IFA-Proficiency Testing Scheme for Water Analysis

Round N158
Major Ions

Sample Dispatch: 6 September 2021

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Round: N158	Date / Signature:	08.10.2021

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199 pages

This report summarises the results of round N158 (major ions) within the IFA-Proficiency Testing Scheme for Water Analysis. The samples N158A and N158B were distributed to 50 participants on Monday, 6 September 2021. Each participant received two samples of 1000 mL, each filled into two 500 mL PET bottles.
Closing date for reporting results to the IFA-Tulln was Friday, 1 October 2021. 49 participants submitted results. To make the participants anonymous, each laboratory obtained a letter code by random.

Samples

The samples consisted of artificial ground water. For sample preparation, ultrapure water was spiked with solutions of salts and standards in order to simulate the ionic composition of natural Austrian ground water. The following substances were added to the samples: $CaCO_3$, $CaCl_2$, $Ca(NO_3)_2$, $MgSO_4$, $Mg(NO_3)_2$, $NaHCO_3$, Na_2SO_4, $KHCO_3$, K_2SO_4, diethyl ethylphosphonate ($C_6H_{15}PO_3$, for total-P), potassium hydrogen phthalate (for DOC) and certified standard solutions of $NaNO_2$, NH_4Cl, $NH_4H_2PO_4$, H_3BO_3 and $Zn(CN)_2$/KCN. Both samples, N158A and N158B, contained free CO_2, which was used for dissolution of $CaCO_3$. No other substances (e.g. preservatives) were added. The samples were stabilised by sterile filtration and low temperature.

No phosphorus substances were added to sample N158B in order to check the analytical blank values.

Homogeneity, accuracy and stability tests at the IFA-Tulln

The samples were checked for homogeneity and accuracy at the IFA-Tulln before dispatch. The results of the measurements are listed in the result tables and the parameter oriented part of the report (”IFA result”).

To verify stability, the parameters DOC, NH_4^+, NO_2^-, o-PO_4^{3-} and CN^- of samples N158A and N158B were determined in several samples about four weeks after shipment. The results are listed in the result tables (”Stability test”) and the parameter oriented part of the report (“IFA result”). Stability tests for all other parameters will be carried out together with the accuracy tests of the following round (N159).

According to our experience, the samples remain stable up to 18 months for the parameters conductivity, total hardness, alkalinity, Ca^{2+}, Mg^{2+}, Na^+, K^+, NO_3^-, Cl^-, SO_4^{2-}, boron and HCO_3^- when stored at 4°C in the dark. For the parameters CN^-, NH_4^+, NO_2^-, o-PO_4^{3-}, total-P and DOC the samples remain stable several weeks, whereas the first changes normally are observed for NH_4^+ and cyanide.

Results

Data evaluation was based on target concentrations that were calculated from the weights of the substances and standards used to produce the samples. Their uncertainty intervals correspond to the expanded uncertainty (coverage factor k = 2) as described in the EURACHEM/CITAC Guide “Quantifying Uncertainty in Analytical Measurement, 3rd Edition (2012)”.

The target value of the electrical conductivity was set to the laboratory mean (conventional value). When calculated from more than 20 results with a standard deviation between the laboratories of about 1 %, the conventional value has a confidence interval that is smaller than the uncertainty of our estimate calculated from the target concentrations by Debye-Hückel´s theory: 2.4 % (p = 95 %). However, the calculated electrical conductivity was 484 µS/cm in sample N158A and 435 µS/cm in sample N158B.

For the pH no target values can be assigned. The results can be compared on the tables. In this kind of samples containing CO_2, the pH tends to increase slowly over time.

Total phosphorus after digestion had to be determined according to DIN EN ISO 6878. Diethyl ethylphosphonate ($C_6H_{15}PO_3$), which can be determined as phosphate only after oxidative digestion, and ammonium dihydrogen phosphate ($NH_4H_2PO_4$) were used for preparation. The target values of total-P were calculated from the weights of the two substances. The results were given in mg/L o-PO_4^{3-}.

Cyanide (easily liberatable) had to be determined according to ISO 14403 - 2:2012 (ISO 6703 - 2:1984; DIN 38405 - D13). A certified potassium cyanide - zinc cyanide standard solution was used for preparation of the interlaboratory comparison samples. The major advantage of the zinc complex over free cyanide is its excellent stability behaviour at neutral pH. The results were given in mg/L CN^-.

Recoveries for individual laboratory results and overall mean values are related to the target concentrations. The results were tested for outliers by application of the Hampel outlier test (level of significance 99 %).

In order to check the analytical blank values, target concentrations were set to <0.009 mg/L o-PO_4^{3-} and <0.009 mg/L total-P (as PO_4^{3-}) in N158B, which meets the minimum quantifiable values defined by the Austrian ground and river water monitoring program and the quantification limits of the analytical methods applied in the IFA.

The recoveries of the target concentrations, calculated from outlier-corrected data mean values ranged between 89.5 % (cyanide in sample N158A) and 107.3 % (ammonium in sample N158A).

The between laboratory CVs covered the range between 0.9 % (conductivity in sample N158B) and 19.5 % (cyanide in sample N158B).

All confidence intervals of the outlier-corrected laboratory mean values except cyanide in sample N158A (89.5 % ± 6.0 %) and DOC in sample N158B (104.5 % ± 2.5 %) encompass the corresponding target values with their uncertainties. For all other parameters, statistically, no difference could be detected between theoretical target concentrations and outlier corrected laboratory means.

z-scores

The most common approach is to form the z-score given by

$$z = \frac{x_i - X}{\sigma_{PT}}$$

z	z-score
x_i	result of laboratory
X	target value or mean value („consensus value“)
σ_{PT}	standard deviation for proficiency assessment

Thus, the z-score is the ratio of the estimated bias (difference between result and target value) and a standard deviation. The standard deviations for proficiency assessment were determined from the results of all interlaboratory comparisons that have been organised by the IFA-Tulln from 2010 to 2020. They represent average performance data of all former participating laboratories.

This approach was chosen, because standard deviations of the outlier-corrected measurements substantially vary between individual proficiency test rounds. Averaging standard deviations from proficiency testing rounds of several years can provide standard deviations for proficiency assessment on a broad data basis. It is therefore more suitable than a standard deviation taken directly from the interlaboratory comparison (EN ISO/IEC 17043:2010, B.3.1.3).

Another advantage of previously determined standard deviations is that the participants can foresee which z-scores can be expected by their routine analysis methods before participation.

Calculation example:

A laboratory found 7.00 mg/L for the parameter DOC (recovery of 116 %). The target value for the DOC was 6.02 mg/L (100 %). The relative standard deviation for proficiency assessment is given in the table below (as well as in the annual program www.ifatest.eu) by 5.9 %, which is 0.36 mg/L DOC, when based on the target value.

$$z = \frac{x_i - X}{\sigma_{PT}} = \frac{7.00\ \text{mg/L} - 6.02\ \text{mg/L}}{0.36\ \text{mg/L}} \approx 2.7 \quad \textbf{or} \quad \frac{116\% - 100\%}{5.9\%} \approx 2.7$$

z z-score
x_i 7.00 mg/L equivalent to 116 % (value of the laboratory)
X 6.02 mg/L equivalent to 100 % (target value)
σ_{pt} 0.36 mg/L equivalent to 5.9 % (standard deviation for proficiency assessment, see table below)

In the case of recalculation, deviations in the last digits may occur due to the fact that rounded values are given in the report for clarity.

The following table lists the z-score criteria as relative standard deviation and their limits of applicability.

Parameter	standard deviation for proficiency assessment	Lower limit
Alkalinity $K_{S4.3}$	2.0 %	0.2 mmol/L
Ammonium	12 %	0.01 mg/L
Boron	7.8 %	0.012 mg/L
Calcium	3.3 %	9 mg/L
Chloride	3.0 %	2 mg/L
el. Conductivity	1.3 %	50 µS/cm
Cyanide	16 %	0.01 mg/L
DOC	5.9 %	1 mg/L
Hydrogen carbonate	2.4 %	20 mg/L
Magnesium	3.7 %	1 mg/L
Nitrate	3.3 %	2 mg/L
Nitrite	6.1 %	0.01 mg/L
Orthophosphate	10 %	0.015 mg/L
Potassium	4.5 %	0.5 mg/L
Sodium	3.4 %	1 mg/L
Sulphate	3.1 %	3 mg/L
Total hardness	2.9 %	0.1 mmol/L
Total-P (as PO_4^{3-})	10 %	0.015 mg/L

Normally, a classification based on z-scores is made this way:

|z-Score|	Classification
≤2	satisfactory
2<|z|<3	questionable
≥3	unsatisfactory

The z-scores are listed in the parameter-oriented evaluation in the tables next to the recoveries. Additionally, each laboratory receives a sheet on which the obtained z-scores are summarized and graphically presented. The standard deviations for proficiency assessment are given in concentration units there.

Illustration of results

An explanation to the illustration of the results is given on the following page.

The **laboratory oriented part** contains the measurement results and reported uncertainties of each individual laboratory for all parameters together with the achieved recoveries in graphical and tabular form. This part of the report also lists tables with the results originally reported by the laboratories.

In the **parameter oriented part** the reported results and corresponding uncertainties are illustrated together with recoveries of the target values and the z-scores for each parameter and all laboratories. This information is presented in graphical and tabular form.

Results, which were identified as outliers by the Hampel test are marked with an asterisk (*). These values were not considered for the calculation of statistical parameters (mean values, standard deviations and confidence intervals). Moreover, the parameter oriented part contains the uncertainties of the target values. The uncertainty intervals correspond to the expanded uncertainty (coverage factor k = 2) as described in the EURACHEM / CITAC Guide "Quantifying Uncertainty in Analytical Measurement", 3rd Edition (2012)". The uncertainty interval of the reference concentration is illustrated in the graphs as a grey band around the 100 % recovery line.

Results, for which no recoveries could be calculated, are illustrated by one of the following symbols: **FN** (false negative), **FP** (false positive) or • - symbol.

- "FN": A result is considered false negative when the "< result" reported is lower than the corresponding target value
- "FP": False positive results can only be obtained for compounds that were evaluated on the basis of a "< target value". A result is termed FP if it does not include (strike) the "< target" with its measurement uncertainty.
- "•": All other results for which no recoveries can be calculated are illustrated by this symbol

Tulln, 8 October 2021

EXPLANATION

Sample M106A

Parameter Copper

Target value ± U (k=2)	4,79 µg/l	±	0,13 µg/l	*Obtained from sample preperation, U=uncertainty*
IFA result ± U (k=2)	4,79 µg/l	±	0,38 µg/l	*Determined at IFA prior to shipment of samples*
Stability test ± U (k=2)	4,69 µg/l	±	0,38 µg/l	*Determined at IFA 3 weeks after sample dispatch*

Lab Code	Result	±	Unit	Recovery	z-Score
A	5,16	0,4128	µg/l	108%	0,90
B	4,22	0,42	µg/l	88%	-1,38
C	4,45	0,13	µg/l	93%	-0,83
D			µg/l		
E			µg/l		
F	4,10	0,08	µg/l	86%	-1,68
G			µg/l		
H			µg/l		
I	4,75	0,74	µg/l	99%	-0,10
J	<5		µg/l	•	
K	4,76		µg/l	99%	-0,07
L	<10		µg/l	•	
M	4,8	0,5	µg/l	100%	0,02
N	3,7	0,4	µg/l	77%	-2,65
O	4,47	0,447	µg/l	93%	-0,78
P	6,0		µg/l	125%	2,94
Q	4,17	0,2	µg/l	87%	-1,51
R	4,6	0,8	µg/l	96%	-0,46
S	4,44	0,67	µg/l	93%	-0,85
T			µg/l		
U	4,675	0,935	µg/l	98%	-0,28
V	5,0	0,50	µg/l	104%	0,51
W	3,54	0,3	µg/l	74%	-3,03
X	7,108 *	0,749	µg/l	148%	5,63
Y	<10		µg/l	•	
Z			µg/l		
AA	<3,0		µg/l	FN	
AB	3,775	0,107	µg/l	79%	-2,46
AC	<10,0		µg/l	•	

Recovery of target value in percent

z-Score of the laboratory

An asterik indicates a result detected as outlier by Hampel test

Interval expected to encompass target value as stated by participant

	All results	Outliers excl.	Unit
Mean ± CI(99%)	4,65 ± 0,57	4,51 ± 0,42	µg/l
Recov. ± CI(99%)	97,1 ± 12,0	94,1 ± 8,8	%
SD between labs	0,84	0,59	µg/l
RSD between labs	18,1	13,2	%
n for calculation	18	17	

Between laboratory standard deviation

Laboratory mean and recovery of target value with corresponding confidence intervals (p=99%)

Number of results used for calculation of statistic parameters

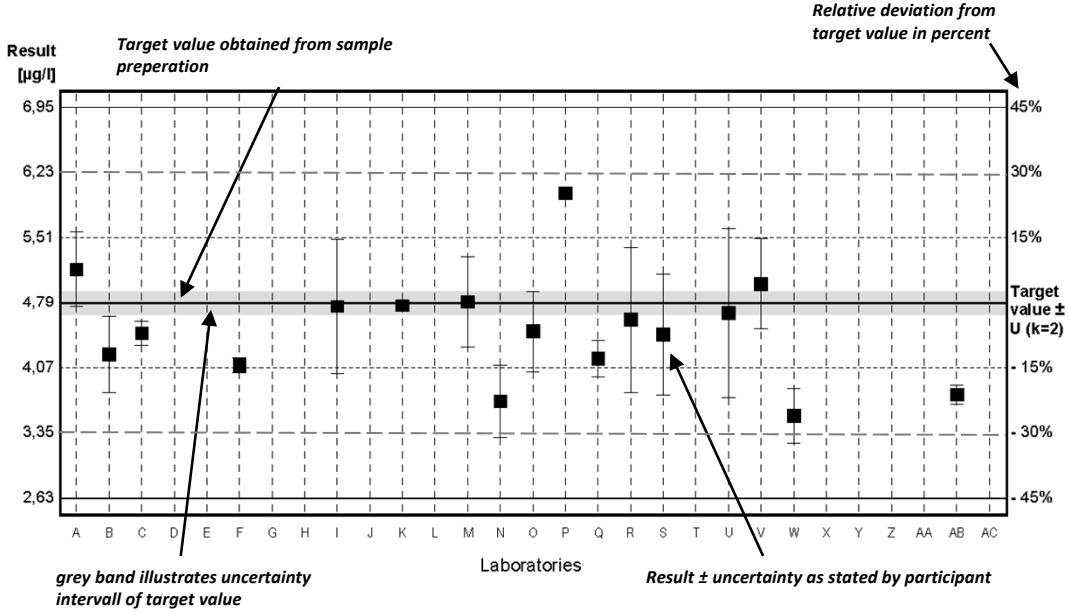


Diagram 1: Measurement results and their uncertainties

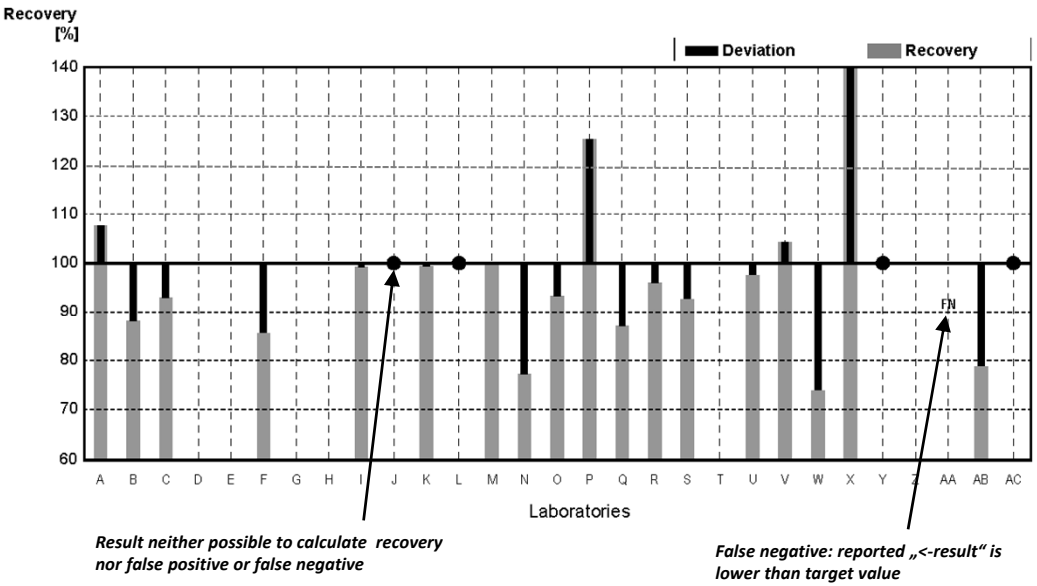


Diagram 2: Recoveries and deviations from target values

Illustration of Results
Tables and Parameter Oriented Part

Round N158
Major Ions

Sample Dispatch: 6 September 2021

TULLN

Results Sample N158A

	pH	Cond.	total-Hardn.	$K_{S\ 4.3}$	HCO_3^-	Ca^{2+}	Mg^{2+}	Na^+	K^+	NO_3^-
Unit		µS/cm	mmol/L	mmol/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value		489	2.04	1.71	101	57.9	14.5	11.7	2.30	39.9
IFA result	6.43	492	2.11	1.67	99.1	60.5	14.6	11.8	2.32	39.4
Stability test										
A	6.56	493	2.18			60.28	15.055	11.981	2.273	40.36
B	6.08	482	2.079	1.607	98	60.0	15.1	12.45	5.45	40.7
C	6.06	492		1.73	103					41.0
D										
E	6.33	489		1.81		61.5	14.9	11.3	2.37	39.2
F										
G										
H	6.4	485	2.05	1.74	106	57.64	14.97	12.08	2.43	40.0
I	6.0	485	2.01	1.667	98.6	56.8	14.3	11.6	2.37	39.7
J	6.74	507	2.03	1.55	94.6	58.3	14.2	11.7	2.30	38.7
K						51.1	13.5	11.9	2.41	39.8
L	6.10	488	2.05	1.69	99.8	57.8	14.7	11.7	2.19	39.7
M	6.2	494.4	1.987	1.733	102.7	56.1	14.3	12.1	2.20	38.9
N	6.3	497	1.67	1.67	102	57.3	14.4	11.9	2.28	40.5
O	6.23	484	2.01	1.71	101	56.8	14.5	10.8	2.24	40.3
P	6.35	491	2.004	1.702	103.9	56.52	14.43	11.82	2.270	38.71
Q	6.12	495	2.10	1.68	101.7	59.6	14.9	11.9	2.40	39.5
R										42.3
S										>30
T	6.28	483	2.04	1.725	102	57.9	14.4	12.0	2.31	38.6
U	6.30	487	1.93	1.67	100	54.4	13.9	11.0	2.34	39.6
V	6.1	488	2.043	1.67		65.7	15.7	15.5	2.63	
W	6.67	497	2.04	1.70	100.66	57.800	14.436	11.487	2.119	38.918
X	6.09	491	2.03	1.67	99.1	57.7	14.3	11.6	2.36	40.3
Y	6.04	498		1.68		57.3	14.9	13.0	3.02	40.0
Z			1.99	1.72						

Measurement Uncertainties Sample N158A

	pH ±	Cond. ±	total-Hardn. ±	$K_{S\ 4.3}$ ±	HCO_3^- ±	Ca^{2+} ±	Mg^{2+} ±	Na^+ ±	K^+ ±	NO_3^- ±
Unit		µS/cm	mmol/L	mmol/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value		2	0.02	0.02	1	0.7	0.2	0.3	0.04	0.6
IFA result	0.20	7	0.08	0.07	4.0	2.4	0.7	0.9	0.16	2.0
Stability test										
A	0.1	14	0.2			3.19	1.2	0.83	0.13	1.89
B	0.04	14.0	0.025	0.025	10	2	0.4	1	0.2	1
C	0.04	3.48		0.05	1.49					2.81
D										
E										
F										
G										
H	0.32	24	0.2	0.095	5.3	5.8	1.5	1.2	0.24	2.0
I	0.1	19	0.11	0.131	8.0	2.7	0.9	0.6	0.13	2.4
J	0.5	15	0.28	0.06	3.78	8.2	1.3	1.1	0.18	3.5
K						0.5	0.2	0.1	0.08	0.3
L	0.30	15	0.16	0.07	4.0	2.9	0.9	0.5	0.17	2.4
M		27.9	0.264			7.48	1.89	2.14	0.36	3.28
N	0.1	8	0.14	0.05	3	3.3	0.9	1.3	0.09	1.8
O	0.010	6.0	0.035	0.006	0.200	0.208	0.231	0.458	0.006	0.231
P	0.0622	2.70	0.094	0.164		1.87	0.48	0.40	0.068	1.26
Q	0.1	49.5	0.17			4.77	1.19	0.95	0.26	4.75
R										3
S										
T	0.25	19	0.37	0.07	4	10.4	2.59	2.16	0.42	3.47
U	0.03	15	0.16	0.08	5	2.5	1.1	0.8	0.17	1.3
V						3.36	0.59	1.04	0.58	
W	0.1	4.51		0.17		5.7	1.4	1.1	0.2	3.9
X	0.0609	0.226	0.0374	0.0825	1.981	0.756	0.787	0.153	0.0378	0.425
Y	0.013	0.225		0.018		1.66	0.072	0.858	0.185	4.20
Z			0.01	0.02						

Results Sample N158A

	pH	Cond.	total-Hardn.	$K_{S\ 4.3}$	HCO_3^-	Ca^{2+}	Mg^{2+}	Na^+	K^+	NO_3^-
Unit		µS/cm	mmol/L	mmol/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value		489	2.04	1.71	101	57.9	14.5	11.7	2.30	39.9
IFA result	6.43	492	2.11	1.67	99.1	60.5	14.6	11.8	2.32	39.4
Stability test										
AA	6.34	472	2.00	1.68	99.3	56.4	14.5	10.74	2.11	38.7
AB						61.9	14.63	13.05	2.18	36.4
AC	6.1	483	2.11	1.68	99.5	60.1	14.8	11.8	2.26	39.4
AD	6.1	493	2.10	1.745	106.5	60.1	14.7	12.0	2.36	39.3
AE		493	20.4	1.62	98.9	58.0	14.5	10.8	2.15	41.6
AF	6.1	475	2.08	1.62	99	59.6	14.4	10.9	2.33	39.8
AG	6.09	490	10.9	1.65	100	54.8	14.1	11.1	2.31	39.2
AH		495				57.7	14.6	12.0	2.23	8.67
AI	6.5	492	2.04	1.69	100.1	57.6	14.6	11.7	2.29	39.2
AJ			1.973	1.66	100.55					
AK			2.07			58.1	15.0			
AL	6.1	486.000	1.98	1.6300	99.5000	56.54	13.80	12.01	2.39	40.629
AM	6.53	491	2.04	1.71	102.2	57.5	14.6	11.68	2.24	39.26
AN				1.73	105.6					
AO										
AP	6.64		1.652			62.082	16.420	12.853	2.936	43.281
AQ	6.42	482	2.05	1.67	98.6	59.1	13.9	11.0	2.29	39.3
AR	6.1	488	2.02	1.75	107	57	14.3	11.4	2.30	38.8
AS	6.54	486	2.10	1.70	101	60.1	14.6	11.6	2.14	40.1
AT	6.2	490	2.02	1.67	98.9	57.4	14.4	11.4	2.17	40.2
AU	6.08	472	2.12	1.65	100.7	57.0	14.8			41.6
AV				1.67						
AW	6.0	491	2.04	1.66		57.4	14.8	11.8	2.29	39.1
AX	6.2	503	2.11	1.70	102.4	60	15.0	12.0	2.00	41.0

Measurement Uncertainties Sample N158A

	pH ±	Cond. ±	total-Hardn. ±	$K_{S\ 4.3}$ ±	HCO_3^- ±	Ca^{2+} ±	Mg^{2+} ±	Na^+ ±	K^+ ±	NO_3^- ±
Unit		µS/cm	mmol/L	mmol/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value		2	0.02	0.02	1	0.7	0.2	0.3	0.04	0.6
IFA result	0.20	7	0.08	0.07	4.0	2.4	0.7	0.9	0.16	2.0
Stability test										
AA		9	0.08	0.08	4.97	2.3	0.7	0.54	0.11	1.2
AB						3.09	0.732	0.653	0.109	1.82
AC	0.1	2.3		0.12	0.8	1.6	0.1	0.2	0.2	0.4
AD						1.14	0.18	0.05	0.02	
AE		14		0.08	5	8.12	1.16	1.73	0.22	1.7
AF	0.1	19	0.17			4.2	1.2	1.2	0.4	2.8
AG		14.2		0.0346	2.11	1.76	0.460	1.0	0.159	1.10
AH		25				2.9	0.7	0.6	0.11	0.9
AI	0.1	5	0.2	0.17	10	11.5	2.9	1.8	0.46	3.9
AJ			0.19	0.15	10					
AK			0.060			4.31	0.88			
AL	0.3700	19.4000		0.24500	14.9200	5.654	1.380	1.201	0.239	1.6252
AM										
AN										
AO										
AP						6.208	1.642	1.285	0.294	8.656
AQ	0.20	12	0.21	0.17	9.9	5.9	1.4	1.1	0.23	3.9
AR	0.1	3	0.18	0.10	4	2	1	1	0.5	2
AS	0.20	49	0.21	0.17	10	6.0	1.5	1.2	0.21	4.0
AT	0.3	20	0.1	0.1	4	5	1.8	1.8	0.3	4
AU	0.01	2.4	0.07	0.01	0.61	1.9	0.2			0.25
AV				0.03						
AW	0.1	10	0.41	0.2		11.5	3.0	1.8	0.46	4.0
AX	0.2	10	0.14	0.1	8.2	4.8	1.20	0.72	0.22	2.05

Results Sample N158A

	NO_2^-	NH_4^+	Cl^-	SO_4^{2-}	o-PO_4^{3-}	Boron	DOC	total-P (as PO_4^{3-})	CN^-
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.0468	0.0251	47.6	45.3	0.132	0.0431	5.62	0.184	0.0469
IFA result	0.0459	0.0255	47.0	45.0	0.133	0.0407	5.58	0.190	0.0459
Stability test	0.0469	0.0246			0.132		5.67		0.0458
A	0.0482	0.0266	48.88	46.41	0.1311	0.04318	5.65	0.1848	0.0417
B	0.0490	0.0250	48.9	43.1		0.050		0.2000	
C	0.0466	0.0268	48.5		0.142			0.194	
D					0.139				
E	0.050	0.0300	47.9	46.1	0.131	0.0480	5.49		
F					0.1245			0.4879	
G						0.04099		0.17747	
H	0.0489	0.0270	46.1	44.33	0.130	0.0450	5.653	0.184	0.0440
I	0.0453	0.0309	47.6	45.3	0.154	0.0439	5.81	0.175	
J	0.0490	0.0310	47.2	44.1	0.132	0.0410	5.27	0.178	0.0440
K			45.0	44.0					
L	0.0492	0.0269	48.2	45.5	0.134	0.0454	5.58	0.191	0.0431
M	0.0450	0.0400	48.6	45.9	0.135	0.0440	6.00	0.184	0.0380
N	0.0354	0.0200	48.2	46.5			5.91		
O	0.0499	0.0266	48.1	47.4	0.129	0.0420	5.04	0.165	0.0354
P	0.0487	0.0245	46.98	44.43	0.129	0.04037	10.29	0.172	0.0430
Q	0.0480	0.0280	49.7	45.4	0.1196	0.0430	5.52	0.184	0.0420
R									
S		0.0349			0.138		>4	0.194	
T	0.0465	0.0344	47.0	44.1	0.127	0.0425	6.10	0.188	0.0453
U	0.0495	0.0198	47.6	45.8	0.127	0.0425	5.66	0.188	0.0340
V					<0.2	0.0431			
W	0.0476	0.0241	47.248	44.212	0.1275	0.0466	5.662	0.168	
X	0.0465	0.0267	51.4	45.9	0.133	0.0438	5.703	0.0594	44.65
Y	0.0465	0.0375	46.7	44.3	0.133	0.0413	6.22	0.185	0.0444
Z					0.130				

Measurement Uncertainties Sample N158A

	NO_2^- ±	NH_4^+ ±	Cl^- ±	SO_4^{2-} ±	o-PO_4^{3-} ±	Boron ±	DOC ±	total-P (as PO_4^{3-}) ±	CN^- ±
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.0010	0.0044	0.9	0.5	0.001	0.0002	0.03	0.001	0.0003
IFA result	0.0023	0.0020	1.9	0.9	0.001	0.0033	0.11	0.023	0.0041
Stability test	0.0023	0.0020			0.001		0.11		0.0041
A	0.0052	0.0071	1.81	2.18	0.0343	0.0093	0.63	0.0364	0.0125
B	0.01	0.01	1	1.5		0.01		0.05	
C	0.0047	0.0040	0.49		0.017			0.026	
D					0.010				
E									
F					0.0082			0.0334	
G									
H	0.0049	0.003	4.61	4.43	0.013	0.005	1.023	0.018	0.004
I	0.0052	0.0071	3.8	4.2	0.020	0.0048	1.08	0.028	
J	0.0020	0.0020	3.8	2.6	0.012	0.007	0.63	0.016	0.004
K			0.2	0.1					
L	0.0039	0.0026	2.4	2.7	0.007	0.0045	0.56	0.013	0.013
M	0.005	0.01	4.05	2.96	0.037	0.001	1.12	0.0295	0.0038
N	0.005	0.005	3.3	3			1.23		
O	0.0001	0.001	0.289	0.265	0.001	0.002	0.265	0.001	0.002
P	0.00284	0.00141	1.01	1.12	0.00286	0.00238	2.028	0.00382	0.00965
Q	0.0096	0.005	4.47	4.5	0.0120	0.008	0.66	0.066	
R									
S		0.0079			0.018			0.007	
T	0.004	0.003	4.23	3.97	0.011	0.008	0.55	0.008	0.004
U	0.005	0.001	3.2	1.5	0.01	0.005	0.91	0.013	0.01
V						0.005			
W	0.005	0.0024	4.7	4.4	0.013	0.005	0.57	0.017	
X	0.00103	0.00245	0.998	0.388	0.00251	0.00101	0.0881	0.00044	0.598
Y	0.0026	0.0016	4.32	4.56	0.0007	0.0013	0.030	0.0010	0.0042
Z					0.001				

Results Sample N158A

	NO_2^-	NH_4^+	Cl^-	SO_4^{2-}	o-PO_4^{3-}	Boron	DOC	total-P (as PO_4^{3-})	CN^-
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.0468	0.0251	47.6	45.3	0.132	0.0431	5.62	0.184	0.0469
IFA result	0.0459	0.0255	47.0	45.0	0.133	0.0407	5.58	0.190	0.0459
Stability test	0.0469	0.0246			0.132		5.67		0.0458
AA	0.0480	0.0310	47.0	45.4	0.127	<0.050	5.29	0.2027	
AB			39.1	43.6					
AC	0.051	0.0279	49.8	46.5	0.124	0.0412	5.73	0.193	
AD	0.460		48.0	45.2		0.0469		0.218	
AE	0.0487	0.0239	48.3	45.7		0.0474	5.65		
AF	0.0460	<0.040	48.4	46.6	0.123	0.0412	5.62	0.135	0.0420
AG	0.0493	<0.02	48.3	44.8	0.126	<0.05	5.50	0.166	0.0320
AH		<0.02	48.8	46.0		0.0382			36.3
AI	0.0466	0.0256	46.6	45.0	0.131	0.0324	5.59	0.182	
AJ					0.130		5.83		
AK	0.056				0.132				
AL	0.04600	0.02700	47.36	47.26	0.11300	0.04900	5.500	0.17783	48.2900
AM	0.0490	0.0200	47.24	45.14	0.126		5.56	0.172	
AN					0.064				
AO									
AP			58.610	51.320					
AQ	0.0517	0.0279	50.3	47.0	0.129	0.0429	5.67	0.174	0.0400
AR	0.0457	0.0294	48.2	44.5		0.0458	5.5	0.189	0.056
AS	0.0490	0.0263	48.5	45.2	0.109	0.0390	5.51	0.141	0.0420
AT	0.0460	0.0270	47.9	45.3	0.124		5.77	0.180	
AU			46.7	43.7		0.0479	6.0	0.071	0.050
AV									
AW	0.0466	0.0267	46.8	44.9	0.130	0.0339		0.182	0.0427
AX	0.0470	0.0250	49.0	47.0	0.137	0.0400	5.6	0.177	

Measurement Uncertainties Sample N158A

	NO_2^- ±	NH_4^+ ±	Cl^- ±	SO_4^{2-} ±	o-PO_4^{3-} ±	Boron ±	DOC ±	total-P (as PO_4^{3-}) ±	CN^- ±
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.0010	0.0044	0.9	0.5	0.001	0.0002	0.03	0.001	0.0003
IFA result	0.0023	0.0020	1.9	0.9	0.001	0.0033	0.11	0.023	0.0041
Stability test	0.0023	0.0020			0.001		0.11		0.0041
AA	0.005	0.003	1.4	1.4	0.013		0.53	0.0304	
AB			1.96	2.18					
AC	0.001	0.002	1.4	3.1	0.003	0.0025	0.08	0.002	
AD						0.0003		0.005	
AE	0.010	0.002	12.1	2.7		0.0119	1.41		
AF	0.007		2.4	2.8		0.007	0.56		
AG	0.0031		0.941	1.16	0.010		0.670	0.0138	0.0040
AH			4.9	4.6		0.0019			4
AI	0.0111	0.0045	4.7	4.5	0.027	0.0081	0.56	0.037	
AJ					0.013		0.5		
AK	0.008				0.021				
AL	0.00370	0.00270	2.368	2.363	0.01360	0.00590	0.44000	0.02667	4.82900
AM									
AN									
AO									
AP			8.791	10.264					
AQ	0.0052	0.0028	5.0	4.7	0.013	0.0043	0.57	0.017	0.004
AR	0.01	0.01	2	2		0.01	0.4	0.02	0.02
AS	0.0049	0.0026	4.9	4.5	0.011	0.0039	0.55	0.028	0.0042
AT	0.004	0.004	3	4	0.02		0.9	0.02	
AU			0.35	0.79		0.0021	0.26	0.002	0.013
AV									
AW	0.01	0.01	4.7	4.5	0.027	0.0085		0.037	0.011
AX	0.006	0.007	3.92	2.82	0.012	0.0068	0.672	0.044	

Results Sample N158B

	pH	Cond.	total-Hardn.	$K_{S\ 4.3}$	HCO_3^-	Ca^{2+}	Mg^{2+}	Na^+	K^+	NO_3^-
Unit		µS/cm	mmol/L	mmol/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value		435	1.25	1.19	69.5	39.4	6.41	32.5	5.52	73.3
IFA result	6.81	438	1.28	1.18	68.8	40.6	6.38	32.5	5.53	70.2
Stability test										
A	7.01	438	1.28			40.713	6.508	32.423	5.600	71.81
B	6.29	429	1.291	1.130	69	41.8	7.1	32.4	5.60	74.6
C	6.38	436		1.22	71.5					72.2
D										
E	6.53	434		1.32		41.5	6.54	30.9	5.55	72.3
F										
G										
H	6.67	430	1.26	1.23	75.1	39.3	6.68	32.8	5.79	75.32
I	6.4	433	1.22	1.174	68.6	38.2	6.4	31.5	5.54	71.9
J	6.78	433	1.26	1.25	76.3	39.9	6.51	31.1	5.34	70.8
K						36.8	5.83	31.5	5.49	72.5
L	6.33	436	1.25	1.19	69.3	39.2	6.60	32.5	5.57	72.9
M	6.5	439.7	1.229	1.212	70.9	38.1	6.80	33.3	5.40	73.2
N	6.7	442	1.23	1.19	73	38.9	6.4	33.0	5.51	73.8
O	6.44	430	1.23	1.19	70.6	38.9	6.25	29.9	5.30	75.3
P	6.63	435	1.234	1.183	72.19	38.69	6.510	32.43	5.559	71.62
Q	6.40	444	1.29	1.17	72.3	40.6	6.6	33.1	5.6	75.9
R										76.23
S										>30
T	6.65	429	1.24	1.20	70.2	39.0	6.58	32.9	5.56	71.3
U	6.60	433	1.18	1.15	70.2	36.9	6.17	31.0	5.25	70.6
V	6.4	432	1.250	1.19		42.6	7.12	38.5	6.13	
W	6.88	437	1.24	1.19	69.551	39.254	6.484	32.553	5.425	74.555
X	6.38	436	1.22	1.17	68.3	38.6	6.20	32.3	5.72	74.1
Y	6.34	437		1.17		40.2	7.02	34.6	6.63	70.9
Z			1.21	1.21						

Measurement Uncertainties Sample N158B

	pH ±	Cond. ±	total-Hardn.±	$K_{S\ 4.3}$ ±	HCO_3^- ±	Ca^{2+} ±	Mg^{2+} ±	Na^+ ±	K^+ ±	NO_3^- ±
Unit		µS/cm	mmol/L	mmol/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value		1	0.02	0.01	0.4	0.6	0.09	0.2	0.04	1.7
IFA result	0.20	6	0.05	0.05	2.8	2.0	0.32	1.6	0.28	3.5
Stability test										
A	0.1	13	0.1			2.16	0.52	2.24	0.32	3.38
B	0.04	14.0	0.025	0.025	10	2	0.4	1	0.2	1
C	0.04	3.09		0.03	1.03					4.95
D										
E										
F										
G										
H	0.34	21.5	0.13	0.067	3.8	3.9	0.7	3.3	0.58	3.77
I	0.1	17	0.06	0.100	6.1	1.9	0.4	1.6	0.2	4.4
J	0.5	13	0.18	0.05	3.05	1.6	0.59	2.8	0.43	6.4
K						0.4	0.10	0.2	0.10	0.3
L	0.30	13	0.10	0.05	2.8	2.0	0.40	1.3	0.44	4.4
M		24.9	0.164			5.08	0.90	5.89	0.89	6.18
N	0.1	7	0.1	0.03	2	2.2	0.4	3.7	0.21	3.4
O	0.023	5.3	0.020	0.005	0.100	0.794	0.091	0.964	0.040	0.100
P	0.0650	2.39	0.058	0.114		1.28	0.215	1.10	0.167	2.33
Q	0.1	44.4	0.10			3.25	0.53	2.65	0.62	9.11
R										3
S										
T	0.27	17	0.22	0.05	2.81	7.02	1.18	5.92	1	6.42
U	0.03	13	0.10	0.06	3.4	1.7	0.51	2.2	0.38	2.3
V						1.77	0.29	2.61	0.57	
W	0.1	4.51		0.12		3.9	0.65	3.2	0.5	7.5
X	0.0638	0.152	0.0191	0.0724	1.367	0.762	0.0415	0.156	0.406	0.805
Y	0.014	0.256		0.013		1.17	0.034	2.28	0.406	7.44
Z			0.03	0.02						

Results Sample N158B

	pH	Cond.	total-Hardn.	$K_{S\ 4.3}$	HCO_3^-	Ca^{2+}	Mg^{2+}	Na^+	K^+	NO_3^-
Unit		µS/cm	mmol/L	mmol/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value		435	1.25	1.19	69.5	39.4	6.41	32.5	5.52	73.3
IFA result	6.81	438	1.28	1.18	68.8	40.6	6.38	32.5	5.53	70.2
Stability test										
AA	6.62	417	1.22	1.21	71.0	37.4	7.2	29.69	5.06	71.7
AB						41.6	6.39	36.4	5.65	69.9
AC	6.5	419	1.32	1.16	67.7	42.1	6.66	31.3	5.49	71.1
AD	6.3	438	1.27	1.184	72.2	40.1	6.53	32.2	5.65	71.7
AE		437	13.01	1.14	69.6	41.6	6.37	27.7	5.45	73.6
AF	6.4	421	1.26	1.16	71	40.2	6.3	31.4	5.6	73.1
AG	6.42	435	6.75	1.15	70.2	38.0	6.21	32.3	5.63	70.4
AH		440				39.1	6.45	33.5	5.38	16.4
AI	6.7	437	1.24	1.18	68.9	38.6	6.63	32.5	5.81	71.8
AJ			1.199	1.17	69.19					
AK			1.24			38.9	6.59			
AL	6.3	432.000	1.22	1.17000	71.4000	38.65	6.20	31.85	5.39	73.069
AM	6.72	436	1.25	1.21	71.1	38.9	6.7	32.25	5.45	71.03
AN				1.23	75.05					
AO										
AP	6.84		0.993			39.582	6.444	33.803	5.663	74.257
AQ	6.70	433	1.25	1.16	67.7	39.8	6.23	32.6	5.48	71.1
AR	6.3	434	1.23	1.20	73	38.6	6.3	31.5	5.5	71
AS	6.77	429	1.28	1.14	66.5	40.7	6.48	32.3	5.55	72.7
AT	6.5	435	1.23	1.18	68.7	38.9	6.36	33.0	5.49	73.1
AU	6.30	430	1.19	1.15	70.2	35.8	6.07			76.3
AV				1.17						
AW	6.3	436	1.24	1.19		38.6	6.67	32.3	5.83	71.8
AX	6.4	440	1.27	1.20	71.55	41.0	6.0	33.0	5.0	74.0

Measurement Uncertainties Sample N158B

	pH ±	Cond. ±	total-Hardn.±	$K_{S\ 4.3}$ ±	HCO_3^- ±	Ca^{2+} ±	Mg^{2+} ±	Na^+ ±	K^+ ±	NO_3^- ±
Unit		µS/cm	mmol/L	mmol/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value		1	0.02	0.01	0.4	0.6	0.09	0.2	0.04	1.7
IFA result	0.20	6	0.05	0.05	2.8	2.0	0.32	1.6	0.28	3.5
Stability test										
AA		8	0.05	0.06	3.6	1.5	0.4	1.49	0.25	2.2
AB						2.08	0.319	1.82	0.283	3.49
AC	0.1			0.1	0.4	1.5	0.07	1.0	0.06	1.2
AD						0.76	0.08	0.14	0.04	
AE		13		0.06	3.45	5.8	0.5	4.4	0.55	2.9
AF	0.1	17	0.10			2.8	0.5	3.5	0.9	5.1
AG		12.6		0.0242	1.47	1.22	0.202	1.48	0.386	1.97
AH		22				2	0.32	1.7	0.27	1.6
AI	0.1	5	0.1	0.12	7	7.7	1.3	4.9	1.2	7.2
AJ			0.12	0.11	7					
AK			0.037			6.51	0.47			
AL	0.38000	17.3000		0.17600	10.7100	3.865	0.620	3.185	0.539	2.9228
AM										
AN										
AO										
AP						3.958	0.644	3.380	0.566	14.851
AQ	0.20	11	0.12	0.12	6.8	4.0	0.62	3.3	0.55	7.1
AR	0.1	3	0.15	0.10	3	2	1	2	0.5	3
AS	0.20	43	0.13	0.11	6.7	4.1	0.65	3.2	0.55	7.3
AT	0.3	18	0.1	0.1	3	4	0.8	5	0.8	6
AU	0.01	2.2	0.10	0.01	0.61	2.9	0.10			0.45
AV				0.01						
AW	0.1	10	0.25	0.12		7.7	1.3	4.8	1.2	7.2
AX	0.2	9	0.09	0.1	5.7	3.28	0.48	1.98	0.55	3.7

Results Sample N158B

	NO_2^-	NH_4^+	Cl^-	SO_4^{2-}	o-PO_4^{3-}	Boron	DOC	total-P (as PO_4^{3-})	CN^-
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.063	0.070	14.7	62.6	<0.009	0.0244	1.56	<0.009	0.0165
IFA result	0.063	0.071	14.4	61.9	<0.009	0.0230	1.58	<0.009	0.0160
Stability test	0.064	0.069			<0.009		1.63		0.0158
A	0.0645	0.0712	15.02	64.40	<0.015	0.02435	1.69	<0.015	0.0132
B	0.0640	0.0700	14.3	58.8		0.0300		0.0100	
C	0.0630	0.0743	14.7		0.0105			0.0120	
D					<0.05				
E	0.070	0.080	14.7	63.8	0.0200	0.0290	1.55		
F					<0.01			<0.01	
G						0.02271		<0.0300	
H	0.0657	0.070	15.0	62.21	<0.01	0.0270	1.723	<0.01	0.0150
I	0.064	0.080	14.7	62.1	<0.010	0.0250	1.63	<0.010	
J	0.066	0.081	14.5	61.4	<0.015	0.0210	1.74	<0.015	0.0150
K			13.5	58.5					
L	0.066	0.075	15.0	62.7	<0.006	0.0253	1.58	<0.006	0.0141
M	0.060	0.080	15.3	65.9	<0.03	0.0260	1.80	0.153	0.0150
N	0.053	0.063	14.7	64.7			1.74		
O	0.0659	0.0677	14.6	65.5	<0.015	0.0274	1.26	<0.015	0.0119
P	0.0625	0.0618	14.21	61.28	<0.0307	0.01954	4.288	<0.0153	0.0150
Q	0.065	0.070	14.3	63.4	<0.030	0.0250	1.65	<0.015	0.0130
R									
S		0.0746			<0.019		1.540	<0.02	
T	0.0610	0.0761	14.3	61.4	<0.01	0.0243	1.56	<0.05	0.0158
U	0.0678	0.0648	14.7	64.1	<0.015	0.0247	1.57	<0.015	0.0103
V					<0.2	0.0236			
W	0.0643	0.0631	14.672	65.365	<0.0055	0.0267	1.661	<0.001	
X	0.0634	0.0736	15.4	63.4	<0.0150	0.0243	1.622	<0.0049	15.402
Y	0.0620	0.100	14.4	61.3	<0.050	0.0226	1.98	<0.050	0.0162
Z					<0.015				

Measurement Uncertainties Sample N158B

	NO_2^- ±	NH_4^+ ±	Cl^- ±	SO_4^{2-} ±	o-PO_4^{3-} ±	Boron ±	DOC ±	total-P (as PO_4^{3-}) ±	CN^- ±
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Target value	0.003	0.003	0.3	0.4		0.0001	0.01		0.0001
IFA result	0.003	0.002	0.6	1.2		0.0018	0.09		0.0014
Stability test	0.003	0.002					0.10		0.0014
A	0.0069	0.0191	0.56	3.02		0.0052	0.19		0.0040
B	0.01	0.01	1	1.5		0.01		0.05	
C	0.0063	0.0112	0.15		0.0012			0.0016	
D					0.005				
E									
F									
G									
H	0.0066	0.007	1.5	6.22		0.003	0.312		0.002
I	0.006	0.01	1.4	5.7		0.0031	0.41		
J	0.003	0.006	1.1	3.7	0.002	0.004	0.21	0.002	0.001
K			0.1	0.1					
L	0.005	0.007	0.8	3.8		0.0025	0.16		0.005
M	0.006	0.018	1.28	4.25	0.01	0.001	0.34	0.0246	0.0015
N	0.008	0.015	1	4.2			0.36		
O	0.0001	0.001	0.058	0.364		0.001	0.087		0.0004
P	0.00365	0.00356	0.307	1.55	0.00066	0.00115	0.304	0.00034	0.00337
Q	0.013	0.011	1.3	6.3		0.005	0.38		
R									
S		0.01820					0.505		
T	0.005	0.007	1.29	5.53		0.004	0.14		0.001
U	0.007	0.005	1.0	2.1		0.003	0.25		0.002
V						0.005			
W	0.0064	0.0063	1.5	6.5		0.003	0.17		
X	0.00102	0.00233	0.480	0.618		0.00117	0.0826		0.594
Y	0.0034	0.0044	1.33	6.31		0.0007	0.0095		0.00153
Z									

Results Sample N158B

	NO_2^-	NH_4^+	Cl^-	SO_4^{2-}	o-PO_4^{3-}	Boron	DOC	total-P (as PO_4^{3-})	CN^-
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.063	0.070	14.7	62.6	<0.009	0.0244	1.56	<0.009	0.0165
IFA result	0.063	0.071	14.4	61.9	<0.009	0.0230	1.58	<0.009	0.0160
Stability test	0.064	0.069			<0.009		1.63		0.0158
AA	0.066	0.074	14.5	63.3	<0.020	<0.050	1.51	<0.031	
AB			12.62	61.0					
AC	0.0698	0.0730	15.1	63.7	0.0104	0.0227	1.60	<0.03	
AD	0.0631		14.9	63.4		0.0257		<0.05	
AE	0.0656	0.0667	13.7	62.7		0.0268	1.65		
AF	0.0619	0.074	14.6	63.3	<0.06	0.0252	1.61	<0.06	0.0130
AG	0.0631	0.0552	14.0	60.8	<0.01	<0.05	1.60	<0.016	0.0237
AH		0.061	14.9	63.5		0.0199			12.6
AI	0.0640	0.0686	14.3	63.0	<0.015	<0.020	1.62	<0.015	
AJ					<0.031		1.65		
AK	0.074				<0.01				
AL	0.06600	0.07600	14.80	65.08	0.00900	0.02800	1.600	<0.0153	17.7600
AM	0.0660	0.0660	14.02	61.26	<0.009		1.64	<0.009	
AN					<0.096				
AO									
AP			15.358	65.026					
AQ	0.0702	0.0722	15.3	63.2	<0.02	0.0236	1.69	<0.05	0.0130
AR	0.062	0.077	14.4	62		0.0378	1.54	0.0198	0.0180
AS	0.0694	0.0696	14.9	62.5	<0.008	0.0228	1.49	<0.015	0.0150
AT	0.062	0.072	14.8	62.8	<0.01		1.59	<0.013	
AU			15.0	62.2		0.0276	1.75	<0.005	0.0300
AV									
AW	0.0640	0.0684	14.2	62.9	<0.015	<0.020		<0.015	0.0162
AX	0.063	0.0780	15.0	64.0	<0.009	0.0200	1.70	<0.009	

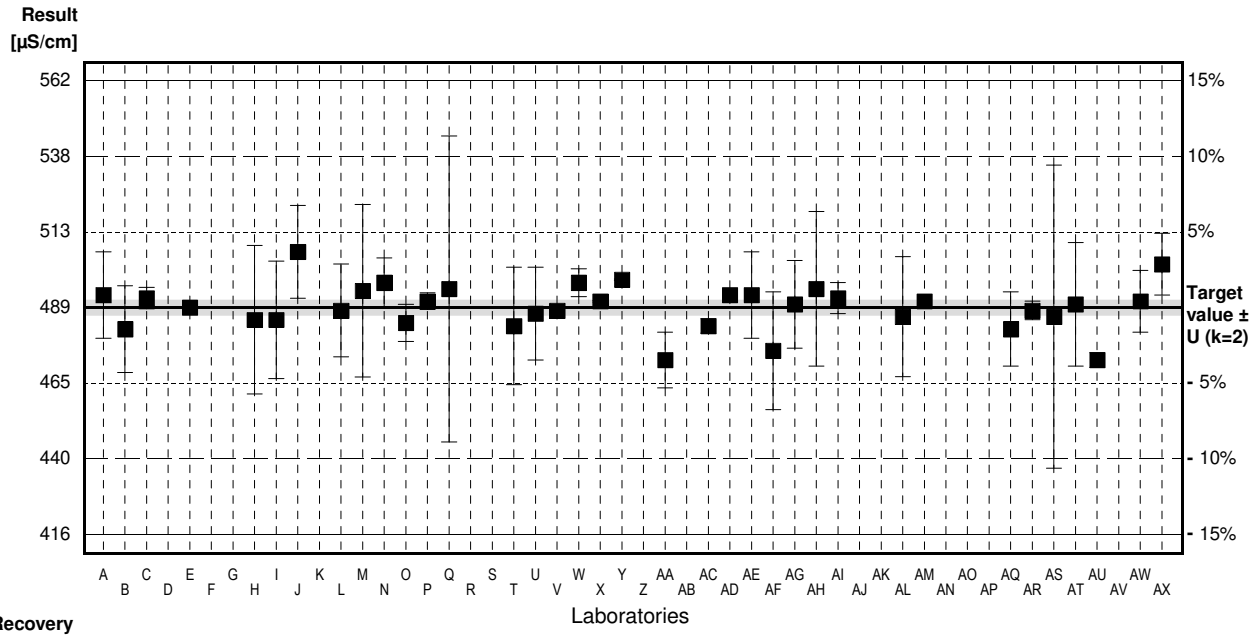
Measurement Uncertainties Sample N158B

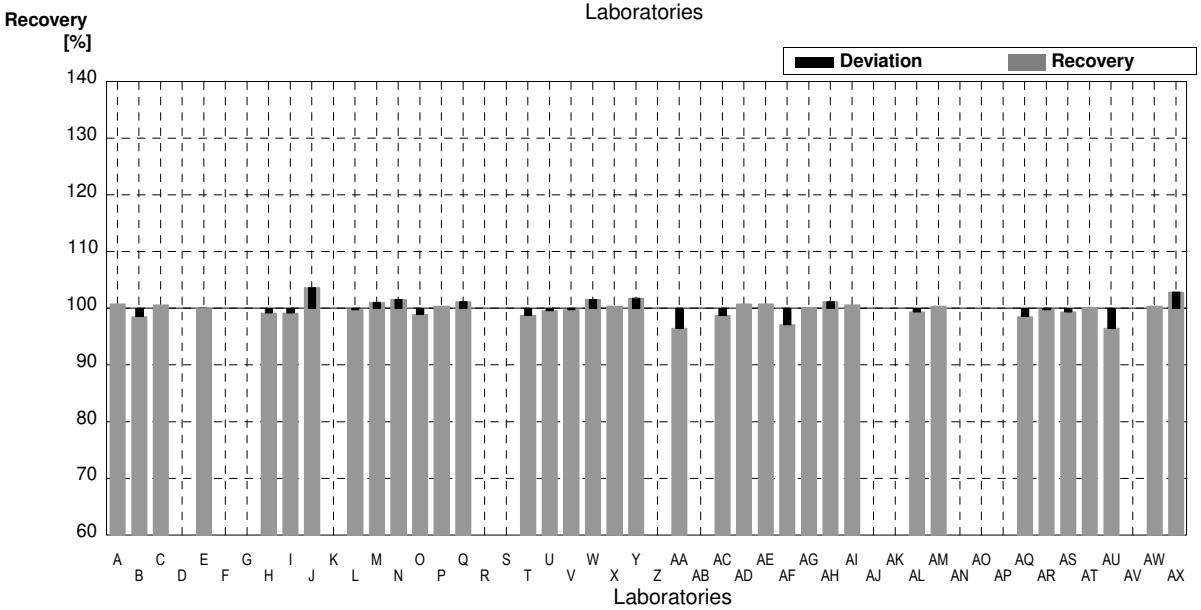
	NO_2^- ±	NH_4^+ ±	Cl^- ±	SO_4^{2-} ±	o-PO_4^{3-} ±	Boron ±	DOC ±	total-P (as PO_4^{3-}) ±	CN^- ±
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Target value	0.003	0.003	0.3	0.4		0.0001	0.01		0.0001
IFA result	0.003	0.002	0.6	1.2		0.0018	0.09		0.0014
Stability test	0.003	0.002					0.10		0.0014
AA	0.007	0.007	0.4	1.9			0.15		
AB			0.631	3.05					
AC	0.001	0.002	0.5	0.1	0.003	0.0027	0.03		
AD						0.0002			
AE	0.013	0.007	3.4	3.8		0.0067	0.41		
AF	0.01	0.01	0.7	3.8		0.004	0.16		
AG	0.0039	0.010	0.274	1.58			0.670		0.0040
AH		0.006	1.5	6.3		0.0010			1.5
AI	0.0153	0.0121	1.4	6.3			0.16		
AJ							0.15		
AK	0.011								
AL	0.00530	0.00760	0.740	3.254	0.00110	0.00340	0.13000		1.77600
AM									
AN									
AO									
AP			2.304	13.005					
AQ	0.0070	0.0072	1.5	6.3		0.0024	0.17		0.0013
AR	0.01	0.01	2	3		0.01	0.2	0.02	0.01
AS	0.0069	0.0070	1.5	6.3		0.0023	0.15		0.0015
AT	0.005	0.011	0.9	5			0.3		
AU			0.11	1.12		0.0033	0.08	0.002	0.008
AV									
AW	0.013	0.014	1.5	6.5					0.005
AX	0.008	0.020	1.20	3.84		0.0034	0.425		

Sample N158A
Parameter Conductivity

Target value ± U (k=2)	489	µS/cm	±	2	µS/cm
IFA result ± U (k=2)	492	µS/cm	±	7	µS/cm
Stability test		µS/cm			

Lab Code	Result	±	Unit	Recovery	z-Score
A	493	14	µS/cm	101%	0,63
B	482	14,0	µS/cm	99%	-1,10
C	492	3,48	µS/cm	101%	0,47
D			µS/cm		
E	489		µS/cm	100%	0,00
F			µS/cm		
G			µS/cm		
H	485	24	µS/cm	99%	-0,63
I	485	19	µS/cm	99%	-0,63
J	507	15	µS/cm	104%	2,83
K			µS/cm		
L	488	15	µS/cm	100%	-0,16
M	494,4	27,9	µS/cm	101%	0,85
N	497	8	µS/cm	102%	1,26
O	484	6,0	µS/cm	99%	-0,79
P	491	2,70	µS/cm	100%	0,31
Q	495	49,5	µS/cm	101%	0,94
R			µS/cm		
S			µS/cm		
T	483	19	µS/cm	99%	-0,94
U	487	15	µS/cm	100%	-0,31
V	488		µS/cm	100%	-0,16
W	497	4,51	µS/cm	102%	1,26
X	491	0,226	µS/cm	100%	0,31
Y	498	0,225	µS/cm	102%	1,42
Z			µS/cm		
AA	472	9	µS/cm	97%	-2,67
AB			µS/cm		
AC	483	2,3	µS/cm	99%	-0,94
AD	493		µS/cm	101%	0,63
AE	493	14	µS/cm	101%	0,63
AF	475	19	µS/cm	97%	-2,20
AG	490	14,2	µS/cm	100%	0,16
AH	495	25	µS/cm	101%	0,94
AI	492	5	µS/cm	101%	0,47
AJ			µS/cm		
AK			µS/cm		
AL	486,000	19,4000	µS/cm	99%	-0,47
AM	491		µS/cm	100%	0,31
AN			µS/cm		
AO			µS/cm		





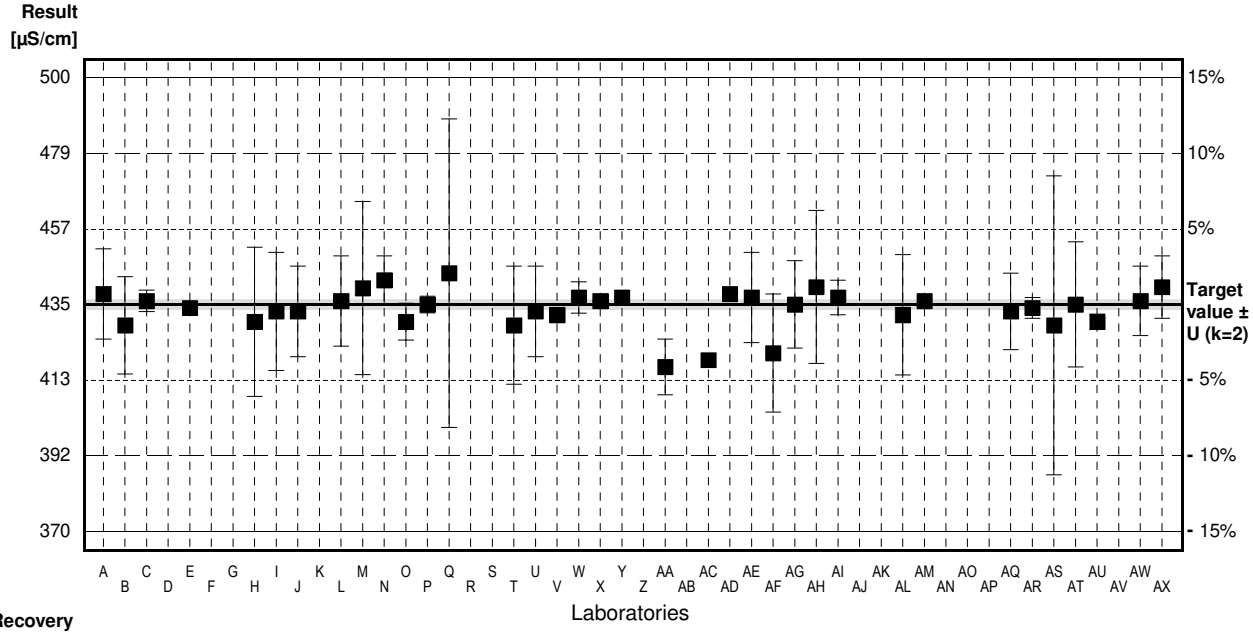
AP			µS/cm		
AQ	482	12	µS/cm	99%	-1,10
AR	488	3	µS/cm	100%	-0,16
AS	486	49	µS/cm	99%	-0,47
AT	490	20	µS/cm	100%	0,16
AU	472	2,4	µS/cm	97%	-2,67
AV			µS/cm		
AW	491	10	µS/cm	100%	0,31
AX	503	10	µS/cm	103%	2,20

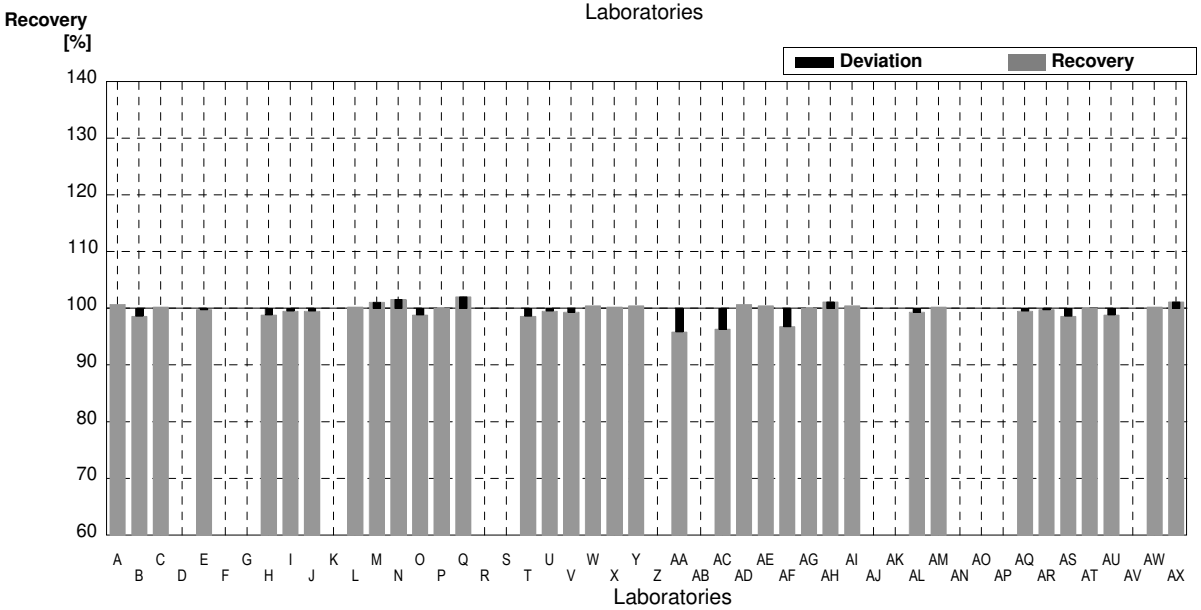
	All results	Outliers excl.	Unit
Mean ± CI(99%)	489 ± 3	489 ± 3	µS/cm
Recov. ± CI(99%)	100,0 ± 0,7	100,0 ± 0,7	%
SD between labs	7	7	µS/cm
RSD between labs	1,5	1,5	%
n for calculation	36	36	

Sample N158B
Parameter Conductivity

Target value ± U (k=2)	435	µS/cm	±	1	µS/cm
IFA result ± U (k=2)	438	µS/cm	±	6	µS/cm
Stability test		µS/cm			

Lab Code	Result	±	Unit	Recovery	z-Score
A	438	13	µS/cm	101%	0,53
B	429	14,0	µS/cm	99%	-1,06
C	436	3,09	µS/cm	100%	0,18
D			µS/cm		
E	434		µS/cm	100%	-0,18
F			µS/cm		
G			µS/cm		
H	430	21,5	µS/cm	99%	-0,88
I	433	17	µS/cm	100%	-0,35
J	433	13	µS/cm	100%	-0,35
K			µS/cm		
L	436	13	µS/cm	100%	0,18
M	439,7	24,9	µS/cm	101%	0,83
N	442	7	µS/cm	102%	1,24
O	430	5,3	µS/cm	99%	-0,88
P	435	2,39	µS/cm	100%	0,00
Q	444	44,4	µS/cm	102%	1,59
R			µS/cm		
S			µS/cm		
T	429	17	µS/cm	99%	-1,06
U	433	13	µS/cm	100%	-0,35
V	432		µS/cm	99%	-0,53
W	437	4,51	µS/cm	100%	0,35
X	436	0,152	µS/cm	100%	0,18
Y	437	0,256	µS/cm	100%	0,35
Z			µS/cm		
AA	417 *	8	µS/cm	96%	-3,18
AB			µS/cm		
AC	419 *		µS/cm	96%	-2,83
AD	438		µS/cm	101%	0,53
AE	437	13	µS/cm	100%	0,35
AF	421 *	17	µS/cm	97%	-2,48
AG	435	12,6	µS/cm	100%	0,00
AH	440	22	µS/cm	101%	0,88
AI	437	5	µS/cm	100%	0,35
AJ			µS/cm		
AK			µS/cm		
AL	432,000	17,3000	µS/cm	99%	-0,53
AM	436		µS/cm	100%	0,18
AN			µS/cm		
AO			µS/cm		





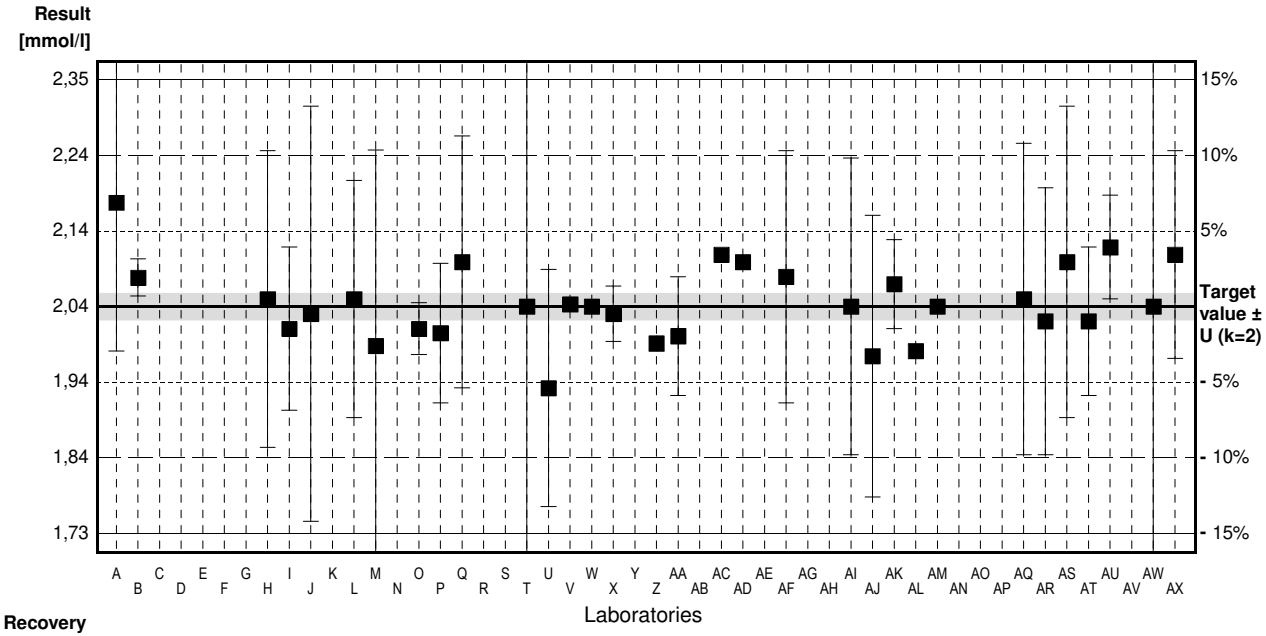
AP			µS/cm		
AQ	433	11	µS/cm	100%	-0,35
AR	434	3	µS/cm	100%	-0,18
AS	429	43	µS/cm	99%	-1,06
AT	435	18	µS/cm	100%	0,00
AU	430	2,2	µS/cm	99%	-0,88
AV			µS/cm		
AW	436	10	µS/cm	100%	0,18
AX	440	9	µS/cm	101%	0,88

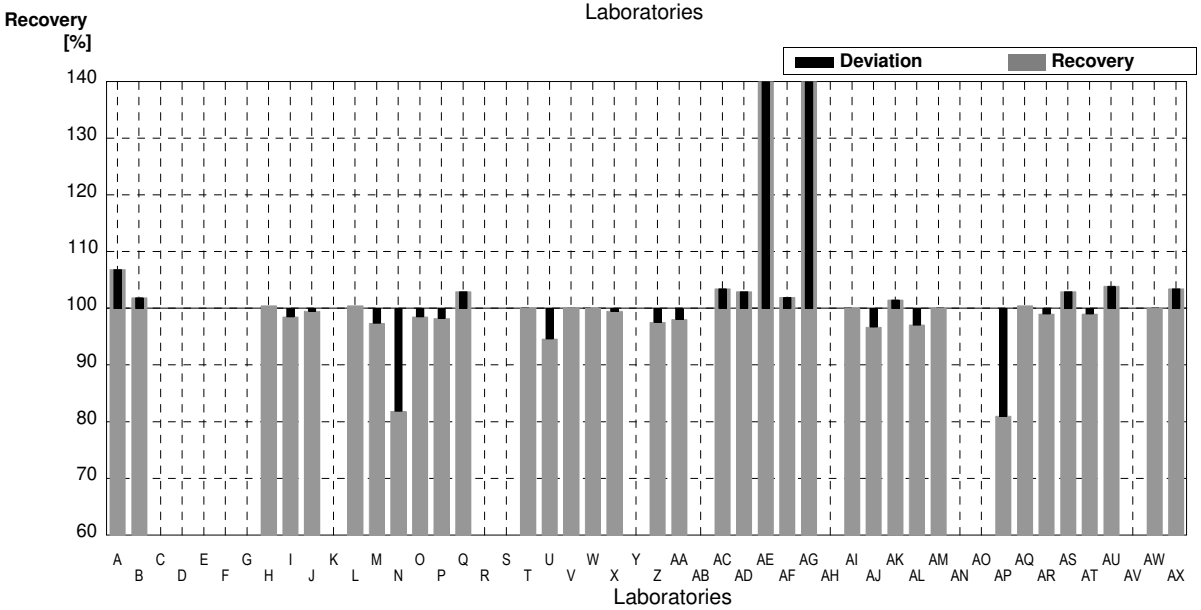
	All results	Outliers excl.	Unit
Mean ± CI(99%)	434 ± 3	435 ± 2	µS/cm
Recov. ± CI(99%)	99,7 ± 0,6	100,0 ± 0,4	%
SD between labs	6	4	µS/cm
RSD between labs	1,3	0,9	%
n for calculation	36	33	

Sample N158A
Parameter Total hardness

Target value ± U (k=2)	2,04	mmol/l	±	0,02	mmol/l
IFA result ± U (k=2)	2,11	mmol/l	±	0,08	mmol/l
Stability test		mmol/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	2,18	0,2	mmol/l	107%	2,37
B	2,079	0,025	mmol/l	102%	0,66
C			mmol/l		
D			mmol/l		
E			mmol/l		
F			mmol/l		
G			mmol/l		
H	2,05	0,2	mmol/l	100%	0,17
I	2,01	0,11	mmol/l	99%	-0,51
J	2,03	0,28	mmol/l	100%	-0,17
K			mmol/l		
L	2,05	0,16	mmol/l	100%	0,17
M	1,987	0,264	mmol/l	97%	-0,90
N	1,67 *	0,14	mmol/l	82%	-6,25
O	2,01	0,035	mmol/l	99%	-0,51
P	2,004	0,094	mmol/l	98%	-0,61
Q	2,10	0,17	mmol/l	103%	1,01
R			mmol/l		
S			mmol/l		
T	2,04	0,37	mmol/l	100%	0,00
U	1,93	0,16	mmol/l	95%	-1,86
V	2,043		mmol/l	100%	0,05
W	2,04		mmol/l	100%	0,00
X	2,03	0,0374	mmol/l	100%	-0,17
Y			mmol/l		
Z	1,99	0,01	mmol/l	98%	-0,85
AA	2,00	0,08	mmol/l	98%	-0,68
AB			mmol/l		
AC	2,11		mmol/l	103%	1,18
AD	2,10		mmol/l	103%	1,01
AE	20,4 *		mmol/l	1000%	310,34
AF	2,08	0,17	mmol/l	102%	0,68
AG	10,9 *		mmol/l	534%	149,76
AH			mmol/l		
AI	2,04	0,2	mmol/l	100%	0,00
AJ	1,973	0,19	mmol/l	97%	-1,13
AK	2,07	0,060	mmol/l	101%	0,51
AL	1,98		mmol/l	97%	-1,01
AM	2,04		mmol/l	100%	0,00
AN			mmol/l		
AO			mmol/l		





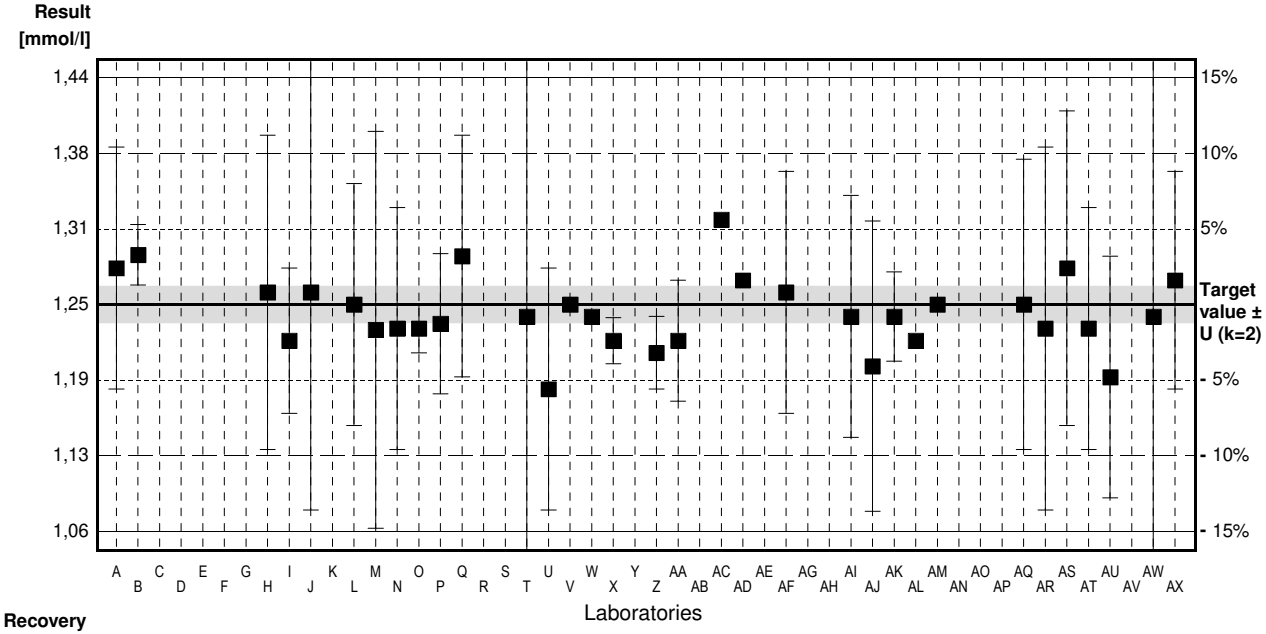
AP	1,652 *		mmol/l	81%	-6,56
AQ	2,05	0,21	mmol/l	100%	0,17
AR	2,02	0,18	mmol/l	99%	-0,34
AS	2,10	0,21	mmol/l	103%	1,01
AT	2,02	0,1	mmol/l	99%	-0,34
AU	2,12	0,07	mmol/l	104%	1,35
AV			mmol/l		
AW	2,04	0,41	mmol/l	100%	0,00
AX	2,11	0,14	mmol/l	103%	1,18

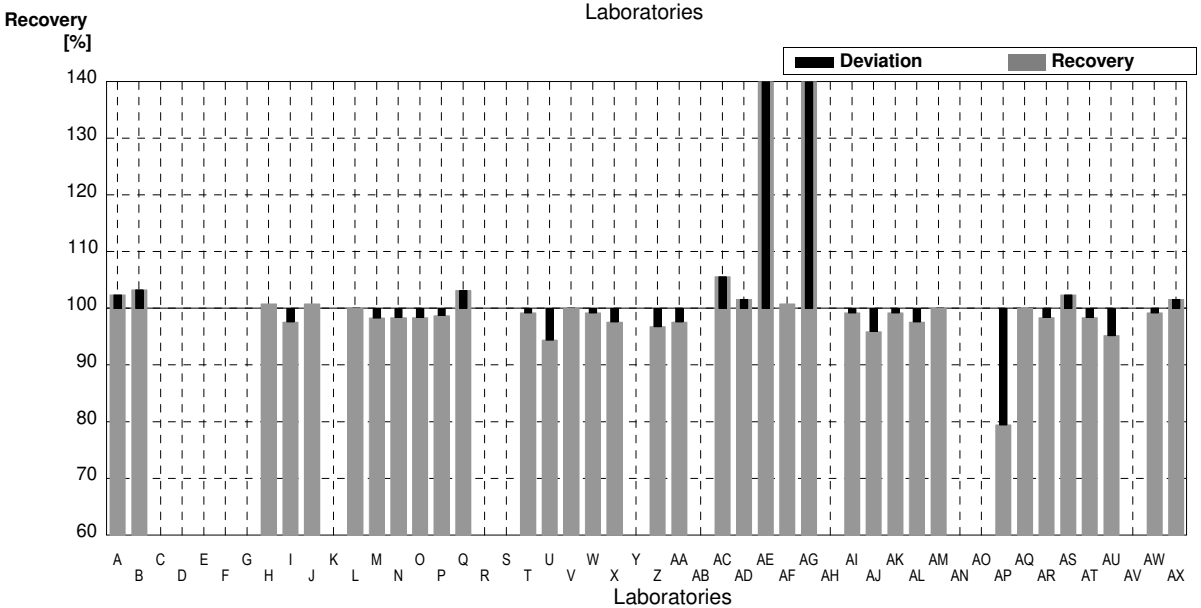
	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,78 ± 1,53	2,04 ± 0,02	mmol/l
Recov. ± CI(99%)	136,2 ± 75,1	100,2 ± 1,2	%
SD between labs	3,36	0,05	mmol/l
RSD between labs	121,1	2,5	%
n for calculation	36	32	

Sample N158B
Parameter Total hardness

Target value ± U (k=2)	1,25	mmol/l	±	0,02	mmol/l
IFA result ± U (k=2)	1,28	mmol/l	±	0,05	mmol/l
Stability test		mmol/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	1,28	0,1	mmol/l	102%	0,83
B	1,291	0,025	mmol/l	103%	1,13
C			mmol/l		
D			mmol/l		
E			mmol/l		
F			mmol/l		
G			mmol/l		
H	1,26	0,13	mmol/l	101%	0,28
I	1,22	0,06	mmol/l	98%	-0,83
J	1,26	0,18	mmol/l	101%	0,28
K			mmol/l		
L	1,25	0,10	mmol/l	100%	0,00
M	1,229	0,164	mmol/l	98%	-0,58
N	1,23	0,1	mmol/l	98%	-0,55
O	1,23	0,020	mmol/l	98%	-0,55
P	1,234	0,058	mmol/l	99%	-0,44
Q	1,29	0,10	mmol/l	103%	1,10
R			mmol/l		
S			mmol/l		
T	1,24	0,22	mmol/l	99%	-0,28
U	1,18	0,10	mmol/l	94%	-1,93
V	1,250		mmol/l	100%	0,00
W	1,24		mmol/l	99%	-0,28
X	1,22	0,0191	mmol/l	98%	-0,83
Y			mmol/l		
Z	1,21	0,03	mmol/l	97%	-1,10
AA	1,22	0,05	mmol/l	98%	-0,83
AB			mmol/l		
AC	1,32		mmol/l	106%	1,93
AD	1,27		mmol/l	102%	0,55
AE	13,01 *		mmol/l	1041%	324,41
AF	1,26	0,10	mmol/l	101%	0,28
AG	6,75 *		mmol/l	540%	151,72
AH			mmol/l		
AI	1,24	0,1	mmol/l	99%	-0,28
AJ	1,199	0,12	mmol/l	96%	-1,41
AK	1,24	0,037	mmol/l	99%	-0,28
AL	1,22		mmol/l	98%	-0,83
AM	1,25		mmol/l	100%	0,00
AN			mmol/l		
AO			mmol/l		





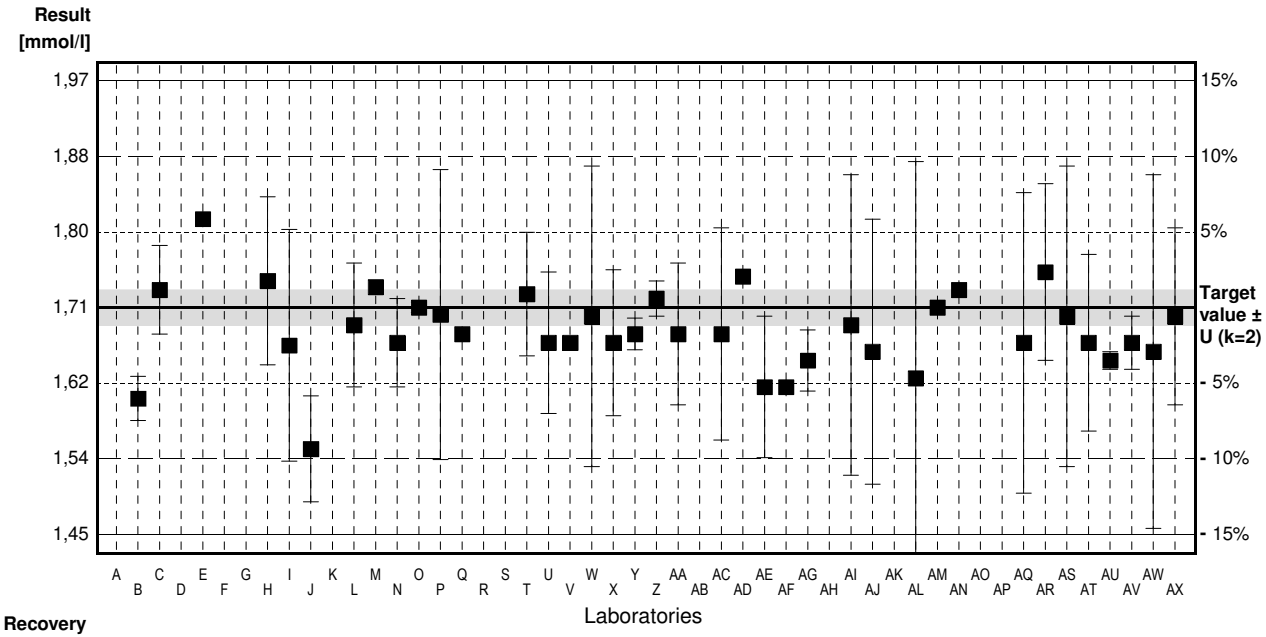
AP	0,993 *		mmol/l	79%	-7,09
AQ	1,25	0,12	mmol/l	100%	0,00
AR	1,23	0,15	mmol/l	98%	-0,55
AS	1,28	0,13	mmol/l	102%	0,83
AT	1,23	0,1	mmol/l	98%	-0,55
AU	1,19	0,10	mmol/l	95%	-1,66
AV			mmol/l		
AW	1,24	0,25	mmol/l	99%	-0,28
AX	1,27	0,09	mmol/l	102%	0,55

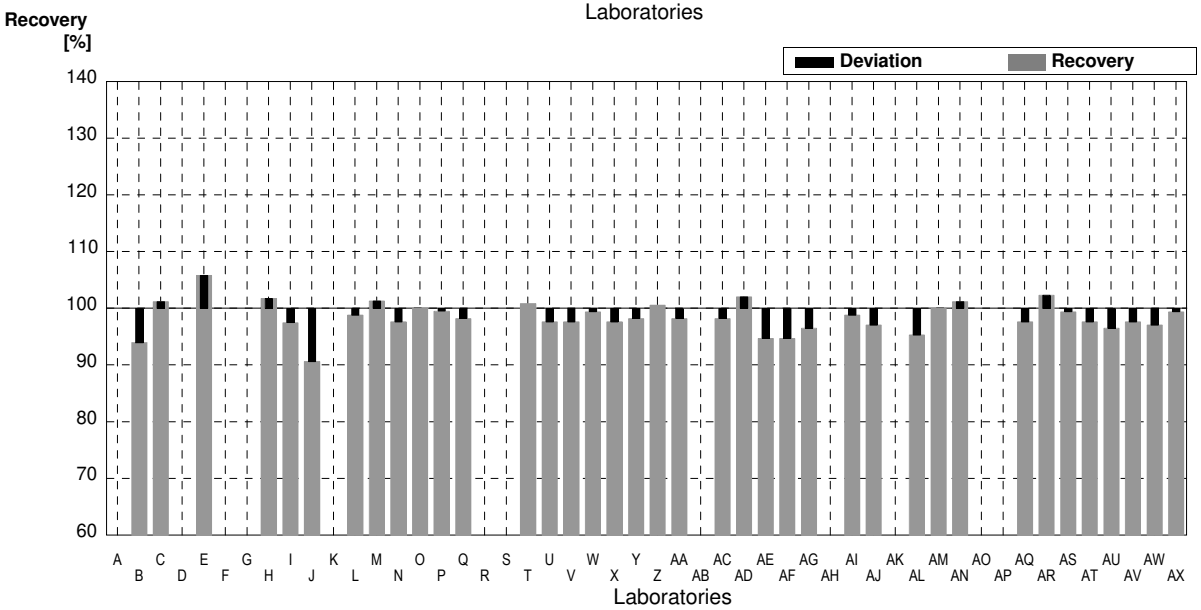
	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,72 ± 0,98	1,24 ± 0,01	mmol/l
Recov. ± CI(99%)	137,3 ± 78,0	99,4 ± 1,1	%
SD between labs	2,14	0,03	mmol/l
RSD between labs	124,9	2,4	%
n for calculation	36	33	

Sample N158A
Parameter Alkalinity

Target value ± U (k=2)	1,71	mmol/l	±	0,02	mmol/l
IFA result ± U (k=2)	1,67	mmol/l	±	0,07	mmol/l
Stability test		mmol/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A			mmol/l		
B	1,607	0,025	mmol/l	94%	-3,01
C	1,73	0,05	mmol/l	101%	0,58
D			mmol/l		
E	1,81 *		mmol/l	106%	2,92
F			mmol/l		
G			mmol/l		
H	1,74	0,095	mmol/l	102%	0,88
I	1,667	0,131	mmol/l	97%	-1,26
J	1,55 *	0,06	mmol/l	91%	-4,68
K			mmol/l		
L	1,69	0,07	mmol/l	99%	-0,58
M	1,733		mmol/l	101%	0,67
N	1,67	0,05	mmol/l	98%	-1,17
O	1,71	0,006	mmol/l	100%	0,00
P	1,702	0,164	mmol/l	100%	-0,23
Q	1,68		mmol/l	98%	-0,88
R			mmol/l		
S			mmol/l		
T	1,725	0,07	mmol/l	101%	0,44
U	1,67	0,08	mmol/l	98%	-1,17
V	1,67		mmol/l	98%	-1,17
W	1,70	0,17	mmol/l	99%	-0,29
X	1,67	0,0825	mmol/l	98%	-1,17
Y	1,68	0,018	mmol/l	98%	-0,88
Z	1,72	0,02	mmol/l	101%	0,29
AA	1,68	0,08	mmol/l	98%	-0,88
AB			mmol/l		
AC	1,68	0,12	mmol/l	98%	-0,88
AD	1,745		mmol/l	102%	1,02
AE	1,62	0,08	mmol/l	95%	-2,63
AF	1,62		mmol/l	95%	-2,63
AG	1,65	0,0346	mmol/l	96%	-1,75
AH			mmol/l		
AI	1,69	0,17	mmol/l	99%	-0,58
AJ	1,66	0,15	mmol/l	97%	-1,46
AK			mmol/l		
AL	1,6300	0,24500	mmol/l	95%	-2,34
AM	1,71		mmol/l	100%	0,00
AN	1,73		mmol/l	101%	0,58
AO			mmol/l		





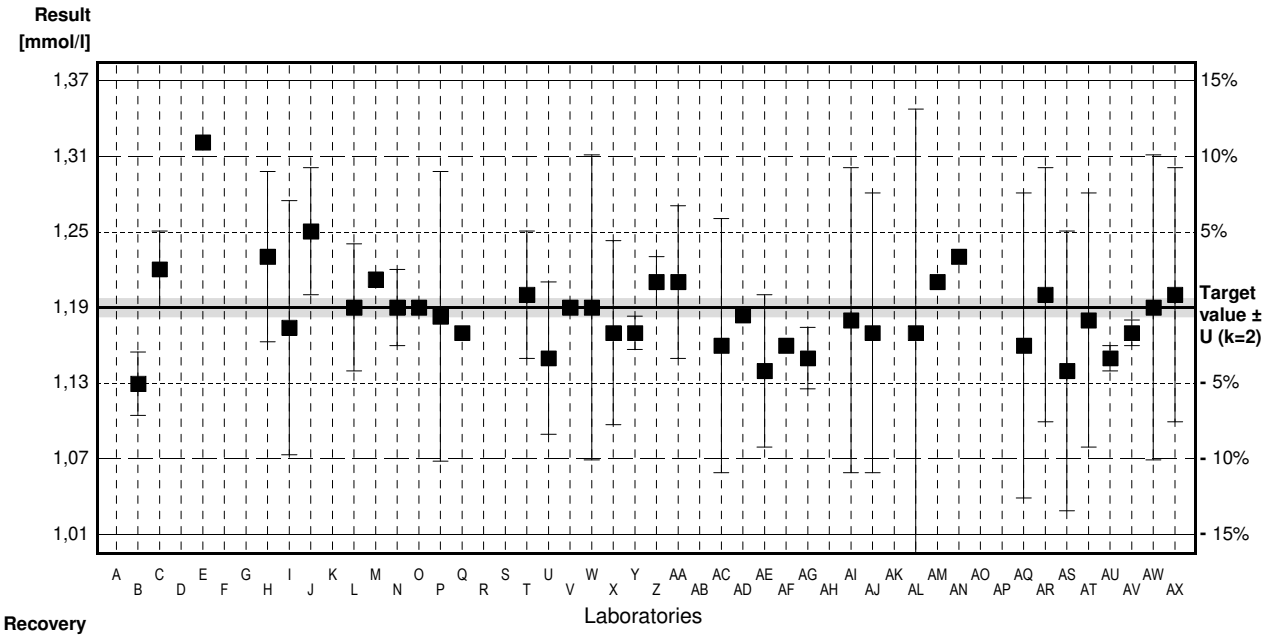
AP			mmol/l		
AQ	1,67	0,17	mmol/l	98%	-1,17
AR	1,75	0,10	mmol/l	102%	1,17
AS	1,70	0,17	mmol/l	99%	-0,29
AT	1,67	0,1	mmol/l	98%	-1,17
AU	1,65	0,01	mmol/l	96%	-1,75
AV	1,67	0,03	mmol/l	98%	-1,17
AW	1,66	0,2	mmol/l	97%	-1,46
AX	1,70	0,1	mmol/l	99%	-0,29

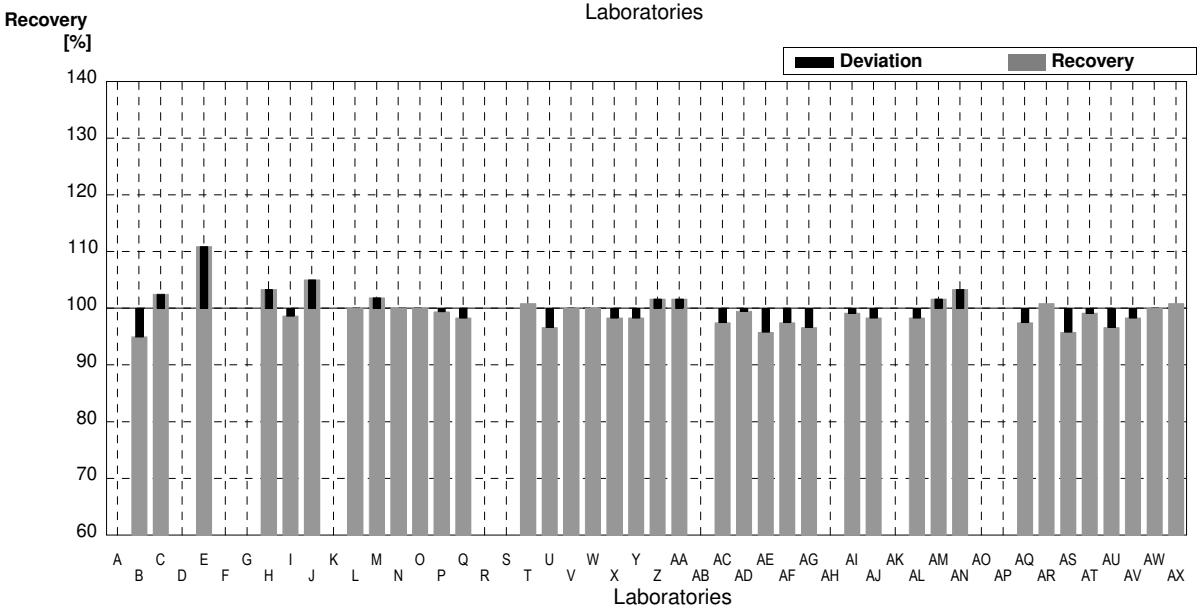
	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,68 ± 0,02	1,68 ± 0,02	mmol/l
Recov. ± CI(99%)	98,5 ± 1,2	98,5 ± 1,0	%
SD between labs	0,05	0,04	mmol/l
RSD between labs	2,7	2,1	%
n for calculation	38	36	

