

# Report

Page 1 (3)



## T1213129

1C00FDWYD6P



Project  
Reference  
Registered **2012-09-17**  
Issued **2012-09-27**

**Mátis ohf**  
**Hrólfur Sigurdsson**  
**Food Research, inn. and safety**  
**Vinlandsleid 12**  
**IS-113 Reykjavik**  
**ICELAND**

### Analysis of waste water

Your ID	<b>R12-2214-1/ Pernunes i Reydarfirdi</b>					
LabID	O10463928					
Analysis	Results	Uncertainty ( $\pm$ )	Unit	Method	Issuer	Sign
Ba	<b>29.0</b>	5.3	$\mu\text{g/l}$	1	H	HESE
Cd	<b>&lt;0.05</b>		$\mu\text{g/l}$	1	H	HESE
Cr	<b>&lt;0.9</b>		$\mu\text{g/l}$	1	H	HESE
Cu	<b>&lt;1</b>		$\mu\text{g/l}$	1	H	HESE
Hg	<b>&lt;0.02</b>		$\mu\text{g/l}$	1	F	HESE
Ni	<b>4.68</b>	1.27	$\mu\text{g/l}$	1	H	HESE
Pb	<b>&lt;0.5</b>		$\mu\text{g/l}$	1	H	HESE
Zn	<b>9.55</b>	3.69	$\mu\text{g/l}$	1	H	STGR
Mo	<b>4.59</b>	1.21	$\mu\text{g/l}$	2	H	HESE
Se*	<b>0.522</b>		$\mu\text{g/l}$	2	G	HESE
tot ext aliphates	<b>0.39</b>	0.16	mg/l	3	1	ANFR
unpolar aliphates	<b>&lt;0.10</b>		mg/l	3	1	ANFR
tot ext aromates	<b>&lt;0.10</b>		mg/l	3	1	ANFR
AOX	<b>0.037</b>	0.010	mg/l	4	1	ANFR
phenol index	<b>0.021</b>	0.005	mg/l	5	1	ANFR
N-tot	<b>32.7</b>	9.81	mg/l	6	1	ANFR
P-tot	<b>0.129</b>	0.026	mg/l	7	1	ANFR
ammonium	<b>40.5</b>	8.11	mg/l	8	1	ANFR
chloride	<b>72.6</b>	14.5	mg/l	9	1	ANFR
sulphate	<b>7.08</b>	1.06	mg/l	10	1	ANFR
fluoride	<b>&lt;0.200</b>		mg/l	11	1	ANFR

# Report

Page 2 (3)



T1213129

1C00FDWYD6P



\* indicates unaccredited analysis.

	Method specification
1	<p>Package V-3B. Determination of metals after microwave digestion with HNO<sub>3</sub>. The measurement was carried out according to EPA-methods 200.7 (ICP-AES) and 200.8 (ICP-SFMS). The determination of Hg was carried out with AFS according to SS-EN ISO 17852:2008.</p> <p>Special information for added metals to the package: W; the sample has been digested with HNO<sub>3</sub> and HF. Se and Ag; the sample has been digested with HCl.</p> <p>Rev 2012-01-19</p>
2	Additional metals
3	<p>Package OV-20B. Determination of oil. Unpolar aliphates, total extractable aliphates and total extractable aromates. The measurement is carried out with infrared (IR)-spectroscopy. Extraction solvent; Perchloroethylene</p>
4	Determination of AOX according to method CSN EN 1485.
5	<p>Determination of phenolindex according to method based on CSN ISO 6439. The measurement is performed with spectrophotometry.</p> <p>Rev 2012-02-15</p>
6	Determination of total nitrogen, N-tot, with IR detection according to method EN 12260.
7	<p>Determination of total phosphorous, P-tot, with spectrophotometry according to method based on CSN EN ISO 6878 and CSN ISO 15681-1.</p> <p>Rev 2012-02-15</p>
8	<p>Determination of ammonium using FIA and spectrophotometric detector according to CSN ISO 11732. The method includes filtration of turbid samples.</p>
9	<p>Determination of chloride using ion chromatography according to CSN ISO 10304-1&amp;2.</p> <p>The method includes filtration of turbid samples.</p>
10	<p>Determination of sulfate using ion chromatography according to a method based on CSN ISO 10304-1&amp;2.</p> <p>The method includes filtration of turbid samples.</p>
11	<p>Determination of fluoride using ion chromatography according to method based on CSN ISO 10304-01. The method includes filtration of turbid samples.</p> <p>Rev 2012-02-15</p>

	Approver
ANFR	Andreas Fredman

# Report

Page 3 (3)



T1213129

1C00FDWYD6P



	Approver
HESE	Hedvig von Seth
STGR	Sture Grägg

	Issuer <sup>1</sup>
F	The determination is performed using AFS The analysis is provided by ALS Scandinavia AB, Aurorum 10, 977 75 Luleå, Sweden, which is a testing laboratory, accredited by the Swedish accreditation body SWEDAC (Reg.No. 2030).
G	The determination is performed using AFS The analysis is provided by ALS Scandinavia AB, Aurorum 10, 977 75 Luleå, Sweden, which is a testing laboratory, accredited by the Swedish accreditation body SWEDAC (Reg.No. 2030).
H	The determination is performed using ICP-SFMS The analysis is provided by ALS Scandinavia AB, Aurorum 10, 977 75 Luleå, Sweden, which is a testing laboratory, accredited by the Swedish accreditation body SWEDAC (Reg.No. 2030).
1	The analysis is provided by ALS Laboratory Group, Na Harfê 9/336, 190 00, Prag 9, Czech Republic, which is a testing laboratory, accredited by the Czech accreditation body CAI (Reg.No 1163). CAI is a signatory to a MLA within EA, the same LA to which the Swedish accreditation body SWEDAC is also a signatory. The laboratories are located in; Prague, Na Harfê 9/336, 190 00, Praha 9, Ceska Lipa, Bendlova 1687/7, 470 03 Ceska Lipa, Pardubice, V Raji 906, 530 02 Pardubice.  Contact the laboratory for further information.

The uncertainty is given as extended uncertainty (according to the definition in "Guide to the Expression of Uncertainty in Measurement", ISO, Geneva, Switzerland 1993) calculated with a coverage factor of 2, which gives a confidence level of approximately 95%.

The uncertainty from subcontractors is often given as extended uncertainty calculated with a coverage factor of 2. Contact the laboratory for further information.

This report may not be reproduced other than in full, except with the prior written approval of the issuing laboratory. The results apply only to the material that has been identified, received, and tested. Regarding the laboratory's liability in relation to assignment, please refer to our latest product catalogue or website <http://www.alsglobal.se>

The digitally signed PDF file represents the original report. Any printouts are to be considered as copies.

<sup>1</sup> The technical unit within ALS Scandinavia where the analysis was carried out, alternatively the subcontractor for the analysis.