067 | 0,00150 | 0,0004 | 0,00041 | 0,0000 | 0,63 | n.v.t. | nee | 0,0001 | 0,0037 | | | |
| perfluoroctaansulfonzuur (PFOS) vertakt | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00011 | 0,00015 | 0,00017 | 0,00030 | 0,00048 | 0,00096 | 0,0001 | 0,00016 | 0,0000 | 1,07 | n.v.t. | nee | 0,0001 | 0,0037 | | | |
| perfluorbutaanzuur (PFBA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00016 | 0,00023 | 0,00024 | 0,00028 | 0,00030 | 0,00038 | 0,0001 | 0,00016 | 0,0000 | 0,53 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluorpentaanzuur (PFPeA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00011 | 0,0001 | 0,00007 | 0,0000 | 0,13 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluorhexaanzuur (PFHxA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00008 | 0,00013 | 0,00016 | 0,00030 | 0,0001 | 0,00009 | 0,0000 | 0,52 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluorheptaanzuur (PFHpA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00011 | 0,0001 | 0,00007 | 0,0000 | 0,09 | n.v.t. | nee | 0,0001 | 0,0008 | | | |
| perfluornonaanzuur (PFNA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluordecaanzuur (PFDeA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00010 | 0,0001 | 0,00007 | 0,0000 | 0,07 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluorundecaanzuur (PFUnDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluordodecaanzuur (PFDoDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | nee | 0,0001 | 0,0008 | | | |
| perfluortridecaanzuur (PFTrDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluortetradecaanzuur (PFTeDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluorhexadecaanzuur (PFHxDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluoroctadecaanzuur (PFODA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluorbutaansulfonzuur (PFBS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluorpentaansulfonzuur (PFPeS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluorhexaansulfonzuur (PFHxS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluorheptaansulfonzuur(PFHpS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluordecaansulfonzuur (PFDS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| 4:2 fluortelomeer sulfonzuur (4:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| 6:2 fluortelomeer sulfonzuur (6:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| 8:2 fluortelomeer sulfonzuur (8:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| 10:2 fluortelomeer sulfonzuur (10:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| N-methylperfluoroctaansulfonamide acetaat (MeFOSAA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00035 | 0,00035 | 0,0001 | 0,00009 | 0,0000 | 0,83 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| N-ethylperfluoroctaansulfonamide acetaat (EtFOSAA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00035 | 0,0001 | 0,00008 | 0,0000 | 0,55 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| perfluoroctaansulfonamide (PFOSA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| N-methylperfluoroctaansulfonamide (MeFOSA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | | | |
| 8:2 polyfluoralkyl fosfaat diester (8:2 diPAP) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00035 | 0,0001 | 0,00008 | 0,0000 | 0,55 | n.v.t. | nee | 0,0001 | 0,0008 | | | |

## Statistische parameters, toetsing aan Besluit Bodemkwaliteit (Waterbodems)

* De norm voor Barium geldt alleen voor die situaties waarbij duidelijke sprake is van antropogene bodemverontreiniging. Voor overige situaties is de norm voor Barium tijdelijk buitenwerking gesteld.
** In verband met 1 of meer gemiddelde gehalten PFAS > 0,0001 mg/kg gelden mogelijk aanvullende toepassingseisen.

- waarde > max. waarde klasse B
- max. waarde klasse A < waarde < max. waarde klasse B
- achtergrondwaarde < waarde < max. waarde klasse A
- waarde < achtergrondwaarde (minimaal 1x >d gemeten)
- waarde < achtergrondwaarde (alleen <d gemeten)
- waarde > hergebruiksnorm conform § 4.8.2 en 4.9.2 uit het Tijdelijk Handelingskader PFAS (versie 29 november 2019) **
- waarde > hergebruiksnorm conform § 4.9.1 uit het Tijdelijk Handelingskader PFAS (versie 29 november 2019) **