Sample N158B
Parameter Alkalinity

Target value ± U (k=2)	1,19	mmol/l	±	0,01	mmol/l
IFA result ± U (k=2)	1,18	mmol/l	±	0,05	mmol/l
Stability test		mmol/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A			mmol/l		
B	1,130	0,025	mmol/l	95%	-2,52
C	1,22	0,03	mmol/l	103%	1,26
D			mmol/l		
E	1,32 *		mmol/l	111%	5,46
F			mmol/l		
G			mmol/l		
H	1,23	0,067	mmol/l	103%	1,68
I	1,174	0,100	mmol/l	99%	-0,67
J	1,25	0,05	mmol/l	105%	2,52
K			mmol/l		
L	1,19	0,05	mmol/l	100%	0,00
M	1,212		mmol/l	102%	0,92
N	1,19	0,03	mmol/l	100%	0,00
O	1,19	0,005	mmol/l	100%	0,00
P	1,183	0,114	mmol/l	99%	-0,29
Q	1,17		mmol/l	98%	-0,84
R			mmol/l		
S			mmol/l		
T	1,20	0,05	mmol/l	101%	0,42
U	1,15	0,06	mmol/l	97%	-1,68
V	1,19		mmol/l	100%	0,00
W	1,19	0,12	mmol/l	100%	0,00
X	1,17	0,0724	mmol/l	98%	-0,84
Y	1,17	0,013	mmol/l	98%	-0,84
Z	1,21	0,02	mmol/l	102%	0,84
AA	1,21	0,06	mmol/l	102%	0,84
AB			mmol/l		
AC	1,16	0,1	mmol/l	97%	-1,26
AD	1,184		mmol/l	99%	-0,25
AE	1,14	0,06	mmol/l	96%	-2,10
AF	1,16		mmol/l	97%	-1,26
AG	1,15	0,0242	mmol/l	97%	-1,68
AH			mmol/l		
AI	1,18	0,12	mmol/l	99%	-0,42
AJ	1,17	0,11	mmol/l	98%	-0,84
AK			mmol/l		
AL	1,17000	0,17600	mmol/l	98%	-0,84
AM	1,21		mmol/l	102%	0,84
AN	1,23		mmol/l	103%	1,68
AO			mmol/l		





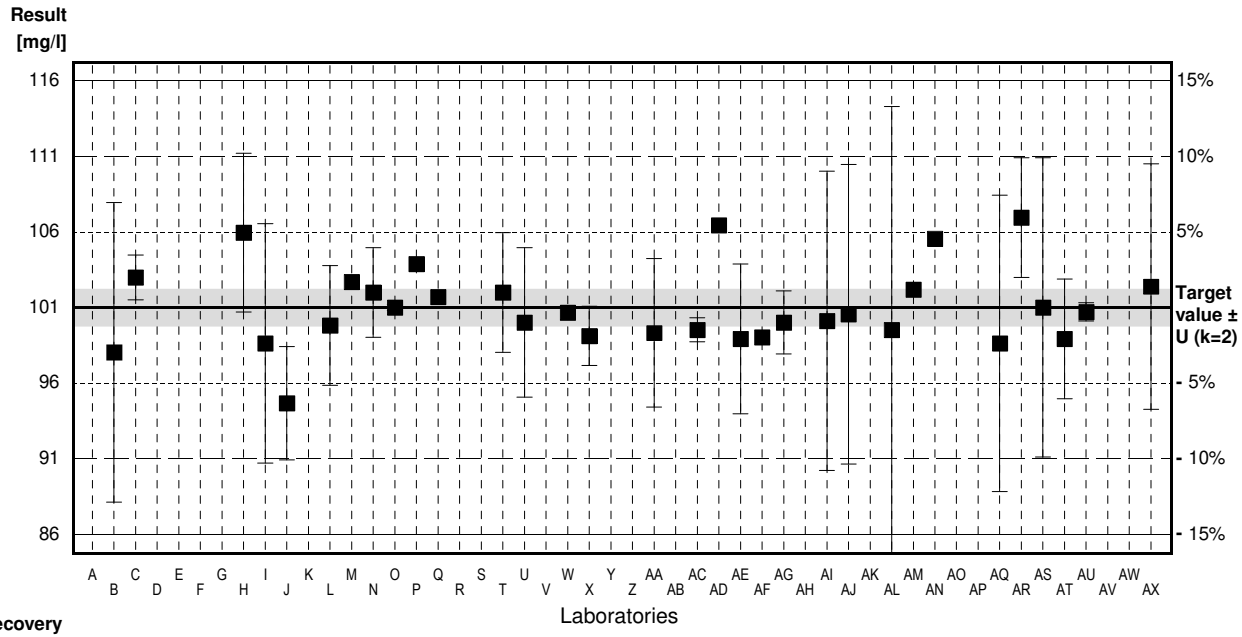
AP			mmol/l		
AQ	1,16	0,12	mmol/l	97%	-1,26
AR	1,20	0,10	mmol/l	101%	0,42
AS	1,14	0,11	mmol/l	96%	-2,10
AT	1,18	0,1	mmol/l	99%	-0,42
AU	1,15	0,01	mmol/l	97%	-1,68
AV	1,17	0,01	mmol/l	98%	-0,84
AW	1,19	0,12	mmol/l	100%	0,00
AX	1,20	0,1	mmol/l	101%	0,42

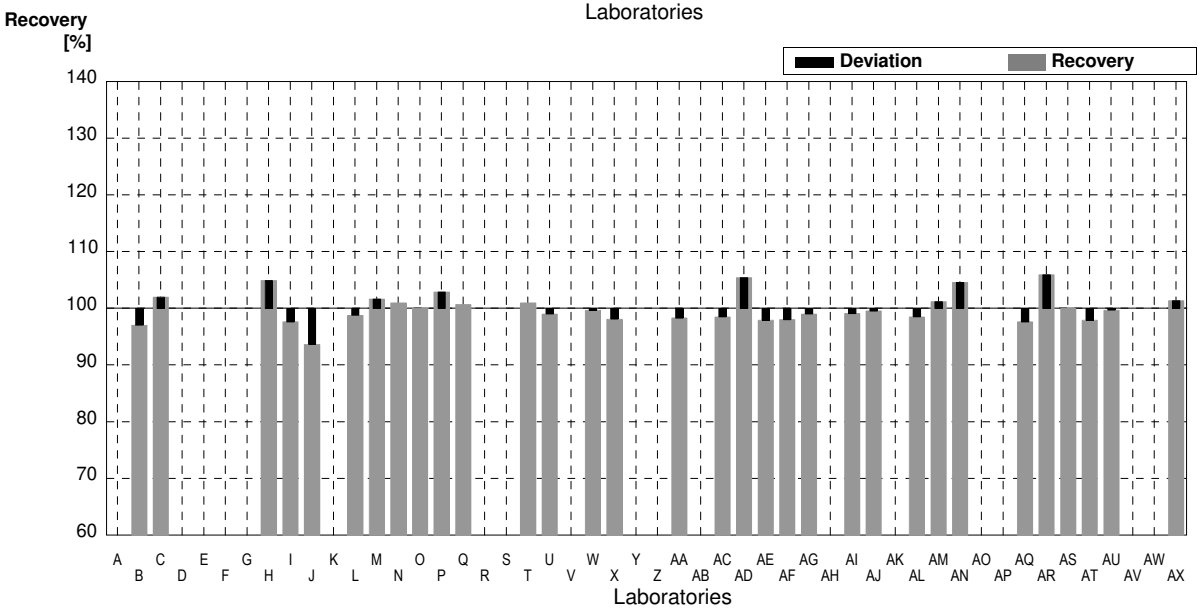
	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,19 ± 0,02	1,18 ± 0,01	mmol/l
Recov. ± CI(99%)	99,7 ± 1,3	99,4 ± 1,0	%
SD between labs	0,03	0,03	mmol/l
RSD between labs	2,9	2,3	%
n for calculation	38	37	

Sample N158A
Parameter Hydrogen carbonate

Target value	± U (k=2)	101 mg/l	±	1 mg/l	
IFA result	± U (k=2)	99,1 mg/l	±	4,0 mg/l	
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A			mg/l		
B	98	10	mg/l	97%	-1,24
C	103	1,49	mg/l	102%	0,83
D			mg/l		
E			mg/l		
F			mg/l		
G			mg/l		
H	106	5,3	mg/l	105%	2,06
I	98,6	8,0	mg/l	98%	-0,99
J	94,6	3,78	mg/l	94%	-2,64
K			mg/l		
L	99,8	4,0	mg/l	99%	-0,50
M	102,7		mg/l	102%	0,70
N	102	3	mg/l	101%	0,41
O	101	0,200	mg/l	100%	0,00
P	103,9		mg/l	103%	1,20
Q	101,7		mg/l	101%	0,29
R			mg/l		
S			mg/l		
T	102	4	mg/l	101%	0,41
U	100	5	mg/l	99%	-0,41
V			mg/l		
W	100,66		mg/l	100%	-0,14
X	99,1	1,981	mg/l	98%	-0,78
Y			mg/l		
Z			mg/l		
AA	99,3	4,97	mg/l	98%	-0,70
AB			mg/l		
AC	99,5	0,8	mg/l	99%	-0,62
AD	106,5		mg/l	105%	2,27
AE	98,9	5	mg/l	98%	-0,87
AF	99		mg/l	98%	-0,83
AG	100	2,11	mg/l	99%	-0,41
AH			mg/l		
AI	100,1	10	mg/l	99%	-0,37
AJ	100,55	10	mg/l	100%	-0,19
AK			mg/l		
AL	99,5000	14,9200	mg/l	99%	-0,62
AM	102,2		mg/l	101%	0,50
AN	105,6		mg/l	105%	1,90
AO			mg/l		





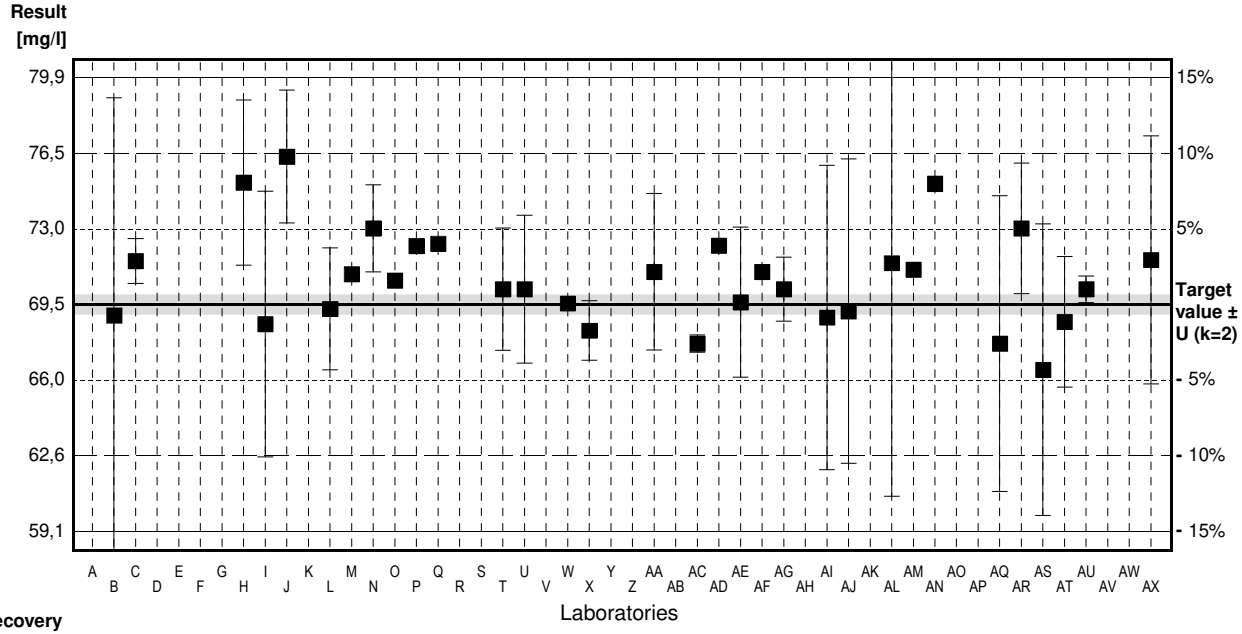
AP			mg/l		
AQ	98,6	9,9	mg/l	98%	-0,99
AR	107	4	mg/l	106%	2,48
AS	101	10	mg/l	100%	0,00
AT	98,9	4	mg/l	98%	-0,87
AU	100,7	0,61	mg/l	100%	-0,12
AV			mg/l		
AW			mg/l		
AX	102,4	8,2	mg/l	101%	0,58

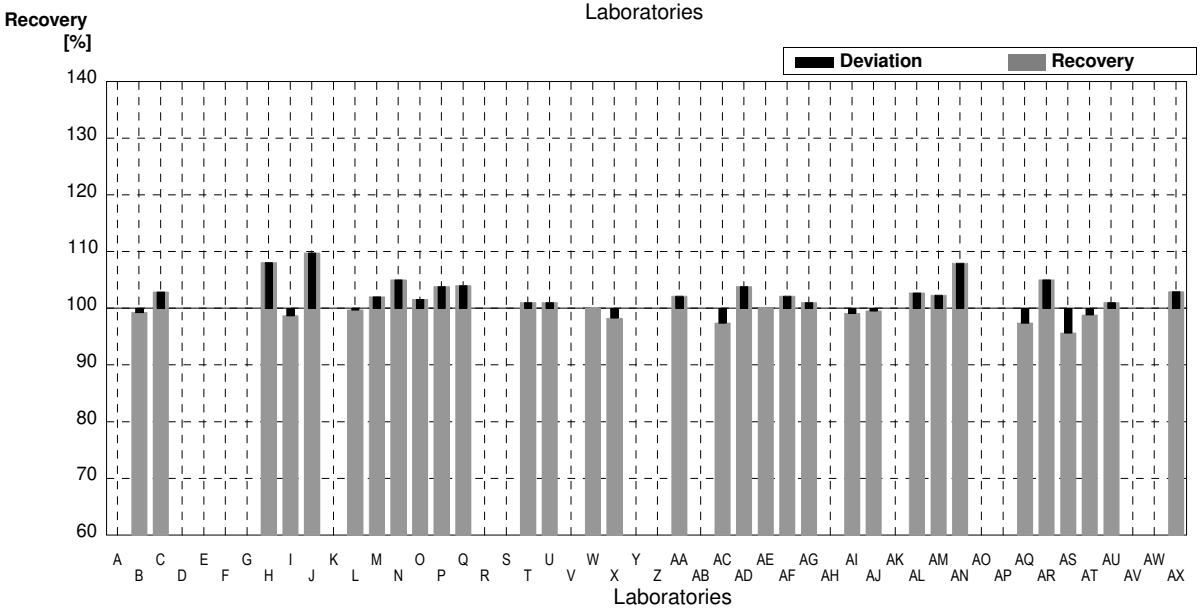
	All results	Outliers excl.	Unit
Mean ± CI(99%)	101 ± 1	101 ± 1	mg/l
Recov. ± CI(99%)	100,0 ± 1,3	100,0 ± 1,3	%
SD between labs	3	3	mg/l
RSD between labs	2,7	2,7	%
n for calculation	32	32	

Sample N158B
Parameter Hydrogen carbonate

Target value	± U (k=2)	69,5 mg/l	±	0,4 mg/l	
IFA result	± U (k=2)	68,8 mg/l	±	2,8 mg/l	
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A			mg/l		
B	69	10	mg/l	99%	-0,30
C	71,5	1,03	mg/l	103%	1,20
D			mg/l		
E			mg/l		
F			mg/l		
G			mg/l		
H	75,1	3,8	mg/l	108%	3,36
I	68,6	6,1	mg/l	99%	-0,54
J	76,3	3,05	mg/l	110%	4,08
K			mg/l		
L	69,3	2,8	mg/l	100%	-0,12
M	70,9		mg/l	102%	0,84
N	73	2	mg/l	105%	2,10
O	70,6	0,100	mg/l	102%	0,66
P	72,19		mg/l	104%	1,61
Q	72,3		mg/l	104%	1,68
R			mg/l		
S			mg/l		
T	70,2	2,81	mg/l	101%	0,42
U	70,2	3,4	mg/l	101%	0,42
V			mg/l		
W	69,551		mg/l	100%	0,03
X	68,3	1,367	mg/l	98%	-0,72
Y			mg/l		
Z			mg/l		
AA	71,0	3,6	mg/l	102%	0,90
AB			mg/l		
AC	67,7	0,4	mg/l	97%	-1,08
AD	72,2		mg/l	104%	1,62
AE	69,6	3,45	mg/l	100%	0,06
AF	71		mg/l	102%	0,90
AG	70,2	1,47	mg/l	101%	0,42
AH			mg/l		
AI	68,9	7	mg/l	99%	-0,36
AJ	69,19	7	mg/l	100%	-0,19
AK			mg/l		
AL	71,4000	10,7100	mg/l	103%	1,14
AM	71,1		mg/l	102%	0,96
AN	75,05		mg/l	108%	3,33
AO			mg/l		





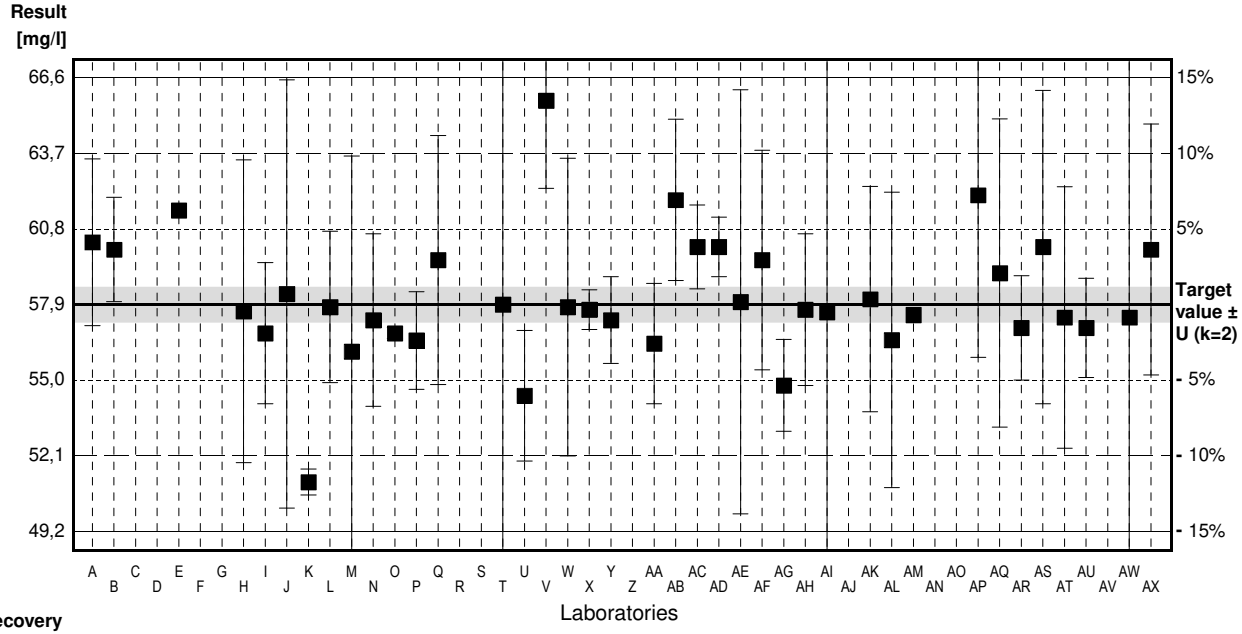
AP			mg/l		
AQ	67,7	6,8	mg/l	97%	-1,08
AR	73	3	mg/l	105%	2,10
AS	66,5	6,7	mg/l	96%	-1,80
AT	68,7	3	mg/l	99%	-0,48
AU	70,2	0,61	mg/l	101%	0,42
AV			mg/l		
AW			mg/l		
AX	71,55	5,7	mg/l	103%	1,23

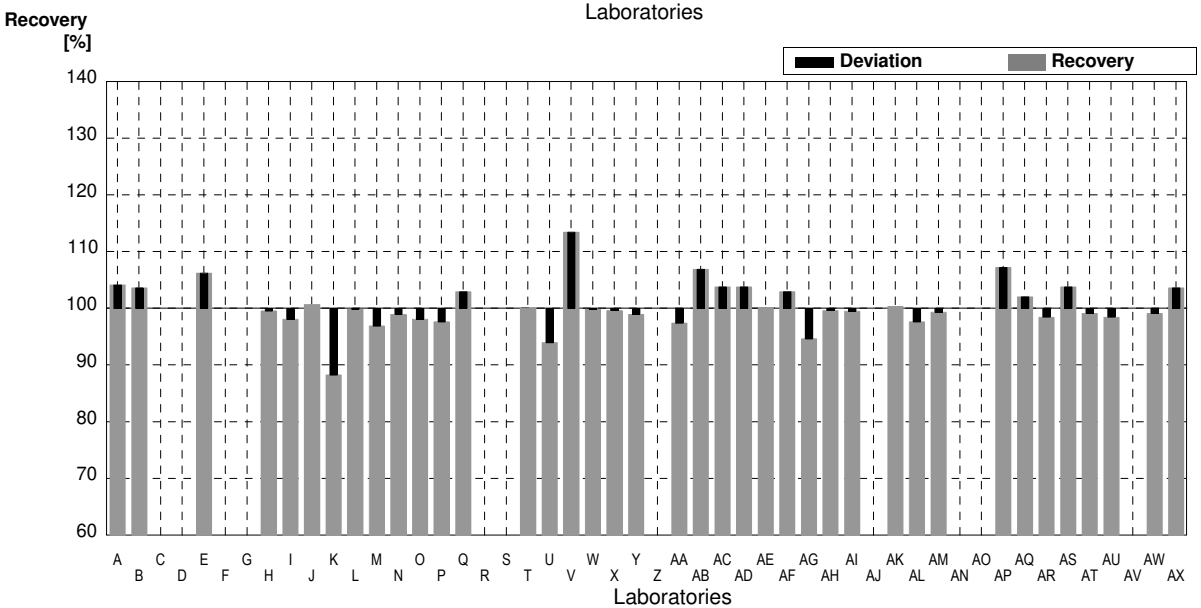
	All results	Outliers excl.	Unit
Mean ± CI(99%)	70,7 ± 1,1	70,7 ± 1,1	mg/l
Recov. ± CI(99%)	101,7 ± 1,6	101,7 ± 1,6	%
SD between labs	2,2	2,2	mg/l
RSD between labs	3,1	3,1	%
n for calculation	32	32	

Sample N158A
Parameter Calcium

Target value ± U (k=2)	57,9	mg/l	±	0,7	mg/l
IFA result ± U (k=2)	60,5	mg/l	±	2,4	mg/l
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	60,28	3,19	mg/l	104%	1,25
B	60,0	2	mg/l	104%	1,10
C			mg/l		
D			mg/l		
E	61,5		mg/l	106%	1,88
F			mg/l		
G			mg/l		
H	57,64	5,8	mg/l	100%	-0,14
I	56,8	2,7	mg/l	98%	-0,58
J	58,3	8,2	mg/l	101%	0,21
K	51,1 *	0,5	mg/l	88%	-3,56
L	57,8	2,9	mg/l	100%	-0,05
M	56,1	7,48	mg/l	97%	-0,94
N	57,3	3,3	mg/l	99%	-0,31
O	56,8	0,208	mg/l	98%	-0,58
P	56,52	1,87	mg/l	98%	-0,72
Q	59,6	4,77	mg/l	103%	0,89
R			mg/l		
S			mg/l		
T	57,9	10,4	mg/l	100%	0,00
U	54,4	2,5	mg/l	94%	-1,83
V	65,7 *	3,36	mg/l	113%	4,08
W	57,800	5,7	mg/l	100%	-0,05
X	57,7	0,756	mg/l	100%	-0,10
Y	57,3	1,66	mg/l	99%	-0,31
Z			mg/l		
AA	56,4	2,3	mg/l	97%	-0,79
AB	61,9	3,09	mg/l	107%	2,09
AC	60,1	1,6	mg/l	104%	1,15
AD	60,1	1,14	mg/l	104%	1,15
AE	58,0	8,12	mg/l	100%	0,05
AF	59,6	4,2	mg/l	103%	0,89
AG	54,8	1,76	mg/l	95%	-1,62
AH	57,7	2,9	mg/l	100%	-0,10
AI	57,6	11,5	mg/l	99%	-0,16
AJ			mg/l		
AK	58,1	4,31	mg/l	100%	0,10
AL	56,54	5,654	mg/l	98%	-0,71
AM	57,5		mg/l	99%	-0,21
AN			mg/l		
AO			mg/l		





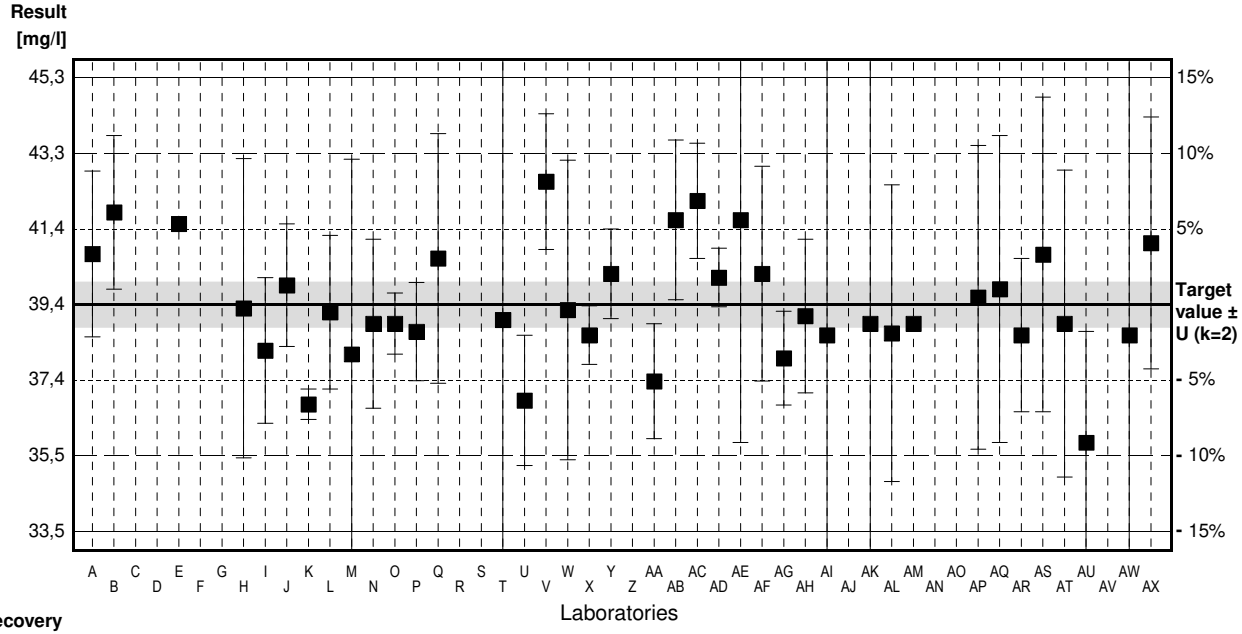
AP	62,082	6,208	mg/l	107%	2,19
AQ	59,1	5,9	mg/l	102%	0,63
AR	57	2	mg/l	98%	-0,47
AS	60,1	6,0	mg/l	104%	1,15
AT	57,4	5	mg/l	99%	-0,26
AU	57,0	1,9	mg/l	98%	-0,47
AV			mg/l		
AW	57,4	11,5	mg/l	99%	-0,26
AX	60	4,8	mg/l	104%	1,10

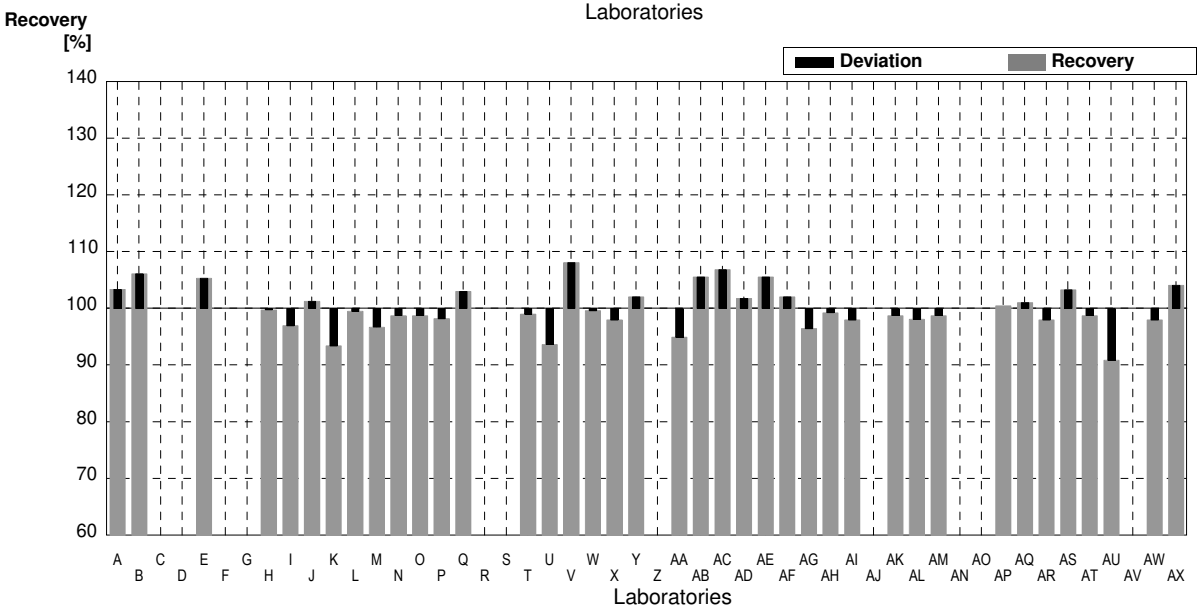
	All results	Outliers excl.	Unit
Mean ± CI(99%)	58,2 ± 1,1	58,2 ± 0,8	mg/l
Recov. ± CI(99%)	100,5 ± 1,8	100,5 ± 1,4	%
SD between labs	2,4	1,8	mg/l
RSD between labs	4,2	3,1	%
n for calculation	39	37	

Sample N158B
Parameter Calcium

Target value ± U (k=2)	39,4	mg/l	±	0,6	mg/l
IFA result ± U (k=2)	40,6	mg/l	±	2,0	mg/l
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	40,713	2,16	mg/l	103%	1,01
B	41,8	2	mg/l	106%	1,85
C			mg/l		
D			mg/l		
E	41,5		mg/l	105%	1,62
F			mg/l		
G			mg/l		
H	39,3	3,9	mg/l	100%	-0,08
I	38,2	1,9	mg/l	97%	-0,92
J	39,9	1,6	mg/l	101%	0,38
K	36,8	0,4	mg/l	93%	-2,00
L	39,2	2,0	mg/l	99%	-0,15
M	38,1	5,08	mg/l	97%	-1,00
N	38,9	2,2	mg/l	99%	-0,38
O	38,9	0,794	mg/l	99%	-0,38
P	38,69	1,28	mg/l	98%	-0,55
Q	40,6	3,25	mg/l	103%	0,92
R			mg/l		
S			mg/l		
T	39,0	7,02	mg/l	99%	-0,31
U	36,9	1,7	mg/l	94%	-1,92
V	42,6	1,77	mg/l	108%	2,46
W	39,254	3,9	mg/l	100%	-0,11
X	38,6	0,762	mg/l	98%	-0,62
Y	40,2	1,17	mg/l	102%	0,62
Z			mg/l		
AA	37,4	1,5	mg/l	95%	-1,54
AB	41,6	2,08	mg/l	106%	1,69
AC	42,1	1,5	mg/l	107%	2,08
AD	40,1	0,76	mg/l	102%	0,54
AE	41,6	5,8	mg/l	106%	1,69
AF	40,2	2,8	mg/l	102%	0,62
AG	38,0	1,22	mg/l	96%	-1,08
AH	39,1	2	mg/l	99%	-0,23
AI	38,6	7,7	mg/l	98%	-0,62
AJ			mg/l		
AK	38,9	6,51	mg/l	99%	-0,38
AL	38,65	3,865	mg/l	98%	-0,58
AM	38,9		mg/l	99%	-0,38
AN			mg/l		
AO			mg/l		





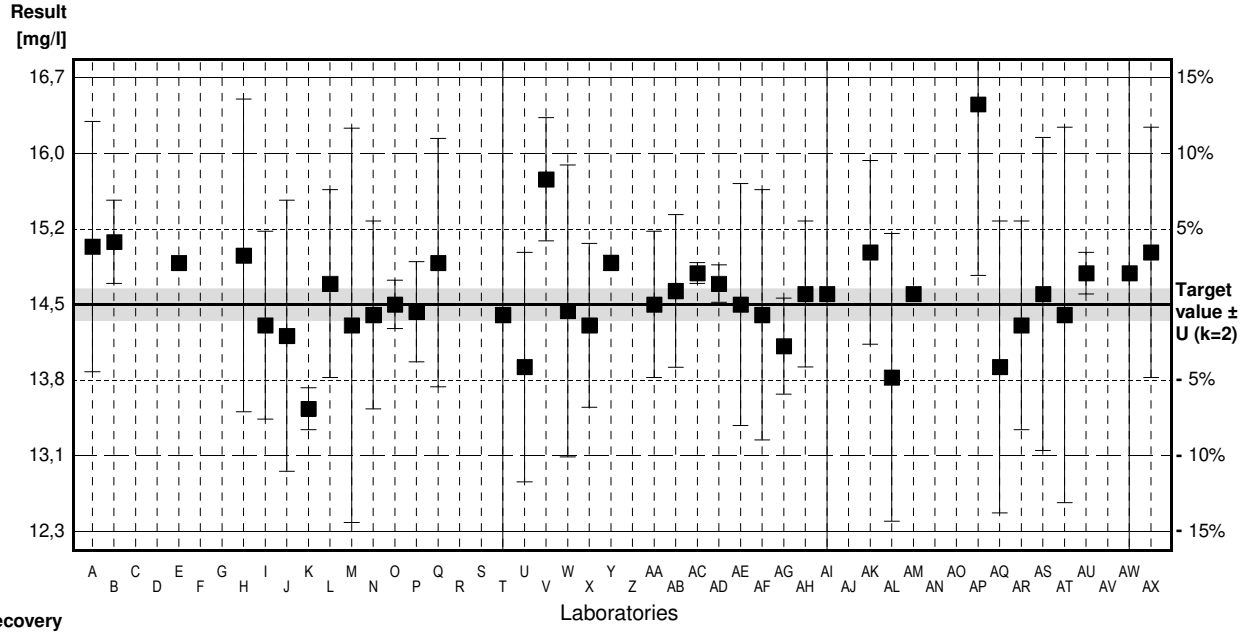
AP	39,582	3,958	mg/l	100%	0,14
AQ	39,8	4,0	mg/l	101%	0,31
AR	38,6	2	mg/l	98%	-0,62
AS	40,7	4,1	mg/l	103%	1,00
AT	38,9	4	mg/l	99%	-0,38
AU	35,8	2,9	mg/l	91%	-2,77
AV			mg/l		
AW	38,6	7,7	mg/l	98%	-0,62
AX	41,0	3,28	mg/l	104%	1,23

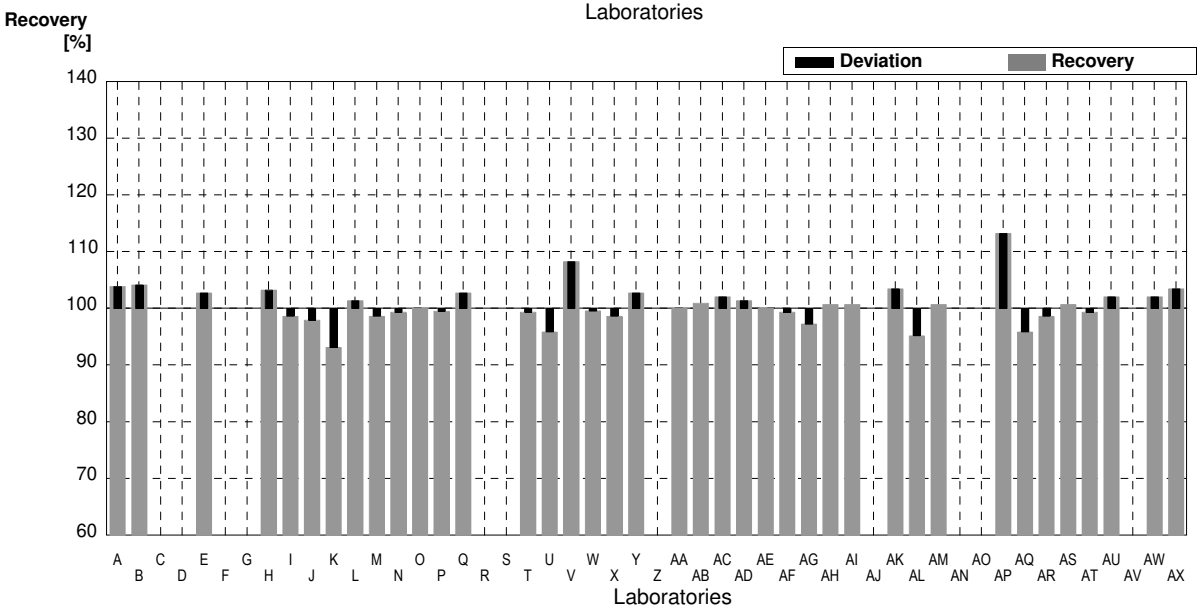
	All results	Outliers excl.	Unit
Mean ± CI(99%)	39,4 ± 0,7	39,4 ± 0,7	mg/l
Recov. ± CI(99%)	100,0 ± 1,7	100,0 ± 1,7	%
SD between labs	1,5	1,5	mg/l
RSD between labs	3,8	3,8	%
n for calculation	39	39	

Sample N158A
Parameter Magnesium

Target value ± U (k=2)	14,5	mg/l	±	0,2	mg/l
IFA result ± U (k=2)	14,6	mg/l	±	0,7	mg/l
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	15,055	1,2	mg/l	104%	1,03
B	15,1	0,4	mg/l	104%	1,12
C			mg/l		
D			mg/l		
E	14,9		mg/l	103%	0,75
F			mg/l		
G			mg/l		
H	14,97	1,5	mg/l	103%	0,88
I	14,3	0,9	mg/l	99%	-0,37
J	14,2	1,3	mg/l	98%	-0,56
K	13,5	0,2	mg/l	93%	-1,86
L	14,7	0,9	mg/l	101%	0,37
M	14,3	1,89	mg/l	99%	-0,37
N	14,4	0,9	mg/l	99%	-0,19
O	14,5	0,231	mg/l	100%	0,00
P	14,43	0,48	mg/l	100%	-0,13
Q	14,9	1,19	mg/l	103%	0,75
R			mg/l		
S			mg/l		
T	14,4	2,59	mg/l	99%	-0,19
U	13,9	1,1	mg/l	96%	-1,12
V	15,7	0,59	mg/l	108%	2,24
W	14,436	1,4	mg/l	100%	-0,12
X	14,3	0,787	mg/l	99%	-0,37
Y	14,9	0,072	mg/l	103%	0,75
Z			mg/l		
AA	14,5	0,7	mg/l	100%	0,00
AB	14,63	0,732	mg/l	101%	0,24
AC	14,8	0,1	mg/l	102%	0,56
AD	14,7	0,18	mg/l	101%	0,37
AE	14,5	1,16	mg/l	100%	0,00
AF	14,4	1,2	mg/l	99%	-0,19
AG	14,1	0,460	mg/l	97%	-0,75
AH	14,6	0,7	mg/l	101%	0,19
AI	14,6	2,9	mg/l	101%	0,19
AJ			mg/l		
AK	15,0	0,88	mg/l	103%	0,93
AL	13,80	1,380	mg/l	95%	-1,30
AM	14,6		mg/l	101%	0,19
AN			mg/l		
AO			mg/l		





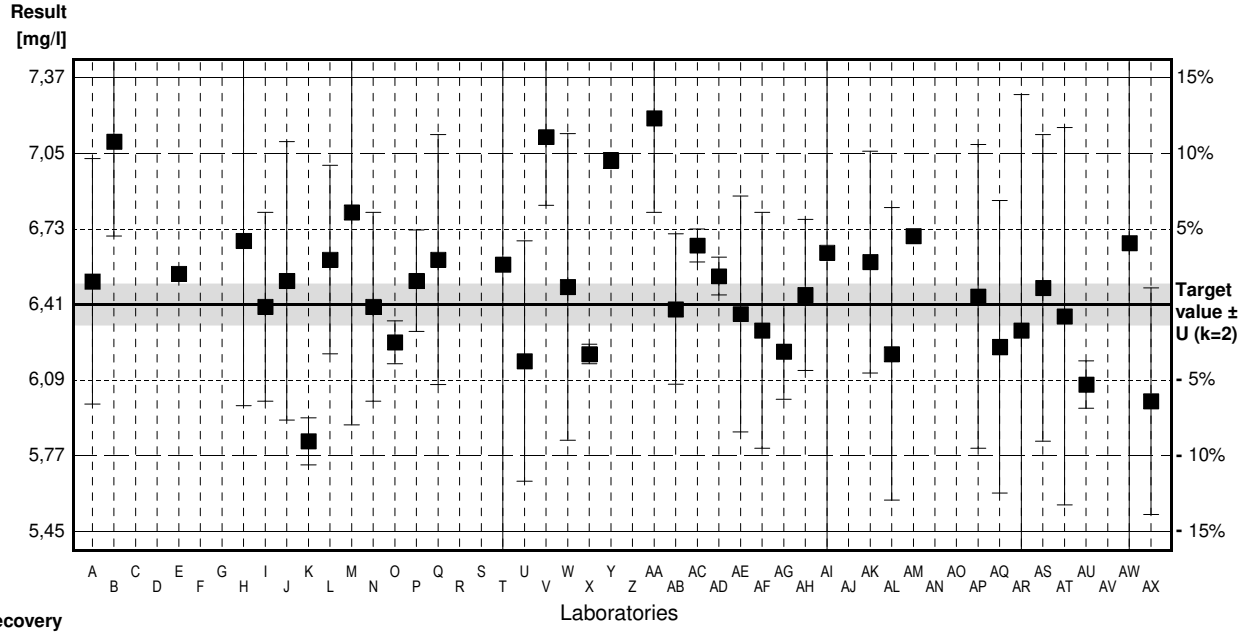
AP	16,420 *	1,642	mg/l	113%	3,58
AQ	13,9	1,4	mg/l	96%	-1,12
AR	14,3	1	mg/l	99%	-0,37
AS	14,6	1,5	mg/l	101%	0,19
AT	14,4	1,8	mg/l	99%	-0,19
AU	14,8	0,2	mg/l	102%	0,56
AV			mg/l		
AW	14,8	3,0	mg/l	102%	0,56
AX	15,0	1,20	mg/l	103%	0,93

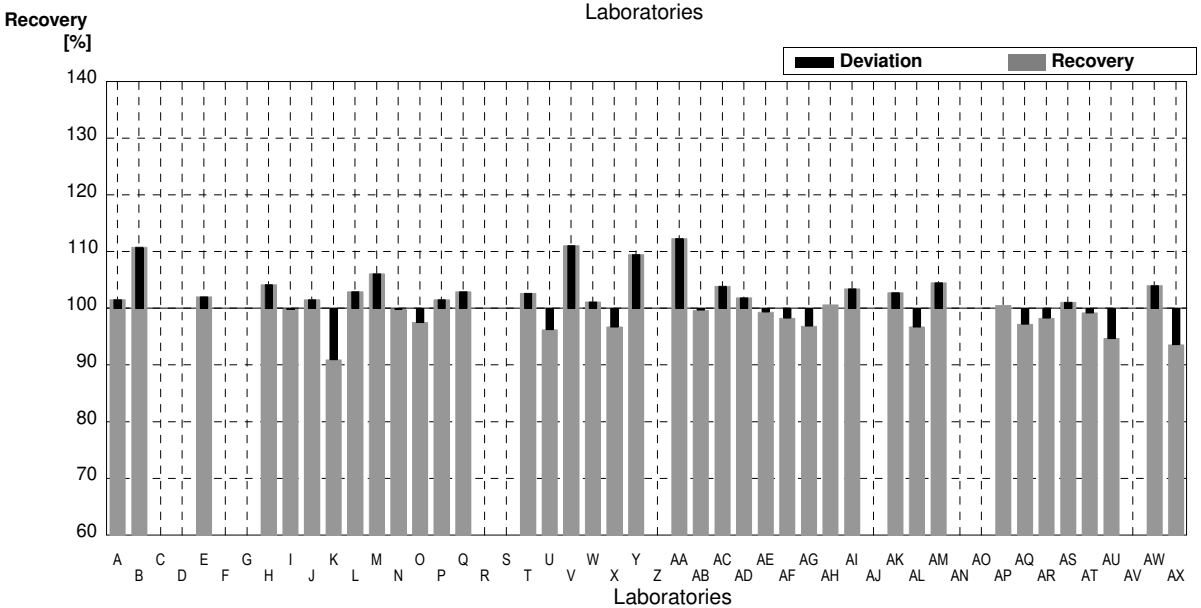
	All results	Outliers excl.	Unit
Mean ± CI(99%)	14,6 ± 0,2	14,6 ± 0,2	mg/l
Recov. ± CI(99%)	100,7 ± 1,5	100,3 ± 1,3	%
SD between labs	0,5	0,4	mg/l
RSD between labs	3,5	2,8	%
n for calculation	39	38	

Sample N158B
Parameter Magnesium

Target value ± U (k=2)	6,41	mg/l	±	0,09	mg/l
IFA result ± U (k=2)	6,38	mg/l	±	0,32	mg/l
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	6,508	0,52	mg/l	102%	0,41
B	7,1	0,4	mg/l	111%	2,91
C			mg/l		
D			mg/l		
E	6,54		mg/l	102%	0,55
F			mg/l		
G			mg/l		
H	6,68	0,7	mg/l	104%	1,14
I	6,4	0,4	mg/l	100%	-0,04
J	6,51	0,59	mg/l	102%	0,42
K	5,83	0,10	mg/l	91%	-2,45
L	6,60	0,40	mg/l	103%	0,80
M	6,80	0,90	mg/l	106%	1,64
N	6,4	0,4	mg/l	100%	-0,04
O	6,25	0,091	mg/l	98%	-0,67
P	6,510	0,215	mg/l	102%	0,42
Q	6,6	0,53	mg/l	103%	0,80
R			mg/l		
S			mg/l		
T	6,58	1,18	mg/l	103%	0,72
U	6,17	0,51	mg/l	96%	-1,01
V	7,12	0,29	mg/l	111%	2,99
W	6,484	0,65	mg/l	101%	0,31
X	6,20	0,0415	mg/l	97%	-0,89
Y	7,02	0,034	mg/l	110%	2,57
Z			mg/l		
AA	7,2	0,4	mg/l	112%	3,33
AB	6,39	0,319	mg/l	100%	-0,08
AC	6,66	0,07	mg/l	104%	1,05
AD	6,53	0,08	mg/l	102%	0,51
AE	6,37	0,5	mg/l	99%	-0,17
AF	6,3	0,5	mg/l	98%	-0,46
AG	6,21	0,202	mg/l	97%	-0,84
AH	6,45	0,32	mg/l	101%	0,17
AI	6,63	1,3	mg/l	103%	0,93
AJ			mg/l		
AK	6,59	0,47	mg/l	103%	0,76
AL	6,20	0,620	mg/l	97%	-0,89
AM	6,7		mg/l	105%	1,22
AN			mg/l		
AO			mg/l		





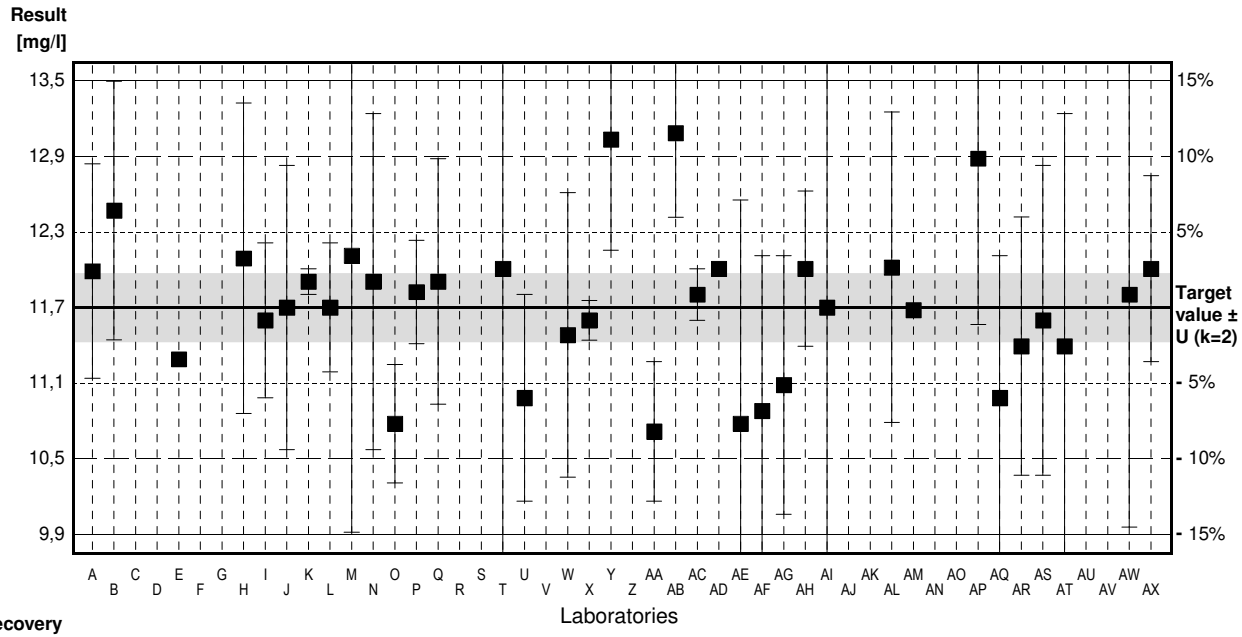
AP	6,444	0,644	mg/l	101%	0,14
AQ	6,23	0,62	mg/l	97%	-0,76
AR	6,3	1	mg/l	98%	-0,46
AS	6,48	0,65	mg/l	101%	0,30
AT	6,36	0,8	mg/l	99%	-0,21
AU	6,07	0,10	mg/l	95%	-1,43
AV			mg/l		
AW	6,67	1,3	mg/l	104%	1,10
AX	6,0	0,48	mg/l	94%	-1,73

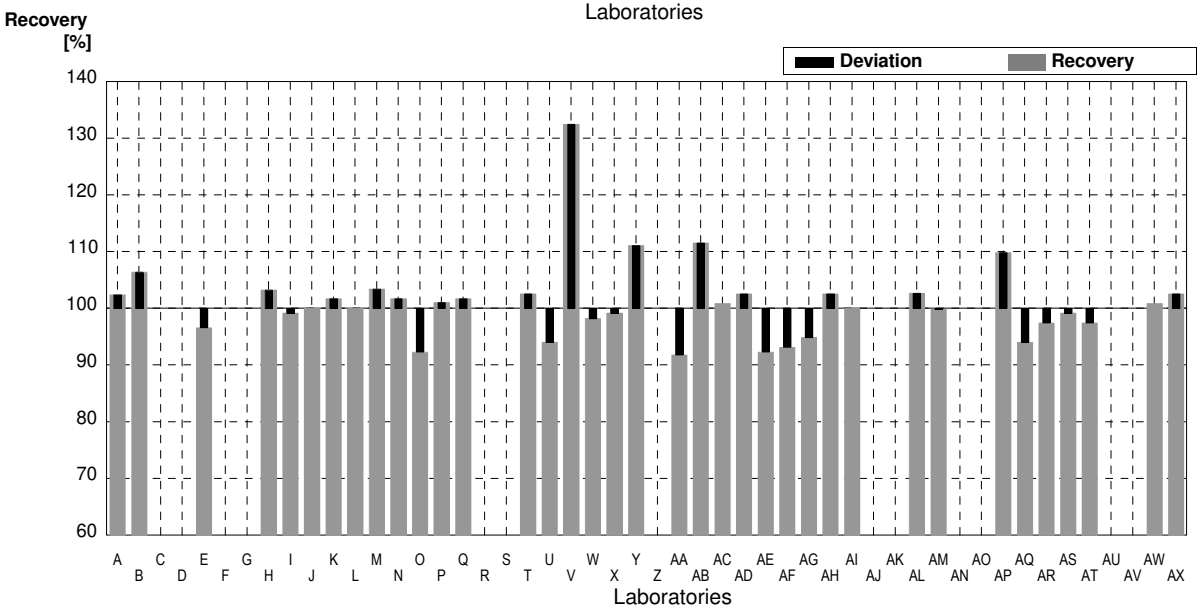
	All results	Outliers excl.	Unit
Mean ± CI(99%)	6,49 ± 0,13	6,49 ± 0,13	mg/l
Recov. ± CI(99%)	101,2 ± 2,0	101,2 ± 2,0	%
SD between labs	0,30	0,30	mg/l
RSD between labs	4,6	4,6	%
n for calculation	39	39	

Sample N158A
Parameter Sodium

Target value ± U (k=2)	11,7	mg/l	±	0,3	mg/l
IFA result ± U (k=2)	11,8	mg/l	±	0,9	mg/l
Stability test		mg/l			

Lab Code	Result		±	Unit	Recovery	z-Score
A	11,981		0,83	mg/l	102%	0,71
B	12,45		1	mg/l	106%	1,89
C				mg/l		
D				mg/l		
E	11,3			mg/l	97%	-1,01
F				mg/l		
G				mg/l		
H	12,08		1,2	mg/l	103%	0,96
I	11,6		0,6	mg/l	99%	-0,25
J	11,7		1,1	mg/l	100%	0,00
K	11,9		0,1	mg/l	102%	0,50
L	11,7		0,5	mg/l	100%	0,00
M	12,1		2,14	mg/l	103%	1,01
N	11,9		1,3	mg/l	102%	0,50
O	10,8	*	0,458	mg/l	92%	-2,26
P	11,82		0,40	mg/l	101%	0,30
Q	11,9		0,95	mg/l	102%	0,50
R				mg/l		
S				mg/l		
T	12,0		2,16	mg/l	103%	0,75
U	11,0		0,8	mg/l	94%	-1,76
V	15,5	*	1,04	mg/l	132%	9,55
W	11,487		1,1	mg/l	98%	-0,54
X	11,6		0,153	mg/l	99%	-0,25
Y	13,0	*	0,858	mg/l	111%	3,27
Z				mg/l		
AA	10,74	*	0,54	mg/l	92%	-2,41
AB	13,05	*	0,653	mg/l	112%	3,39
AC	11,8		0,2	mg/l	101%	0,25
AD	12,0		0,05	mg/l	103%	0,75
AE	10,8	*	1,73	mg/l	92%	-2,26
AF	10,9		1,2	mg/l	93%	-2,01
AG	11,1		1,0	mg/l	95%	-1,51
AH	12,0		0,6	mg/l	103%	0,75
AI	11,7		1,8	mg/l	100%	0,00
AJ				mg/l		
AK				mg/l		
AL	12,01		1,201	mg/l	103%	0,78
AM	11,68			mg/l	100%	-0,05
AN				mg/l		
AO				mg/l		





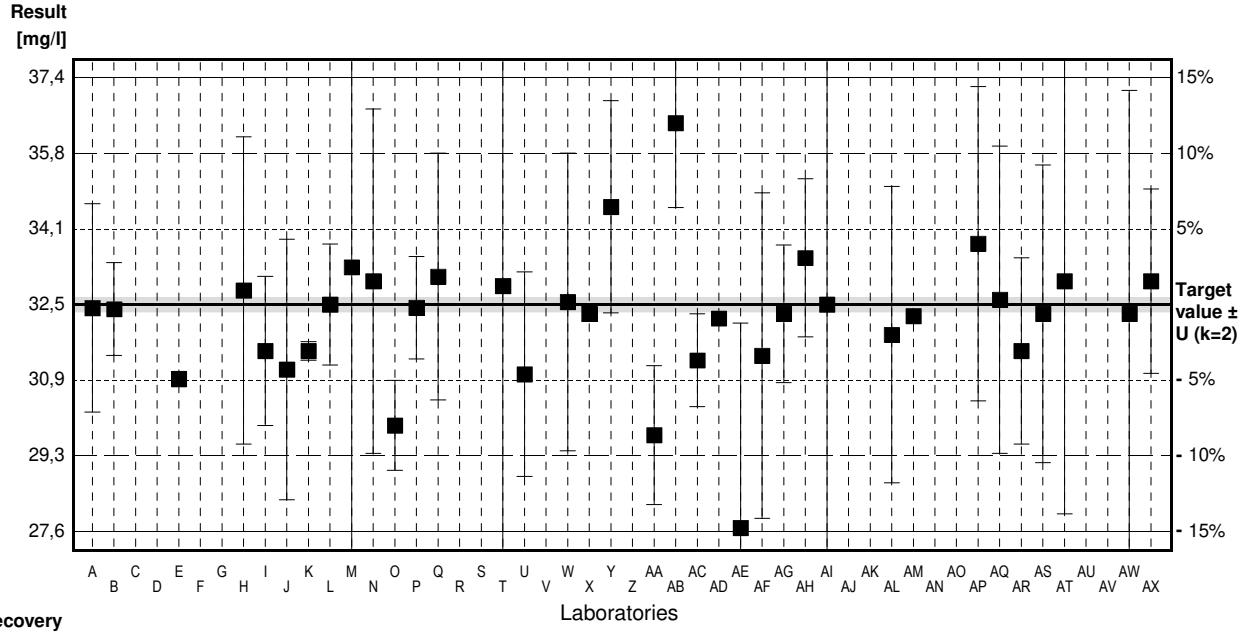
AP	12,853 *	1,285	mg/l	110%	2,90
AQ	11,0	1,1	mg/l	94%	-1,76
AR	11,4	1	mg/l	97%	-0,75
AS	11,6	1,2	mg/l	99%	-0,25
AT	11,4	1,8	mg/l	97%	-0,75
AU			mg/l		
AV			mg/l		
AW	11,8	1,8	mg/l	101%	0,25
AX	12,0	0,72	mg/l	103%	0,75

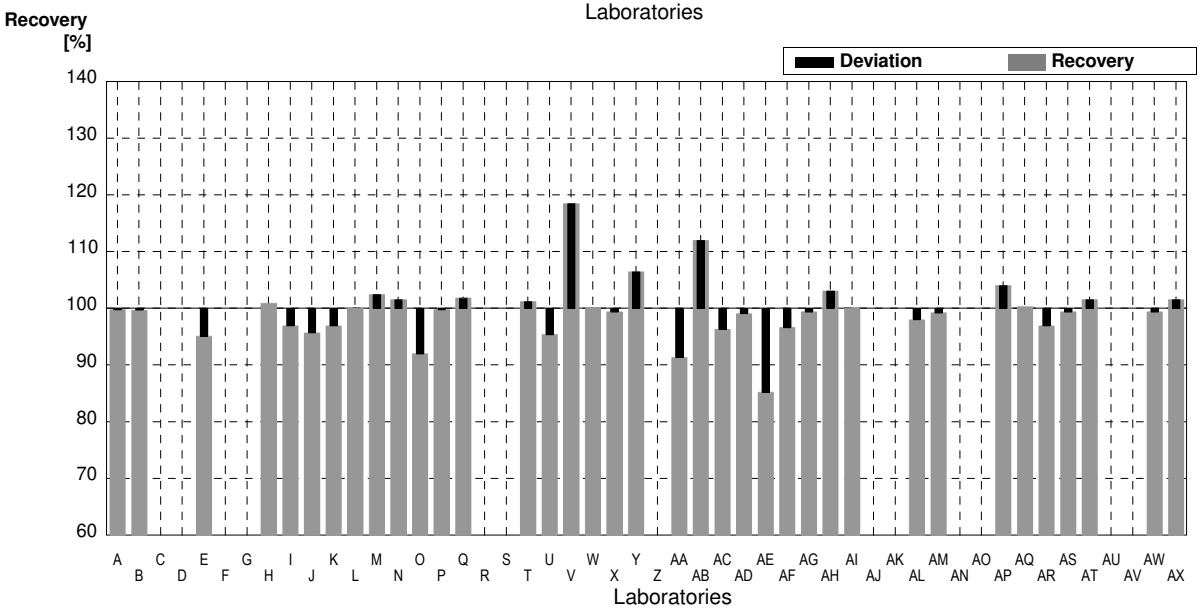
	All results	Outliers excl.	Unit
Mean ± CI(99%)	11,8 ± 0,4	11,7 ± 0,2	mg/l
Recov. ± CI(99%)	101,1 ± 3,2	100,0 ± 1,6	%
SD between labs	0,8	0,4	mg/l
RSD between labs	7,1	3,2	%
n for calculation	37	30	

Sample N158B
Parameter Sodium

Target value ± U (k=2)	32,5	mg/l	±	0,2	mg/l
IFA result ± U (k=2)	32,5	mg/l	±	1,6	mg/l
Stability test		mg/l			

Lab Code	Result		±	Unit	Recovery	z-Score
A	32,423		2,24	mg/l	100%	-0,07
B	32,4		1	mg/l	100%	-0,09
C				mg/l		
D				mg/l		
E	30,9			mg/l	95%	-1,45
F				mg/l		
G				mg/l		
H	32,8		3,3	mg/l	101%	0,27
I	31,5		1,6	mg/l	97%	-0,90
J	31,1		2,8	mg/l	96%	-1,27
K	31,5		0,2	mg/l	97%	-0,90
L	32,5		1,3	mg/l	100%	0,00
M	33,3		5,89	mg/l	102%	0,72
N	33,0		3,7	mg/l	102%	0,45
O	29,9		0,964	mg/l	92%	-2,35
P	32,43		1,10	mg/l	100%	-0,06
Q	33,1		2,65	mg/l	102%	0,54
R				mg/l		
S				mg/l		
T	32,9		5,92	mg/l	101%	0,36
U	31,0		2,2	mg/l	95%	-1,36
V	38,5	*	2,61	mg/l	118%	5,43
W	32,553		3,2	mg/l	100%	0,05
X	32,3		0,156	mg/l	99%	-0,18
Y	34,6		2,28	mg/l	106%	1,90
Z				mg/l		
AA	29,69		1,49	mg/l	91%	-2,54
AB	36,4	*	1,82	mg/l	112%	3,53
AC	31,3		1,0	mg/l	96%	-1,09
AD	32,2		0,14	mg/l	99%	-0,27
AE	27,7	*	4,4	mg/l	85%	-4,34
AF	31,4		3,5	mg/l	97%	-1,00
AG	32,3		1,48	mg/l	99%	-0,18
AH	33,5		1,7	mg/l	103%	0,90
AI	32,5		4,9	mg/l	100%	0,00
AJ				mg/l		
AK				mg/l		
AL	31,85		3,185	mg/l	98%	-0,59
AM	32,25			mg/l	99%	-0,23
AN				mg/l		
AO				mg/l		





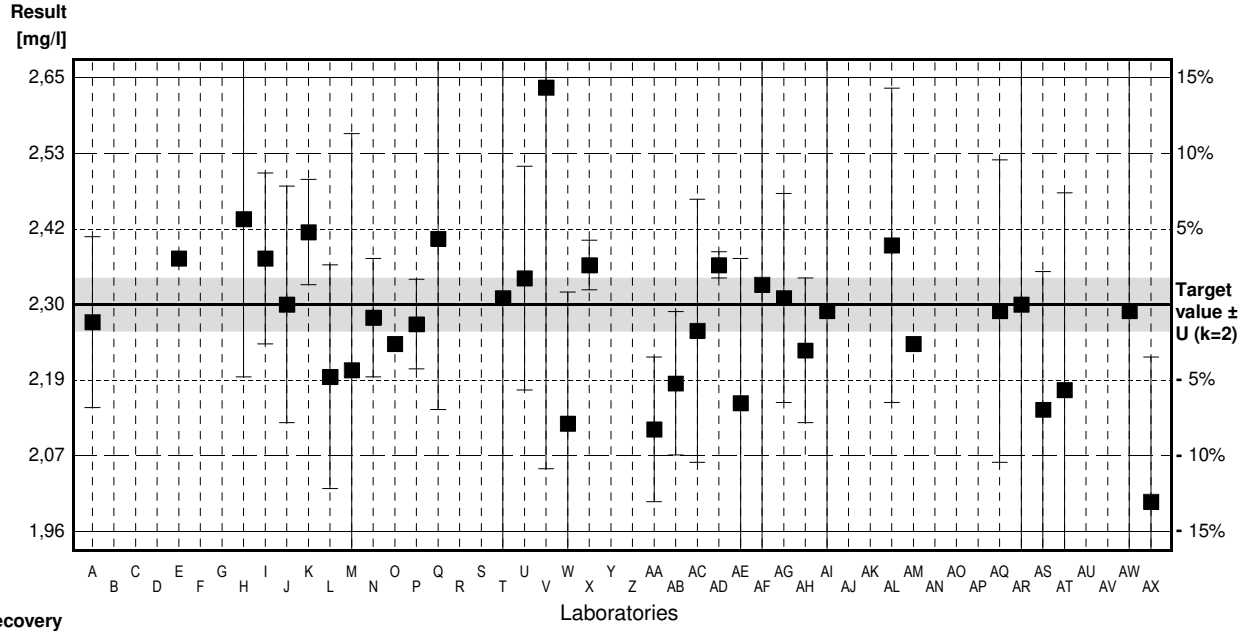
AP	33,803	3,380	mg/l	104%	1,18
AQ	32,6	3,3	mg/l	100%	0,09
AR	31,5	2	mg/l	97%	-0,90
AS	32,3	3,2	mg/l	99%	-0,18
AT	33,0	5	mg/l	102%	0,45
AU			mg/l		
AV			mg/l		
AW	32,3	4,8	mg/l	99%	-0,18
AX	33,0	1,98	mg/l	102%	0,45

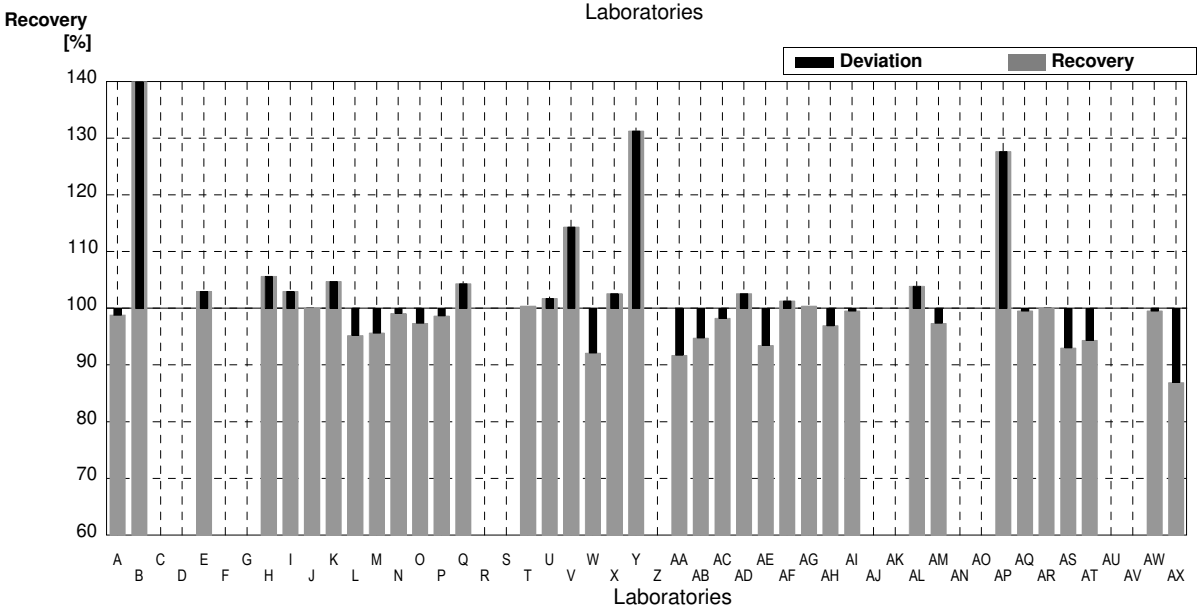
	All results	Outliers excl.	Unit
Mean ± CI(99%)	32,4 ± 0,8	32,2 ± 0,5	mg/l
Recov. ± CI(99%)	99,7 ± 2,4	99,2 ± 1,5	%
SD between labs	1,8	1,0	mg/l
RSD between labs	5,4	3,2	%
n for calculation	37	34	

Sample N158A
Parameter Potassium

Target value ± U (k=2)	2,30	mg/l	±	0,04	mg/l
IFA result ± U (k=2)	2,32	mg/l	±	0,16	mg/l
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	2,273	0,13	mg/l	99%	-0,26
B	5,45 *	0,2	mg/l	237%	30,43
C			mg/l		
D			mg/l		
E	2,37		mg/l	103%	0,68
F			mg/l		
G			mg/l		
H	2,43	0,24	mg/l	106%	1,26
I	2,37	0,13	mg/l	103%	0,68
J	2,30	0,18	mg/l	100%	0,00
K	2,41	0,08	mg/l	105%	1,06
L	2,19	0,17	mg/l	95%	-1,06
M	2,20	0,36	mg/l	96%	-0,97
N	2,28	0,09	mg/l	99%	-0,19
O	2,24	0,006	mg/l	97%	-0,58
P	2,270	0,068	mg/l	99%	-0,29
Q	2,40	0,26	mg/l	104%	0,97
R			mg/l		
S			mg/l		
T	2,31	0,42	mg/l	100%	0,10
U	2,34	0,17	mg/l	102%	0,39
V	2,63	0,58	mg/l	114%	3,19
W	2,119	0,2	mg/l	92%	-1,75
X	2,36	0,0378	mg/l	103%	0,58
Y	3,02 *	0,185	mg/l	131%	6,96
Z			mg/l		
AA	2,11	0,11	mg/l	92%	-1,84
AB	2,18	0,109	mg/l	95%	-1,16
AC	2,26	0,2	mg/l	98%	-0,39
AD	2,36	0,02	mg/l	103%	0,58
AE	2,15	0,22	mg/l	93%	-1,45
AF	2,33	0,4	mg/l	101%	0,29
AG	2,31	0,159	mg/l	100%	0,10
AH	2,23	0,11	mg/l	97%	-0,68
AI	2,29	0,46	mg/l	100%	-0,10
AJ			mg/l		
AK			mg/l		
AL	2,39	0,239	mg/l	104%	0,87
AM	2,24		mg/l	97%	-0,58
AN			mg/l		
AO			mg/l		





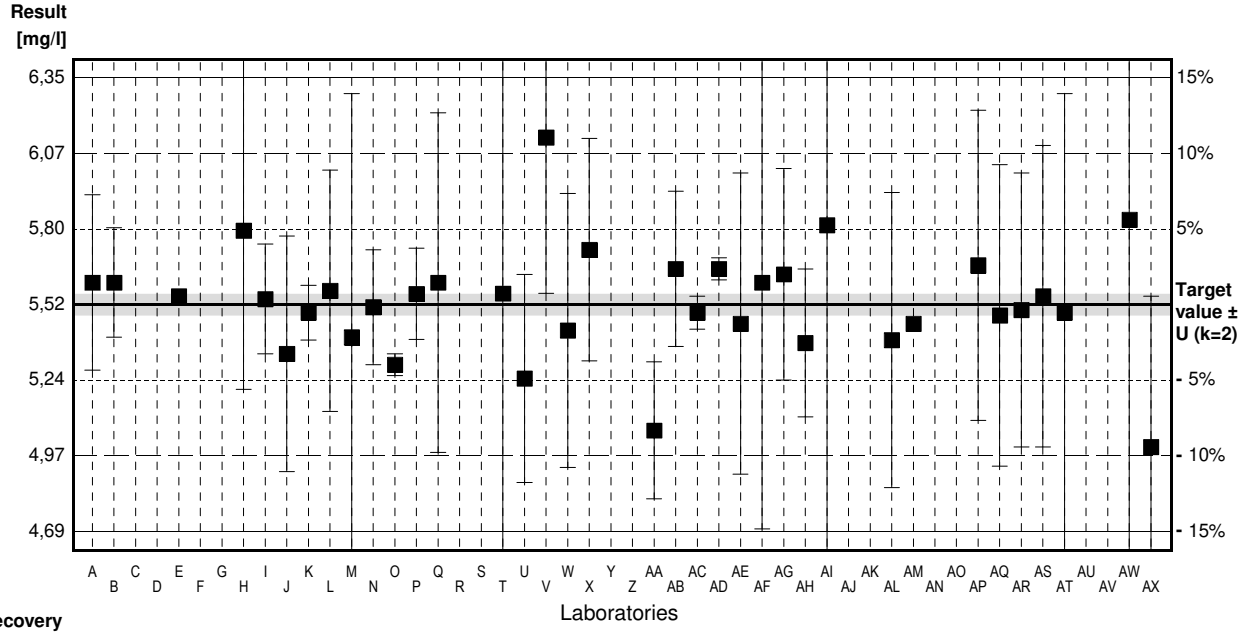
AP	2,936 *	0,294	mg/l	128%	6,14
AQ	2,29	0,23	mg/l	100%	-0,10
AR	2,30	0,5	mg/l	100%	0,00
AS	2,14	0,21	mg/l	93%	-1,55
AT	2,17	0,3	mg/l	94%	-1,26
AU			mg/l		
AV			mg/l		
AW	2,29	0,46	mg/l	100%	-0,10
AX	2,00	0,22	mg/l	87%	-2,90

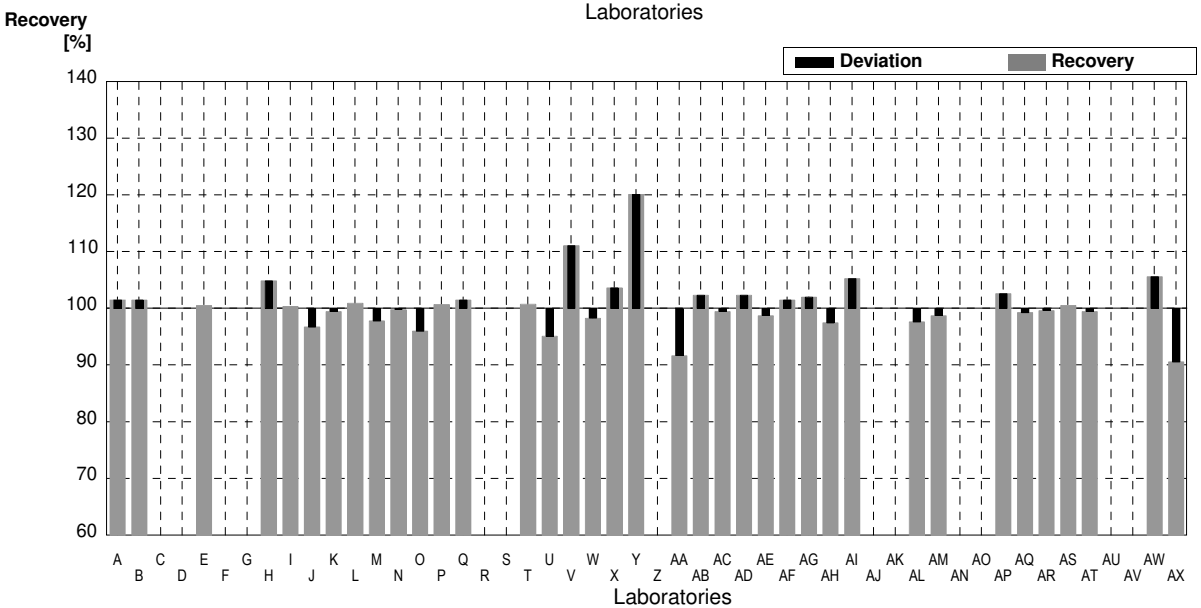
	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,40 ± 0,25	2,28 ± 0,05	mg/l
Recov. ± CI(99%)	104,5 ± 10,7	99,1 ± 2,4	%
SD between labs	0,55	0,12	mg/l
RSD between labs	22,9	5,1	%
n for calculation	37	34	

Sample N158B
Parameter Potassium

Target value	± U (k=2)	5,52 mg/l	±	0,04 mg/l	
IFA result	± U (k=2)	5,53 mg/l	±	0,28 mg/l	
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	5,600	0,32	mg/l	101%	0,32
B	5,60	0,2	mg/l	101%	0,32
C			mg/l		
D			mg/l		
E	5,55		mg/l	101%	0,12
F			mg/l		
G			mg/l		
H	5,79	0,58	mg/l	105%	1,09
I	5,54	0,2	mg/l	100%	0,08
J	5,34	0,43	mg/l	97%	-0,72
K	5,49	0,10	mg/l	99%	-0,12
L	5,57	0,44	mg/l	101%	0,20
M	5,40	0,89	mg/l	98%	-0,48
N	5,51	0,21	mg/l	100%	-0,04
O	5,30	0,040	mg/l	96%	-0,89
P	5,559	0,167	mg/l	101%	0,16
Q	5,6	0,62	mg/l	101%	0,32
R			mg/l		
S			mg/l		
T	5,56	1	mg/l	101%	0,16
U	5,25	0,38	mg/l	95%	-1,09
V	6,13 *	0,57	mg/l	111%	2,46
W	5,425	0,5	mg/l	98%	-0,38
X	5,72	0,406	mg/l	104%	0,81
Y	6,63 *	0,406	mg/l	120%	4,47
Z			mg/l		
AA	5,06 *	0,25	mg/l	92%	-1,85
AB	5,65	0,283	mg/l	102%	0,52
AC	5,49	0,06	mg/l	99%	-0,12
AD	5,65	0,04	mg/l	102%	0,52
AE	5,45	0,55	mg/l	99%	-0,28
AF	5,6	0,9	mg/l	101%	0,32
AG	5,63	0,386	mg/l	102%	0,44
AH	5,38	0,27	mg/l	97%	-0,56
AI	5,81	1,2	mg/l	105%	1,17
AJ			mg/l		
AK			mg/l		
AL	5,39	0,539	mg/l	98%	-0,52
AM	5,45		mg/l	99%	-0,28
AN			mg/l		
AO			mg/l		





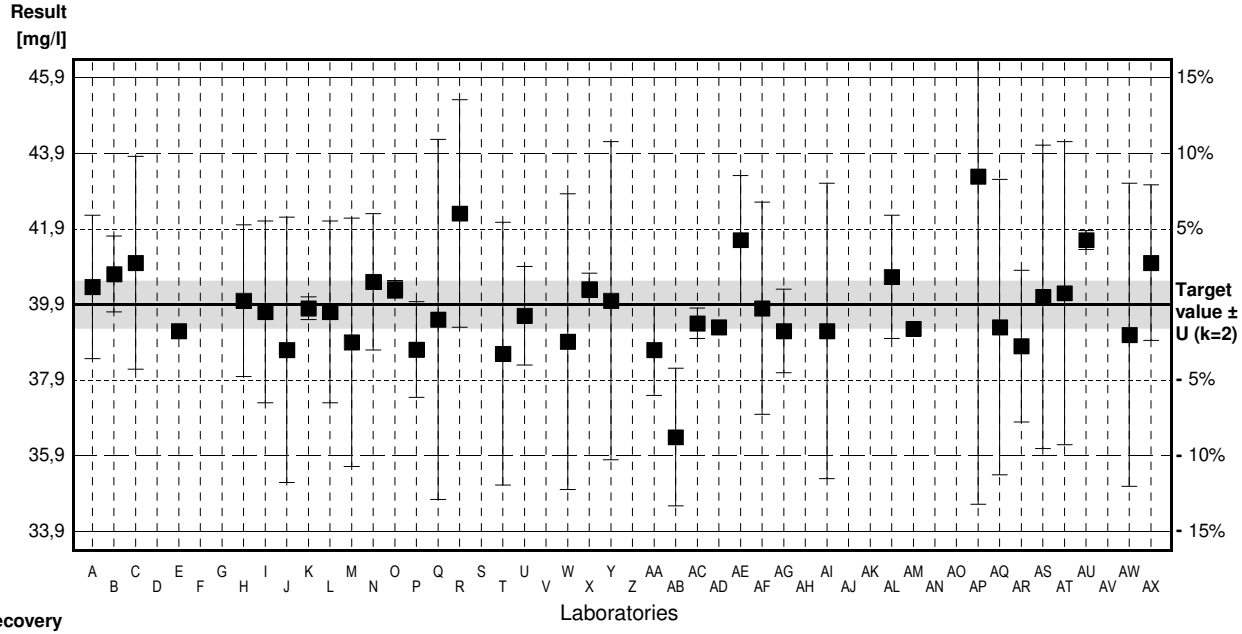
AP	5,663	0,566	mg/l	103%	0,58
AQ	5,48	0,55	mg/l	99%	-0,16
AR	5,5	0,5	mg/l	100%	-0,08
AS	5,55	0,55	mg/l	101%	0,12
AT	5,49	0,8	mg/l	99%	-0,12
AU			mg/l		
AV			mg/l		
AW	5,83	1,2	mg/l	106%	1,25
AX	5,0 *	0,55	mg/l	91%	-2,09

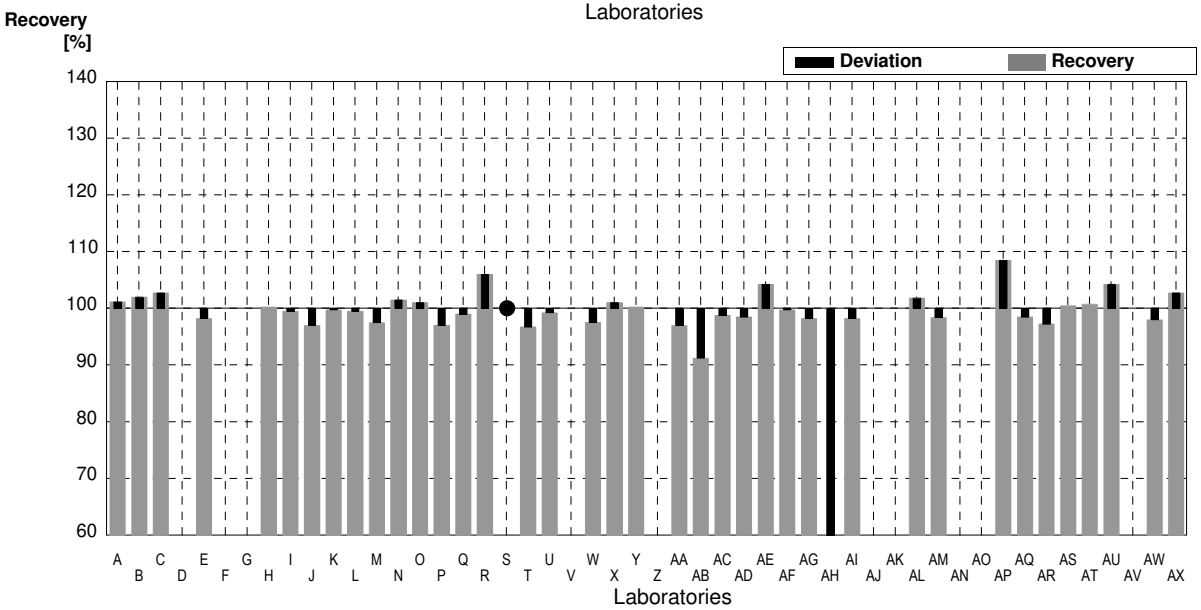
	All results	Outliers excl.	Unit
Mean ± CI(99%)	5,56 ± 0,12	5,54 ± 0,07	mg/l
Recov. ± CI(99%)	100,7 ± 2,2	100,4 ± 1,2	%
SD between labs	0,27	0,14	mg/l
RSD between labs	4,9	2,5	%
n for calculation	37	33	

Sample N158A
Parameter Nitrate

Target value ± U (k=2)	39,9	mg/l	±	0,6	mg/l
IFA result ± U (k=2)	39,4	mg/l	±	2,0	mg/l
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	40,36	1,89	mg/l	101%	0,35
B	40,7	1	mg/l	102%	0,61
C	41,0	2,81	mg/l	103%	0,84
D			mg/l		
E	39,2		mg/l	98%	-0,53
F			mg/l		
G			mg/l		
H	40,0	2,0	mg/l	100%	0,08
I	39,7	2,4	mg/l	99%	-0,15
J	38,7	3,5	mg/l	97%	-0,91
K	39,8	0,3	mg/l	100%	-0,08
L	39,7	2,4	mg/l	99%	-0,15
M	38,9	3,28	mg/l	97%	-0,76
N	40,5	1,8	mg/l	102%	0,46
O	40,3	0,231	mg/l	101%	0,30
P	38,71	1,26	mg/l	97%	-0,90
Q	39,5	4,75	mg/l	99%	-0,30
R	42,3	3	mg/l	106%	1,82
S	>30		mg/l	•	
T	38,6	3,47	mg/l	97%	-0,99
U	39,6	1,3	mg/l	99%	-0,23
V			mg/l		
W	38,918	3,9	mg/l	98%	-0,75
X	40,3	0,425	mg/l	101%	0,30
Y	40,0	4,20	mg/l	100%	0,08
Z			mg/l		
AA	38,7	1,2	mg/l	97%	-0,91
AB	36,4 *	1,82	mg/l	91%	-2,66
AC	39,4	0,4	mg/l	99%	-0,38
AD	39,3		mg/l	98%	-0,46
AE	41,6	1,7	mg/l	104%	1,29
AF	39,8	2,8	mg/l	100%	-0,08
AG	39,2	1,10	mg/l	98%	-0,53
AH	8,67 *	0,9	mg/l	22%	-23,72
AI	39,2	3,9	mg/l	98%	-0,53
AJ			mg/l		
AK			mg/l		
AL	40,629	1,6252	mg/l	102%	0,55
AM	39,26		mg/l	98%	-0,49
AN			mg/l		
AO			mg/l		





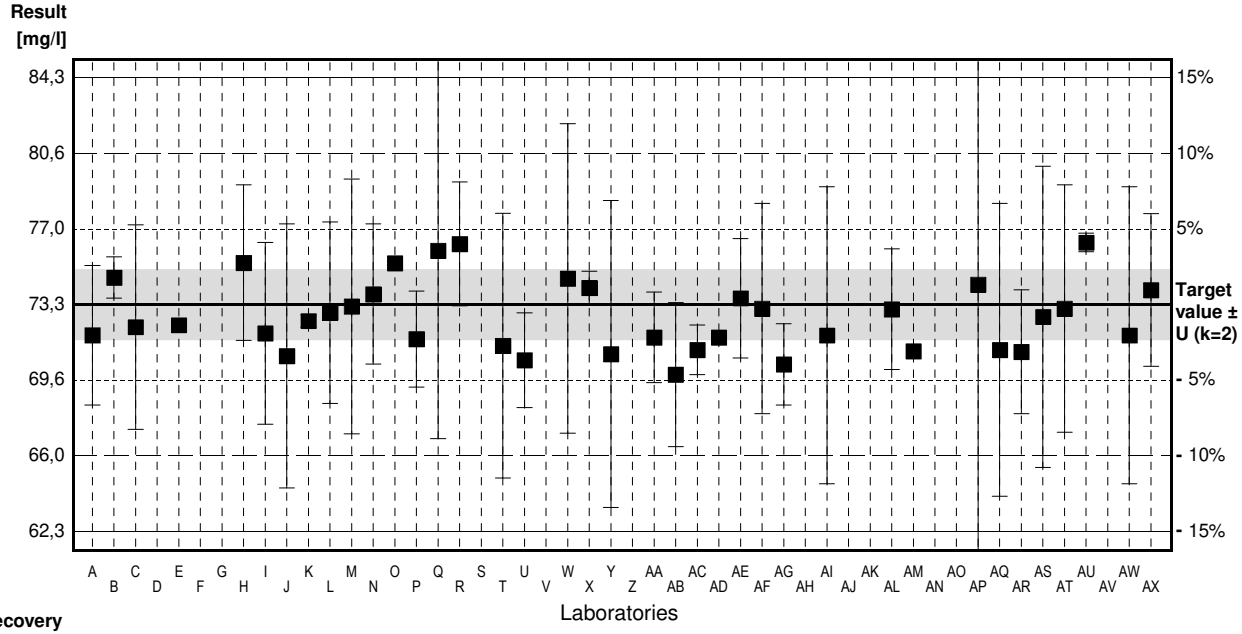
AP	43,281 *	8,656	mg/l	108%	2,57
AQ	39,3	3,9	mg/l	98%	-0,46
AR	38,8	2	mg/l	97%	-0,84
AS	40,1	4,0	mg/l	101%	0,15
AT	40,2	4	mg/l	101%	0,23
AU	41,6	0,25	mg/l	104%	1,29
AV			mg/l		
AW	39,1	4,0	mg/l	98%	-0,61
AX	41,0	2,05	mg/l	103%	0,84

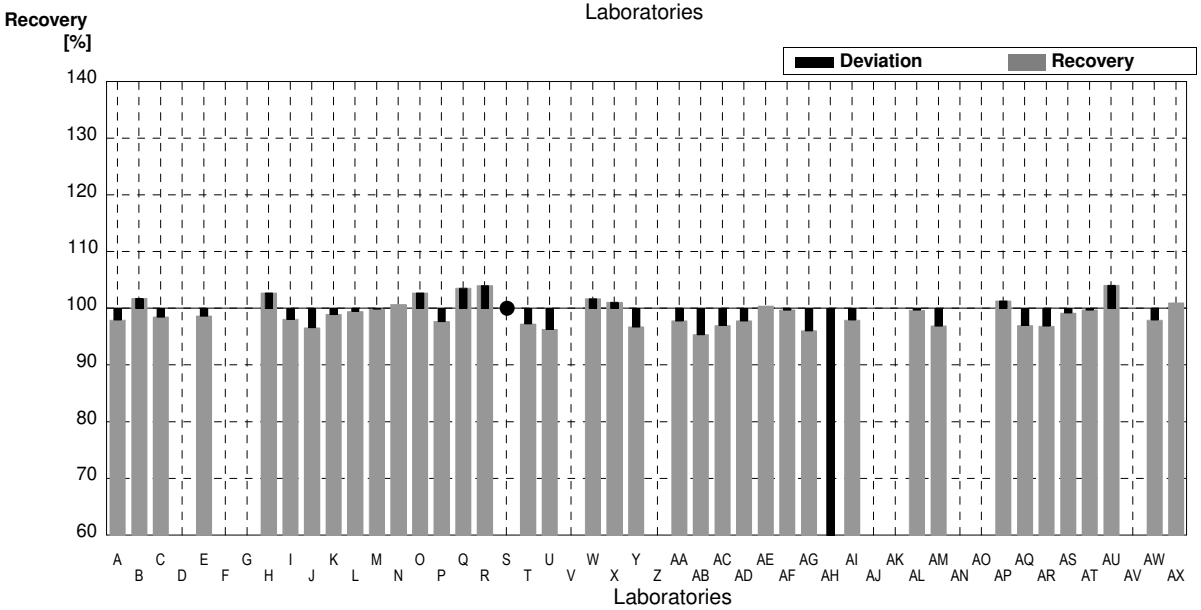
	All results	Outliers excl.	Unit
Mean ± CI(99%)	39,0 ± 2,2	39,8 ± 0,4	mg/l
Recov. ± CI(99%)	97,8 ± 5,6	99,8 ± 1,0	%
SD between labs	5,1	0,9	mg/l
RSD between labs	13,1	2,3	%
n for calculation	39	36	

