

IFA-Proficiency Testing Scheme for Water Analysis

**Round N159
Major Ions**

Sample Dispatch: 8 November 2021



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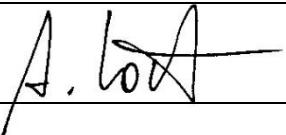
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151 pages

This report summarises the results of round N159 (major ions) within the IFA-Proficiency Testing Scheme for Water Analysis. The samples N159A and N159B were distributed to 48 participants on Monday, 8 November 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, 3 December 2021. 46 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: CaCO₃, CaCl₂, Ca(NO₃)₂, MgSO₄, Mg(NO₃)₂, NaHCO₃, Na₂SO₄, KHCO₃, diethyl ethylphosphonate (C₆H₁₅PO₃, for total-P), potassium hydrogen phthalate (for DOC), sodium salicylate (for KMnO₄-Index) and certified standard solutions of NaNO₂, NH₄Cl, KH₂PO₄ and H₃BO₃. Both samples, N159A and N159B, contained free CO₂, which was used for dissolution of CaCO₃. No other substances (e.g. preservatives) were added. The samples were stabilised by sterile filtration and low temperature.

Ammonium was not added to sample N159A and no phosphorus substances were added to sample N159B 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, all parameters were determined in several samples four weeks after shipment. The results are listed in the result tables ("Stability test") and the parameter oriented part of the report ("IFA result").

According to our experience, the samples remain stable up to 18 months for the parameters conductivity, total hardness, alkalinity, Ca²⁺, Mg²⁺, Na⁺, K⁺, NO₃⁻, Cl⁻, SO₄²⁻, boron and HCO₃⁻ when stored at 4°C in the dark. For the parameters NH₄⁺, NO₂⁻, o-PO₄³⁻, total-P and DOC the samples remain stable several weeks, whereas the first changes normally are observed for NH₄⁺.

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 605 µS/cm in sample N159A and 448 µS/cm in sample N159B.

For the pH no target values can be assigned. The results can be compared on the tables. In this kind of samples containing CO₂, 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 potassium dihydrogen phosphate (KH_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-} .

The concentrations of sodium salicylate, which was used as standard substance for the KMnO₄-Index, were 1.77 mg/L in sample N159A and 3.43 mg/L in sample N159B. Assuming complete oxidation to carbon dioxide, nitrate and water (considering nitrite), the theoretical values were 2.48 mg/L O₂ (N159A) and 4.82 mg/L O₂ (N159B). However, the laboratory mean values were taken as reference values in this report: 2.40 mg/L O₂ for N159A and 4.29 mg/L O₂ for N159B.

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 <0.01 mg/L NH₄⁺ in sample N159A, <0.009 mg/L o- PO_4^{3-} and <0.009 mg/L total-P (as PO₄³⁻) in sample N159B, 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 96.7 % (total-P (as PO₄³⁻) in sample N159A) and 106.3 % (ammonium in sample N159B).

The between laboratory CVs covered the range between 1.0 % (conductivity in sample N159A) and 12.5 % (ammonium in sample N159B).

All confidence intervals of the outlier-corrected laboratory mean values encompass the corresponding target values with their uncertainties. Thus, for all 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.

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

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 (25°C)	1.3 %	50 µS/cm
DOC	5.9 %	1 mg/L
Hydrogen carbonate	2.4 %	20 mg/L
KMnO ₄ -Index (as O ₂)	10 %	1 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, 13 December 2021

