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201H0ZANF8P



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Project
Reference

Analysis of drinking water

Your ID	R16-2230-1/ A/Skinney						
LabID	O10795566						
Analysis	Results	Uncertainty (\pm)	Unit	Method	Issuer	Sign	
Ca	10.1	0.8	mg/l	1	R	STGR	
Fe	<0.0004		mg/l	1	H	STGR	
K	<0.4		mg/l	1	R	STGR	
Mg	2.26	0.15	mg/l	1	R	STGR	
Na	5.07	0.35	mg/l	1	R	STGR	
Si	4.54	0.28	mg/l	1	R	STGR	
Al	0.738	0.189	μ g/l	1	H	STGR	
As	<0.05		μ g/l	1	H	STGR	
Ba	0.129	0.029	μ g/l	1	H	STGR	
Cd	<0.002		μ g/l	1	H	STGR	
Co	<0.005		μ g/l	1	H	STGR	
Cr	0.0286	0.0163	μ g/l	1	H	STGR	
Cu	0.481	0.105	μ g/l	1	H	STGR	
Hg	<0.002		μ g/l	1	F	STGR	
Mn	<0.03		μ g/l	1	H	STGR	
Mo	0.171	0.032	μ g/l	1	H	STGR	
Ni	<0.05		μ g/l	1	H	STGR	
P	2.80	0.60	μ g/l	1	H	STGR	
Pb	0.0338	0.0072	μ g/l	1	H	STGR	
Sr	23.4	2.3	μ g/l	1	R	STGR	
Zn	0.504	0.146	μ g/l	1	H	STGR	
V	0.665	0.128	μ g/l	1	H	STGR	
Sb	<0.01		μ g/l	2	H	STGR	
B	<10		μ g/l	3	R	STGR	
S	0.699	0.063	mg/l	4	R	STGR	
Se	<0.5		μ g/l	5	H	STGR	
benzene	<0.20		μ g/l	6	1	FREN	
toluene	<0.20		μ g/l	6	1	FREN	
ethylbenzene	<0.10		μ g/l	6	1	FREN	
m,p-xylene	<0.20		μ g/l	6	1	FREN	
o-xylene	<0.10		μ g/l	6	1	FREN	
xylenes, sum*	<0.20		μ g/l	6	1	FREN	
dichloromethane	<2.0		μ g/l	7	1	FREN	
1,1-dichloroethane	<0.10		μ g/l	7	1	FREN	
1,2-dichloroethane	<0.50		μ g/l	7	1	FREN	
trans-1,2-dichloroethene	<0.10		μ g/l	7	1	FREN	
cis-1,2-dichloroethene	<0.10		μ g/l	7	1	FREN	
1,2-dichloropropane	<1.0		μ g/l	7	1	FREN	
tetrachloromethane	<0.10		μ g/l	7	1	FREN	
1,1,1-trichloroethane	<0.10		μ g/l	7	1	FREN	