Sample N158B
Parameter Nitrate

Target value ± U (k=2)	73,3	mg/l	±	1,7	mg/l
IFA result ± U (k=2)	70,2	mg/l	±	3,5	mg/l
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	71,81	3,38	mg/l	98%	-0,62
B	74,6	1	mg/l	102%	0,54
C	72,2	4,95	mg/l	98%	-0,45
D			mg/l		
E	72,3		mg/l	99%	-0,41
F			mg/l		
G			mg/l		
H	75,32	3,77	mg/l	103%	0,84
I	71,9	4,4	mg/l	98%	-0,58
J	70,8	6,4	mg/l	97%	-1,03
K	72,5	0,3	mg/l	99%	-0,33
L	72,9	4,4	mg/l	99%	-0,17
M	73,2	6,18	mg/l	100%	-0,04
N	73,8	3,4	mg/l	101%	0,21
O	75,3	0,100	mg/l	103%	0,83
P	71,62	2,33	mg/l	98%	-0,69
Q	75,9	9,11	mg/l	104%	1,07
R	76,23	3	mg/l	104%	1,21
S	>30		mg/l	•	
T	71,3	6,42	mg/l	97%	-0,83
U	70,6	2,3	mg/l	96%	-1,12
V			mg/l		
W	74,555	7,5	mg/l	102%	0,52
X	74,1	0,805	mg/l	101%	0,33
Y	70,9	7,44	mg/l	97%	-0,99
Z			mg/l		
AA	71,7	2,2	mg/l	98%	-0,66
AB	69,9	3,49	mg/l	95%	-1,41
AC	71,1	1,2	mg/l	97%	-0,91
AD	71,7		mg/l	98%	-0,66
AE	73,6	2,9	mg/l	100%	0,12
AF	73,1	5,1	mg/l	100%	-0,08
AG	70,4	1,97	mg/l	96%	-1,20
AH	16,4 *	1,6	mg/l	22%	-23,52
AI	71,8	7,2	mg/l	98%	-0,62
AJ			mg/l		
AK			mg/l		
AL	73,069	2,9228	mg/l	100%	-0,10
AM	71,03		mg/l	97%	-0,94
AN			mg/l		
AO			mg/l		





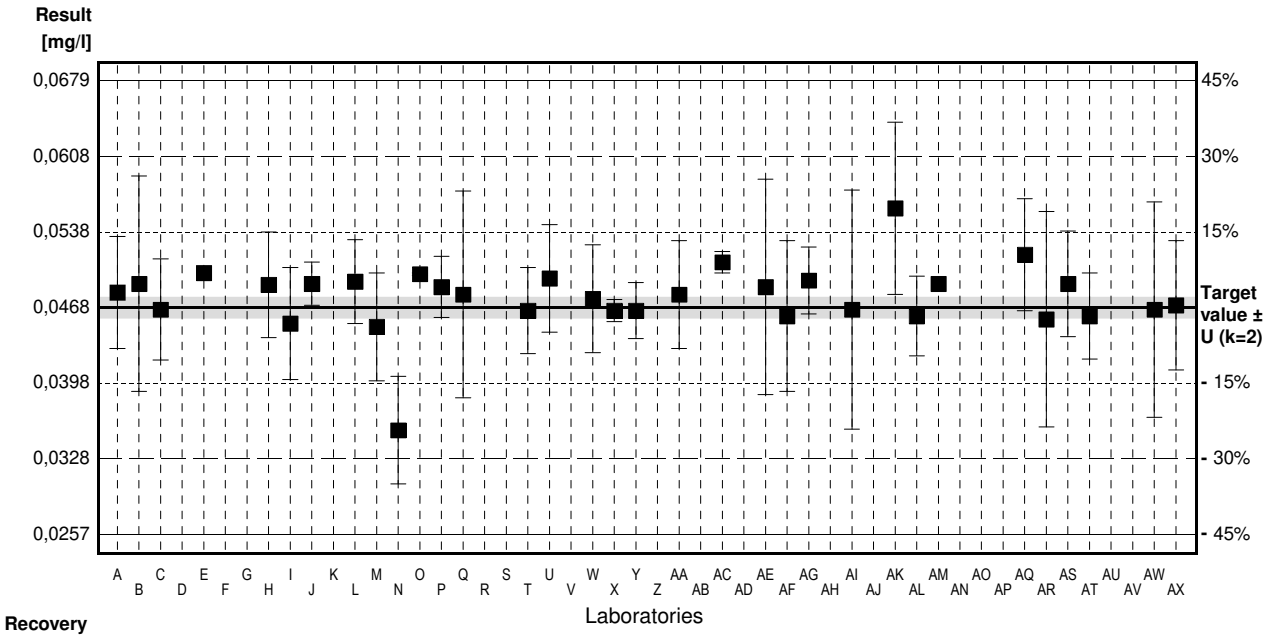
AP	74,257	14,851	mg/l	101%	0,40
AQ	71,1	7,1	mg/l	97%	-0,91
AR	71	3	mg/l	97%	-0,95
AS	72,7	7,3	mg/l	99%	-0,25
AT	73,1	6	mg/l	100%	-0,08
AU	76,3	0,45	mg/l	104%	1,24
AV			mg/l		
AW	71,8	7,2	mg/l	98%	-0,62
AX	74,0	3,7	mg/l	101%	0,29

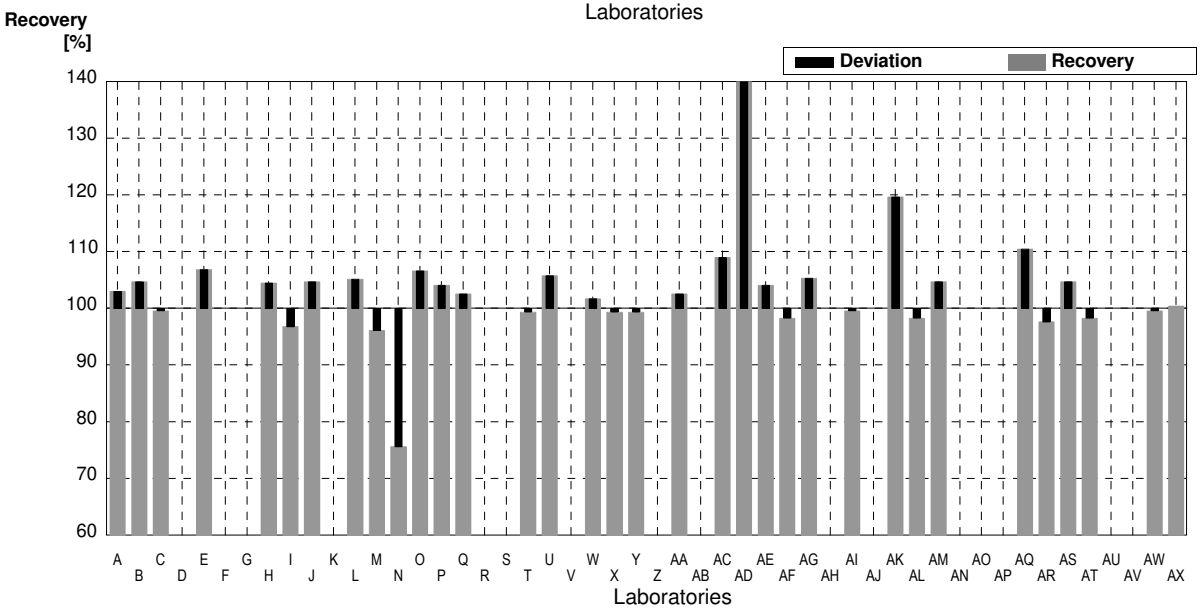
	All results	Outliers excl.	Unit
Mean ± CI(99%)	71,3 ± 4,0	72,7 ± 0,8	mg/l
Recov. ± CI(99%)	97,2 ± 5,4	99,2 ± 1,0	%
SD between labs	9,2	1,7	mg/l
RSD between labs	12,9	2,4	%
n for calculation	39	38	

Sample N158A
Parameter Nitrite

Target value	± U (k=2)	0,0468	mg/l	±	0,0010 mg/l
IFA result	± U (k=2)	0,0459	mg/l	±	0,0023 mg/l
Stability test	± U (k=2)	0,0469	mg/l	±	0,0023 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0,0482	0,0052	mg/l	103%	0,49
B	0,0490	0,01	mg/l	105%	0,77
C	0,0466	0,0047	mg/l	100%	-0,07
D			mg/l		
E	0,050		mg/l	107%	1,12
F			mg/l		
G			mg/l		
H	0,0489	0,0049	mg/l	104%	0,74
I	0,0453	0,0052	mg/l	97%	-0,53
J	0,0490	0,0020	mg/l	105%	0,77
K			mg/l		
L	0,0492	0,0039	mg/l	105%	0,84
M	0,0450	0,005	mg/l	96%	-0,63
N	0,0354 *	0,005	mg/l	76%	-3,99
O	0,0499	0,0001	mg/l	107%	1,09
P	0,0487	0,00284	mg/l	104%	0,67
Q	0,0480	0,0096	mg/l	103%	0,42
R			mg/l		
S			mg/l		
T	0,0465	0,004	mg/l	99%	-0,11
U	0,0495	0,005	mg/l	106%	0,95
V			mg/l		
W	0,0476	0,005	mg/l	102%	0,28
X	0,0465	0,00103	mg/l	99%	-0,11
Y	0,0465	0,0026	mg/l	99%	-0,11
Z			mg/l		
AA	0,0480	0,005	mg/l	103%	0,42
AB			mg/l		
AC	0,051	0,001	mg/l	109%	1,47
AD	0,460 *		mg/l	983%	144,74
AE	0,0487	0,010	mg/l	104%	0,67
AF	0,0460	0,007	mg/l	98%	-0,28
AG	0,0493	0,0031	mg/l	105%	0,88
AH			mg/l		
AI	0,0466	0,0111	mg/l	100%	-0,07
AJ			mg/l		
AK	0,056 *	0,008	mg/l	120%	3,22
AL	0,04600	0,00370	mg/l	98%	-0,28
AM	0,0490		mg/l	105%	0,77
AN			mg/l		
AO			mg/l		





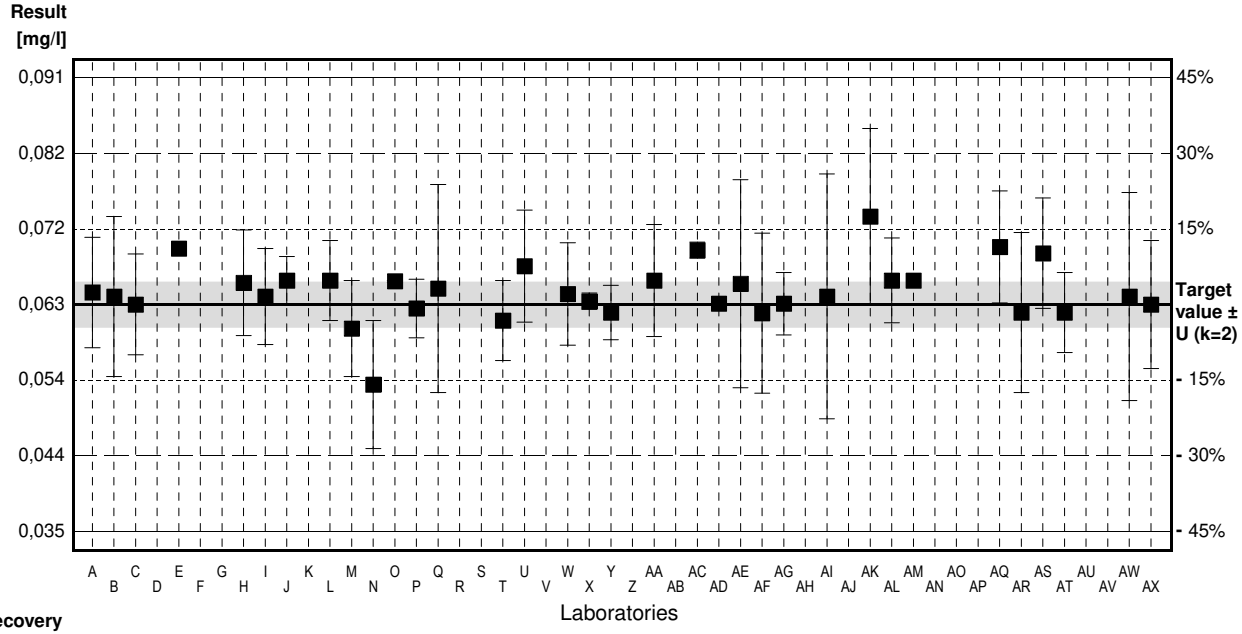
AP			mg/l		
AQ	0,0517	0,0052	mg/l	110%	1,72
AR	0,0457	0,01	mg/l	98%	-0,39
AS	0,0490	0,0049	mg/l	105%	0,77
AT	0,0460	0,004	mg/l	98%	-0,28
AU			mg/l		
AV			mg/l		
AW	0,0466	0,01	mg/l	100%	-0,07
AX	0,0470	0,006	mg/l	100%	0,07

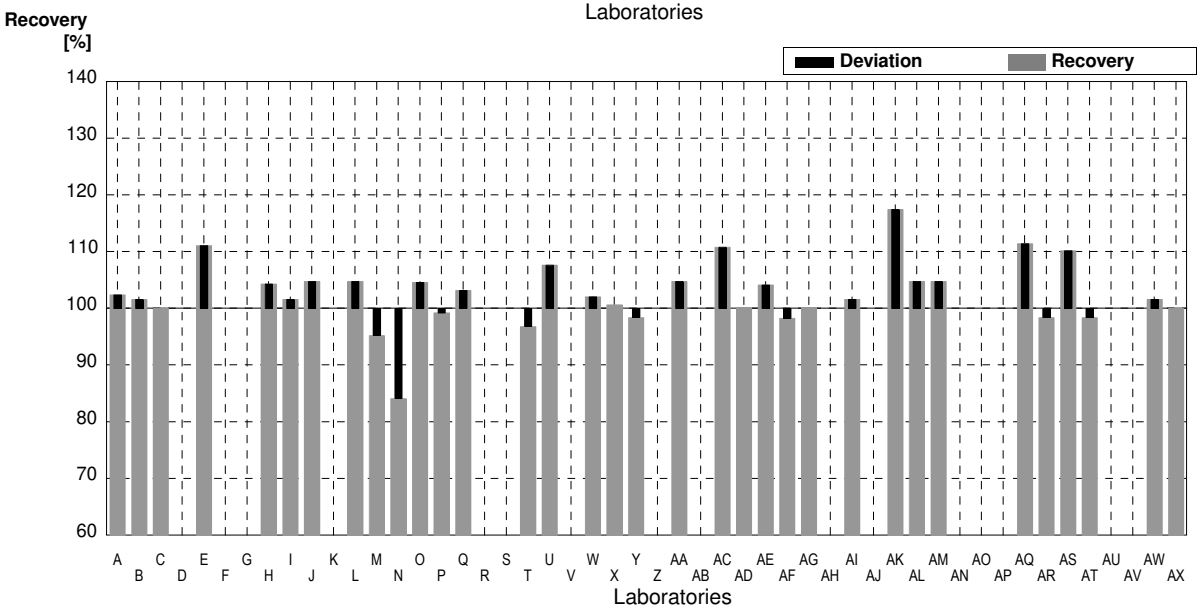
	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,0599 ± 0,0333	0,0479 ± 0,0008	mg/l
Recov. ± CI(99%)	128,0 ± 71,1	102,4 ± 1,8	%
SD between labs	0,0708	0,0017	mg/l
RSD between labs	118,1	3,6	%
n for calculation	34	31	

Sample N158B
Parameter Nitrite

Target value ± U (k=2)	0,063	mg/l	±	0,003	mg/l
IFA result ± U (k=2)	0,063	mg/l	±	0,003	mg/l
Stability test ± U (k=2)	0,064	mg/l	±	0,003	mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0,0645	0,0069	mg/l	102%	0,39
B	0,0640	0,01	mg/l	102%	0,26
C	0,0630	0,0063	mg/l	100%	0,00
D			mg/l		
E	0,070		mg/l	111%	1,82
F			mg/l		
G			mg/l		
H	0,0657	0,0066	mg/l	104%	0,70
I	0,064	0,006	mg/l	102%	0,26
J	0,066	0,003	mg/l	105%	0,78
K			mg/l		
L	0,066	0,005	mg/l	105%	0,78
M	0,060	0,006	mg/l	95%	-0,78
N	0,053 *	0,008	mg/l	84%	-2,60
O	0,0659	0,0001	mg/l	105%	0,75
P	0,0625	0,00365	mg/l	99%	-0,13
Q	0,065	0,013	mg/l	103%	0,52
R			mg/l		
S			mg/l		
T	0,0610	0,005	mg/l	97%	-0,52
U	0,0678	0,007	mg/l	108%	1,25
V			mg/l		
W	0,0643	0,0064	mg/l	102%	0,34
X	0,0634	0,00102	mg/l	101%	0,10
Y	0,0620	0,0034	mg/l	98%	-0,26
Z			mg/l		
AA	0,066	0,007	mg/l	105%	0,78
AB			mg/l		
AC	0,0698	0,001	mg/l	111%	1,77
AD	0,0631		mg/l	100%	0,03
AE	0,0656	0,013	mg/l	104%	0,68
AF	0,0619	0,01	mg/l	98%	-0,29
AG	0,0631	0,0039	mg/l	100%	0,03
AH			mg/l		
AI	0,0640	0,0153	mg/l	102%	0,26
AJ			mg/l		
AK	0,074 *	0,011	mg/l	117%	2,86
AL	0,06600	0,00530	mg/l	105%	0,78
AM	0,0660		mg/l	105%	0,78
AN			mg/l		
AO			mg/l		





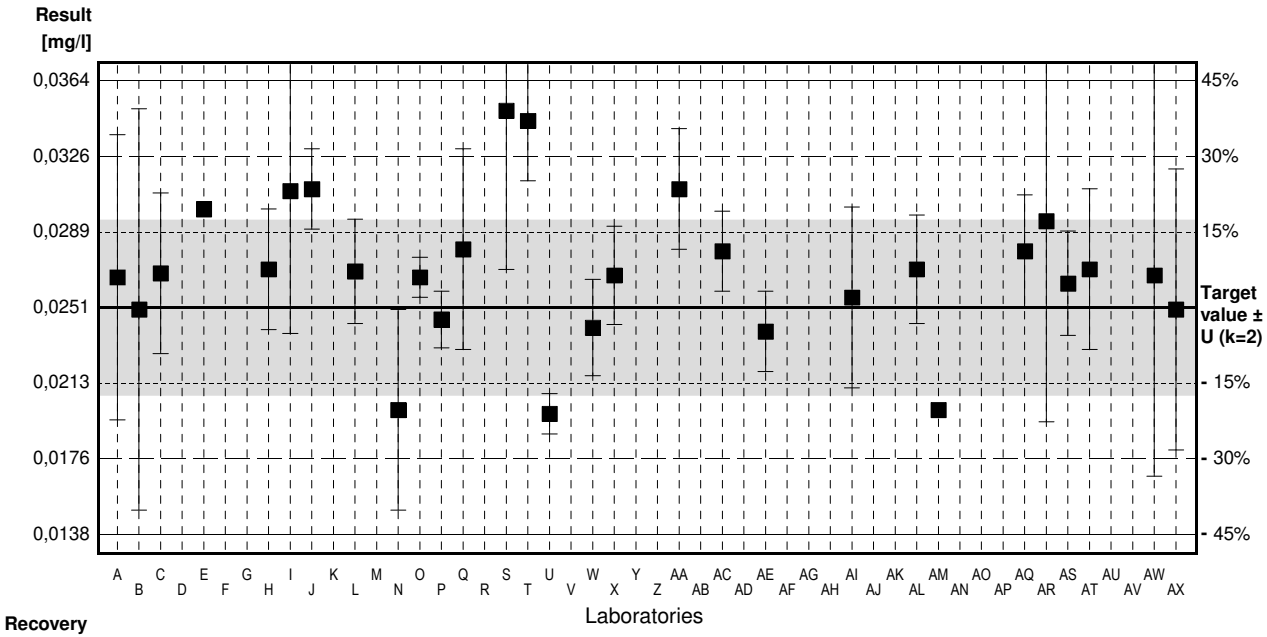
AP			mg/l		
AQ	0,0702	0,0070	mg/l	111%	1,87
AR	0,062	0,01	mg/l	98%	-0,26
AS	0,0694	0,0069	mg/l	110%	1,67
AT	0,062	0,005	mg/l	98%	-0,26
AU			mg/l		
AV			mg/l		
AW	0,0640	0,013	mg/l	102%	0,26
AX	0,063	0,008	mg/l	100%	0,00

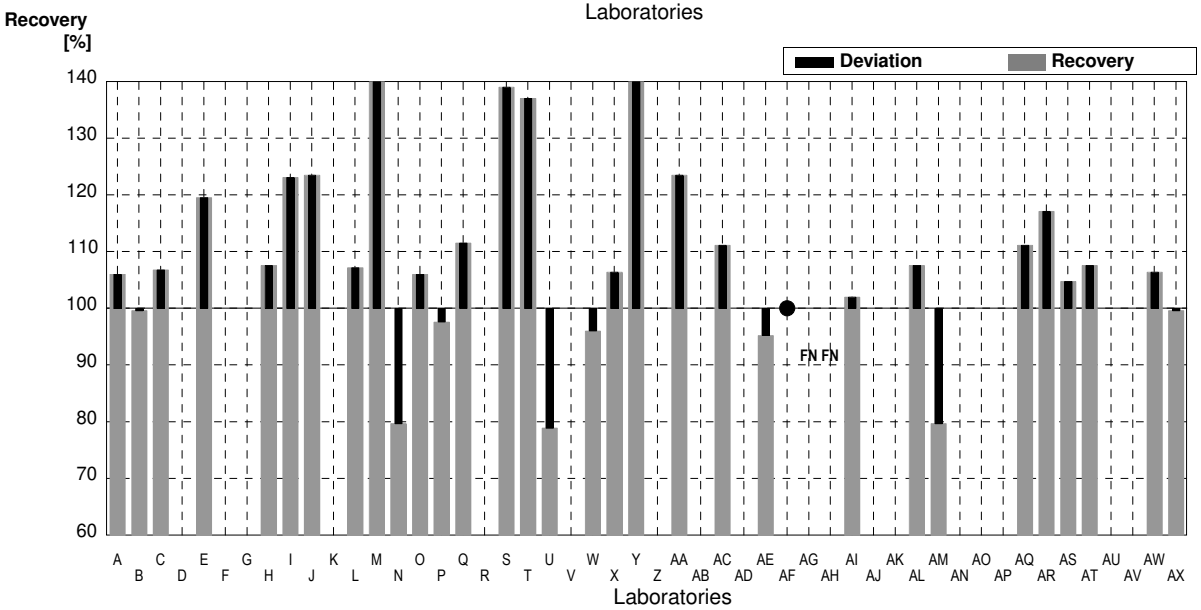
	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,065 ± 0,002	0,065 ± 0,001	mg/l
Recov. ± CI(99%)	102,6 ± 2,7	102,7 ± 2,0	%
SD between labs	0,004	0,003	mg/l
RSD between labs	5,6	4,0	%
n for calculation	34	32	

Sample N158A
Parameter Ammonium

Target value	± U (k=2)	0,0251	mg/l	±	0,0044 mg/l
IFA result	± U (k=2)	0,0255	mg/l	±	0,0020 mg/l
Stability test	± U (k=2)	0,0246	mg/l	±	0,0020 mg/l

Lab Code	Result		±	Unit	Recovery	z-Score
A	0,0266		0,0071	mg/l	106%	0,50
B	0,0250		0,01	mg/l	100%	-0,03
C	0,0268		0,0040	mg/l	107%	0,56
D				mg/l		
E	0,0300			mg/l	120%	1,63
F				mg/l		
G				mg/l		
H	0,0270		0,003	mg/l	108%	0,63
I	0,0309		0,0071	mg/l	123%	1,93
J	0,0310		0,0020	mg/l	124%	1,96
K				mg/l		
L	0,0269		0,0026	mg/l	107%	0,60
M	0,0400	*	0,01	mg/l	159%	4,95
N	0,0200		0,005	mg/l	80%	-1,69
O	0,0266		0,001	mg/l	106%	0,50
P	0,0245		0,00141	mg/l	98%	-0,20
Q	0,0280		0,005	mg/l	112%	0,96
R				mg/l		
S	0,0349		0,0079	mg/l	139%	3,25
T	0,0344		0,003	mg/l	137%	3,09
U	0,0198		0,001	mg/l	79%	-1,76
V				mg/l		
W	0,0241		0,0024	mg/l	96%	-0,33
X	0,0267		0,00245	mg/l	106%	0,53
Y	0,0375	*	0,0016	mg/l	149%	4,12
Z				mg/l		
AA	0,0310		0,003	mg/l	124%	1,96
AB				mg/l		
AC	0,0279		0,002	mg/l	111%	0,93
AD				mg/l		
AE	0,0239		0,002	mg/l	95%	-0,40
AF	<0,040			mg/l	•	
AG	<0,02			mg/l	FN	
AH	<0,02			mg/l	FN	
AI	0,0256		0,0045	mg/l	102%	0,17
AJ				mg/l		
AK				mg/l		
AL	0,02700		0,00270	mg/l	108%	0,63
AM	0,0200			mg/l	80%	-1,69
AN				mg/l		
AO				mg/l		





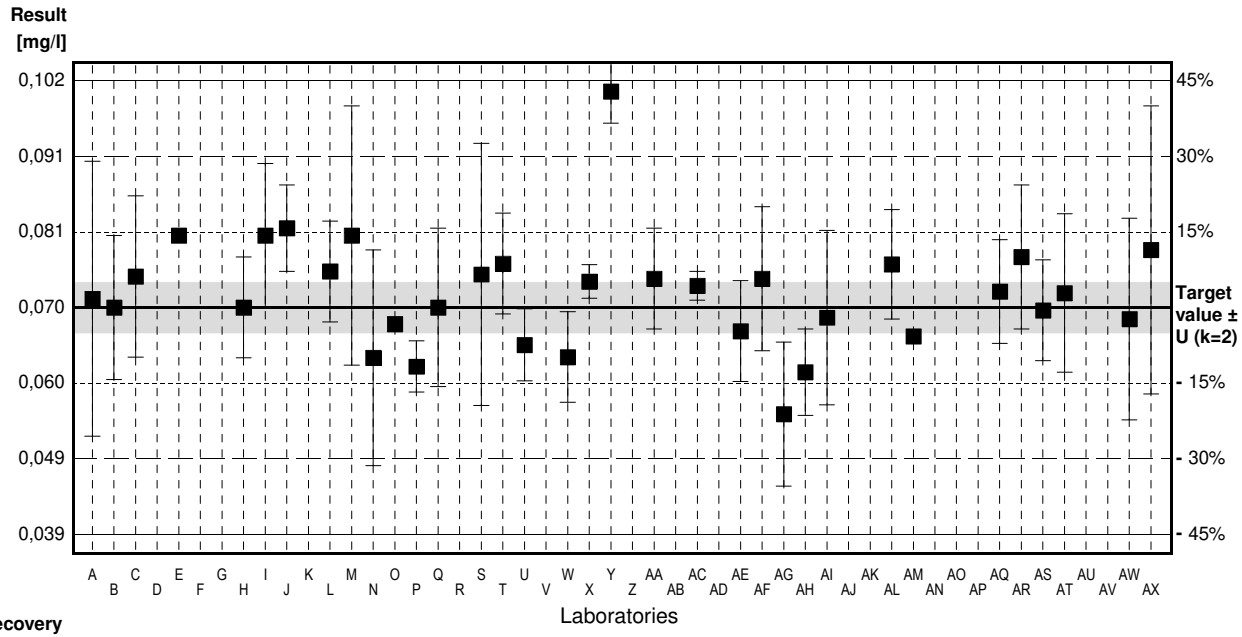
AP			mg/l		
AQ	0,0279	0,0028	mg/l	111%	0,93
AR	0,0294	0,01	mg/l	117%	1,43
AS	0,0263	0,0026	mg/l	105%	0,40
AT	0,0270	0,004	mg/l	108%	0,63
AU			mg/l		
AV			mg/l		
AW	0,0267	0,01	mg/l	106%	0,53
AX	0,0250	0,007	mg/l	100%	-0,03

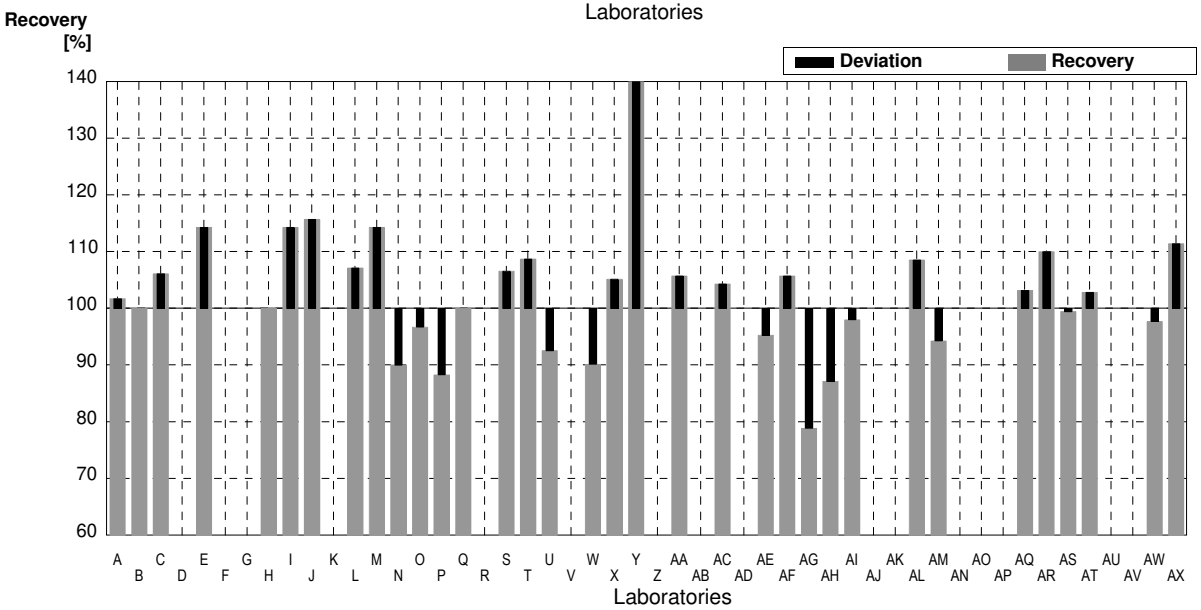
	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,0277 ± 0,0023	0,0269 ± 0,0019	mg/l
Recov. ± CI(99%)	110,3 ± 9,0	107,3 ± 7,4	%
SD between labs	0,0046	0,0036	mg/l
RSD between labs	16,6	13,4	%
n for calculation	31	29	

Sample N158B
Parameter Ammonium

Target value	± U (k=2)	0,070	mg/l	±	0,003 mg/l
IFA result	± U (k=2)	0,071	mg/l	±	0,002 mg/l
Stability test	± U (k=2)	0,069	mg/l	±	0,002 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0,0712	0,0191	mg/l	102%	0,14
B	0,0700	0,01	mg/l	100%	0,00
C	0,0743	0,0112	mg/l	106%	0,51
D			mg/l		
E	0,080		mg/l	114%	1,19
F			mg/l		
G			mg/l		
H	0,070	0,007	mg/l	100%	0,00
I	0,080	0,01	mg/l	114%	1,19
J	0,081	0,006	mg/l	116%	1,31
K			mg/l		
L	0,075	0,007	mg/l	107%	0,60
M	0,080	0,018	mg/l	114%	1,19
N	0,063	0,015	mg/l	90%	-0,83
O	0,0677	0,001	mg/l	97%	-0,27
P	0,0618	0,00356	mg/l	88%	-0,98
Q	0,070	0,011	mg/l	100%	0,00
R			mg/l		
S	0,0746	0,01820	mg/l	107%	0,55
T	0,0761	0,007	mg/l	109%	0,73
U	0,0648	0,005	mg/l	93%	-0,62
V			mg/l		
W	0,0631	0,0063	mg/l	90%	-0,82
X	0,0736	0,00233	mg/l	105%	0,43
Y	0,100 *	0,0044	mg/l	143%	3,57
Z			mg/l		
AA	0,074	0,007	mg/l	106%	0,48
AB			mg/l		
AC	0,0730	0,002	mg/l	104%	0,36
AD			mg/l		
AE	0,0667	0,007	mg/l	95%	-0,39
AF	0,074	0,01	mg/l	106%	0,48
AG	0,0552	0,010	mg/l	79%	-1,76
AH	0,061	0,006	mg/l	87%	-1,07
AI	0,0686	0,0121	mg/l	98%	-0,17
AJ			mg/l		
AK			mg/l		
AL	0,07600	0,00760	mg/l	109%	0,71
AM	0,0660		mg/l	94%	-0,48
AN			mg/l		
AO			mg/l		





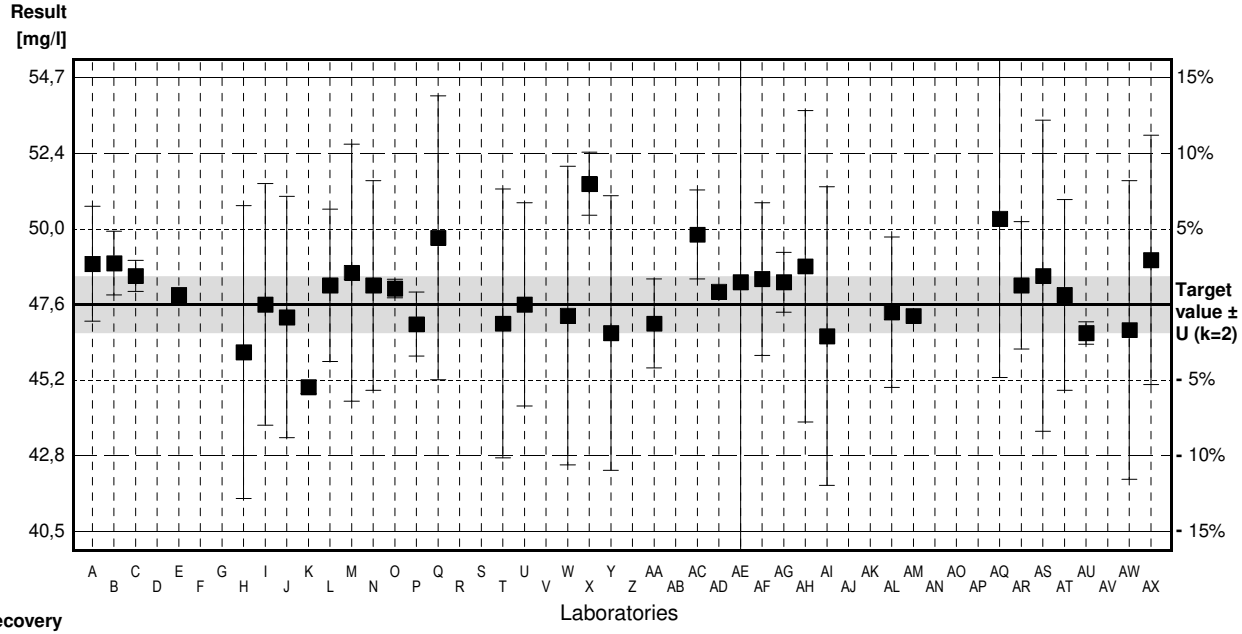
AP			mg/l		
AQ	0,0722	0,0072	mg/l	103%	0,26
AR	0,077	0,01	mg/l	110%	0,83
AS	0,0696	0,0070	mg/l	99%	-0,05
AT	0,072	0,011	mg/l	103%	0,24
AU			mg/l		
AV			mg/l		
AW	0,0684	0,014	mg/l	98%	-0,19
AX	0,0780	0,020	mg/l	111%	0,95

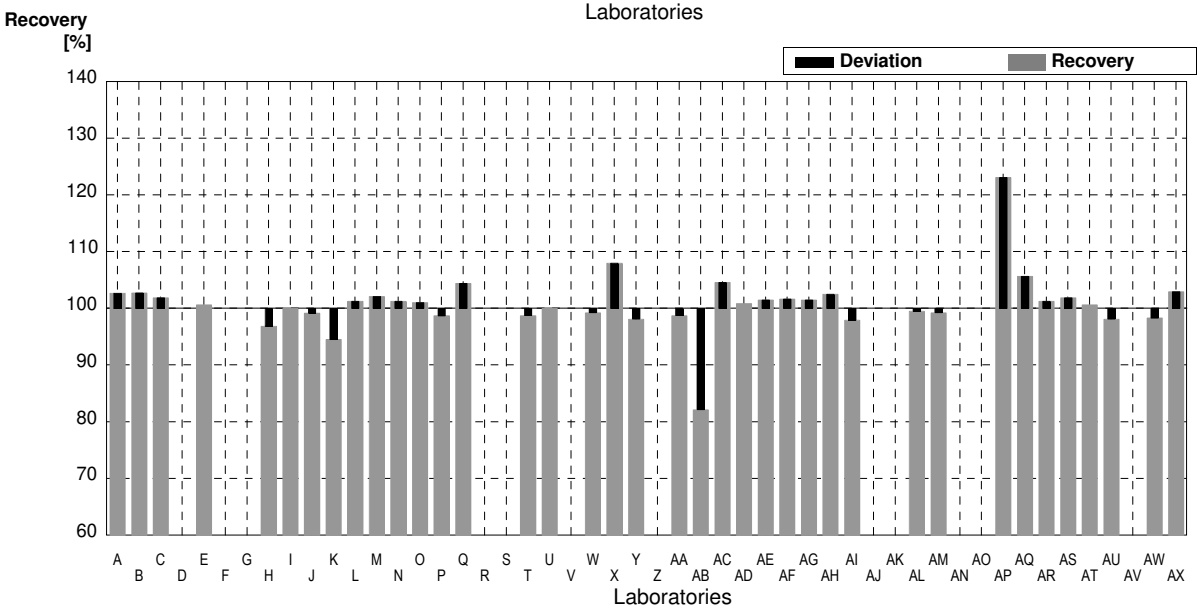
	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,072 ± 0,004	0,071 ± 0,003	mg/l
Recov. ± CI(99%)	102,9 ± 5,3	101,6 ± 4,2	%
SD between labs	0,008	0,006	mg/l
RSD between labs	10,9	8,7	%
n for calculation	34	33	

Sample N158A
Parameter Chloride

Target value	± U (k=2)	47,6 mg/l	±	0,9 mg/l	
IFA result	± U (k=2)	47,0 mg/l	±	1,9 mg/l	
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	48,88	1,81	mg/l	103%	0,90
B	48,9	1	mg/l	103%	0,91
C	48,5	0,49	mg/l	102%	0,63
D			mg/l		
E	47,9		mg/l	101%	0,21
F			mg/l		
G			mg/l		
H	46,1	4,61	mg/l	97%	-1,05
I	47,6	3,8	mg/l	100%	0,00
J	47,2	3,8	mg/l	99%	-0,28
K	45,0	0,2	mg/l	95%	-1,82
L	48,2	2,4	mg/l	101%	0,42
M	48,6	4,05	mg/l	102%	0,70
N	48,2	3,3	mg/l	101%	0,42
O	48,1	0,289	mg/l	101%	0,35
P	46,98	1,01	mg/l	99%	-0,43
Q	49,7	4,47	mg/l	104%	1,47
R			mg/l		
S			mg/l		
T	47,0	4,23	mg/l	99%	-0,42
U	47,6	3,2	mg/l	100%	0,00
V			mg/l		
W	47,248	4,7	mg/l	99%	-0,25
X	51,4	0,998	mg/l	108%	2,66
Y	46,7	4,32	mg/l	98%	-0,63
Z			mg/l		
AA	47,0	1,4	mg/l	99%	-0,42
AB	39,1 *	1,96	mg/l	82%	-5,95
AC	49,8	1,4	mg/l	105%	1,54
AD	48,0		mg/l	101%	0,28
AE	48,3	12,1	mg/l	101%	0,49
AF	48,4	2,4	mg/l	102%	0,56
AG	48,3	0,941	mg/l	101%	0,49
AH	48,8	4,9	mg/l	103%	0,84
AI	46,6	4,7	mg/l	98%	-0,70
AJ			mg/l		
AK			mg/l		
AL	47,36	2,368	mg/l	99%	-0,17
AM	47,24		mg/l	99%	-0,25
AN			mg/l		
AO			mg/l		





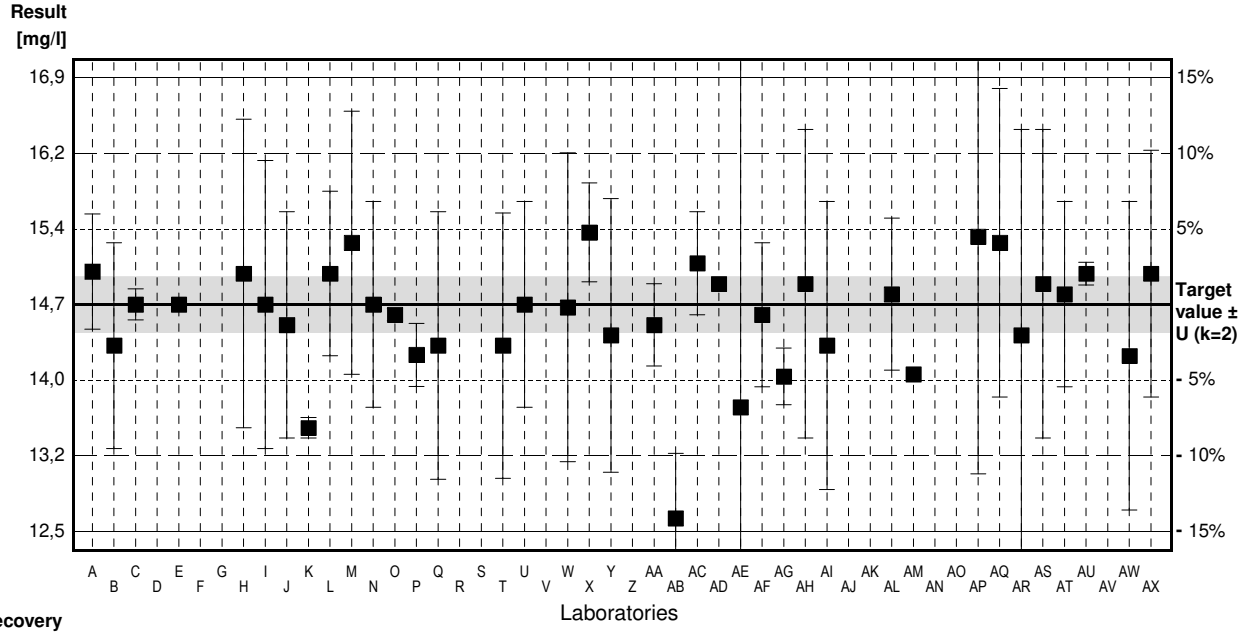
AP	58,610 *	8,791	mg/l	123%	7,71
AQ	50,3	5,0	mg/l	106%	1,89
AR	48,2	2	mg/l	101%	0,42
AS	48,5	4,9	mg/l	102%	0,63
AT	47,9	3	mg/l	101%	0,21
AU	46,7	0,35	mg/l	98%	-0,63
AV			mg/l		
AW	46,8	4,7	mg/l	98%	-0,56
AX	49,0	3,92	mg/l	103%	0,98

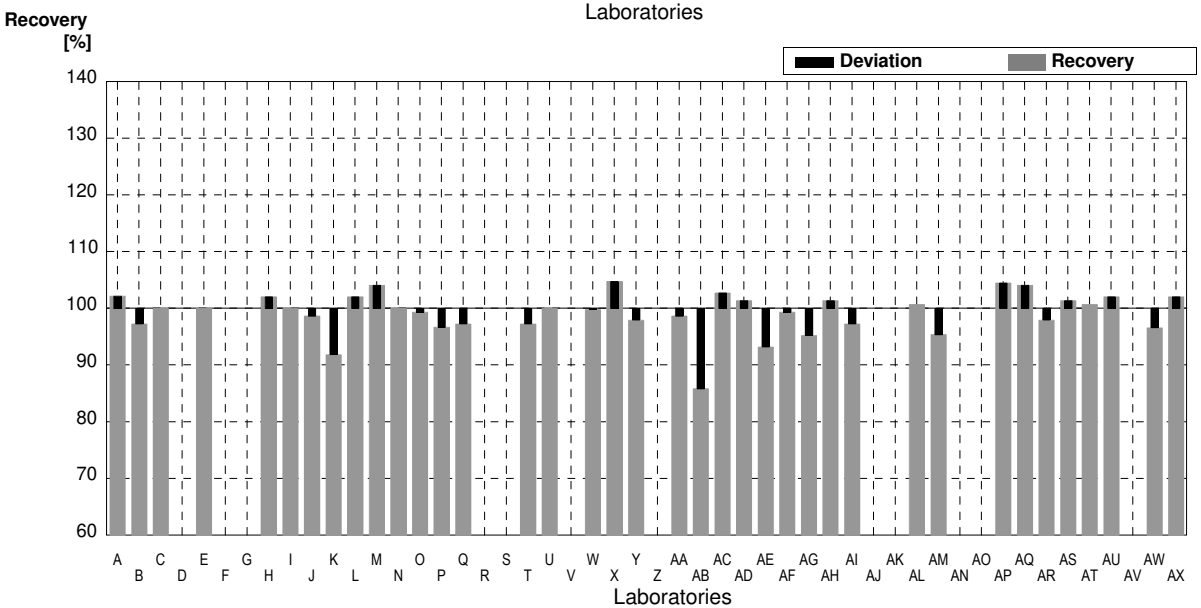
	All results	Outliers excl.	Unit
Mean ± CI(99%)	48,0 ± 1,1	48,0 ± 0,6	mg/l
Recov. ± CI(99%)	100,9 ± 2,4	100,8 ± 1,2	%
SD between labs	2,6	1,2	mg/l
RSD between labs	5,4	2,6	%
n for calculation	38	36	

Sample N158B
Parameter Chloride

Target value ± U (k=2)	14,7	mg/l	±	0,3	mg/l
IFA result ± U (k=2)	14,4	mg/l	±	0,6	mg/l
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	15,02	0,56	mg/l	102%	0,73
B	14,3	1	mg/l	97%	-0,91
C	14,7	0,15	mg/l	100%	0,00
D			mg/l		
E	14,7		mg/l	100%	0,00
F			mg/l		
G			mg/l		
H	15,0	1,5	mg/l	102%	0,68
I	14,7	1,4	mg/l	100%	0,00
J	14,5	1,1	mg/l	99%	-0,45
K	13,5	0,1	mg/l	92%	-2,72
L	15,0	0,8	mg/l	102%	0,68
M	15,3	1,28	mg/l	104%	1,36
N	14,7	1	mg/l	100%	0,00
O	14,6	0,058	mg/l	99%	-0,23
P	14,21	0,307	mg/l	97%	-1,11
Q	14,3	1,3	mg/l	97%	-0,91
R			mg/l		
S			mg/l		
T	14,3	1,29	mg/l	97%	-0,91
U	14,7	1,0	mg/l	100%	0,00
V			mg/l		
W	14,672	1,5	mg/l	100%	-0,06
X	15,4	0,480	mg/l	105%	1,59
Y	14,4	1,33	mg/l	98%	-0,68
Z			mg/l		
AA	14,5	0,4	mg/l	99%	-0,45
AB	12,62 *	0,631	mg/l	86%	-4,72
AC	15,1	0,5	mg/l	103%	0,91
AD	14,9		mg/l	101%	0,45
AE	13,7	3,4	mg/l	93%	-2,27
AF	14,6	0,7	mg/l	99%	-0,23
AG	14,0	0,274	mg/l	95%	-1,59
AH	14,9	1,5	mg/l	101%	0,45
AI	14,3	1,4	mg/l	97%	-0,91
AJ			mg/l		
AK			mg/l		
AL	14,80	0,740	mg/l	101%	0,23
AM	14,02		mg/l	95%	-1,54
AN			mg/l		
AO			mg/l		





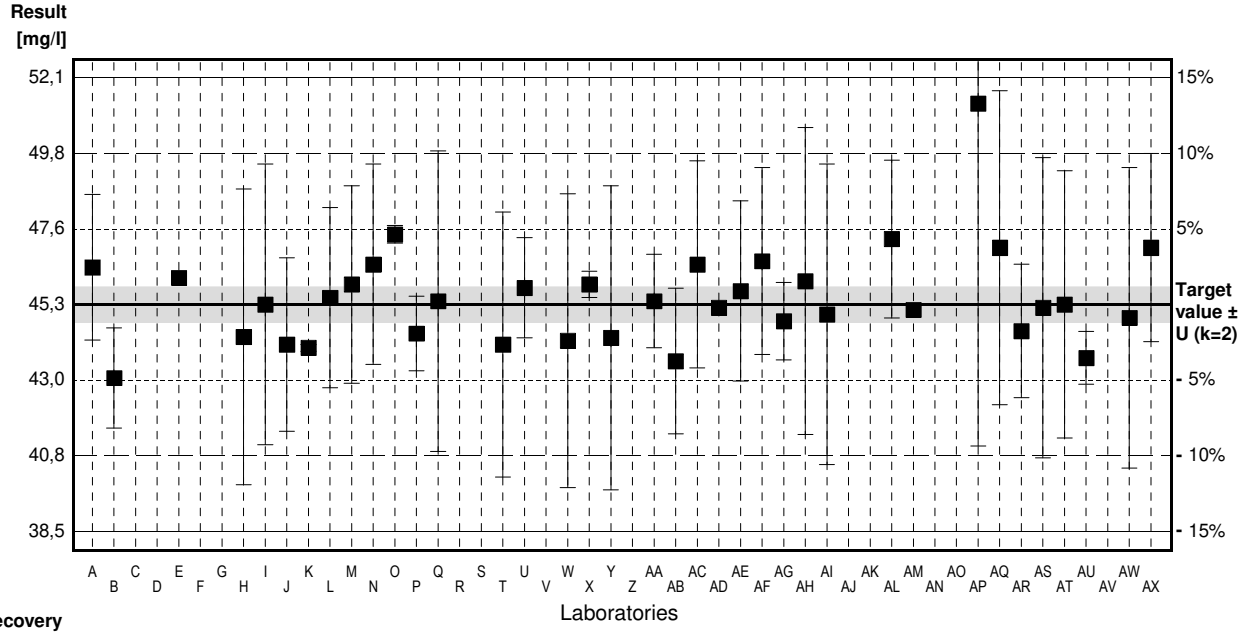
AP	15,358	2,304	mg/l	104%	1,49
AQ	15,3	1,5	mg/l	104%	1,36
AR	14,4	2	mg/l	98%	-0,68
AS	14,9	1,5	mg/l	101%	0,45
AT	14,8	0,9	mg/l	101%	0,23
AU	15,0	0,11	mg/l	102%	0,68
AV			mg/l		
AW	14,2	1,5	mg/l	97%	-1,13
AX	15,0	1,20	mg/l	102%	0,68

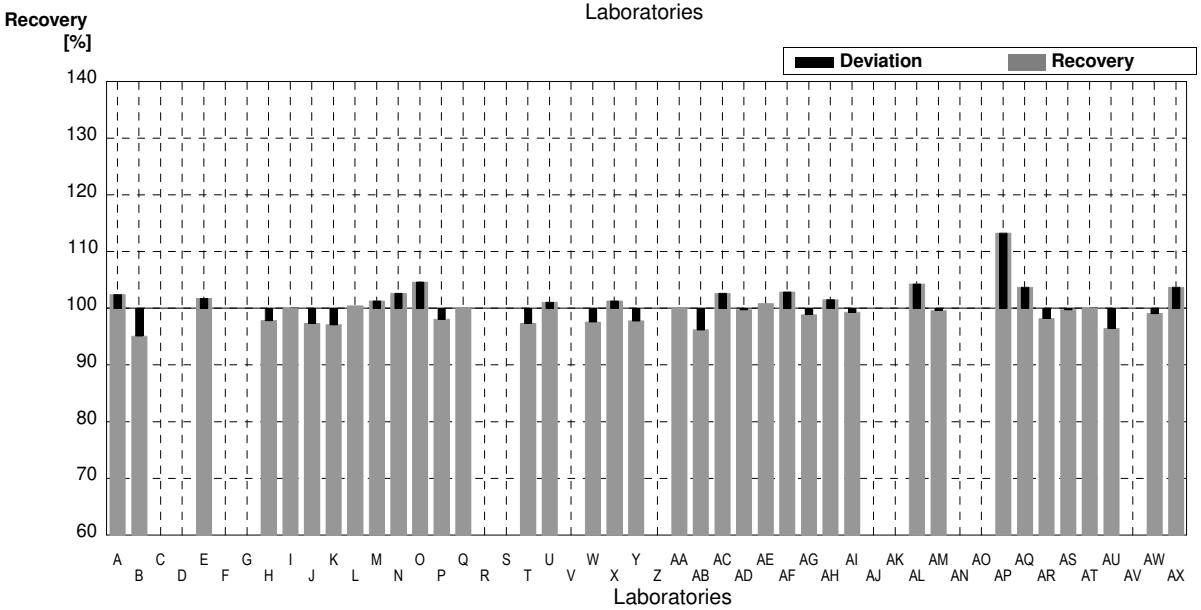
	All results	Outliers excl.	Unit
Mean ± CI(99%)	14,6 ± 0,2	14,6 ± 0,2	mg/l
Recov. ± CI(99%)	99,2 ± 1,6	99,6 ± 1,3	%
SD between labs	0,5	0,4	mg/l
RSD between labs	3,7	3,0	%
n for calculation	38	37	

Sample N158A
Parameter Sulphate

Target value	± U (k=2)	45,3	mg/l	±	0,5 mg/l
IFA result	± U (k=2)	45,0	mg/l	±	0,9 mg/l
Stability test			mg/l		

Lab Code	Result	±	Unit	Recovery	z-Score
A	46,41	2,18	mg/l	102%	0,79
B	43,1	1,5	mg/l	95%	-1,57
C			mg/l		
D			mg/l		
E	46,1		mg/l	102%	0,57
F			mg/l		
G			mg/l		
H	44,33	4,43	mg/l	98%	-0,69
I	45,3	4,2	mg/l	100%	0,00
J	44,1	2,6	mg/l	97%	-0,85
K	44,0	0,1	mg/l	97%	-0,93
L	45,5	2,7	mg/l	100%	0,14
M	45,9	2,96	mg/l	101%	0,43
N	46,5	3	mg/l	103%	0,85
O	47,4	0,265	mg/l	105%	1,50
P	44,43	1,12	mg/l	98%	-0,62
Q	45,4	4,5	mg/l	100%	0,07
R			mg/l		
S			mg/l		
T	44,1	3,97	mg/l	97%	-0,85
U	45,8	1,5	mg/l	101%	0,36
V			mg/l		
W	44,212	4,4	mg/l	98%	-0,77
X	45,9	0,388	mg/l	101%	0,43
Y	44,3	4,56	mg/l	98%	-0,71
Z			mg/l		
AA	45,4	1,4	mg/l	100%	0,07
AB	43,6	2,18	mg/l	96%	-1,21
AC	46,5	3,1	mg/l	103%	0,85
AD	45,2		mg/l	100%	-0,07
AE	45,7	2,7	mg/l	101%	0,28
AF	46,6	2,8	mg/l	103%	0,93
AG	44,8	1,16	mg/l	99%	-0,36
AH	46,0	4,6	mg/l	102%	0,50
AI	45,0	4,5	mg/l	99%	-0,21
AJ			mg/l		
AK			mg/l		
AL	47,26	2,363	mg/l	104%	1,40
AM	45,14		mg/l	100%	-0,11
AN			mg/l		
AO			mg/l		





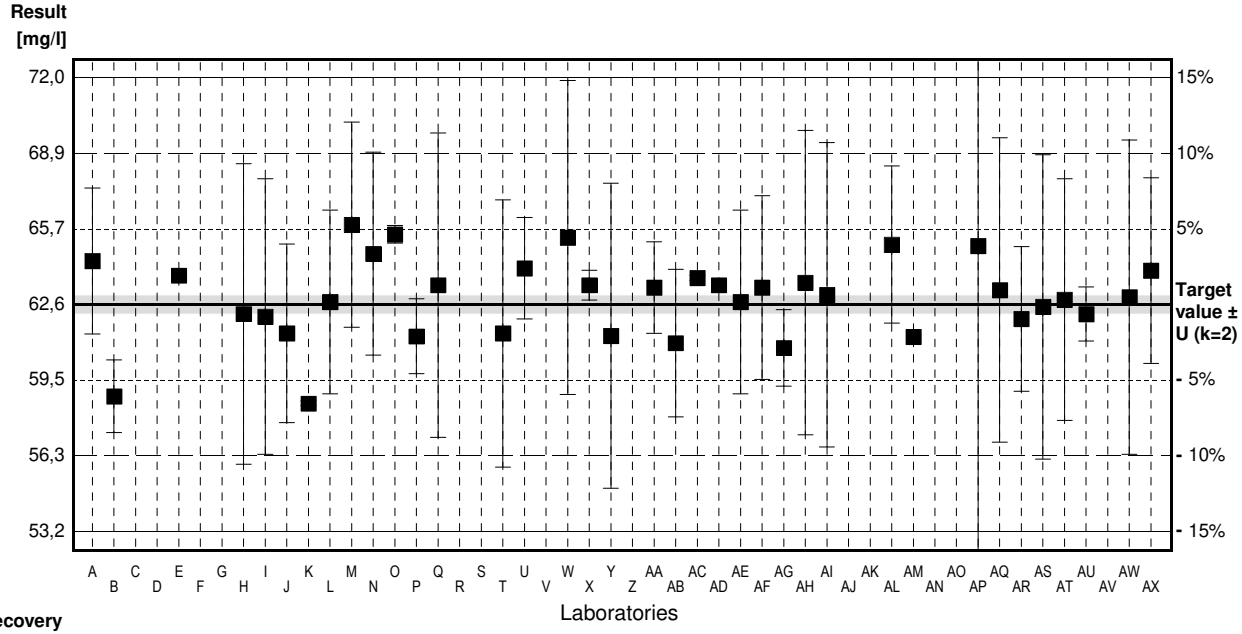
AP	51,320 *	10,264	mg/l	113%	4,29
AQ	47,0	4,7	mg/l	104%	1,21
AR	44,5	2	mg/l	98%	-0,57
AS	45,2	4,5	mg/l	100%	-0,07
AT	45,3	4	mg/l	100%	0,00
AU	43,7	0,79	mg/l	96%	-1,14
AV			mg/l		
AW	44,9	4,5	mg/l	99%	-0,28
AX	47,0	2,82	mg/l	104%	1,21

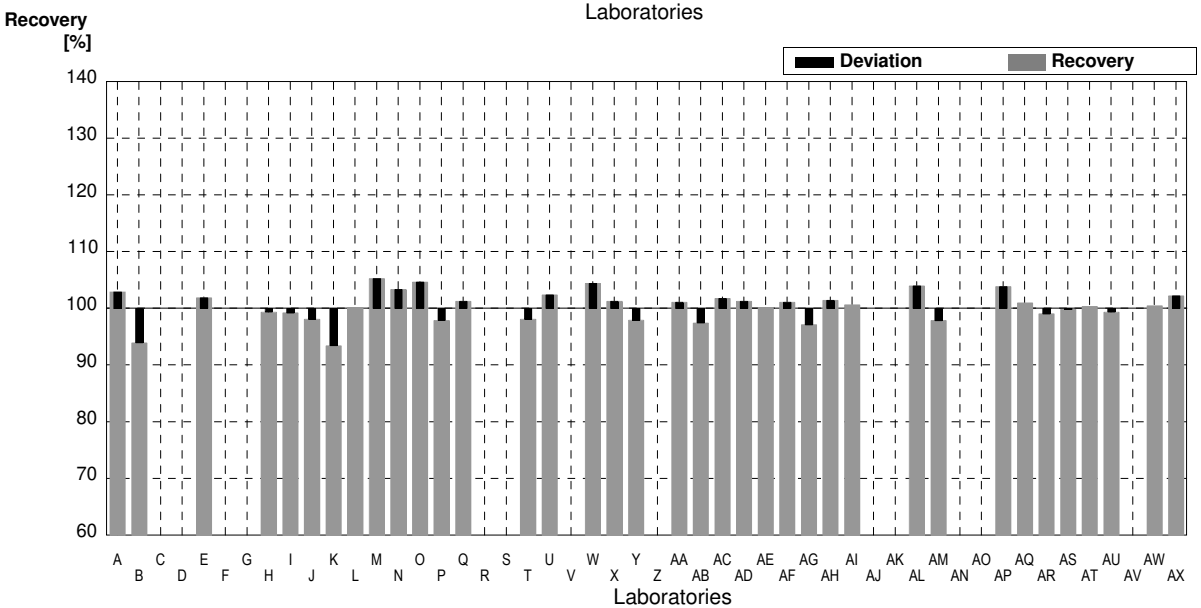
	All results	Outliers excl.	Unit
Mean ± CI(99%)	45,5 ± 0,7	45,3 ± 0,5	mg/l
Recov. ± CI(99%)	100,4 ± 1,4	100,0 ± 1,1	%
SD between labs	1,5	1,1	mg/l
RSD between labs	3,2	2,4	%
n for calculation	37	36	

Sample N158B
Parameter Sulphate

Target value	± U (k=2)	62,6 mg/l	±	0,4 mg/l	
IFA result	± U (k=2)	61,9 mg/l	±	1,2 mg/l	
Stability test		mg/l			

Lab Code	Result	±	Unit	Recovery	z-Score
A	64,40	3,02	mg/l	103%	0,93
B	58,8	1,5	mg/l	94%	-1,96
C			mg/l		
D			mg/l		
E	63,8		mg/l	102%	0,62
F			mg/l		
G			mg/l		
H	62,21	6,22	mg/l	99%	-0,20
I	62,1	5,7	mg/l	99%	-0,26
J	61,4	3,7	mg/l	98%	-0,62
K	58,5	0,1	mg/l	93%	-2,11
L	62,7	3,8	mg/l	100%	0,05
M	65,9	4,25	mg/l	105%	1,70
N	64,7	4,2	mg/l	103%	1,08
O	65,5	0,364	mg/l	105%	1,49
P	61,28	1,55	mg/l	98%	-0,68
Q	63,4	6,3	mg/l	101%	0,41
R			mg/l		
S			mg/l		
T	61,4	5,53	mg/l	98%	-0,62
U	64,1	2,1	mg/l	102%	0,77
V			mg/l		
W	65,365	6,5	mg/l	104%	1,42
X	63,4	0,618	mg/l	101%	0,41
Y	61,3	6,31	mg/l	98%	-0,67
Z			mg/l		
AA	63,3	1,9	mg/l	101%	0,36
AB	61,0	3,05	mg/l	97%	-0,82
AC	63,7	0,1	mg/l	102%	0,57
AD	63,4		mg/l	101%	0,41
AE	62,7	3,8	mg/l	100%	0,05
AF	63,3	3,8	mg/l	101%	0,36
AG	60,8	1,58	mg/l	97%	-0,93
AH	63,5	6,3	mg/l	101%	0,46
AI	63,0	6,3	mg/l	101%	0,21
AJ			mg/l		
AK			mg/l		
AL	65,08	3,254	mg/l	104%	1,28
AM	61,26		mg/l	98%	-0,69
AN			mg/l		
AO			mg/l		





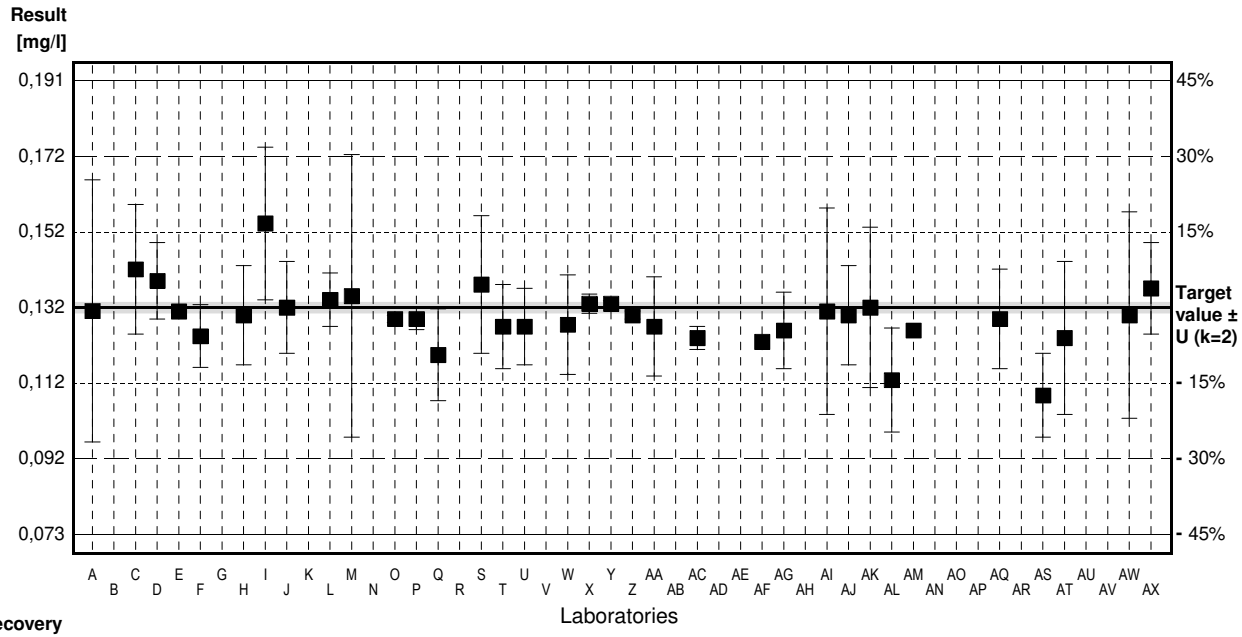
AP	65,026	13,005	mg/l	104%	1,25
AQ	63,2	6,3	mg/l	101%	0,31
AR	62	3	mg/l	99%	-0,31
AS	62,5	6,3	mg/l	100%	-0,05
AT	62,8	5	mg/l	100%	0,10
AU	62,2	1,12	mg/l	99%	-0,21
AV			mg/l		
AW	62,9	6,5	mg/l	100%	0,15
AX	64,0	3,84	mg/l	102%	0,72

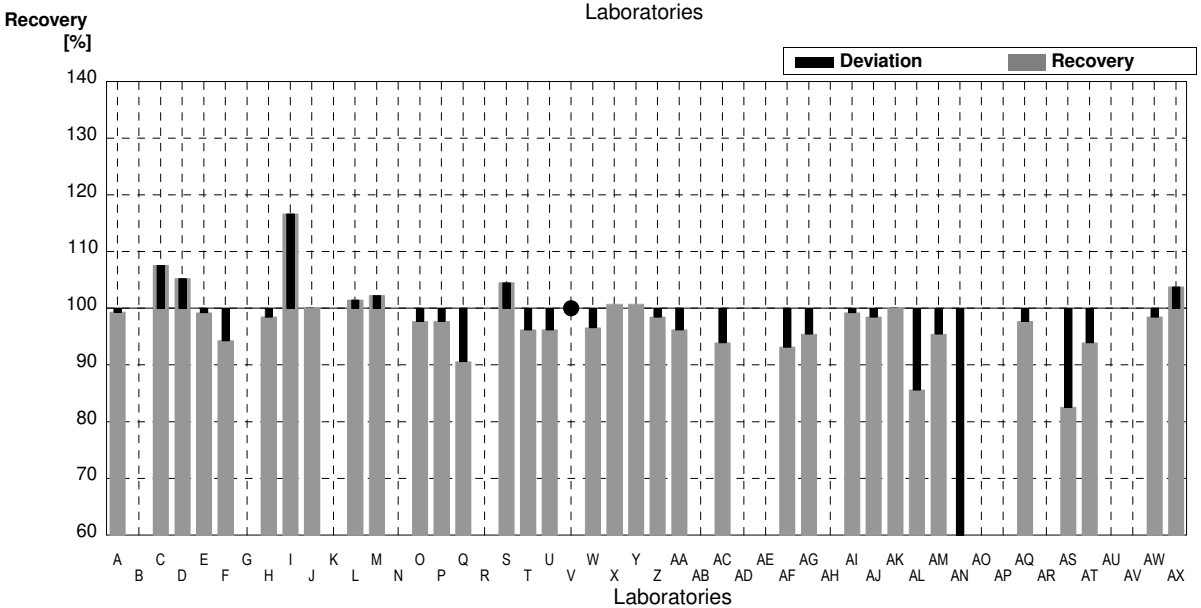
	All results	Outliers excl.	Unit
Mean ± CI(99%)	62,9 ± 0,8	62,9 ± 0,8	mg/l
Recov. ± CI(99%)	100,4 ± 1,2	100,4 ± 1,2	%
SD between labs	1,7	1,7	mg/l
RSD between labs	2,7	2,7	%
n for calculation	37	37	

Sample N158A
Parameter Orthophosphate

Target value ± U (k=2)	0,132	mg/l	±	0,001	mg/l
IFA result ± U (k=2)	0,133	mg/l	±	0,001	mg/l
Stability test ± U (k=2)	0,132	mg/l	±	0,001	mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0,1311	0,0343	mg/l	99%	-0,07
B			mg/l		
C	0,142	0,017	mg/l	108%	0,76
D	0,139	0,010	mg/l	105%	0,53
E	0,131		mg/l	99%	-0,08
F	0,1245	0,0082	mg/l	94%	-0,57
G			mg/l		
H	0,130	0,013	mg/l	98%	-0,15
I	0,154 *	0,020	mg/l	117%	1,67
J	0,132	0,012	mg/l	100%	0,00
K			mg/l		
L	0,134	0,007	mg/l	102%	0,15
M	0,135	0,037	mg/l	102%	0,23
N			mg/l		
O	0,129	0,001	mg/l	98%	-0,23
P	0,129	0,00286	mg/l	98%	-0,23
Q	0,1196	0,0120	mg/l	91%	-0,94
R			mg/l		
S	0,138	0,018	mg/l	105%	0,45
T	0,127	0,011	mg/l	96%	-0,38
U	0,127	0,01	mg/l	96%	-0,38
V	<0,2		mg/l	•	
W	0,1275	0,013	mg/l	97%	-0,34
X	0,133	0,00251	mg/l	101%	0,08
Y	0,133	0,0007	mg/l	101%	0,08
Z	0,130	0,001	mg/l	98%	-0,15
AA	0,127	0,013	mg/l	96%	-0,38
AB			mg/l		
AC	0,124	0,003	mg/l	94%	-0,61
AD			mg/l		
AE			mg/l		
AF	0,123		mg/l	93%	-0,68
AG	0,126	0,010	mg/l	95%	-0,45
AH			mg/l		
AI	0,131	0,027	mg/l	99%	-0,08
AJ	0,130	0,013	mg/l	98%	-0,15
AK	0,132	0,021	mg/l	100%	0,00
AL	0,11300 *	0,01360	mg/l	86%	-1,44
AM	0,126		mg/l	95%	-0,45
AN	0,064 *		mg/l	48%	-5,15
AO			mg/l		





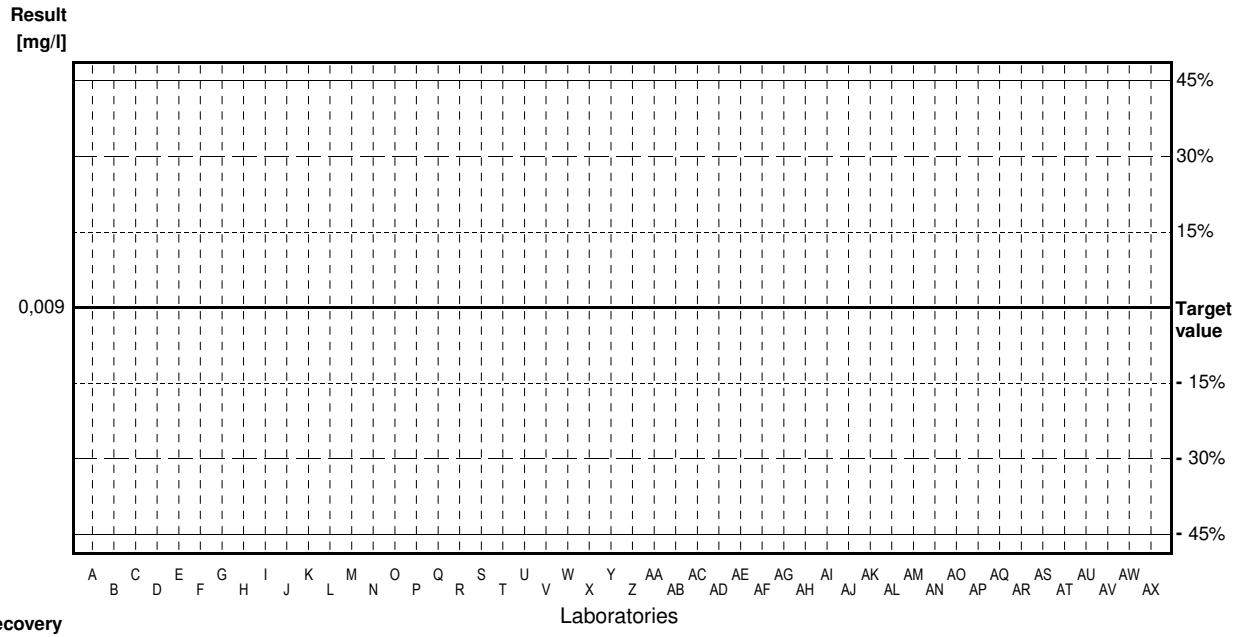
AP			mg/l		
AQ	0,129	0,013	mg/l	98%	-0,23
AR			mg/l		
AS	0,109 *	0,011	mg/l	83%	-1,74
AT	0,124	0,02	mg/l	94%	-0,61
AU			mg/l		
AV			mg/l		
AW	0,130	0,027	mg/l	98%	-0,15
AX	0,137	0,012	mg/l	104%	0,38

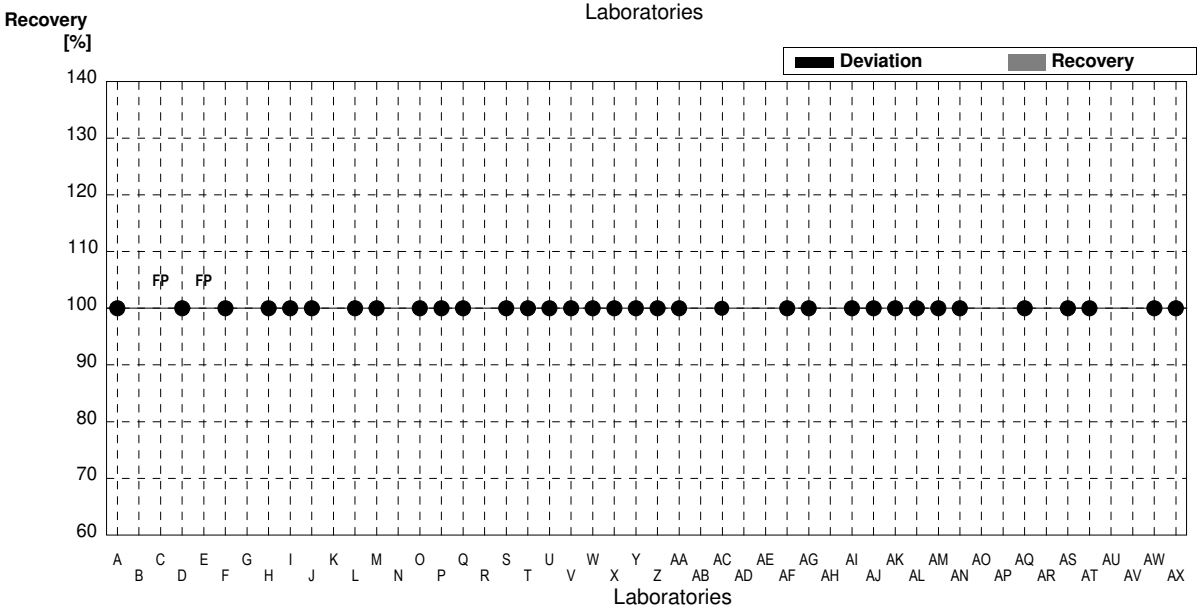
	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,128 ± 0,006	0,130 ± 0,002	mg/l
Recov. ± CI(99%)	96,8 ± 4,7	98,5 ± 1,9	%
SD between labs	0,014	0,005	mg/l
RSD between labs	10,6	3,8	%
n for calculation	35	31	

Sample N158B
Parameter Orthophosphate

Target value	<0,009	mg/l
IFA result	<0,009	mg/l
Stability test	<0,009	mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<0,015		mg/l	•	
B			mg/l		
C	0,0105	0,0012	mg/l	FP	
D	<0,05	0,005	mg/l	•	
E	0,0200		mg/l	FP	
F	<0,01		mg/l	•	
G			mg/l		
H	<0,01		mg/l	•	
I	<0,010		mg/l	•	
J	<0,015	0,002	mg/l	•	
K			mg/l		
L	<0,006		mg/l	•	
M	<0,03	0,01	mg/l	•	
N			mg/l		
O	<0,015		mg/l	•	
P	<0,0307	0,00066	mg/l	•	
Q	<0,030		mg/l	•	
R			mg/l		
S	<0,019		mg/l	•	
T	<0,01		mg/l	•	
U	<0,015		mg/l	•	
V	<0,2		mg/l	•	
W	<0,0055		mg/l	•	
X	<0,0150		mg/l	•	
Y	<0,050		mg/l	•	
Z	<0,015		mg/l	•	
AA	<0,020		mg/l	•	
AB			mg/l		
AC	'0,0104	0,003	mg/l	•	
AD			mg/l		
AE			mg/l		
AF	<0,06		mg/l	•	
AG	<0,01		mg/l	•	
AH			mg/l		
AI	<0,015		mg/l	•	
AJ	<0,031		mg/l	•	
AK	<0,01		mg/l	•	
AL	0,00900	0,00110	mg/l	•	
AM	<0,009		mg/l	•	
AN	<0,096		mg/l	•	
AO			mg/l		





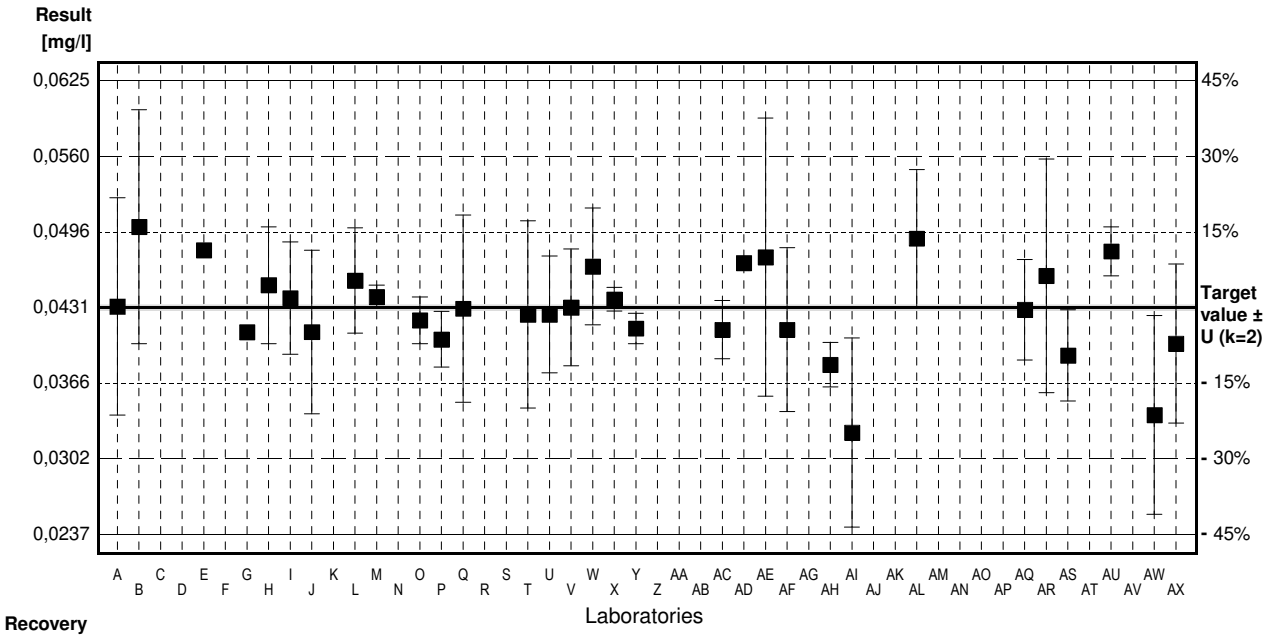
AP			mg/l		
AQ	<0,02		mg/l	•	
AR			mg/l		
AS	<0,008		mg/l	•	
AT	<0,01		mg/l	•	
AU			mg/l		
AV			mg/l		
AW	<0,015		mg/l	•	
AX	<0,009		mg/l	•	

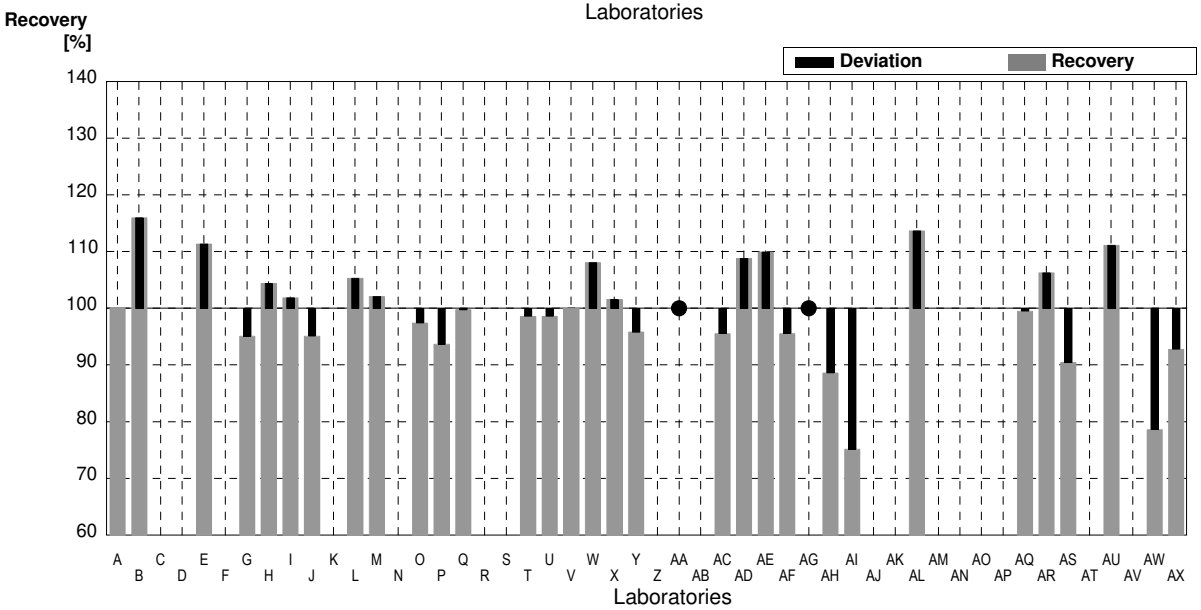
	All results	Outliers excl.	Unit
Mean ± CI(99%)			mg/l
Recov. ± CI(99%)			%
SD between labs			mg/l
RSD between labs			%
n for calculation			

Sample N158A
Parameter Boron

Target value ± U (k=2) 0,0431 mg/l ± 0,0002 mg/l
IFA result ± U (k=2) 0,0407 mg/l ± 0,0033 mg/l
Stability test mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0,04318	0,0093	mg/l	100%	0,02
B	0,050	0,01	mg/l	116%	2,05
C			mg/l		
D			mg/l		
E	0,0480		mg/l	111%	1,46
F			mg/l		
G	0,04099		mg/l	95%	-0,63
H	0,0450	0,005	mg/l	104%	0,57
I	0,0439	0,0048	mg/l	102%	0,24
J	0,0410	0,007	mg/l	95%	-0,62
K			mg/l		
L	0,0454	0,0045	mg/l	105%	0,68
M	0,0440	0,001	mg/l	102%	0,27
N			mg/l		
O	0,0420	0,002	mg/l	97%	-0,33
P	0,04037	0,00238	mg/l	94%	-0,81
Q	0,0430	0,008	mg/l	100%	-0,03
R			mg/l		
S			mg/l		
T	0,0425	0,008	mg/l	99%	-0,18
U	0,0425	0,005	mg/l	99%	-0,18
V	0,0431	0,005	mg/l	100%	0,00
W	0,0466	0,005	mg/l	108%	1,04
X	0,0438	0,00101	mg/l	102%	0,21
Y	0,0413	0,0013	mg/l	96%	-0,54
Z			mg/l		
AA	<0,050		mg/l	•	
AB			mg/l		
AC	0,0412	0,0025	mg/l	96%	-0,57
AD	0,0469	0,0003	mg/l	109%	1,13
AE	0,0474	0,0119	mg/l	110%	1,28
AF	0,0412	0,007	mg/l	96%	-0,57
AG	<0,05		mg/l	•	
AH	0,0382	0,0019	mg/l	89%	-1,46
AI	0,0324 *	0,0081	mg/l	75%	-3,18
AJ			mg/l		
AK			mg/l		
AL	0,04900	0,00590	mg/l	114%	1,76
AM			mg/l		
AN			mg/l		
AO			mg/l		





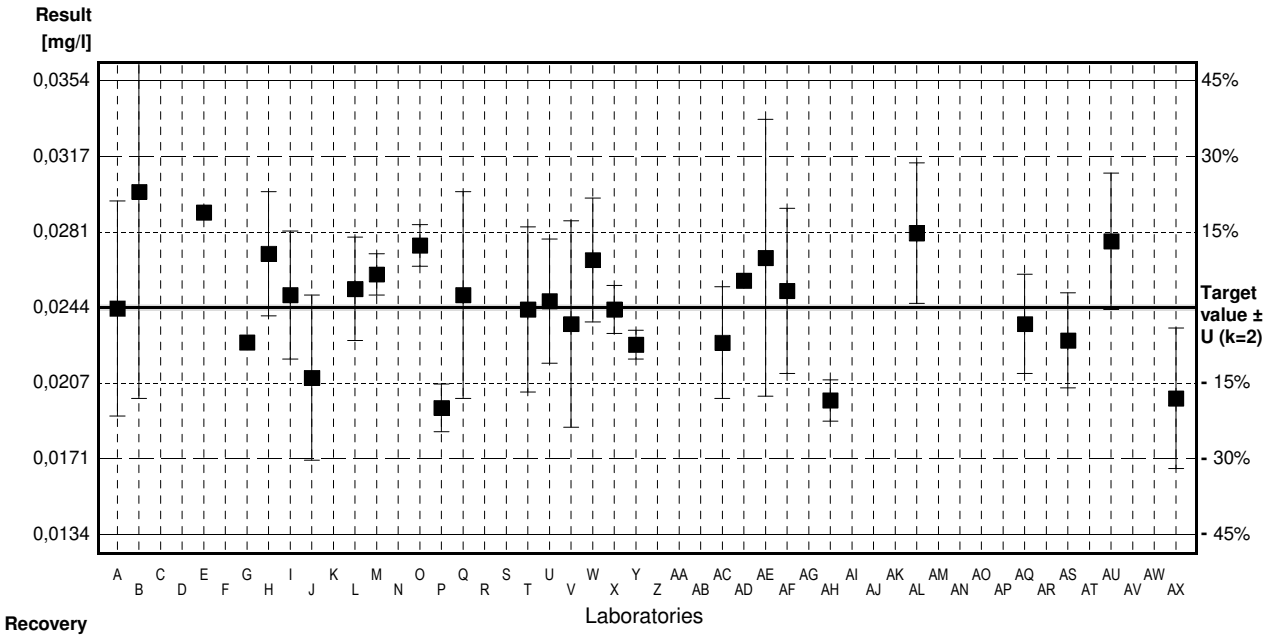
AP			mg/l		
AQ	0,0429	0,0043	mg/l	100%	-0,06
AR	0,0458	0,01	mg/l	106%	0,80
AS	0,0390	0,0039	mg/l	90%	-1,22
AT			mg/l		
AU	0,0479	0,0021	mg/l	111%	1,43
AV			mg/l		
AW	0,0339	0,0085	mg/l	79%	-2,74
AX	0,0400	0,0068	mg/l	93%	-0,92

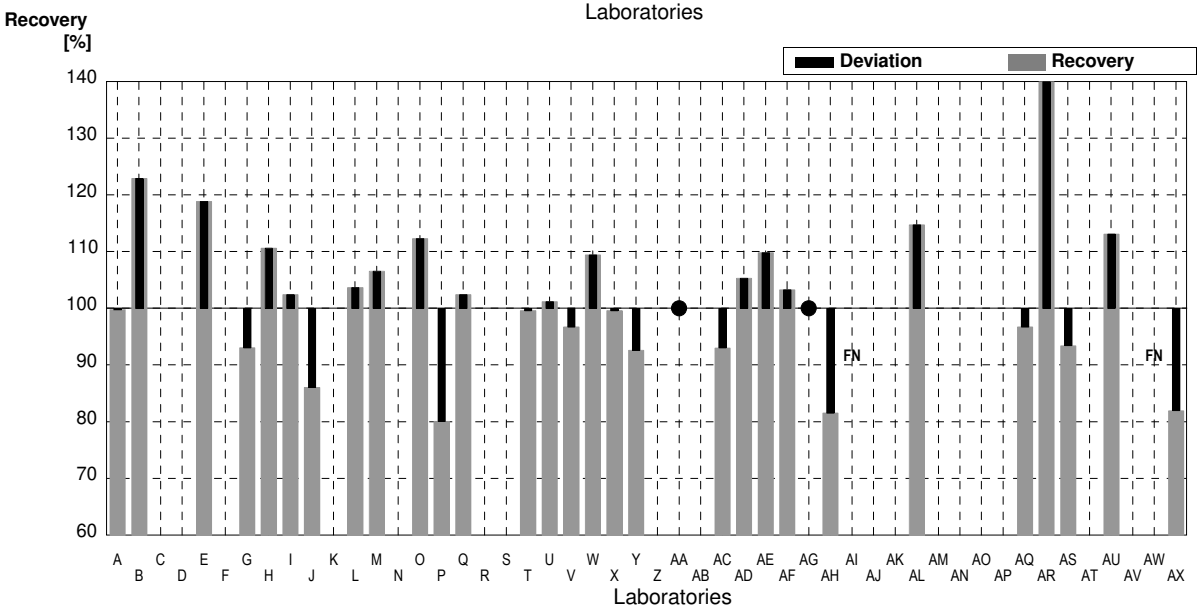
	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,0430 ± 0,0020	0,0433 ± 0,0018	mg/l
Recov. ± CI(99%)	99,7 ± 4,5	100,5 ± 4,1	%
SD between labs	0,0040	0,0035	mg/l
RSD between labs	9,2	8,1	%
n for calculation	31	30	

Sample N158B
Parameter Boron

Target value ± U (k=2) 0,0244 mg/l ± 0,0001 mg/l
IFA result ± U (k=2) 0,0230 mg/l ± 0,0018 mg/l
Stability test mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0,02435	0,0052	mg/l	100%	-0,03
B	0,0300	0,01	mg/l	123%	2,94
C			mg/l		
D			mg/l		
E	0,0290		mg/l	119%	2,42
F			mg/l		
G	0,02271		mg/l	93%	-0,89
H	0,0270	0,003	mg/l	111%	1,37
I	0,0250	0,0031	mg/l	102%	0,32
J	0,0210	0,004	mg/l	86%	-1,79
K			mg/l		
L	0,0253	0,0025	mg/l	104%	0,47
M	0,0260	0,001	mg/l	107%	0,84
N			mg/l		
O	0,0274	0,001	mg/l	112%	1,58
P	0,01954	0,00115	mg/l	80%	-2,55
Q	0,0250	0,005	mg/l	102%	0,32
R			mg/l		
S			mg/l		
T	0,0243	0,004	mg/l	100%	-0,05
U	0,0247	0,003	mg/l	101%	0,16
V	0,0236	0,005	mg/l	97%	-0,42
W	0,0267	0,003	mg/l	109%	1,21
X	0,0243	0,00117	mg/l	100%	-0,05
Y	0,0226	0,0007	mg/l	93%	-0,95
Z			mg/l		
AA	<0,050		mg/l	•	
AB			mg/l		
AC	0,0227	0,0027	mg/l	93%	-0,89
AD	0,0257	0,0002	mg/l	105%	0,68
AE	0,0268	0,0067	mg/l	110%	1,26
AF	0,0252	0,004	mg/l	103%	0,42
AG	<0,05		mg/l	•	
AH	0,0199	0,0010	mg/l	82%	-2,36
AI	<0,020		mg/l	FN	
AJ			mg/l		
AK			mg/l		
AL	0,02800	0,00340	mg/l	115%	1,89
AM			mg/l		
AN			mg/l		
AO			mg/l		





