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Project  
 Reference

**This report replaces any previous report with the same number.**

## Analysis of drinking water

Your ID	<b>R19-3049-2/ 2</b>					
LabID	<b>O11229752</b>					
Analysis	Results	Uncertainty (±)	Unit	Method	Issuer	Sign
Ca	2.76	0.22	mg/l	1	R	AKR
Fe	0.00229	0.00064	mg/l	1	H	AKR
K	0.724	0.053	mg/l	1	R	AKR
Mg	0.912	0.060	mg/l	1	R	AKR
Na	8.48	0.63	mg/l	1	R	AKR
Si	6.58	0.42	mg/l	1	R	AKR
Al	3.43	0.74	µg/l	1	H	AKR
As	<0.05		µg/l	1	H	AKR
Ba	0.123	0.023	µg/l	1	H	AKR
Cd	0.00309	0.00121	µg/l	1	H	AKR
Co	<0.005		µg/l	1	H	AKR
Cr	0.0224	0.0106	µg/l	1	H	AKR
Cu	0.380	0.127	µg/l	1	H	AKR
Hg	<0.002		µg/l	1	F	AKR
Mn	0.432	0.087	µg/l	1	H	AKR
Mo	0.0682	0.0149	µg/l	1	H	AKR
Ni	0.0680	0.0366	µg/l	1	H	AKR
P	36.8	7.4	µg/l	1	H	AKR
Pb	<0.01		µg/l	1	H	AKR
Sr	4.50	0.47	µg/l	1	R	AKR
Zn	0.362	0.185	µg/l	1	H	AKR
V	3.56	0.65	µg/l	1	H	AKR
Sb	<0.01		µg/l	2	H	AKR
B	<10		µg/l	2	R	AKR
S	0.719	0.061	mg/l	2	R	AKR
Se	<0.5		µg/l	2	H	AKR
Li	<4		µg/l	2	R	AKR
benzene	<0.20		µg/l	3	1	ULKA
toluene	<0.20		µg/l	3	1	ULKA
ethylbenzene	<0.10		µg/l	3	1	ULKA
m,p-xylene	<0.20		µg/l	3	1	ULKA
o-xylene	<0.10		µg/l	3	1	ULKA
xylenes, sum*	<0.15		µg/l	3	1	ULKA



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dichloromethane	<2.0		µg/l	4	1	ULKA
1,1-dichloroethane	<0.10		µg/l	4	1	ULKA
1,2-dichloroethane	<0.50		µg/l	4	1	ULKA
trans-1,2-dichloroethene	<0.10		µg/l	4	1	ULKA
cis-1,2-dichloroethene	<0.10		µg/l	4	1	ULKA
1,2-dichloropropane	<1.0		µg/l	4	1	ULKA
tetrachloromethane	<0.10		µg/l	4	1	ULKA
1,1,1-trichloroethane	<0.10		µg/l	4	1	ULKA
1,1,2-trichloroethane	<0.20		µg/l	4	1	ULKA
trichloroethene	<0.10		µg/l	4	1	ULKA
tetrachloroethene	<0.20		µg/l	4	1	ULKA
vinylchloride	<1.0		µg/l	4	1	ULKA
1,1-dichloroethene	<0.10		µg/l	4	1	ULKA
naphthalene	<0.20		µg/l	5	1	ULKA
acenaphthylene	<0.10		µg/l	5	1	ULKA
acenaphthene	<0.0070		µg/l	5	1	ULKA
fluorene	<0.010		µg/l	5	1	ULKA
phenanthrene	<0.040		µg/l	5	1	ULKA
anthracene	<0.0050		µg/l	5	1	ULKA
fluoranthene	<0.0050		µg/l	5	1	ULKA
pyrene	<0.0050		µg/l	5	1	ULKA
benzo(a)anthracene	<0.0030		µg/l	5	1	ULKA
chrysene	<0.0070		µg/l	5	1	ULKA
benzo(b)fluoranthene	<0.0040		µg/l	5	1	ULKA
benzo(k)fluoranthene	<0.0020		µg/l	5	1	ULKA
benzo(a)pyrene	<0.0020		µg/l	5	1	ULKA
dibenzo(ah)anthracene	<0.0020		µg/l	5	1	ULKA
benzo(ghi)perylene	<0.0030		µg/l	5	1	ULKA
indeno(123cd)pyrene	<0.0030		µg/l	5	1	ULKA
PAH, sum 16 *	<0.20		µg/l	5	1	ULKA
PAH, sum carcinogenic *	<0.012		µg/l	5	1	ULKA
PAH, sum non carcinogenic *	<0.20		µg/l	5	1	ULKA
PAH, sum 4 *	<0.0060		µg/l	5	1	ULKA
PAH, sum L *	<0.20		µg/l	5	1	ULKA
PAH, sum M *	<0.033		µg/l	5	1	ULKA
PAH, sum H *	<0.013		µg/l	5	1	ULKA
trichloromethane	<0.30		µg/l	6	1	ULKA
tribromomethane	<0.20		µg/l	6	1	ULKA
dibromochloromethane	<0.10		µg/l	6	1	ULKA
bromodichloromethane	<0.10		µg/l	6	1	ULKA
trihalomethanes, sum *	<0.35		µg/l	6	1	ULKA
ammonium	<0.026		mg/l	7	1	ULKA
ammonium nitrogen	<0.020		mg/l	7	1	ULKA
chloride	11.2	1.68	mg/l	8	1	ULKA
sulphate	1.82	0.272	mg/l	9	1	ULKA