**Zone** **Statistische parameters**

| **Klei, tussenlaag (0,5 - 1,0 m-wb)** | | | | | | | | | | | Waterbodemkwaliteitsklasse: | | | Klasse A | | | Lut = 25,0 % | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gezoneerd: | ja | | | | | | | | | | | | | | | | OS = 10,0 % | | |
| Stoffen | N | Min | 5P | 25P | 50P | 75P | 80P | 90P | 95P | Max | 80% MIN | Gem | 80% MAX | VC | Hetero-geniteit | P95> I | achtergrond waarde | klasse A | klasse B / interventie-waarde |
| Arseen | 27 | 5,7 | 7,5 | 9,9 | 11,7 | 14,8 | 14,8 | 19,5 | 21,9 | 35,9 | 12,0 | 13,2 | 14,4 | 0,37 | 0,22 | nee | 20,0 | 29,0 | 85,0 |
| Barium* | 27 | 57,9 | 70,9 | 84,4 | 100,7 | 115,8 | 119,1 | 138,5 | 147,3 | 327,4 | 99,2 | 108,8 | 118,4 | 0,36 | n.v.t. | n.v.t. | 190,00 | n.v.t. | n.v.t. |
| Cadmium | 27 | 0,19 | 0,22 | 0,39 | 0,63 | 0,94 | 1,04 | 1,21 | 2,17 | 9,82 | 0,72 | 1,05 | 1,38 | 1,29 | 0,15 | nee | 0,60 | 4,00 | 14,0 |
| Chroom | 27 | 20,6 | 23,3 | 29,8 | 34,4 | 41,8 | 43,3 | 47,7 | 52,0 | 59,6 | 34,0 | 36,0 | 38,0 | 0,23 | 0,09 | nee | 55,0 | 120,0 | 380,0 |
| Kobalt | 27 | 10,4 | 11,4 | 13,7 | 15,0 | 18,1 | 18,7 | 21,2 | 22,1 | 23,7 | 15,4 | 16,1 | 16,8 | 0,17 | 0,05 | nee | 15,0 | 25,0 | 240,0 |
| Koper | 27 | 9,8 | 13,4 | 19,5 | 20,8 | 24,1 | 24,7 | 28,9 | 36,7 | 156,0 | 21,2 | 26,3 | 31,3 | 0,78 | 0,16 | nee | 40,0 | 96,0 | 190,0 |
| Kwik | 27 | 0,04 | 0,04 | 0,04 | 0,07 | 0,11 | 0,11 | 0,14 | 0,32 | 1,81 | 0,07 | 0,15 | 0,22 | 2,04 | 0,03 | nee | 0,15 | 1,20 | 10,0 |
| Lood | 27 | 27,5 | 35,0 | 49,0 | 63,3 | 72,3 | 80,5 | 95,3 | 349,0 | 669,1 | 69,8 | 98,3 | 126,8 | 1,17 | 0,59 | nee | 50,0 | 138,0 | 580,0 |
| Molybdeen | 27 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | n.v.t. | 1,05 | n.v.t. | 0,00 | 0,00 | nee | 1,5 | 5,0 | 200,0 |
| Nikkel | 27 | 20,8 | 24,3 | 31,2 | 34,2 | 40,4 | 40,4 | 47,5 | 51,5 | 52,6 | 34,2 | 35,8 | 37,4 | 0,18 | 0,16 | nee | 35,0 | 50,0 | 210,0 |
| Zink | 27 | 80,4 | 84,7 | 124,5 | 166,0 | 242,6 | 265,6 | 301,4 | 618,0 | 2043,1 | 192,6 | 265,6 | 338,6 | 1,11 | 0,29 | nee | 140,0 | 563,0 | 2000,0 |
| PCB28 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0015 | 0,0140 | n.v.t. |
| PCB52 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0020 | 0,0150 | n.v.t. |
| PCB101 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0015 | 0,0230 | n.v.t. |
| PCB118 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0045 | 0,0160 | n.v.t. |
| PCB138 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0040 | 0,0270 | n.v.t. |
| PCB153 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0035 | 0,0330 | n.v.t. |
| PCB180 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0025 | 0,0180 | n.v.t. |
| PCB (som 7) | 27 | 0,0194 | 0,0194 | 0,0194 | 0,0194 | 0,0194 | 0,0194 | 0,0194 | 0,0194 | 0,0194 | n.v.t. | 0,0194 | n.v.t. | 0,00 | 0,00 | nee | 0,0200 | 0,1390 | 1,0 |
| PAK (som 10) | 27 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,3 | 0,9 | 10,0 | 0,1 | 0,6 | 1,1 | 3,14 | 0,02 | nee | 1,5 | 9,0 | 40,0 |
| Minerale olie | 27 | 97,1 | 97,1 | 97,1 | 97,1 | 97,1 | 97,1 | 97,1 | 97,1 | 475,8 | 106,5 | 111,0 | 115,5 | 0,17 | 0,00 | nee | 190,0 | 1250,0 | 5000,0 |
| Pentachloorbenzeen | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0025 | 0,0070 | n.v.t. |
| Hexachloorbenzeen | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0052 | 0,0027 | 0,0028 | 0,0028 | 0,04 | n.v.t. | n.v.t. | 0,0085 | 0,0440 | n.v.t. |
| Pentachloorfenol | 27 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | n.v.t. | 0,0083 | n.v.t. | 0,00 | 0,00 | nee | 0,0030 | 0,0160 | 5,0 |
| Chloordaan | 27 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | n.v.t. | 0,0056 | n.v.t. | 0,00 | 0,00 | nee | 0,0020 | n.v.t. | 4,0 |
| DDT | 27 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | n.v.t. | 0,0056 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,2000 | n.v.t. | n.v.t. |
| DDD | 27 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | n.v.t. | 0,0056 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0200 | n.v.t. | n.v.t. |
| DDE | 27 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | n.v.t. | 0,0056 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,1000 | n.v.t. | n.v.t. |
| DDT/DDD/DDE | 27 | 0,0167 | 0,0167 | 0,0167 | 0,0167 | 0,0167 | 0,0167 | 0,0167 | 0,0167 | 0,0167 | n.v.t. | 0,0167 | n.v.t. | 0,00 | n.v.t. | nee | 0,3000 | 0,3000 | 4,0 |
| Aldrin | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0008 | 0,0013 | n.v.t. |
| Dieldrin | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0080 | 0,0080 | n.v.t. |
| Endrin | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0035 | 0,0035 | n.v.t. |
| Drins (som 3) | 27 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | n.v.t. | 0,0083 | n.v.t. | 0,00 | 0,00 | nee | 0,0150 | 0,0150 | 4,0 |
| Isodrin | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0010 | n.v.t. | n.v.t. |
| Telodrin | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0005 | n.v.t. | n.v.t. |
| α-Endosulfan | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | 0,00 | nee | 0,0009 | 0,0021 | 4,0 |