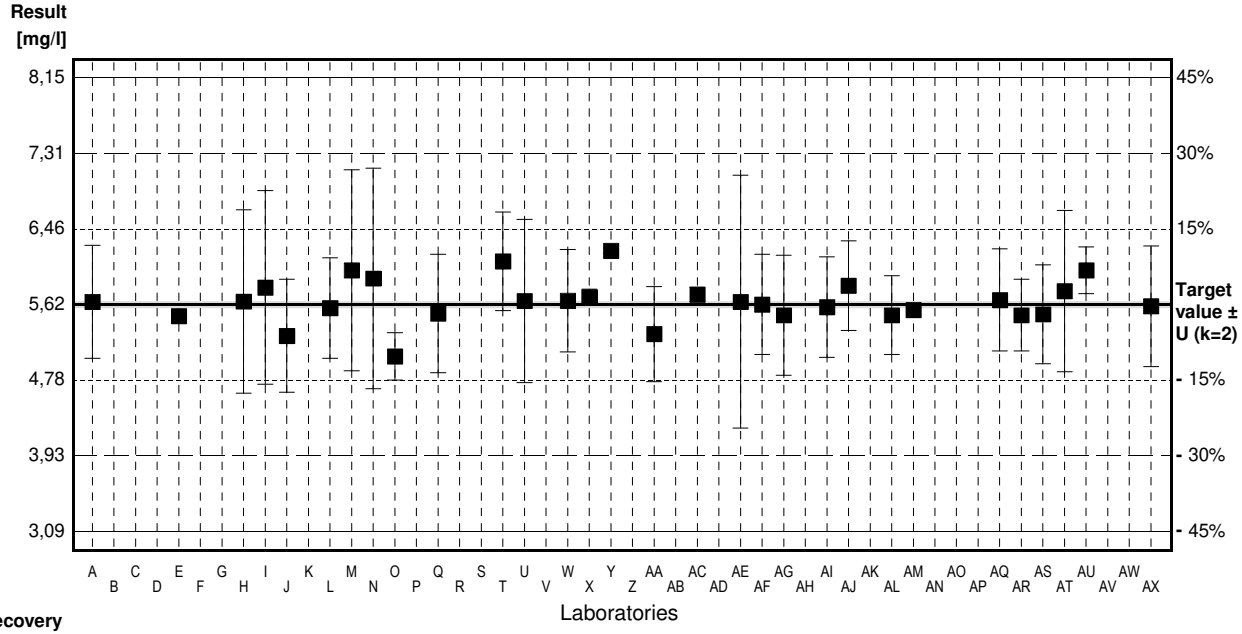
AP			mg/l		
AQ	0,0236	0,0024	mg/l	97%	-0,42
AR	0,0378 *	0,01	mg/l	155%	7,04
AS	0,0228	0,0023	mg/l	93%	-0,84
AT			mg/l		
AU	0,0276	0,0033	mg/l	113%	1,68
AV			mg/l		
AW	<0,020		mg/l	FN	
AX	0,0200	0,0034	mg/l	82%	-2,31

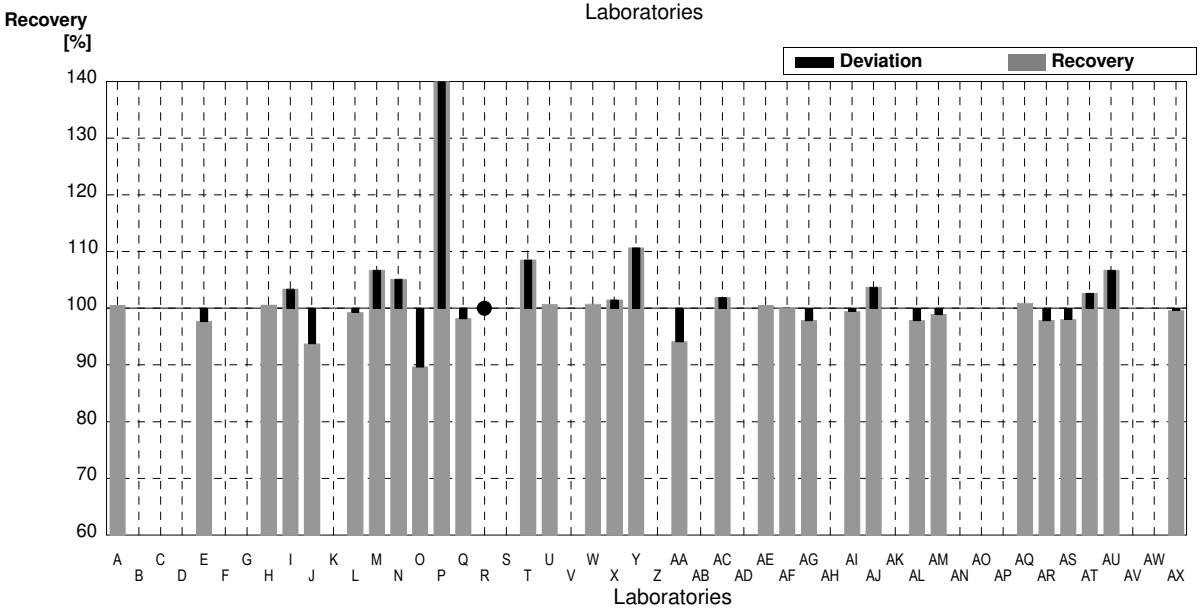
	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,0251 ± 0,0018	0,0247 ± 0,0014	mg/l
Recov. ± CI(99%)	103,0 ± 7,5	101,1 ± 5,8	%
SD between labs	0,0036	0,0027	mg/l
RSD between labs	14,3	10,9	%
n for calculation	29	28	

Sample N158A
Parameter DOC

Target value ± U (k=2)	5,62	mg/l	±	0,03	mg/l
IFA result ± U (k=2)	5,58	mg/l	±	0,11	mg/l
Stability test ± U (k=2)	5,67	mg/l	±	0,11	mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	5,65	0,63	mg/l	101%	0,09
B			mg/l		
C			mg/l		
D			mg/l		
E	5,49		mg/l	98%	-0,39
F			mg/l		
G			mg/l		
H	5,653	1,023	mg/l	101%	0,10
I	5,81	1,08	mg/l	103%	0,57
J	5,27	0,63	mg/l	94%	-1,06
K			mg/l		
L	5,58	0,56	mg/l	99%	-0,12
M	6,00	1,12	mg/l	107%	1,15
N	5,91	1,23	mg/l	105%	0,87
O	5,04	0,265	mg/l	90%	-1,75
P	10,29 *	2,028	mg/l	183%	14,08
Q	5,52	0,66	mg/l	98%	-0,30
R			mg/l		
S	>4		mg/l	•	
T	6,10	0,55	mg/l	109%	1,45
U	5,66	0,91	mg/l	101%	0,12
V			mg/l		
W	5,662	0,57	mg/l	101%	0,13
X	5,703	0,0881	mg/l	101%	0,25
Y	6,22	0,030	mg/l	111%	1,81
Z			mg/l		
AA	5,29	0,53	mg/l	94%	-1,00
AB			mg/l		
AC	5,73	0,08	mg/l	102%	0,33
AD			mg/l		
AE	5,65	1,41	mg/l	101%	0,09
AF	5,62	0,56	mg/l	100%	0,00
AG	5,50	0,670	mg/l	98%	-0,36
AH			mg/l		
AI	5,59	0,56	mg/l	99%	-0,09
AJ	5,83	0,5	mg/l	104%	0,63
AK			mg/l		
AL	5,500	0,44000	mg/l	98%	-0,36
AM	5,56		mg/l	99%	-0,18
AN			mg/l		
AO			mg/l		





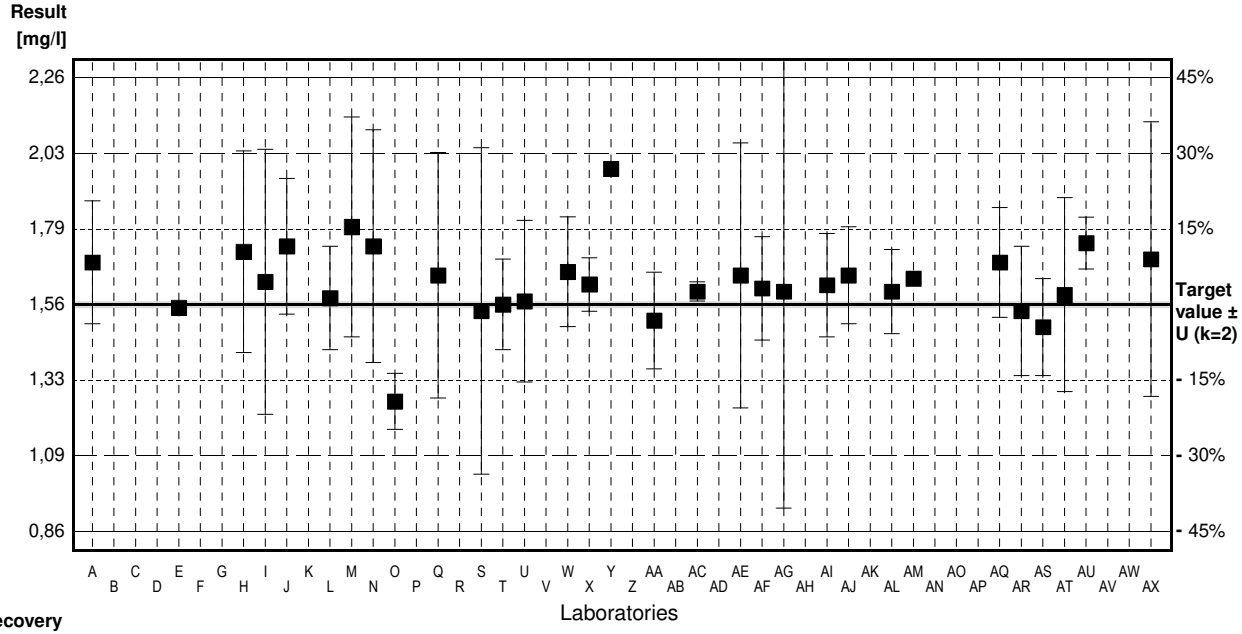
AP			mg/l		
AQ	5,67	0,57	mg/l	101%	0,15
AR	5,5	0,4	mg/l	98%	-0,36
AS	5,51	0,55	mg/l	98%	-0,33
AT	5,77	0,9	mg/l	103%	0,45
AU	6,0	0,26	mg/l	107%	1,15
AV			mg/l		
AW			mg/l		
AX	5,6	0,672	mg/l	100%	-0,06

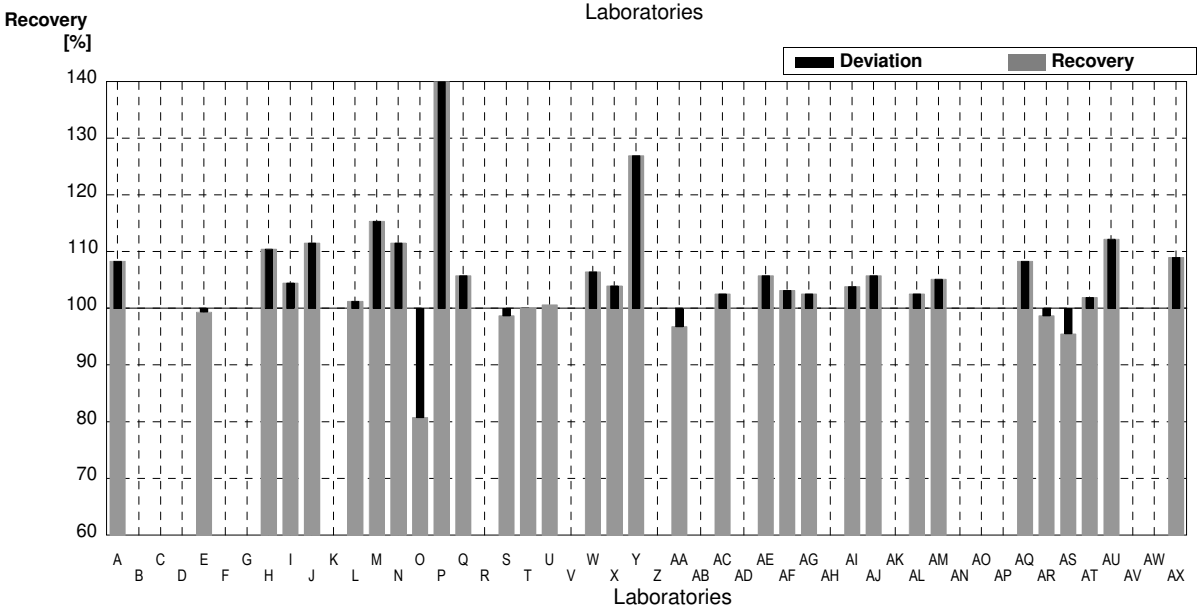
	All results	Outliers excl.	Unit
Mean ± CI(99%)	5,80 ± 0,43	5,65 ± 0,12	mg/l
Recov. ± CI(99%)	103,2 ± 7,6	100,6 ± 2,2	%
SD between labs	0,87	0,24	mg/l
RSD between labs	14,9	4,3	%
n for calculation	31	30	

Sample N158B
Parameter DOC

Target value ± U (k=2)	1,56	mg/l	±	0,01	mg/l
IFA result ± U (k=2)	1,58	mg/l	±	0,09	mg/l
Stability test ± U (k=2)	1,63	mg/l	±	0,10	mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	1,69	0,19	mg/l	108%	1,41
B			mg/l		
C			mg/l		
D			mg/l		
E	1,55		mg/l	99%	-0,11
F			mg/l		
G			mg/l		
H	1,723	0,312	mg/l	110%	1,77
I	1,63	0,41	mg/l	104%	0,76
J	1,74	0,21	mg/l	112%	1,96
K			mg/l		
L	1,58	0,16	mg/l	101%	0,22
M	1,80	0,34	mg/l	115%	2,61
N	1,74	0,36	mg/l	112%	1,96
O	1,26 *	0,087	mg/l	81%	-3,26
P	4,288 *	0,304	mg/l	275%	29,64
Q	1,65	0,38	mg/l	106%	0,98
R			mg/l		
S	1,540	0,505	mg/l	99%	-0,22
T	1,56	0,14	mg/l	100%	0,00
U	1,57	0,25	mg/l	101%	0,11
V			mg/l		
W	1,661	0,17	mg/l	106%	1,10
X	1,622	0,0826	mg/l	104%	0,67
Y	1,98 *	0,0095	mg/l	127%	4,56
Z			mg/l		
AA	1,51	0,15	mg/l	97%	-0,54
AB			mg/l		
AC	1,60	0,03	mg/l	103%	0,43
AD			mg/l		
AE	1,65	0,41	mg/l	106%	0,98
AF	1,61	0,16	mg/l	103%	0,54
AG	1,60	0,670	mg/l	103%	0,43
AH			mg/l		
AI	1,62	0,16	mg/l	104%	0,65
AJ	1,65	0,15	mg/l	106%	0,98
AK			mg/l		
AL	1,600	0,13000	mg/l	103%	0,43
AM	1,64		mg/l	105%	0,87
AN			mg/l		
AO			mg/l		





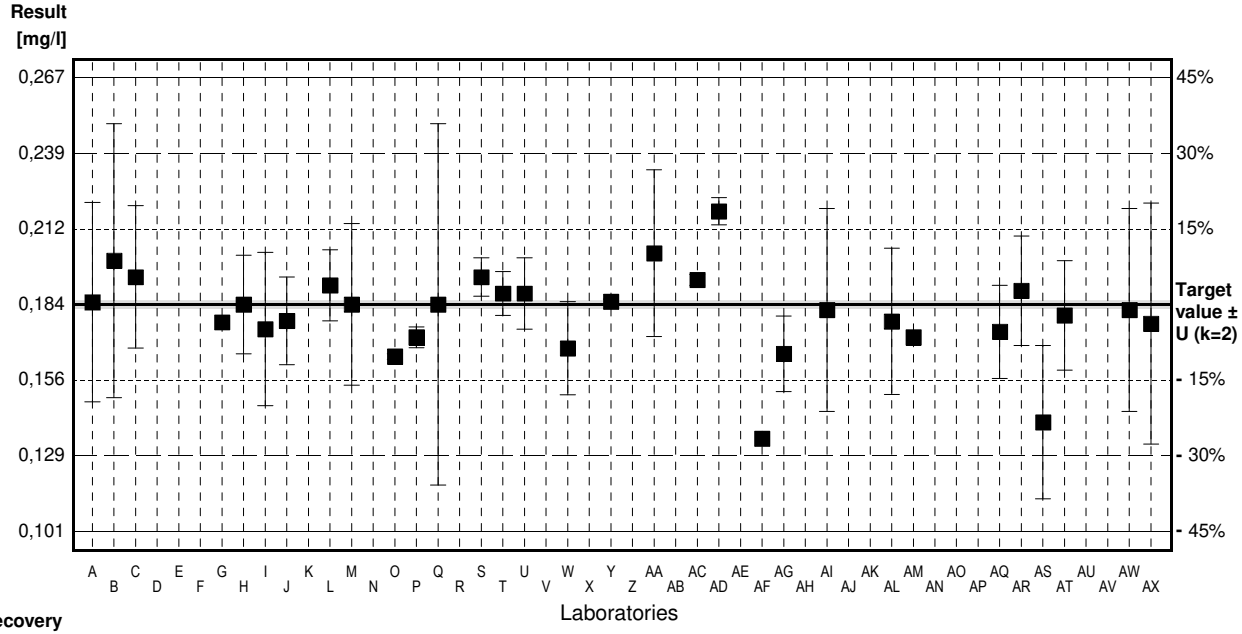
AP			mg/l		
AQ	1,69	0,17	mg/l	108%	1,41
AR	1,54	0,2	mg/l	99%	-0,22
AS	1,49	0,15	mg/l	96%	-0,76
AT	1,59	0,3	mg/l	102%	0,33
AU	1,75	0,08	mg/l	112%	2,06
AV			mg/l		
AW			mg/l		
AX	1,70	0,425	mg/l	109%	1,52

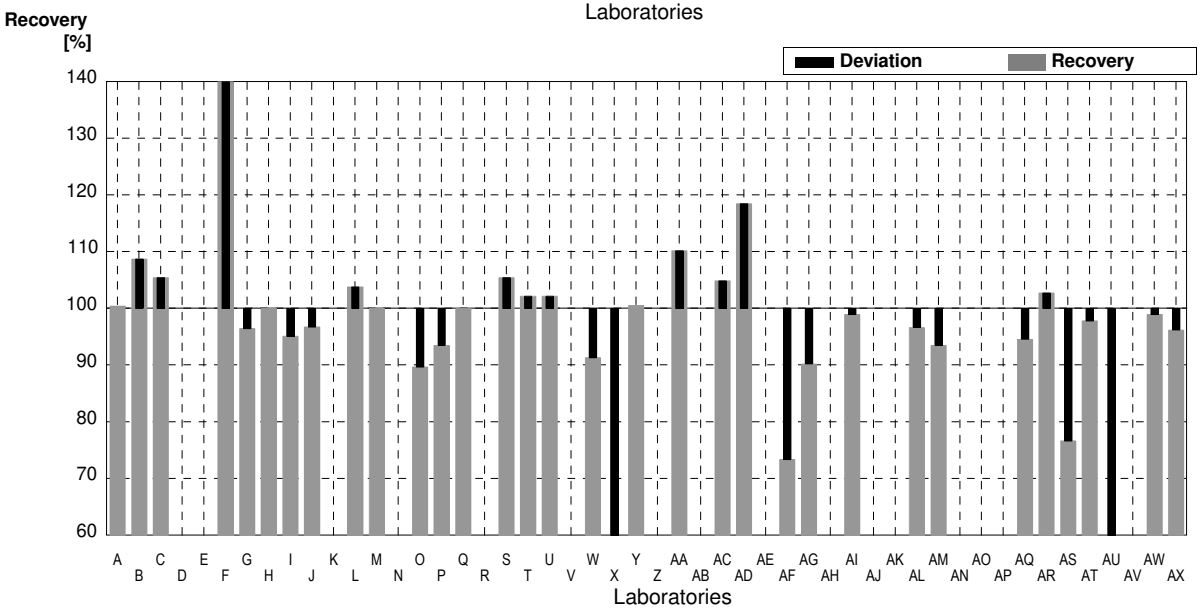
	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,71 ± 0,24	1,63 ± 0,04	mg/l
Recov. ± CI(99%)	109,8 ± 15,1	104,5 ± 2,5	%
SD between labs	0,48	0,08	mg/l
RSD between labs	28,3	4,7	%
n for calculation	32	29	

Sample N158A
Parameter Total P (as PO4)

Target value ± U (k=2) 0,184 mg/l ± 0,001 mg/l
IFA result ± U (k=2) 0,190 mg/l ± 0,023 mg/l
Stability test mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0,1848	0,0364	mg/l	100%	0,04
B	0,2000	0,05	mg/l	109%	0,87
C	0,194	0,026	mg/l	105%	0,54
D			mg/l		
E			mg/l		
F	0,4879 *	0,0334	mg/l	265%	16,52
G	0,17747		mg/l	96%	-0,35
H	0,184	0,018	mg/l	100%	0,00
I	0,175	0,028	mg/l	95%	-0,49
J	0,178	0,016	mg/l	97%	-0,33
K			mg/l		
L	0,191	0,013	mg/l	104%	0,38
M	0,184	0,0295	mg/l	100%	0,00
N			mg/l		
O	0,165	0,001	mg/l	90%	-1,03
P	0,172	0,00382	mg/l	93%	-0,65
Q	0,184	0,066	mg/l	100%	0,00
R			mg/l		
S	0,194	0,007	mg/l	105%	0,54
T	0,188	0,008	mg/l	102%	0,22
U	0,188	0,013	mg/l	102%	0,22
V			mg/l		
W	0,168	0,017	mg/l	91%	-0,87
X	0,0594 *	0,00044	mg/l	32%	-6,77
Y	0,185	0,0010	mg/l	101%	0,05
Z			mg/l		
AA	0,2027	0,0304	mg/l	110%	1,02
AB			mg/l		
AC	0,193	0,002	mg/l	105%	0,49
AD	0,218	0,005	mg/l	118%	1,85
AE			mg/l		
AF	0,135 *		mg/l	73%	-2,66
AG	0,166	0,0138	mg/l	90%	-0,98
AH			mg/l		
AI	0,182	0,037	mg/l	99%	-0,11
AJ			mg/l		
AK			mg/l		
AL	0,17783	0,02667	mg/l	97%	-0,34
AM	0,172		mg/l	93%	-0,65
AN			mg/l		
AO			mg/l		





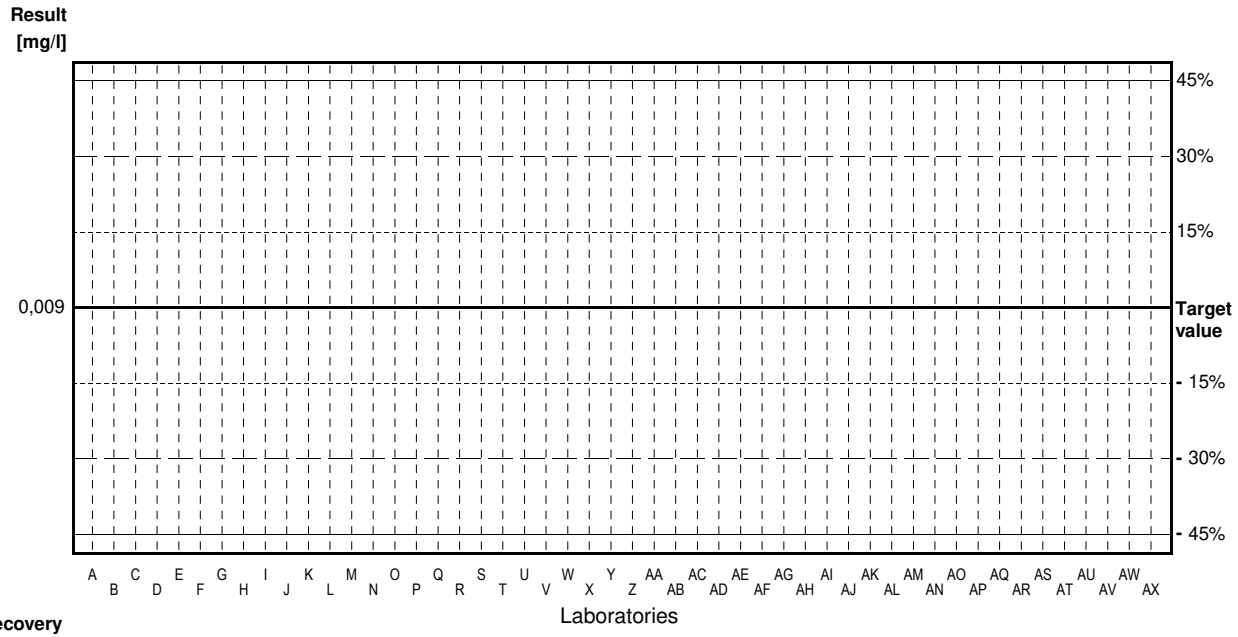
AP			mg/l		
AQ	0,174	0,017	mg/l	95%	-0,54
AR	0,189	0,02	mg/l	103%	0,27
AS	0,141 *	0,028	mg/l	77%	-2,34
AT	0,180	0,02	mg/l	98%	-0,22
AU	0,071 *	0,002	mg/l	39%	-6,14
AV			mg/l		
AW	0,182	0,037	mg/l	99%	-0,11
AX	0,177	0,044	mg/l	96%	-0,38

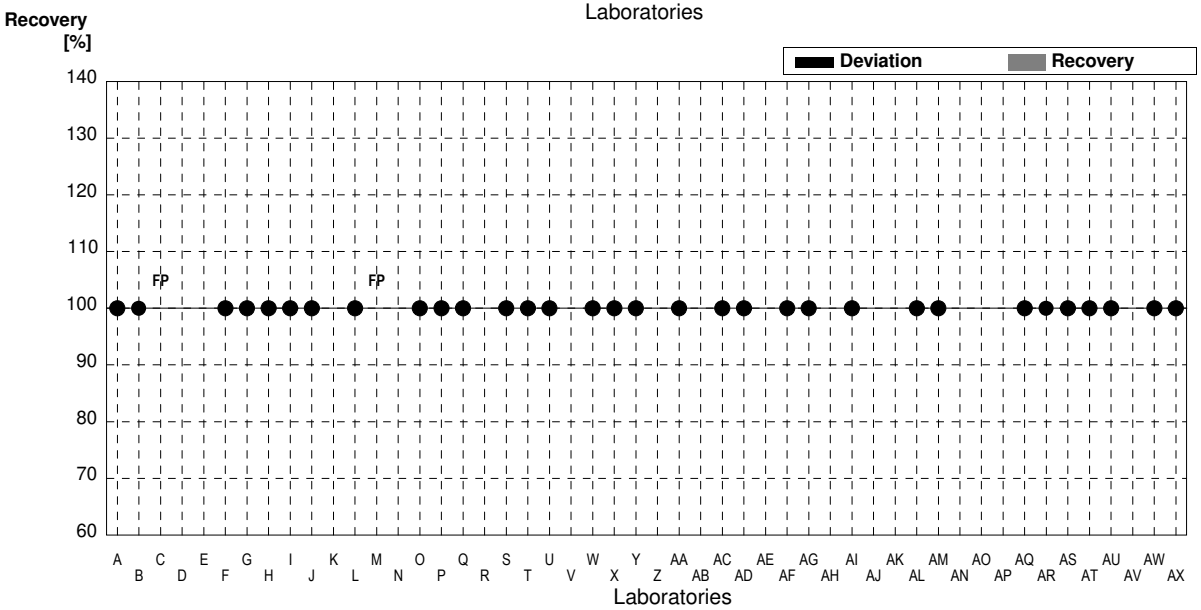
	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,183 ± 0,029	0,184 ± 0,006	mg/l
Recov. ± CI(99%)	99,4 ± 15,9	99,8 ± 3,2	%
SD between labs	0,062	0,012	mg/l
RSD between labs	34,1	6,3	%
n for calculation	34	29	

Sample N158B
Parameter Total P (as PO4)

Target value	<0,009	mg/l
IFA result	<0,009	mg/l
Stability test		mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<0,015		mg/l	•	
B	'0,0100	0,05	mg/l	•	
C	0,0120	0,0016	mg/l	FP	
D			mg/l		
E			mg/l		
F	<0,01		mg/l	•	
G	<0,0300		mg/l	•	
H	<0,01		mg/l	•	
I	<0,010		mg/l	•	
J	<0,015	0,002	mg/l	•	
K			mg/l		
L	<0,006		mg/l	•	
M	0,153	0,0246	mg/l	FP	
N			mg/l		
O	<0,015		mg/l	•	
P	<0,0153	0,00034	mg/l	•	
Q	<0,015		mg/l	•	
R			mg/l		
S	<0,02		mg/l	•	
T	<0,05		mg/l	•	
U	<0,015		mg/l	•	
V			mg/l		
W	<0,001		mg/l	•	
X	<0,0049		mg/l	•	
Y	<0,050		mg/l	•	
Z			mg/l		
AA	<0,031		mg/l	•	
AB			mg/l		
AC	<0,03		mg/l	•	
AD	<0,05		mg/l	•	
AE			mg/l		
AF	<0,06		mg/l	•	
AG	<0,016		mg/l	•	
AH			mg/l		
AI	<0,015		mg/l	•	
AJ			mg/l		
AK			mg/l		
AL	<0,0153		mg/l	•	
AM	<0,009		mg/l	•	
AN			mg/l		
AO			mg/l		





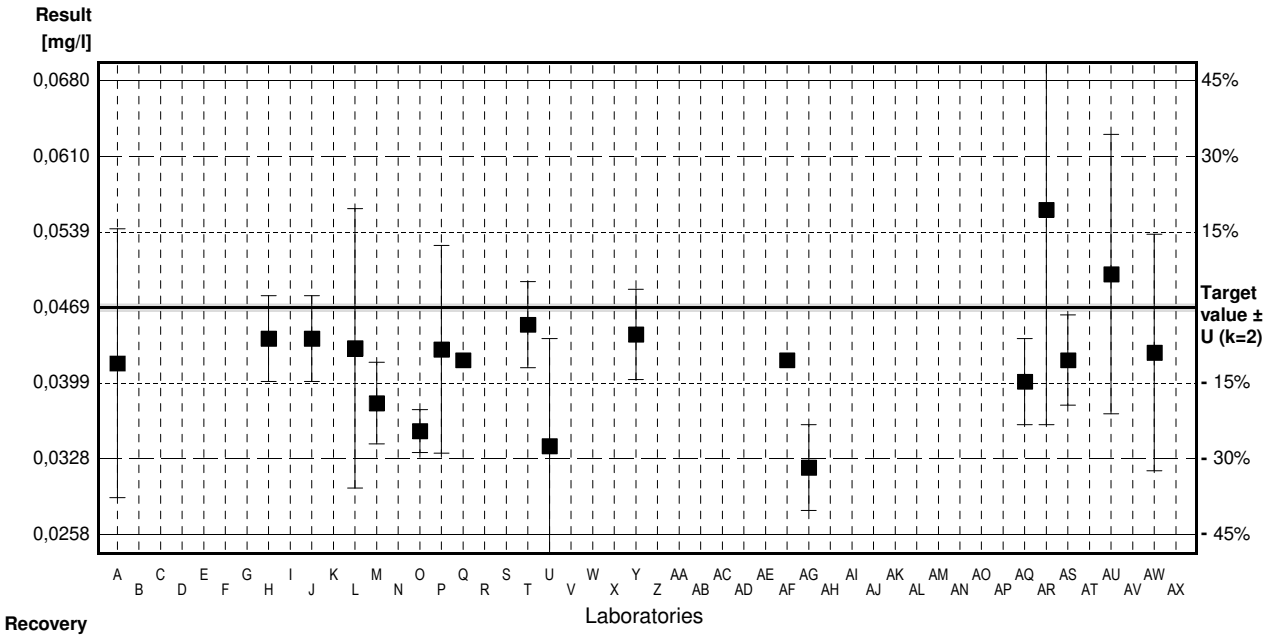
AP			mg/l		
AQ	<0,05		mg/l	•	
AR	'0,0198	0,02	mg/l	•	
AS	<0,015		mg/l	•	
AT	<0,013		mg/l	•	
AU	<0,005	0,002	mg/l	•	
AV			mg/l		
AW	<0,015		mg/l	•	
AX	<0,009		mg/l	•	

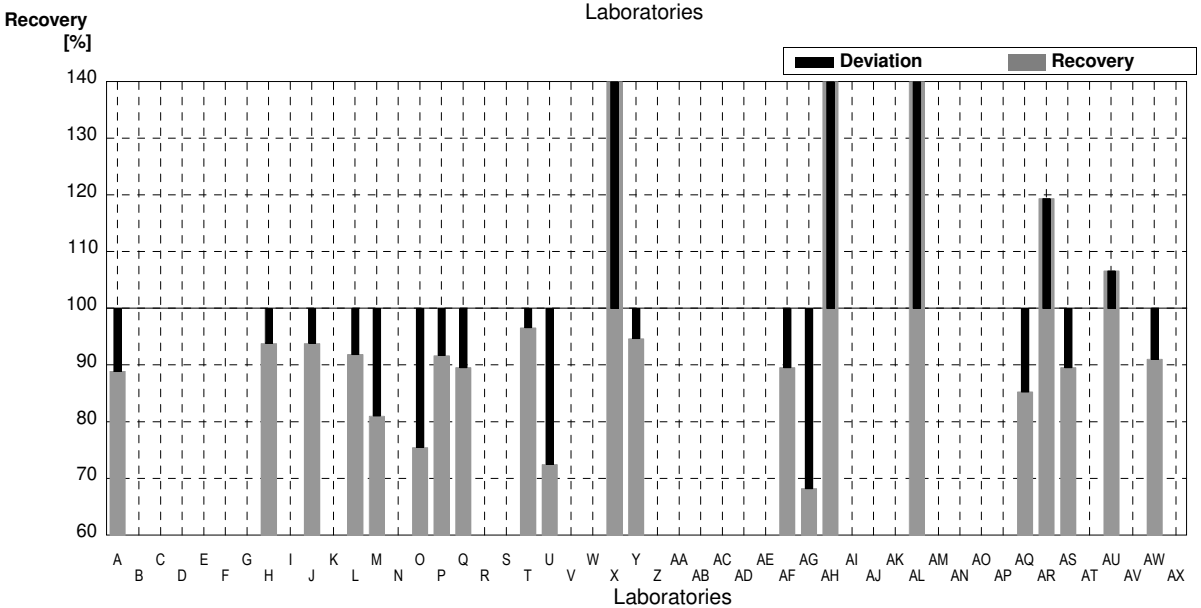
	All results	Outliers excl.	Unit
Mean ± CI(99%)			mg/l
Recov. ± CI(99%)			%
SD between labs			mg/l
RSD between labs			%
n for calculation			

Sample N158A
Parameter Cyanide

Target value	± U (k=2)	0,0469	mg/l	±	0,0003 mg/l
IFA result	± U (k=2)	0,0459	mg/l	±	0,0041 mg/l
Stability test	± U (k=2)	0,0458	mg/l	±	0,0041 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0,0417	0,0125	mg/l	89%	-0,69
B			mg/l		
C			mg/l		
D			mg/l		
E			mg/l		
F			mg/l		
G			mg/l		
H	0,0440	0,004	mg/l	94%	-0,39
I			mg/l		
J	0,0440	0,004	mg/l	94%	-0,39
K			mg/l		
L	0,0431	0,013	mg/l	92%	-0,51
M	0,0380	0,0038	mg/l	81%	-1,19
N			mg/l		
O	0,0354	0,002	mg/l	75%	-1,53
P	0,0430	0,00965	mg/l	92%	-0,52
Q	0,0420		mg/l	90%	-0,65
R			mg/l		
S			mg/l		
T	0,0453	0,004	mg/l	97%	-0,21
U	0,0340	0,01	mg/l	72%	-1,72
V			mg/l		
W			mg/l		
X	44,65 *	0,598	mg/l	95203%	5943,91
Y	0,0444	0,0042	mg/l	95%	-0,33
Z			mg/l		
AA			mg/l		
AB			mg/l		
AC			mg/l		
AD			mg/l		
AE			mg/l		
AF	0,0420		mg/l	90%	-0,65
AG	0,0320 *	0,0040	mg/l	68%	-1,99
AH	36,3 *	4	mg/l	77399%	4831,17
AI			mg/l		
AJ			mg/l		
AK			mg/l		
AL	48,2900 *	4,82900	mg/l	102964%	6428,98
AM			mg/l		
AN			mg/l		
AO			mg/l		





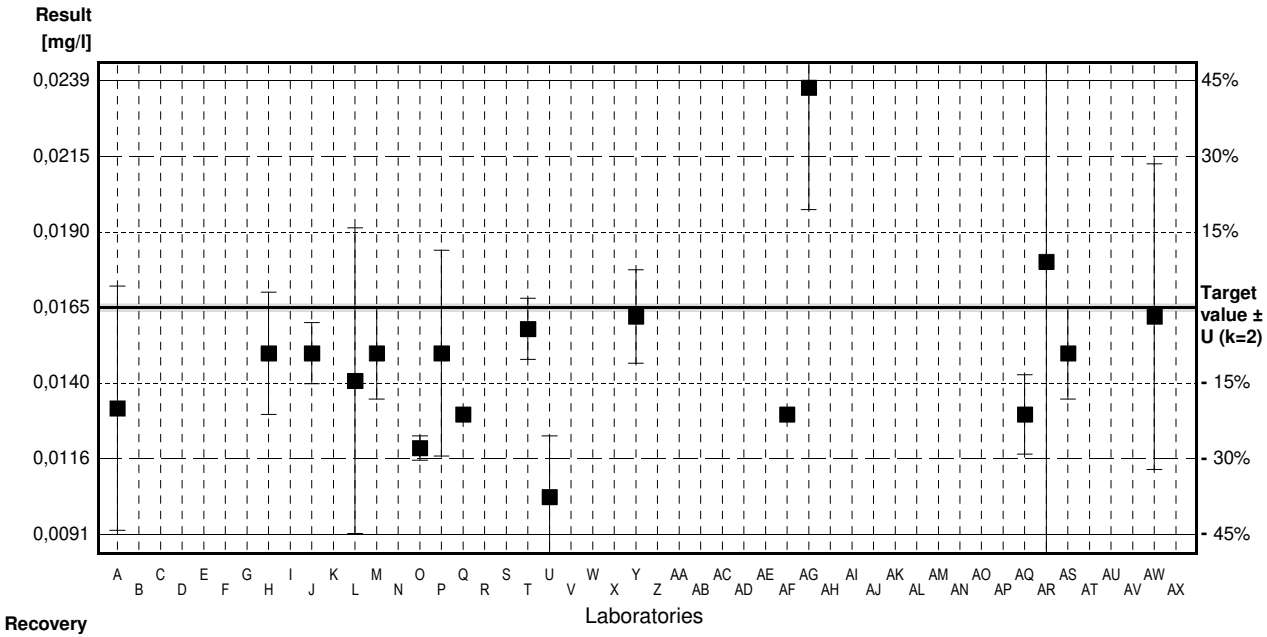
AP			mg/l		
AQ	0,0400	0,004	mg/l	85%	-0,92
AR	0,056 *	0,02	mg/l	119%	1,21
AS	0,0420	0,0042	mg/l	90%	-0,65
AT			mg/l		
AU	0,050	0,013	mg/l	107%	0,41
AV			mg/l		
AW	0,0427	0,011	mg/l	91%	-0,56
AX			mg/l		

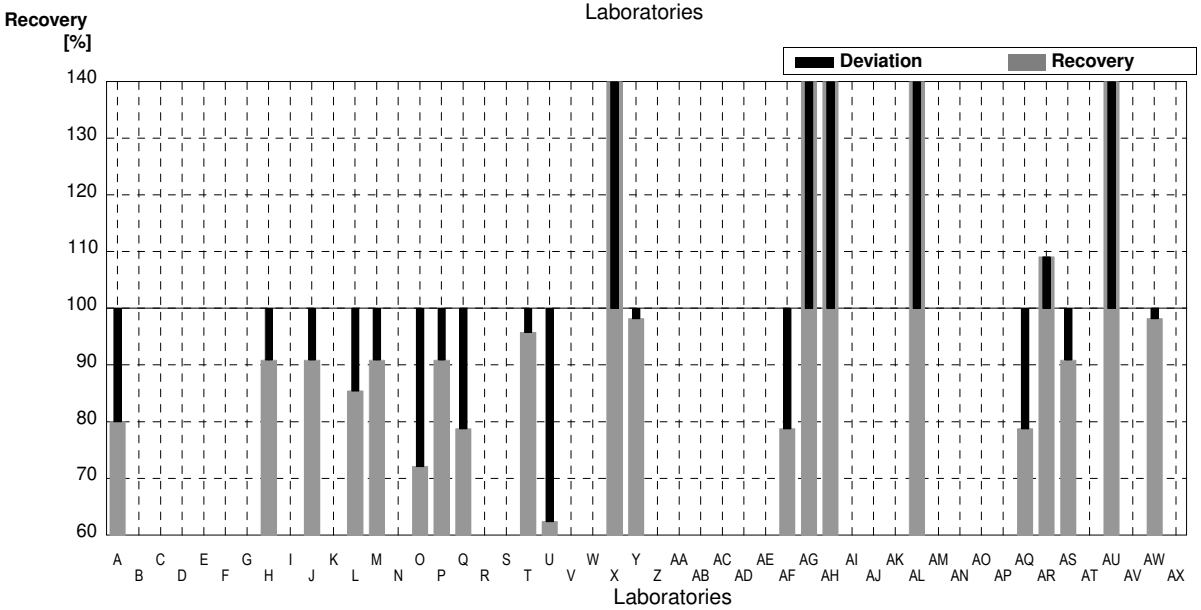
	All results	Outliers excl.	Unit
Mean ± CI(99%)	6,1905 ± 9,6733	0,0420 ± 0,0028	mg/l
Recov. ± CI(99%)	13199,3 ± 20625,	89,5 ± 6,0	%
SD between labs	15,5540	0,0038	mg/l
RSD between labs	251,3	9,1	%
n for calculation	21	16	

Sample N158B
Parameter Cyanide

Target value	± U (k=2)	0,0165	mg/l	±	0,0001 mg/l
IFA result	± U (k=2)	0,0160	mg/l	±	0,0014 mg/l
Stability test	± U (k=2)	0,0158	mg/l	±	0,0014 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0,0132	0,0040	mg/l	80%	-1,25
B			mg/l		
C			mg/l		
D			mg/l		
E			mg/l		
F			mg/l		
G			mg/l		
H	0,0150	0,002	mg/l	91%	-0,57
I			mg/l		
J	0,0150	0,001	mg/l	91%	-0,57
K			mg/l		
L	0,0141	0,005	mg/l	85%	-0,91
M	0,0150	0,0015	mg/l	91%	-0,57
N			mg/l		
O	0,0119	0,0004	mg/l	72%	-1,74
P	0,0150	0,00337	mg/l	91%	-0,57
Q	0,0130		mg/l	79%	-1,33
R			mg/l		
S			mg/l		
T	0,0158	0,001	mg/l	96%	-0,27
U	0,0103	0,002	mg/l	62%	-2,35
V			mg/l		
W			mg/l		
X	15,402 *	0,594	mg/l	93345%	5827,84
Y	0,0162	0,00153	mg/l	98%	-0,11
Z			mg/l		
AA			mg/l		
AB			mg/l		
AC			mg/l		
AD			mg/l		
AE			mg/l		
AF	0,0130		mg/l	79%	-1,33
AG	0,0237	0,0040	mg/l	144%	2,73
AH	12,6 *	1,5	mg/l	76364%	4766,48
AI			mg/l		
AJ			mg/l		
AK			mg/l		
AL	17,7600 *	1,77600	mg/l	107636%	6721,02
AM			mg/l		
AN			mg/l		
AO			mg/l		





AP			mg/l		
AQ	0,0130	0,0013	mg/l	79%	-1,33
AR	0,0180	0,01	mg/l	109%	0,57
AS	0,0150	0,0015	mg/l	91%	-0,57
AT			mg/l		
AU	0,0300 *	0,008	mg/l	182%	5,11
AV			mg/l		
AW	0,0162	0,005	mg/l	98%	-0,11
AX			mg/l		

	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,1926 ± 3,4359	0,0149 ± 0,0021	mg/l
Recov. ± CI(99%)	13288,7 ± 20823,	90,3 ± 12,5	%
SD between labs	5,5247	0,0029	mg/l
RSD between labs	252,0	19,5	%
n for calculation	21	17	

Illustration of Results
Laboratory Oriented Part

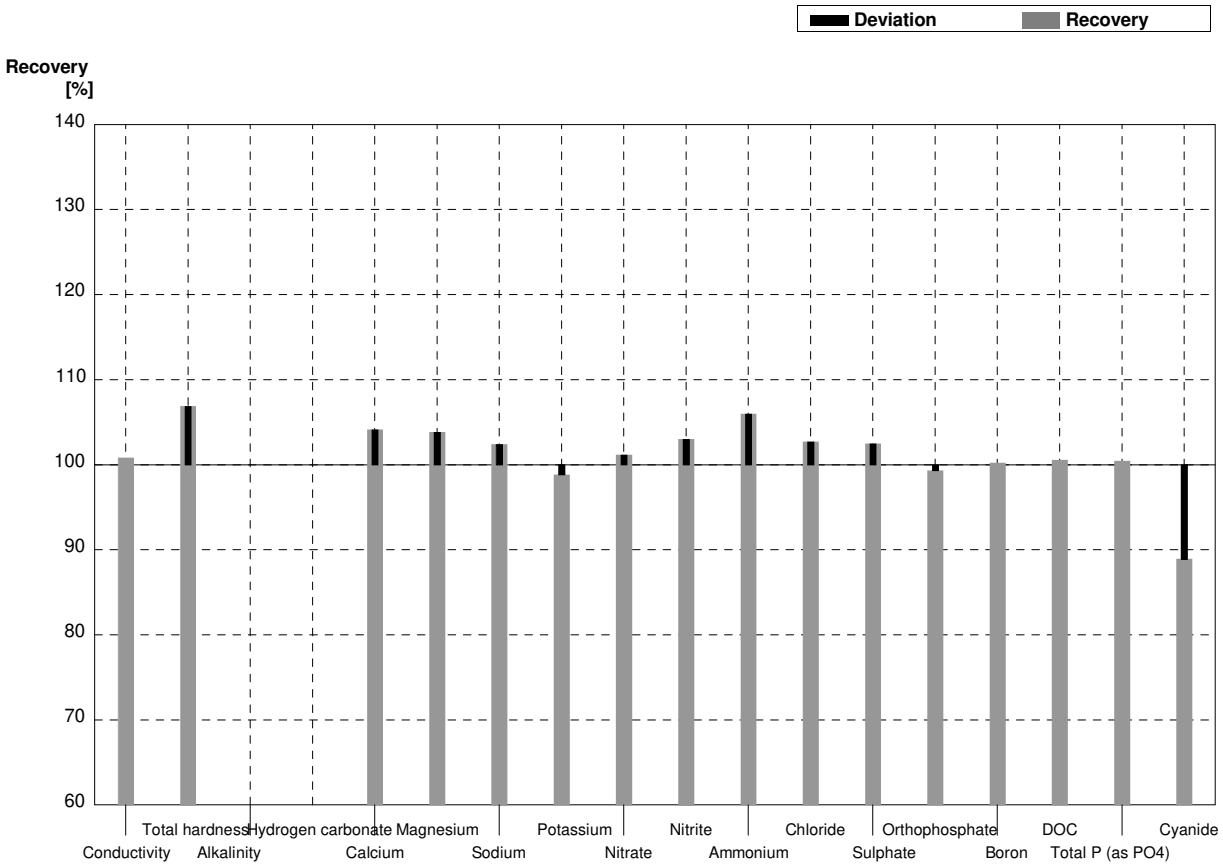
Round N158
Major Ions

Sample Dispatch: 6 September 2021

TULLN

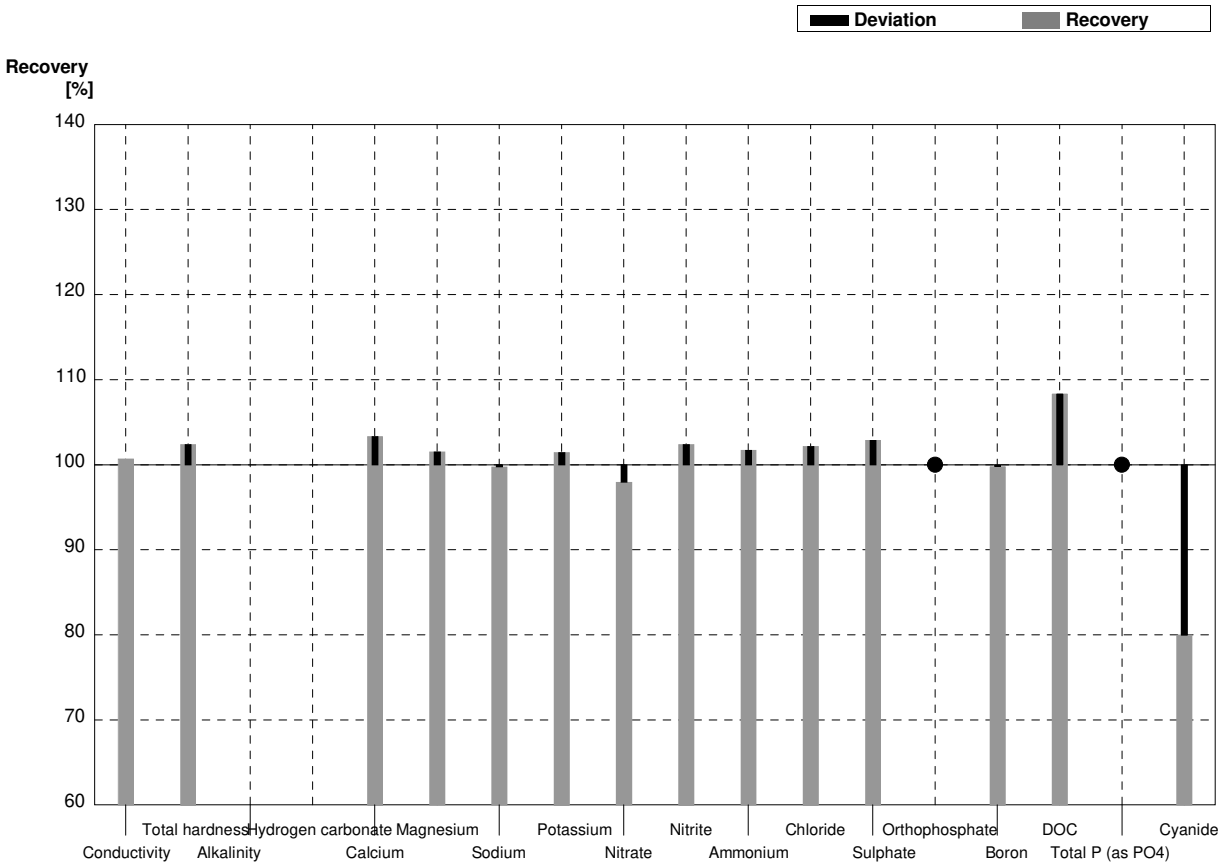
Sample **N158A**
Laboratory **A**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	493	14	µS/cm	101%
Total hardness	2,04	0,02	2,18	0,2	mmol/l	107%
Alkalinity	1,71	0,02			mmol/l	
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7	60,28	3,19	mg/l	104%
Magnesium	14,5	0,2	15,055	1,2	mg/l	104%
Sodium	11,7	0,3	11,981	0,83	mg/l	102%
Potassium	2,30	0,04	2,273	0,13	mg/l	99%
Nitrate	39,9	0,6	40,36	1,89	mg/l	101%
Nitrite	0,0468	0,0010	0,0482	0,0052	mg/l	103%
Ammonium	0,0251	0,0044	0,0266	0,0071	mg/l	106%
Chloride	47,6	0,9	48,88	1,81	mg/l	103%
Sulphate	45,3	0,5	46,41	2,18	mg/l	102%
Orthophosphate	0,132	0,001	0,1311	0,0343	mg/l	99%
Boron	0,0431	0,0002	0,04318	0,0093	mg/l	100%
DOC	5,62	0,03	5,65	0,63	mg/l	101%
Total P (as PO4)	0,184	0,001	0,1848	0,0364	mg/l	100%
Cyanide	0,0469	0,0003	0,0417	0,0125	mg/l	89%



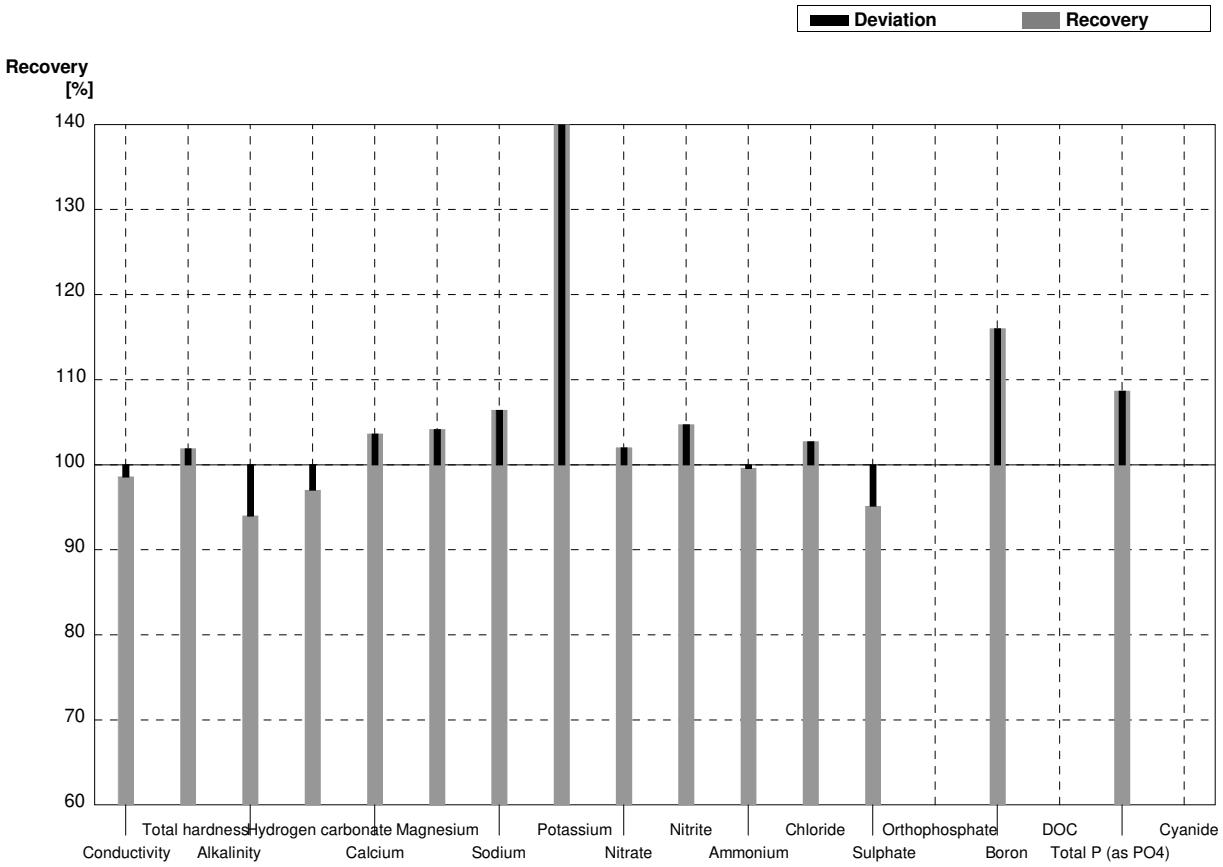
Sample **N158B**
Laboratory **A**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	438	13	µS/cm	101%
Total hardness	1,25	0,02	1,28	0,1	mmol/l	102%
Alkalinity	1,19	0,01			mmol/l	
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6	40,713	2,16	mg/l	103%
Magnesium	6,41	0,09	6,508	0,52	mg/l	102%
Sodium	32,5	0,2	32,423	2,24	mg/l	100%
Potassium	5,52	0,04	5,600	0,32	mg/l	101%
Nitrate	73,3	1,7	71,81	3,38	mg/l	98%
Nitrite	0,063	0,003	0,0645	0,0069	mg/l	102%
Ammonium	0,070	0,003	0,0712	0,0191	mg/l	102%
Chloride	14,7	0,3	15,02	0,56	mg/l	102%
Sulphate	62,6	0,4	64,40	3,02	mg/l	103%
Orthophosphate	<0,009		<0,015		mg/l	•
Boron	0,0244	0,0001	0,02435	0,0052	mg/l	100%
DOC	1,56	0,01	1,69	0,19	mg/l	108%
Total P (as PO4)	<0,009		<0,015		mg/l	•
Cyanide	0,0165	0,0001	0,0132	0,0040	mg/l	80%



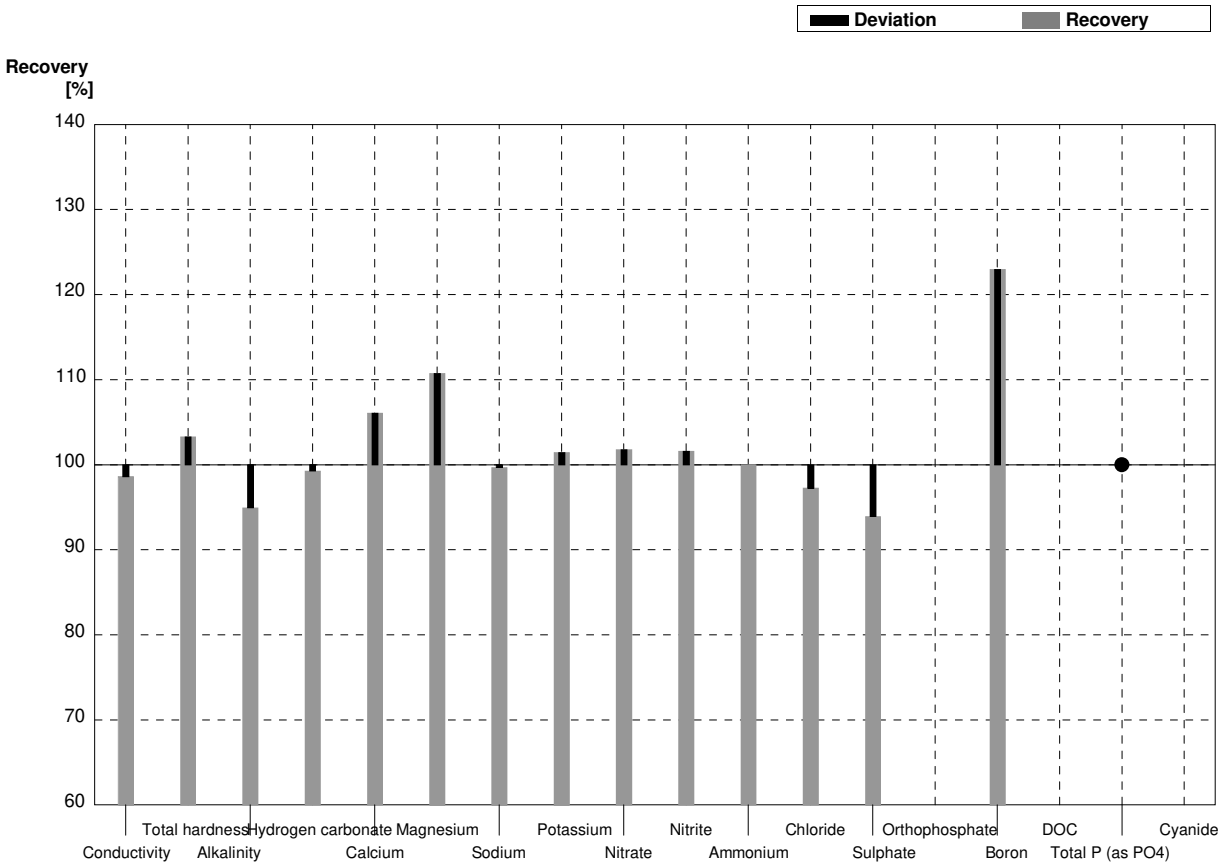
Sample **N158A**
Laboratory **B**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	482	14,0	µS/cm	99%
Total hardness	2,04	0,02	2,079	0,025	mmol/l	102%
Alkalinity	1,71	0,02	1,607	0,025	mmol/l	94%
Hydrogen carbonate	101	1	98	10	mg/l	97%
Calcium	57,9	0,7	60,0	2	mg/l	104%
Magnesium	14,5	0,2	15,1	0,4	mg/l	104%
Sodium	11,7	0,3	12,45	1	mg/l	106%
Potassium	2,30	0,04	5,45	0,2	mg/l	237%
Nitrate	39,9	0,6	40,7	1	mg/l	102%
Nitrite	0,0468	0,0010	0,0490	0,01	mg/l	105%
Ammonium	0,0251	0,0044	0,0250	0,01	mg/l	100%
Chloride	47,6	0,9	48,9	1	mg/l	103%
Sulphate	45,3	0,5	43,1	1,5	mg/l	95%
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002	0,050	0,01	mg/l	116%
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001	0,2000	0,05	mg/l	109%
Cyanide	0,0469	0,0003			mg/l	



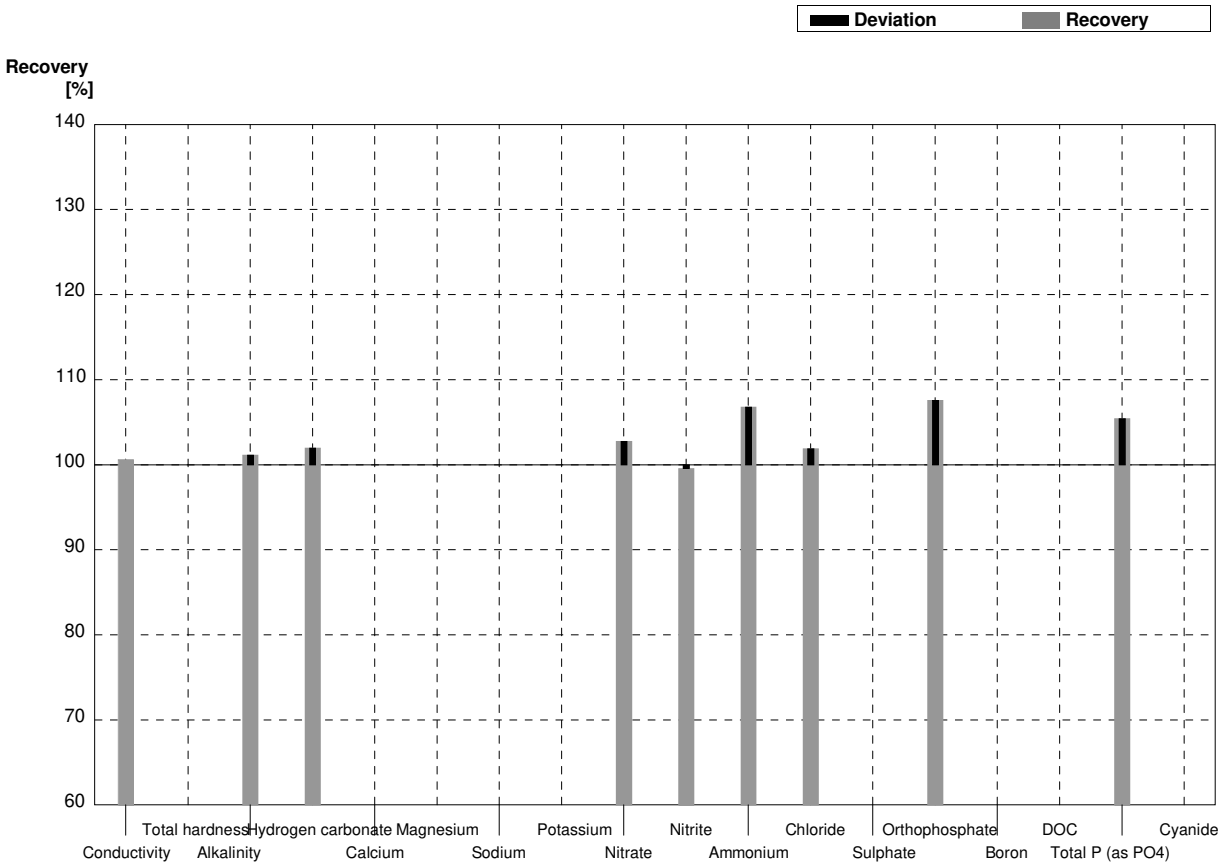
Sample N158B
Laboratory B

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	429	14,0	µS/cm	99%
Total hardness	1,25	0,02	1,291	0,025	mmol/l	103%
Alkalinity	1,19	0,01	1,130	0,025	mmol/l	95%
Hydrogen carbonate	69,5	0,4	69	10	mg/l	99%
Calcium	39,4	0,6	41,8	2	mg/l	106%
Magnesium	6,41	0,09	7,1	0,4	mg/l	111%
Sodium	32,5	0,2	32,4	1	mg/l	100%
Potassium	5,52	0,04	5,60	0,2	mg/l	101%
Nitrate	73,3	1,7	74,6	1	mg/l	102%
Nitrite	0,063	0,003	0,0640	0,01	mg/l	102%
Ammonium	0,070	0,003	0,0700	0,01	mg/l	100%
Chloride	14,7	0,3	14,3	1	mg/l	97%
Sulphate	62,6	0,4	58,8	1,5	mg/l	94%
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001	0,0300	0,01	mg/l	123%
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009		'0,0100	0,05	mg/l	•
Cyanide	0,0165	0,0001			mg/l	



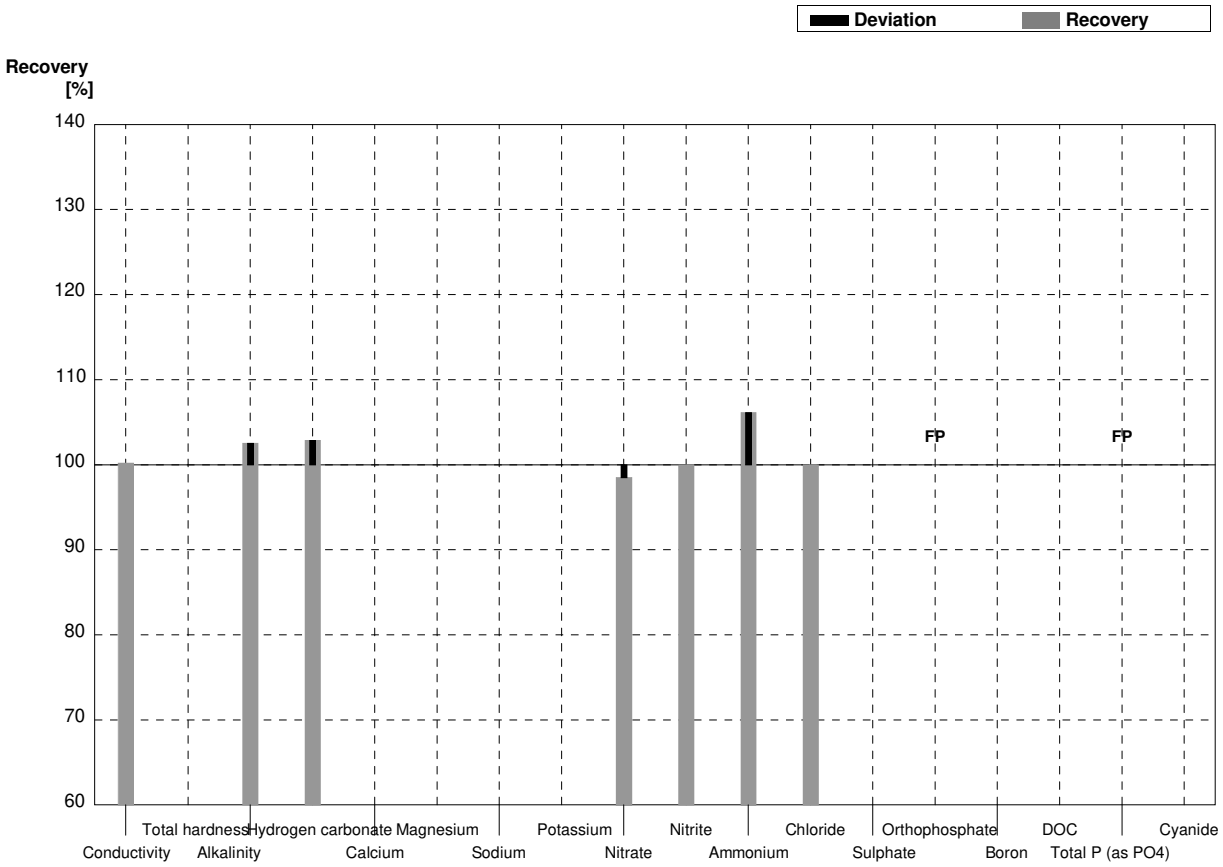
Sample **N158A**
Laboratory **C**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	492	3,48	µS/cm	101%
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02	1,73	0,05	mmol/l	101%
Hydrogen carbonate	101	1	103	1,49	mg/l	102%
Calcium	57,9	0,7			mg/l	
Magnesium	14,5	0,2			mg/l	
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6	41,0	2,81	mg/l	103%
Nitrite	0,0468	0,0010	0,0466	0,0047	mg/l	100%
Ammonium	0,0251	0,0044	0,0268	0,0040	mg/l	107%
Chloride	47,6	0,9	48,5	0,49	mg/l	102%
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001	0,142	0,017	mg/l	108%
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001	0,194	0,026	mg/l	105%
Cyanide	0,0469	0,0003			mg/l	



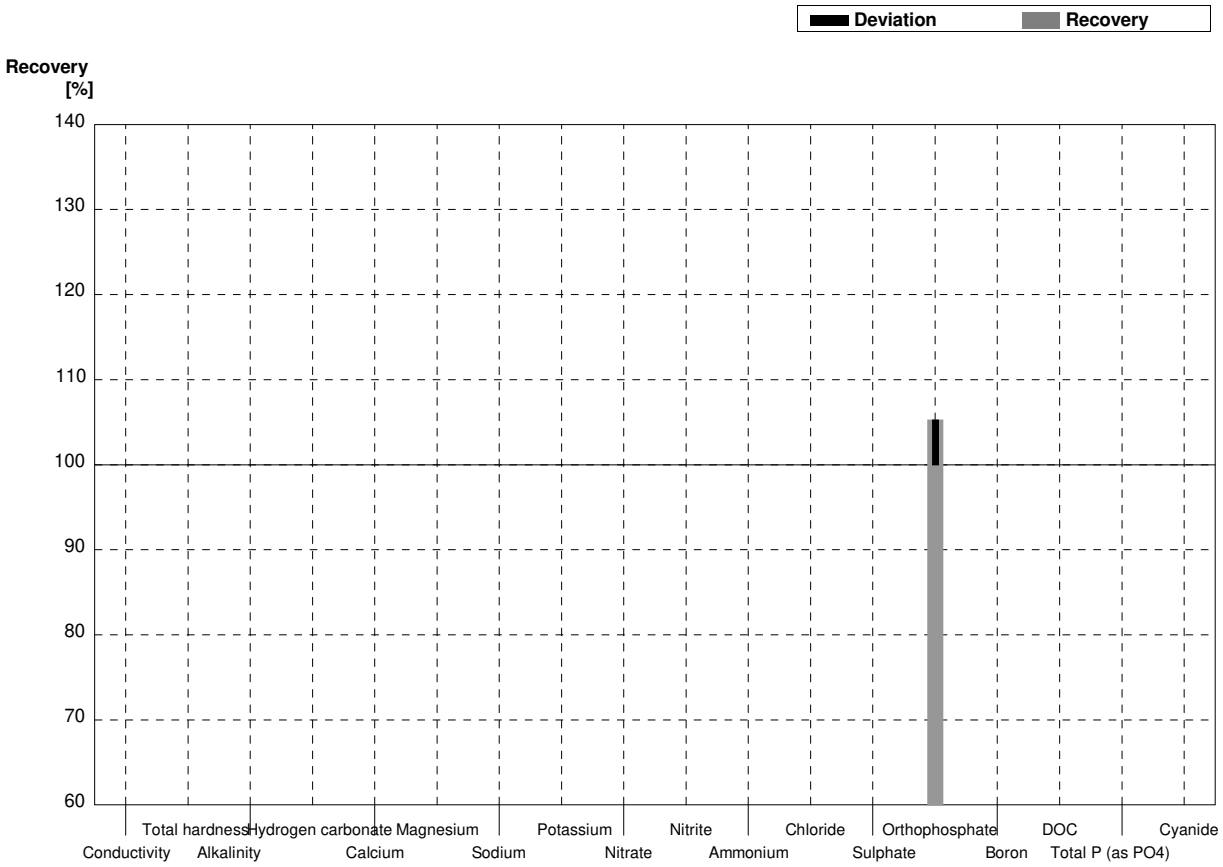
Sample **N158B**
Laboratory **C**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	436	3,09	µS/cm	100%
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01	1,22	0,03	mmol/l	103%
Hydrogen carbonate	69,5	0,4	71,5	1,03	mg/l	103%
Calcium	39,4	0,6			mg/l	
Magnesium	6,41	0,09			mg/l	
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7	72,2	4,95	mg/l	98%
Nitrite	0,063	0,003	0,0630	0,0063	mg/l	100%
Ammonium	0,070	0,003	0,0743	0,0112	mg/l	106%
Chloride	14,7	0,3	14,7	0,15	mg/l	100%
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009		0,0105	0,0012	mg/l	FP
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009		0,0120	0,0016	mg/l	FP
Cyanide	0,0165	0,0001			mg/l	



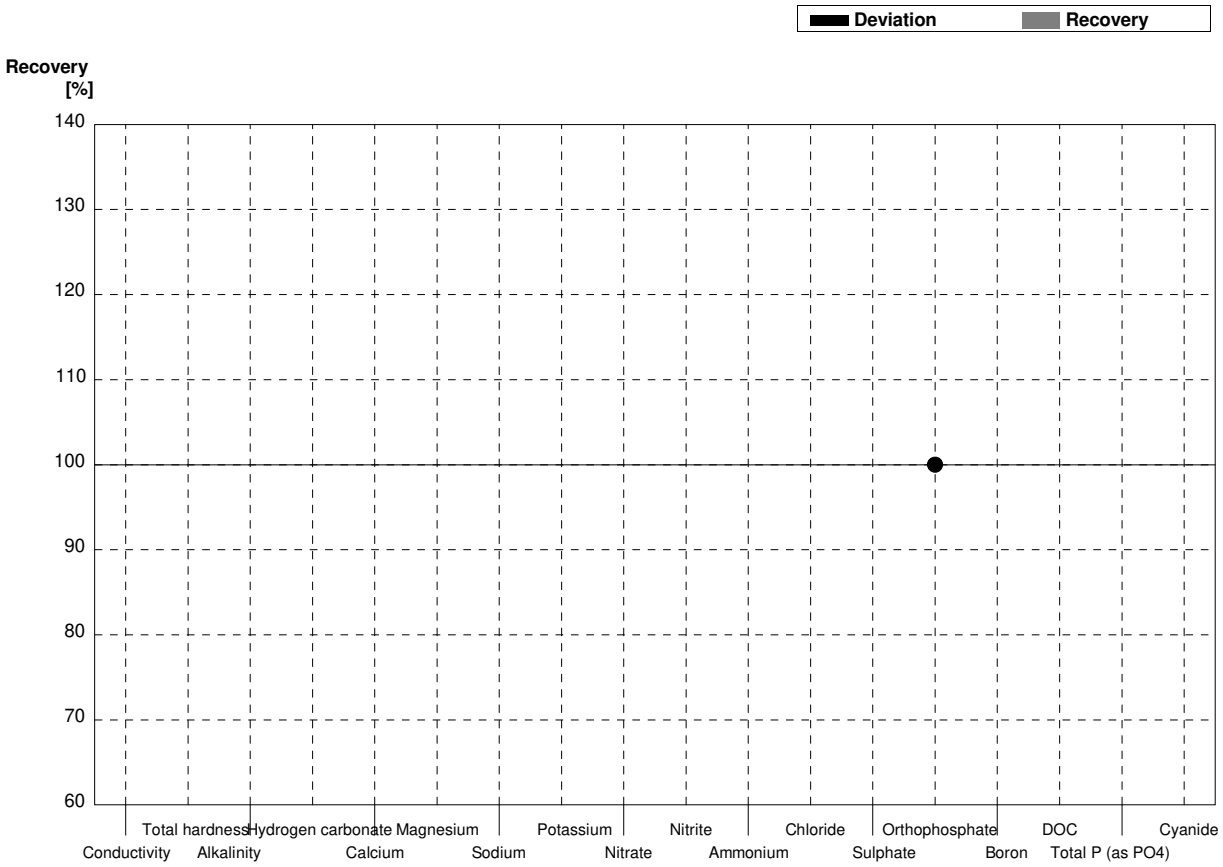
Sample **N158A**
Laboratory **D**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02			mmol/l	
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7			mg/l	
Magnesium	14,5	0,2			mg/l	
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6			mg/l	
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9			mg/l	
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001	0,139	0,010	mg/l	105%
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



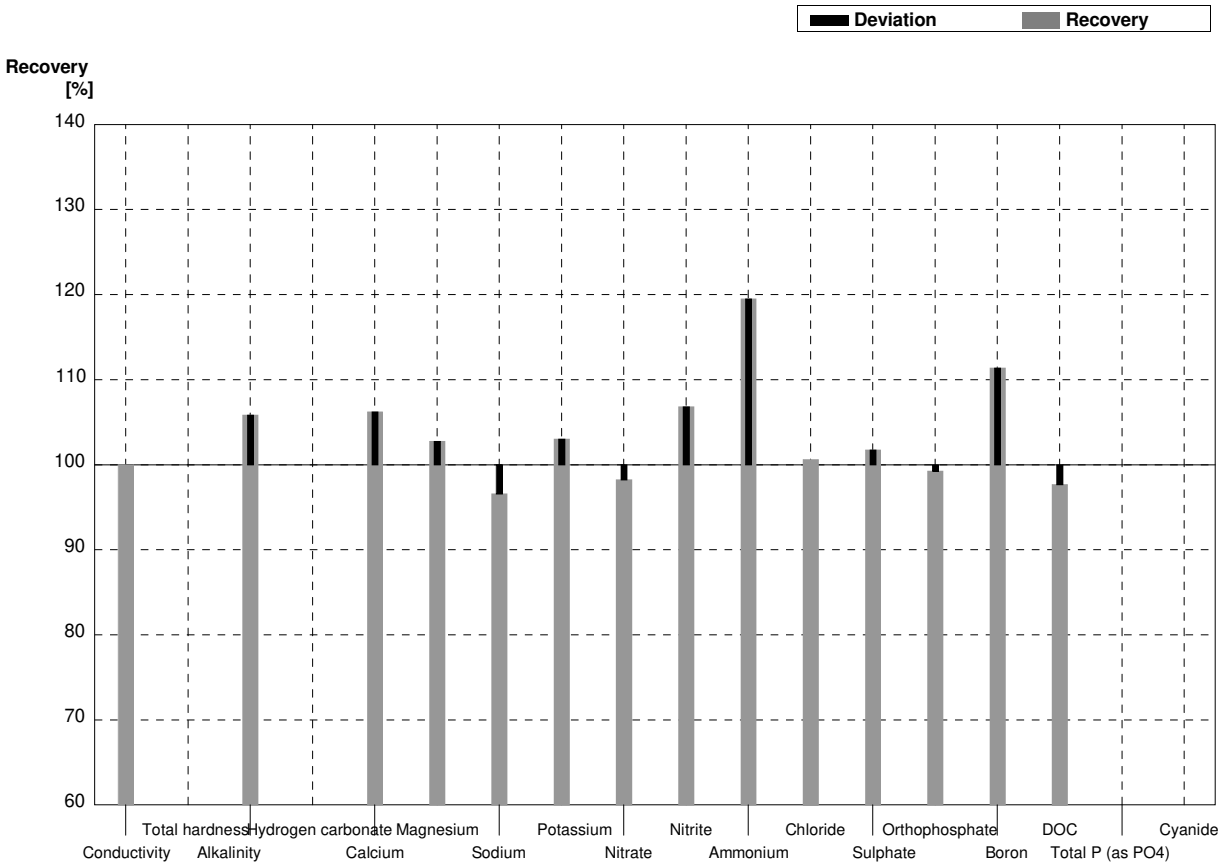
Sample **N158B**
Laboratory **D**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01			mmol/l	
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6			mg/l	
Magnesium	6,41	0,09			mg/l	
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7			mg/l	
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3			mg/l	
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009		<0,05	0,005	mg/l	•
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



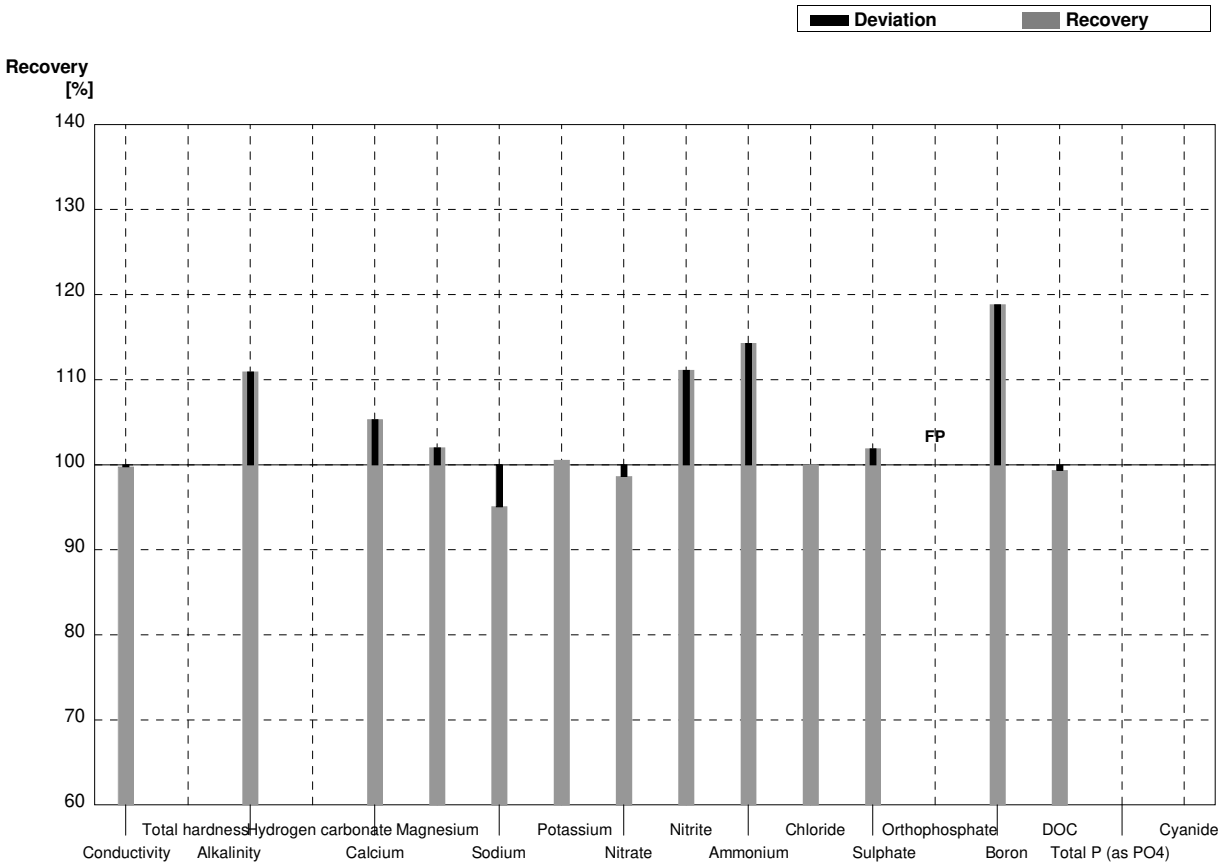
Sample **N158A**
Laboratory **E**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	489		µS/cm	100%
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02	1,81		mmol/l	106%
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7	61,5		mg/l	106%
Magnesium	14,5	0,2	14,9		mg/l	103%
Sodium	11,7	0,3	11,3		mg/l	97%
Potassium	2,30	0,04	2,37		mg/l	103%
Nitrate	39,9	0,6	39,2		mg/l	98%
Nitrite	0,0468	0,0010	0,050		mg/l	107%
Ammonium	0,0251	0,0044	0,0300		mg/l	120%
Chloride	47,6	0,9	47,9		mg/l	101%
Sulphate	45,3	0,5	46,1		mg/l	102%
Orthophosphate	0,132	0,001	0,131		mg/l	99%
Boron	0,0431	0,0002	0,0480		mg/l	111%
DOC	5,62	0,03	5,49		mg/l	98%
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



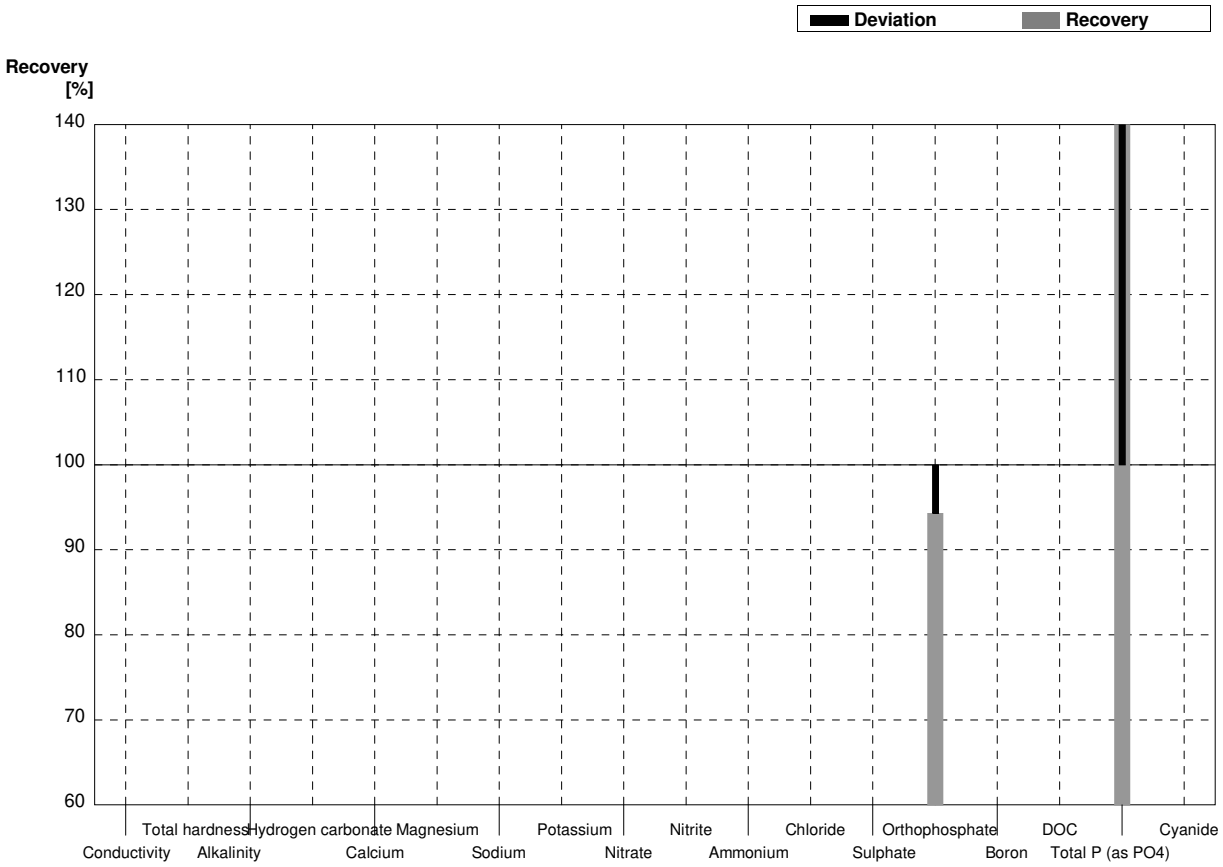
Sample **N158B**
Laboratory **E**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	434		µS/cm	100%
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01	1,32		mmol/l	111%
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6	41,5		mg/l	105%
Magnesium	6,41	0,09	6,54		mg/l	102%
Sodium	32,5	0,2	30,9		mg/l	95%
Potassium	5,52	0,04	5,55		mg/l	101%
Nitrate	73,3	1,7	72,3		mg/l	99%
Nitrite	0,063	0,003	0,070		mg/l	111%
Ammonium	0,070	0,003	0,080		mg/l	114%
Chloride	14,7	0,3	14,7		mg/l	100%
Sulphate	62,6	0,4	63,8		mg/l	102%
Orthophosphate	<0,009		0,0200		mg/l	FP
Boron	0,0244	0,0001	0,0290		mg/l	119%
DOC	1,56	0,01	1,55		mg/l	99%
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



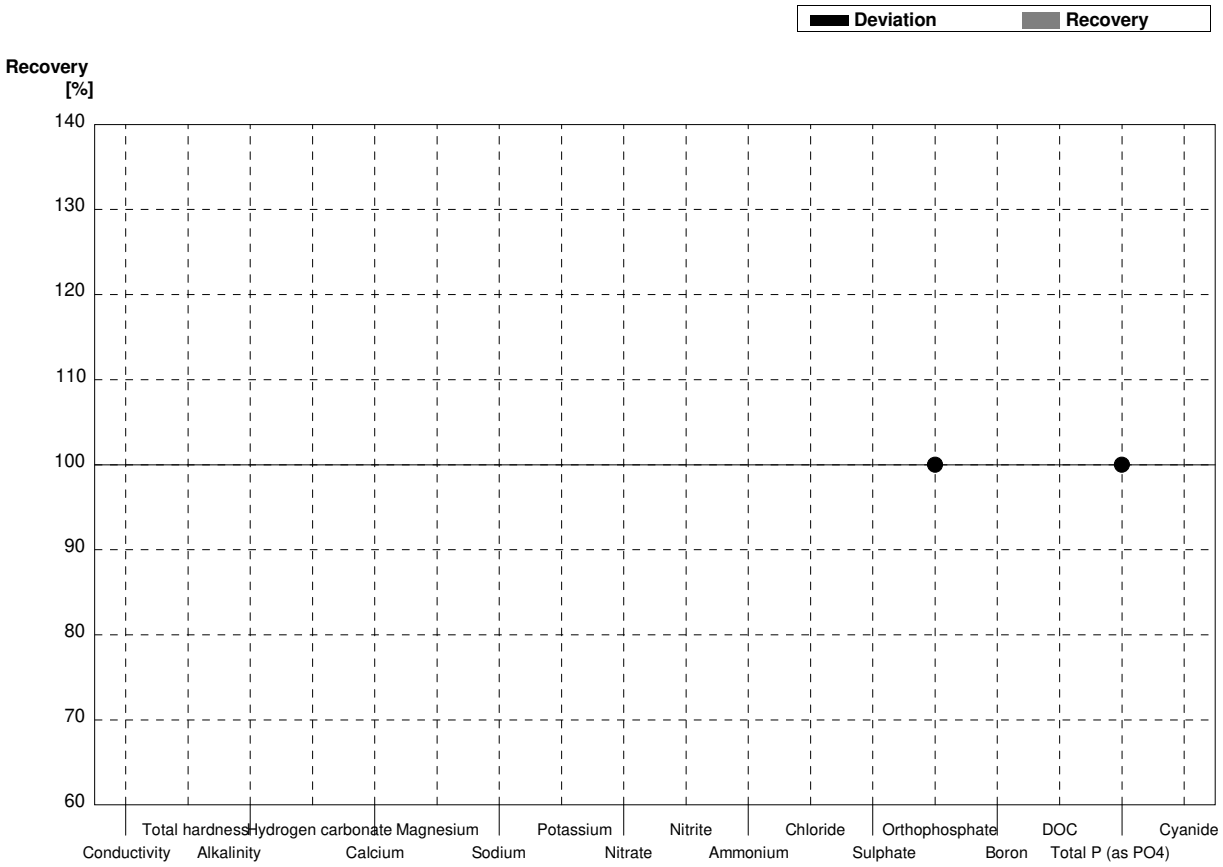
Sample **N158A**
Laboratory **F**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02			mmol/l	
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7			mg/l	
Magnesium	14,5	0,2			mg/l	
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6			mg/l	
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9			mg/l	
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001	0,1245	0,0082	mg/l	94%
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001	0,4879	0,0334	mg/l	265%
Cyanide	0,0469	0,0003			mg/l	