EXPLANATION

Sample M106A

Parameter Copper

Target value $\pm U$ ($k=2$) $4,79 \mu\text{g/l} \pm 0,13 \mu\text{g/l}$

IFA result $\pm U$ ($k=2$) $4,79 \mu\text{g/l} \pm 0,38 \mu\text{g/l}$

Stability test $\pm U$ ($k=2$) $4,69 \mu\text{g/l} \pm 0,38 \mu\text{g/l}$

Obtained from sample preparation, U =uncertainty

Determined at IFA prior to shipment of samples

Determined at IFA 3 weeks after sample dispatch

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	5.16	0.4128	$\mu\text{g/l}$	108%	0.90
B	4.22	0.42	$\mu\text{g/l}$	88%	-1.38
C	4.45	0.13	$\mu\text{g/l}$	93%	-0.83
D			$\mu\text{g/l}$		
E			$\mu\text{g/l}$		
F	4.10	0.08	$\mu\text{g/l}$	86%	-1.68
G			$\mu\text{g/l}$		
H			$\mu\text{g/l}$		
I	4.75	0.74	$\mu\text{g/l}$	99%	-0.10
J	<5		$\mu\text{g/l}$	*	
K	4.76		$\mu\text{g/l}$	99%	-0.07
L	<10		$\mu\text{g/l}$	*	
M	4.8	0.5	$\mu\text{g/l}$	100%	0.02
N	3.7	0.4	$\mu\text{g/l}$	77%	-2.65
O	4.47	0.447	$\mu\text{g/l}$	93%	-0.78
P	6.0		$\mu\text{g/l}$	125%	2.94
Q	4.17	0.2	$\mu\text{g/l}$	87%	-1.51
R	4.6	0.8	$\mu\text{g/l}$	96%	-0.46
S	4.44	0.67	$\mu\text{g/l}$	93%	-0.85
T			$\mu\text{g/l}$		
U	4.675	0.935	$\mu\text{g/l}$	98%	-0.28
V	5.0	0.50	$\mu\text{g/l}$	104%	0.51
W	3.54	0.3	$\mu\text{g/l}$	74%	-3.03
X	7.108	*	$\mu\text{g/l}$	148%	5.63
Y	<10		$\mu\text{g/l}$	*	
Z			$\mu\text{g/l}$		
AA	<3.0		$\mu\text{g/l}$	FN	
AB	3.775	0.107	$\mu\text{g/l}$	79%	-2.46
AC	<10.0		$\mu\text{g/l}$	*	

An asterisk 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 $\pm CI(99\%)$	$4,65 \pm 0,57$	$4,51 \pm 0,42$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	$97,1 \pm 12,0$	$94,1 \pm 8,8$	%
SD between labs	0.84	0.59	$\mu\text{g/l}$
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