| Endosulfansulfaat | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | n.v.t. | n.v.t. | n.v.t. |
| α-HCH | 26 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0010 | 0,0012 | n.v.t. |
| β-HCH | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0020 | 0,0065 | n.v.t. |
| γ-HCH | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0030 | 0,0030 | n.v.t. |
| δ-HCH | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | n.v.t. | n.v.t. | n.v.t. |
| HCH (som 4) | 26 | 0,0111 | 0,0111 | 0,0111 | 0,0111 | 0,0111 | 0,0111 | 0,0111 | 0,0111 | 0,0111 | n.v.t. | 0,0111 | n.v.t. | 0,00 | 0,00 | nee | 0,0100 | 0,0100 | 2,0 |
| Heptachloor | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | 0,00 | nee | 0,0007 | 0,0040 | 4,0 |
| Heptachloorepoxide | 27 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | n.v.t. | 0,0056 | n.v.t. | 0,00 | 0,00 | nee | 0,0020 | 0,0040 | 4,0 |
| Hexachloorbutadieën | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0030 | 0,0075 | n.v.t. |
| OCB's (som) | 27 | 0,0638 | 0,0638 | 0,0638 | 0,0638 | 0,0638 | 0,0638 | 0,0638 | 0,0638 | 0,0793 | 0,0640 | 0,0642 | 0,0644 | 0,01 | n.v.t. | nee | 0,4000 | n.v.t. | n.v.t. |
| **Beoordeling PFAS** | | | | | | | | | | | | | | | | | Hergebruiksnormen | | |
| | | | | | | | | | | | | | | | | | Beperking type 1 | Beperking type 2 | |
| **PFOA som lineair + vertakt** | 40 | 0,00010 | 0,00010 | 0,00010 | 0,00010 | 0,00016 | 0,00019 | 0,00022 | 0,00025 | 0,00029 | 0,0001 | 0,00013 | 0,0000 | 0,43 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| **PFOS som lineair + vertakt** | 40 | 0,00010 | 0,00010 | 0,00010 | 0,00010 | 0,00010 | 0,00010 | 0,00013 | 0,00017 | 0,00020 | 0,0001 | 0,00011 | 0,0000 | 0,22 | n.v.t. | nee | 0,0001 | 0,0037 | |
| perfluoroctaanzuur (PFOA) lineair | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00016 | 0,00019 | 0,00022 | 0,00025 | 0,00029 | 0,0001 | 0,00012 | 0,0000 | 0,57 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluoroctaanzuur (PFOA) vertakt | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluoroctaansulfonzuur (PFOS) lineair | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00011 | 0,00014 | 0,00019 | 0,0001 | 0,00008 | 0,0000 | 0,35 | n.v.t. | nee | 0,0001 | 0,0037 | |
| perfluoroctaansulfonzuur (PFOS) vertakt | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00010 | 0,0001 | 0,00007 | 0,0000 | 0,07 | n.v.t. | nee | 0,0001 | 0,0037 | |
| perfluorbutaanzuur (PFBA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00013 | 0,00014 | 0,0001 | 0,00008 | 0,0000 | 0,23 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorpentaanzuur (PFPeA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorhexaanzuur (PFHxA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorheptaanzuur (PFHpA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | nee | 0,0001 | 0,0008 | |
| perfluornonaanzuur (PFNA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluordecaanzuur (PFDeA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorundecaanzuur (PFUnDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluordodecaanzuur (PFDoDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | nee | 0,0001 | 0,0008 | |
| perfluortridecaanzuur (PFTrDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluortetradecaanzuur (PFTeDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorhexadecaanzuur (PFHxDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluoroctadecaanzuur (PFODA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorbutaansulfonzuur (PFBS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorpentaansulfonzuur (PFPeS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorhexaansulfonzuur (PFHxS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorheptaansulfonzuur(PFHpS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluordecaansulfonzuur (PFDS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 4:2 fluortelomeer sulfonzuur (4:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 6:2 fluortelomeer sulfonzuur (6:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 8:2 fluortelomeer sulfonzuur (8:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 10:2 fluortelomeer sulfonzuur (10:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| N-methylperfluoroctaansulfonamide acetaat (MeFOSAA) | 39 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00035 | 0,00035 | 0,00035 | 0,0001 | 0,00011 | 0,0000 | 0,93 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| N-ethylperfluoroctaansulfonamide acetaat (EtFOSAA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00035 | 0,00035 | 0,00035 | 0,0001 | 0,00011 | 0,0000 | 0,85 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluoroctaansulfonamide (PFOSA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| N-methylperfluoroctaansulfonamide (MeFOSA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 8:2 polyfluoralkyl fosfaat diester (8:2 diPAP) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00035 | 0,0001 | 0,00008 | 0,0000 | 0,55 | n.v.t. | nee | 0,0001 | 0,0008 | |