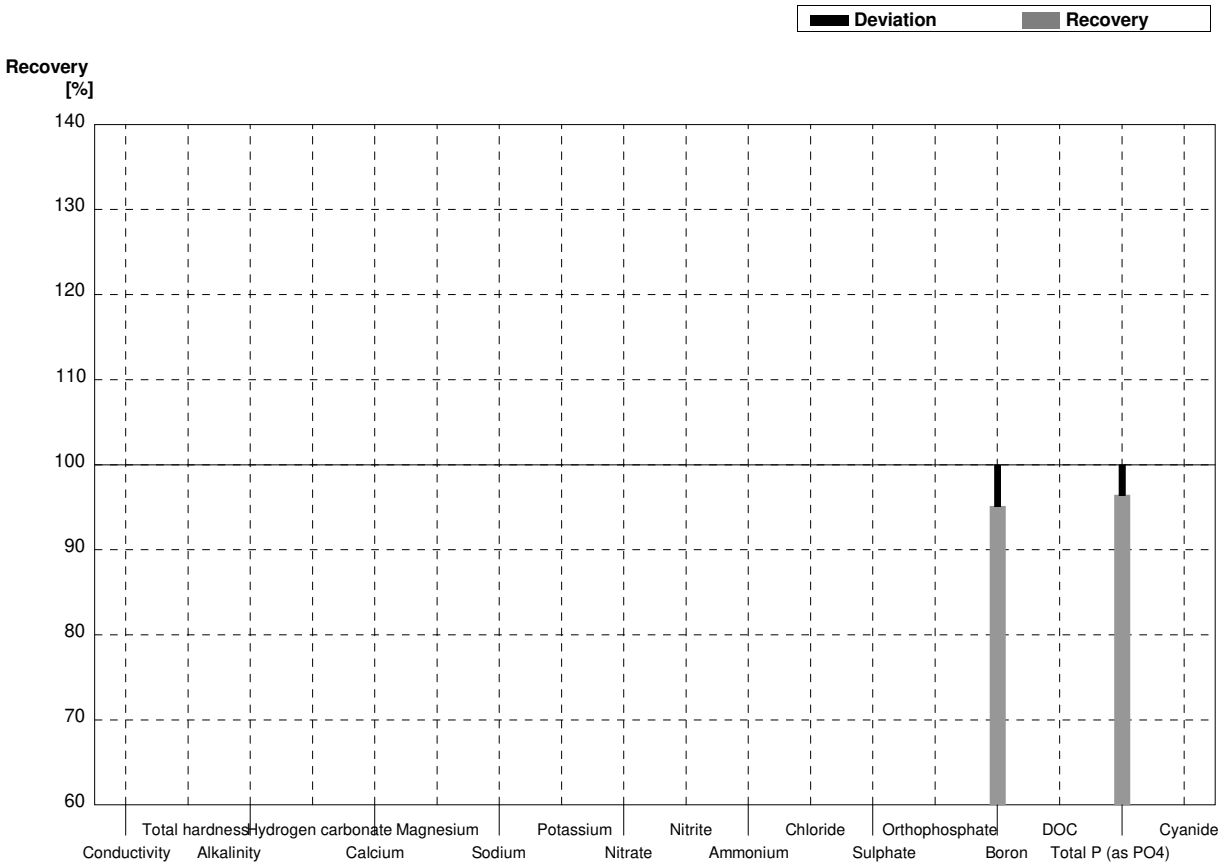
Sample **N158B**
Laboratory **F**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01			mmol/l	
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6			mg/l	
Magnesium	6,41	0,09			mg/l	
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7			mg/l	
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3			mg/l	
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009		<0,01		mg/l	•
Cyanide	0,0165	0,0001			mg/l	



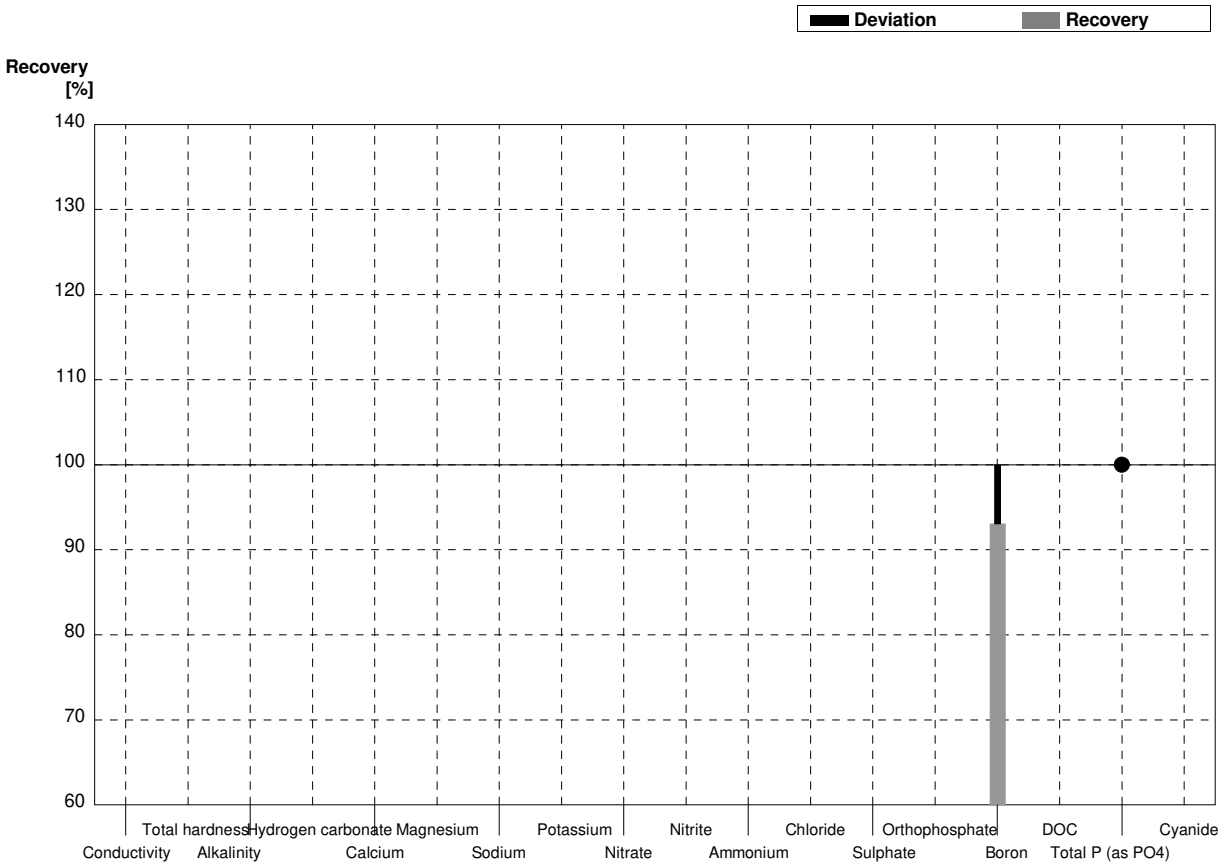
Sample **N158A**
Laboratory **G**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02			mmol/l	
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7			mg/l	
Magnesium	14,5	0,2			mg/l	
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6			mg/l	
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9			mg/l	
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002	0,04099		mg/l	95%
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001	0,17747		mg/l	96%
Cyanide	0,0469	0,0003			mg/l	



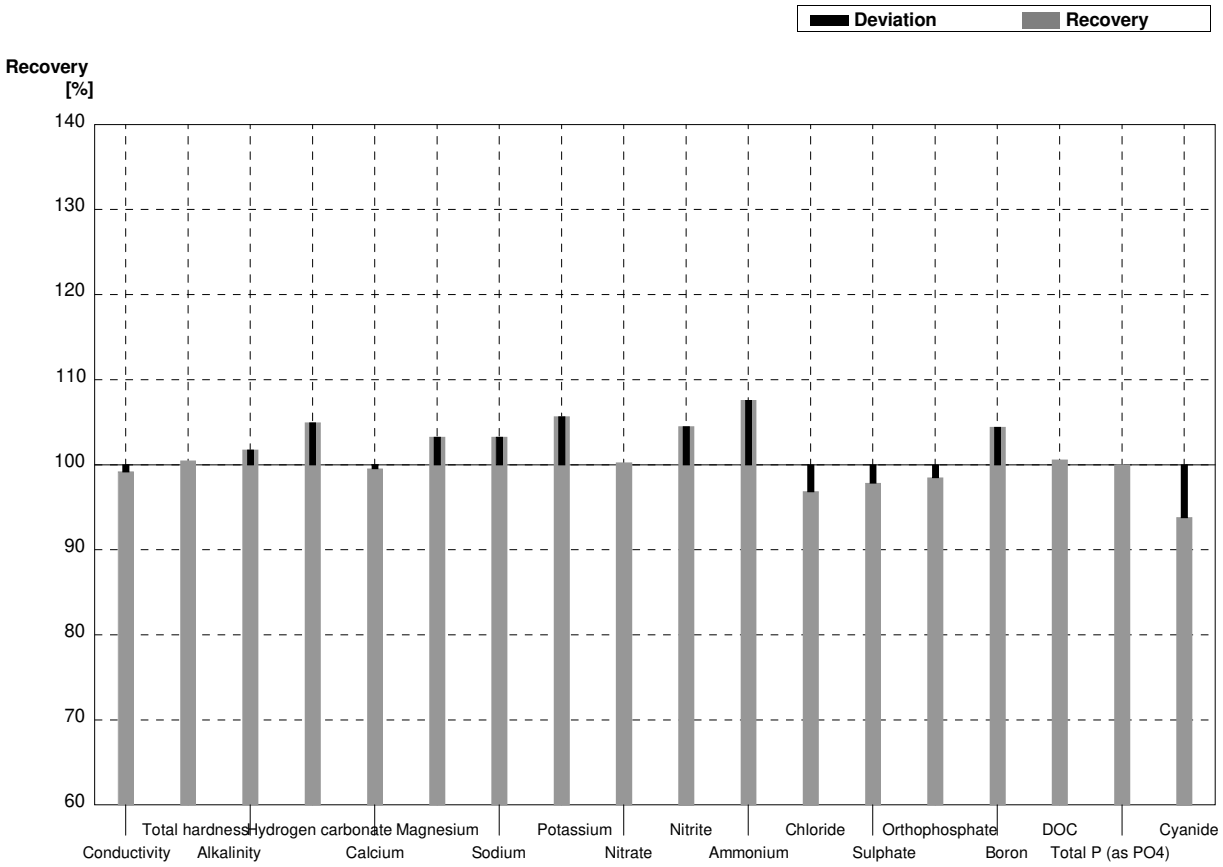
Sample **N158B**
Laboratory **G**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01			mmol/l	
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6			mg/l	
Magnesium	6,41	0,09			mg/l	
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7			mg/l	
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3			mg/l	
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001	0,02271		mg/l	93%
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009		<0,0300		mg/l	•
Cyanide	0,0165	0,0001			mg/l	



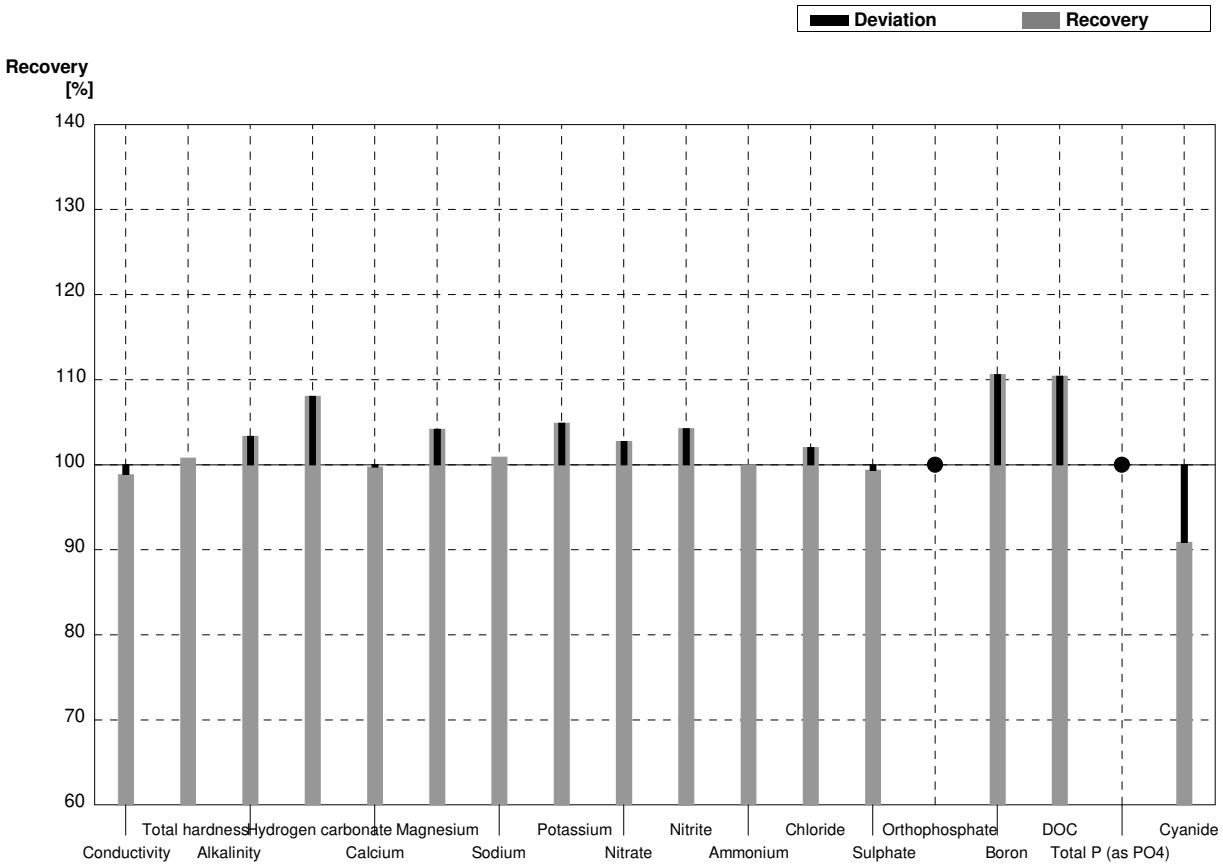
Sample **N158A**
Laboratory **H**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	485	24	µS/cm	99%
Total hardness	2,04	0,02	2,05	0,2	mmol/l	100%
Alkalinity	1,71	0,02	1,74	0,095	mmol/l	102%
Hydrogen carbonate	101	1	106	5,3	mg/l	105%
Calcium	57,9	0,7	57,64	5,8	mg/l	100%
Magnesium	14,5	0,2	14,97	1,5	mg/l	103%
Sodium	11,7	0,3	12,08	1,2	mg/l	103%
Potassium	2,30	0,04	2,43	0,24	mg/l	106%
Nitrate	39,9	0,6	40,0	2,0	mg/l	100%
Nitrite	0,0468	0,0010	0,0489	0,0049	mg/l	104%
Ammonium	0,0251	0,0044	0,0270	0,003	mg/l	108%
Chloride	47,6	0,9	46,1	4,61	mg/l	97%
Sulphate	45,3	0,5	44,33	4,43	mg/l	98%
Orthophosphate	0,132	0,001	0,130	0,013	mg/l	98%
Boron	0,0431	0,0002	0,0450	0,005	mg/l	104%
DOC	5,62	0,03	5,653	1,023	mg/l	101%
Total P (as PO4)	0,184	0,001	0,184	0,018	mg/l	100%
Cyanide	0,0469	0,0003	0,0440	0,004	mg/l	94%



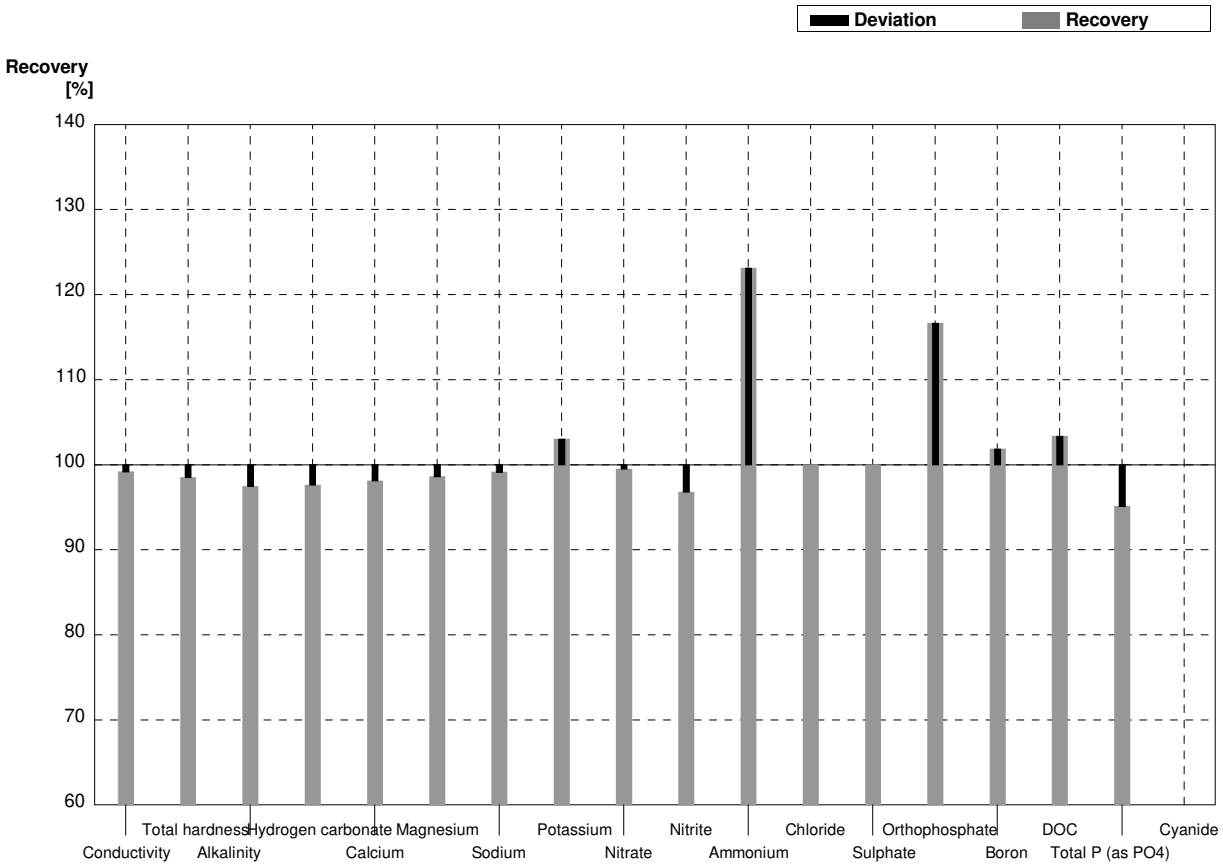
Sample N158B
Laboratory H

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	430	21,5	µS/cm	99%
Total hardness	1,25	0,02	1,26	0,13	mmol/l	101%
Alkalinity	1,19	0,01	1,23	0,067	mmol/l	103%
Hydrogen carbonate	69,5	0,4	75,1	3,8	mg/l	108%
Calcium	39,4	0,6	39,3	3,9	mg/l	100%
Magnesium	6,41	0,09	6,68	0,7	mg/l	104%
Sodium	32,5	0,2	32,8	3,3	mg/l	101%
Potassium	5,52	0,04	5,79	0,58	mg/l	105%
Nitrate	73,3	1,7	75,32	3,77	mg/l	103%
Nitrite	0,063	0,003	0,0657	0,0066	mg/l	104%
Ammonium	0,070	0,003	0,070	0,007	mg/l	100%
Chloride	14,7	0,3	15,0	1,5	mg/l	102%
Sulphate	62,6	0,4	62,21	6,22	mg/l	99%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,0244	0,0001	0,0270	0,003	mg/l	111%
DOC	1,56	0,01	1,723	0,312	mg/l	110%
Total P (as PO4)	<0,009		<0,01		mg/l	•
Cyanide	0,0165	0,0001	0,0150	0,002	mg/l	91%



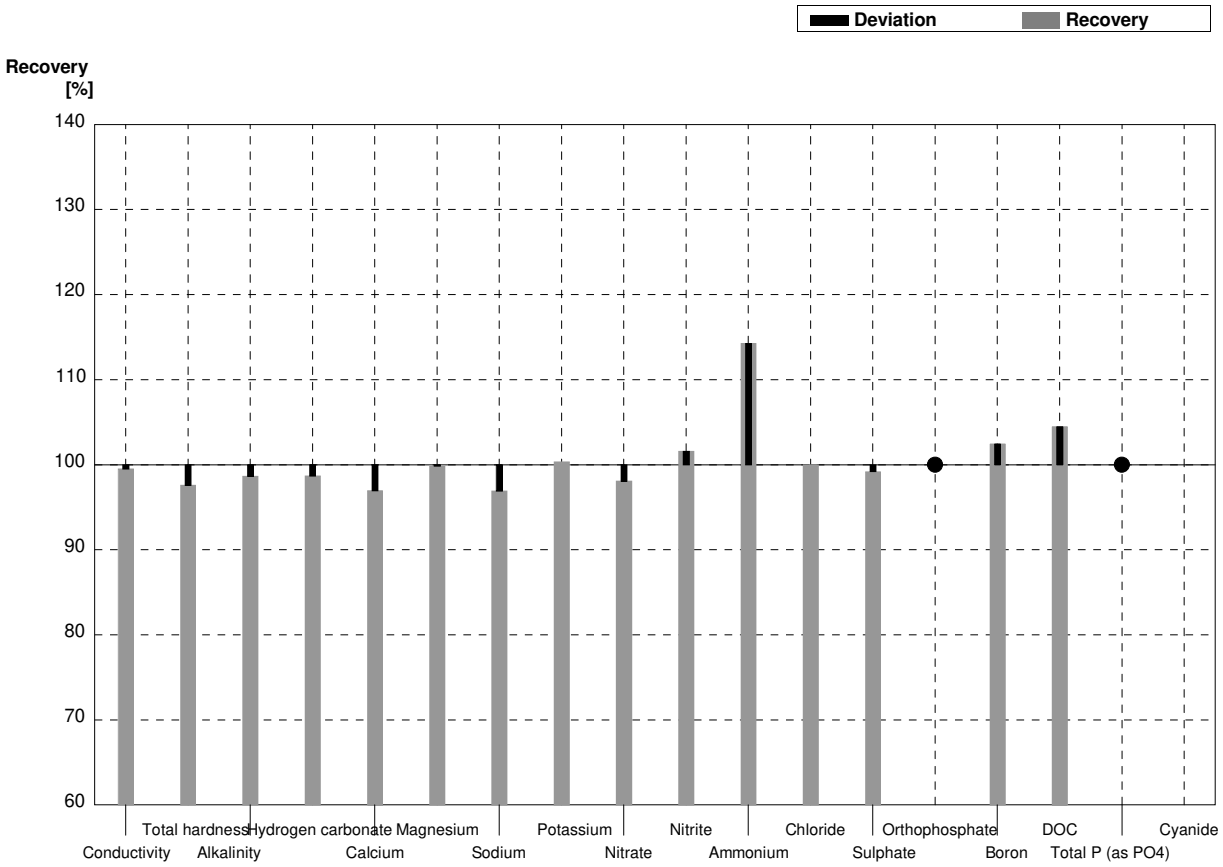
Sample N158A
Laboratory I

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	485	19	µS/cm	99%
Total hardness	2,04	0,02	2,01	0,11	mmol/l	99%
Alkalinity	1,71	0,02	1,667	0,131	mmol/l	97%
Hydrogen carbonate	101	1	98,6	8,0	mg/l	98%
Calcium	57,9	0,7	56,8	2,7	mg/l	98%
Magnesium	14,5	0,2	14,3	0,9	mg/l	99%
Sodium	11,7	0,3	11,6	0,6	mg/l	99%
Potassium	2,30	0,04	2,37	0,13	mg/l	103%
Nitrate	39,9	0,6	39,7	2,4	mg/l	99%
Nitrite	0,0468	0,0010	0,0453	0,0052	mg/l	97%
Ammonium	0,0251	0,0044	0,0309	0,0071	mg/l	123%
Chloride	47,6	0,9	47,6	3,8	mg/l	100%
Sulphate	45,3	0,5	45,3	4,2	mg/l	100%
Orthophosphate	0,132	0,001	0,154	0,020	mg/l	117%
Boron	0,0431	0,0002	0,0439	0,0048	mg/l	102%
DOC	5,62	0,03	5,81	1,08	mg/l	103%
Total P (as PO4)	0,184	0,001	0,175	0,028	mg/l	95%
Cyanide	0,0469	0,0003			mg/l	



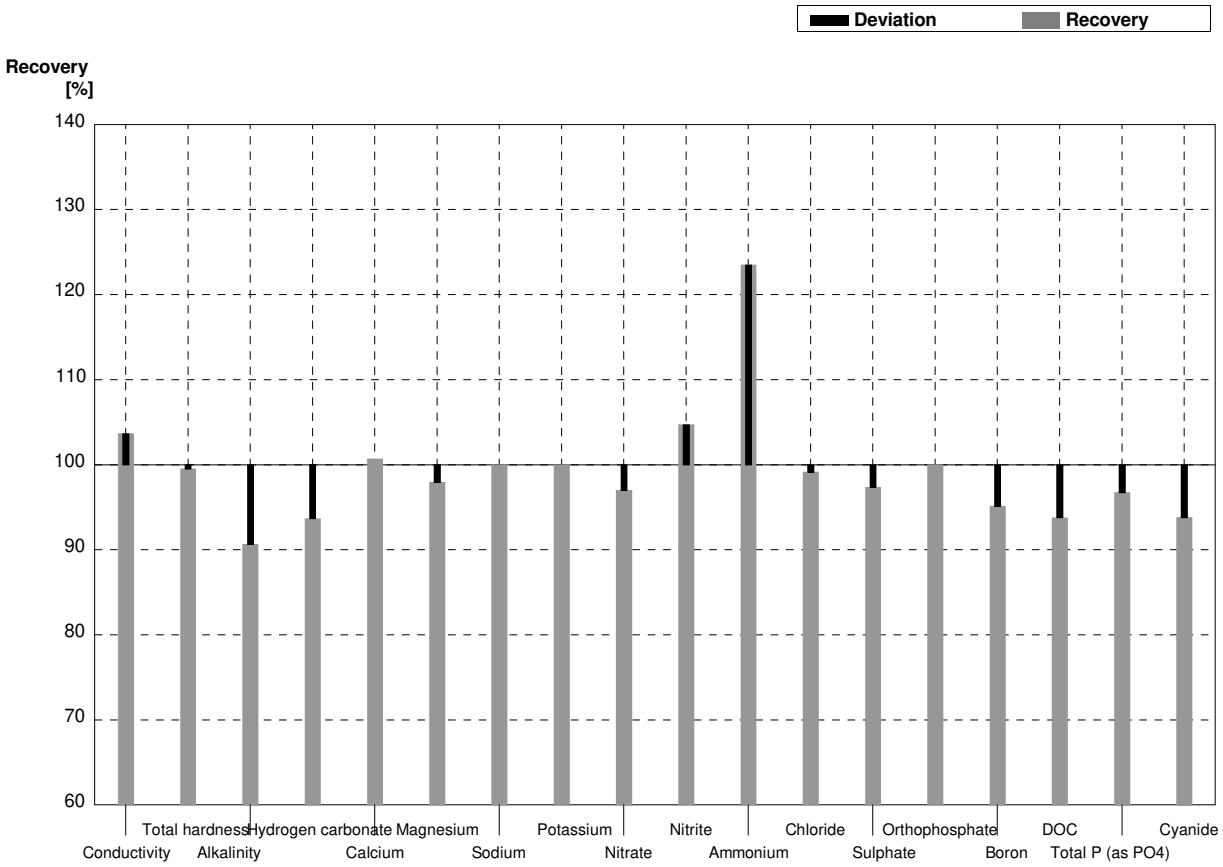
Sample N158B
Laboratory I

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	433	17	µS/cm	100%
Total hardness	1,25	0,02	1,22	0,06	mmol/l	98%
Alkalinity	1,19	0,01	1,174	0,100	mmol/l	99%
Hydrogen carbonate	69,5	0,4	68,6	6,1	mg/l	99%
Calcium	39,4	0,6	38,2	1,9	mg/l	97%
Magnesium	6,41	0,09	6,4	0,4	mg/l	100%
Sodium	32,5	0,2	31,5	1,6	mg/l	97%
Potassium	5,52	0,04	5,54	0,2	mg/l	100%
Nitrate	73,3	1,7	71,9	4,4	mg/l	98%
Nitrite	0,063	0,003	0,064	0,006	mg/l	102%
Ammonium	0,070	0,003	0,080	0,01	mg/l	114%
Chloride	14,7	0,3	14,7	1,4	mg/l	100%
Sulphate	62,6	0,4	62,1	5,7	mg/l	99%
Orthophosphate	<0,009		<0,010		mg/l	•
Boron	0,0244	0,0001	0,0250	0,0031	mg/l	102%
DOC	1,56	0,01	1,63	0,41	mg/l	104%
Total P (as PO4)	<0,009		<0,010		mg/l	•
Cyanide	0,0165	0,0001			mg/l	



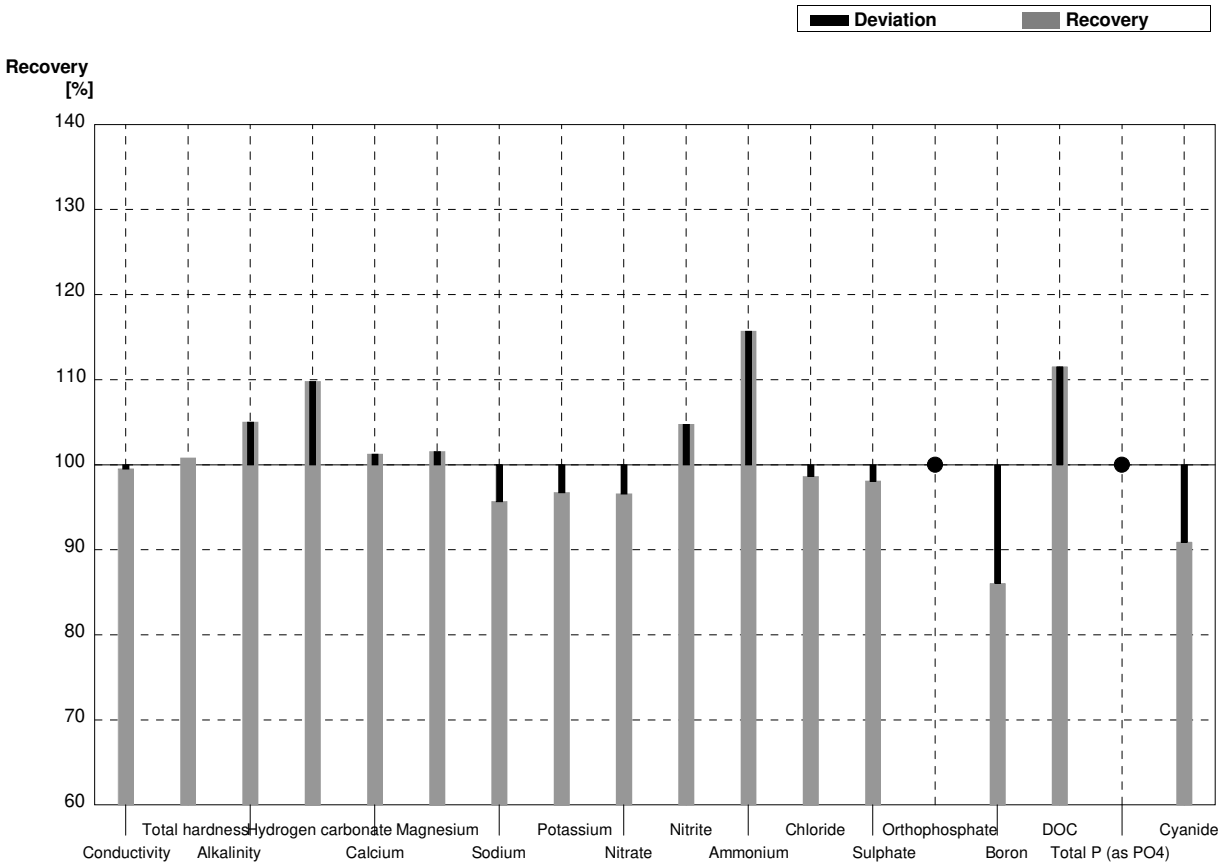
Sample N158A
Laboratory J

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	507	15	µS/cm	104%
Total hardness	2,04	0,02	2,03	0,28	mmol/l	100%
Alkalinity	1,71	0,02	1,55	0,06	mmol/l	91%
Hydrogen carbonate	101	1	94,6	3,78	mg/l	94%
Calcium	57,9	0,7	58,3	8,2	mg/l	101%
Magnesium	14,5	0,2	14,2	1,3	mg/l	98%
Sodium	11,7	0,3	11,7	1,1	mg/l	100%
Potassium	2,30	0,04	2,30	0,18	mg/l	100%
Nitrate	39,9	0,6	38,7	3,5	mg/l	97%
Nitrite	0,0468	0,0010	0,0490	0,0020	mg/l	105%
Ammonium	0,0251	0,0044	0,0310	0,0020	mg/l	124%
Chloride	47,6	0,9	47,2	3,8	mg/l	99%
Sulphate	45,3	0,5	44,1	2,6	mg/l	97%
Orthophosphate	0,132	0,001	0,132	0,012	mg/l	100%
Boron	0,0431	0,0002	0,0410	0,007	mg/l	95%
DOC	5,62	0,03	5,27	0,63	mg/l	94%
Total P (as PO4)	0,184	0,001	0,178	0,016	mg/l	97%
Cyanide	0,0469	0,0003	0,0440	0,004	mg/l	94%



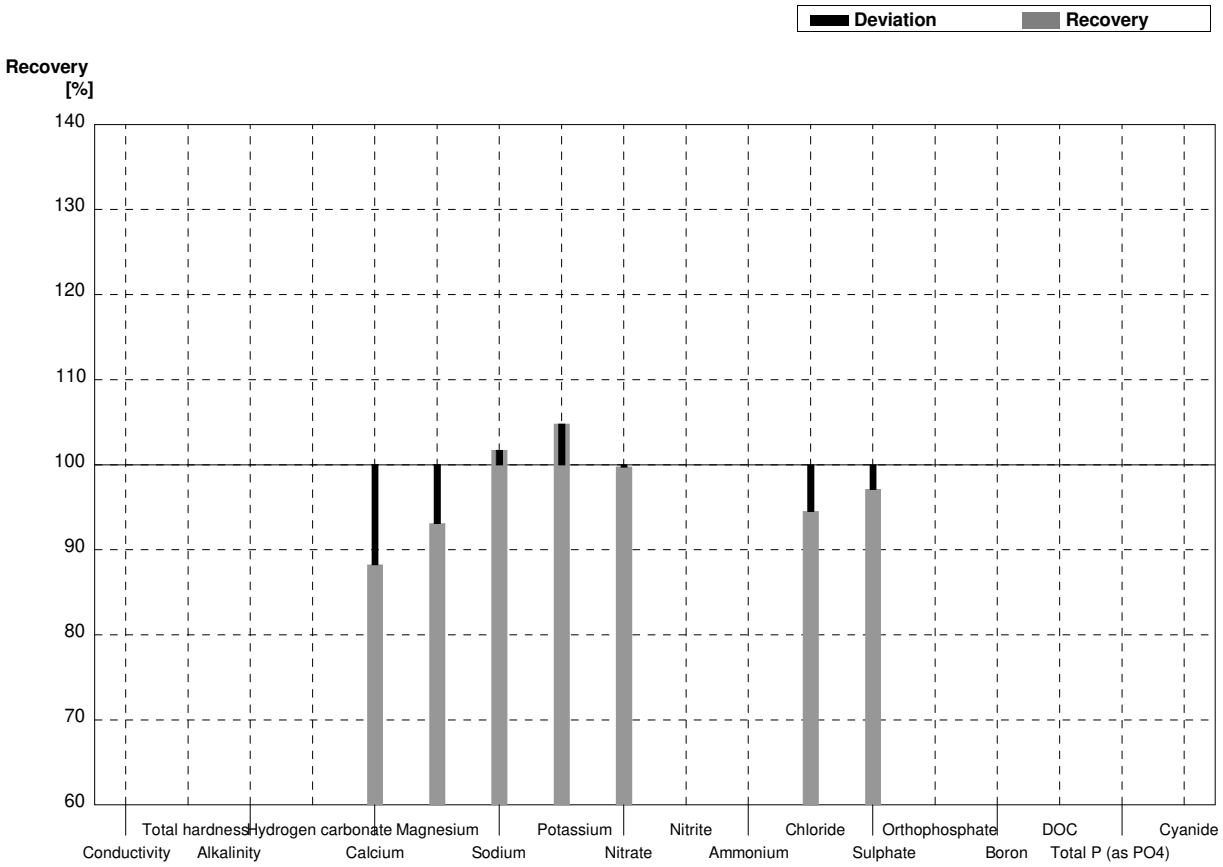
Sample N158B
Laboratory J

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	433	13	µS/cm	100%
Total hardness	1,25	0,02	1,26	0,18	mmol/l	101%
Alkalinity	1,19	0,01	1,25	0,05	mmol/l	105%
Hydrogen carbonate	69,5	0,4	76,3	3,05	mg/l	110%
Calcium	39,4	0,6	39,9	1,6	mg/l	101%
Magnesium	6,41	0,09	6,51	0,59	mg/l	102%
Sodium	32,5	0,2	31,1	2,8	mg/l	96%
Potassium	5,52	0,04	5,34	0,43	mg/l	97%
Nitrate	73,3	1,7	70,8	6,4	mg/l	97%
Nitrite	0,063	0,003	0,066	0,003	mg/l	105%
Ammonium	0,070	0,003	0,081	0,006	mg/l	116%
Chloride	14,7	0,3	14,5	1,1	mg/l	99%
Sulphate	62,6	0,4	61,4	3,7	mg/l	98%
Orthophosphate	<0,009		<0,015	0,002	mg/l	•
Boron	0,0244	0,0001	0,0210	0,004	mg/l	86%
DOC	1,56	0,01	1,74	0,21	mg/l	112%
Total P (as PO4)	<0,009		<0,015	0,002	mg/l	•
Cyanide	0,0165	0,0001	0,0150	0,001	mg/l	91%



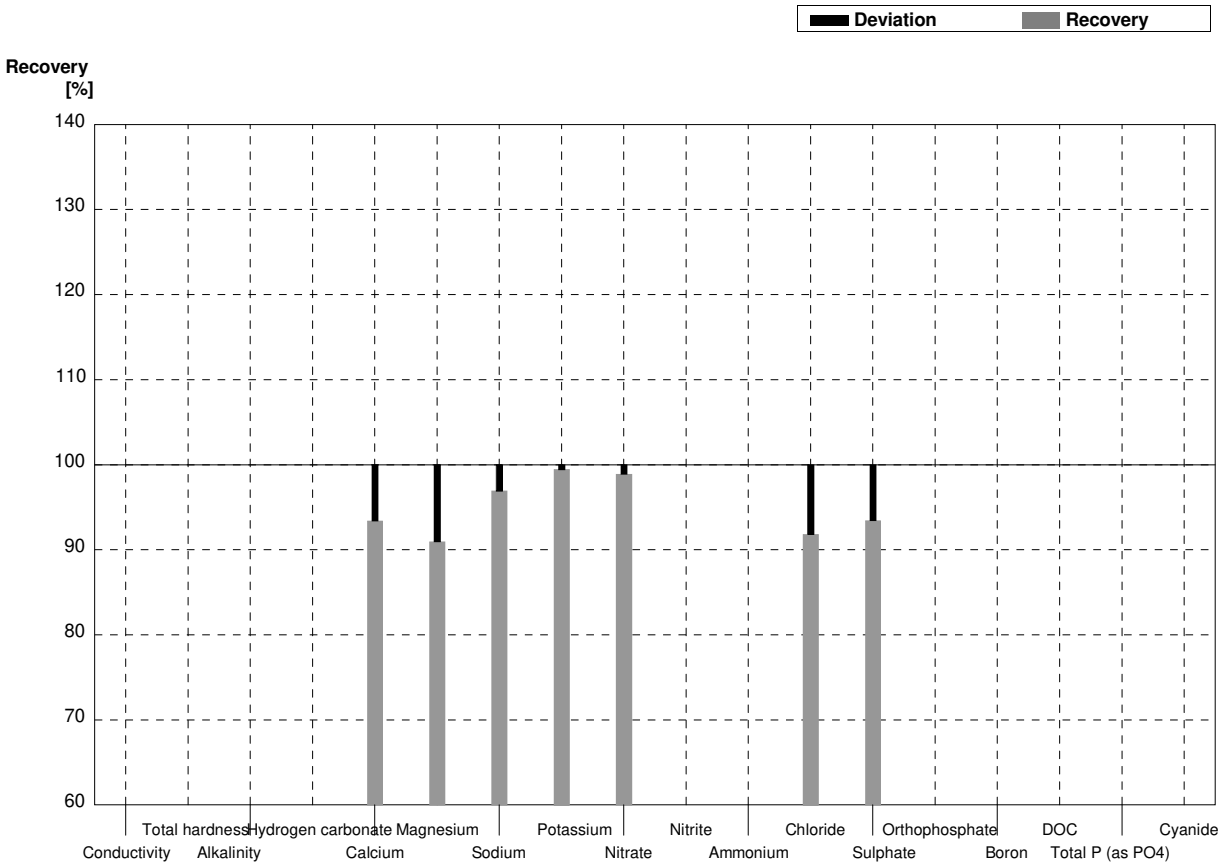
Sample **N158A**
Laboratory **K**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02			mmol/l	
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7	51,1	0,5	mg/l	88%
Magnesium	14,5	0,2	13,5	0,2	mg/l	93%
Sodium	11,7	0,3	11,9	0,1	mg/l	102%
Potassium	2,30	0,04	2,41	0,08	mg/l	105%
Nitrate	39,9	0,6	39,8	0,3	mg/l	100%
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9	45,0	0,2	mg/l	95%
Sulphate	45,3	0,5	44,0	0,1	mg/l	97%
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



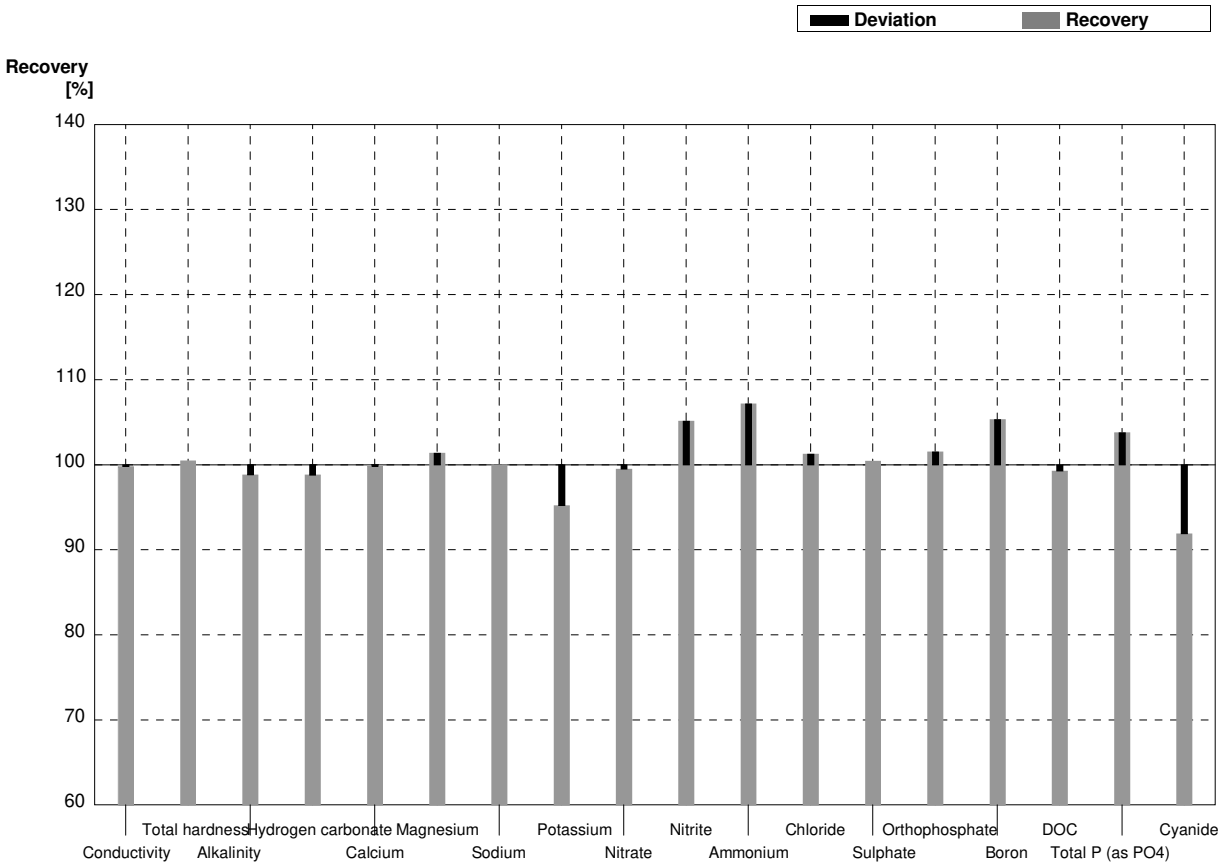
Sample **N158B**
Laboratory **K**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01			mmol/l	
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6	36,8	0,4	mg/l	93%
Magnesium	6,41	0,09	5,83	0,10	mg/l	91%
Sodium	32,5	0,2	31,5	0,2	mg/l	97%
Potassium	5,52	0,04	5,49	0,10	mg/l	99%
Nitrate	73,3	1,7	72,5	0,3	mg/l	99%
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3	13,5	0,1	mg/l	92%
Sulphate	62,6	0,4	58,5	0,1	mg/l	93%
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



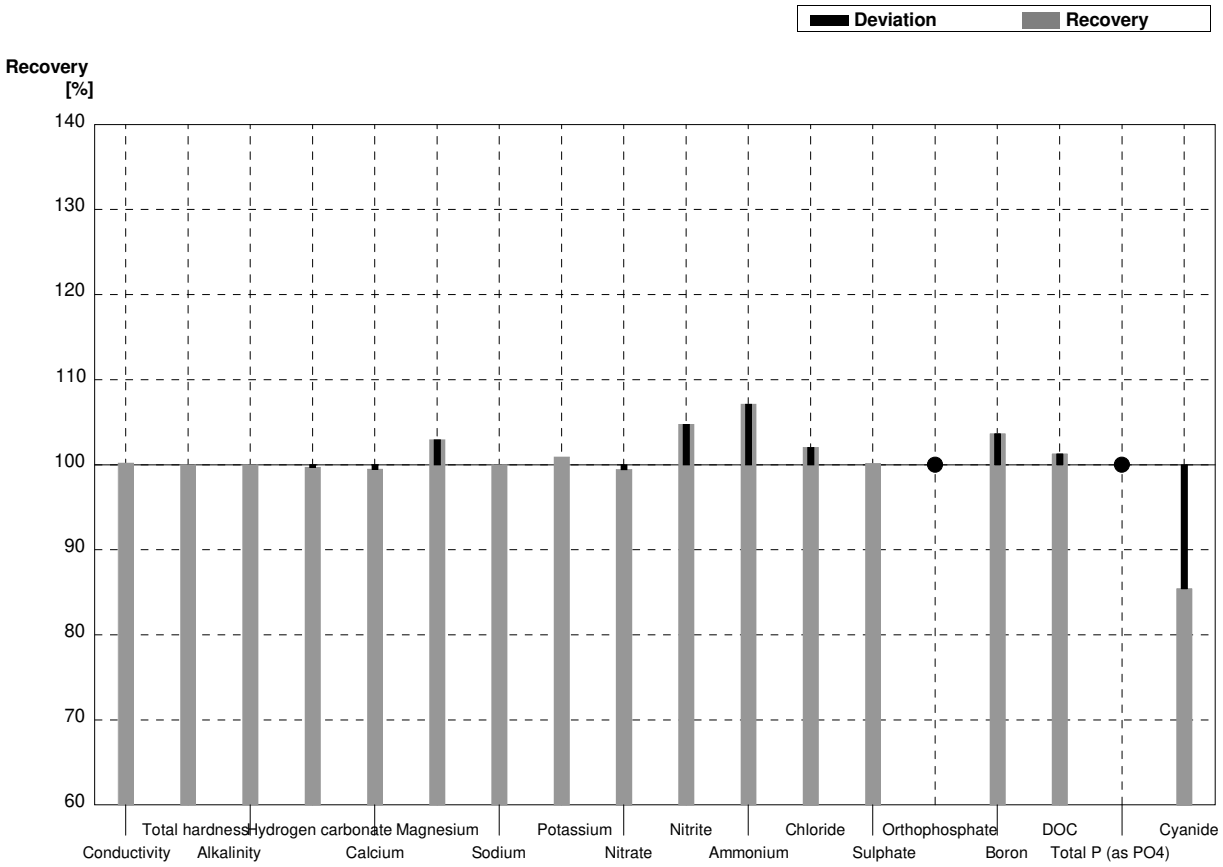
Sample **N158A**
Laboratory **L**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	488	15	µS/cm	100%
Total hardness	2,04	0,02	2,05	0,16	mmol/l	100%
Alkalinity	1,71	0,02	1,69	0,07	mmol/l	99%
Hydrogen carbonate	101	1	99,8	4,0	mg/l	99%
Calcium	57,9	0,7	57,8	2,9	mg/l	100%
Magnesium	14,5	0,2	14,7	0,9	mg/l	101%
Sodium	11,7	0,3	11,7	0,5	mg/l	100%
Potassium	2,30	0,04	2,19	0,17	mg/l	95%
Nitrate	39,9	0,6	39,7	2,4	mg/l	99%
Nitrite	0,0468	0,0010	0,0492	0,0039	mg/l	105%
Ammonium	0,0251	0,0044	0,0269	0,0026	mg/l	107%
Chloride	47,6	0,9	48,2	2,4	mg/l	101%
Sulphate	45,3	0,5	45,5	2,7	mg/l	100%
Orthophosphate	0,132	0,001	0,134	0,007	mg/l	102%
Boron	0,0431	0,0002	0,0454	0,0045	mg/l	105%
DOC	5,62	0,03	5,58	0,56	mg/l	99%
Total P (as PO4)	0,184	0,001	0,191	0,013	mg/l	104%
Cyanide	0,0469	0,0003	0,0431	0,013	mg/l	92%



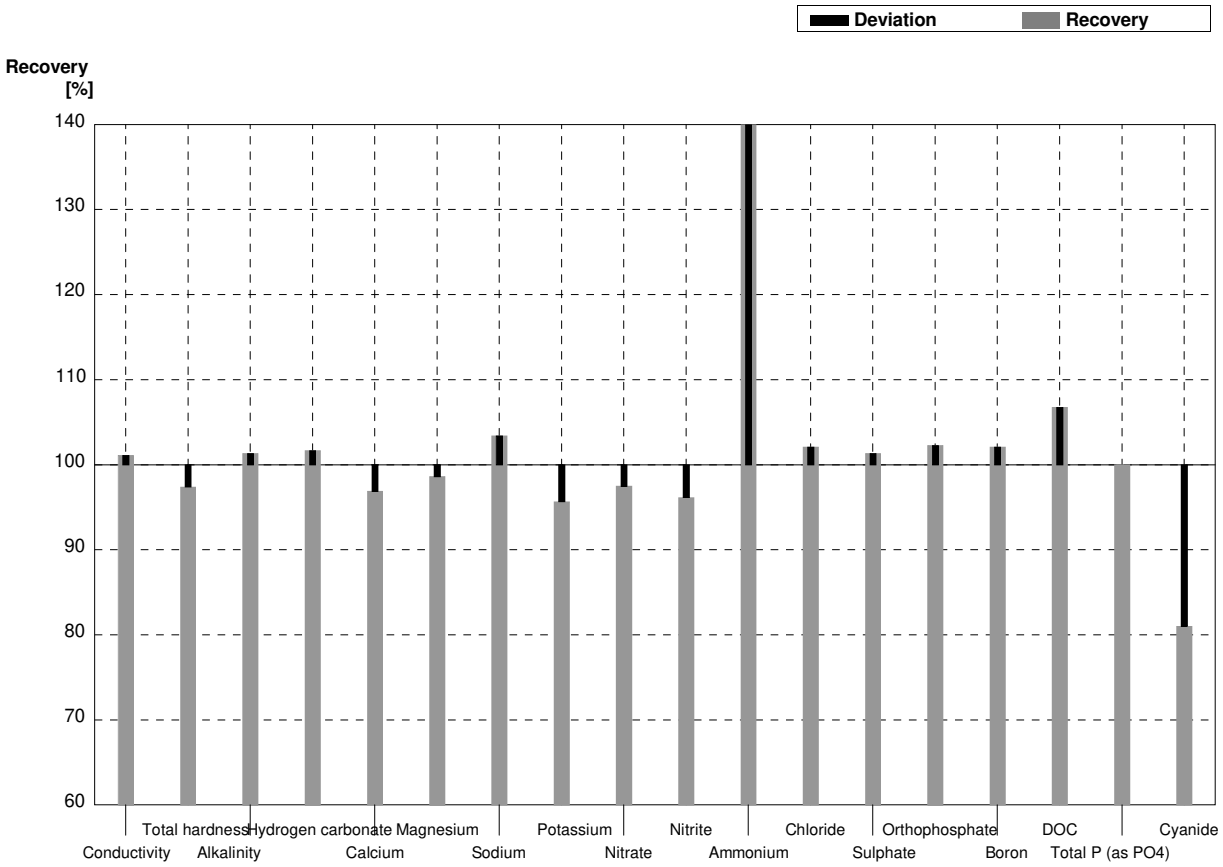
Sample **N158B**
Laboratory **L**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	436	13	µS/cm	100%
Total hardness	1,25	0,02	1,25	0,10	mmol/l	100%
Alkalinity	1,19	0,01	1,19	0,05	mmol/l	100%
Hydrogen carbonate	69,5	0,4	69,3	2,8	mg/l	100%
Calcium	39,4	0,6	39,2	2,0	mg/l	99%
Magnesium	6,41	0,09	6,60	0,40	mg/l	103%
Sodium	32,5	0,2	32,5	1,3	mg/l	100%
Potassium	5,52	0,04	5,57	0,44	mg/l	101%
Nitrate	73,3	1,7	72,9	4,4	mg/l	99%
Nitrite	0,063	0,003	0,066	0,005	mg/l	105%
Ammonium	0,070	0,003	0,075	0,007	mg/l	107%
Chloride	14,7	0,3	15,0	0,8	mg/l	102%
Sulphate	62,6	0,4	62,7	3,8	mg/l	100%
Orthophosphate	<0,009		<0,006		mg/l	•
Boron	0,0244	0,0001	0,0253	0,0025	mg/l	104%
DOC	1,56	0,01	1,58	0,16	mg/l	101%
Total P (as PO4)	<0,009		<0,006		mg/l	•
Cyanide	0,0165	0,0001	0,0141	0,005	mg/l	85%



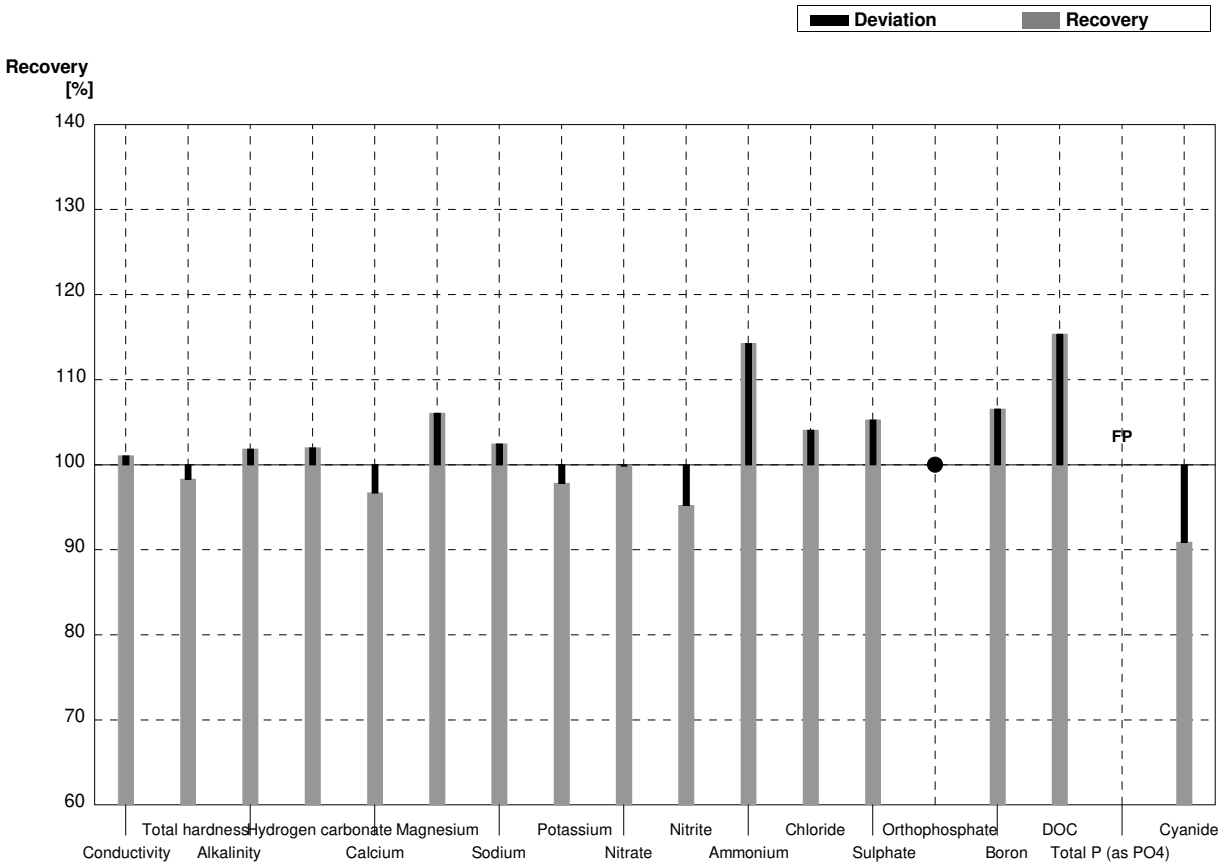
Sample **N158A**
Laboratory **M**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	494,4	27,9	µS/cm	101%
Total hardness	2,04	0,02	1,987	0,264	mmol/l	97%
Alkalinity	1,71	0,02	1,733		mmol/l	101%
Hydrogen carbonate	101	1	102,7		mg/l	102%
Calcium	57,9	0,7	56,1	7,48	mg/l	97%
Magnesium	14,5	0,2	14,3	1,89	mg/l	99%
Sodium	11,7	0,3	12,1	2,14	mg/l	103%
Potassium	2,30	0,04	2,20	0,36	mg/l	96%
Nitrate	39,9	0,6	38,9	3,28	mg/l	97%
Nitrite	0,0468	0,0010	0,0450	0,005	mg/l	96%
Ammonium	0,0251	0,0044	0,0400	0,01	mg/l	159%
Chloride	47,6	0,9	48,6	4,05	mg/l	102%
Sulphate	45,3	0,5	45,9	2,96	mg/l	101%
Orthophosphate	0,132	0,001	0,135	0,037	mg/l	102%
Boron	0,0431	0,0002	0,0440	0,001	mg/l	102%
DOC	5,62	0,03	6,00	1,12	mg/l	107%
Total P (as PO4)	0,184	0,001	0,184	0,0295	mg/l	100%
Cyanide	0,0469	0,0003	0,0380	0,0038	mg/l	81%



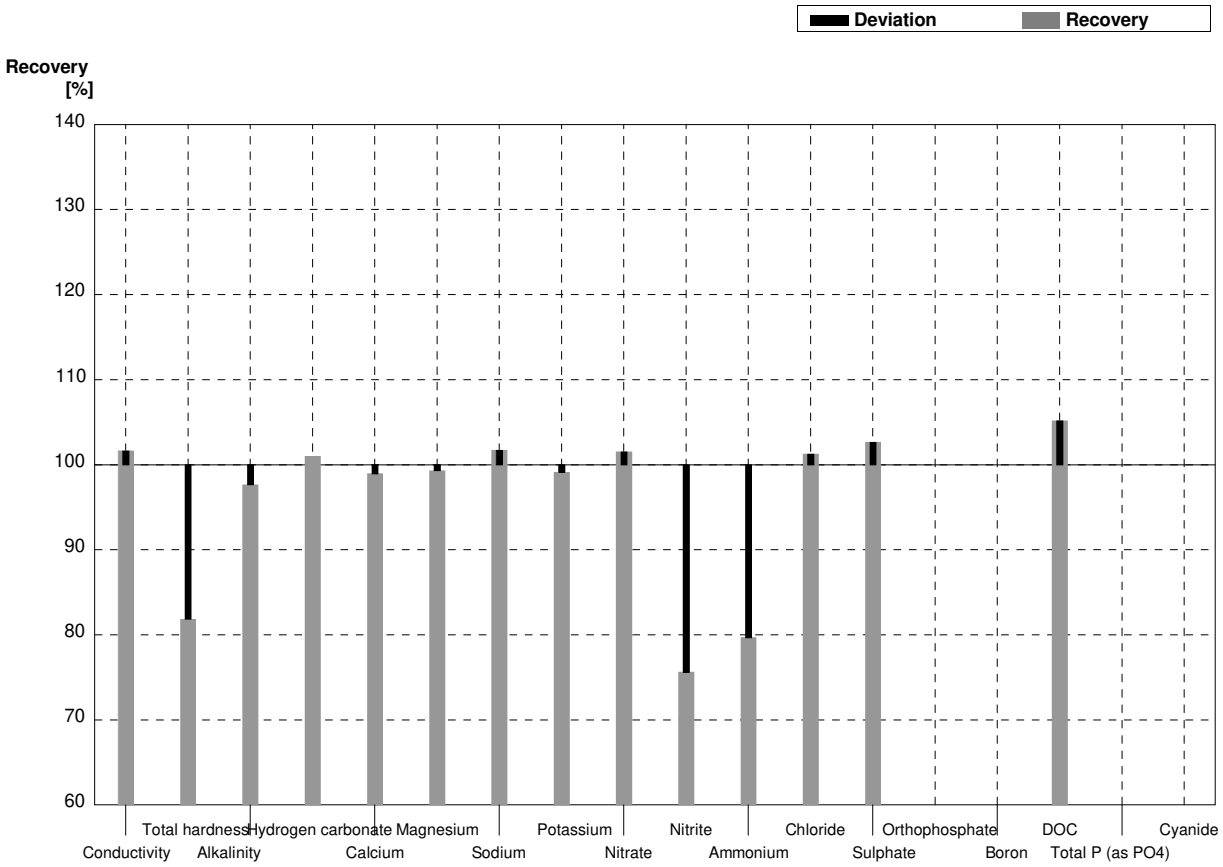
Sample N158B
Laboratory M

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	439,7	24,9	µS/cm	101%
Total hardness	1,25	0,02	1,229	0,164	mmol/l	98%
Alkalinity	1,19	0,01	1,212		mmol/l	102%
Hydrogen carbonate	69,5	0,4	70,9		mg/l	102%
Calcium	39,4	0,6	38,1	5,08	mg/l	97%
Magnesium	6,41	0,09	6,80	0,90	mg/l	106%
Sodium	32,5	0,2	33,3	5,89	mg/l	102%
Potassium	5,52	0,04	5,40	0,89	mg/l	98%
Nitrate	73,3	1,7	73,2	6,18	mg/l	100%
Nitrite	0,063	0,003	0,060	0,006	mg/l	95%
Ammonium	0,070	0,003	0,080	0,018	mg/l	114%
Chloride	14,7	0,3	15,3	1,28	mg/l	104%
Sulphate	62,6	0,4	65,9	4,25	mg/l	105%
Orthophosphate	<0,009		<0,03	0,01	mg/l	•
Boron	0,0244	0,0001	0,0260	0,001	mg/l	107%
DOC	1,56	0,01	1,80	0,34	mg/l	115%
Total P (as PO4)	<0,009		0,153	0,0246	mg/l	FP
Cyanide	0,0165	0,0001	0,0150	0,0015	mg/l	91%



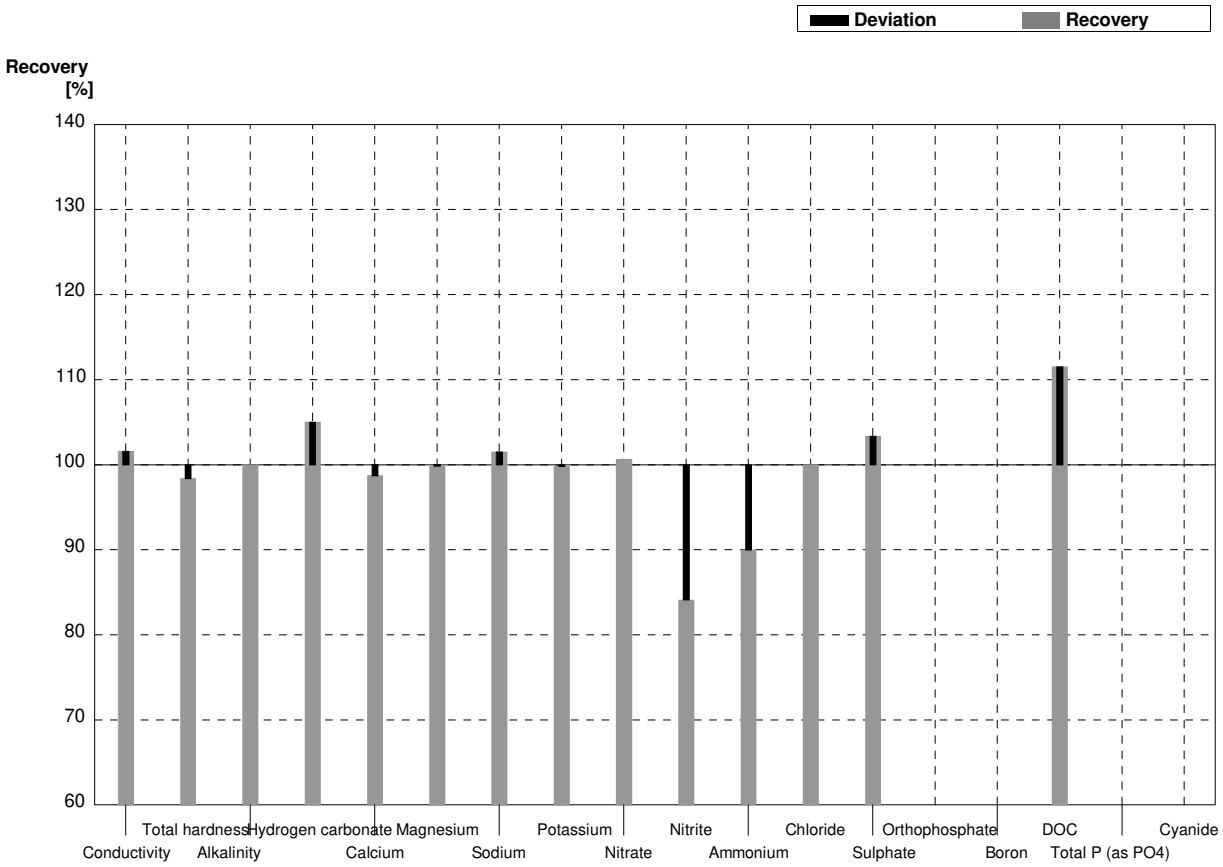
Sample **N158A**
Laboratory **N**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	497	8	µS/cm	102%
Total hardness	2,04	0,02	1,67	0,14	mmol/l	82%
Alkalinity	1,71	0,02	1,67	0,05	mmol/l	98%
Hydrogen carbonate	101	1	102	3	mg/l	101%
Calcium	57,9	0,7	57,3	3,3	mg/l	99%
Magnesium	14,5	0,2	14,4	0,9	mg/l	99%
Sodium	11,7	0,3	11,9	1,3	mg/l	102%
Potassium	2,30	0,04	2,28	0,09	mg/l	99%
Nitrate	39,9	0,6	40,5	1,8	mg/l	102%
Nitrite	0,0468	0,0010	0,0354	0,005	mg/l	76%
Ammonium	0,0251	0,0044	0,0200	0,005	mg/l	80%
Chloride	47,6	0,9	48,2	3,3	mg/l	101%
Sulphate	45,3	0,5	46,5	3	mg/l	103%
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03	5,91	1,23	mg/l	105%
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



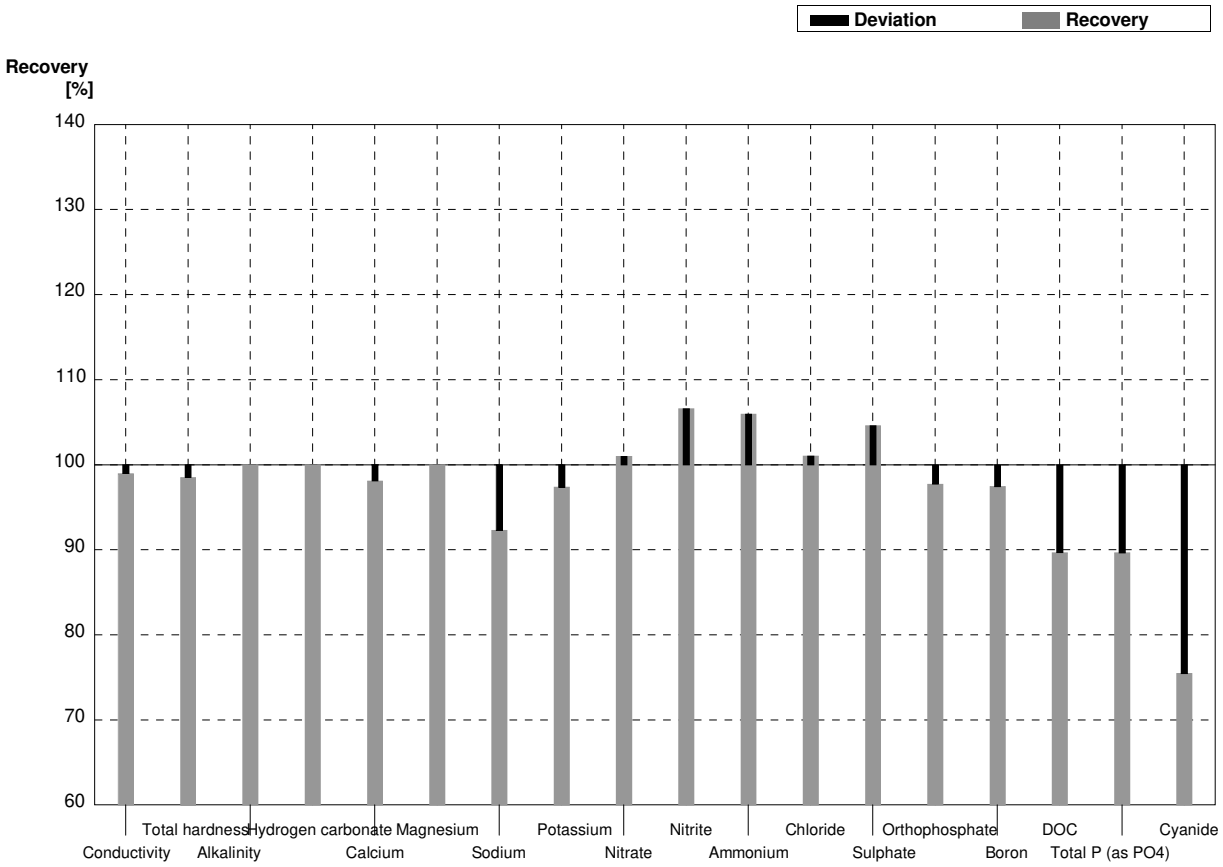
Sample **N158B**
Laboratory **N**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	442	7	µS/cm	102%
Total hardness	1,25	0,02	1,23	0,1	mmol/l	98%
Alkalinity	1,19	0,01	1,19	0,03	mmol/l	100%
Hydrogen carbonate	69,5	0,4	73	2	mg/l	105%
Calcium	39,4	0,6	38,9	2,2	mg/l	99%
Magnesium	6,41	0,09	6,4	0,4	mg/l	100%
Sodium	32,5	0,2	33,0	3,7	mg/l	102%
Potassium	5,52	0,04	5,51	0,21	mg/l	100%
Nitrate	73,3	1,7	73,8	3,4	mg/l	101%
Nitrite	0,063	0,003	0,053	0,008	mg/l	84%
Ammonium	0,070	0,003	0,063	0,015	mg/l	90%
Chloride	14,7	0,3	14,7	1	mg/l	100%
Sulphate	62,6	0,4	64,7	4,2	mg/l	103%
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01	1,74	0,36	mg/l	112%
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



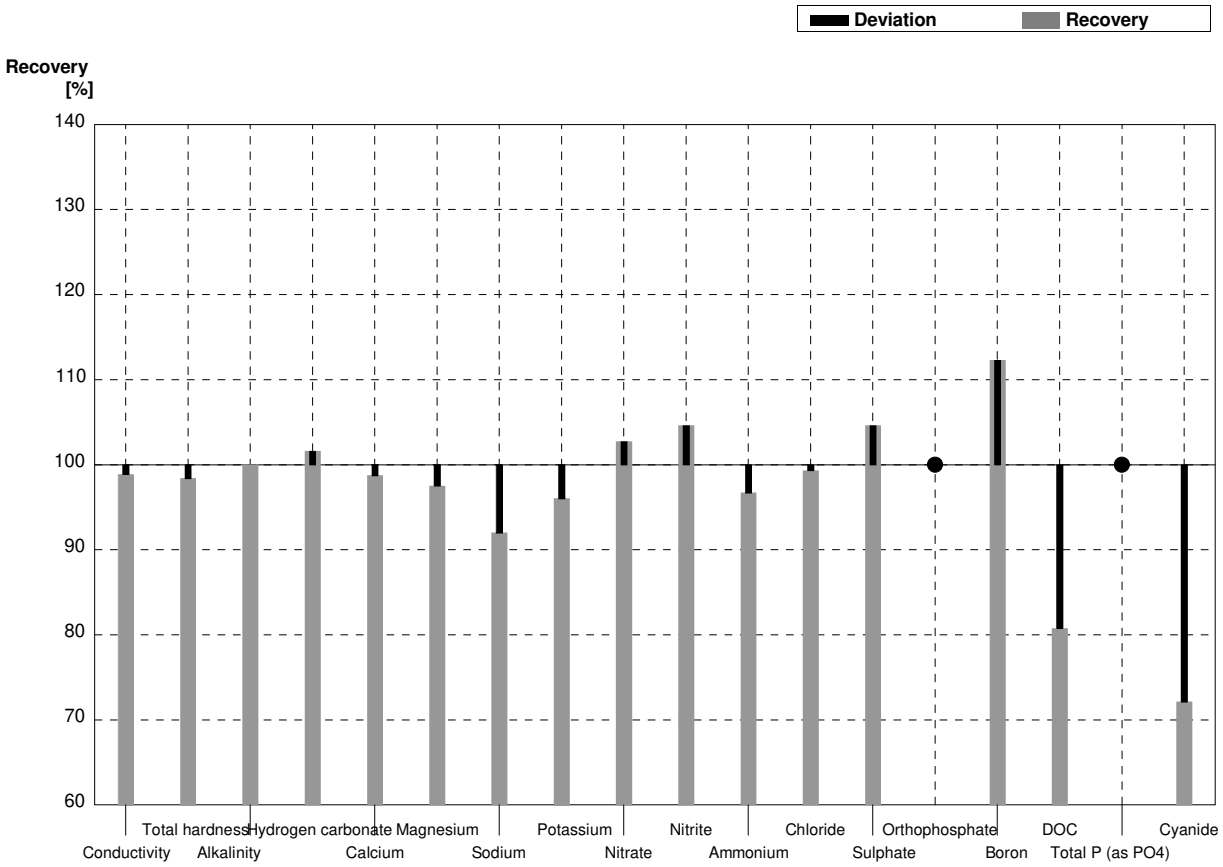
Sample **N158A**
Laboratory **O**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	484	6,0	µS/cm	99%
Total hardness	2,04	0,02	2,01	0,035	mmol/l	99%
Alkalinity	1,71	0,02	1,71	0,006	mmol/l	100%
Hydrogen carbonate	101	1	101	0,200	mg/l	100%
Calcium	57,9	0,7	56,8	0,208	mg/l	98%
Magnesium	14,5	0,2	14,5	0,231	mg/l	100%
Sodium	11,7	0,3	10,8	0,458	mg/l	92%
Potassium	2,30	0,04	2,24	0,006	mg/l	97%
Nitrate	39,9	0,6	40,3	0,231	mg/l	101%
Nitrite	0,0468	0,0010	0,0499	0,0001	mg/l	107%
Ammonium	0,0251	0,0044	0,0266	0,001	mg/l	106%
Chloride	47,6	0,9	48,1	0,289	mg/l	101%
Sulphate	45,3	0,5	47,4	0,265	mg/l	105%
Orthophosphate	0,132	0,001	0,129	0,001	mg/l	98%
Boron	0,0431	0,0002	0,0420	0,002	mg/l	97%
DOC	5,62	0,03	5,04	0,265	mg/l	90%
Total P (as PO4)	0,184	0,001	0,165	0,001	mg/l	90%
Cyanide	0,0469	0,0003	0,0354	0,002	mg/l	75%



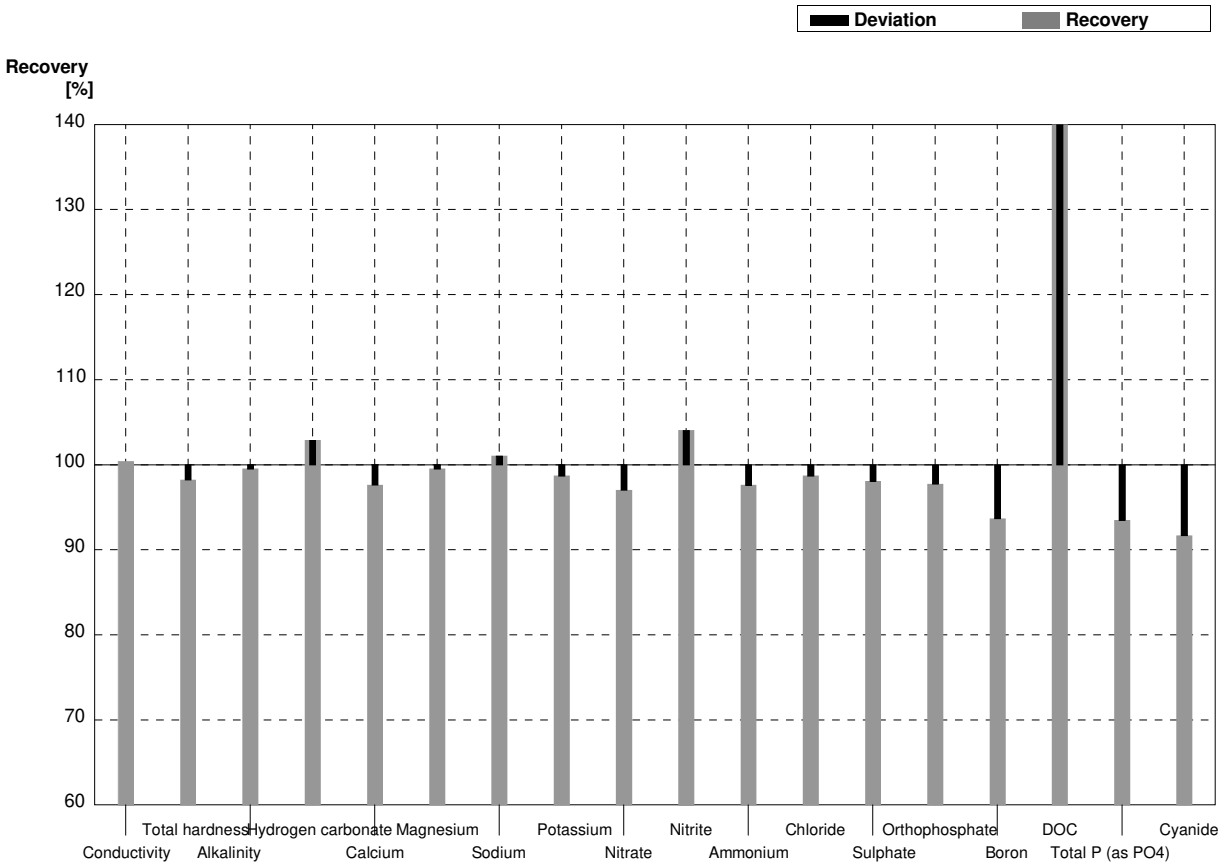
Sample **N158B**
Laboratory **O**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	430	5,3	µS/cm	99%
Total hardness	1,25	0,02	1,23	0,020	mmol/l	98%
Alkalinity	1,19	0,01	1,19	0,005	mmol/l	100%
Hydrogen carbonate	69,5	0,4	70,6	0,100	mg/l	102%
Calcium	39,4	0,6	38,9	0,794	mg/l	99%
Magnesium	6,41	0,09	6,25	0,091	mg/l	98%
Sodium	32,5	0,2	29,9	0,964	mg/l	92%
Potassium	5,52	0,04	5,30	0,040	mg/l	96%
Nitrate	73,3	1,7	75,3	0,100	mg/l	103%
Nitrite	0,063	0,003	0,0659	0,0001	mg/l	105%
Ammonium	0,070	0,003	0,0677	0,001	mg/l	97%
Chloride	14,7	0,3	14,6	0,058	mg/l	99%
Sulphate	62,6	0,4	65,5	0,364	mg/l	105%
Orthophosphate	<0,009		<0,015		mg/l	•
Boron	0,0244	0,0001	0,0274	0,001	mg/l	112%
DOC	1,56	0,01	1,26	0,087	mg/l	81%
Total P (as PO4)	<0,009		<0,015		mg/l	•
Cyanide	0,0165	0,0001	0,0119	0,0004	mg/l	72%



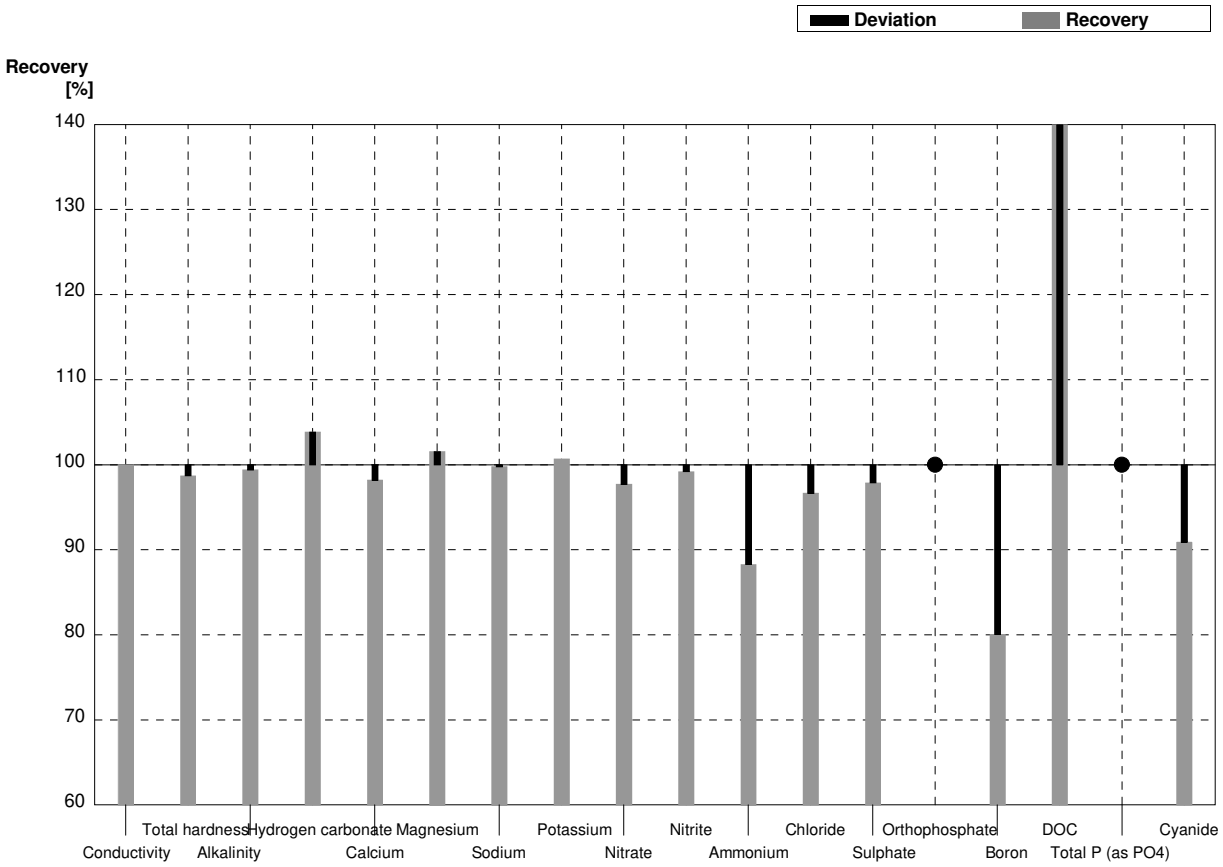
Sample **N158A**
Laboratory **P**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	491	2,70	µS/cm	100%
Total hardness	2,04	0,02	2,004	0,094	mmol/l	98%
Alkalinity	1,71	0,02	1,702	0,164	mmol/l	100%
Hydrogen carbonate	101	1	103,9		mg/l	103%
Calcium	57,9	0,7	56,52	1,87	mg/l	98%
Magnesium	14,5	0,2	14,43	0,48	mg/l	100%
Sodium	11,7	0,3	11,82	0,40	mg/l	101%
Potassium	2,30	0,04	2,270	0,068	mg/l	99%
Nitrate	39,9	0,6	38,71	1,26	mg/l	97%
Nitrite	0,0468	0,0010	0,0487	0,00284	mg/l	104%
Ammonium	0,0251	0,0044	0,0245	0,00141	mg/l	98%
Chloride	47,6	0,9	46,98	1,01	mg/l	99%
Sulphate	45,3	0,5	44,43	1,12	mg/l	98%
Orthophosphate	0,132	0,001	0,129	0,00286	mg/l	98%
Boron	0,0431	0,0002	0,04037	0,00238	mg/l	94%
DOC	5,62	0,03	10,29	2,028	mg/l	183%
Total P (as PO4)	0,184	0,001	0,172	0,00382	mg/l	93%
Cyanide	0,0469	0,0003	0,0430	0,00965	mg/l	92%



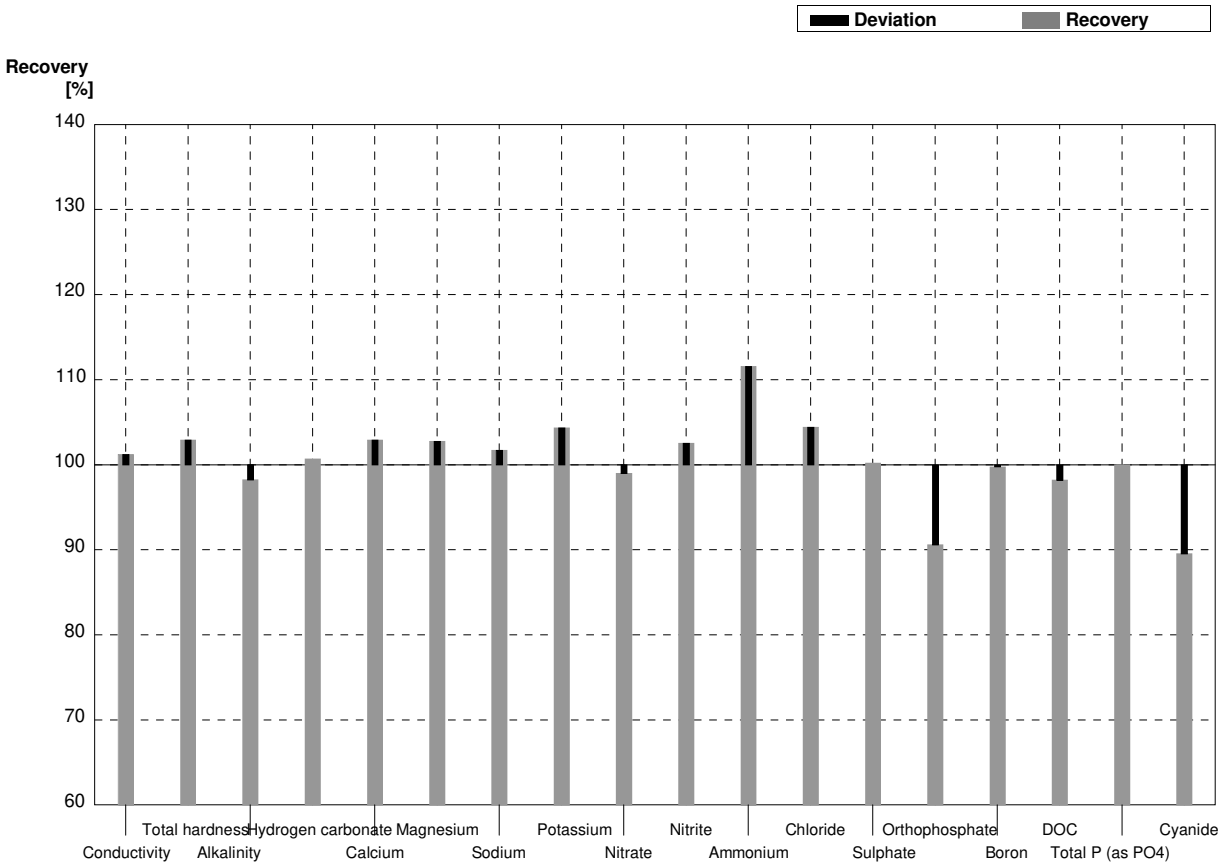
Sample **N158B**
Laboratory **P**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	435	2,39	µS/cm	100%
Total hardness	1,25	0,02	1,234	0,058	mmol/l	99%
Alkalinity	1,19	0,01	1,183	0,114	mmol/l	99%
Hydrogen carbonate	69,5	0,4	72,19		mg/l	104%
Calcium	39,4	0,6	38,69	1,28	mg/l	98%
Magnesium	6,41	0,09	6,510	0,215	mg/l	102%
Sodium	32,5	0,2	32,43	1,10	mg/l	100%
Potassium	5,52	0,04	5,559	0,167	mg/l	101%
Nitrate	73,3	1,7	71,62	2,33	mg/l	98%
Nitrite	0,063	0,003	0,0625	0,00365	mg/l	99%
Ammonium	0,070	0,003	0,0618	0,00356	mg/l	88%
Chloride	14,7	0,3	14,21	0,307	mg/l	97%
Sulphate	62,6	0,4	61,28	1,55	mg/l	98%
Orthophosphate	<0,009		<0,0307	0,00066	mg/l	•
Boron	0,0244	0,0001	0,01954	0,00115	mg/l	80%
DOC	1,56	0,01	4,288	0,304	mg/l	275%
Total P (as PO4)	<0,009		<0,0153	0,00034	mg/l	•
Cyanide	0,0165	0,0001	0,0150	0,00337	mg/l	91%



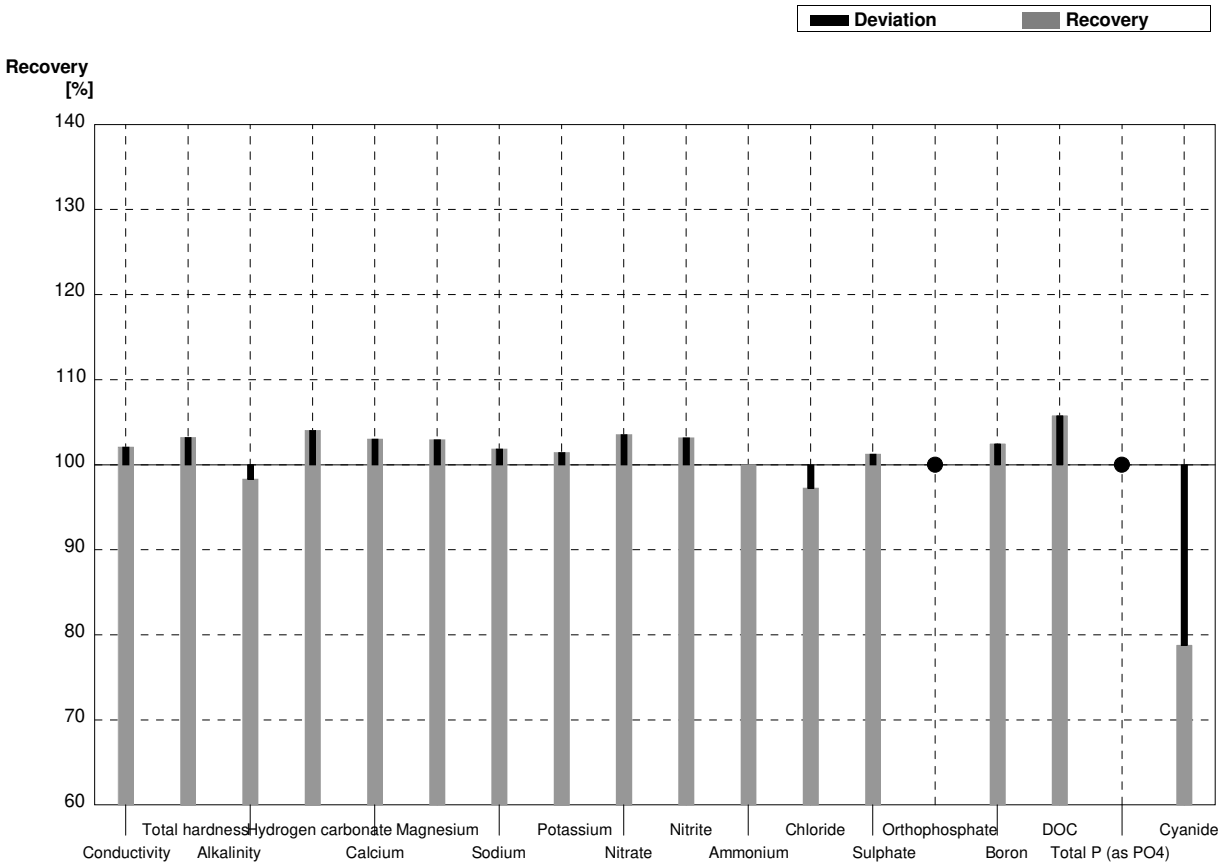
Sample **N158A**
Laboratory **Q**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	495	49,5	µS/cm	101%
Total hardness	2,04	0,02	2,10	0,17	mmol/l	103%
Alkalinity	1,71	0,02	1,68		mmol/l	98%
Hydrogen carbonate	101	1	101,7		mg/l	101%
Calcium	57,9	0,7	59,6	4,77	mg/l	103%
Magnesium	14,5	0,2	14,9	1,19	mg/l	103%
Sodium	11,7	0,3	11,9	0,95	mg/l	102%
Potassium	2,30	0,04	2,40	0,26	mg/l	104%
Nitrate	39,9	0,6	39,5	4,75	mg/l	99%
Nitrite	0,0468	0,0010	0,0480	0,0096	mg/l	103%
Ammonium	0,0251	0,0044	0,0280	0,005	mg/l	112%
Chloride	47,6	0,9	49,7	4,47	mg/l	104%
Sulphate	45,3	0,5	45,4	4,5	mg/l	100%
Orthophosphate	0,132	0,001	0,1196	0,0120	mg/l	91%
Boron	0,0431	0,0002	0,0430	0,008	mg/l	100%
DOC	5,62	0,03	5,52	0,66	mg/l	98%
Total P (as PO4)	0,184	0,001	0,184	0,066	mg/l	100%
Cyanide	0,0469	0,0003	0,0420		mg/l	90%