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Your ID	R16-2230-1/ A/Skinney					
LabID	O10795566					
Analysis	Results	Uncertainty (±)	Unit	Method	Issuer	Sign
1,1,2-trichloroethane	<0.20		µg/l	7	1	FREN
trichloroethene	<0.10		µg/l	7	1	FREN
tetrachloroethene	<0.20		µg/l	7	1	FREN
vinylchloride	<1.0		µg/l	7	1	FREN
naphthalene	<0.20		µg/l	8	1	FREN
acenaphthylene	<0.10		µg/l	8	1	FREN
acenaphthene	<0.0070		µg/l	8	1	FREN
fluorene	<0.010		µg/l	8	1	FREN
phenanthrene	<0.040		µg/l	8	1	FREN
anthracene	<0.0050		µg/l	8	1	FREN
fluoranthene	<0.0050		µg/l	8	1	FREN
pyrene	<0.0050		µg/l	8	1	FREN
benzo(a)anthracene	<0.0030		µg/l	8	1	FREN
chrysene	<0.0070		µg/l	8	1	FREN
benzo(b)fluoranthene	<0.0040		µg/l	8	1	FREN
benzo(k)fluoranthene	<0.0020		µg/l	8	1	FREN
benzo(a)pyrene	<0.0020		µg/l	8	1	FREN
dibenzo(ah)anthracene	<0.0020		µg/l	8	1	FREN
benzo(ghi)perylene	<0.0030		µg/l	8	1	FREN
indeno(123cd)pyrene	<0.0030		µg/l	8	1	FREN
PAH, sum 16*	<0.20		µg/l	8	1	FREN
PAH, sum carcinogenic*	<0.012		µg/l	8	1	FREN
PAH, sum non carcinogenic*	<0.20		µg/l	8	1	FREN
PAH, sum 4*	<0.0060		µg/l	8	1	FREN
PAH, sum L*	<0.20		µg/l	8	1	FREN
PAH, sum M*	<0.040		µg/l	8	1	FREN
PAH, sum H*	<0.013		µg/l	8	1	FREN
trichloromethane	<0.30		µg/l	9	1	FREN
tribromomethane	<0.20		µg/l	9	1	FREN
dibromochloromethane	<0.10		µg/l	9	1	FREN
bromodichloromethane	<0.10		µg/l	9	1	FREN
trihalomethanes, sum*	<0.35		µg/l	9	1	FREN
ammonium	0.030	0.004	mg/l	10	1	FREN
chloride	6.48	0.973	mg/l	11	1	FREN
colour	<5		mgPt/l	12	2	NEMA
sulphate	2.08	0.311	mg/l	13	1	FREN
TOC	<0.50		mg/l	14	1	FREN
nitrate	0.314	0.044	mg/l	15	3	STGR
nitrite	<0.01		mg/l	16	2	NAKA
fluoride	<0.200		mg/l	17	1	FREN
CN total	<0.005		mg/l	18	1	FREN

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* indicates unaccredited analysis.

	Method specification
1	<p>Package V-2. Determination of metals without digestion. The measurement was carried out according to EPA-method 200.7(mod), SS EN ISO 11885(mod) (ICP-AES) and EPA-method 200.8(mod), SS EN ISO 17294-1,2(mod) (ICP-SFMS). Analysis of Hg with AFS according to SS-EN ISO 17852:2008.</p> <p>Special information for added metals to the package: W; the sample must not be acidified prior to analysis. S; the sample has been stabilized with H2O2.</p> <p>Rev 2015-06-25</p>
2	<p>Determination of Sb without digestion. The measurement was carried out according to EPA-method 200.7(mod), SS EN ISO 11885(mod) (ICP-AES) or EPA-method 200.8(mod), SS EN ISO 17294-1,2(mod) (ICP-SFMS).</p> <p>Rev 2015-06-25</p>
3	<p>Determination of B without digestion. The measurement was carried out with either ICP-AES according to EPA-methods 200.7 and SS EN ISO 11885 or with ICP-SFMS according to EPA-method 200.8 and SS EN ISO 17294-1.</p> <p>Rev 2015-04-24</p>
4	<p>Determination of S, Sulfur, without previous digestion. Stabilisation with H2O2. The sample has been acidified with 1 ml nitric acid (Suprapur) per 100 ml. This is not done if the sample was already acidified previous to the arrival at the laboratory. The measurement was carried out according to EPA-method 200.7(mod), SS EN ISO 11885(mod) (ICP-AES) or EPA-method 200.8(mod), SS EN ISO 17294-1,2(mod) (ICP-SFMS).</p> <p>Rev 2015-06-25</p>
5	Additional metals
6	<p>Package OV-5. Determination of monocyclic aromatics (BTEX) according to method based on US EPA 624, US EPA 8260, EN ISO 10301, MADEP 2004, rev. 1.1. Measurement is performed with GC-FID and GC-MS.</p> <p>Rev 2013-09-19</p>
7	<p>Package OV-6. Determination of chlorinated aliphates including vinylchloride according to method based on US EPA 624, US EPA 8260, EN ISO 10301, MADEP 2004, rev.1.1.. The measurement is performed with GC-FID and GC-MS.</p> <p>Rev 2013-09-18</p>
8	<p>Package OV-1. Determination of polycyclic aromatic hydrocarbons, PAH (EPA-16) according to method based on US EPA 550 The measurement is performed by HPLC with fluorescence and PDA detection.</p> <p>PAH carcinogenic are benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, dibenzo(ah)anthracene and indeno(1,2,3-c,d)pyrene. Sum 4 PAH: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-c,d)pyrene and</p>