## Statistische parameters, toetsing aan Besluit Bodemkwaliteit (Waterbodems)

* De norm voor Barium geldt alleen voor die situaties waarbij duidelijke sprake is van antropogene bodemverontreiniging. Voor overige situaties is de norm voor Barium tijdelijk buitenwerking gesteld.
** In verband met 1 of meer gemiddelde gehalten PFAS > 0,0001 mg/kg gelden mogelijk aanvullende toepassingseisen.

- waarde > max. waarde klasse B
- max. waarde klasse A < waarde < max. waarde klasse B
- achtergrondwaarde < waarde < max. waarde klasse A
- waarde < achtergrondwaarde (minimaal 1x >d gemeten)
- waarde < achtergrondwaarde (alleen <d gemeten)
- waarde > hergebruiksnorm conform § 4.8.2 en 4.9.2 uit het Tijdelijk Handelingskader PFAS (versie 29 november 2019) **
- waarde > hergebruiksnorm conform § 4.9.1 uit het Tijdelijk Handelingskader PFAS (versie 29 november 2019) **

**Zone** **Statistische parameters**

| **Zand, tussenlaag (0,5 - 1,0 m-wb)** | | | | | | | | | | | Waterbodemkwaliteitsklasse: | | | Klasse A | | | Lut = | 25,0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gezoneerd: | ja | | | | | | | | | | | | | | | | OS = | 10,0 | |
| Stoffen | N | Min | 5P | 25P | 50P | 75P | 80P | 90P | 95P | Max | 80% MIN | Gem | 80% MAX | VC | Hetero-geniteit | P95> I | achtergrond waarde | klasse A | klasse B / interventie-waarde |
| Arseen | 31 | 4,7 | 4,7 | 4,7 | 4,7 | 8,2 | 8,6 | 12,2 | 14,9 | 33,8 | 6,6 | 7,4 | 8,2 | 0,46 | 0,16 | nee | 20,0 | 29,0 | 85,0 |
| Barium* | 31 | 46,3 | 46,3 | 46,3 | 46,3 | 56,2 | 86,0 | 109,1 | 163,7 | 529,1 | 70,5 | 76,7 | 83,0 | 0,35 | n.v.t. | n.v.t. | 190,00 | n.v.t. | n.v.t. |
| Cadmium | 31 | 0,24 | 0,24 | 0,24 | 0,24 | 0,24 | 0,24 | 0,62 | 2,35 | 8,41 | 0,45 | 0,66 | 0,87 | 1,39 | 0,16 | nee | 0,60 | 4,00 | 14,0 |
| Chroom | 31 | 12,3 | 12,3 | 12,3 | 12,3 | 19,4 | 22,9 | 28,2 | 30,0 | 67,0 | 15,8 | 17,3 | 18,7 | 0,36 | 0,05 | nee | 55,0 | 120,0 | 380,0 |
| Kobalt | 31 | 6,1 | 7,0 | 10,4 | 11,9 | 17,3 | 19,3 | 22,0 | 24,1 | 33,6 | 13,6 | 14,1 | 14,5 | 0,14 | 0,08 | nee | 15,0 | 25,0 | 240,0 |
| Koper | 31 | 6,9 | 6,9 | 6,9 | 6,9 | 6,9 | 9,9 | 14,6 | 34,5 | 236,6 | 11,9 | 16,8 | 21,6 | 1,25 | 0,18 | nee | 40,0 | 96,0 | 190,0 |
| Kwik | 31 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,22 | 1,83 | 0,06 | 0,11 | 0,16 | 2,03 | 0,02 | nee | 0,15 | 1,20 | 10,0 |
| Lood | 31 | 10,7 | 10,7 | 10,7 | 10,7 | 14,6 | 19,9 | 47,5 | 124,2 | 552,0 | 23,2 | 38,3 | 53,3 | 1,71 | 0,21 | nee | 50,0 | 138,0 | 580,0 |
| Molybdeen | 31 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | n.v.t. | 1,05 | n.v.t. | 0,00 | 0,00 | nee | 1,5 | 5,0 | 200,0 |
| Nikkel | 31 | 12,6 | 14,4 | 18,3 | 24,3 | 31,4 | 34,0 | 39,3 | 43,2 | 55,0 | 25,0 | 25,9 | 26,8 | 0,15 | 0,16 | nee | 35,0 | 50,0 | 210,0 |
| Zink | 31 | 31,0 | 31,0 | 37,6 | 59,8 | 89,7 | 97,4 | 194,9 | 708,7 | 2214,7 | 132,1 | 175,6 | 219,2 | 1,08 | 0,36 | nee | 140,0 | 563,0 | 2000,0 |
| PCB28 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0015 | 0,0140 | n.v.t. |
| PCB52 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0020 | 0,0150 | n.v.t. |
| PCB101 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0015 | 0,0230 | n.v.t. |
| PCB118 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0045 | 0,0160 | n.v.t. |
| PCB138 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0040 | 0,0270 | n.v.t. |
| PCB153 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0035 | 0,0330 | n.v.t. |
| PCB180 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0025 | 0,0180 | n.v.t. |
| PCB (som 7) | 31 | 0,0238 | 0,0238 | 0,0238 | 0,0238 | 0,0238 | 0,0238 | 0,0238 | 0,0238 | 0,0238 | n.v.t. | 0,0238 | n.v.t. | 0,00 | 0,00 | nee | 0,0200 | 0,1390 | 1,0 |
| PAK (som 10) | 31 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 1,1 | 4,4 | 0,2 | 0,4 | 0,6 | 1,95 | 0,02 | nee | 1,5 | 9,0 | 40,0 |
| Minerale olie | 31 | 118,9 | 118,9 | 118,9 | 118,9 | 118,9 | 118,9 | 118,9 | 118,9 | 441,5 | 126,3 | 129,0 | 131,8 | 0,09 | 0,00 | nee | 190,0 | 1250,0 | 5000,0 |
| Pentachloorbenzeen | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0025 | 0,0070 | n.v.t. |
| Hexachloorbenzeen | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0085 | 0,0440 | n.v.t. |
| Pentachloorfenol | 31 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | n.v.t. | 0,0102 | n.v.t. | 0,00 | 0,00 | nee | 0,0030 | 0,0160 | 5,0 |
| Chloordaan | 31 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | n.v.t. | 0,0068 | n.v.t. | 0,00 | 0,00 | nee | 0,0020 | n.v.t. | 4,0 |
| DDT | 31 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | n.v.t. | 0,0068 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,2000 | n.v.t. | n.v.t. |
| DDD | 31 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | n.v.t. | 0,0068 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0200 | n.v.t. | n.v.t. |
| DDE | 31 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | n.v.t. | 0,0068 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,1000 | n.v.t. | n.v.t. |
| DDT/DDD/DDE | 31 | 0,0204 | 0,0204 | 0,0204 | 0,0204 | 0,0204 | 0,0204 | 0,0204 | 0,0204 | 0,0204 | n.v.t. | 0,0204 | n.v.t. | 0,00 | n.v.t. | nee | 0,3000 | 0,3000 | 4,0 |
| Aldrin | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0008 | 0,0013 | n.v.t. |
| Dieldrin | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0080 | 0,0080 | n.v.t. |
| Endrin | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0035 | 0,0035 | n.v.t. |
| Drins (som 3) | 31 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | n.v.t. | 0,0102 | n.v.t. | 0,00 | 0,00 | nee | 0,0150 | 0,0150 | 4,0 |