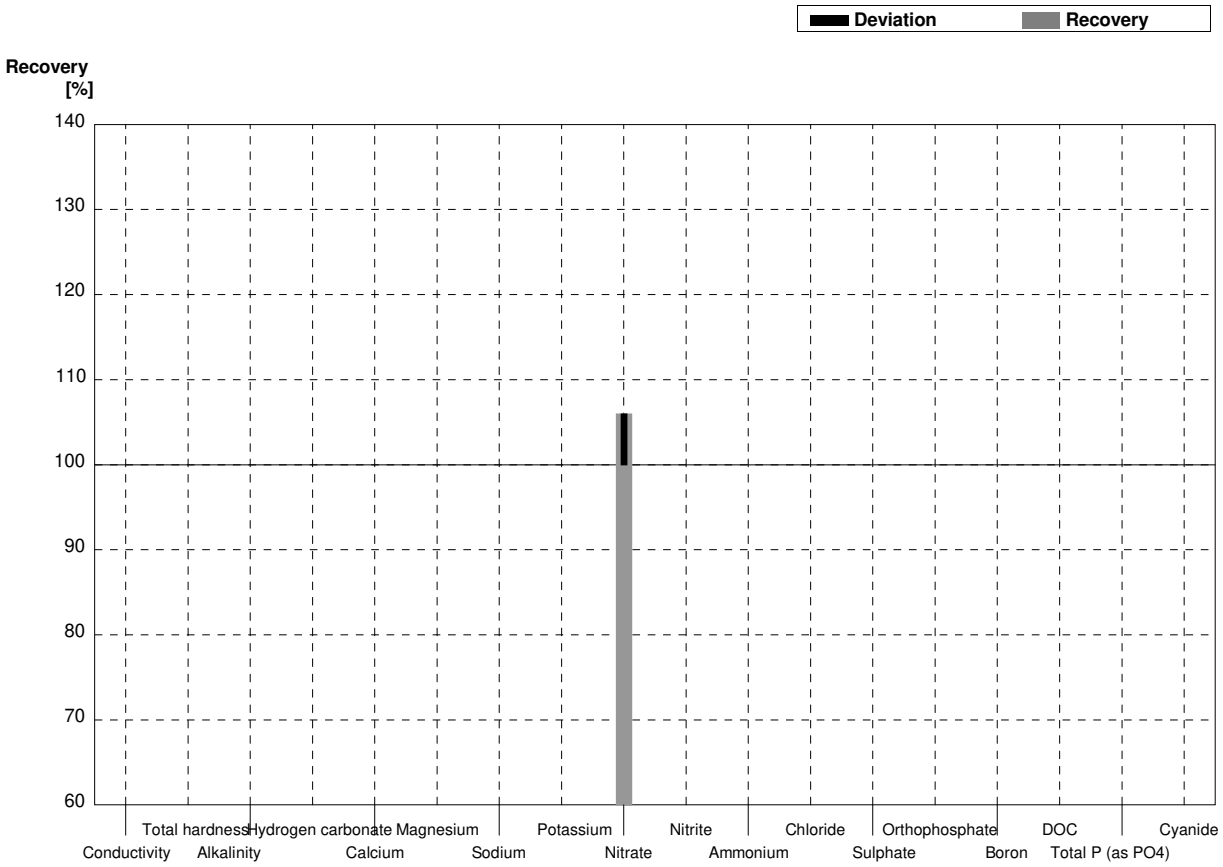
Sample **N158B**
Laboratory **Q**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	444	44,4	µS/cm	102%
Total hardness	1,25	0,02	1,29	0,10	mmol/l	103%
Alkalinity	1,19	0,01	1,17		mmol/l	98%
Hydrogen carbonate	69,5	0,4	72,3		mg/l	104%
Calcium	39,4	0,6	40,6	3,25	mg/l	103%
Magnesium	6,41	0,09	6,6	0,53	mg/l	103%
Sodium	32,5	0,2	33,1	2,65	mg/l	102%
Potassium	5,52	0,04	5,6	0,62	mg/l	101%
Nitrate	73,3	1,7	75,9	9,11	mg/l	104%
Nitrite	0,063	0,003	0,065	0,013	mg/l	103%
Ammonium	0,070	0,003	0,070	0,011	mg/l	100%
Chloride	14,7	0,3	14,3	1,3	mg/l	97%
Sulphate	62,6	0,4	63,4	6,3	mg/l	101%
Orthophosphate	<0,009		<0,030		mg/l	•
Boron	0,0244	0,0001	0,0250	0,005	mg/l	102%
DOC	1,56	0,01	1,65	0,38	mg/l	106%
Total P (as PO4)	<0,009		<0,015		mg/l	•
Cyanide	0,0165	0,0001	0,0130		mg/l	79%



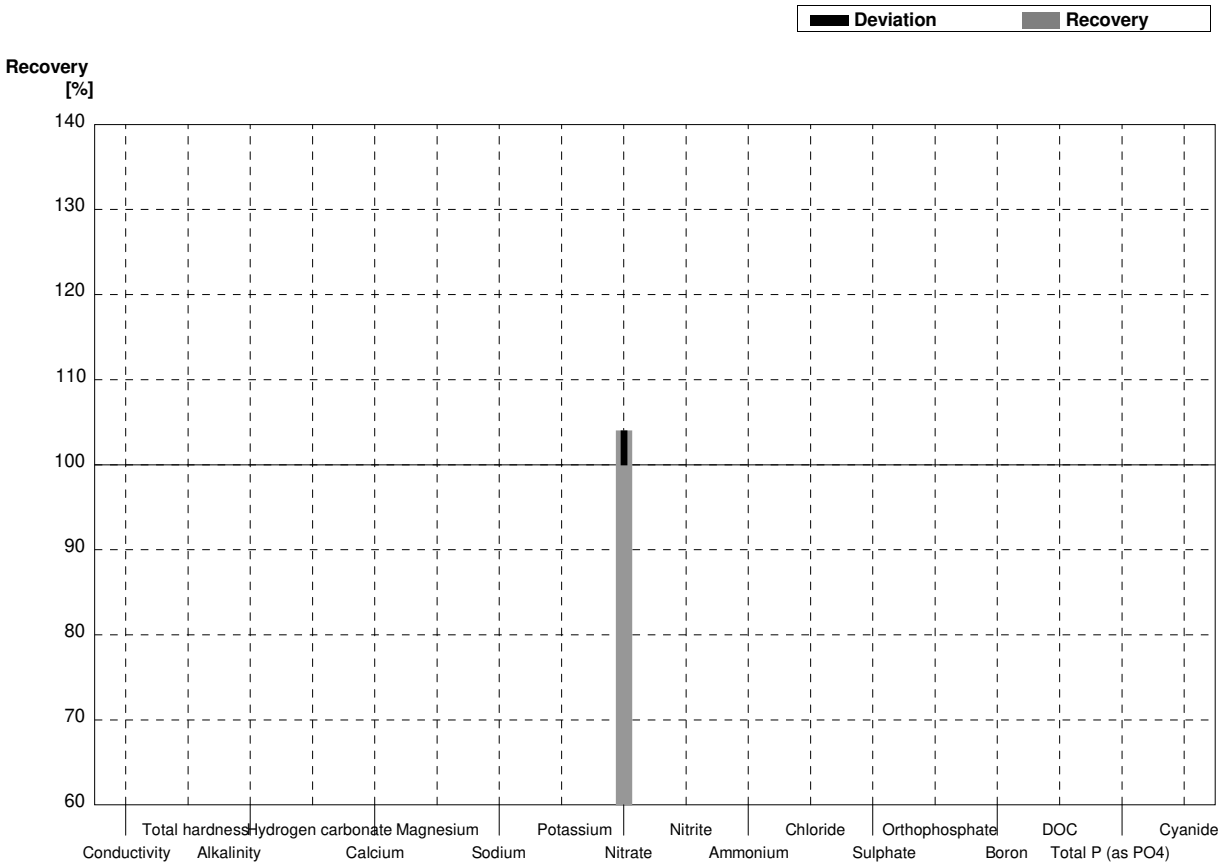
Sample **N158A**
Laboratory **R**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02			mmol/l	
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7			mg/l	
Magnesium	14,5	0,2			mg/l	
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6	42,3	3	mg/l	106%
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9			mg/l	
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



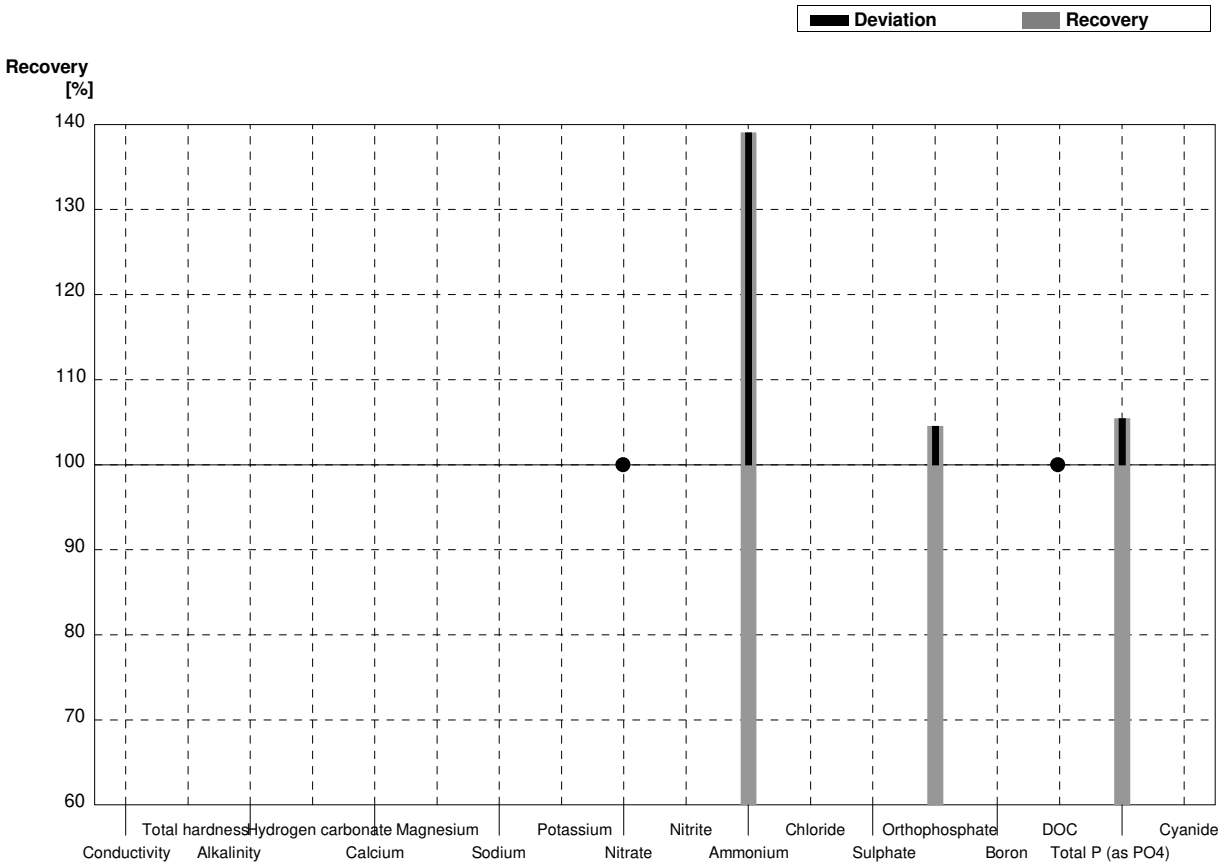
Sample **N158B**
Laboratory **R**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01			mmol/l	
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6			mg/l	
Magnesium	6,41	0,09			mg/l	
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7	76,23	3	mg/l	104%
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3			mg/l	
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



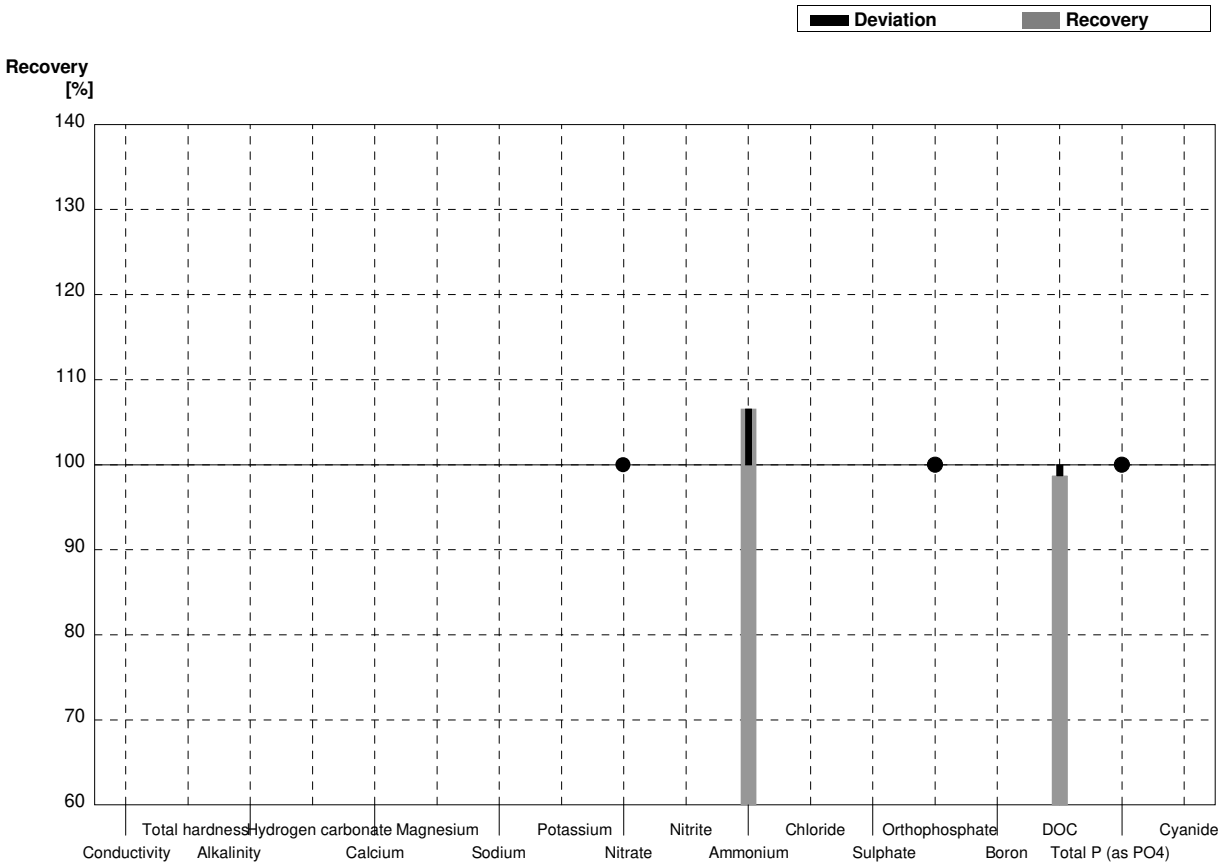
Sample **N158A**
Laboratory **S**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02			mmol/l	
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7			mg/l	
Magnesium	14,5	0,2			mg/l	
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6	>30		mg/l	•
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044	0,0349	0,0079	mg/l	139%
Chloride	47,6	0,9			mg/l	
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001	0,138	0,018	mg/l	105%
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03	>4		mg/l	•
Total P (as PO4)	0,184	0,001	0,194	0,007	mg/l	105%
Cyanide	0,0469	0,0003			mg/l	



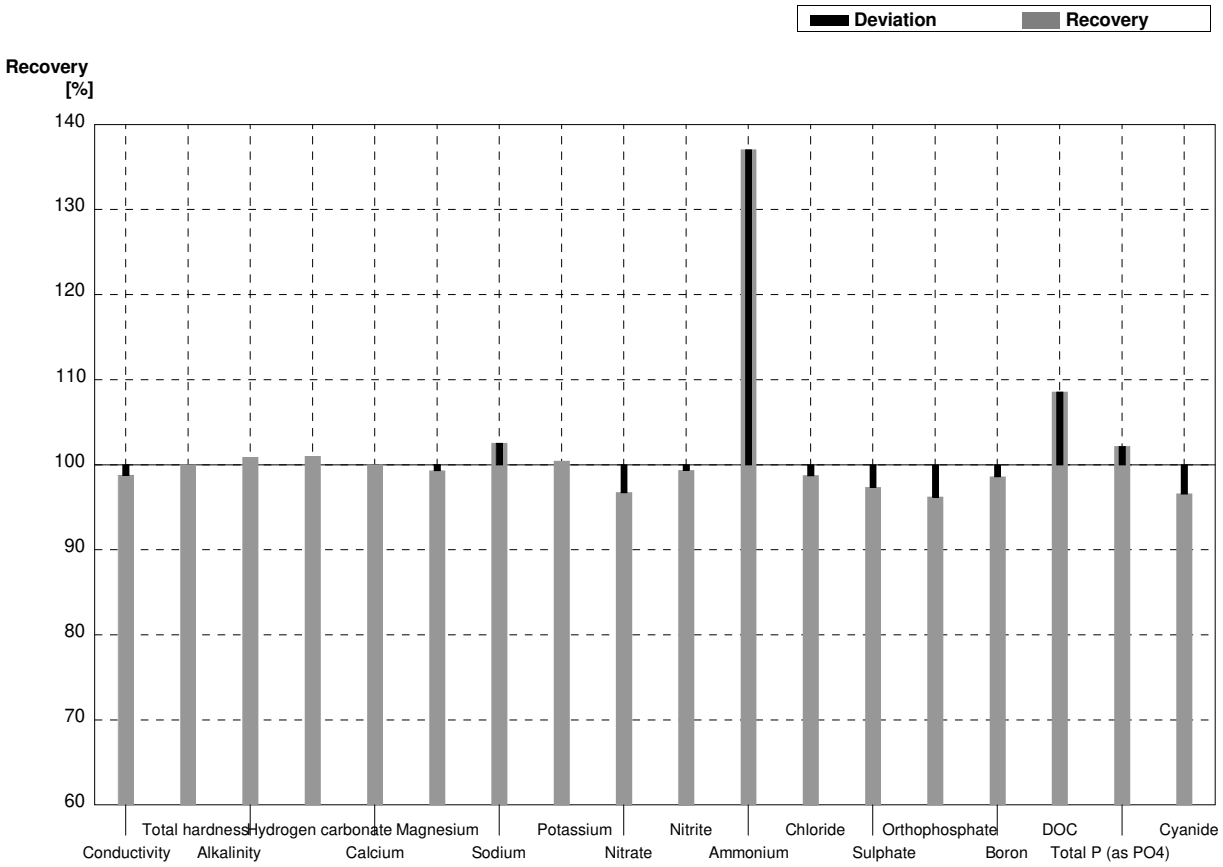
Sample **N158B**
Laboratory **S**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01			mmol/l	
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6			mg/l	
Magnesium	6,41	0,09			mg/l	
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7	>30		mg/l	•
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003	0,0746	0,01820	mg/l	107%
Chloride	14,7	0,3			mg/l	
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009		<0,019		mg/l	•
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01	1,540	0,505	mg/l	99%
Total P (as PO4)	<0,009		<0,02		mg/l	•
Cyanide	0,0165	0,0001			mg/l	



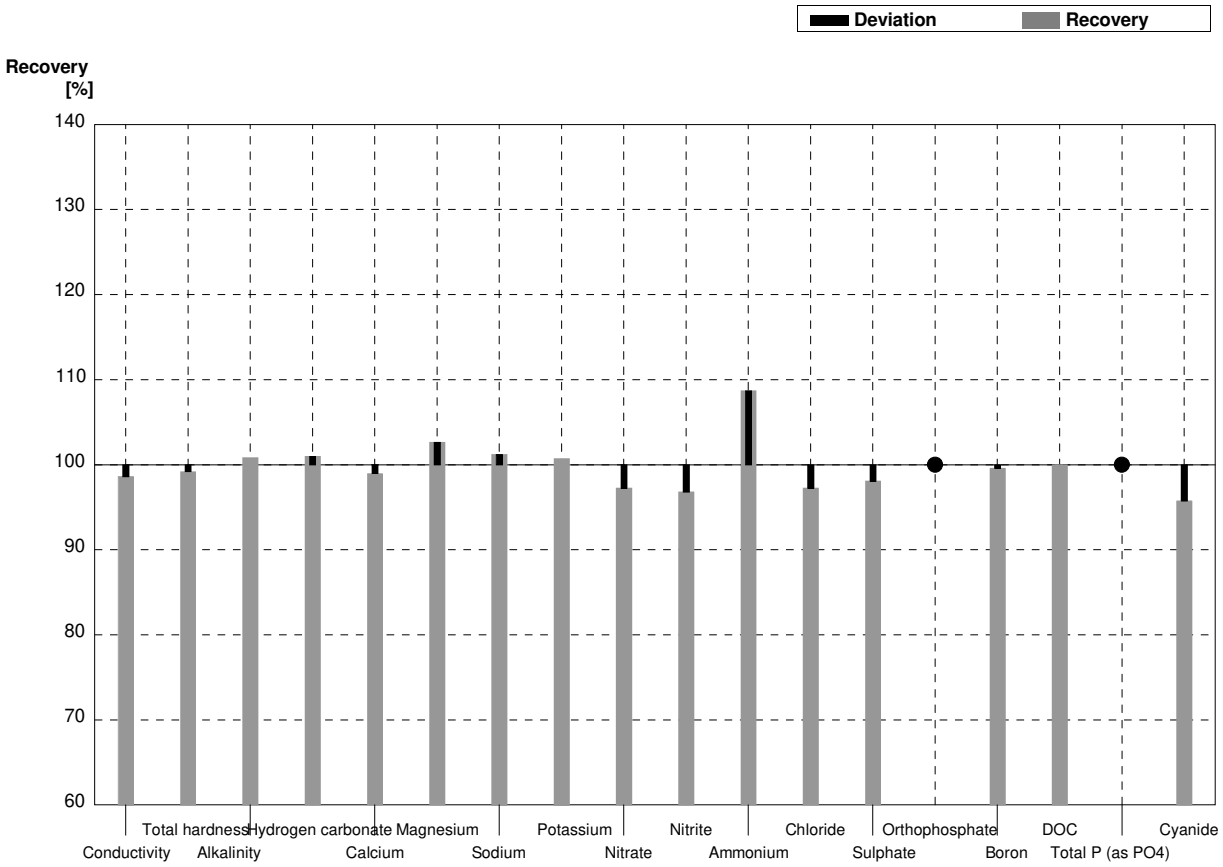
Sample **N158A**
Laboratory **T**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	483	19	µS/cm	99%
Total hardness	2,04	0,02	2,04	0,37	mmol/l	100%
Alkalinity	1,71	0,02	1,725	0,07	mmol/l	101%
Hydrogen carbonate	101	1	102	4	mg/l	101%
Calcium	57,9	0,7	57,9	10,4	mg/l	100%
Magnesium	14,5	0,2	14,4	2,59	mg/l	99%
Sodium	11,7	0,3	12,0	2,16	mg/l	103%
Potassium	2,30	0,04	2,31	0,42	mg/l	100%
Nitrate	39,9	0,6	38,6	3,47	mg/l	97%
Nitrite	0,0468	0,0010	0,0465	0,004	mg/l	99%
Ammonium	0,0251	0,0044	0,0344	0,003	mg/l	137%
Chloride	47,6	0,9	47,0	4,23	mg/l	99%
Sulphate	45,3	0,5	44,1	3,97	mg/l	97%
Orthophosphate	0,132	0,001	0,127	0,011	mg/l	96%
Boron	0,0431	0,0002	0,0425	0,008	mg/l	99%
DOC	5,62	0,03	6,10	0,55	mg/l	109%
Total P (as PO4)	0,184	0,001	0,188	0,008	mg/l	102%
Cyanide	0,0469	0,0003	0,0453	0,004	mg/l	97%



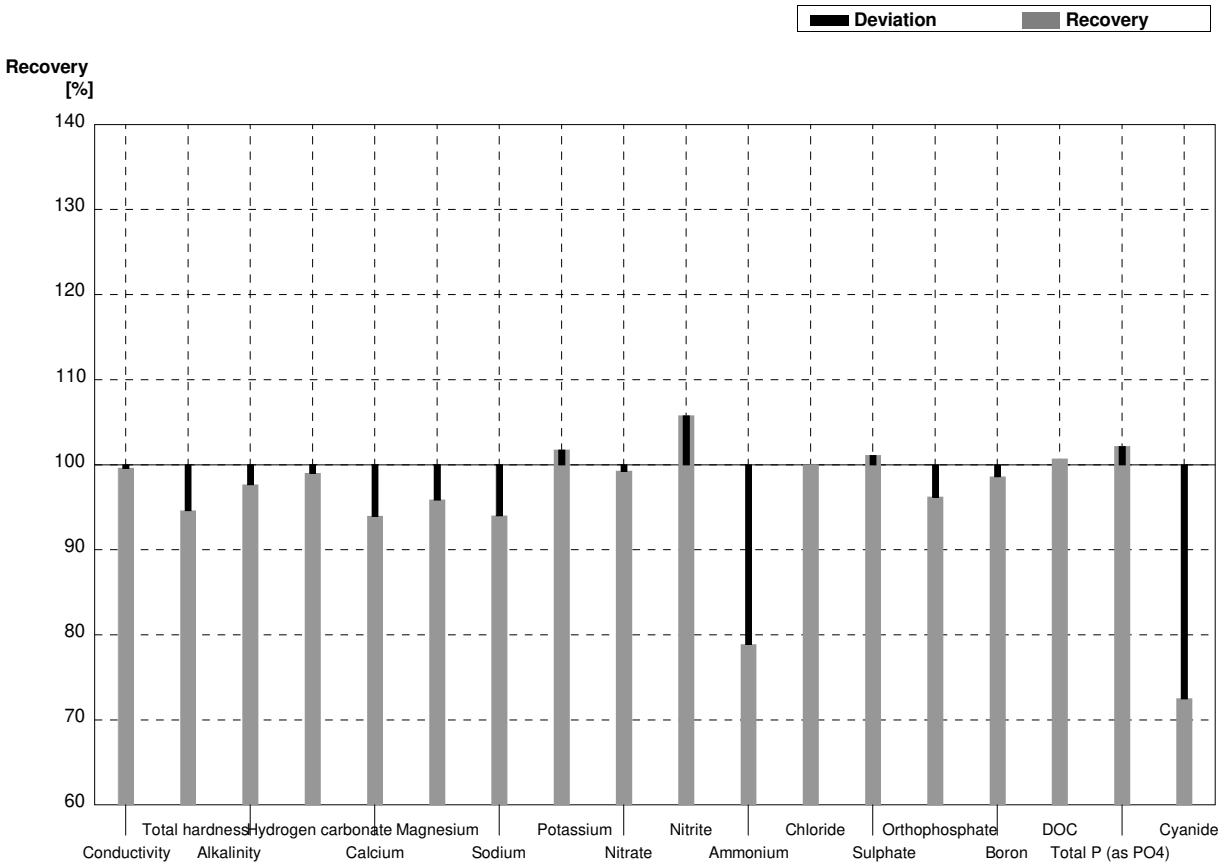
Sample **N158B**
Laboratory **T**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	429	17	µS/cm	99%
Total hardness	1,25	0,02	1,24	0,22	mmol/l	99%
Alkalinity	1,19	0,01	1,20	0,05	mmol/l	101%
Hydrogen carbonate	69,5	0,4	70,2	2,81	mg/l	101%
Calcium	39,4	0,6	39,0	7,02	mg/l	99%
Magnesium	6,41	0,09	6,58	1,18	mg/l	103%
Sodium	32,5	0,2	32,9	5,92	mg/l	101%
Potassium	5,52	0,04	5,56	1	mg/l	101%
Nitrate	73,3	1,7	71,3	6,42	mg/l	97%
Nitrite	0,063	0,003	0,0610	0,005	mg/l	97%
Ammonium	0,070	0,003	0,0761	0,007	mg/l	109%
Chloride	14,7	0,3	14,3	1,29	mg/l	97%
Sulphate	62,6	0,4	61,4	5,53	mg/l	98%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,0244	0,0001	0,0243	0,004	mg/l	100%
DOC	1,56	0,01	1,56	0,14	mg/l	100%
Total P (as PO4)	<0,009		<0,05		mg/l	•
Cyanide	0,0165	0,0001	0,0158	0,001	mg/l	96%



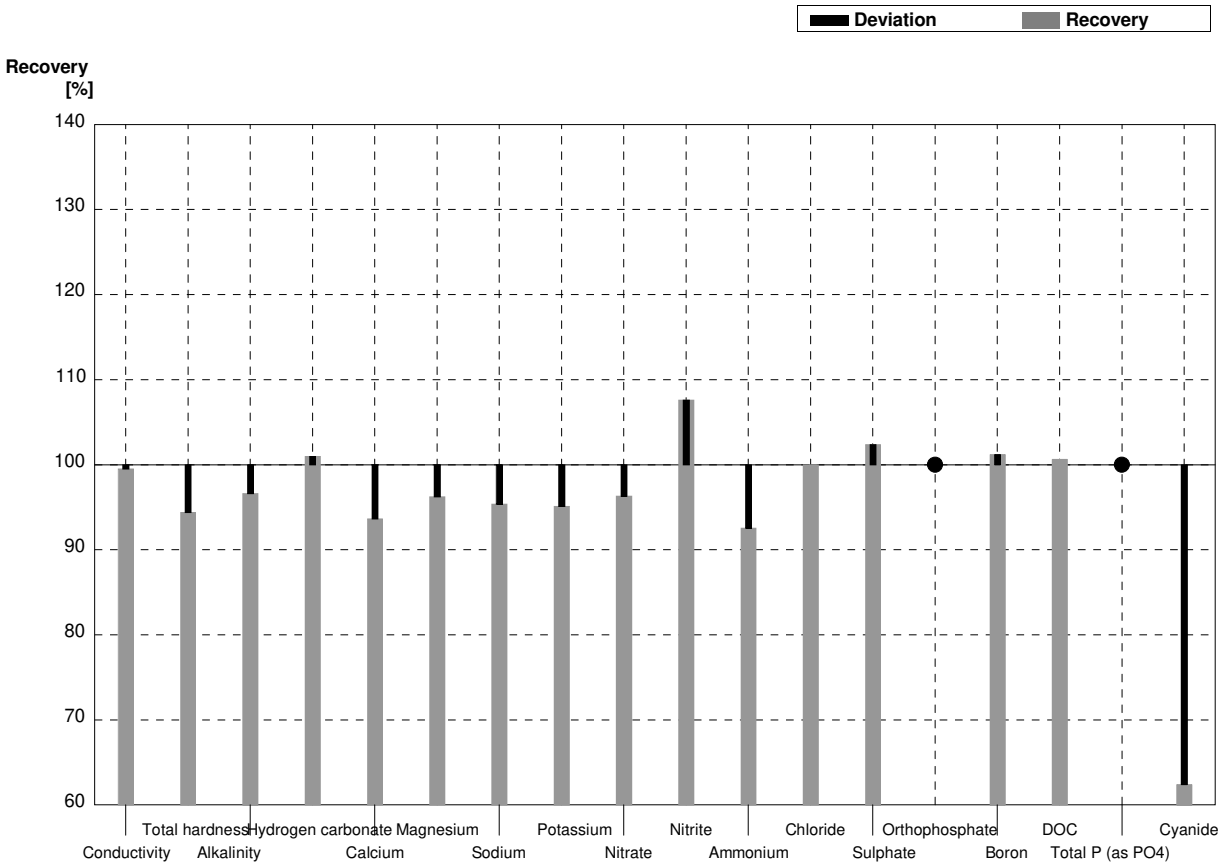
Sample N158A
Laboratory U

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	487	15	µS/cm	100%
Total hardness	2,04	0,02	1,93	0,16	mmol/l	95%
Alkalinity	1,71	0,02	1,67	0,08	mmol/l	98%
Hydrogen carbonate	101	1	100	5	mg/l	99%
Calcium	57,9	0,7	54,4	2,5	mg/l	94%
Magnesium	14,5	0,2	13,9	1,1	mg/l	96%
Sodium	11,7	0,3	11,0	0,8	mg/l	94%
Potassium	2,30	0,04	2,34	0,17	mg/l	102%
Nitrate	39,9	0,6	39,6	1,3	mg/l	99%
Nitrite	0,0468	0,0010	0,0495	0,005	mg/l	106%
Ammonium	0,0251	0,0044	0,0198	0,001	mg/l	79%
Chloride	47,6	0,9	47,6	3,2	mg/l	100%
Sulphate	45,3	0,5	45,8	1,5	mg/l	101%
Orthophosphate	0,132	0,001	0,127	0,01	mg/l	96%
Boron	0,0431	0,0002	0,0425	0,005	mg/l	99%
DOC	5,62	0,03	5,66	0,91	mg/l	101%
Total P (as PO4)	0,184	0,001	0,188	0,013	mg/l	102%
Cyanide	0,0469	0,0003	0,0340	0,01	mg/l	72%



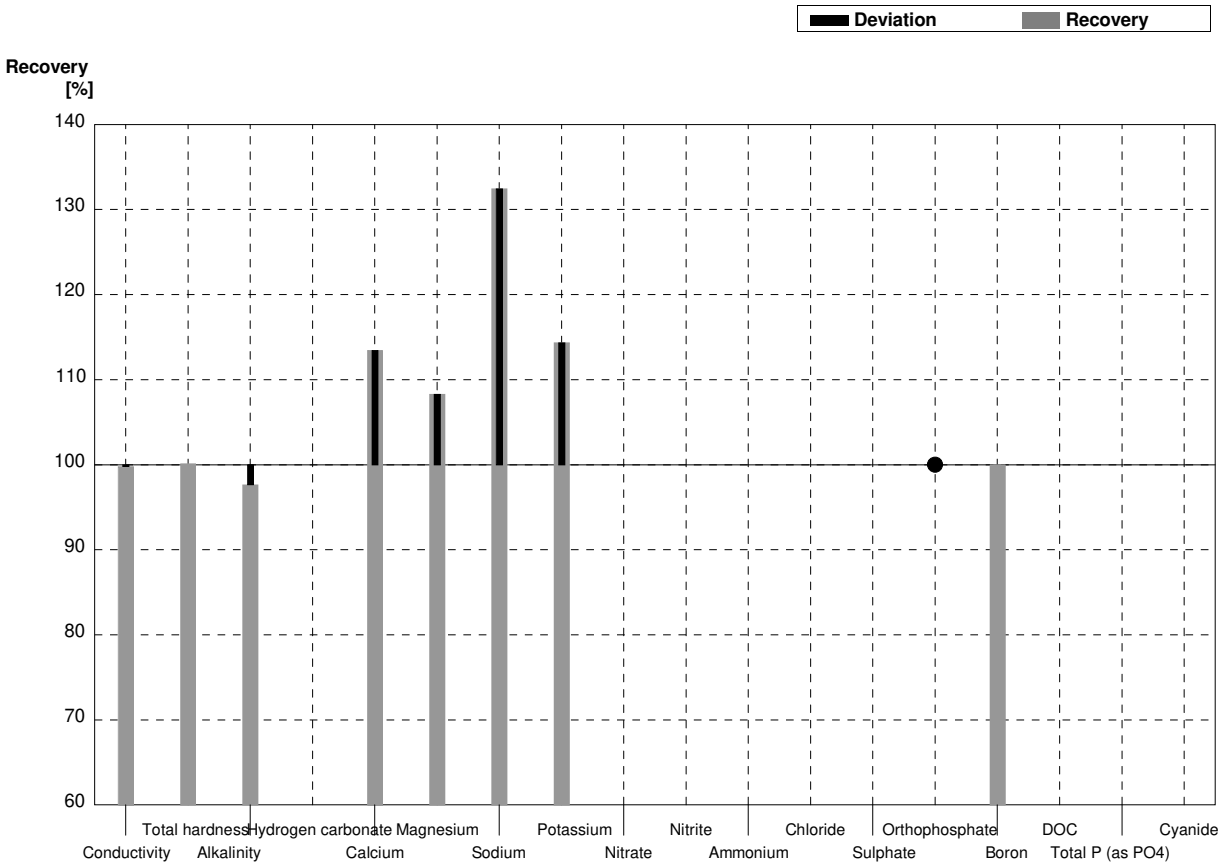
Sample N158B
Laboratory U

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	433	13	µS/cm	100%
Total hardness	1,25	0,02	1,18	0,10	mmol/l	94%
Alkalinity	1,19	0,01	1,15	0,06	mmol/l	97%
Hydrogen carbonate	69,5	0,4	70,2	3,4	mg/l	101%
Calcium	39,4	0,6	36,9	1,7	mg/l	94%
Magnesium	6,41	0,09	6,17	0,51	mg/l	96%
Sodium	32,5	0,2	31,0	2,2	mg/l	95%
Potassium	5,52	0,04	5,25	0,38	mg/l	95%
Nitrate	73,3	1,7	70,6	2,3	mg/l	96%
Nitrite	0,063	0,003	0,0678	0,007	mg/l	108%
Ammonium	0,070	0,003	0,0648	0,005	mg/l	93%
Chloride	14,7	0,3	14,7	1,0	mg/l	100%
Sulphate	62,6	0,4	64,1	2,1	mg/l	102%
Orthophosphate	<0,009		<0,015		mg/l	•
Boron	0,0244	0,0001	0,0247	0,003	mg/l	101%
DOC	1,56	0,01	1,57	0,25	mg/l	101%
Total P (as PO4)	<0,009		<0,015		mg/l	•
Cyanide	0,0165	0,0001	0,0103	0,002	mg/l	62%



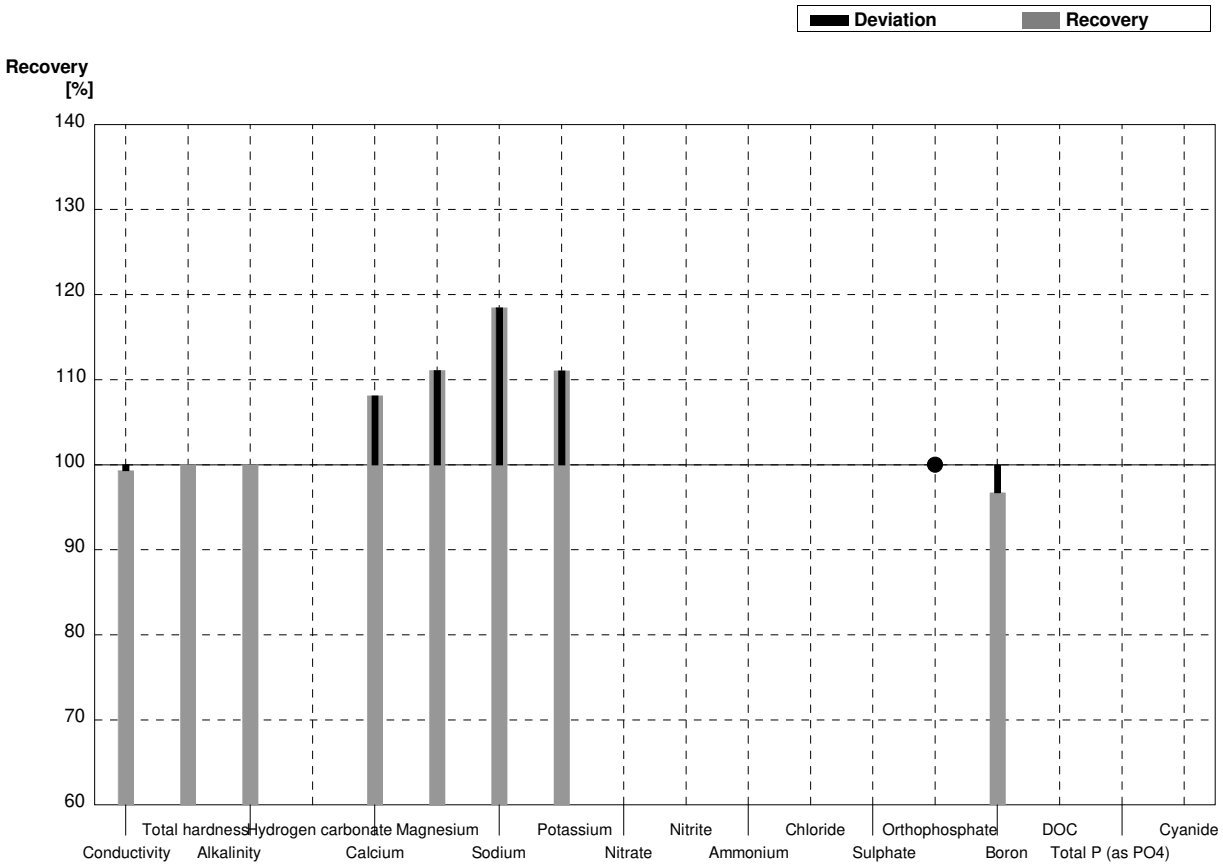
Sample N158A
Laboratory V

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	488		µS/cm	100%
Total hardness	2,04	0,02	2,043		mmol/l	100%
Alkalinity	1,71	0,02	1,67		mmol/l	98%
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7	65,7	3,36	mg/l	113%
Magnesium	14,5	0,2	15,7	0,59	mg/l	108%
Sodium	11,7	0,3	15,5	1,04	mg/l	132%
Potassium	2,30	0,04	2,63	0,58	mg/l	114%
Nitrate	39,9	0,6			mg/l	
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9			mg/l	
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001	<0,2		mg/l	•
Boron	0,0431	0,0002	0,0431	0,005	mg/l	100%
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



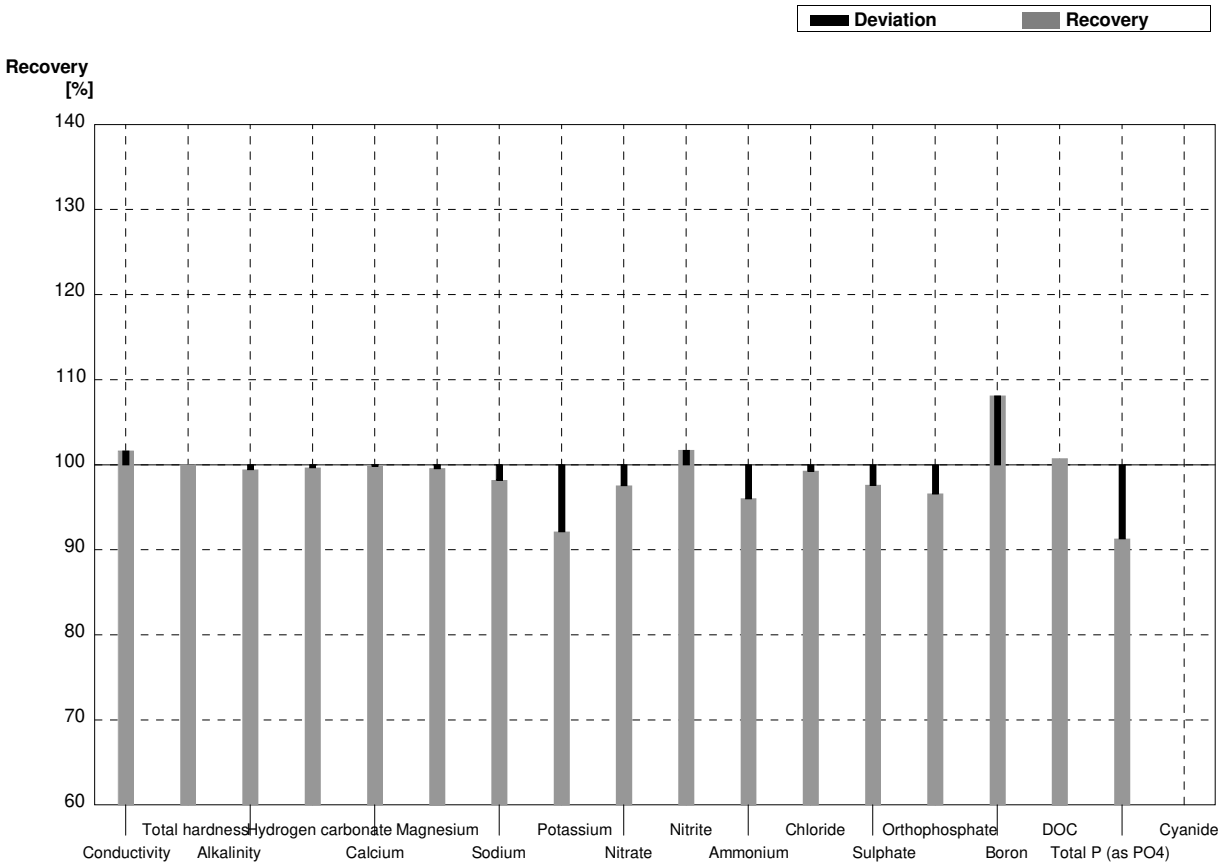
Sample N158B
Laboratory V

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	432		µS/cm	99%
Total hardness	1,25	0,02	1,250		mmol/l	100%
Alkalinity	1,19	0,01	1,19		mmol/l	100%
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6	42,6	1,77	mg/l	108%
Magnesium	6,41	0,09	7,12	0,29	mg/l	111%
Sodium	32,5	0,2	38,5	2,61	mg/l	118%
Potassium	5,52	0,04	6,13	0,57	mg/l	111%
Nitrate	73,3	1,7			mg/l	
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3			mg/l	
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009		<0,2		mg/l	•
Boron	0,0244	0,0001	0,0236	0,005	mg/l	97%
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



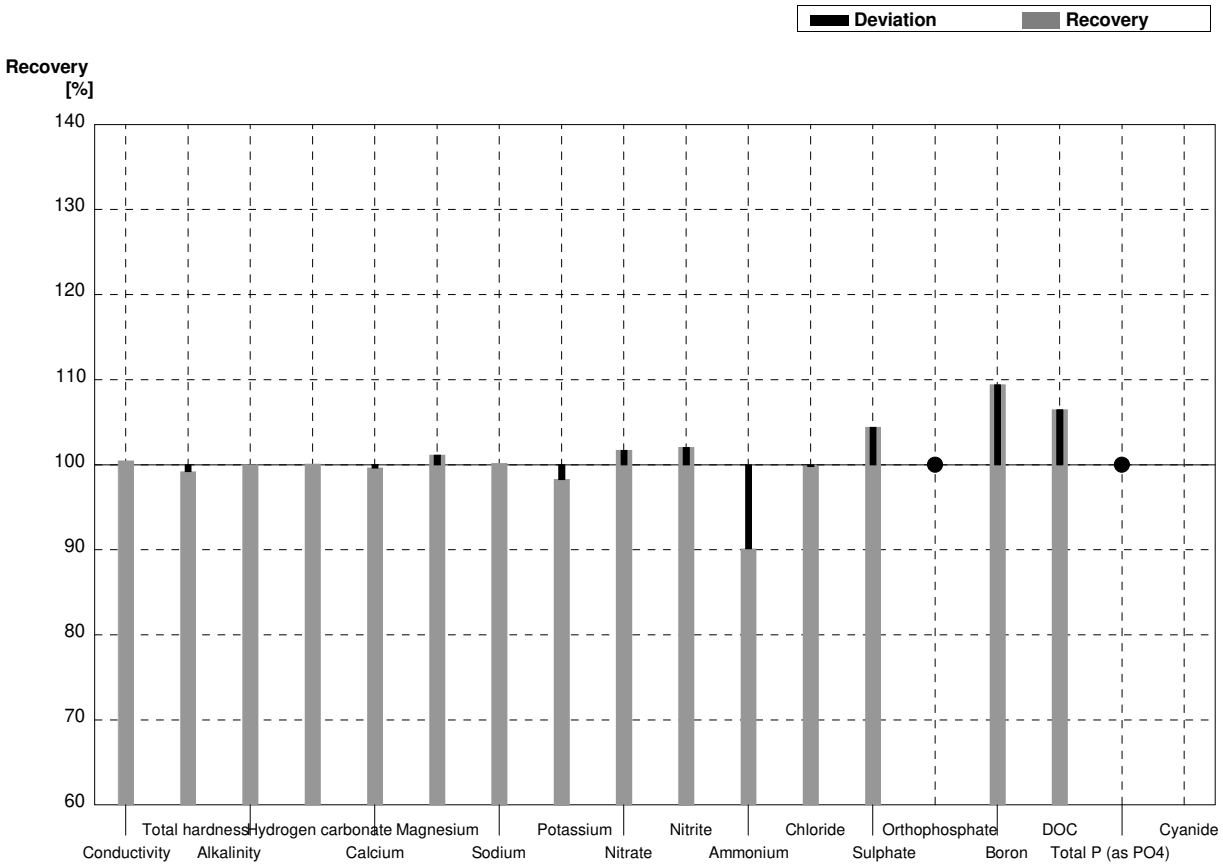
Sample N158A
Laboratory W

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	497	4,51	µS/cm	102%
Total hardness	2,04	0,02	2,04		mmol/l	100%
Alkalinity	1,71	0,02	1,70	0,17	mmol/l	99%
Hydrogen carbonate	101	1	100,66		mg/l	100%
Calcium	57,9	0,7	57,800	5,7	mg/l	100%
Magnesium	14,5	0,2	14,436	1,4	mg/l	100%
Sodium	11,7	0,3	11,487	1,1	mg/l	98%
Potassium	2,30	0,04	2,119	0,2	mg/l	92%
Nitrate	39,9	0,6	38,918	3,9	mg/l	98%
Nitrite	0,0468	0,0010	0,0476	0,005	mg/l	102%
Ammonium	0,0251	0,0044	0,0241	0,0024	mg/l	96%
Chloride	47,6	0,9	47,248	4,7	mg/l	99%
Sulphate	45,3	0,5	44,212	4,4	mg/l	98%
Orthophosphate	0,132	0,001	0,1275	0,013	mg/l	97%
Boron	0,0431	0,0002	0,0466	0,005	mg/l	108%
DOC	5,62	0,03	5,662	0,57	mg/l	101%
Total P (as PO4)	0,184	0,001	0,168	0,017	mg/l	91%
Cyanide	0,0469	0,0003			mg/l	



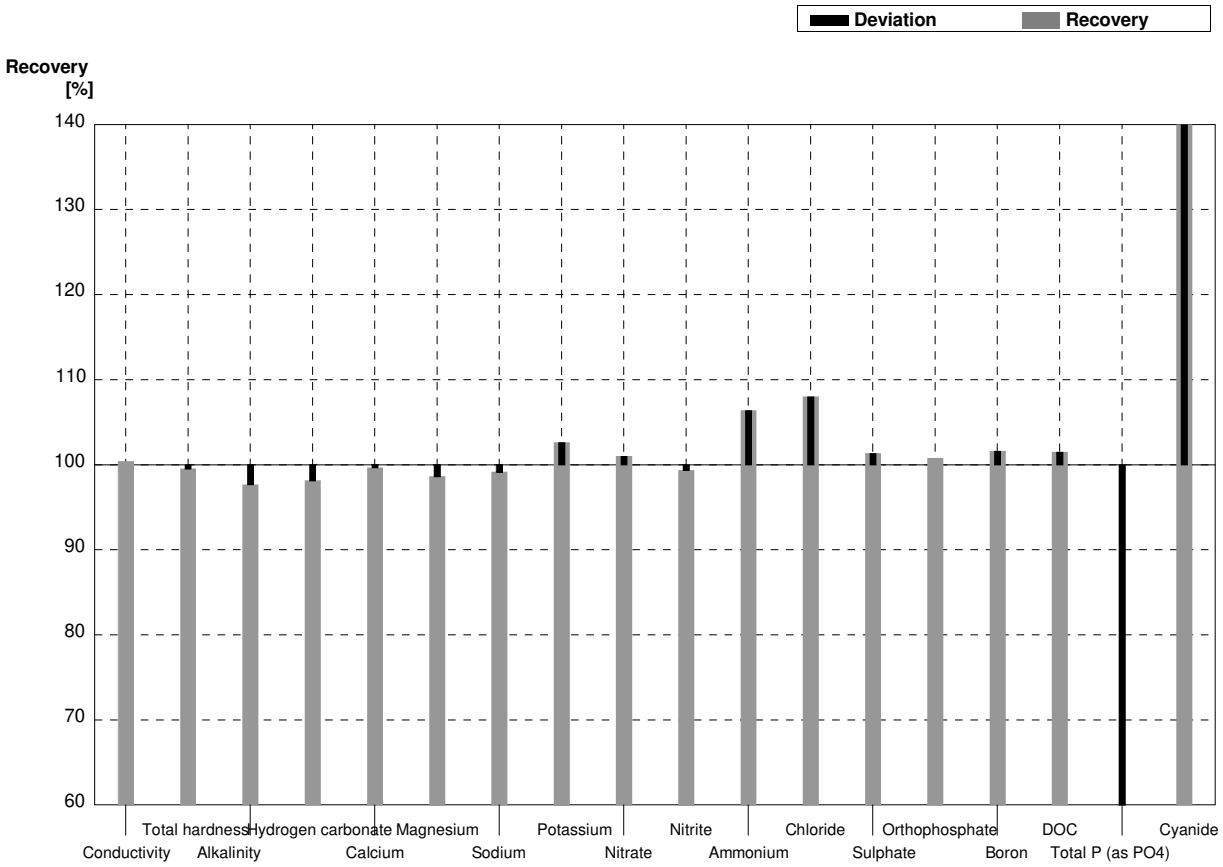
Sample N158B
Laboratory W

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	437	4,51	µS/cm	100%
Total hardness	1,25	0,02	1,24		mmol/l	99%
Alkalinity	1,19	0,01	1,19	0,12	mmol/l	100%
Hydrogen carbonate	69,5	0,4	69,551		mg/l	100%
Calcium	39,4	0,6	39,254	3,9	mg/l	100%
Magnesium	6,41	0,09	6,484	0,65	mg/l	101%
Sodium	32,5	0,2	32,553	3,2	mg/l	100%
Potassium	5,52	0,04	5,425	0,5	mg/l	98%
Nitrate	73,3	1,7	74,555	7,5	mg/l	102%
Nitrite	0,063	0,003	0,0643	0,0064	mg/l	102%
Ammonium	0,070	0,003	0,0631	0,0063	mg/l	90%
Chloride	14,7	0,3	14,672	1,5	mg/l	100%
Sulphate	62,6	0,4	65,365	6,5	mg/l	104%
Orthophosphate	<0,009		<0,0055		mg/l	•
Boron	0,0244	0,0001	0,0267	0,003	mg/l	109%
DOC	1,56	0,01	1,661	0,17	mg/l	106%
Total P (as PO4)	<0,009		<0,001		mg/l	•
Cyanide	0,0165	0,0001			mg/l	



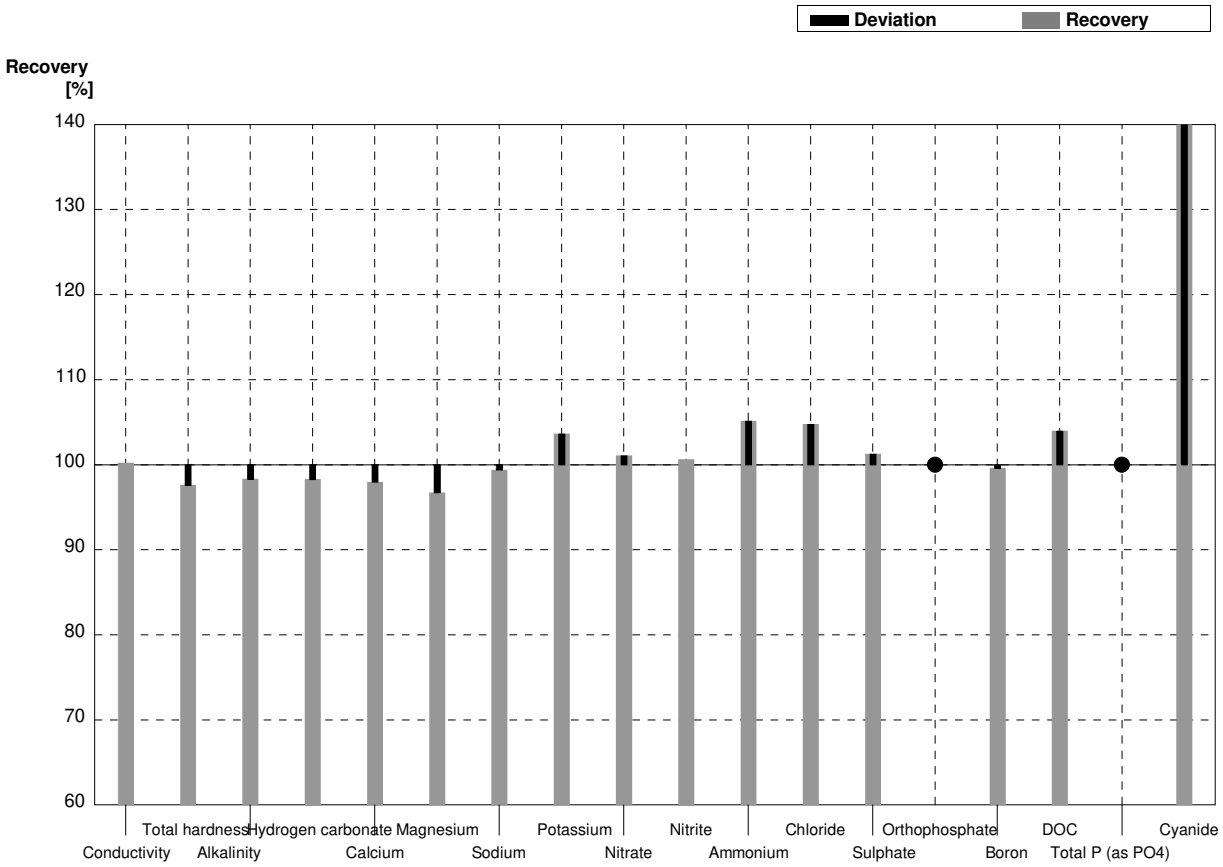
Sample **N158A**
Laboratory **X**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	491	0,226	µS/cm	100%
Total hardness	2,04	0,02	2,03	0,0374	mmol/l	100%
Alkalinity	1,71	0,02	1,67	0,0825	mmol/l	98%
Hydrogen carbonate	101	1	99,1	1,981	mg/l	98%
Calcium	57,9	0,7	57,7	0,756	mg/l	100%
Magnesium	14,5	0,2	14,3	0,787	mg/l	99%
Sodium	11,7	0,3	11,6	0,153	mg/l	99%
Potassium	2,30	0,04	2,36	0,0378	mg/l	103%
Nitrate	39,9	0,6	40,3	0,425	mg/l	101%
Nitrite	0,0468	0,0010	0,0465	0,00103	mg/l	99%
Ammonium	0,0251	0,0044	0,0267	0,00245	mg/l	106%
Chloride	47,6	0,9	51,4	0,998	mg/l	108%
Sulphate	45,3	0,5	45,9	0,388	mg/l	101%
Orthophosphate	0,132	0,001	0,133	0,00251	mg/l	101%
Boron	0,0431	0,0002	0,0438	0,00101	mg/l	102%
DOC	5,62	0,03	5,703	0,0881	mg/l	101%
Total P (as PO4)	0,184	0,001	0,0594	0,00044	mg/l	32%
Cyanide	0,0469	0,0003	44,65	0,598	mg/l	95203%



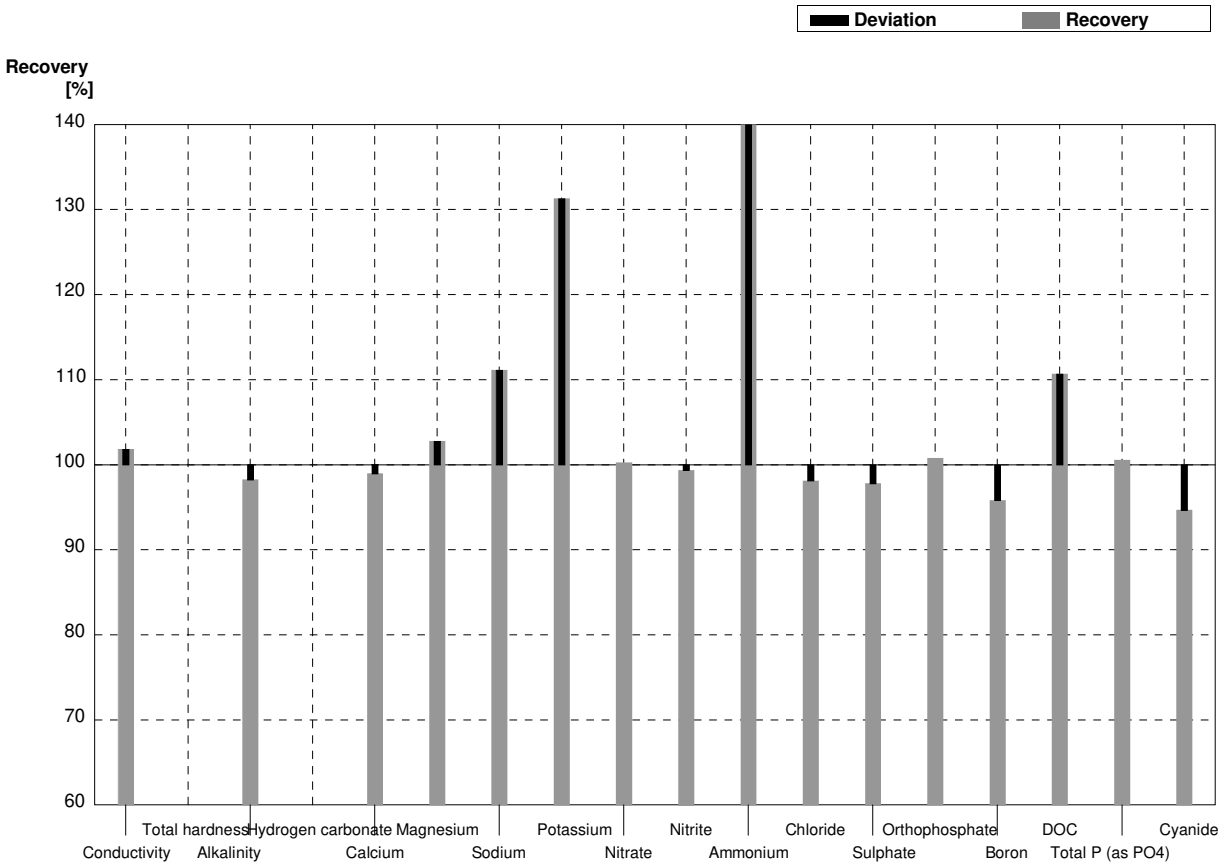
Sample **N158B**
Laboratory **X**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	436	0,152	µS/cm	100%
Total hardness	1,25	0,02	1,22	0,0191	mmol/l	98%
Alkalinity	1,19	0,01	1,17	0,0724	mmol/l	98%
Hydrogen carbonate	69,5	0,4	68,3	1,367	mg/l	98%
Calcium	39,4	0,6	38,6	0,762	mg/l	98%
Magnesium	6,41	0,09	6,20	0,0415	mg/l	97%
Sodium	32,5	0,2	32,3	0,156	mg/l	99%
Potassium	5,52	0,04	5,72	0,406	mg/l	104%
Nitrate	73,3	1,7	74,1	0,805	mg/l	101%
Nitrite	0,063	0,003	0,0634	0,00102	mg/l	101%
Ammonium	0,070	0,003	0,0736	0,00233	mg/l	105%
Chloride	14,7	0,3	15,4	0,480	mg/l	105%
Sulphate	62,6	0,4	63,4	0,618	mg/l	101%
Orthophosphate	<0,009		<0,0150		mg/l	•
Boron	0,0244	0,0001	0,0243	0,00117	mg/l	100%
DOC	1,56	0,01	1,622	0,0826	mg/l	104%
Total P (as PO4)	<0,009		<0,0049		mg/l	•
Cyanide	0,0165	0,0001	15,402	0,594	mg/l	93345%



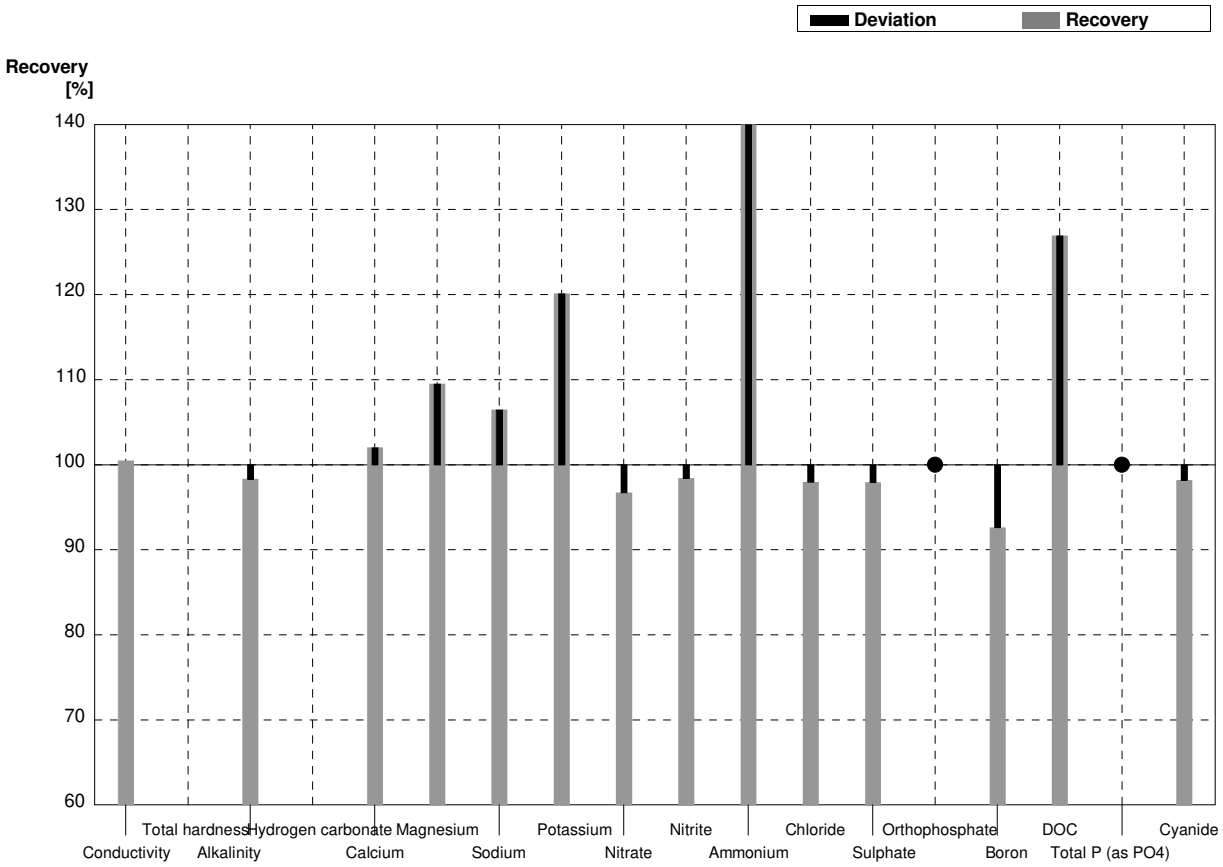
Sample **N158A**
Laboratory **Y**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	498	0,225	µS/cm	102%
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02	1,68	0,018	mmol/l	98%
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7	57,3	1,66	mg/l	99%
Magnesium	14,5	0,2	14,9	0,072	mg/l	103%
Sodium	11,7	0,3	13,0	0,858	mg/l	111%
Potassium	2,30	0,04	3,02	0,185	mg/l	131%
Nitrate	39,9	0,6	40,0	4,20	mg/l	100%
Nitrite	0,0468	0,0010	0,0465	0,0026	mg/l	99%
Ammonium	0,0251	0,0044	0,0375	0,0016	mg/l	149%
Chloride	47,6	0,9	46,7	4,32	mg/l	98%
Sulphate	45,3	0,5	44,3	4,56	mg/l	98%
Orthophosphate	0,132	0,001	0,133	0,0007	mg/l	101%
Boron	0,0431	0,0002	0,0413	0,0013	mg/l	96%
DOC	5,62	0,03	6,22	0,030	mg/l	111%
Total P (as PO4)	0,184	0,001	0,185	0,0010	mg/l	101%
Cyanide	0,0469	0,0003	0,0444	0,0042	mg/l	95%



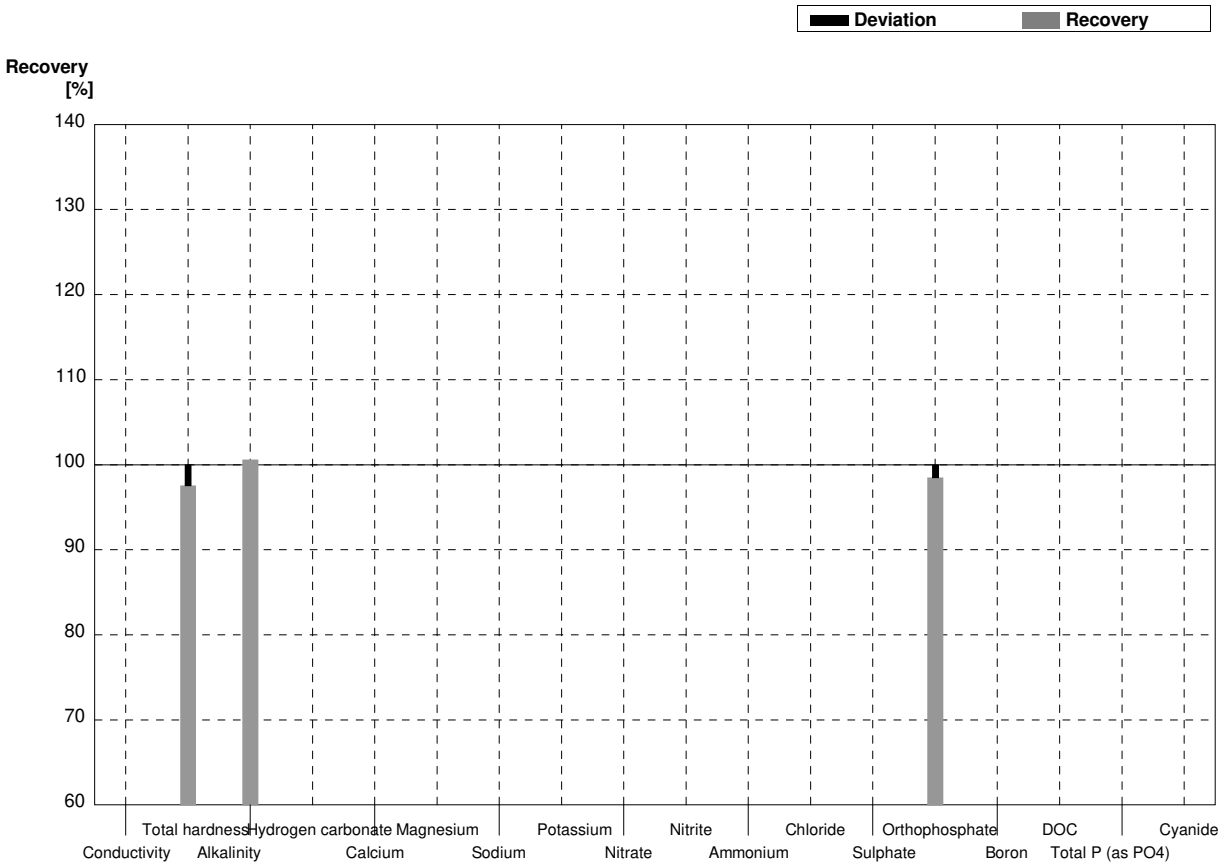
Sample N158B
Laboratory Y

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	437	0,256	µS/cm	100%
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01	1,17	0,013	mmol/l	98%
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6	40,2	1,17	mg/l	102%
Magnesium	6,41	0,09	7,02	0,034	mg/l	110%
Sodium	32,5	0,2	34,6	2,28	mg/l	106%
Potassium	5,52	0,04	6,63	0,406	mg/l	120%
Nitrate	73,3	1,7	70,9	7,44	mg/l	97%
Nitrite	0,063	0,003	0,0620	0,0034	mg/l	98%
Ammonium	0,070	0,003	0,100	0,0044	mg/l	143%
Chloride	14,7	0,3	14,4	1,33	mg/l	98%
Sulphate	62,6	0,4	61,3	6,31	mg/l	98%
Orthophosphate	<0,009		<0,050		mg/l	•
Boron	0,0244	0,0001	0,0226	0,0007	mg/l	93%
DOC	1,56	0,01	1,98	0,0095	mg/l	127%
Total P (as PO4)	<0,009		<0,050		mg/l	•
Cyanide	0,0165	0,0001	0,0162	0,00153	mg/l	98%



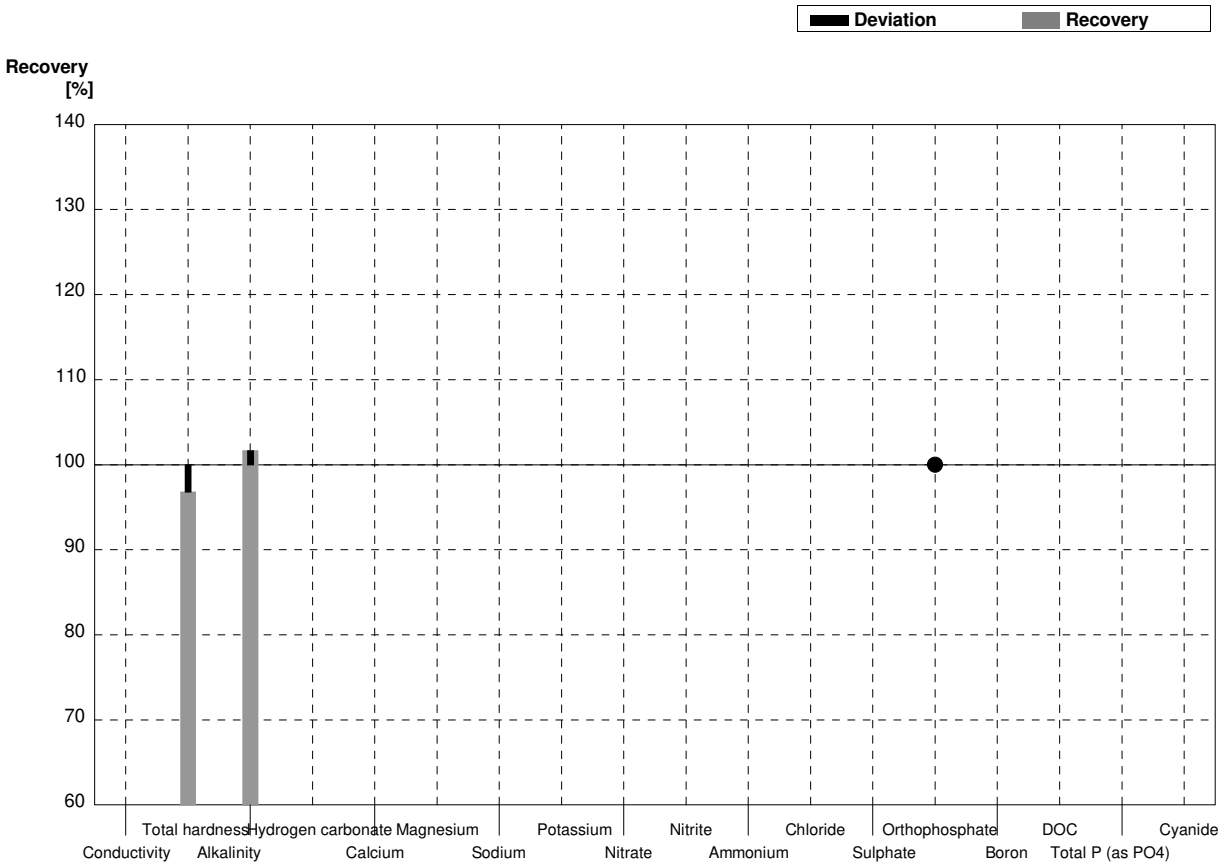
Sample **N158A**
Laboratory **Z**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02	1,99	0,01	mmol/l	98%
Alkalinity	1,71	0,02	1,72	0,02	mmol/l	101%
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7			mg/l	
Magnesium	14,5	0,2			mg/l	
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6			mg/l	
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9			mg/l	
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001	0,130	0,001	mg/l	98%
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



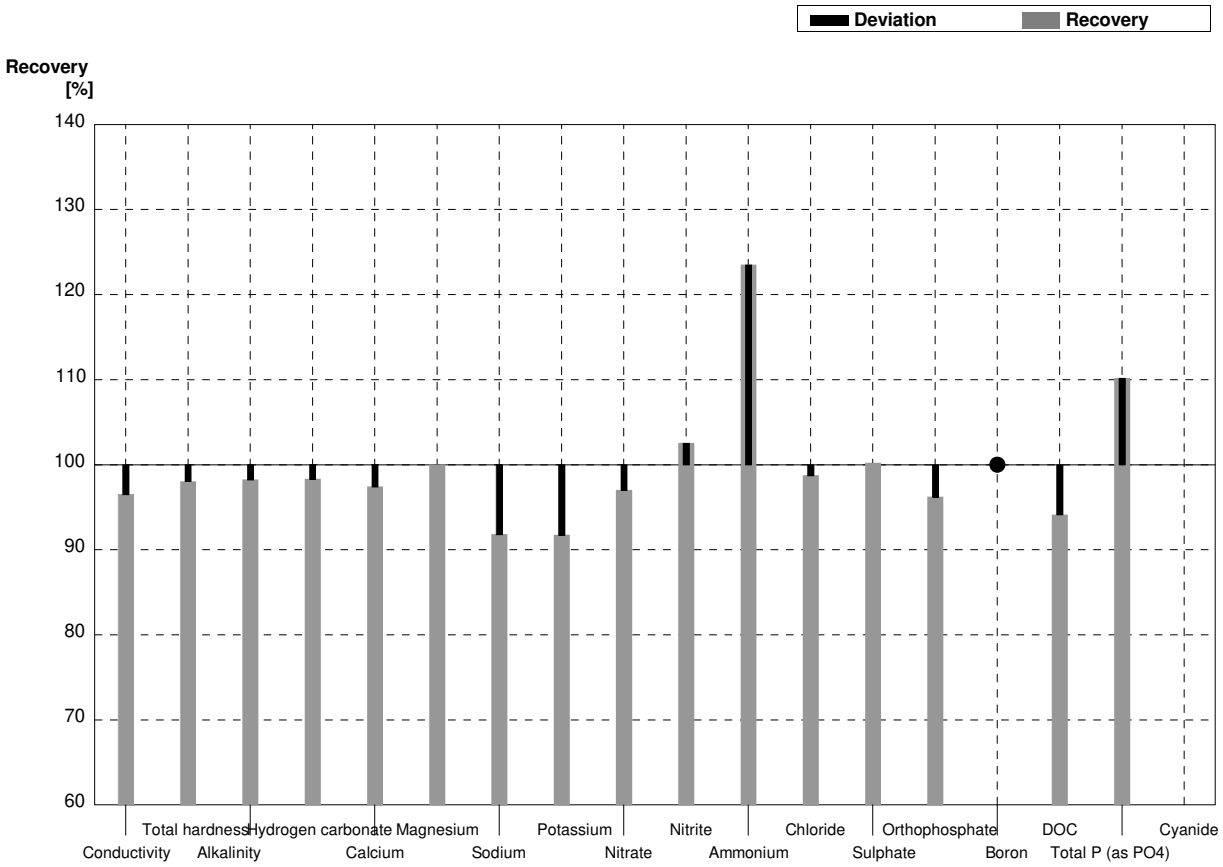
Sample **N158B**
Laboratory **Z**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02	1,21	0,03	mmol/l	97%
Alkalinity	1,19	0,01	1,21	0,02	mmol/l	102%
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6			mg/l	
Magnesium	6,41	0,09			mg/l	
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7			mg/l	
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3			mg/l	
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009		<0,015		mg/l	•
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



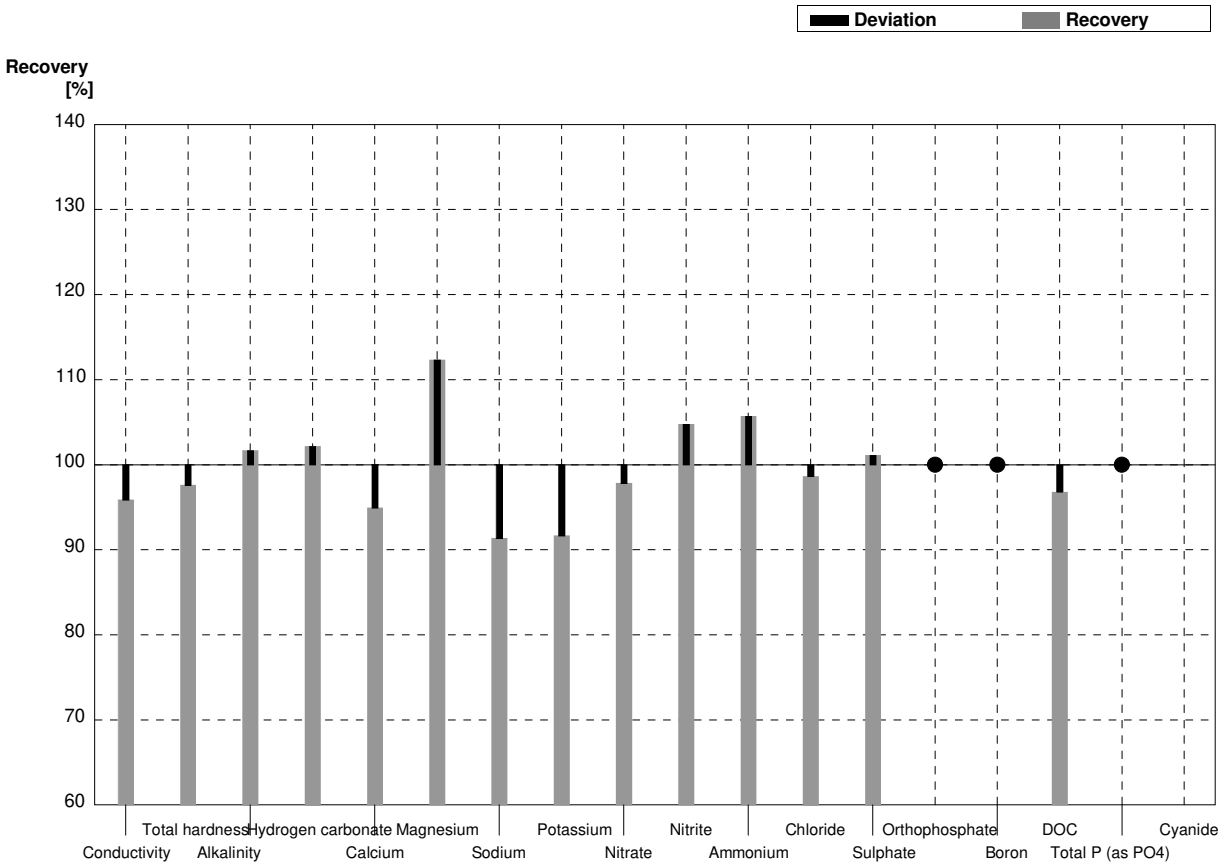
Sample **N158A**
Laboratory **AA**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	472	9	µS/cm	97%
Total hardness	2,04	0,02	2,00	0,08	mmol/l	98%
Alkalinity	1,71	0,02	1,68	0,08	mmol/l	98%
Hydrogen carbonate	101	1	99,3	4,97	mg/l	98%
Calcium	57,9	0,7	56,4	2,3	mg/l	97%
Magnesium	14,5	0,2	14,5	0,7	mg/l	100%
Sodium	11,7	0,3	10,74	0,54	mg/l	92%
Potassium	2,30	0,04	2,11	0,11	mg/l	92%
Nitrate	39,9	0,6	38,7	1,2	mg/l	97%
Nitrite	0,0468	0,0010	0,0480	0,005	mg/l	103%
Ammonium	0,0251	0,0044	0,0310	0,003	mg/l	124%
Chloride	47,6	0,9	47,0	1,4	mg/l	99%
Sulphate	45,3	0,5	45,4	1,4	mg/l	100%
Orthophosphate	0,132	0,001	0,127	0,013	mg/l	96%
Boron	0,0431	0,0002	<0,050		mg/l	•
DOC	5,62	0,03	5,29	0,53	mg/l	94%
Total P (as PO4)	0,184	0,001	0,2027	0,0304	mg/l	110%
Cyanide	0,0469	0,0003			mg/l	



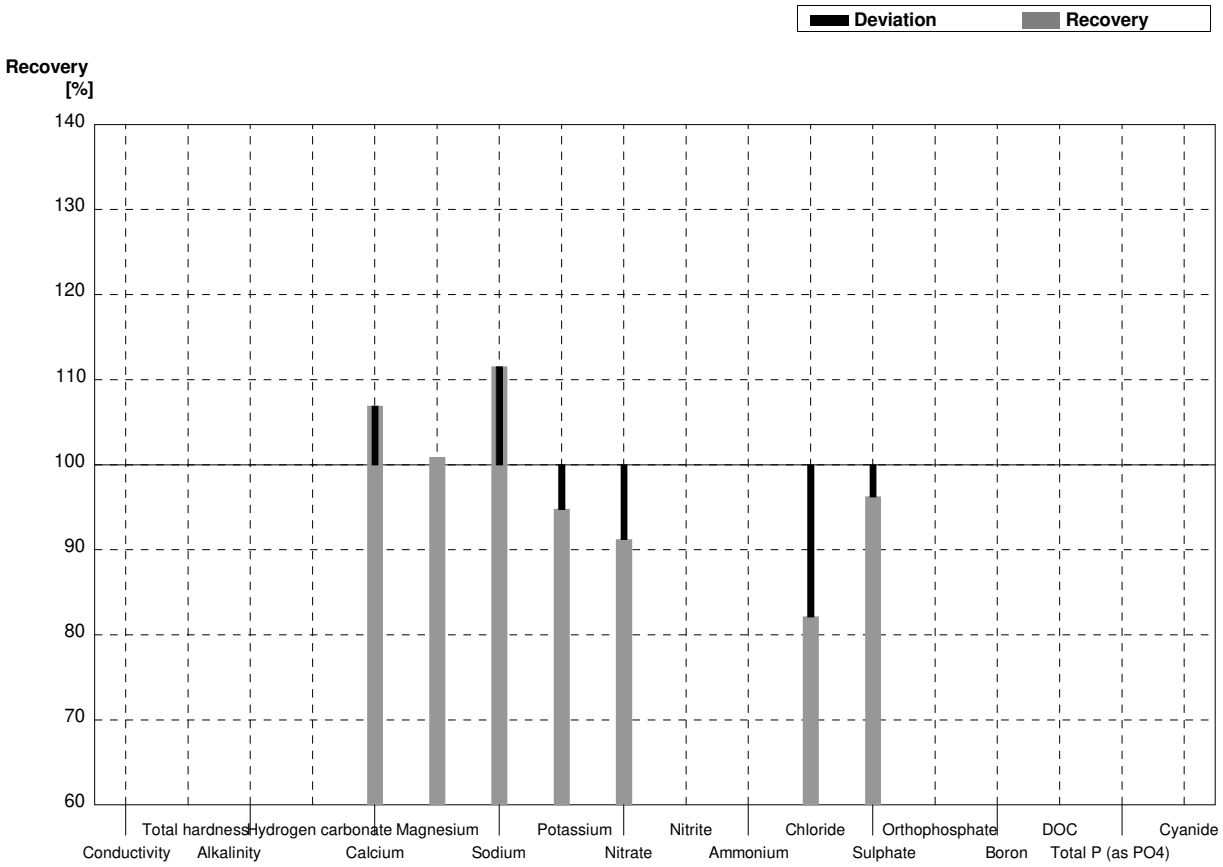
Sample **N158B**
Laboratory **AA**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	417	8	µS/cm	96%
Total hardness	1,25	0,02	1,22	0,05	mmol/l	98%
Alkalinity	1,19	0,01	1,21	0,06	mmol/l	102%
Hydrogen carbonate	69,5	0,4	71,0	3,6	mg/l	102%
Calcium	39,4	0,6	37,4	1,5	mg/l	95%
Magnesium	6,41	0,09	7,2	0,4	mg/l	112%
Sodium	32,5	0,2	29,69	1,49	mg/l	91%
Potassium	5,52	0,04	5,06	0,25	mg/l	92%
Nitrate	73,3	1,7	71,7	2,2	mg/l	98%
Nitrite	0,063	0,003	0,066	0,007	mg/l	105%
Ammonium	0,070	0,003	0,074	0,007	mg/l	106%
Chloride	14,7	0,3	14,5	0,4	mg/l	99%
Sulphate	62,6	0,4	63,3	1,9	mg/l	101%
Orthophosphate	<0,009		<0,020		mg/l	•
Boron	0,0244	0,0001	<0,050		mg/l	•
DOC	1,56	0,01	1,51	0,15	mg/l	97%
Total P (as PO4)	<0,009		<0,031		mg/l	•
Cyanide	0,0165	0,0001			mg/l	



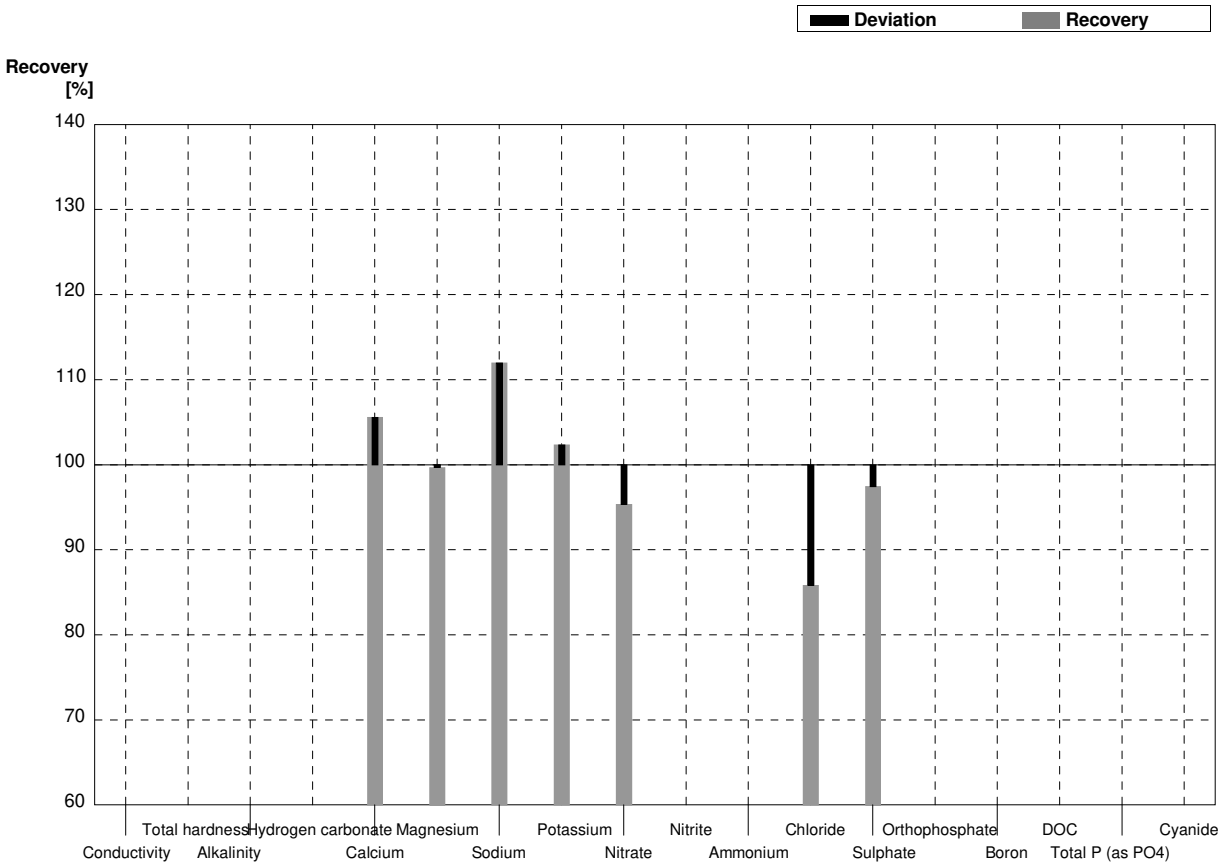
Sample **N158A**
Laboratory **AB**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02			mmol/l	
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7	61,9	3,09	mg/l	107%
Magnesium	14,5	0,2	14,63	0,732	mg/l	101%
Sodium	11,7	0,3	13,05	0,653	mg/l	112%
Potassium	2,30	0,04	2,18	0,109	mg/l	95%
Nitrate	39,9	0,6	36,4	1,82	mg/l	91%
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9	39,1	1,96	mg/l	82%
Sulphate	45,3	0,5	43,6	2,18	mg/l	96%
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



