

RelyOn Nutec Denmark A/S
Uglvigårdsvvej 3
6705 Esbjerg Ø
Att.: Rene Petersen

Report code: AR-21-CA-21019069-01
Batch code: EUDKVE-21019069
Client code: CA0000723
Received on: 24.02.2021

Analytical Report

Sample type: Waste water
Sampling Point: RelyOn Nutec, spildevand - / 20001561
Sampler: Eurofins Miljø Vand A/S SVT
Sampling: 24.02.2021 . 13:15
Test period: 24.02.2021 - 05.03.2021

Sample description:

Lab sample No.:	835-2014-80210321	Unit	LOQ	Method	^{m)} Urel (%)
Inhibition of nitrification					
Dilution	200	ml/l		Preparation	
Inhibition of nitrification 1 conc/std sludge	< 20	%	20	EN ISO 9509:2006 mod.	30
Sludge used for Inhibition of nitrification					
Sludge from a specific treatment plan				*	
Organic Assembly Parameters					
Oil	0.35	mg/l	0.1	DS/R 209 mod. Spectrophotometry (IR)	15
Aromatic hydrocarbons					
Benzene	0.040	µg/l	0.02	ISO 11423-2:1997 mod. GC-MS	20
Toluene	< 0.02	µg/l	0.02	ISO 11423-2:1997 mod. GC-MS	15
Ethylbenzene	< 0.02	µg/l	0.02	ISO 11423-2:1997 mod. GC-MS	20
Xylene (ortho-)	0.032	µg/l	0.02	ISO 11423-2:1997 mod. GC-MS	15
Xylene (meta-, para-)	< 0.02	µg/l	0.02	ISO 11423-2:1997 mod. GC-MS	15
Sum of xylenes	0.032	µg/l		ISO 11423-2:1997 mod. GC-MS	20
BTEX (sum)	0.072	µg/l		ISO 11423-2:1997 mod. GC-MS	20
PAH-compounds					
Acenaphthene	< 0.01	µg/l	0.01	M 0250 GC-MS	30
Fluorene	0.026	µg/l	0.01	M 0250 GC-MS	30
Phenanthrene	< 0.01	µg/l	0.01	M 0250 GC-MS	30
Fluoranthene	0.10	µg/l	0.01	M 0250 GC-MS	30
Pyrene	0.16	µg/l	0.01	M 0250 GC-MS	30
Benzo[b+j+k]fluoranthene	0.041	µg/l	0.01	M 0250 GC-MS	30
Benzo(a)pyrene	0.018	µg/l	0.01	M 0250 GC-MS	30
Indeno(1,2,3-cd)pyrene	0.023	µg/l	0.01	M 0250 GC-MS	30
Benzo(g,h,i)perylene	0.043	µg/l	0.01	M 0250 GC-MS	30
PAH, all	0.41	µg/l		M 0250 GC-MS	
Dioxins					
2,3,7,8-TetraCDD	< 0.686	pg/l	0.72	Internal GC-MS/MS	A
1,2,3,7,8-PentaCDD	< 0.914	pg/l	0.96	Internal GC-MS/MS	A
1,2,3,4,7,8-HexaCDD	< 1.83	pg/l	1.9	Internal GC-MS/MS	A
1,2,3,6,7,8-HexaCDD	< 1.83	pg/l	1.9	Internal GC-MS/MS	A
1,2,3,7,8,9-HexaCDD	< 1.83	pg/l	1.9	Internal GC-MS/MS	A

Legend:

<: less than
>: greater than
#: none of the parameters are detected
LOQ Limit of quantification
*): Not included in the accreditation
n.d: not detected
NM: non-measurable
m): subcontractors

Urel (%): The expanded relative measurement uncertainty, with a coverage factor 2. For results at the level of detection limit the uncertainty might be higher than reported.

m): Uncertainties of microbiological parameters are given as a logarithmical standard deviation

The test results relate only to the items tested.

The report shall not be reproduced except in full without the written approval of the testing laboratory.

RelyOn Nutec Denmark A/S
Uglviggårdsvej 3
6705 Esbjerg Ø
Att.: Rene Petersen

Report code: AR-21-CA-21019069-01
Batch code: EUDKVE-21019069
Client code: CA0000723
Received on: 24.02.2021

Analytical Report

Sample type: Waste water
Sampling Point: RelyOn Nutec, spildevand - / 20001561
Sampler: Eurofins Miljø Vand A/S SVT
Sampling: 24.02.2021 . 13:15
Test period: 24.02.2021 - 05.03.2021

Sample description:

Lab sample No.:	835-2014-80210321	Unit	LOQ	Method	^{m)} Urel (%)
1,2,3,4,6,7,8-HeptaCDD	< 1.56	pg/l	1.6	Internal GC-MS/MS	A
OctaCDD	< 11.0	pg/l	12	Internal GC-MS/MS	A
2,3,7,8-TetraCDF	< 1.22	pg/l	1.3	Internal GC-MS/MS	A
1,2,3,7,8-PentaCDF	< 1.64	pg/l	1.7	Internal GC-MS/MS	A
2,3,4,7,8-PentaCDF	< 1.64	pg/l	1.7	Internal GC-MS/MS	A
1,2,3,4,7,8-HexaCDF	< 1.52	pg/l	1.6	Internal GC-MS/MS	A
1,2,3,6,7,8-HexaCDF	< 1.52	pg/l	1.6	Internal GC-MS/MS	A
1,2,3,7,8,9-HexaCDF	< 1.52	pg/l	1.6	Internal GC-MS/MS	A
2,3,4,6,7,8-HexaCDF	< 1.52	pg/l	1.6	Internal GC-MS/MS	A
1,2,3,4,6,7,8-HeptaCDF	< 1.45	pg/l	1.5	Internal GC-MS/MS	A
1,2,3,4,7,8,9-HeptaCDF	< 1.45	pg/l	1.5	Internal GC-MS/MS	A
OctaCDF	< 3.05	pg/l	3.2	Internal GC-MS/MS	A
WHO(2005)-PCDD/F TEQ (lower-bound)	ND	pg/l		Internal GC-MS/MS	A
WHO(2005)-PCDD/F TEQ (upper-bound)	3.47	pg/l	3.6	Internal GC-MS/MS	A
I-TEQ (NATO/CCMS) (lower-bound)	ND	pg/l		Internal GC-MS/MS	A
I-TEQ (NATO/CCMS) (upper-bound)	3.38	pg/l		Internal GC-MS/MS	A
PFAS-compounds					
PFBA (Perfluorobutanoic acid)	0.26	µg/l	0.001	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B 40
PFBS (Perfluorobutanesulfonic acid)	0.015	µg/l	0.001	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B 40
PFPeA (Perfluoropentanoic acid)	1.1	µg/l	0.001	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B 40
PFHxA (Perfluorohexanoic acid)	1.6	µg/l	0.001	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B 40
PFHxS (Perfluorohexanesulfonic acid)	0.55	µg/l	0.001	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B 40
PFHpA (Perfluoroheptanoic acid)	0.45	µg/l	0.001	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B 40
PFOA (Perfluorooctanoic acid)	0.24	µg/l	0.001	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B 40
PFOS (Perfluorooctanesulfonic acid)	3.0	µg/l	0.001	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B 40
6:2 FTS (Fluorotelomer sulfonate)	26	µg/l	0.001	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B 40

Legend:

<: less than
 >: greater than
 #: none of the parameters are detected
 LOQ Limit of quantification
 *): Not included in the accreditation
 n.d: not detected
 NM: non-measurable
 m): subcontractors

Urel (%): The expanded relative measurement uncertainty, with a coverage factor 2. For results at the level of detection limit the uncertainty might be higher than reported.

^{o)}: Uncertainties of microbiological parameters are given as a logarithmical standard deviation

The test results relate only to the items tested.

The report shall not be reproduced except in full without the written approval of the testing laboratory.

RelyOn Nutec Denmark A/S
Uglviggårdsvej 3
6705 Esbjerg Ø
Att.: Rene Petersen

Report code: AR-21-CA-21019069-01
Batch code: EUDKVE-21019069
Client code: CA0000723
Received on: 24.02.2021

Analytical Report

Sample type: Waste water
Sampling Point: RelyOn Nutec, spildevand - / 20001561
Sampler: Eurofins Miljø Vand A/S SVT
Sampling: 24.02.2021 . 13:15
Test period: 24.02.2021 - 05.03.2021

Sample description:

Lab sample No.:	835-2014-80210321	Unit	LOQ	Method	^{m)} Urel (%)
PFOSA (Perfluorooctanesulfonamide)	<0.01	µg/l	0.001	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B 40
PFNA (Perfluorononanoic acid)	0.051	µg/l	0.001	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B 40
PFDA (Perfluorodecanoic acid)	0.021	µg/l	0.001	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B 40
Sum of PFAS	33	µg/l	0	* DIN38407-42, UNEP Chemicals Branch 2015 mod. LC-MS/MS	B

Information from sampler

Sampling method	Spot test		ISO 5667-10:1992:2007	C
Water temperature	4.7	°C	ISO 5667-10:1992:2007	C
pH	7.1	pH	DS/EN ISO 10523	C

Subcontractors:

A: Eurofins GfA Lab Service GmbH (Hamburg) (DIN EN ISO/IEC 17025:2018 Dakks D-PL-14629-01-00)
B: Eurofins Food & Feed Testing Sweden (Lidköping)
C: Eurofins Environment Water A/S (DS EN ISO/IEC 17025 DANAK 555)

835-2014-80210321 Sample comment:

Som standardrutine bliver alle prøver til totalkulbrinter på FID og/eller kulbrinter på GC-MS dekanteret inden analyse.
Sum af xylener er summen af resultaterne for Ethylbenzen, m+p-Xylen og o-Xylen.

Batch comments:

Oplyst fra prøvetager: Aflæst vandur: d. 23/2: 15734,887 d. 24/2: 15734,887
Detektionsgrænsen for PFAS er hævet grundet højt indhold

Copy to:

DIN Forsyning Spildevand A/S , Kopimodtager, spildevand, Ulvsundvej 1, 6715 Esbjerg N
Esbjerg Kommune , miljo@esbjergkommune.dk, Torvegade 74, 6700 Esbjerg

05.03.2021

Customer center
Tel 70224231
iww@eurofins.dk


Karen Marie Kundby Kristensen
Customer Adviser

Legend:

<: less than
>: greater than
#: none of the parameters are detected
LOQ Limit of quantification
*): Not included in the accreditation
n.d: not detected
NM: non-measurable
m): subcontractors

Urel (%): The expanded relative measurement uncertainty, with a coverage factor 2. For results at the level of detection limit the uncertainty might be higher than reported.

^o): Uncertainties of microbiological parameters are given as a logarithmical standard deviation

The test results relate only to the items tested.

The report shall not be reproduced except in full without the written approval of the testing laboratory.