| Isodrin | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0010 | n.v.t. | n.v.t. |
| Telodrin | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0005 | n.v.t. | n.v.t. |
| α-Endosulfan | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | 0,00 | nee | 0,0009 | 0,0021 | 4,0 |
| Endosulfansulfaat | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | n.v.t. | n.v.t. | n.v.t. |
| α-HCH | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0010 | 0,0012 | n.v.t. |
| β-HCH | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0020 | 0,0065 | n.v.t. |
| γ-HCH | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0030 | 0,0030 | n.v.t. |
| δ-HCH | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | n.v.t. | n.v.t. | n.v.t. |
| HCH (som 4) | 31 | 0,0136 | 0,0136 | 0,0136 | 0,0136 | 0,0136 | 0,0136 | 0,0136 | 0,0136 | 0,0136 | n.v.t. | 0,0136 | n.v.t. | 0,00 | 0,00 | nee | 0,0100 | 0,0100 | 2,0 |
| Heptachloor | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | 0,00 | nee | 0,0007 | 0,0040 | 4,0 |
| Heptachloorepoxide | 31 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | n.v.t. | 0,0068 | n.v.t. | 0,00 | 0,00 | nee | 0,0020 | 0,0040 | 4,0 |
| Hexachloorbutadieën | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0030 | 0,0075 | n.v.t. |
| OCB's (som) | 31 | 0,0781 | 0,0781 | 0,0781 | 0,0781 | 0,0781 | 0,0781 | 0,0781 | 0,0781 | 0,0781 | n.v.t. | 0,0781 | n.v.t. | 0,00 | n.v.t. | nee | 0,4000 | n.v.t. | n.v.t. |
| **Beoordeling PFAS** | | | | | | | | | | | | | | | | | Hergebruiksnormen | | |
| | | | | | | | | | | | | | | | | | Beperking type 1 | Beperking type 2 | |
| **PFOA som lineair + vertakt** | 40 | 0,00010 | 0,00010 | 0,00010 | 0,00010 | 0,00016 | 0,00019 | 0,00022 | 0,00025 | 0,00029 | 0,0001 | 0,00013 | 0,0000 | 0,43 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| **PFOS som lineair + vertakt** | 40 | 0,00010 | 0,00010 | 0,00010 | 0,00010 | 0,00010 | 0,00010 | 0,00013 | 0,00017 | 0,00020 | 0,0001 | 0,00011 | 0,0000 | 0,22 | n.v.t. | nee | 0,0001 | 0,0037 | |
| perfluoroctaanzuur (PFOA) lineair | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00016 | 0,00019 | 0,00022 | 0,00025 | 0,00029 | 0,0001 | 0,00012 | 0,0000 | 0,57 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluoroctaanzuur (PFOA) vertakt | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluoroctaansulfonzuur (PFOS) lineair | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00011 | 0,00014 | 0,00019 | 0,0001 | 0,00008 | 0,0000 | 0,35 | n.v.t. | nee | 0,0001 | 0,0037 | |
| perfluoroctaansulfonzuur (PFOS) vertakt | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00010 | 0,0001 | 0,00007 | 0,0000 | 0,07 | n.v.t. | nee | 0,0001 | 0,0037 | |
| perfluorbutaanzuur (PFBA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00013 | 0,00014 | 0,0001 | 0,00008 | 0,0000 | 0,23 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorpentaanzuur (PFPeA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorhexaanzuur (PFHxA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorheptaanzuur (PFHpA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | nee | 0,0001 | 0,0008 | |
| perfluornonaanzuur (PFNA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluordecaanzuur (PFDeA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorundecaanzuur (PFUnDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluordodecaanzuur (PFDoDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | nee | 0,0001 | 0,0008 | |
| perfluortridecaanzuur (PFTrDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluortetradecaanzuur (PFTeDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorhexadecaanzuur (PFHxDA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluoroctadecaanzuur (PFODA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorbutaansulfonzuur (PFBS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorpentaansulfonzuur (PFPeS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorhexaansulfonzuur (PFHxS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluorheptaansulfonzuur(PFHpS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluordecaansulfonzuur (PFDS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 4:2 fluortelomeer sulfonzuur (4:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 6:2 fluortelomeer sulfonzuur (6:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 8:2 fluortelomeer sulfonzuur (8:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 10:2 fluortelomeer sulfonzuur (10:2 FTS) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| N-methylperfluoroctaansulfonamide acetaat (MeFOSAA) | 39 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00035 | 0,00035 | 0,00035 | 0,0001 | 0,00011 | 0,0000 | 0,93 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| N-ethylperfluoroctaansulfonamide acetaat (EtFOSAA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00035 | 0,00035 | 0,00035 | 0,0001 | 0,00011 | 0,0000 | 0,85 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| perfluoroctaansulfonamide (PFOSA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| N-methylperfluoroctaansulfonamide (MeFOSA) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | n.v.t. | 0,00007 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0001 | 0,0008 | |
| 8:2 polyfluoralkyl fosfaat diester (8:2 diPAP) | 40 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00007 | 0,00035 | 0,0001 | 0,00008 | 0,0000 | 0,55 | n.v.t. | nee | 0,0001 | 0,0008 | |