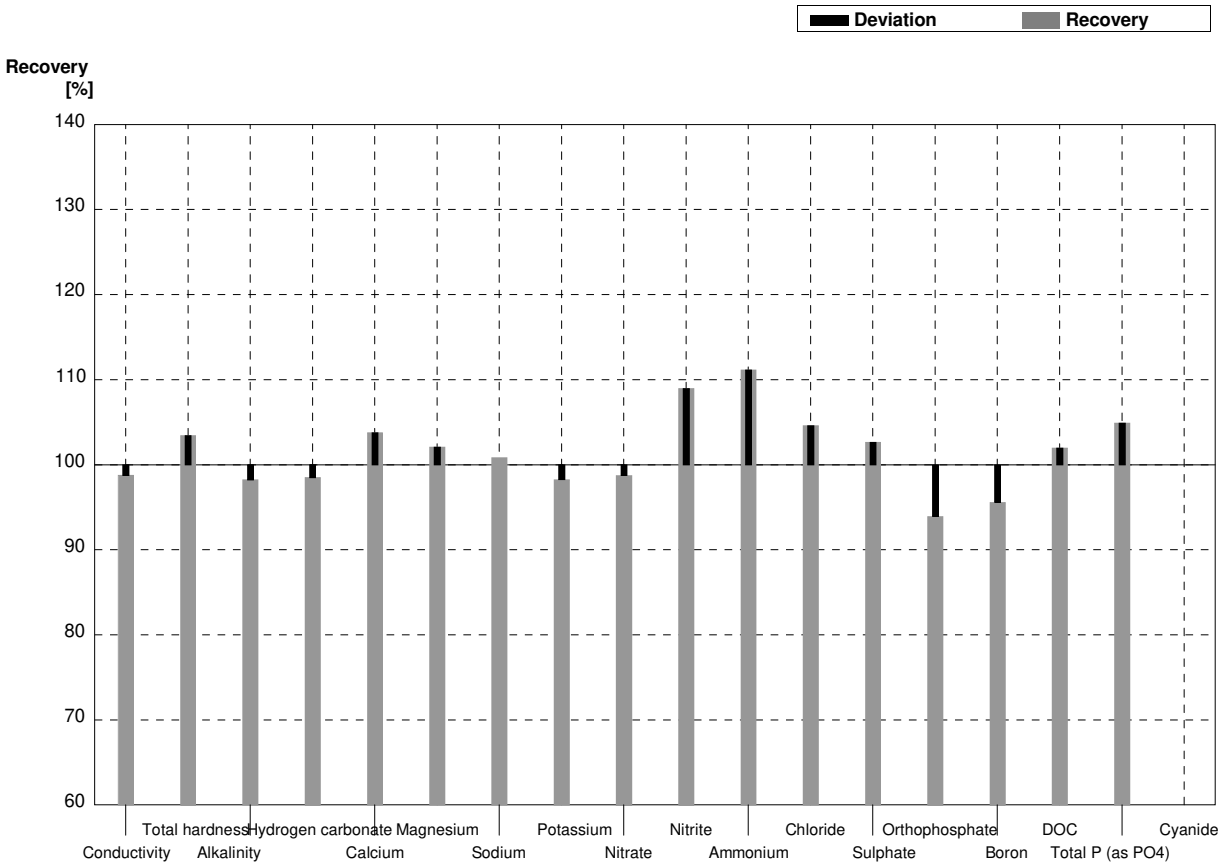
Sample **N158B**
Laboratory **AB**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01			mmol/l	
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6	41,6	2,08	mg/l	106%
Magnesium	6,41	0,09	6,39	0,319	mg/l	100%
Sodium	32,5	0,2	36,4	1,82	mg/l	112%
Potassium	5,52	0,04	5,65	0,283	mg/l	102%
Nitrate	73,3	1,7	69,9	3,49	mg/l	95%
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3	12,62	0,631	mg/l	86%
Sulphate	62,6	0,4	61,0	3,05	mg/l	97%
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



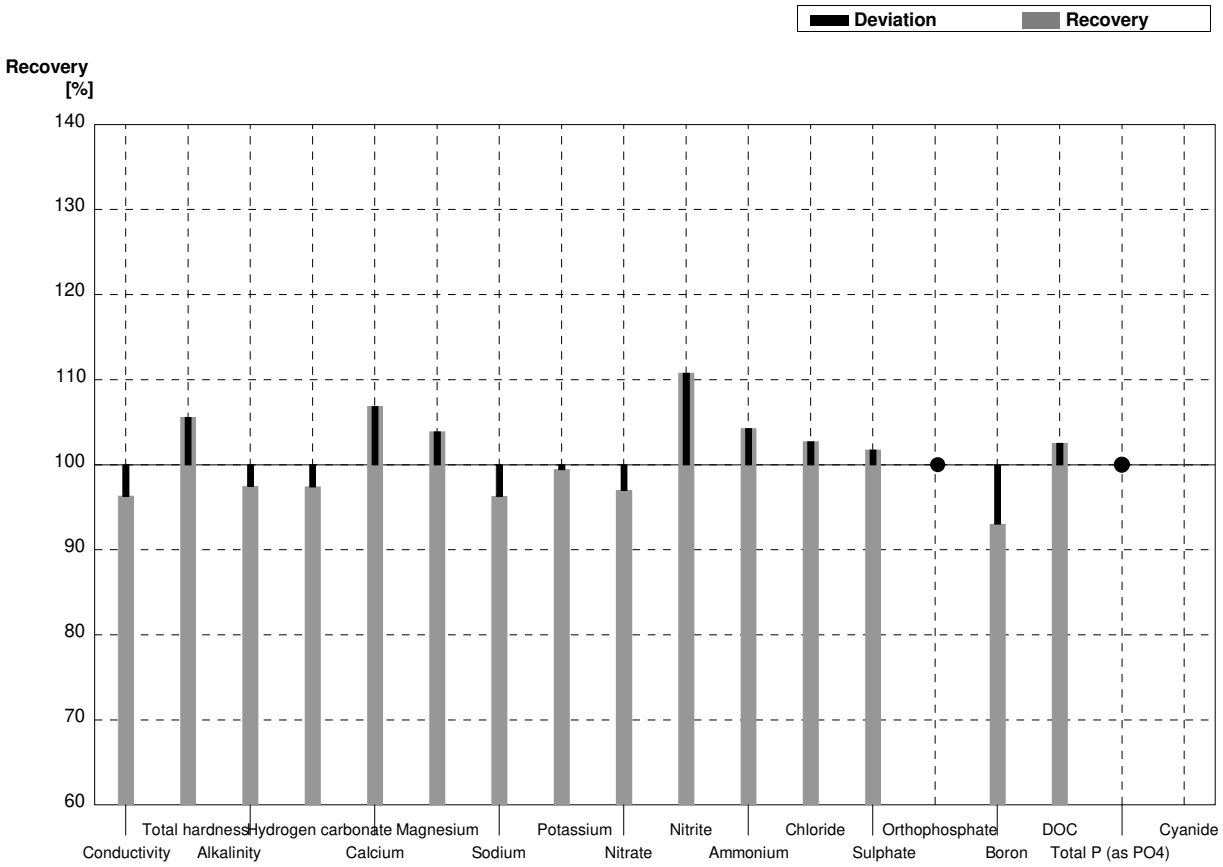
Sample **N158A**
Laboratory **AC**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	483	2,3	µS/cm	99%
Total hardness	2,04	0,02	2,11		mmol/l	103%
Alkalinity	1,71	0,02	1,68	0,12	mmol/l	98%
Hydrogen carbonate	101	1	99,5	0,8	mg/l	99%
Calcium	57,9	0,7	60,1	1,6	mg/l	104%
Magnesium	14,5	0,2	14,8	0,1	mg/l	102%
Sodium	11,7	0,3	11,8	0,2	mg/l	101%
Potassium	2,30	0,04	2,26	0,2	mg/l	98%
Nitrate	39,9	0,6	39,4	0,4	mg/l	99%
Nitrite	0,0468	0,0010	0,051	0,001	mg/l	109%
Ammonium	0,0251	0,0044	0,0279	0,002	mg/l	111%
Chloride	47,6	0,9	49,8	1,4	mg/l	105%
Sulphate	45,3	0,5	46,5	3,1	mg/l	103%
Orthophosphate	0,132	0,001	0,124	0,003	mg/l	94%
Boron	0,0431	0,0002	0,0412	0,0025	mg/l	96%
DOC	5,62	0,03	5,73	0,08	mg/l	102%
Total P (as PO4)	0,184	0,001	0,193	0,002	mg/l	105%
Cyanide	0,0469	0,0003			mg/l	



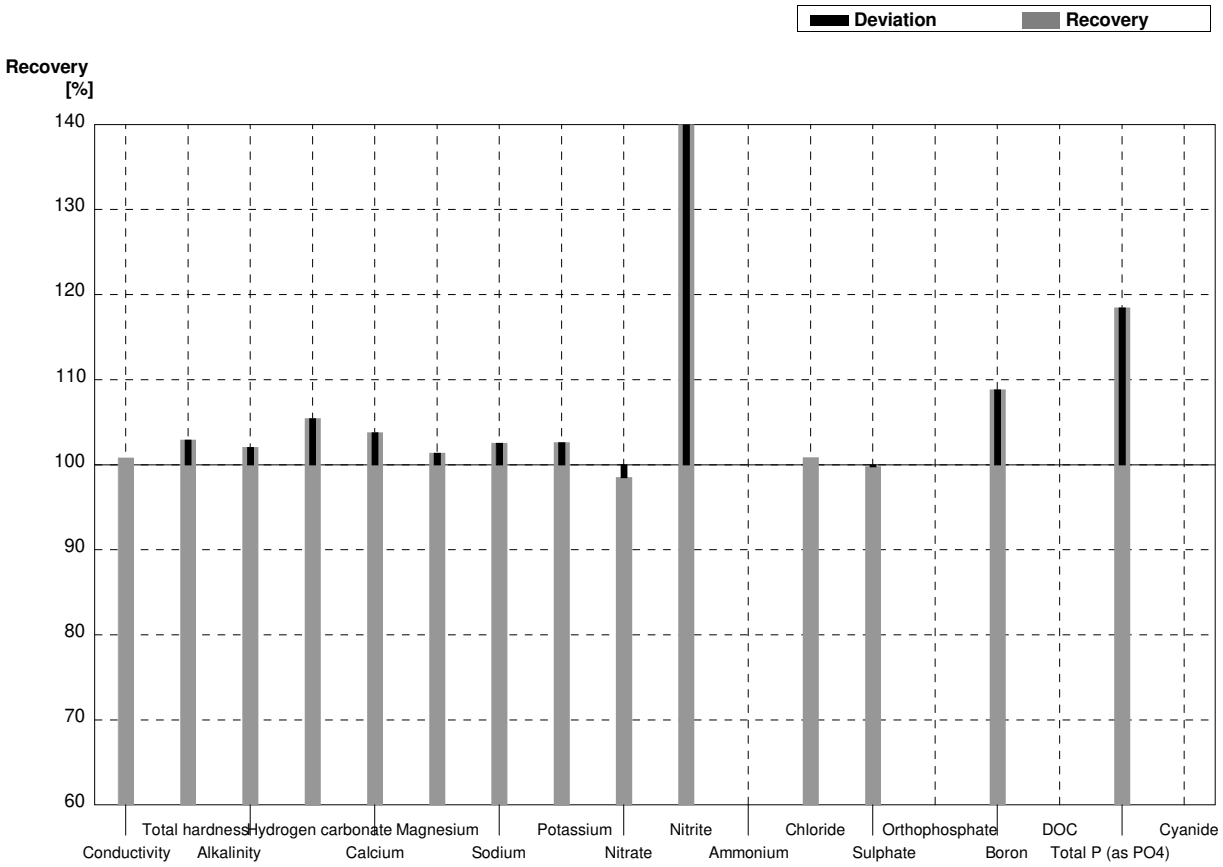
Sample **N158B**
Laboratory **AC**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	419		µS/cm	96%
Total hardness	1,25	0,02	1,32		mmol/l	106%
Alkalinity	1,19	0,01	1,16	0,1	mmol/l	97%
Hydrogen carbonate	69,5	0,4	67,7	0,4	mg/l	97%
Calcium	39,4	0,6	42,1	1,5	mg/l	107%
Magnesium	6,41	0,09	6,66	0,07	mg/l	104%
Sodium	32,5	0,2	31,3	1,0	mg/l	96%
Potassium	5,52	0,04	5,49	0,06	mg/l	99%
Nitrate	73,3	1,7	71,1	1,2	mg/l	97%
Nitrite	0,063	0,003	0,0698	0,001	mg/l	111%
Ammonium	0,070	0,003	0,0730	0,002	mg/l	104%
Chloride	14,7	0,3	15,1	0,5	mg/l	103%
Sulphate	62,6	0,4	63,7	0,1	mg/l	102%
Orthophosphate	<0,009		'0,0104	0,003	mg/l	•
Boron	0,0244	0,0001	0,0227	0,0027	mg/l	93%
DOC	1,56	0,01	1,60	0,03	mg/l	103%
Total P (as PO4)	<0,009		<0,03		mg/l	•
Cyanide	0,0165	0,0001			mg/l	



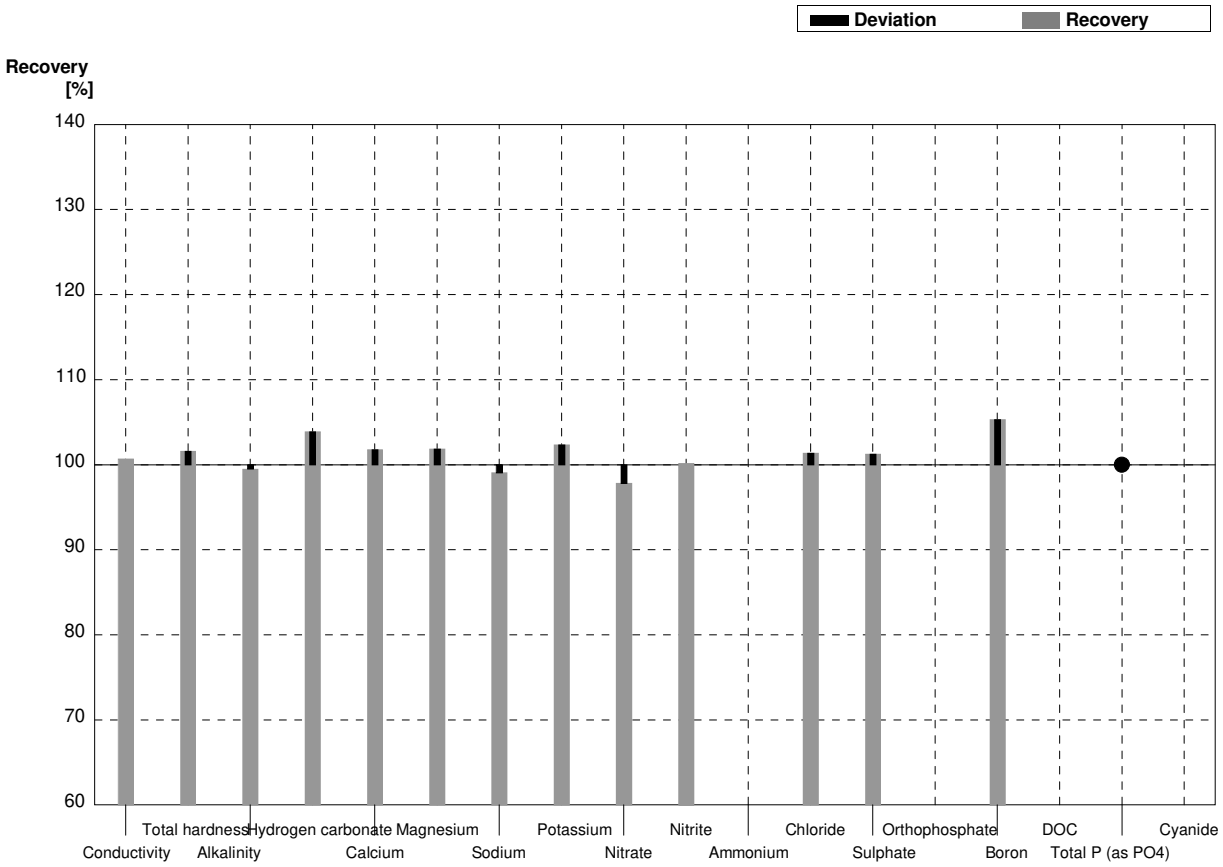
Sample N158A
Laboratory AD

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	493		µS/cm	101%
Total hardness	2,04	0,02	2,10		mmol/l	103%
Alkalinity	1,71	0,02	1,745		mmol/l	102%
Hydrogen carbonate	101	1	106,5		mg/l	105%
Calcium	57,9	0,7	60,1	1,14	mg/l	104%
Magnesium	14,5	0,2	14,7	0,18	mg/l	101%
Sodium	11,7	0,3	12,0	0,05	mg/l	103%
Potassium	2,30	0,04	2,36	0,02	mg/l	103%
Nitrate	39,9	0,6	39,3		mg/l	98%
Nitrite	0,0468	0,0010	0,460		mg/l	983%
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9	48,0		mg/l	101%
Sulphate	45,3	0,5	45,2		mg/l	100%
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002	0,0469	0,0003	mg/l	109%
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001	0,218	0,005	mg/l	118%
Cyanide	0,0469	0,0003			mg/l	



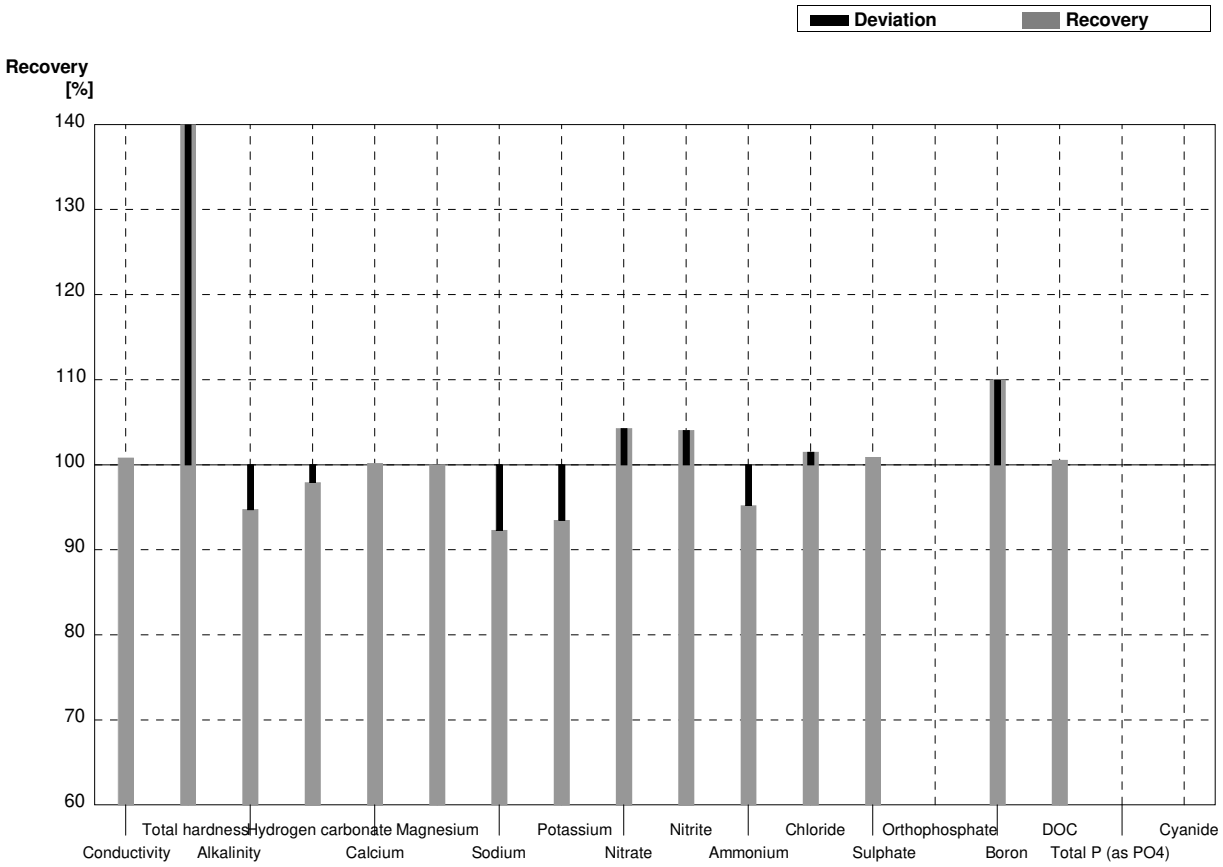
Sample **N158B**
Laboratory **AD**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	438		µS/cm	101%
Total hardness	1,25	0,02	1,27		mmol/l	102%
Alkalinity	1,19	0,01	1,184		mmol/l	99%
Hydrogen carbonate	69,5	0,4	72,2		mg/l	104%
Calcium	39,4	0,6	40,1	0,76	mg/l	102%
Magnesium	6,41	0,09	6,53	0,08	mg/l	102%
Sodium	32,5	0,2	32,2	0,14	mg/l	99%
Potassium	5,52	0,04	5,65	0,04	mg/l	102%
Nitrate	73,3	1,7	71,7		mg/l	98%
Nitrite	0,063	0,003	0,0631		mg/l	100%
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3	14,9		mg/l	101%
Sulphate	62,6	0,4	63,4		mg/l	101%
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001	0,0257	0,0002	mg/l	105%
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009		<0,05		mg/l	•
Cyanide	0,0165	0,0001			mg/l	



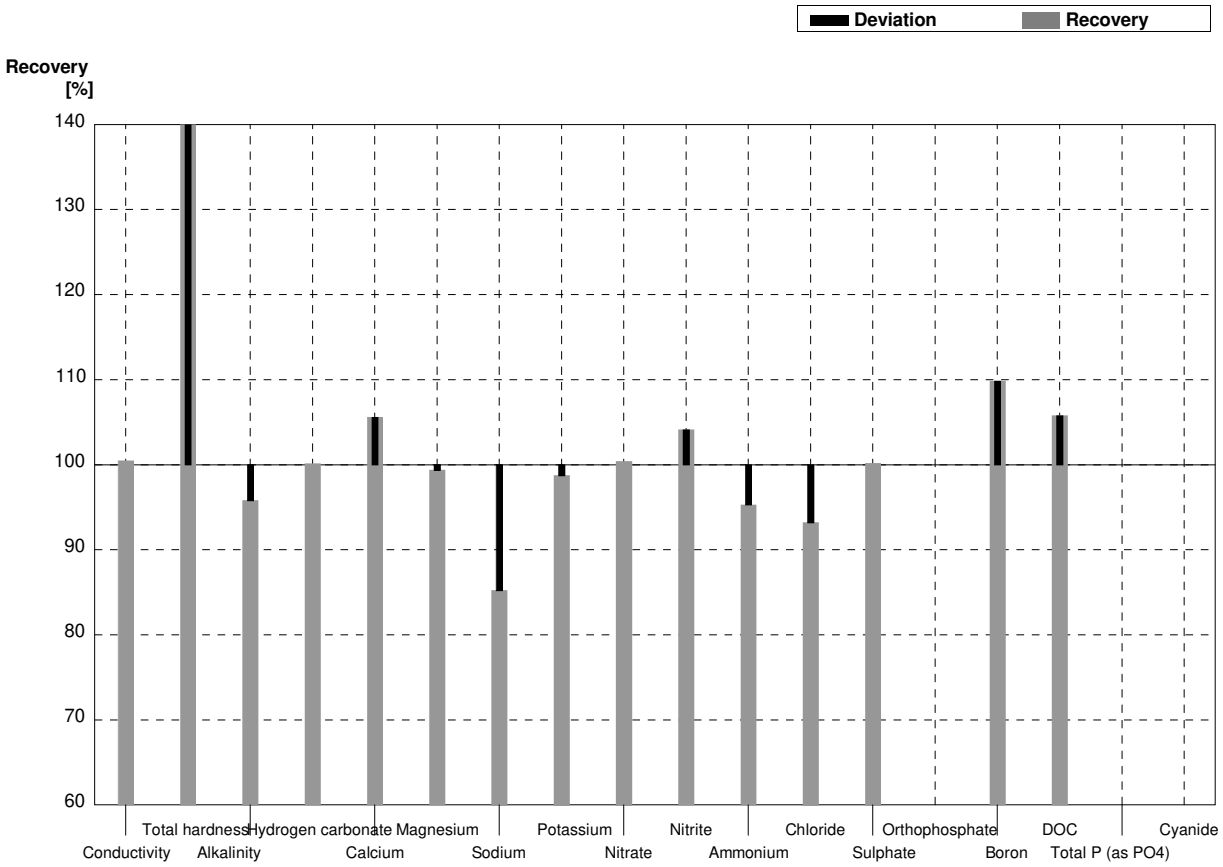
Sample **N158A**
Laboratory **AE**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	493	14	µS/cm	101%
Total hardness	2,04	0,02	20,4		mmol/l	1000%
Alkalinity	1,71	0,02	1,62	0,08	mmol/l	95%
Hydrogen carbonate	101	1	98,9	5	mg/l	98%
Calcium	57,9	0,7	58,0	8,12	mg/l	100%
Magnesium	14,5	0,2	14,5	1,16	mg/l	100%
Sodium	11,7	0,3	10,8	1,73	mg/l	92%
Potassium	2,30	0,04	2,15	0,22	mg/l	93%
Nitrate	39,9	0,6	41,6	1,7	mg/l	104%
Nitrite	0,0468	0,0010	0,0487	0,010	mg/l	104%
Ammonium	0,0251	0,0044	0,0239	0,002	mg/l	95%
Chloride	47,6	0,9	48,3	12,1	mg/l	101%
Sulphate	45,3	0,5	45,7	2,7	mg/l	101%
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002	0,0474	0,0119	mg/l	110%
DOC	5,62	0,03	5,65	1,41	mg/l	101%
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



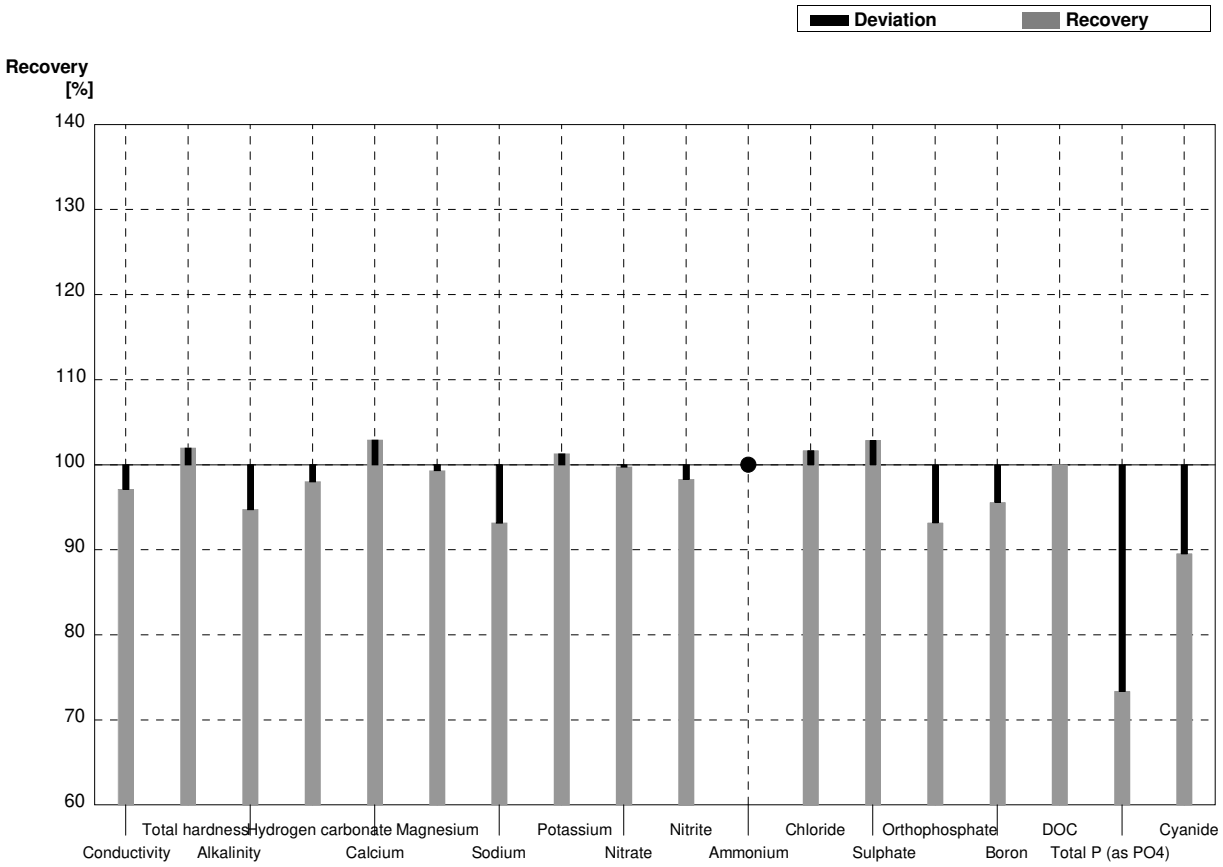
Sample **N158B**
Laboratory **AE**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	437	13	µS/cm	100%
Total hardness	1,25	0,02	13,01		mmol/l	1041%
Alkalinity	1,19	0,01	1,14	0,06	mmol/l	96%
Hydrogen carbonate	69,5	0,4	69,6	3,45	mg/l	100%
Calcium	39,4	0,6	41,6	5,8	mg/l	106%
Magnesium	6,41	0,09	6,37	0,5	mg/l	99%
Sodium	32,5	0,2	27,7	4,4	mg/l	85%
Potassium	5,52	0,04	5,45	0,55	mg/l	99%
Nitrate	73,3	1,7	73,6	2,9	mg/l	100%
Nitrite	0,063	0,003	0,0656	0,013	mg/l	104%
Ammonium	0,070	0,003	0,0667	0,007	mg/l	95%
Chloride	14,7	0,3	13,7	3,4	mg/l	93%
Sulphate	62,6	0,4	62,7	3,8	mg/l	100%
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001	0,0268	0,0067	mg/l	110%
DOC	1,56	0,01	1,65	0,41	mg/l	106%
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



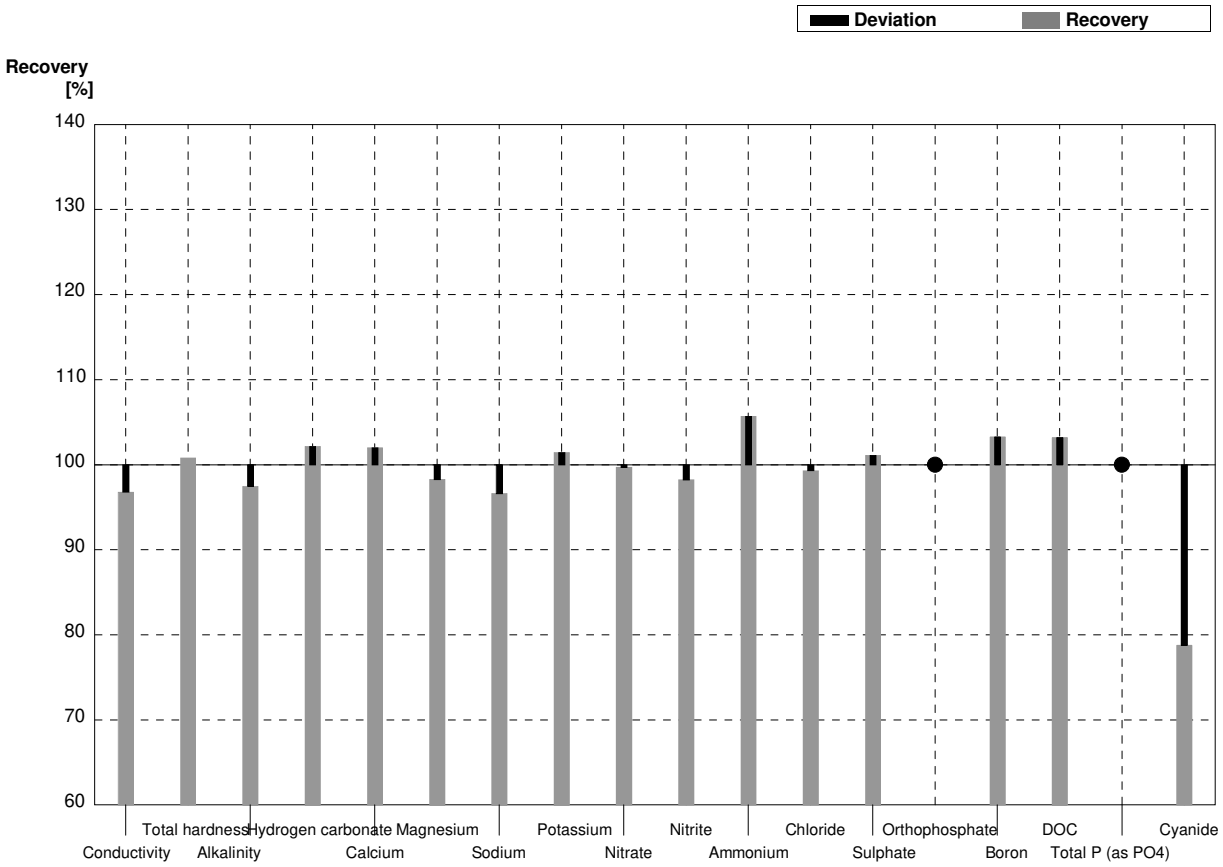
Sample **N158A**
Laboratory **AF**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	475	19	µS/cm	97%
Total hardness	2,04	0,02	2,08	0,17	mmol/l	102%
Alkalinity	1,71	0,02	1,62		mmol/l	95%
Hydrogen carbonate	101	1	99		mg/l	98%
Calcium	57,9	0,7	59,6	4,2	mg/l	103%
Magnesium	14,5	0,2	14,4	1,2	mg/l	99%
Sodium	11,7	0,3	10,9	1,2	mg/l	93%
Potassium	2,30	0,04	2,33	0,4	mg/l	101%
Nitrate	39,9	0,6	39,8	2,8	mg/l	100%
Nitrite	0,0468	0,0010	0,0460	0,007	mg/l	98%
Ammonium	0,0251	0,0044	<0,040		mg/l	•
Chloride	47,6	0,9	48,4	2,4	mg/l	102%
Sulphate	45,3	0,5	46,6	2,8	mg/l	103%
Orthophosphate	0,132	0,001	0,123		mg/l	93%
Boron	0,0431	0,0002	0,0412	0,007	mg/l	96%
DOC	5,62	0,03	5,62	0,56	mg/l	100%
Total P (as PO4)	0,184	0,001	0,135		mg/l	73%
Cyanide	0,0469	0,0003	0,0420		mg/l	90%



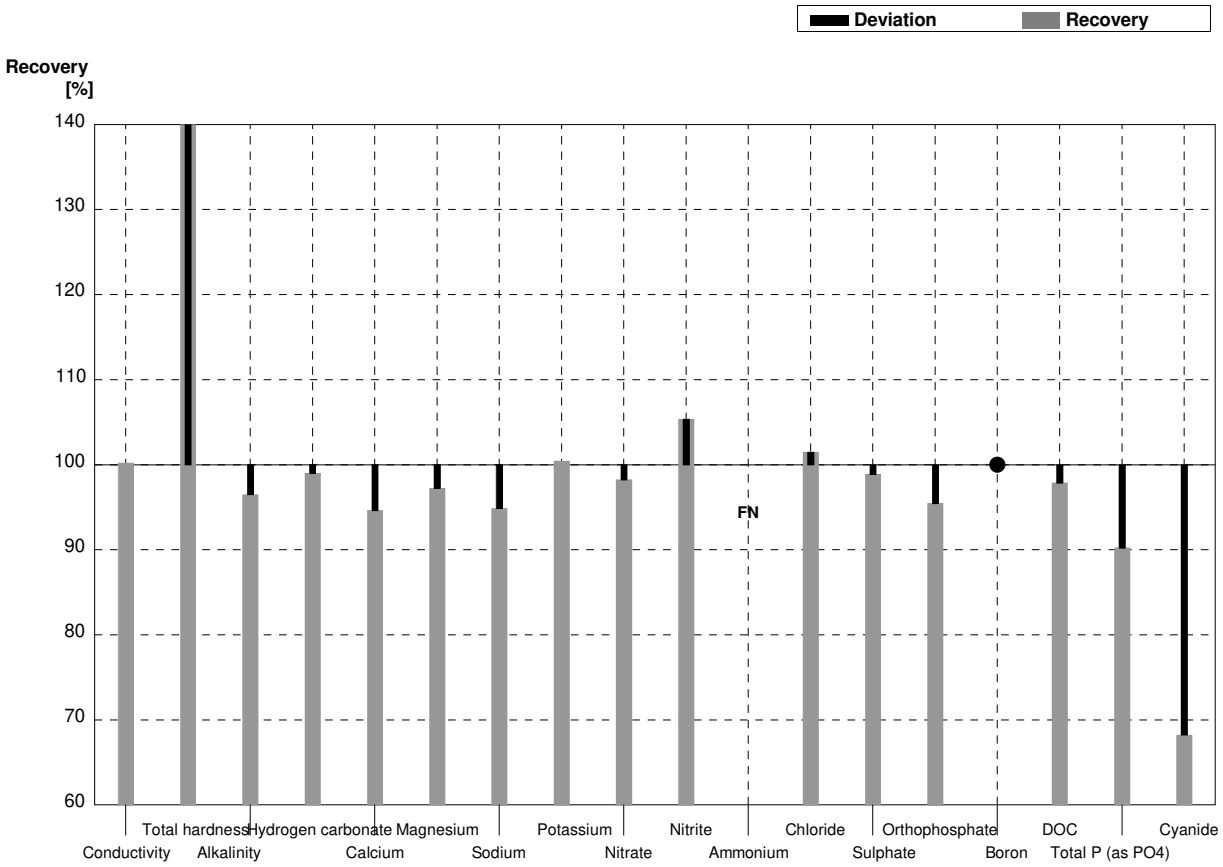
Sample **N158B**
Laboratory **AF**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	421	17	µS/cm	97%
Total hardness	1,25	0,02	1,26	0,10	mmol/l	101%
Alkalinity	1,19	0,01	1,16		mmol/l	97%
Hydrogen carbonate	69,5	0,4	71		mg/l	102%
Calcium	39,4	0,6	40,2	2,8	mg/l	102%
Magnesium	6,41	0,09	6,3	0,5	mg/l	98%
Sodium	32,5	0,2	31,4	3,5	mg/l	97%
Potassium	5,52	0,04	5,6	0,9	mg/l	101%
Nitrate	73,3	1,7	73,1	5,1	mg/l	100%
Nitrite	0,063	0,003	0,0619	0,01	mg/l	98%
Ammonium	0,070	0,003	0,074	0,01	mg/l	106%
Chloride	14,7	0,3	14,6	0,7	mg/l	99%
Sulphate	62,6	0,4	63,3	3,8	mg/l	101%
Orthophosphate	<0,009		<0,06		mg/l	•
Boron	0,0244	0,0001	0,0252	0,004	mg/l	103%
DOC	1,56	0,01	1,61	0,16	mg/l	103%
Total P (as PO4)	<0,009		<0,06		mg/l	•
Cyanide	0,0165	0,0001	0,0130		mg/l	79%



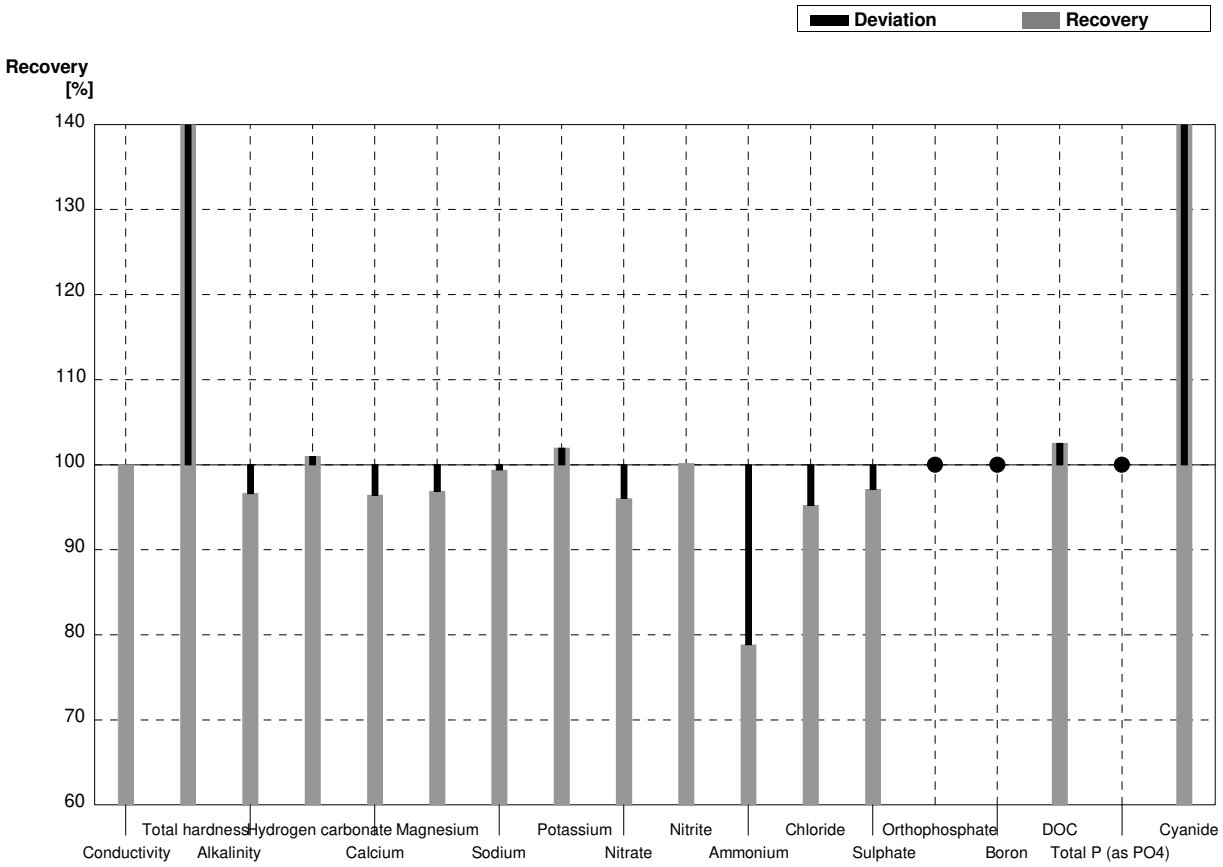
Sample **N158A**
Laboratory **AG**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	490	14,2	µS/cm	100%
Total hardness	2,04	0,02	10,9		mmol/l	534%
Alkalinity	1,71	0,02	1,65	0,0346	mmol/l	96%
Hydrogen carbonate	101	1	100	2,11	mg/l	99%
Calcium	57,9	0,7	54,8	1,76	mg/l	95%
Magnesium	14,5	0,2	14,1	0,460	mg/l	97%
Sodium	11,7	0,3	11,1	1,0	mg/l	95%
Potassium	2,30	0,04	2,31	0,159	mg/l	100%
Nitrate	39,9	0,6	39,2	1,10	mg/l	98%
Nitrite	0,0468	0,0010	0,0493	0,0031	mg/l	105%
Ammonium	0,0251	0,0044	<0,02		mg/l	FN
Chloride	47,6	0,9	48,3	0,941	mg/l	101%
Sulphate	45,3	0,5	44,8	1,16	mg/l	99%
Orthophosphate	0,132	0,001	0,126	0,010	mg/l	95%
Boron	0,0431	0,0002	<0,05		mg/l	•
DOC	5,62	0,03	5,50	0,670	mg/l	98%
Total P (as PO4)	0,184	0,001	0,166	0,0138	mg/l	90%
Cyanide	0,0469	0,0003	0,0320	0,0040	mg/l	68%



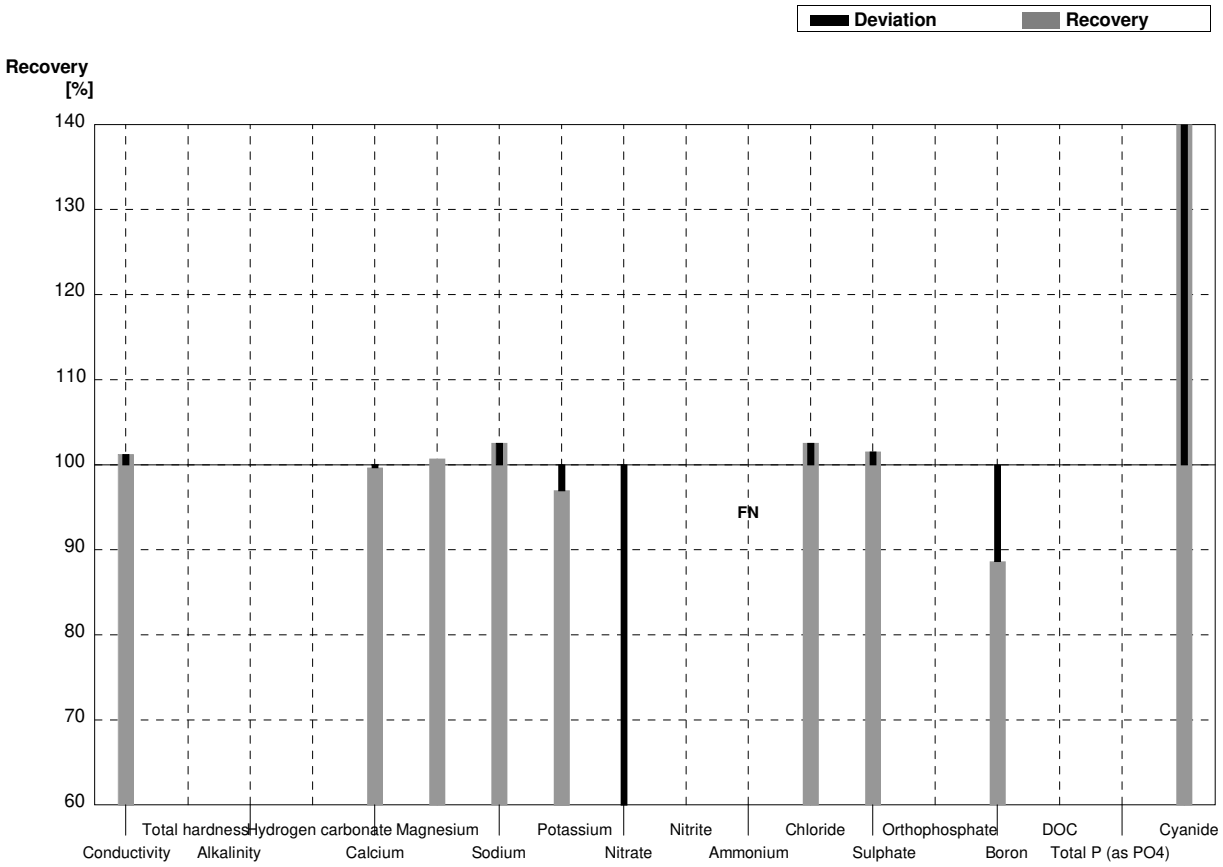
Sample **N158B**
Laboratory **AG**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	435	12,6	µS/cm	100%
Total hardness	1,25	0,02	6,75		mmol/l	540%
Alkalinity	1,19	0,01	1,15	0,0242	mmol/l	97%
Hydrogen carbonate	69,5	0,4	70,2	1,47	mg/l	101%
Calcium	39,4	0,6	38,0	1,22	mg/l	96%
Magnesium	6,41	0,09	6,21	0,202	mg/l	97%
Sodium	32,5	0,2	32,3	1,48	mg/l	99%
Potassium	5,52	0,04	5,63	0,386	mg/l	102%
Nitrate	73,3	1,7	70,4	1,97	mg/l	96%
Nitrite	0,063	0,003	0,0631	0,0039	mg/l	100%
Ammonium	0,070	0,003	0,0552	0,010	mg/l	79%
Chloride	14,7	0,3	14,0	0,274	mg/l	95%
Sulphate	62,6	0,4	60,8	1,58	mg/l	97%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,0244	0,0001	<0,05		mg/l	•
DOC	1,56	0,01	1,60	0,670	mg/l	103%
Total P (as PO4)	<0,009		<0,016		mg/l	•
Cyanide	0,0165	0,0001	0,0237	0,0040	mg/l	144%



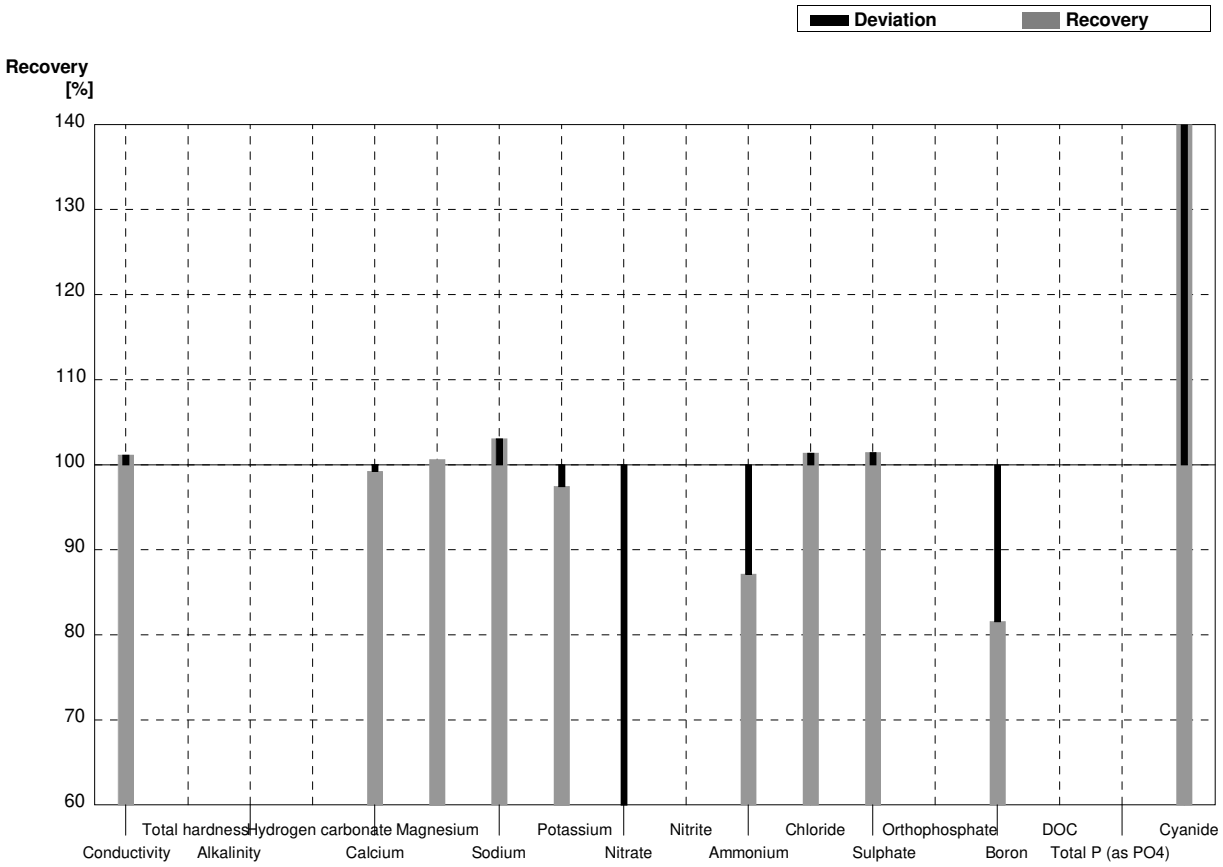
Sample N158A
Laboratory AH

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	495	25	µS/cm	101%
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02			mmol/l	
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7	57,7	2,9	mg/l	100%
Magnesium	14,5	0,2	14,6	0,7	mg/l	101%
Sodium	11,7	0,3	12,0	0,6	mg/l	103%
Potassium	2,30	0,04	2,23	0,11	mg/l	97%
Nitrate	39,9	0,6	8,67	0,9	mg/l	22%
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044	<0,02		mg/l	FN
Chloride	47,6	0,9	48,8	4,9	mg/l	103%
Sulphate	45,3	0,5	46,0	4,6	mg/l	102%
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002	0,0382	0,0019	mg/l	89%
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003	36,3	4	mg/l	77399%



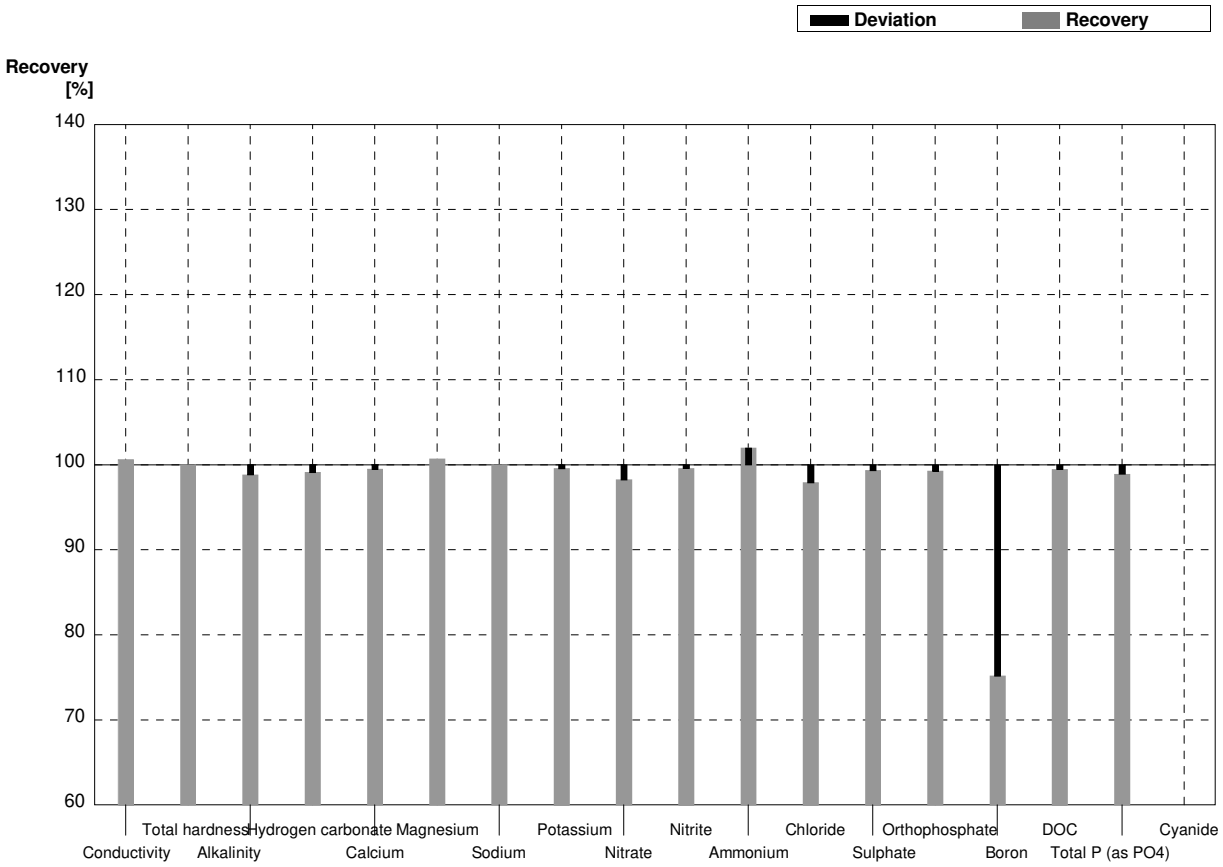
Sample **N158B**
Laboratory **AH**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	440	22	µS/cm	101%
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01			mmol/l	
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6	39,1	2	mg/l	99%
Magnesium	6,41	0,09	6,45	0,32	mg/l	101%
Sodium	32,5	0,2	33,5	1,7	mg/l	103%
Potassium	5,52	0,04	5,38	0,27	mg/l	97%
Nitrate	73,3	1,7	16,4	1,6	mg/l	22%
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003	0,061	0,006	mg/l	87%
Chloride	14,7	0,3	14,9	1,5	mg/l	101%
Sulphate	62,6	0,4	63,5	6,3	mg/l	101%
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001	0,0199	0,0010	mg/l	82%
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001	12,6	1,5	mg/l	76364%



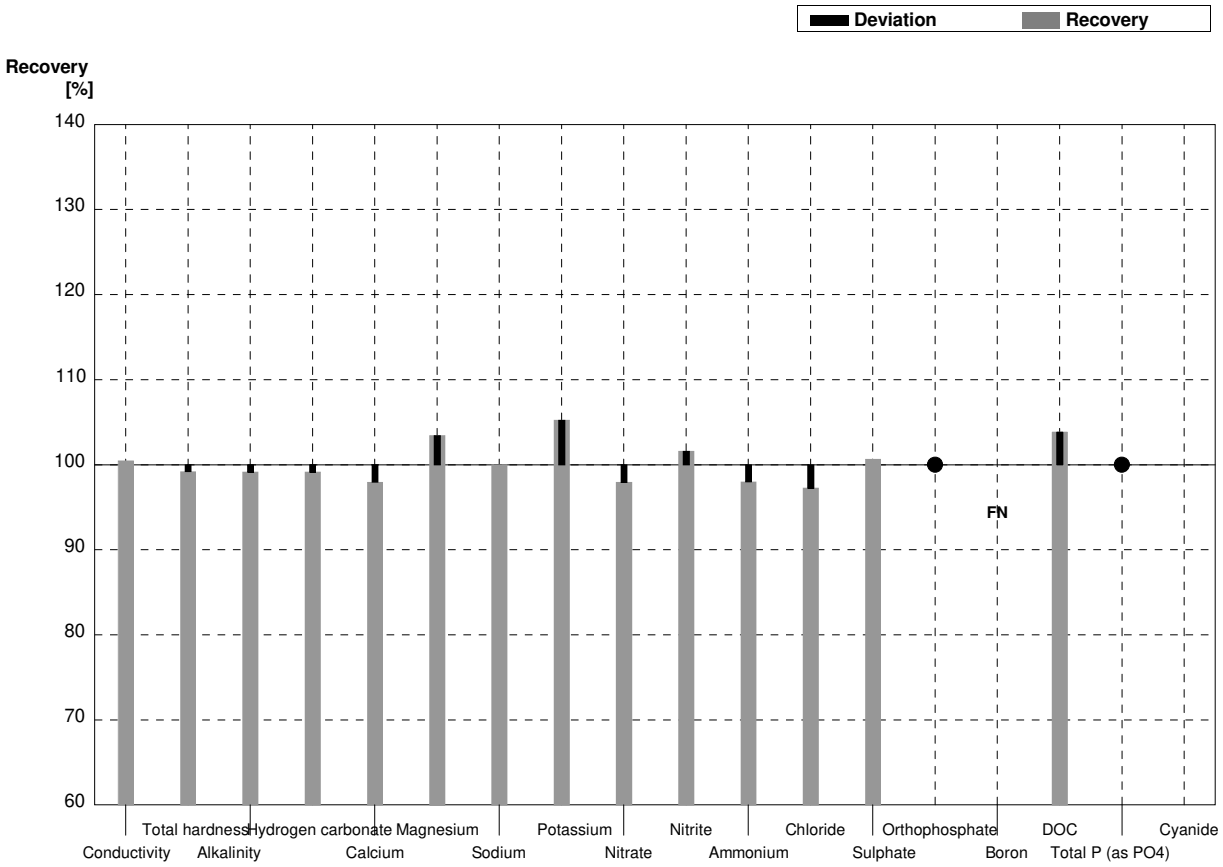
Sample **N158A**
Laboratory **AI**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	492	5	µS/cm	101%
Total hardness	2,04	0,02	2,04	0,2	mmol/l	100%
Alkalinity	1,71	0,02	1,69	0,17	mmol/l	99%
Hydrogen carbonate	101	1	100,1	10	mg/l	99%
Calcium	57,9	0,7	57,6	11,5	mg/l	99%
Magnesium	14,5	0,2	14,6	2,9	mg/l	101%
Sodium	11,7	0,3	11,7	1,8	mg/l	100%
Potassium	2,30	0,04	2,29	0,46	mg/l	100%
Nitrate	39,9	0,6	39,2	3,9	mg/l	98%
Nitrite	0,0468	0,0010	0,0466	0,0111	mg/l	100%
Ammonium	0,0251	0,0044	0,0256	0,0045	mg/l	102%
Chloride	47,6	0,9	46,6	4,7	mg/l	98%
Sulphate	45,3	0,5	45,0	4,5	mg/l	99%
Orthophosphate	0,132	0,001	0,131	0,027	mg/l	99%
Boron	0,0431	0,0002	0,0324	0,0081	mg/l	75%
DOC	5,62	0,03	5,59	0,56	mg/l	99%
Total P (as PO4)	0,184	0,001	0,182	0,037	mg/l	99%
Cyanide	0,0469	0,0003			mg/l	



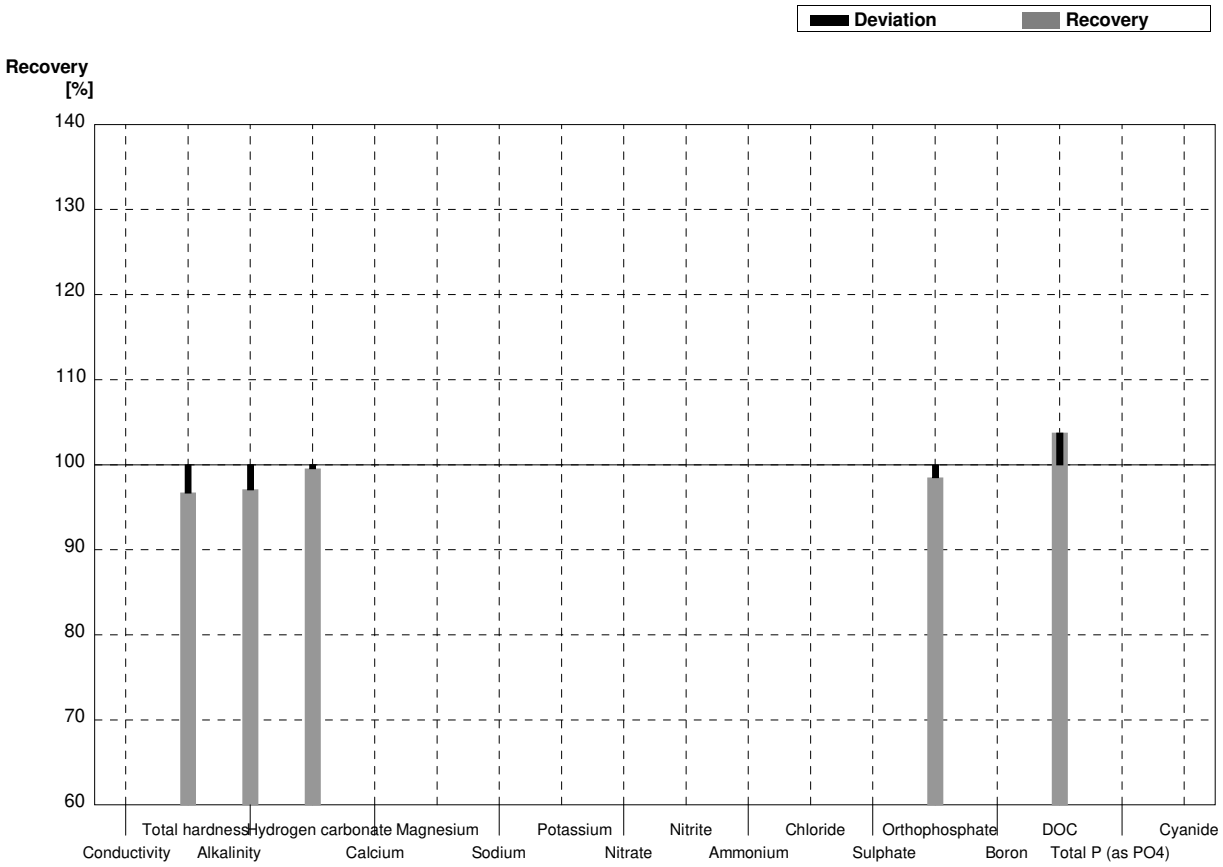
Sample **N158B**
Laboratory **AI**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	437	5	µS/cm	100%
Total hardness	1,25	0,02	1,24	0,1	mmol/l	99%
Alkalinity	1,19	0,01	1,18	0,12	mmol/l	99%
Hydrogen carbonate	69,5	0,4	68,9	7	mg/l	99%
Calcium	39,4	0,6	38,6	7,7	mg/l	98%
Magnesium	6,41	0,09	6,63	1,3	mg/l	103%
Sodium	32,5	0,2	32,5	4,9	mg/l	100%
Potassium	5,52	0,04	5,81	1,2	mg/l	105%
Nitrate	73,3	1,7	71,8	7,2	mg/l	98%
Nitrite	0,063	0,003	0,0640	0,0153	mg/l	102%
Ammonium	0,070	0,003	0,0686	0,0121	mg/l	98%
Chloride	14,7	0,3	14,3	1,4	mg/l	97%
Sulphate	62,6	0,4	63,0	6,3	mg/l	101%
Orthophosphate	<0,009		<0,015		mg/l	•
Boron	0,0244	0,0001	<0,020		mg/l	FN
DOC	1,56	0,01	1,62	0,16	mg/l	104%
Total P (as PO4)	<0,009		<0,015		mg/l	•
Cyanide	0,0165	0,0001			mg/l	



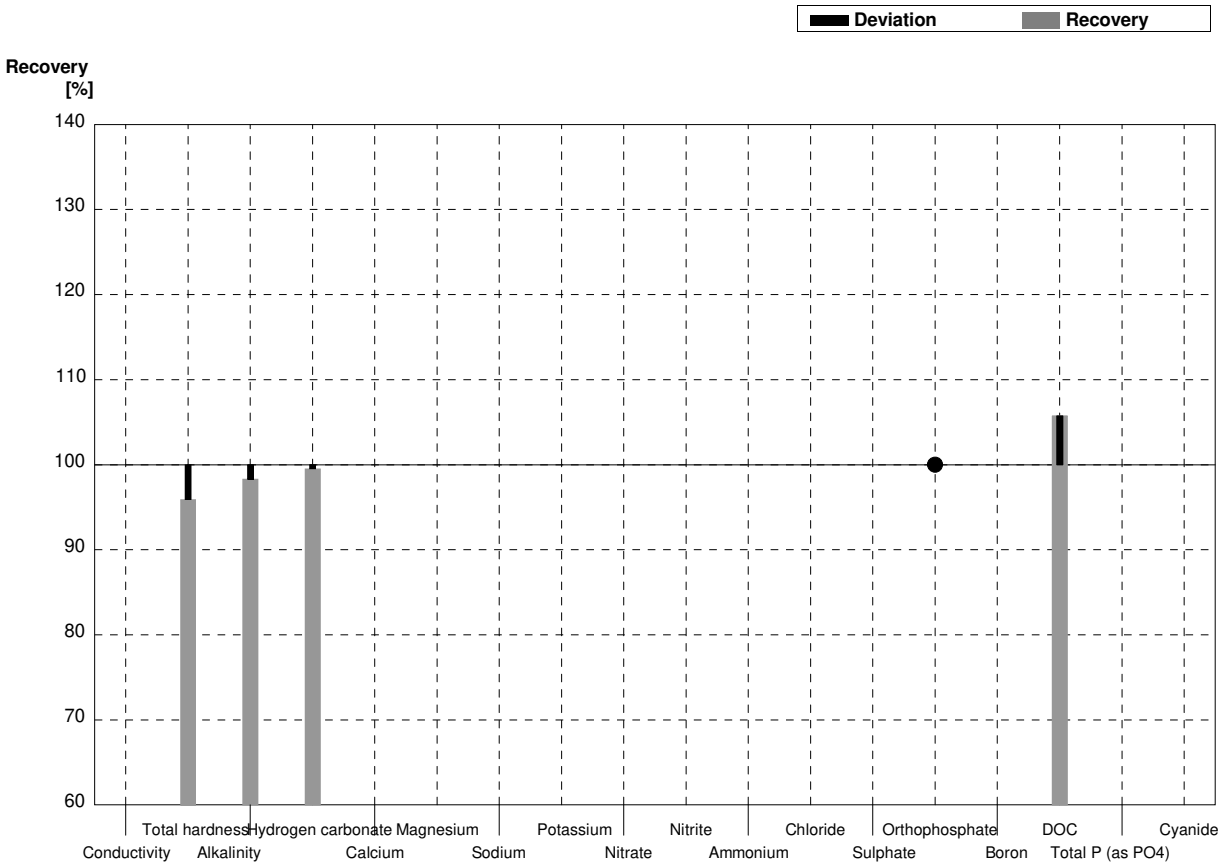
Sample N158A
Laboratory AJ

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02	1,973	0,19	mmol/l	97%
Alkalinity	1,71	0,02	1,66	0,15	mmol/l	97%
Hydrogen carbonate	101	1	100,55	10	mg/l	100%
Calcium	57,9	0,7			mg/l	
Magnesium	14,5	0,2			mg/l	
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6			mg/l	
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9			mg/l	
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001	0,130	0,013	mg/l	98%
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03	5,83	0,5	mg/l	104%
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



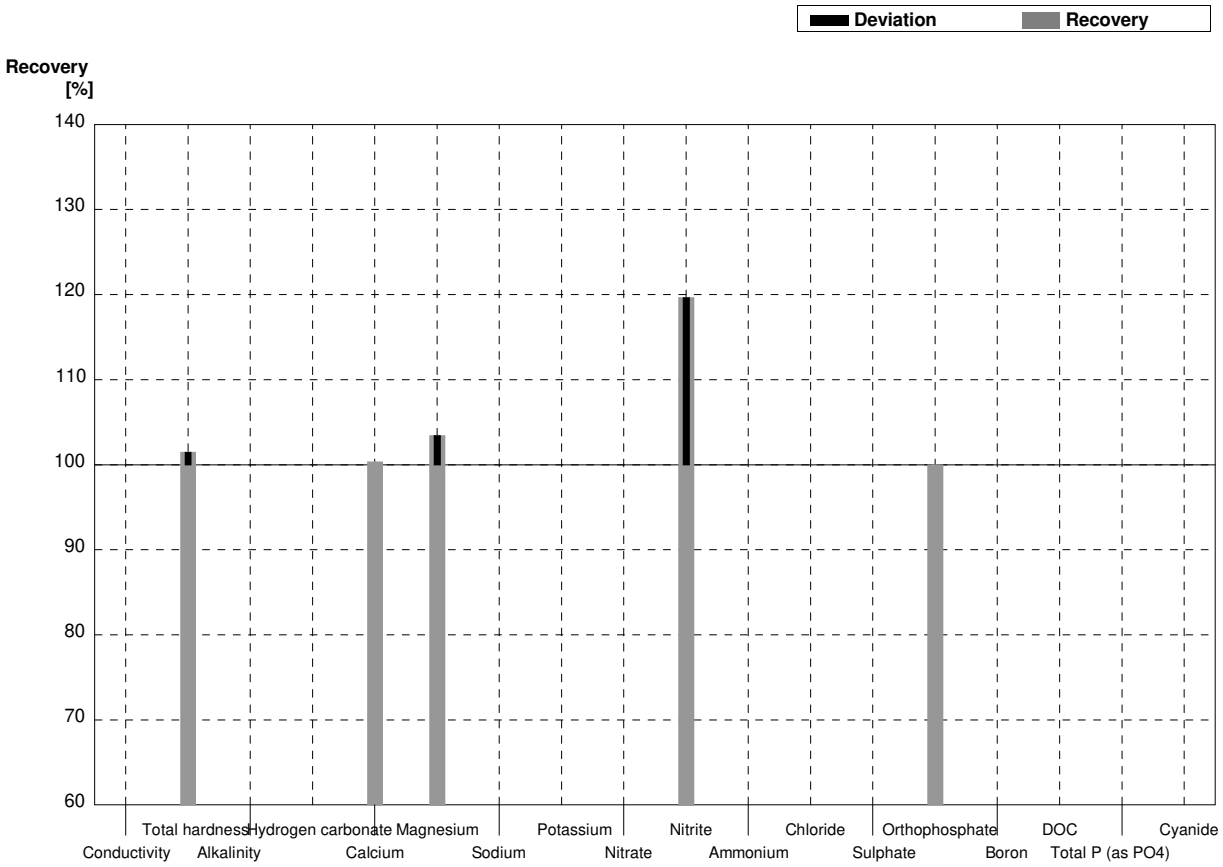
Sample **N158B**
Laboratory **AJ**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02	1,199	0,12	mmol/l	96%
Alkalinity	1,19	0,01	1,17	0,11	mmol/l	98%
Hydrogen carbonate	69,5	0,4	69,19	7	mg/l	100%
Calcium	39,4	0,6			mg/l	
Magnesium	6,41	0,09			mg/l	
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7			mg/l	
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3			mg/l	
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009		<0,031		mg/l	•
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01	1,65	0,15	mg/l	106%
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



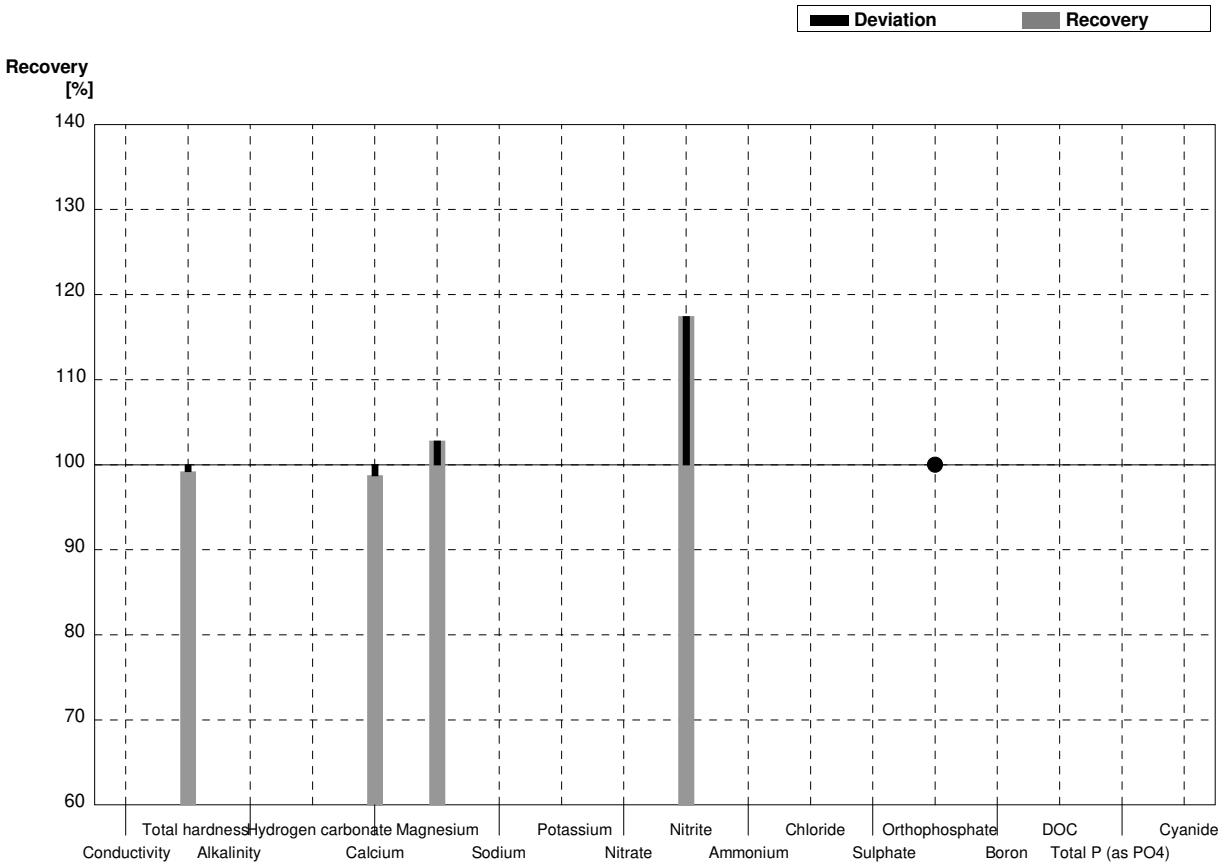
Sample **N158A**
Laboratory **AK**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02	2,07	0,060	mmol/l	101%
Alkalinity	1,71	0,02			mmol/l	
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7	58,1	4,31	mg/l	100%
Magnesium	14,5	0,2	15,0	0,88	mg/l	103%
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6			mg/l	
Nitrite	0,0468	0,0010	0,056	0,008	mg/l	120%
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9			mg/l	
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001	0,132	0,021	mg/l	100%
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



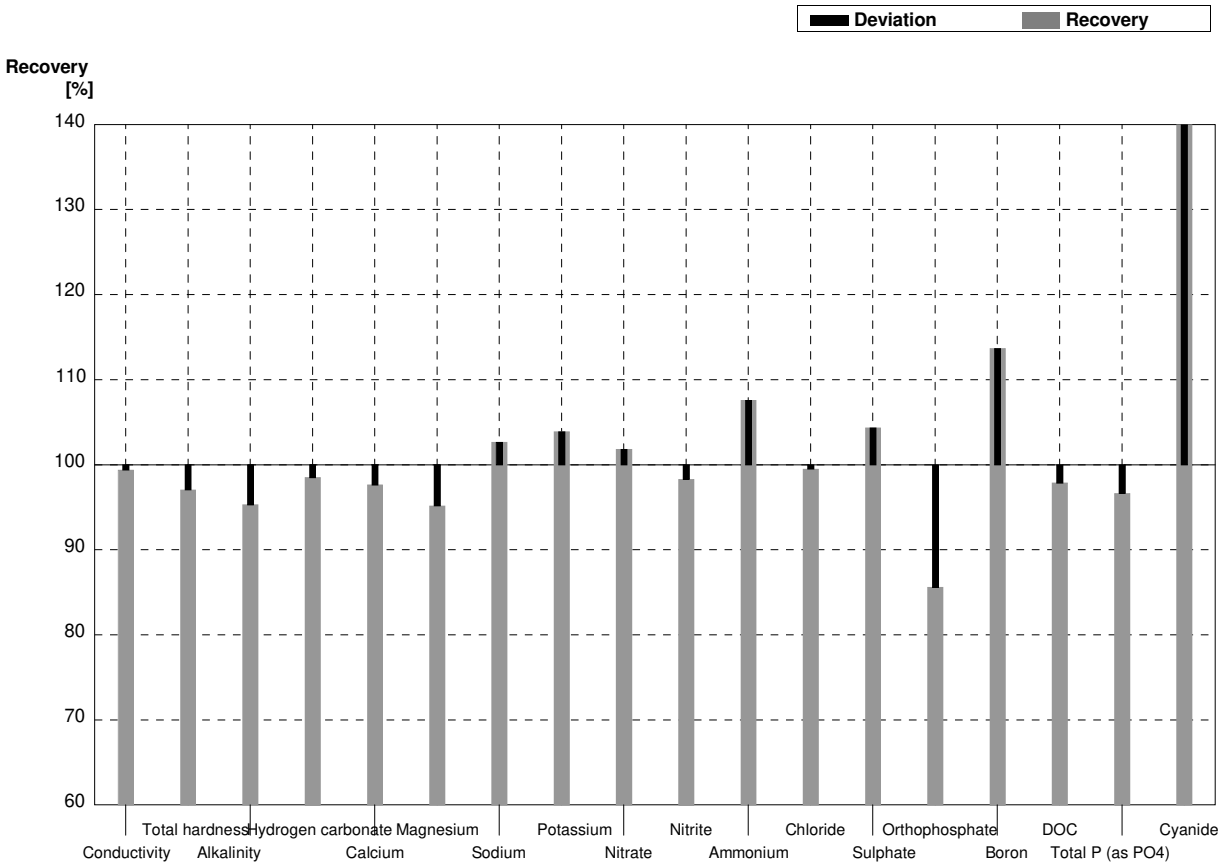
Sample **N158B**
Laboratory **AK**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02	1,24	0,037	mmol/l	99%
Alkalinity	1,19	0,01			mmol/l	
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6	38,9	6,51	mg/l	99%
Magnesium	6,41	0,09	6,59	0,47	mg/l	103%
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7			mg/l	
Nitrite	0,063	0,003	0,074	0,011	mg/l	117%
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3			mg/l	
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



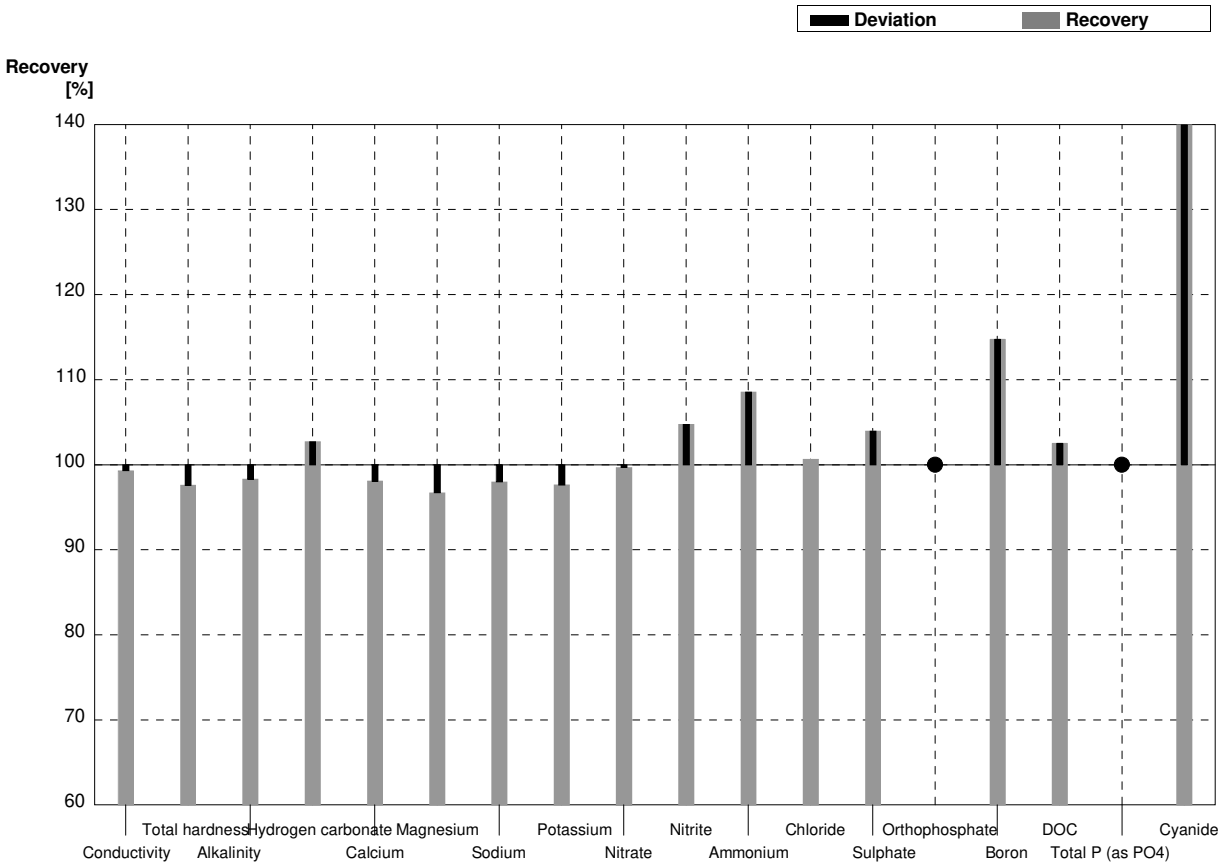
Sample **N158A**
Laboratory **AL**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	486,000	19,4000	µS/cm	99%
Total hardness	2,04	0,02	1,98		mmol/l	97%
Alkalinity	1,71	0,02	1,6300	0,24500	mmol/l	95%
Hydrogen carbonate	101	1	99,5000	14,9200	mg/l	99%
Calcium	57,9	0,7	56,54	5,654	mg/l	98%
Magnesium	14,5	0,2	13,80	1,380	mg/l	95%
Sodium	11,7	0,3	12,01	1,201	mg/l	103%
Potassium	2,30	0,04	2,39	0,239	mg/l	104%
Nitrate	39,9	0,6	40,629	1,6252	mg/l	102%
Nitrite	0,0468	0,0010	0,04600	0,00370	mg/l	98%
Ammonium	0,0251	0,0044	0,02700	0,00270	mg/l	108%
Chloride	47,6	0,9	47,36	2,368	mg/l	99%
Sulphate	45,3	0,5	47,26	2,363	mg/l	104%
Orthophosphate	0,132	0,001	0,11300	0,01360	mg/l	86%
Boron	0,0431	0,0002	0,04900	0,00590	mg/l	114%
DOC	5,62	0,03	5,500	0,44000	mg/l	98%
Total P (as PO4)	0,184	0,001	0,17783	0,02667	mg/l	97%
Cyanide	0,0469	0,0003	48,2900	4,82900	mg/l	102964%



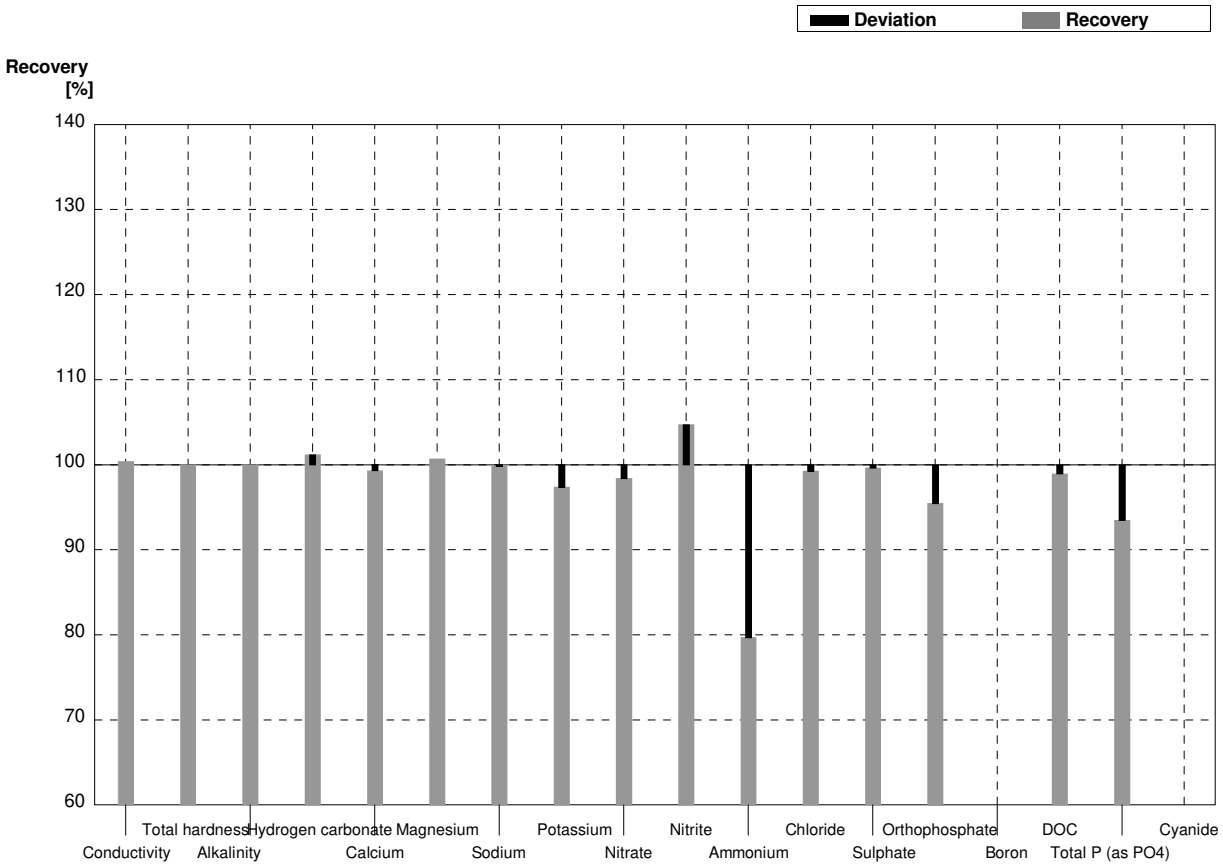
Sample **N158B**
Laboratory **AL**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	432,000	17,3000	µS/cm	99%
Total hardness	1,25	0,02	1,22		mmol/l	98%
Alkalinity	1,19	0,01	1,17000	0,17600	mmol/l	98%
Hydrogen carbonate	69,5	0,4	71,4000	10,7100	mg/l	103%
Calcium	39,4	0,6	38,65	3,865	mg/l	98%
Magnesium	6,41	0,09	6,20	0,620	mg/l	97%
Sodium	32,5	0,2	31,85	3,185	mg/l	98%
Potassium	5,52	0,04	5,39	0,539	mg/l	98%
Nitrate	73,3	1,7	73,069	2,9228	mg/l	100%
Nitrite	0,063	0,003	0,06600	0,00530	mg/l	105%
Ammonium	0,070	0,003	0,07600	0,00760	mg/l	109%
Chloride	14,7	0,3	14,80	0,740	mg/l	101%
Sulphate	62,6	0,4	65,08	3,254	mg/l	104%
Orthophosphate	<0,009		0,00900	0,00110	mg/l	•
Boron	0,0244	0,0001	0,02800	0,00340	mg/l	115%
DOC	1,56	0,01	1,600	0,13000	mg/l	103%
Total P (as PO4)	<0,009		<0,0153		mg/l	•
Cyanide	0,0165	0,0001	17,7600	1,77600	mg/l	107636%