Your ID	<b>R19-3049-2/ 2</b>					
LabID	O11229752					
Analysis	Results	Uncertainty ( $\pm$ )	Unit	Method	Issuer	Sign
nitrite	<0.0050		mg/l	10	1	ULKA
nitrite nitrogen	<0.0020		mg/l	10	1	ULKA
fluoride	<0.200		mg/l	11	1	ULKA
colour	<2.0		mgPt/l	12	1	ULKA
TOC	<0.50		mg/l	13	1	ULKA
CN total	<0.005		mg/l	14	1	ULKA
nitrate	0.195	0.031	mg/l	15	2	ERKU
nitrate nitrogen	0.044	0.00704	mg/l	15	2	ERKU



\* 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	Additional metals
3	<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>
4	<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>
5	<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 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>
6	<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>
7	<p>Spectrophotometric determination of ammonium NH<sub>4</sub>, 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>
8	Determination of chloride using ion chromatography according to CSN EN ISO 10304-1.



Method specification	
	The method includes filtration of turbid samples.  Rev 2012-05-28
9	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.  Rev 2013-03-14
10	Spectrophotometric determination of nitrite/nitrite nitrogen according to method based on CSN ISO 11732, CSN ISO 13395, CSN EN 13370 and CSN EN 12506. The method includes filtration of turbid samples.  The time between sampling and analysis has exceeded 24 hours.  Rev 2014-02-19
11	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
12	Spectrophotometric determination of colour after filtration according to method based on CSN EN ISO 7887.  Rev 2013-09-26
13	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.  Rev 2014-11-24
14	Spectrophotometric determination of total cyanide according to method based on TNV 757415.  Rev 2013-09-19
15	Determination of nitrate, NO <sub>3</sub> according to SS-EN ISO 10304-1. The measurement is performed with ion chromatography. Rev 2014-03-03

Approver	
AKR	Anna-Karin Revell
ERKU	Erika Knutsson
ULKA	Ulrika Karlsson

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).
H	The determination is performed using ICP-SFMS

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



	<b>Issuer<sup>1</sup></b>
	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 01 Ceska Lipa, Pardubice, V Raji 906, 530 02 Pardubice.  Contact the laboratory for further information.
2	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).

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%.

Measurement of uncertainty is reported only for detected substances with levels above the reporting limits.

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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