## Statistische parameters, toetsing aan Besluit Bodemkwaliteit (Waterbodems)

* De norm voor Barium geldt alleen voor die situaties waarbij duidelijke sprake is van antropogene bodemverontreiniging. Voor overige situaties is de norm voor Barium tijdelijk buitenwerking gesteld.
** In verband met 1 of meer gemiddelde gehalten PFAS > 0,0001 mg/kg gelden mogelijk aanvullende toepassingseisen.

- waarde > max. waarde klasse B
- max. waarde klasse A < waarde < max. waarde klasse B
- achtergrondwaarde < waarde < max. waarde klasse A
- waarde < achtergrondwaarde (minimaal 1x >d gemeten)
- waarde < achtergrondwaarde (alleen <d gemeten)
- waarde > hergebruiksnorm conform § 4.8.2 en 4.9.2 uit het Tijdelijk Handelingskader PFAS (versie 29 november 2019) **
- waarde > hergebruiksnorm conform § 4.9.1 uit het Tijdelijk Handelingskader PFAS (versie 29 november 2019) **

**Zone** **Statistische parameters**

| **Klei, ondergrond (1,0 - 3,0 m-mv)** | | | | | | | | | | | Waterbodemkwaliteitsklasse: | | | | Klasse A | | Lut = 25,0 % | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gezoneerd: | ja | | | | | | | | | | | | | | | | OS = 10,0 % | | |
| Stoffen | N | Min | 5P | 25P | 50P | 75P | 80P | 90P | 95P | Max | 80% MIN | Gem | 80% MAX | VC | Hetero-geniteit | P95> I | achtergrond waarde | klasse A | klasse B / interventie-waarde |
| Arseen | 27 | 5,7 | 7,5 | 9,9 | 11,7 | 14,8 | 14,8 | 19,5 | 21,9 | 35,9 | 12,0 | 13,2 | 14,4 | 0,37 | 0,22 | nee | 20,0 | 29,0 | 85,0 |
| Barium* | 27 | 57,9 | 70,9 | 84,4 | 100,7 | 115,8 | 119,1 | 138,5 | 147,3 | 327,4 | 99,2 | 108,8 | 118,4 | 0,36 | n.v.t. | n.v.t. | 190,00 | n.v.t. | n.v.t. |
| Cadmium | 27 | 0,19 | 0,22 | 0,39 | 0,63 | 0,94 | 1,04 | 1,21 | 2,17 | 9,82 | 0,72 | 1,05 | 1,38 | 1,29 | 0,15 | nee | 0,60 | 4,00 | 14,0 |
| Chroom | 27 | 20,6 | 23,3 | 29,8 | 34,4 | 41,8 | 43,3 | 47,7 | 52,0 | 59,6 | 34,0 | 36,0 | 38,0 | 0,23 | 0,09 | nee | 55,0 | 120,0 | 380,0 |
| Kobalt | 27 | 10,4 | 11,4 | 13,7 | 15,0 | 18,1 | 18,7 | 21,2 | 22,1 | 23,7 | 15,4 | 16,1 | 16,8 | 0,17 | 0,05 | nee | 15,0 | 25,0 | 240,0 |
| Koper | 27 | 9,8 | 13,4 | 19,5 | 20,8 | 24,1 | 24,7 | 28,9 | 36,7 | 156,0 | 21,2 | 26,3 | 31,3 | 0,78 | 0,16 | nee | 40,0 | 96,0 | 190,0 |
| Kwik | 27 | 0,04 | 0,04 | 0,04 | 0,07 | 0,11 | 0,11 | 0,14 | 0,32 | 1,81 | 0,07 | 0,15 | 0,22 | 2,04 | 0,03 | nee | 0,15 | 1,20 | 10,0 |
| Lood | 27 | 27,5 | 35,0 | 49,0 | 63,3 | 72,3 | 80,5 | 95,3 | 349,0 | 669,1 | 69,8 | 98,3 | 126,8 | 1,17 | 0,59 | nee | 50,0 | 138,0 | 580,0 |
| Molybdeen | 27 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | n.v.t. | 1,05 | n.v.t. | 0,00 | 0,00 | nee | 1,5 | 5,0 | 200,0 |
| Nikkel | 27 | 20,8 | 24,3 | 31,2 | 34,2 | 40,4 | 40,4 | 47,5 | 51,5 | 52,6 | 34,2 | 35,8 | 37,4 | 0,18 | 0,16 | nee | 35,0 | 50,0 | 210,0 |
| Zink | 27 | 80,4 | 84,7 | 124,5 | 166,0 | 242,6 | 265,6 | 301,4 | 618,0 | 2043,1 | 192,6 | 265,6 | 338,6 | 1,11 | 0,29 | nee | 140,0 | 563,0 | 2000,0 |
| PCB28 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0015 | 0,0140 | n.v.t. |
| PCB52 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0020 | 0,0150 | n.v.t. |
| PCB101 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0015 | 0,0230 | n.v.t. |
| PCB118 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0045 | 0,0160 | n.v.t. |
| PCB138 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0040 | 0,0270 | n.v.t. |
| PCB153 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0035 | 0,0330 | n.v.t. |
| PCB180 | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | nee | 0,0025 | 0,0180 | n.v.t. |
| PCB (som 7) | 27 | 0,0194 | 0,0194 | 0,0194 | 0,0194 | 0,0194 | 0,0194 | 0,0194 | 0,0194 | 0,0194 | n.v.t. | 0,0194 | n.v.t. | 0,00 | 0,00 | nee | 0,0200 | 0,1390 | 1,0 |
| PAK (som 10) | 27 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,3 | 0,9 | 10,0 | 0,1 | 0,6 | 1,1 | 3,14 | 0,02 | nee | 1,5 | 9,0 | 40,0 |
| Minerale olie | 27 | 97,1 | 97,1 | 97,1 | 97,1 | 97,1 | 97,1 | 97,1 | 97,1 | 475,8 | 106,5 | 111,0 | 115,5 | 0,17 | 0,00 | nee | 190,0 | 1250,0 | 5000,0 |
| Pentachloorbenzeen | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0025 | 0,0070 | n.v.t. |
| Hexachloorbenzeen | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0052 | 0,0027 | 0,0028 | 0,0028 | 0,04 | n.v.t. | n.v.t. | 0,0085 | 0,0440 | n.v.t. |
| Pentachloorfenol | 27 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | n.v.t. | 0,0083 | n.v.t. | 0,00 | 0,00 | nee | 0,0030 | 0,0160 | 5,0 |
| Chloordaan | 27 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | n.v.t. | 0,0056 | n.v.t. | 0,00 | 0,00 | nee | 0,0020 | n.v.t. | 4,0 |
| DDT | 27 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | n.v.t. | 0,0056 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,2000 | n.v.t. | n.v.t. |
| DDD | 27 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | n.v.t. | 0,0056 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0200 | n.v.t. | n.v.t. |
| DDE | 27 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | n.v.t. | 0,0056 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,1000 | n.v.t. | n.v.t. |
| DDT/DDD/DDE | 27 | 0,0167 | 0,0167 | 0,0167 | 0,0167 | 0,0167 | 0,0167 | 0,0167 | 0,0167 | 0,0167 | n.v.t. | 0,0167 | n.v.t. | 0,00 | n.v.t. | nee | 0,3000 | 0,3000 | 4,0 |
| Aldrin | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0008 | 0,0013 | n.v.t. |
| Dieldrin | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0080 | 0,0080 | n.v.t. |
| Endrin | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0035 | 0,0035 | n.v.t. |
| Drins (som 3) | 27 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | 0,0083 | n.v.t. | 0,0083 | n.v.t. | 0,00 | 0,00 | nee | 0,0150 | 0,0150 | 4,0 |
| Isodrin | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0010 | n.v.t. | n.v.t. |
| Telodrin | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0005 | n.v.t. | n.v.t. |
| α-Endosulfan | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | 0,00 | nee | 0,0009 | 0,0021 | 4,0 |
| Endosulfansulfaat | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | n.v.t. | n.v.t. | n.v.t. |
| α-HCH | 26 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0010 | 0,0012 | n.v.t. |
| β-HCH | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0020 | 0,0065 | n.v.t. |
| γ-HCH | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0030 | 0,0030 | n.v.t. |
| δ-HCH | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | n.v.t. | n.v.t. | n.v.t. |
| HCH (som 4) | 26 | 0,0111 | 0,0111 | 0,0111 | 0,0111 | 0,0111 | 0,0111 | 0,0111 | 0,0111 | 0,0111 | n.v.t. | 0,0111 | n.v.t. | 0,00 | 0,00 | nee | 0,0100 | 0,0100 | 2,0 |
| Heptachloor | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | 0,00 | nee | 0,0007 | 0,0040 | 4,0 |
| Heptachloorepoxide | 27 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | 0,0056 | n.v.t. | 0,0056 | n.v.t. | 0,00 | 0,00 | nee | 0,0020 | 0,0040 | 4,0 |
| Hexachloorbutadieën | 27 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | 0,0028 | n.v.t. | 0,0028 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0030 | 0,0075 | n.v.t. |
| OCB's (som) | 27 | 0,0638 | 0,0638 | 0,0638 | 0,0638 | 0,0638 | 0,0638 | 0,0638 | 0,0638 | 0,0793 | 0,0640 | 0,0642 | 0,0644 | 0,01 | n.v.t. | nee | 0,4000 | n.v.t. | n.v.t. |

## Statistische parameters, toetsing aan Besluit Bodemkwaliteit (Waterbodems)

* De norm voor Barium geldt alleen voor die situaties waarbij duidelijke sprake is van antropogene bodemverontreiniging. Voor overige situaties is de norm voor Barium tijdelijk buitenwerking gesteld.
** In verband met 1 of meer gemiddelde gehalten PFAS > 0,0001 mg/kg gelden mogelijk aanvullende toepassingseisen.