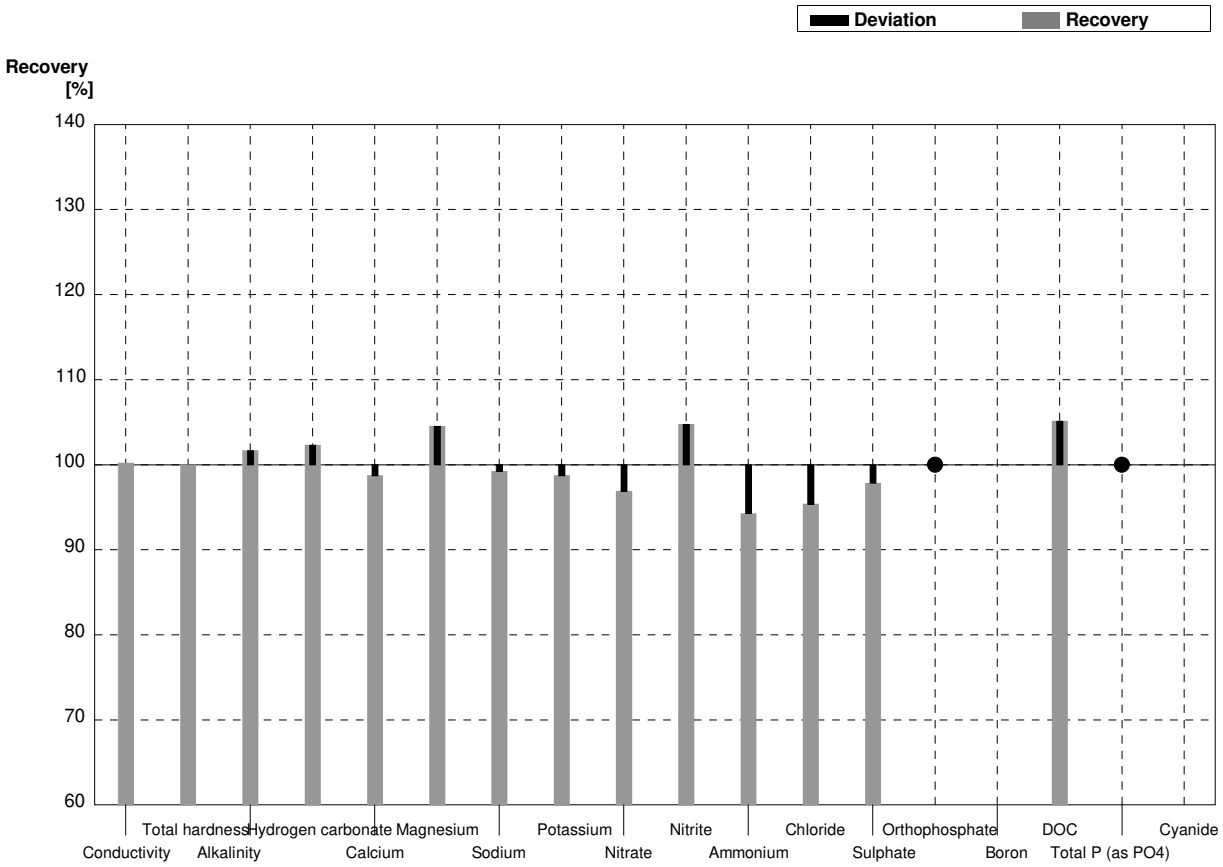
Sample **N158A**
Laboratory **AM**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	491		µS/cm	100%
Total hardness	2,04	0,02	2,04		mmol/l	100%
Alkalinity	1,71	0,02	1,71		mmol/l	100%
Hydrogen carbonate	101	1	102,2		mg/l	101%
Calcium	57,9	0,7	57,5		mg/l	99%
Magnesium	14,5	0,2	14,6		mg/l	101%
Sodium	11,7	0,3	11,68		mg/l	100%
Potassium	2,30	0,04	2,24		mg/l	97%
Nitrate	39,9	0,6	39,26		mg/l	98%
Nitrite	0,0468	0,0010	0,0490		mg/l	105%
Ammonium	0,0251	0,0044	0,0200		mg/l	80%
Chloride	47,6	0,9	47,24		mg/l	99%
Sulphate	45,3	0,5	45,14		mg/l	100%
Orthophosphate	0,132	0,001	0,126		mg/l	95%
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03	5,56		mg/l	99%
Total P (as PO4)	0,184	0,001	0,172		mg/l	93%
Cyanide	0,0469	0,0003			mg/l	



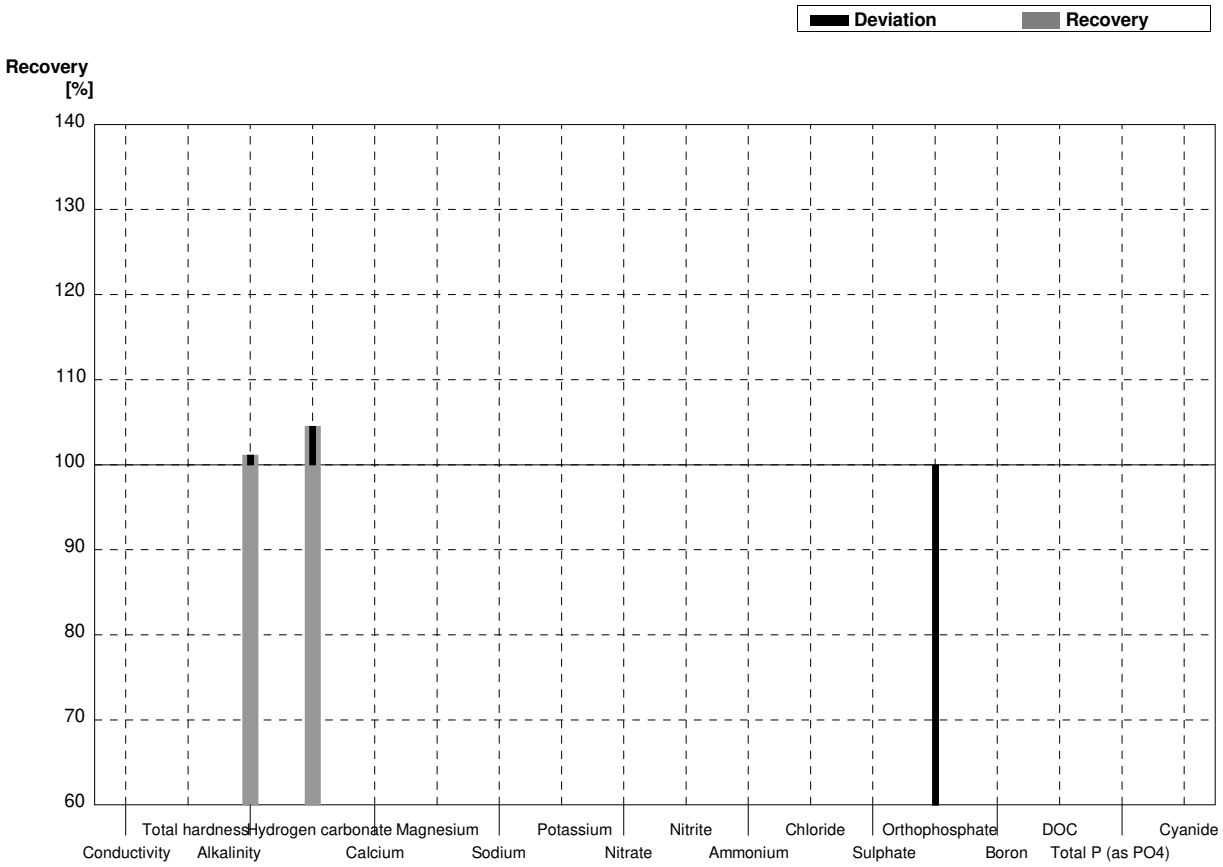
Sample **N158B**
Laboratory **AM**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	436		µS/cm	100%
Total hardness	1,25	0,02	1,25		mmol/l	100%
Alkalinity	1,19	0,01	1,21		mmol/l	102%
Hydrogen carbonate	69,5	0,4	71,1		mg/l	102%
Calcium	39,4	0,6	38,9		mg/l	99%
Magnesium	6,41	0,09	6,7		mg/l	105%
Sodium	32,5	0,2	32,25		mg/l	99%
Potassium	5,52	0,04	5,45		mg/l	99%
Nitrate	73,3	1,7	71,03		mg/l	97%
Nitrite	0,063	0,003	0,0660		mg/l	105%
Ammonium	0,070	0,003	0,0660		mg/l	94%
Chloride	14,7	0,3	14,02		mg/l	95%
Sulphate	62,6	0,4	61,26		mg/l	98%
Orthophosphate	<0,009		<0,009		mg/l	•
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01	1,64		mg/l	105%
Total P (as PO4)	<0,009		<0,009		mg/l	•
Cyanide	0,0165	0,0001			mg/l	



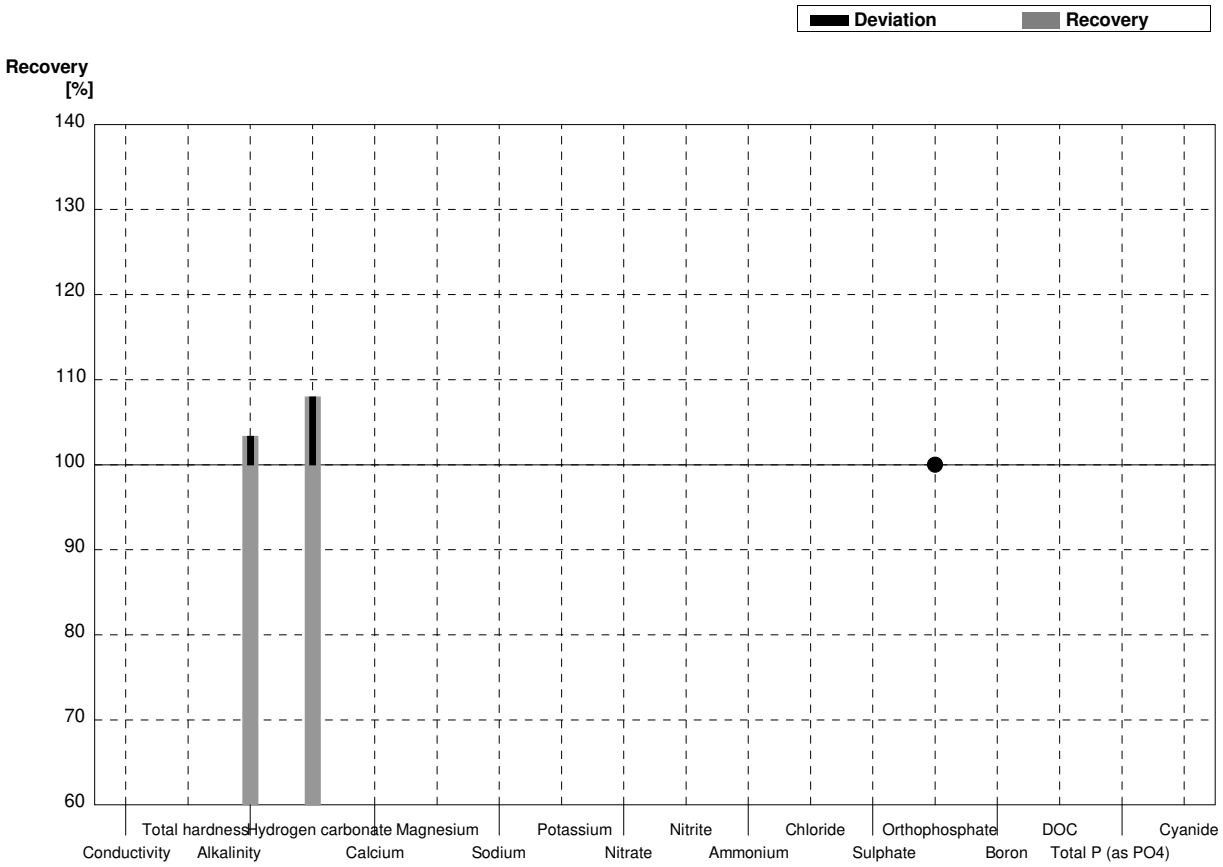
Sample **N158A**
Laboratory **AN**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02	1,73		mmol/l	101%
Hydrogen carbonate	101	1	105,6		mg/l	105%
Calcium	57,9	0,7			mg/l	
Magnesium	14,5	0,2			mg/l	
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6			mg/l	
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9			mg/l	
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001	0,064		mg/l	48%
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



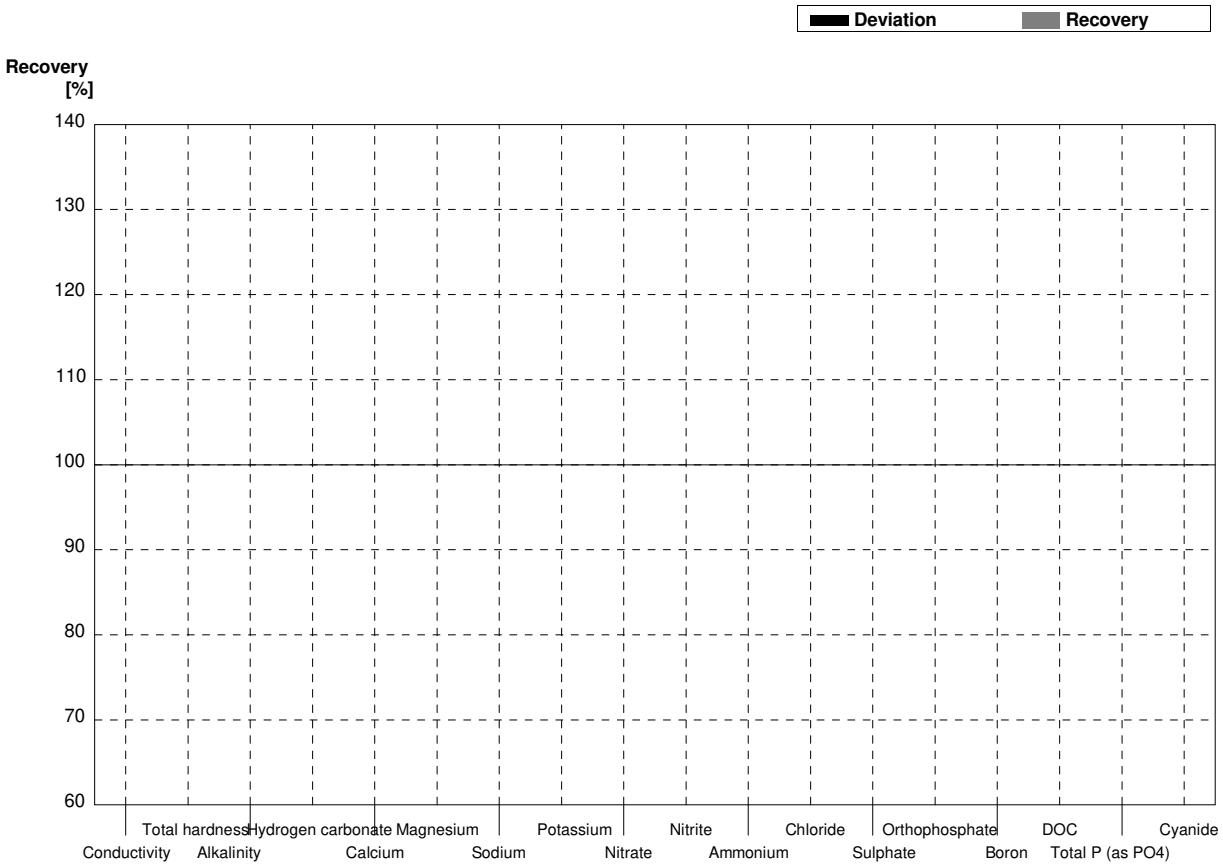
Sample **N158B**
Laboratory **AN**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01	1,23		mmol/l	103%
Hydrogen carbonate	69,5	0,4	75,05		mg/l	108%
Calcium	39,4	0,6			mg/l	
Magnesium	6,41	0,09			mg/l	
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7			mg/l	
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3			mg/l	
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009		<0,096		mg/l	•
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



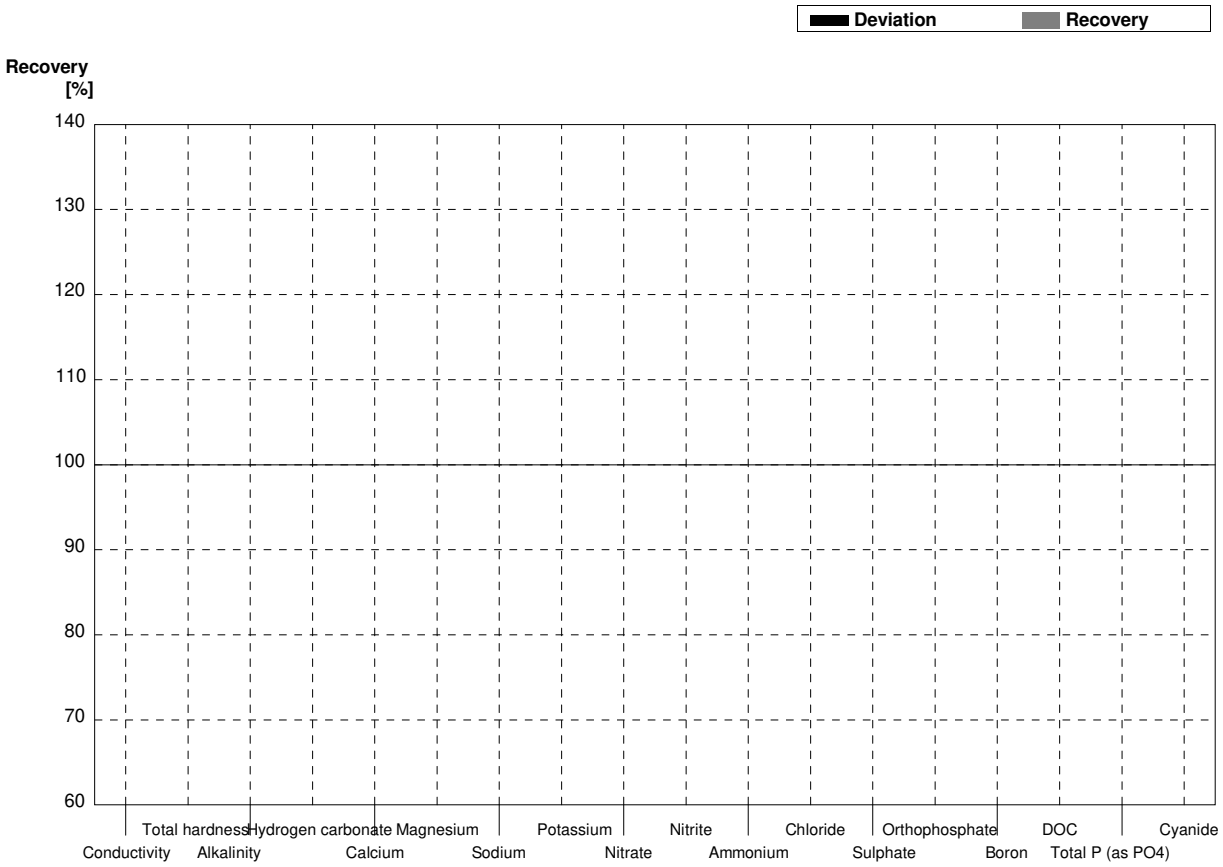
Sample **N158A**
Laboratory **AO**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02			mmol/l	
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7			mg/l	
Magnesium	14,5	0,2			mg/l	
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6			mg/l	
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9			mg/l	
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



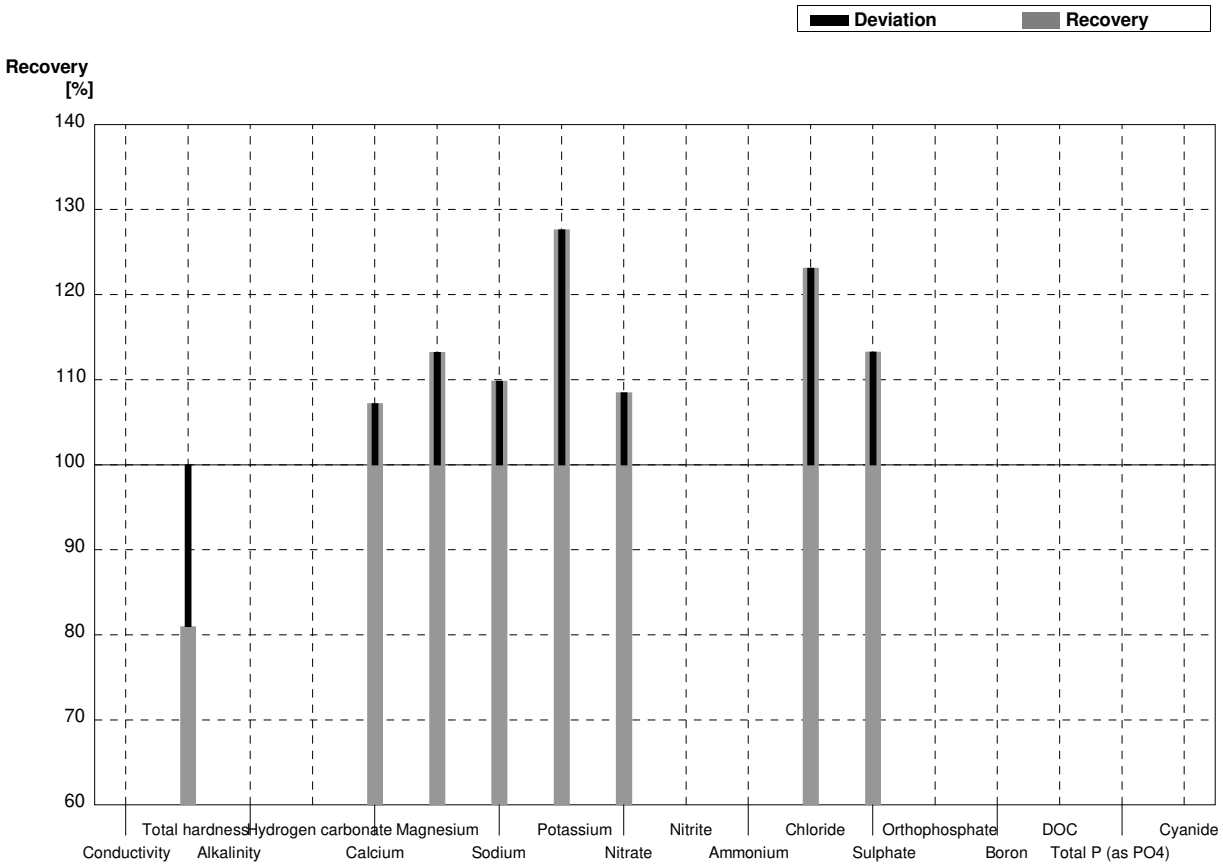
Sample **N158B**
Laboratory **AO**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01			mmol/l	
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6			mg/l	
Magnesium	6,41	0,09			mg/l	
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7			mg/l	
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3			mg/l	
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



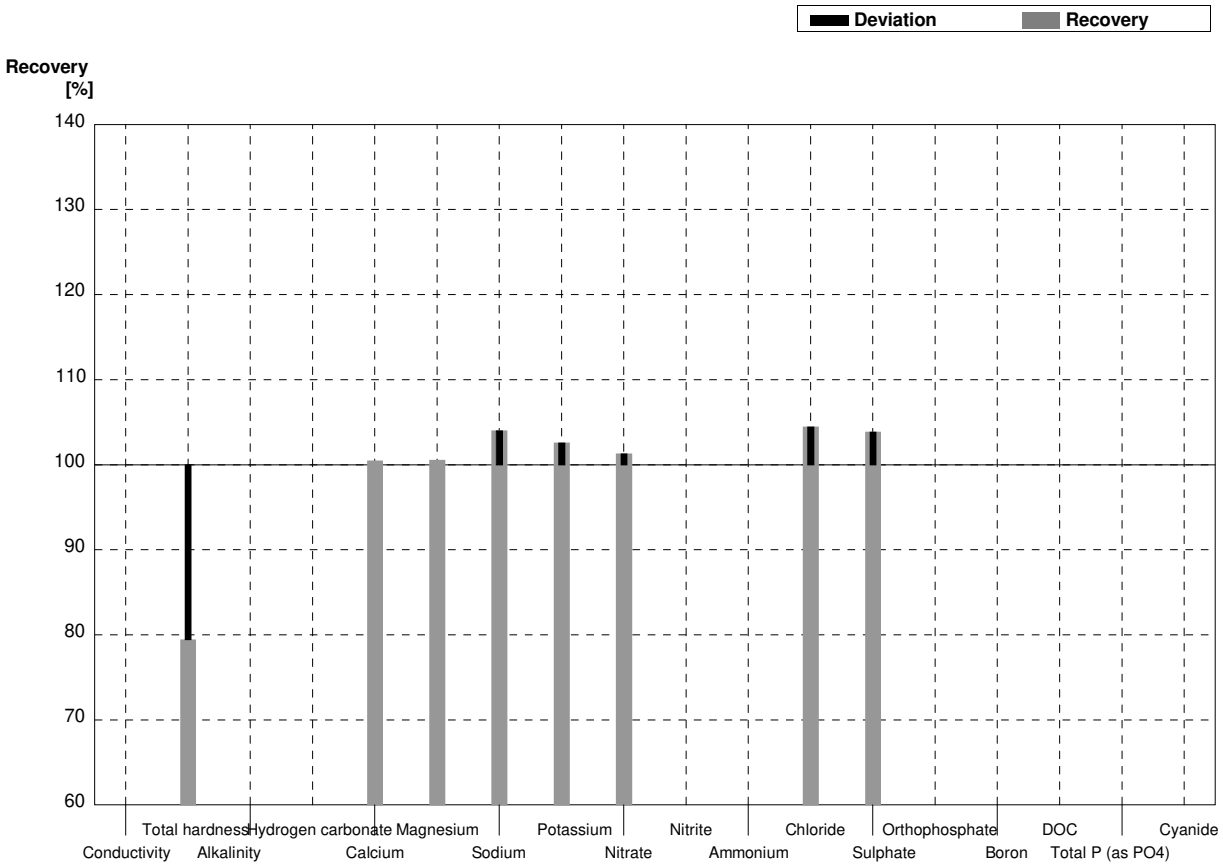
Sample **N158A**
Laboratory **AP**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02	1,652		mmol/l	81%
Alkalinity	1,71	0,02			mmol/l	
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7	62,082	6,208	mg/l	107%
Magnesium	14,5	0,2	16,420	1,642	mg/l	113%
Sodium	11,7	0,3	12,853	1,285	mg/l	110%
Potassium	2,30	0,04	2,936	0,294	mg/l	128%
Nitrate	39,9	0,6	43,281	8,656	mg/l	108%
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9	58,610	8,791	mg/l	123%
Sulphate	45,3	0,5	51,320	10,264	mg/l	113%
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



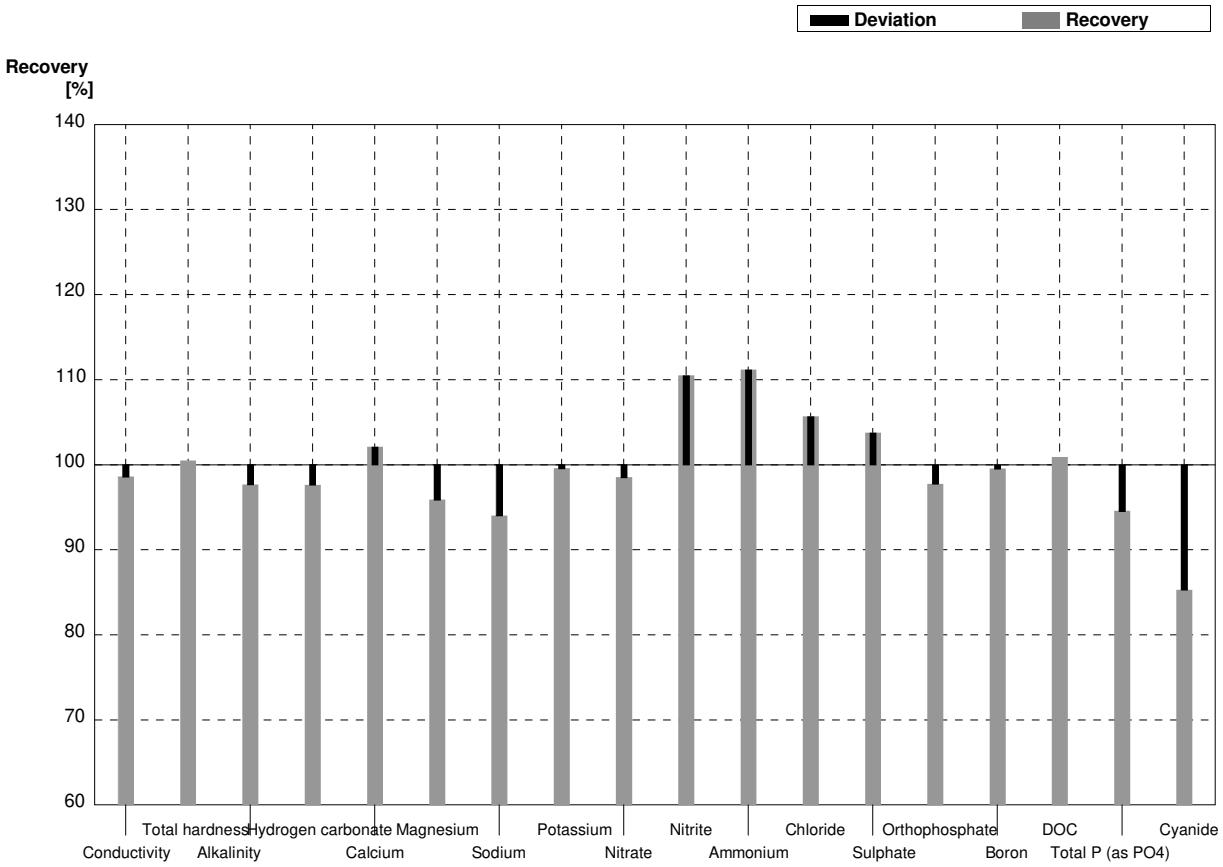
Sample **N158B**
Laboratory **AP**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02	0,993		mmol/l	79%
Alkalinity	1,19	0,01			mmol/l	
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6	39,582	3,958	mg/l	100%
Magnesium	6,41	0,09	6,444	0,644	mg/l	101%
Sodium	32,5	0,2	33,803	3,380	mg/l	104%
Potassium	5,52	0,04	5,663	0,566	mg/l	103%
Nitrate	73,3	1,7	74,257	14,851	mg/l	101%
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3	15,358	2,304	mg/l	104%
Sulphate	62,6	0,4	65,026	13,005	mg/l	104%
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



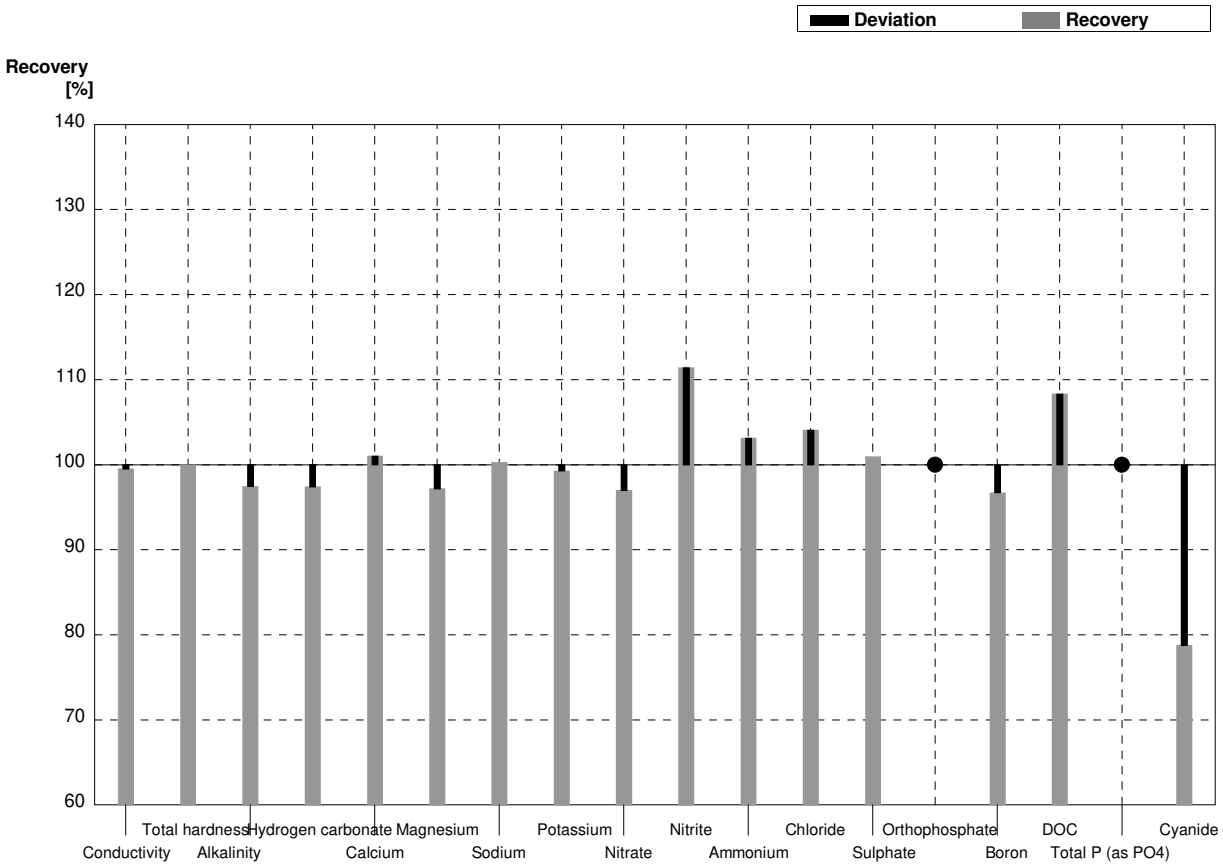
Sample **N158A**
Laboratory **AQ**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	482	12	µS/cm	99%
Total hardness	2,04	0,02	2,05	0,21	mmol/l	100%
Alkalinity	1,71	0,02	1,67	0,17	mmol/l	98%
Hydrogen carbonate	101	1	98,6	9,9	mg/l	98%
Calcium	57,9	0,7	59,1	5,9	mg/l	102%
Magnesium	14,5	0,2	13,9	1,4	mg/l	96%
Sodium	11,7	0,3	11,0	1,1	mg/l	94%
Potassium	2,30	0,04	2,29	0,23	mg/l	100%
Nitrate	39,9	0,6	39,3	3,9	mg/l	98%
Nitrite	0,0468	0,0010	0,0517	0,0052	mg/l	110%
Ammonium	0,0251	0,0044	0,0279	0,0028	mg/l	111%
Chloride	47,6	0,9	50,3	5,0	mg/l	106%
Sulphate	45,3	0,5	47,0	4,7	mg/l	104%
Orthophosphate	0,132	0,001	0,129	0,013	mg/l	98%
Boron	0,0431	0,0002	0,0429	0,0043	mg/l	100%
DOC	5,62	0,03	5,67	0,57	mg/l	101%
Total P (as PO4)	0,184	0,001	0,174	0,017	mg/l	95%
Cyanide	0,0469	0,0003	0,0400	0,004	mg/l	85%



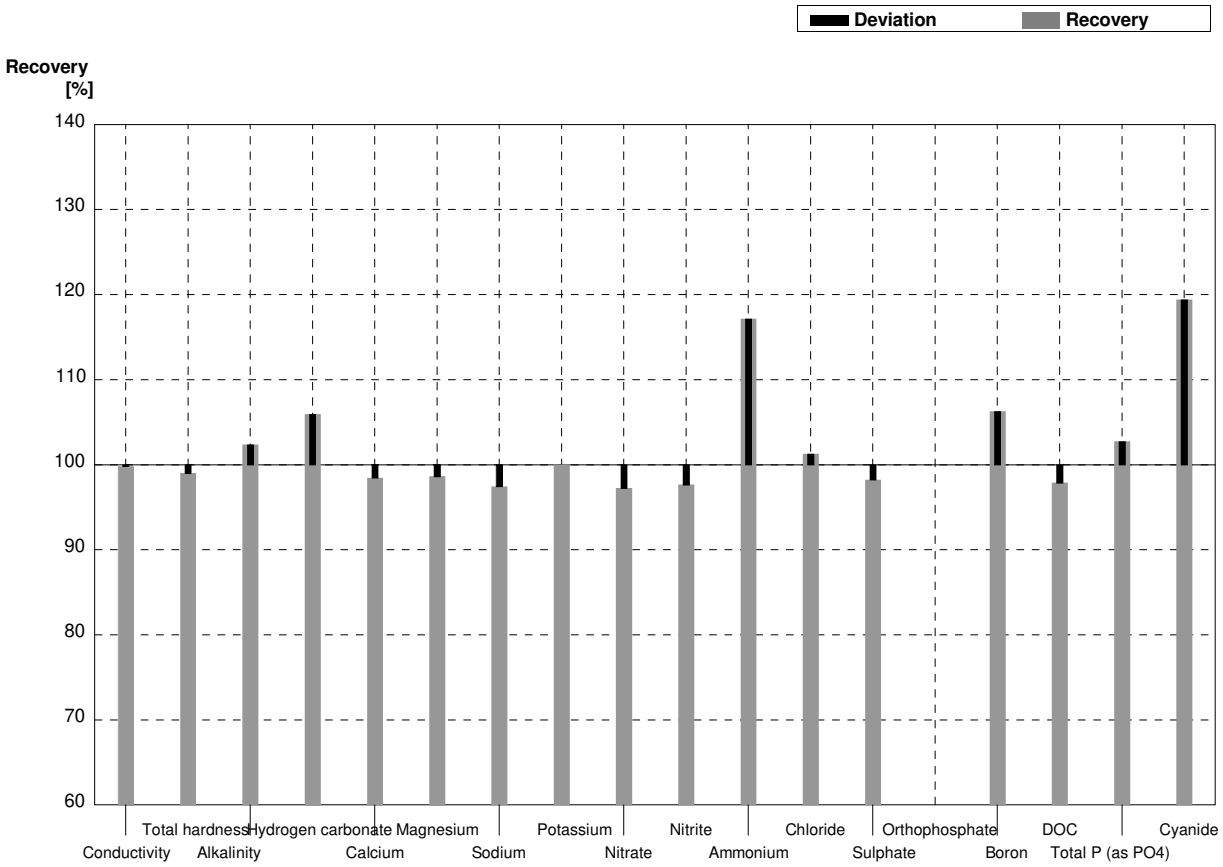
Sample **N158B**
Laboratory **AQ**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	433	11	µS/cm	100%
Total hardness	1,25	0,02	1,25	0,12	mmol/l	100%
Alkalinity	1,19	0,01	1,16	0,12	mmol/l	97%
Hydrogen carbonate	69,5	0,4	67,7	6,8	mg/l	97%
Calcium	39,4	0,6	39,8	4,0	mg/l	101%
Magnesium	6,41	0,09	6,23	0,62	mg/l	97%
Sodium	32,5	0,2	32,6	3,3	mg/l	100%
Potassium	5,52	0,04	5,48	0,55	mg/l	99%
Nitrate	73,3	1,7	71,1	7,1	mg/l	97%
Nitrite	0,063	0,003	0,0702	0,0070	mg/l	111%
Ammonium	0,070	0,003	0,0722	0,0072	mg/l	103%
Chloride	14,7	0,3	15,3	1,5	mg/l	104%
Sulphate	62,6	0,4	63,2	6,3	mg/l	101%
Orthophosphate	<0,009		<0,02		mg/l	•
Boron	0,0244	0,0001	0,0236	0,0024	mg/l	97%
DOC	1,56	0,01	1,69	0,17	mg/l	108%
Total P (as PO4)	<0,009		<0,05		mg/l	•
Cyanide	0,0165	0,0001	0,0130	0,0013	mg/l	79%



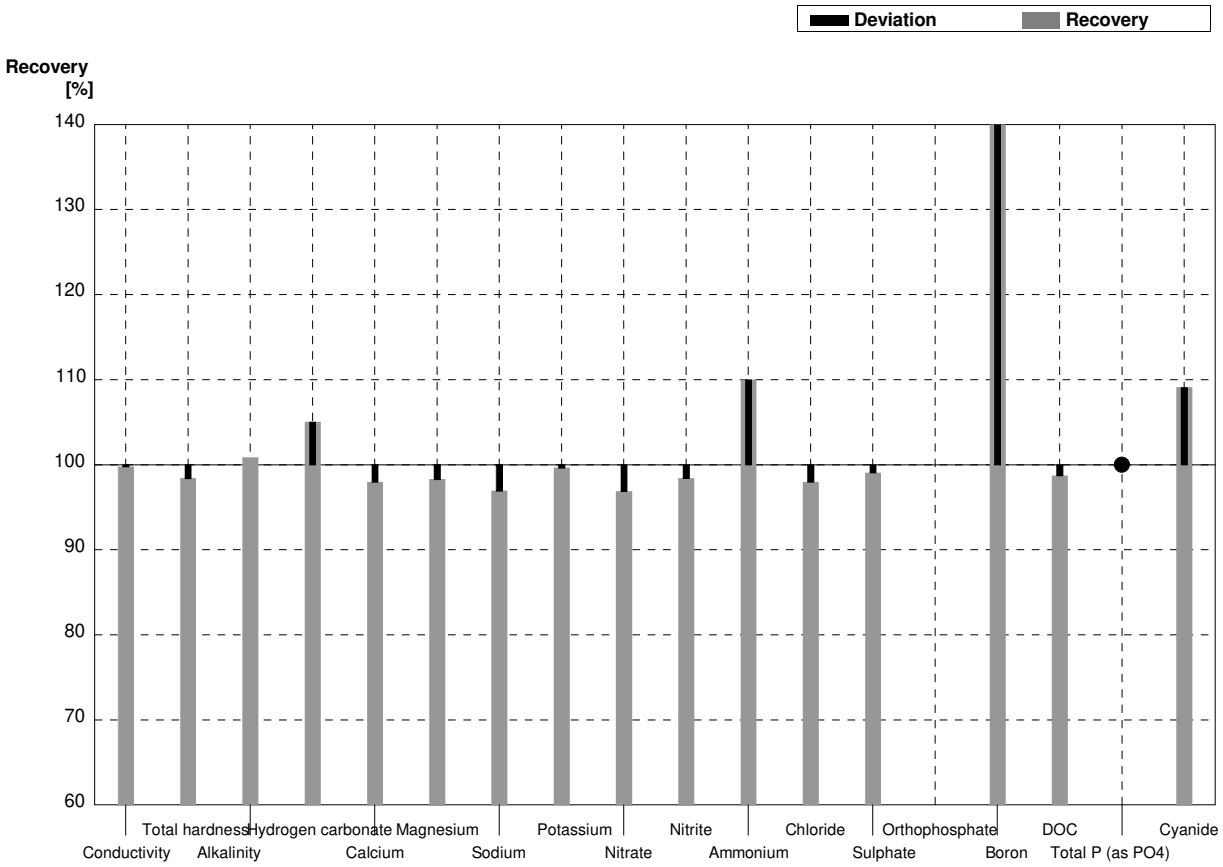
Sample **N158A**
Laboratory **AR**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	488	3	µS/cm	100%
Total hardness	2,04	0,02	2,02	0,18	mmol/l	99%
Alkalinity	1,71	0,02	1,75	0,10	mmol/l	102%
Hydrogen carbonate	101	1	107	4	mg/l	106%
Calcium	57,9	0,7	57	2	mg/l	98%
Magnesium	14,5	0,2	14,3	1	mg/l	99%
Sodium	11,7	0,3	11,4	1	mg/l	97%
Potassium	2,30	0,04	2,30	0,5	mg/l	100%
Nitrate	39,9	0,6	38,8	2	mg/l	97%
Nitrite	0,0468	0,0010	0,0457	0,01	mg/l	98%
Ammonium	0,0251	0,0044	0,0294	0,01	mg/l	117%
Chloride	47,6	0,9	48,2	2	mg/l	101%
Sulphate	45,3	0,5	44,5	2	mg/l	98%
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002	0,0458	0,01	mg/l	106%
DOC	5,62	0,03	5,5	0,4	mg/l	98%
Total P (as PO4)	0,184	0,001	0,189	0,02	mg/l	103%
Cyanide	0,0469	0,0003	0,056	0,02	mg/l	119%



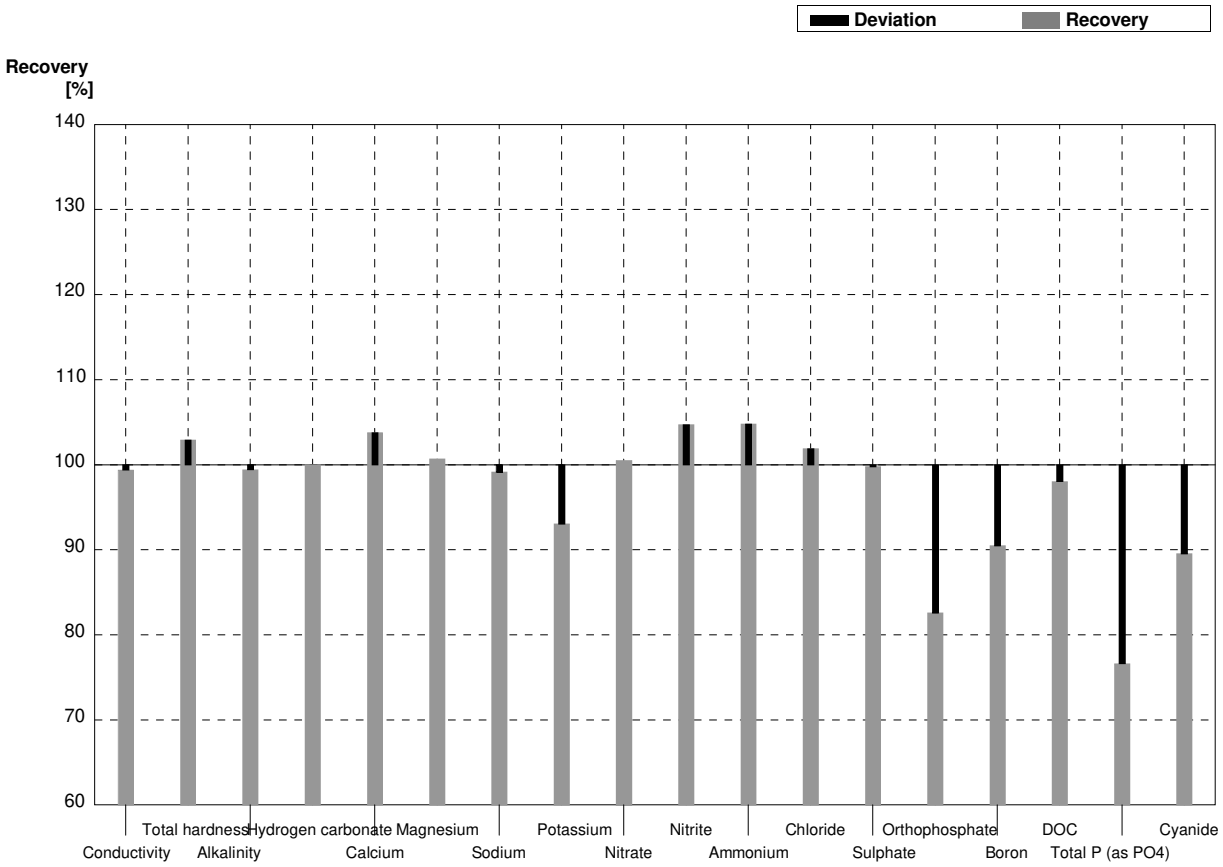
Sample **N158B**
Laboratory **AR**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	434	3	µS/cm	100%
Total hardness	1,25	0,02	1,23	0,15	mmol/l	98%
Alkalinity	1,19	0,01	1,20	0,10	mmol/l	101%
Hydrogen carbonate	69,5	0,4	73	3	mg/l	105%
Calcium	39,4	0,6	38,6	2	mg/l	98%
Magnesium	6,41	0,09	6,3	1	mg/l	98%
Sodium	32,5	0,2	31,5	2	mg/l	97%
Potassium	5,52	0,04	5,5	0,5	mg/l	100%
Nitrate	73,3	1,7	71	3	mg/l	97%
Nitrite	0,063	0,003	0,062	0,01	mg/l	98%
Ammonium	0,070	0,003	0,077	0,01	mg/l	110%
Chloride	14,7	0,3	14,4	2	mg/l	98%
Sulphate	62,6	0,4	62	3	mg/l	99%
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001	0,0378	0,01	mg/l	155%
DOC	1,56	0,01	1,54	0,2	mg/l	99%
Total P (as PO4)	<0,009		'0,0198	0,02	mg/l	•
Cyanide	0,0165	0,0001	0,0180	0,01	mg/l	109%



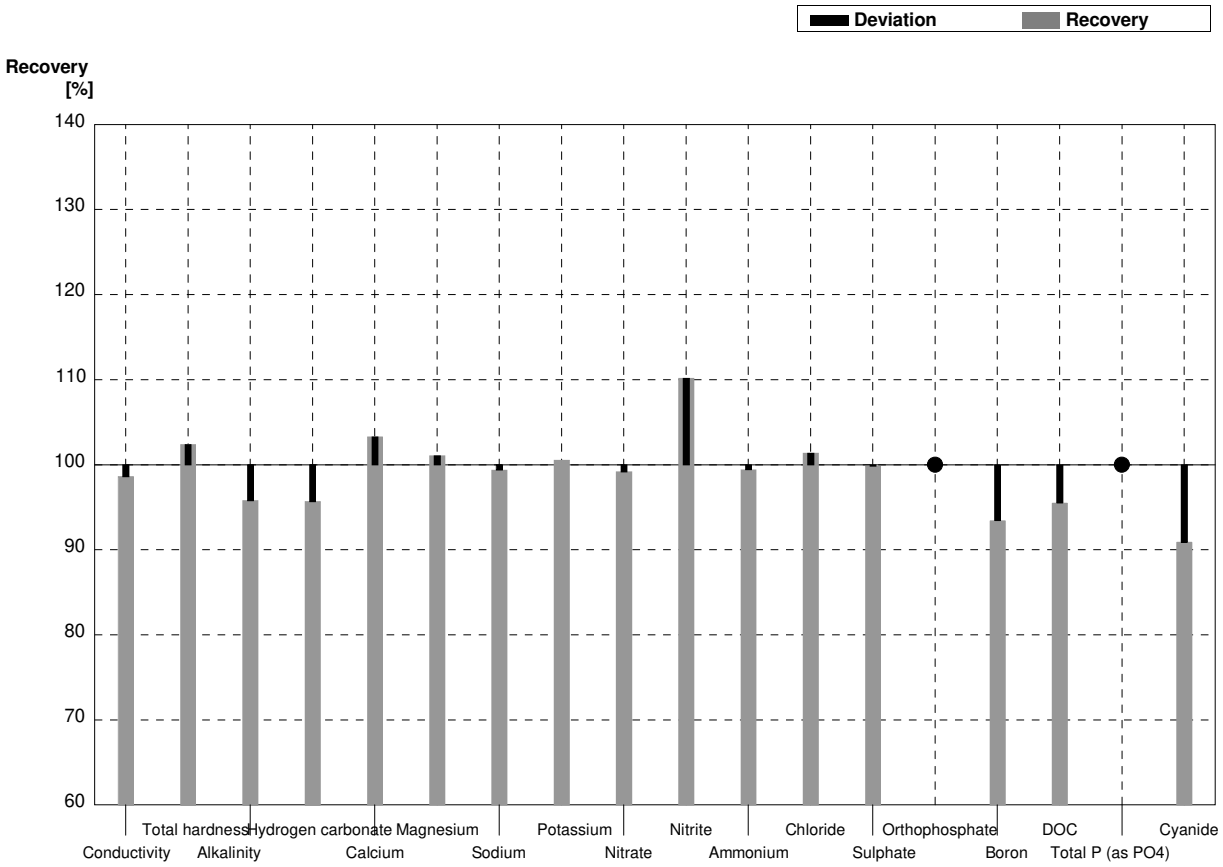
Sample **N158A**
Laboratory **AS**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	486	49	µS/cm	99%
Total hardness	2,04	0,02	2,10	0,21	mmol/l	103%
Alkalinity	1,71	0,02	1,70	0,17	mmol/l	99%
Hydrogen carbonate	101	1	101	10	mg/l	100%
Calcium	57,9	0,7	60,1	6,0	mg/l	104%
Magnesium	14,5	0,2	14,6	1,5	mg/l	101%
Sodium	11,7	0,3	11,6	1,2	mg/l	99%
Potassium	2,30	0,04	2,14	0,21	mg/l	93%
Nitrate	39,9	0,6	40,1	4,0	mg/l	101%
Nitrite	0,0468	0,0010	0,0490	0,0049	mg/l	105%
Ammonium	0,0251	0,0044	0,0263	0,0026	mg/l	105%
Chloride	47,6	0,9	48,5	4,9	mg/l	102%
Sulphate	45,3	0,5	45,2	4,5	mg/l	100%
Orthophosphate	0,132	0,001	0,109	0,011	mg/l	83%
Boron	0,0431	0,0002	0,0390	0,0039	mg/l	90%
DOC	5,62	0,03	5,51	0,55	mg/l	98%
Total P (as PO4)	0,184	0,001	0,141	0,028	mg/l	77%
Cyanide	0,0469	0,0003	0,0420	0,0042	mg/l	90%



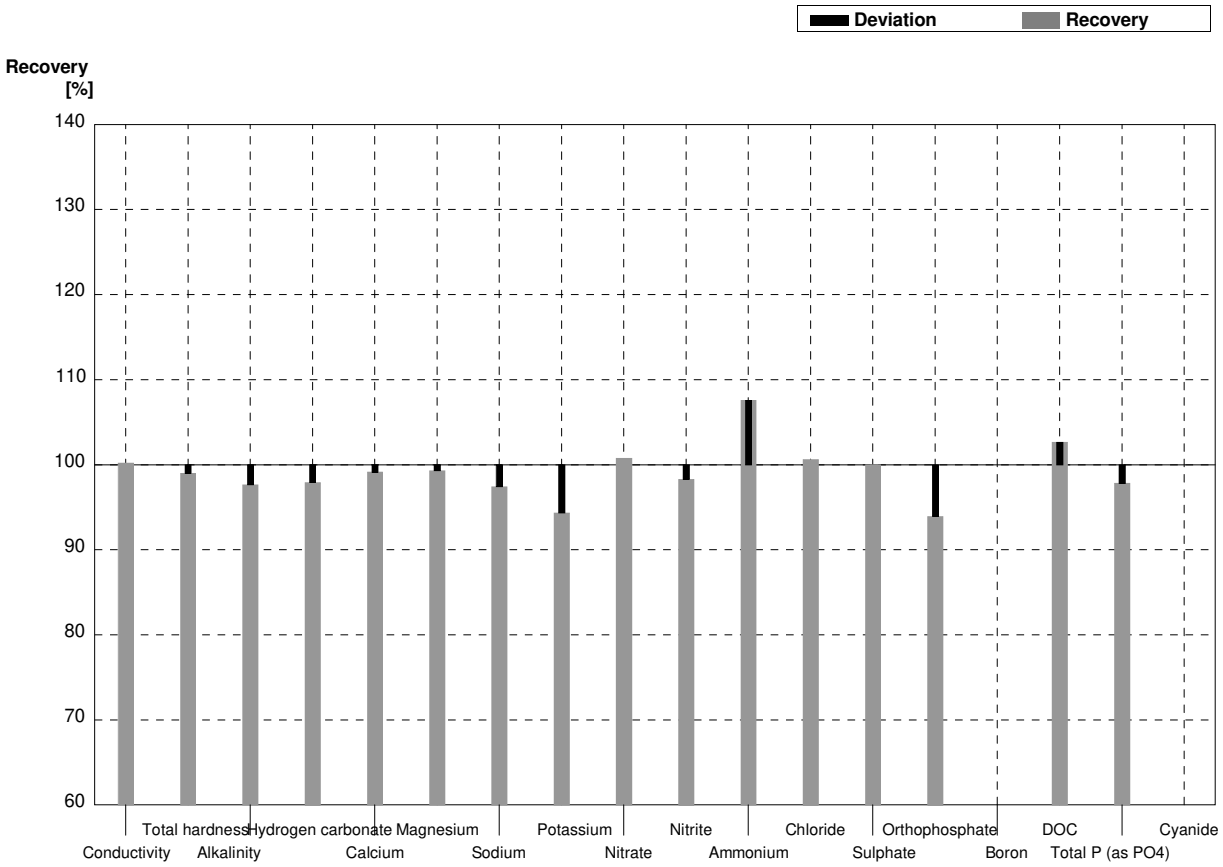
Sample **N158B**
Laboratory **AS**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	429	43	µS/cm	99%
Total hardness	1,25	0,02	1,28	0,13	mmol/l	102%
Alkalinity	1,19	0,01	1,14	0,11	mmol/l	96%
Hydrogen carbonate	69,5	0,4	66,5	6,7	mg/l	96%
Calcium	39,4	0,6	40,7	4,1	mg/l	103%
Magnesium	6,41	0,09	6,48	0,65	mg/l	101%
Sodium	32,5	0,2	32,3	3,2	mg/l	99%
Potassium	5,52	0,04	5,55	0,55	mg/l	101%
Nitrate	73,3	1,7	72,7	7,3	mg/l	99%
Nitrite	0,063	0,003	0,0694	0,0069	mg/l	110%
Ammonium	0,070	0,003	0,0696	0,0070	mg/l	99%
Chloride	14,7	0,3	14,9	1,5	mg/l	101%
Sulphate	62,6	0,4	62,5	6,3	mg/l	100%
Orthophosphate	<0,009		<0,008		mg/l	•
Boron	0,0244	0,0001	0,0228	0,0023	mg/l	93%
DOC	1,56	0,01	1,49	0,15	mg/l	96%
Total P (as PO4)	<0,009		<0,015		mg/l	•
Cyanide	0,0165	0,0001	0,0150	0,0015	mg/l	91%



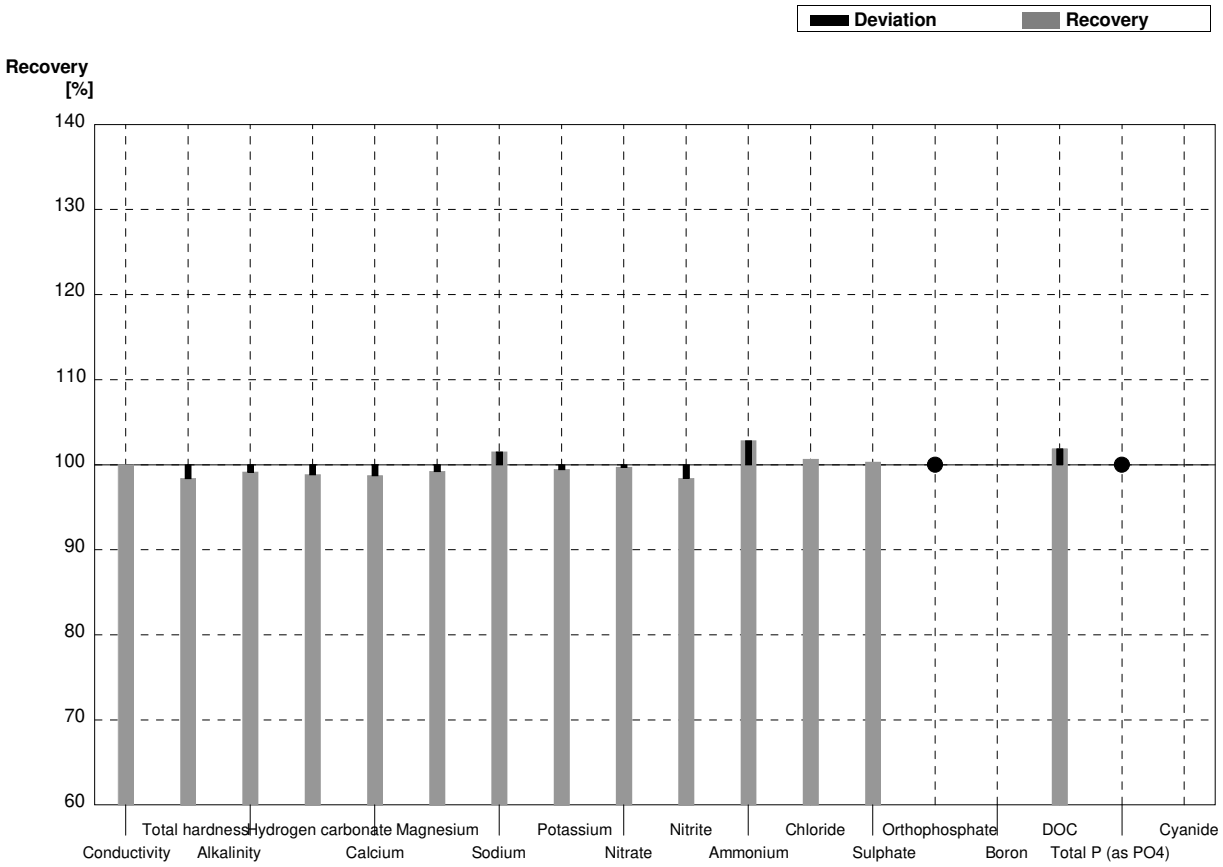
Sample **N158A**
Laboratory **AT**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	490	20	µS/cm	100%
Total hardness	2,04	0,02	2,02	0,1	mmol/l	99%
Alkalinity	1,71	0,02	1,67	0,1	mmol/l	98%
Hydrogen carbonate	101	1	98,9	4	mg/l	98%
Calcium	57,9	0,7	57,4	5	mg/l	99%
Magnesium	14,5	0,2	14,4	1,8	mg/l	99%
Sodium	11,7	0,3	11,4	1,8	mg/l	97%
Potassium	2,30	0,04	2,17	0,3	mg/l	94%
Nitrate	39,9	0,6	40,2	4	mg/l	101%
Nitrite	0,0468	0,0010	0,0460	0,004	mg/l	98%
Ammonium	0,0251	0,0044	0,0270	0,004	mg/l	108%
Chloride	47,6	0,9	47,9	3	mg/l	101%
Sulphate	45,3	0,5	45,3	4	mg/l	100%
Orthophosphate	0,132	0,001	0,124	0,02	mg/l	94%
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03	5,77	0,9	mg/l	103%
Total P (as PO4)	0,184	0,001	0,180	0,02	mg/l	98%
Cyanide	0,0469	0,0003			mg/l	



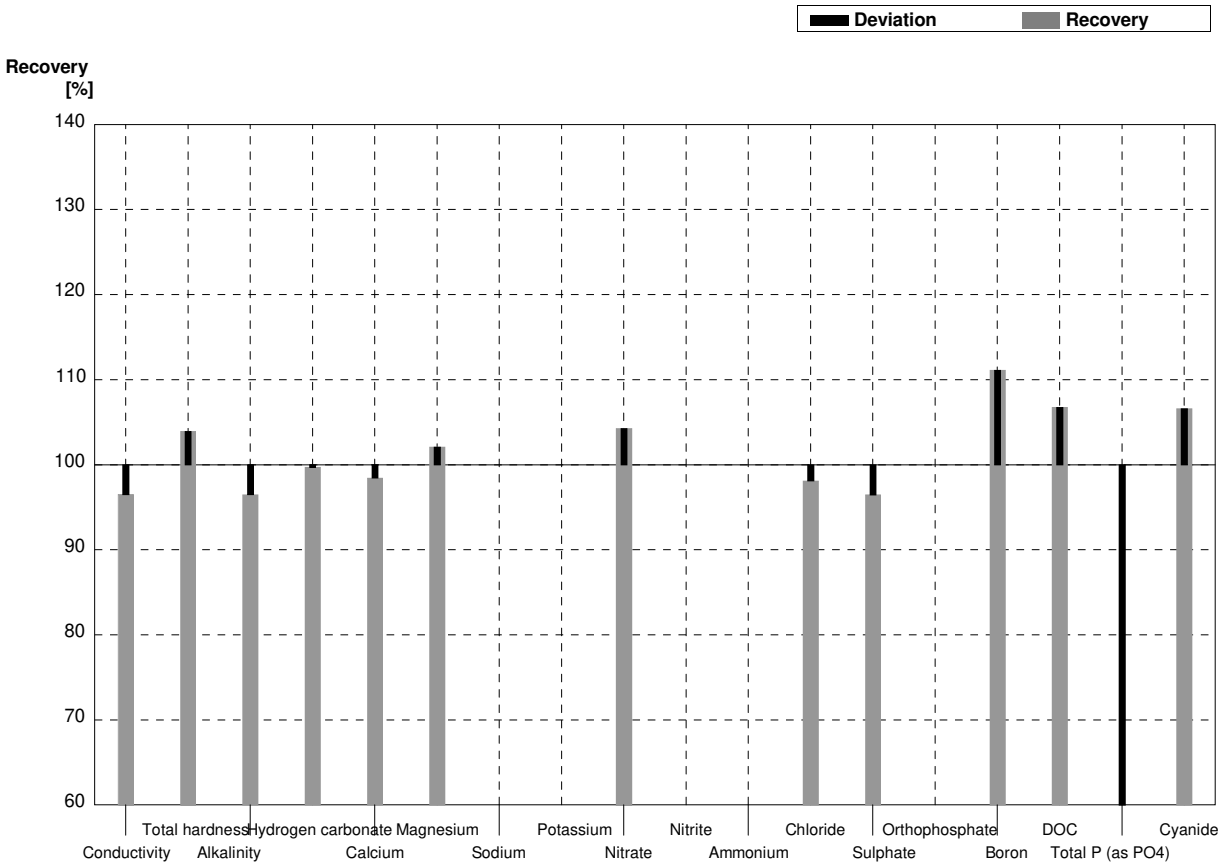
Sample **N158B**
Laboratory **AT**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	435	18	µS/cm	100%
Total hardness	1,25	0,02	1,23	0,1	mmol/l	98%
Alkalinity	1,19	0,01	1,18	0,1	mmol/l	99%
Hydrogen carbonate	69,5	0,4	68,7	3	mg/l	99%
Calcium	39,4	0,6	38,9	4	mg/l	99%
Magnesium	6,41	0,09	6,36	0,8	mg/l	99%
Sodium	32,5	0,2	33,0	5	mg/l	102%
Potassium	5,52	0,04	5,49	0,8	mg/l	99%
Nitrate	73,3	1,7	73,1	6	mg/l	100%
Nitrite	0,063	0,003	0,062	0,005	mg/l	98%
Ammonium	0,070	0,003	0,072	0,011	mg/l	103%
Chloride	14,7	0,3	14,8	0,9	mg/l	101%
Sulphate	62,6	0,4	62,8	5	mg/l	100%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01	1,59	0,3	mg/l	102%
Total P (as PO4)	<0,009		<0,013		mg/l	•
Cyanide	0,0165	0,0001			mg/l	



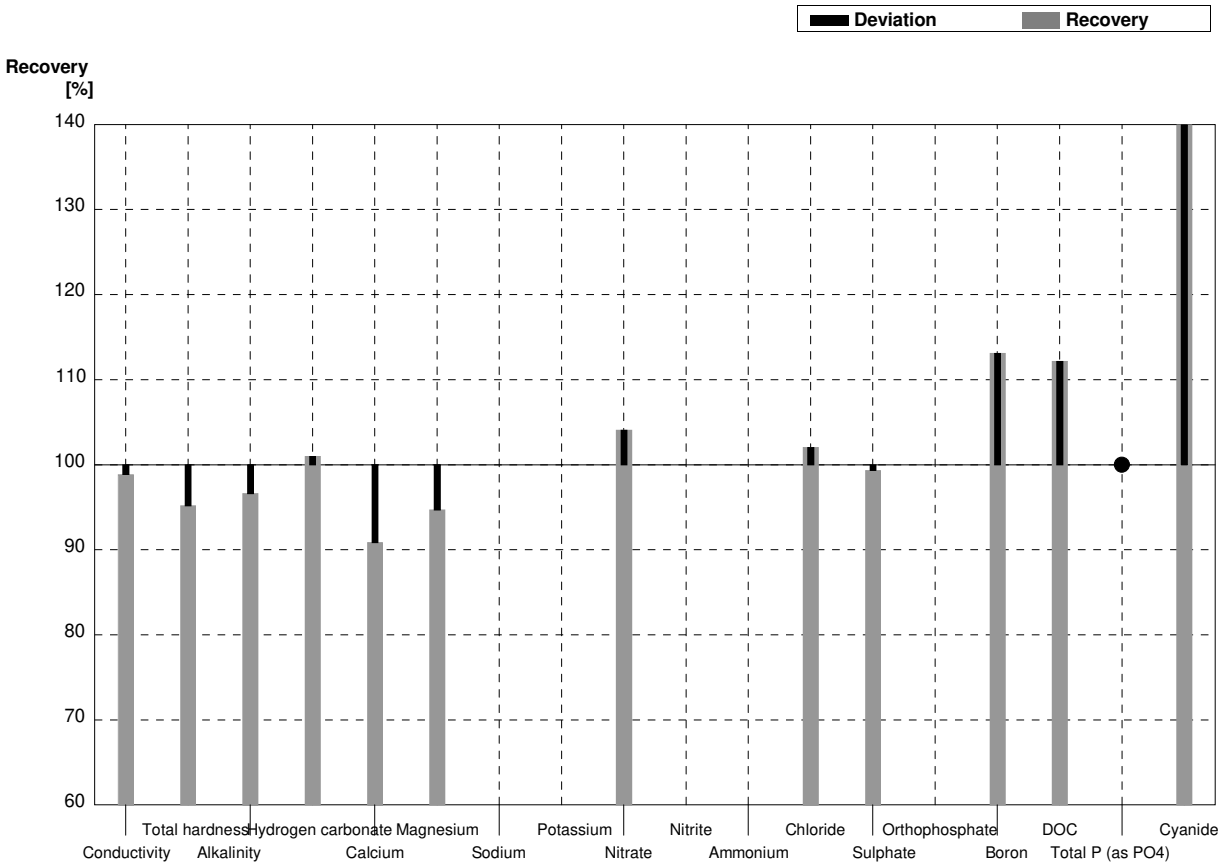
Sample **N158A**
Laboratory **AU**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	472	2,4	µS/cm	97%
Total hardness	2,04	0,02	2,12	0,07	mmol/l	104%
Alkalinity	1,71	0,02	1,65	0,01	mmol/l	96%
Hydrogen carbonate	101	1	100,7	0,61	mg/l	100%
Calcium	57,9	0,7	57,0	1,9	mg/l	98%
Magnesium	14,5	0,2	14,8	0,2	mg/l	102%
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6	41,6	0,25	mg/l	104%
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9	46,7	0,35	mg/l	98%
Sulphate	45,3	0,5	43,7	0,79	mg/l	96%
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002	0,0479	0,0021	mg/l	111%
DOC	5,62	0,03	6,0	0,26	mg/l	107%
Total P (as PO4)	0,184	0,001	0,071	0,002	mg/l	39%
Cyanide	0,0469	0,0003	0,050	0,013	mg/l	107%



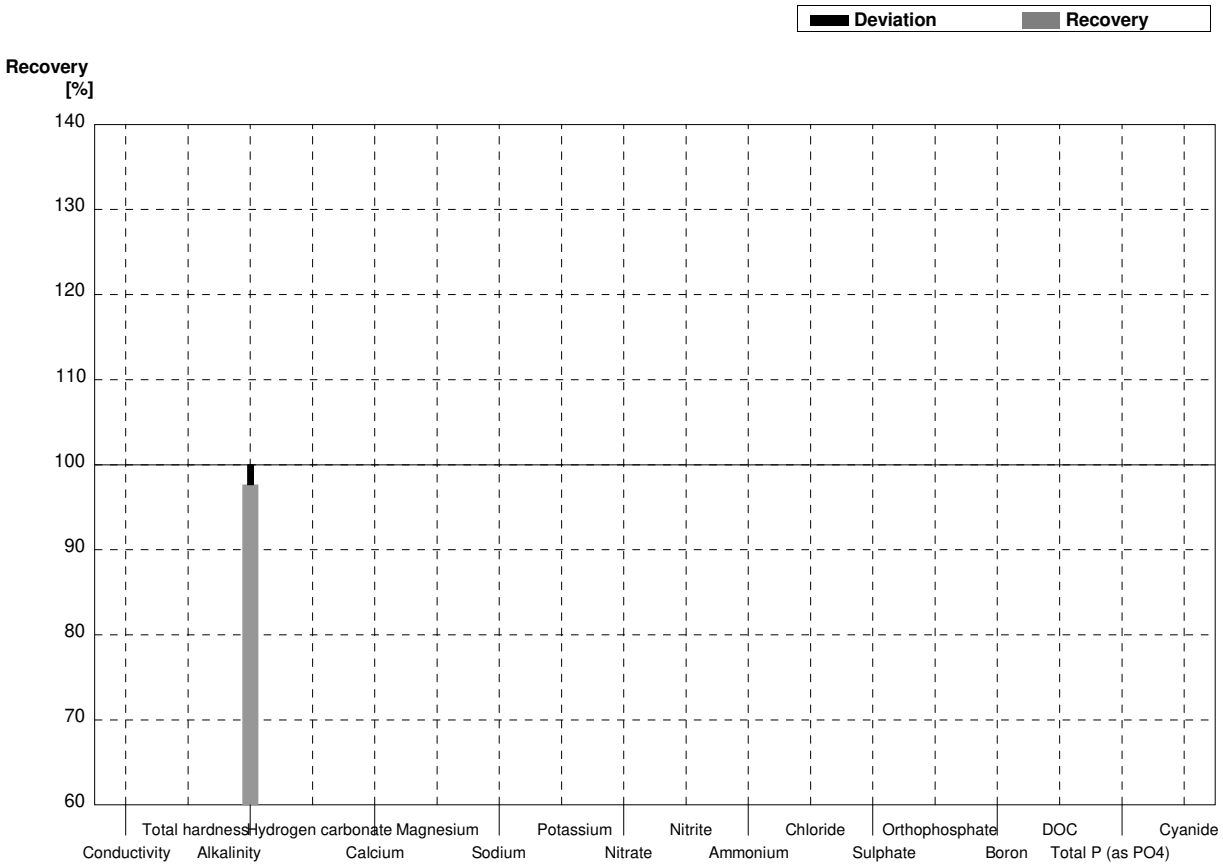
Sample **N158B**
Laboratory **AU**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	430	2,2	µS/cm	99%
Total hardness	1,25	0,02	1,19	0,10	mmol/l	95%
Alkalinity	1,19	0,01	1,15	0,01	mmol/l	97%
Hydrogen carbonate	69,5	0,4	70,2	0,61	mg/l	101%
Calcium	39,4	0,6	35,8	2,9	mg/l	91%
Magnesium	6,41	0,09	6,07	0,10	mg/l	95%
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7	76,3	0,45	mg/l	104%
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3	15,0	0,11	mg/l	102%
Sulphate	62,6	0,4	62,2	1,12	mg/l	99%
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001	0,0276	0,0033	mg/l	113%
DOC	1,56	0,01	1,75	0,08	mg/l	112%
Total P (as PO4)	<0,009		<0,005	0,002	mg/l	•
Cyanide	0,0165	0,0001	0,0300	0,008	mg/l	182%



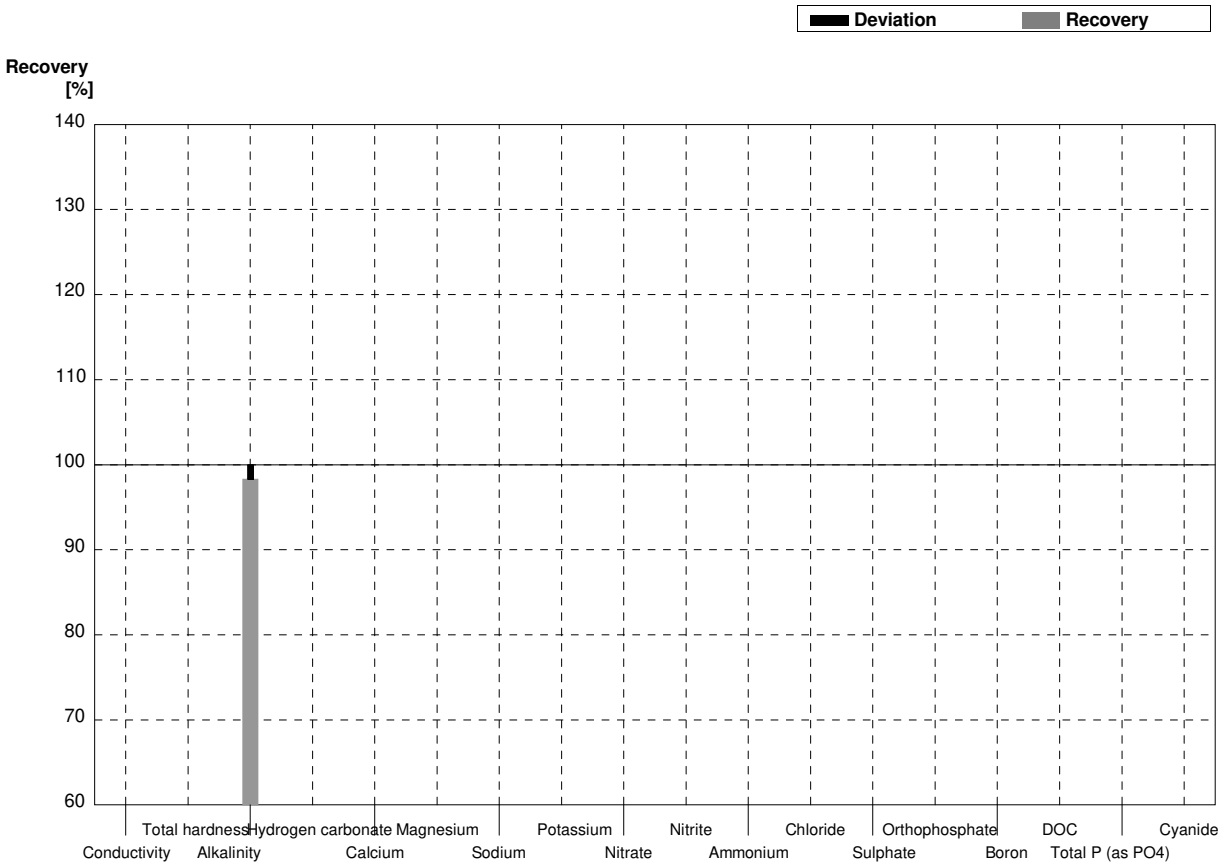
Sample **N158A**
Laboratory **AV**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2			µS/cm	
Total hardness	2,04	0,02			mmol/l	
Alkalinity	1,71	0,02	1,67	0,03	mmol/l	98%
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7			mg/l	
Magnesium	14,5	0,2			mg/l	
Sodium	11,7	0,3			mg/l	
Potassium	2,30	0,04			mg/l	
Nitrate	39,9	0,6			mg/l	
Nitrite	0,0468	0,0010			mg/l	
Ammonium	0,0251	0,0044			mg/l	
Chloride	47,6	0,9			mg/l	
Sulphate	45,3	0,5			mg/l	
Orthophosphate	0,132	0,001			mg/l	
Boron	0,0431	0,0002			mg/l	
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001			mg/l	
Cyanide	0,0469	0,0003			mg/l	



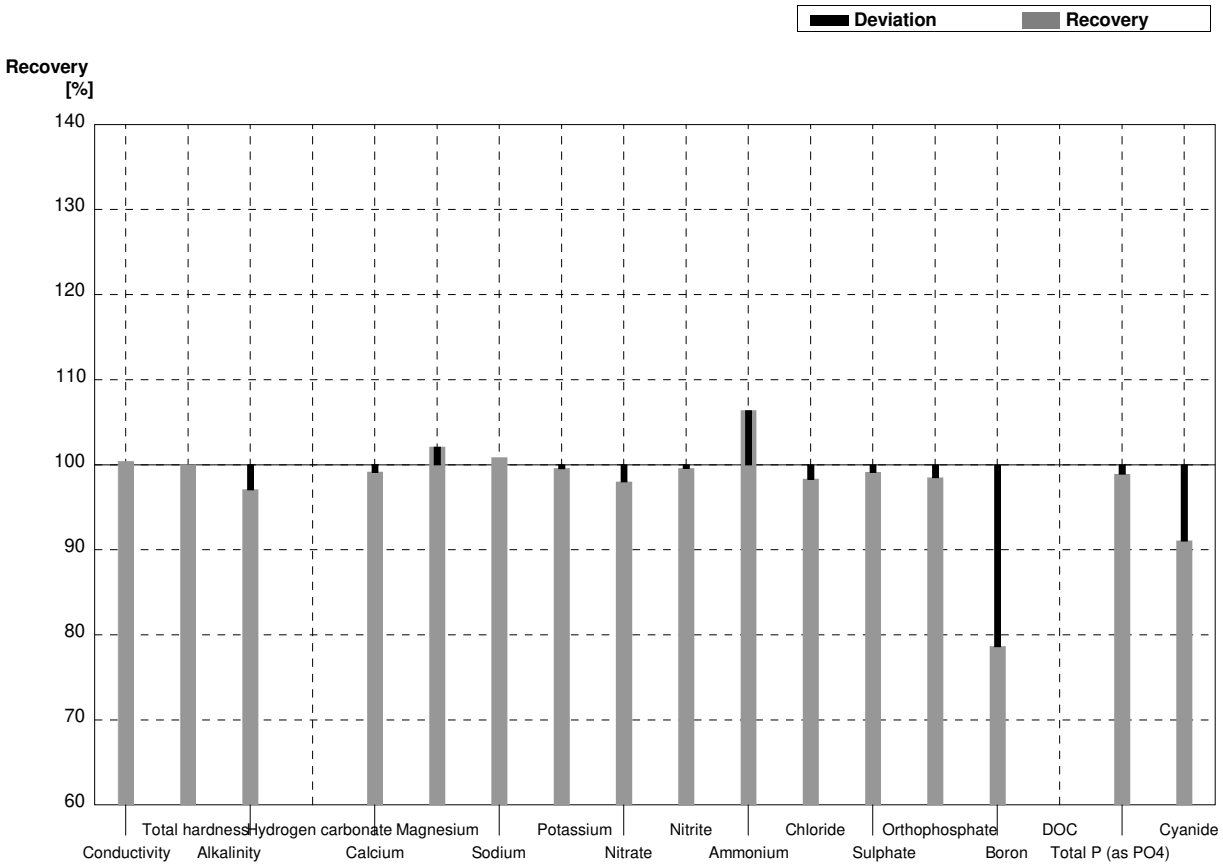
Sample **N158B**
Laboratory **AV**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1			µS/cm	
Total hardness	1,25	0,02			mmol/l	
Alkalinity	1,19	0,01	1,17	0,01	mmol/l	98%
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6			mg/l	
Magnesium	6,41	0,09			mg/l	
Sodium	32,5	0,2			mg/l	
Potassium	5,52	0,04			mg/l	
Nitrate	73,3	1,7			mg/l	
Nitrite	0,063	0,003			mg/l	
Ammonium	0,070	0,003			mg/l	
Chloride	14,7	0,3			mg/l	
Sulphate	62,6	0,4			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,0244	0,0001			mg/l	
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009				mg/l	
Cyanide	0,0165	0,0001			mg/l	



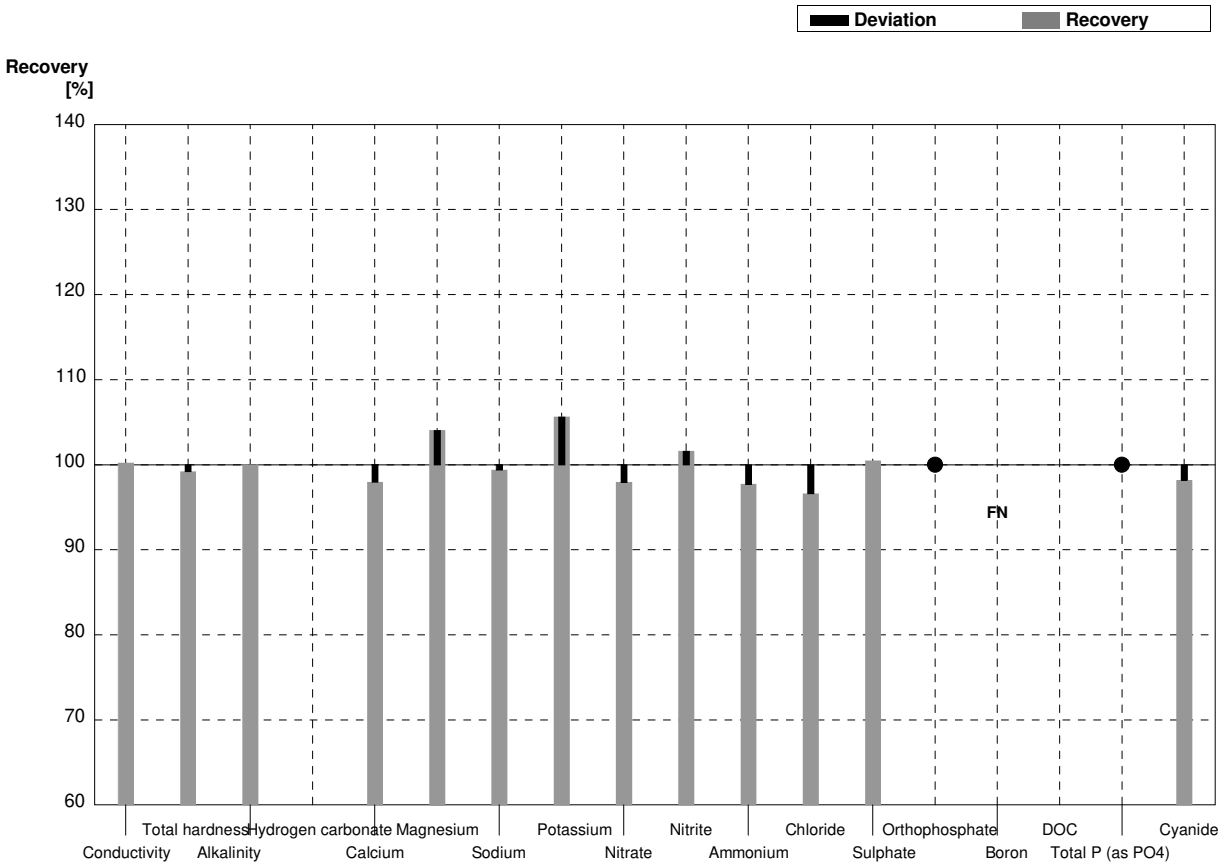
Sample **N158A**
Laboratory **AW**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	491	10	µS/cm	100%
Total hardness	2,04	0,02	2,04	0,41	mmol/l	100%
Alkalinity	1,71	0,02	1,66	0,2	mmol/l	97%
Hydrogen carbonate	101	1			mg/l	
Calcium	57,9	0,7	57,4	11,5	mg/l	99%
Magnesium	14,5	0,2	14,8	3,0	mg/l	102%
Sodium	11,7	0,3	11,8	1,8	mg/l	101%
Potassium	2,30	0,04	2,29	0,46	mg/l	100%
Nitrate	39,9	0,6	39,1	4,0	mg/l	98%
Nitrite	0,0468	0,0010	0,0466	0,01	mg/l	100%
Ammonium	0,0251	0,0044	0,0267	0,01	mg/l	106%
Chloride	47,6	0,9	46,8	4,7	mg/l	98%
Sulphate	45,3	0,5	44,9	4,5	mg/l	99%
Orthophosphate	0,132	0,001	0,130	0,027	mg/l	98%
Boron	0,0431	0,0002	0,0339	0,0085	mg/l	79%
DOC	5,62	0,03			mg/l	
Total P (as PO4)	0,184	0,001	0,182	0,037	mg/l	99%
Cyanide	0,0469	0,0003	0,0427	0,011	mg/l	91%



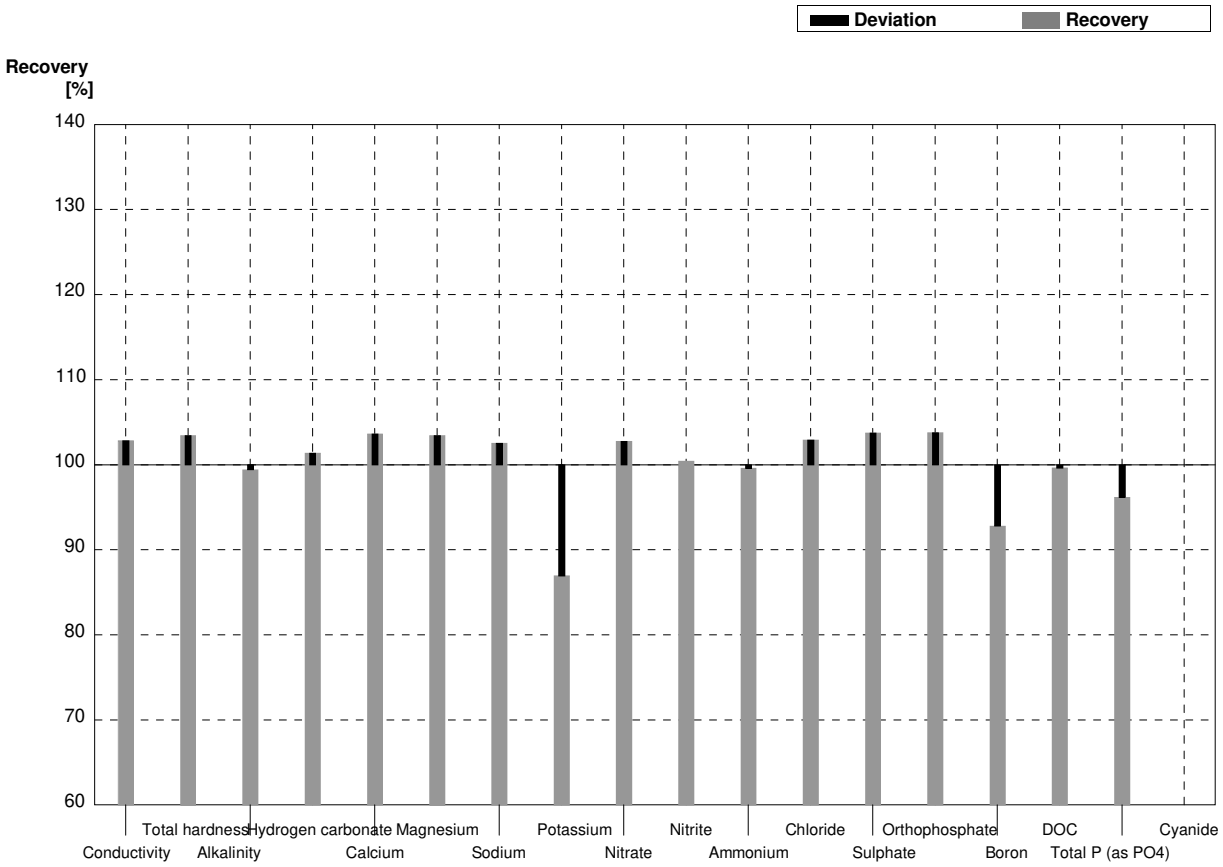
Sample **N158B**
Laboratory **AW**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	436	10	µS/cm	100%
Total hardness	1,25	0,02	1,24	0,25	mmol/l	99%
Alkalinity	1,19	0,01	1,19	0,12	mmol/l	100%
Hydrogen carbonate	69,5	0,4			mg/l	
Calcium	39,4	0,6	38,6	7,7	mg/l	98%
Magnesium	6,41	0,09	6,67	1,3	mg/l	104%
Sodium	32,5	0,2	32,3	4,8	mg/l	99%
Potassium	5,52	0,04	5,83	1,2	mg/l	106%
Nitrate	73,3	1,7	71,8	7,2	mg/l	98%
Nitrite	0,063	0,003	0,0640	0,013	mg/l	102%
Ammonium	0,070	0,003	0,0684	0,014	mg/l	98%
Chloride	14,7	0,3	14,2	1,5	mg/l	97%
Sulphate	62,6	0,4	62,9	6,5	mg/l	100%
Orthophosphate	<0,009		<0,015		mg/l	•
Boron	0,0244	0,0001	<0,020		mg/l	FN
DOC	1,56	0,01			mg/l	
Total P (as PO4)	<0,009		<0,015		mg/l	•
Cyanide	0,0165	0,0001	0,0162	0,005	mg/l	98%



Sample **N158A**
Laboratory **AX**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	489	2	503	10	µS/cm	103%
Total hardness	2,04	0,02	2,11	0,14	mmol/l	103%
Alkalinity	1,71	0,02	1,70	0,1	mmol/l	99%
Hydrogen carbonate	101	1	102,4	8,2	mg/l	101%
Calcium	57,9	0,7	60	4,8	mg/l	104%
Magnesium	14,5	0,2	15,0	1,20	mg/l	103%
Sodium	11,7	0,3	12,0	0,72	mg/l	103%
Potassium	2,30	0,04	2,00	0,22	mg/l	87%
Nitrate	39,9	0,6	41,0	2,05	mg/l	103%
Nitrite	0,0468	0,0010	0,0470	0,006	mg/l	100%
Ammonium	0,0251	0,0044	0,0250	0,007	mg/l	100%
Chloride	47,6	0,9	49,0	3,92	mg/l	103%
Sulphate	45,3	0,5	47,0	2,82	mg/l	104%
Orthophosphate	0,132	0,001	0,137	0,012	mg/l	104%
Boron	0,0431	0,0002	0,0400	0,0068	mg/l	93%
DOC	5,62	0,03	5,6	0,672	mg/l	100%
Total P (as PO4)	0,184	0,001	0,177	0,044	mg/l	96%
Cyanide	0,0469	0,0003			mg/l	



Sample **N158B**
Laboratory **AX**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	435	1	440	9	µS/cm	101%
Total hardness	1,25	0,02	1,27	0,09	mmol/l	102%
Alkalinity	1,19	0,01	1,20	0,1	mmol/l	101%
Hydrogen carbonate	69,5	0,4	71,55	5,7	mg/l	103%
Calcium	39,4	0,6	41,0	3,28	mg/l	104%
Magnesium	6,41	0,09	6,0	0,48	mg/l	94%
Sodium	32,5	0,2	33,0	1,98	mg/l	102%
Potassium	5,52	0,04	5,0	0,55	mg/l	91%
Nitrate	73,3	1,7	74,0	3,7	mg/l	101%
Nitrite	0,063	0,003	0,063	0,008	mg/l	100%
Ammonium	0,070	0,003	0,0780	0,020	mg/l	111%
Chloride	14,7	0,3	15,0	1,20	mg/l	102%
Sulphate	62,6	0,4	64,0	3,84	mg/l	102%
Orthophosphate	<0,009		<0,009		mg/l	•
Boron	0,0244	0,0001	0,0200	0,0034	mg/l	82%
DOC	1,56	0,01	1,70	0,425	mg/l	109%
Total P (as PO4)	<0,009		<0,009		mg/l	•
Cyanide	0,0165	0,0001			mg/l