Method specification	
	<p>benzo(g,h,i)perylene</p> <p>Sum PAH L: naphthalene, acenaphthene and acenaphthylene. Sum PAH M: fluorene, phenanthrene, anthracene, fluoranthene and pyrene Sum PAH H: benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-c,d)pyrene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene)</p> <p>Rev 2013-09-24</p>
9	<p>Package OV-10. Determination of trihalomethanes according to a method based on US EPA 624, US EPA 8260, EN ISO 10301, MADEP 2004, rev.1.1. The measurement is performed with GC-FID and GC-MS.</p> <p>Rev 2013-09-19</p>
10	<p>Spectrophotometric determination of ammonium NH₄, low LOQ, according to method based on CSN EN ISO 11732, CSN EN ISO 13395, CSN EN 13370 and CSN EN 12506. The method includes filtration of turbid samples.</p> <p>Rev 2013-09-18</p>
11	<p>Determination of chloride using ion chromatography according to CSN EN ISO 10304-1. The method includes filtration of turbid samples.</p> <p>Rev 2012-05-28</p>
12	<p>Determination of colour according to SS-EN ISO 7887 edition 2, method C. Photometric determination at 410 nm after filtration. Uncertainty (k=2): ±18% at 20 mg Pt/l and ±12% at 100 mg Pt/l</p> <p>Rev 2016-05-17</p>
13	<p>Determination of sulfate with low LOQ, using ion chromatography according to a method based on CSN ISO 10304-1&2. The method includes filtration of turbid samples.</p> <p>Rev 2013-03-14</p>
14	<p>Determination of TOC with IR detection according to method based on CSN EN 1484 and CSN EN 13370. The method includes filtration of turbid samples.</p> <p>Rev 2014-11-24</p>
15	<p>Determination of nitrate, NO₃ according to SS-EN ISO 10304-1. The measurement is performed with ion chromatography.</p> <p>Rev 2014-03-03</p>
16	<p>Determination of nitrite nitrogen according to SS-EN ISO 13395-1 (FIA). Filtration through 0.45 µm filter is included in the method. Sample for the determination of nitrite nitrogen should arrive to the laboratory as soon as possible after sampling, because this parameter is time-sensitive. The determination should be done within 24 hours after sampling according to SS-EN ISO 5667-3.</p> <p>Uncertainty (k=2) Clean water: ±14% at 0.01 mg N/l ±10% at 0.05 mg N/l and ±14% at 0.2 mg N/l Waste water: ±14% at 0.01 mg N/l and ±11% at 0.05 mg N/l and ±15% at 0.2 mg N/l</p> <p>Rev 2016-03-17</p>

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Method specification	
17	Determination of fluoride using ion chromatography according to CSN ISO 10304-1 and CSN EN 12506. The method includes filtration of turbid samples. Rev 2013-09-17
18	Spectrophotometric determination of total cyanide according to method based on TNV 757415. Rev 2013-09-19

	Approver
FREN	Fredrik Enzell
NAKA	Natalia Karwanska
NEMA	Nesrine Mansouri
STGR	Sture Grägg

Issuer ¹	
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).
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).
R	The determination is performed using ICP-AES 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.
2	The analysis is provided by ALS Scandinavia AB, Box 700, 182 17 Danderyd, which is accredited by the Swedish accreditation body SWEDAC (Reg.No. 2030).
3	The analysis is provided by AK Lab AB, Getängsvägen 29, 504 68 Borås, Sweden, which is a testing laboratory, accredited by the Swedish accreditation body SWEDAC (Reg.No. 1790).

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

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The uncertainty is given as extended uncertainty (according to the definition in "Guide to the Expression of Uncertainty in Measurement", JCGM 100:2008 Corrected version 2010) 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.

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