- waarde > max. waarde klasse B
- max. waarde klasse A < waarde < max. waarde klasse B
- achtergrondwaarde < waarde < max. waarde klasse A
- waarde < achtergrondwaarde (minimaal 1x >d gemeten)
- waarde < achtergrondwaarde (alleen <d gemeten)
- waarde > hergebruiksnorm conform § 4.8.2 en 4.9.2 uit het Tijdelijk Handelingskader PFAS (versie 29 november 2019) **
- waarde > hergebruiksnorm conform § 4.9.1 uit het Tijdelijk Handelingskader PFAS (versie 29 november 2019) **

**Zone** **Statistische parameters**

| **Zand, ondergrond (1,0 - 3,0 m-mv)** | | | | | | | | | | | Waterbodemkwaliteitsklasse: | | | | Vrij toepasbaar | | Lut = 25,0 % | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gezoneerd: | ja | | | | | | | | | | | | | | | | OS = 10,0 % | | |
| Stoffen | N | Min | 5P | 25P | 50P | 75P | 80P | 90P | 95P | Max | 80% MIN | Gem | 80% MAX | VC | Hetero-geniteit | P95> I | achtergrond waarde | klasse A | klasse B / interventie-waarde |
| Arseen | 31 | 4,7 | 4,7 | 4,7 | 4,7 | 8,2 | 8,6 | 12,2 | 14,9 | 33,8 | 6,6 | 7,4 | 8,2 | 0,46 | 0,16 | nee | 20,0 | 29,0 | 85,0 |
| Barium* | 31 | 46,3 | 46,3 | 46,3 | 46,3 | 56,2 | 86,0 | 109,1 | 163,7 | 529,1 | 70,5 | 76,7 | 83,0 | 0,35 | n.v.t. | n.v.t. | 190,00 | n.v.t. | n.v.t. |
| Cadmium | 31 | 0,24 | 0,24 | 0,24 | 0,24 | 0,24 | 0,24 | 0,62 | 2,35 | 8,41 | 0,45 | 0,66 | 0,87 | 1,39 | 0,16 | nee | 0,60 | 4,00 | 14,0 |
| Chroom | 31 | 12,3 | 12,3 | 12,3 | 12,3 | 19,4 | 22,9 | 28,2 | 30,0 | 67,0 | 15,8 | 17,3 | 18,7 | 0,36 | 0,05 | nee | 55,0 | 120,0 | 380,0 |
| Kobalt | 31 | 6,1 | 7,0 | 10,4 | 11,9 | 17,3 | 19,3 | 22,0 | 24,1 | 33,6 | 13,6 | 14,1 | 14,5 | 0,14 | 0,08 | nee | 15,0 | 25,0 | 240,0 |
| Koper | 31 | 6,9 | 6,9 | 6,9 | 6,9 | 6,9 | 9,9 | 14,6 | 34,5 | 236,6 | 11,9 | 16,8 | 21,6 | 1,25 | 0,18 | nee | 40,0 | 96,0 | 190,0 |
| Kwik | 31 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,05 | 0,22 | 1,83 | 0,06 | 0,11 | 0,16 | 2,03 | 0,02 | nee | 0,15 | 1,20 | 10,0 |
| Lood | 31 | 10,7 | 10,7 | 10,7 | 10,7 | 14,6 | 19,9 | 47,5 | 124,2 | 552,0 | 23,2 | 38,3 | 53,3 | 1,71 | 0,21 | nee | 50,0 | 138,0 | 580,0 |
| Molybdeen | 31 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | 1,05 | n.v.t. | 1,05 | n.v.t. | 0,00 | 0,00 | nee | 1,5 | 5,0 | 200,0 |
| Nikkel | 31 | 12,6 | 14,4 | 18,3 | 24,3 | 31,4 | 34,0 | 39,3 | 43,2 | 55,0 | 25,0 | 25,9 | 26,8 | 0,15 | 0,16 | nee | 35,0 | 50,0 | 210,0 |
| Zink | 31 | 31,0 | 31,0 | 37,6 | 59,8 | 89,7 | 97,4 | 194,9 | 708,7 | 2214,7 | 132,1 | 175,6 | 219,2 | 1,08 | 0,36 | nee | 140,0 | 563,0 | 2000,0 |
| PCB28 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0015 | 0,0140 | n.v.t. |
| PCB52 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0020 | 0,0150 | n.v.t. |
| PCB101 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0015 | 0,0230 | n.v.t. |
| PCB118 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0045 | 0,0160 | n.v.t. |
| PCB138 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0040 | 0,0270 | n.v.t. |
| PCB153 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0035 | 0,0330 | n.v.t. |
| PCB180 | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | nee | 0,0025 | 0,0180 | n.v.t. |
| PCB (som 7) | 31 | 0,0238 | 0,0238 | 0,0238 | 0,0238 | 0,0238 | 0,0238 | 0,0238 | 0,0238 | 0,0238 | n.v.t. | 0,0238 | n.v.t. | 0,00 | 0,00 | nee | 0,0200 | 0,1390 | 1,0 |
| PAK (som 10) | 31 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 1,1 | 4,4 | 0,2 | 0,4 | 0,6 | 1,95 | 0,02 | nee | 1,5 | 9,0 | 40,0 |
| Minerale olie | 31 | 118,9 | 118,9 | 118,9 | 118,9 | 118,9 | 118,9 | 118,9 | 118,9 | 441,5 | 126,3 | 129,0 | 131,8 | 0,09 | 0,00 | nee | 190,0 | 1250,0 | 5000,0 |
| Pentachloorbenzeen | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0025 | 0,0070 | n.v.t. |
| Hexachloorbenzeen | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0085 | 0,0440 | n.v.t. |
| Pentachloorfenol | 31 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | n.v.t. | 0,0102 | n.v.t. | 0,00 | 0,00 | nee | 0,0030 | 0,0160 | 5,0 |
| Chloordaan | 31 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | n.v.t. | 0,0068 | n.v.t. | 0,00 | 0,00 | nee | 0,0020 | n.v.t. | 4,0 |
| DDT | 31 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | n.v.t. | 0,0068 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,2000 | n.v.t. | n.v.t. |
| DDD | 31 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | n.v.t. | 0,0068 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0200 | n.v.t. | n.v.t. |
| DDE | 31 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | n.v.t. | 0,0068 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,1000 | n.v.t. | n.v.t. |
| DDT/DDD/DDE | 31 | 0,0204 | 0,0204 | 0,0204 | 0,0204 | 0,0204 | 0,0204 | 0,0204 | 0,0204 | 0,0204 | n.v.t. | 0,0204 | n.v.t. | 0,00 | n.v.t. | nee | 0,3000 | 0,3000 | 4,0 |
| Aldrin | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0008 | 0,0013 | n.v.t. |
| Dieldrin | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0080 | 0,0080 | n.v.t. |
| Endrin | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0035 | 0,0035 | n.v.t. |
| Drins (som 3) | 31 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | 0,0102 | n.v.t. | 0,0102 | n.v.t. | 0,00 | 0,00 | nee | 0,0150 | 0,0150 | 4,0 |
| Isodrin | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0010 | n.v.t. | n.v.t. |
| Telodrin | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0005 | n.v.t. | n.v.t. |
| α-Endosulfan | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | 0,00 | nee | 0,0009 | 0,0021 | 4,0 |
| Endosulfansulfaat | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | n.v.t. | n.v.t. | n.v.t. |
| α-HCH | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0010 | 0,0012 | n.v.t. |
| β-HCH | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0020 | 0,0065 | n.v.t. |
| γ-HCH | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0030 | 0,0030 | n.v.t. |
| δ-HCH | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | n.v.t. | n.v.t. | n.v.t. |
| HCH (som 4) | 31 | 0,0136 | 0,0136 | 0,0136 | 0,0136 | 0,0136 | 0,0136 | 0,0136 | 0,0136 | 0,0136 | n.v.t. | 0,0136 | n.v.t. | 0,00 | 0,00 | nee | 0,0100 | 0,0100 | 2,0 |
| Heptachloor | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | 0,00 | nee | 0,0007 | 0,0040 | 4,0 |
| Heptachloorepoxide | 31 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | 0,0068 | n.v.t. | 0,0068 | n.v.t. | 0,00 | 0,00 | nee | 0,0020 | 0,0040 | 4,0 |
| Hexachloorbutadieën | 31 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | 0,0034 | n.v.t. | 0,0034 | n.v.t. | 0,00 | n.v.t. | n.v.t. | 0,0030 | 0,0075 | n.v.t. |
| OCB's (som) | 31 | 0,0781 | 0,0781 | 0,0781 | 0,0781 | 0,0781 | 0,0781 | 0,0781 | 0,0781 | 0,0781 | n.v.t. | 0,0781 | n.v.t. | 0,00 | n.v.t. | nee | 0,4000 | n.v.t. | n.v.t. |

LEGENDA

**Bodemkwaliteitszones**

- Oeverzone
- Riviervlakte

**Overige**

- Uitgesloten gebied

**Uitgezonderd van de waterbodemkwaliteitskaart zijn:**

- de op de kaart aangegeven drogere oevergebieden;
- wegen en dijklichamen;
- watergangen en poelen in beheer bij Rijkswaterstaat Zuid Nederland;
- de waterbodemlaag dieper dan 3 meter minus maaiveld;
- het grondwater.

**Voorafgaand aan het gebruik van deze kaart als bewijsmiddel bij grondverzet dient altijd te worden onderzocht of er sprake is van een uitgesloten gebied waar deze kaart niet van toepassing is.**




TITEL

Beheergebied en uitgesloten gebieden

PROJECT

Actualisatie waterbodemkwaliteitskaart Demen-Dieden

OPDRACHTGEVER

K3Delta

| | | | |
|---|---|---|---|
| Kaartnr: | SOB10398.D7 | Versie: | Definitief |
| | | Auteur: | Paul Karels |
| | | Gecontroleerd: | Jeroen Spronk |
| | | Schaal (A3): | 1:11.000 |
| | | Datum: | december 2019 |

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DocumentNaam: SOB10398.D7_Beheergebied_v1.mxd

LEGENDA

**Ontgraving- en toepassingsklasse (waterbodem) ***

- Niet toepasbaar
- Klasse B
- Klasse A
- Vrij toepasbaar

**Overige**

- Uitgesloten gebied

* In verband met de aanwezigheid van 1 of meer gemiddelde gehalten PFAS > 0,0001 mg/kg gelden mogelijk aanvullende toepassingseisen als grond buiten het beheergebied wordt toegepast.

**Voorafgaand aan het gebruik van deze kaart als bewijsmiddel bij grondverzet dient altijd te worden onderzocht of er sprake is van een uitgesloten gebied waar deze kaart niet van toepassing is.**

TITEL

Kwaliteitskaart toplaag (0 - 0,5 m-wb)

PROJECT

Actualisatie waterbodemkwaliteitskaart Demen-Dieden

OPDRACHTGEVER

K3Delta

| | | | |
|---|---|---|---|
| Kaartnr: | SOB10398.D8 | Versie: | Definitief |
| | | Auteur: | Paul Karels |
| | | Gecontroleerd: | Jeroen Spronk |
| | | Schaal (A3): | 1:11.000 |
| | | Datum: | december 2019 |

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DocumentNaam: SOB10398.D8_Kwaliteitskaart_toplaag_v1.mxd

LEGENDA

**Ontgraving- en toepassingsklasse (waterbodem) ***

- Niet toepasbaar
- Klasse B
- Klasse A
- Vrij toepasbaar

**Overige**

- Uitgesloten gebied

* In verband met de aanwezigheid van 1 of meer gemiddelde gehalten PFAS > 0,0001 mg/kg gelden mogelijk aanvullende toepassingseisen als grond buiten het beheergebied wordt toegepast.

**Voorafgaand aan het gebruik van deze kaart als bewijsmiddel bij grondverzet dient altijd te worden onderzocht of er sprake is van een uitgesloten gebied waar deze kaart niet van toepassing is.**

TITEL

Kwaliteitskaart tussenlaag (0,5 - 1,0 m-wb)

PROJECT

Actualisatie waterbodemkwaliteitskaart Demen-Dieden

OPDRACHTGEVER

K3Delta

| | | | |
|---|---|---|---|
| Kaartnr: | SOB10398.D9 | Versie: | Definitief |
| | | Auteur: | Paul Karels |
| | | Gecontroleerd: | Jeroen Spronk |
| | | Schaal (A3): | 1:11.000 |
| | | Datum: | december 2019 |

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LEGENDA

**Ontgraving- en toepassingsklasse (waterbodem) ***

- Niet toepasbaar
- Klasse B
- Klasse A
- Vrij toepasbaar

**Overige**

- Uitgesloten gebied

**Voorafgaand aan het gebruik van deze kaart als bewijsmiddel bij grondverzet dient altijd te worden onderzocht of er sprake is van een uitgesloten gebied waar deze kaart niet van toepassing is.**

TITEL

Kwaliteitskaart ondergrond (1,0 - 3,0 m-wb)

PROJECT

Actualisatie waterbodemkwaliteitskaart Demen-Dieden

OPDRACHTGEVER

K3Delta

| | | | |
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