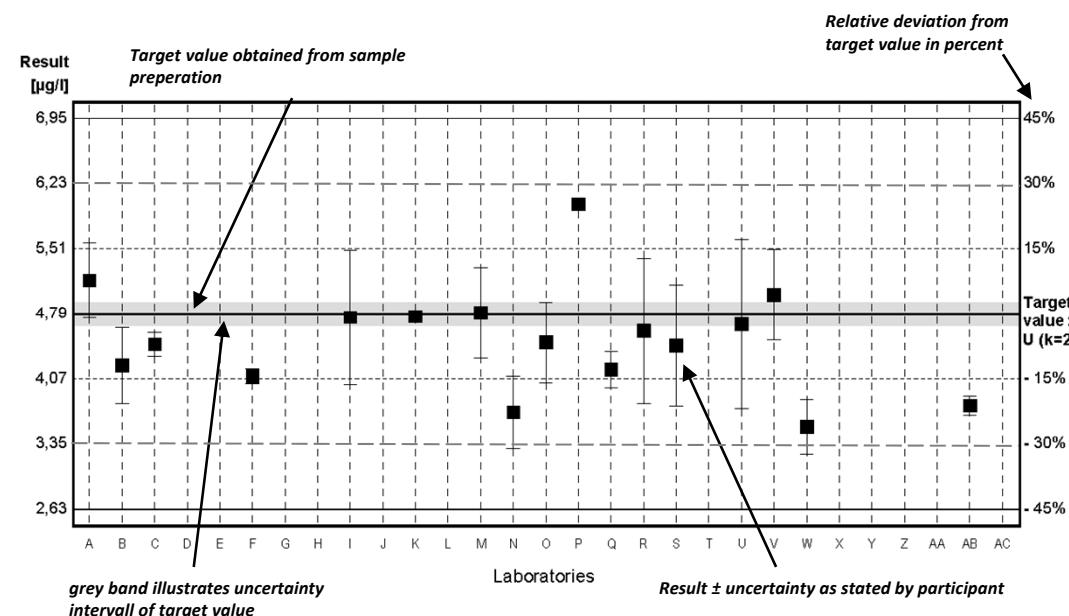


Diagram 1: Measurement results and their uncertainties

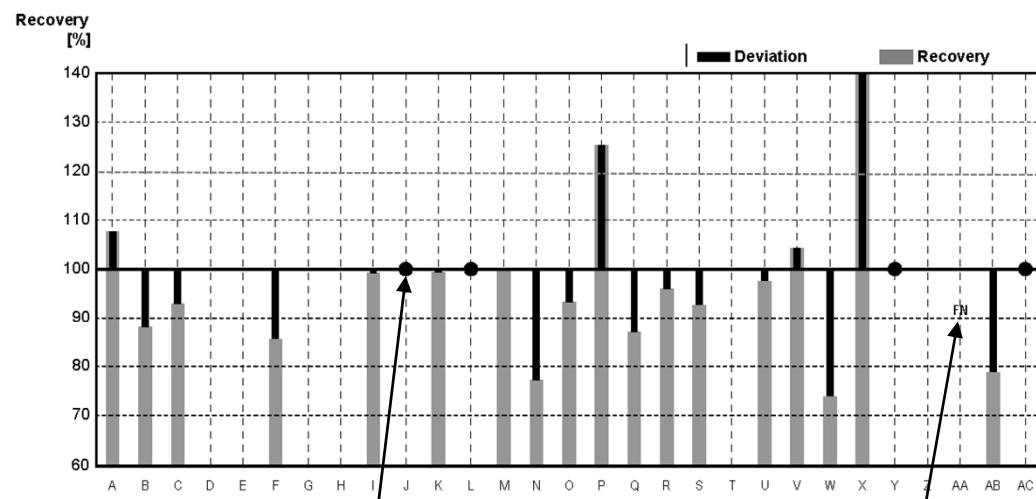


Diagram 2: Recoveries and deviations from target values

Illustration of Results Tables and Parameter Oriented Part

Round N159
Major Ions

Sample Dispatch: 8 November 2021



Results Sample N159A

	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		610	2.33	3.52	212	72.7	12.5	33.5	4.51	31.8
IFA result	6.28	613	2.36	3.46	208	74.7	12.0	33.5	4.53	30.8
Stability test	6.45	609	2.15	3.49	210	66.8	11.7	32.6	4.44	31.2
A	6.47	618	2.33	3.50		73.27	12.31	34.30	4.56	32.38
B	6.46	615	2.24	3.28	200	69.8	12.0	32.5	7.4	29.2
C	6.45	611	2.34	3.45	207	73.1	12.4	33.8	4.46	32.0
D										
E	6.44	606.8	2.28	3.52	208.2	70.80	12.60	33.33	4.60	31.45
F	6.37	599	2.33	3.46	211.1	34.3	12.5	35.9	4.70	22.6
G	6.8	608	2.41	3.47	208.7	74.5	13.6	34.1	4.75	32.6
H	7.2	606	2.31	3.40	205	71.3	13.0	33.5	4.63	32.5
I										31.5
J	6.24	641	2.28	3.43	209.3	76.5	12.18	31.97	4.27	31.62
K	6.40	612	2.32	3.45	208	72.9	12.1	34.1	4.56	31.5
L	6.6	620	2.31	3.40	209	72	12.4	33.5	4.38	33.1
M	6.6	558	2.34	3.59		72.1	13.2	31.7	4.58	30.4
N	6.2	610	2.32	3.42	205.3	72.8	12.3	32.1	4.46	32.2
O	6.30	595	2.404	3.50		75.39	12.71	36.05	5.192	32.61
P	6.56	607	2.27	3.49	210	70.8	12.4	33.2	4.55	30.7
Q	6.22	620	12.7	3.40	207					
R	6.18	614	2.40	3.50	NA	75.7	12.0	31.4	4.31	32.4
S	6.42	604	2.33	3.50	214	73.3	12.1	33.1	4.24	32.0
T	6.48	615	12.7	3.49	213	70.5	12.1	32.7	4.26	32.2
U	6.3	612	2.34	3.44	209.9	73.32	12.53	33.55	4.56	31.722
V	6.48	611	11.8	3.50	210	65.3	11.9	32.0	3.96	33.9
W	6.29	614	2.40	3.52	211.73	74.23	12.56	34.18	4.95	29.98
X	6.64	615	2.20	3.51	211.09	68.45	11.91	30.29	4.30	30.65
Y	6.3	615	2.30	3.47	211.7	71.2	12.7	33.0	4.70	32.1
Z	7.58	635								32.06
AA	6.62	610	2.43	3.48	212	77.60	12.14	34.85	4.52	31.03
AB	6.25	603	2.34	3.37	205	72.8	12.6	29.8	4.38	32.5
AC	6.31	609	2.36	3.44	210	73.5	12.6	35.2	5.57	31.5
AD				3.50						
AE	6.90	450	2.40	2.25	137	74.9	12.9	35.0	4.70	30.1
AF	6.22	611		3.44	207					31.9
AG										
AH	6.30	612	2.33	3.47	209	72.3	12.7	32.2	4.20	31.4
AI	6.14	566	2.27	3.42	209	71	12.2	33.4	4.49	33.3
AJ		613				74.5	13.4	35.5	4.96	
AK	6.88	606	2.34	3.50	213	71.2	12.3	32.8	4.41	31.3
AL	6.25	595	2.37	3.47	209	74.3	12.6	32.8	4.81	32.4
AM	6.3	607	2.416	3.517	212	75.9	12.7	33.8	4.93	31.9
AN	6.3	612	2.32	3.46	208	72.4	12.5	33.9	4.49	32.4
AO	6.1	610	2.29	3.42		71	12.5	33.2	4.61	
AP						74.2	12.4	33.1	4.33	31.3
AQ	6.27	598	2.39	3.46	211.2	79.3	9.80			31.1
AR		587	2.32	3.51	214	72.2	12.6	32.4	4.31	32.3
AS	6.21	609	2.31	3.53	212	71.88	12.28	32.02	3.96	31.76
AT				3.49						
AU										
AV	6.53	617.0	2.30	3.46	211.0	74.40	12.71	32.95	4.45	33.85

Measurement Uncertainties Sample N159A

	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	0.04	2	0.9	0.1	0.5	0.05	0.5
IFA result	0.20	9	0.09	0.14	8	3.0	0.6	1.3	0.27	1.5
Stability test	0.20	9	0.09	0.14	8	2.7	0.6	1.3	0.27	1.6
A	0.06	16	0.35	0.32		9.16	1.83	4.56	0.41	0.84
B	0.2	8.0		0.11		5	1	1	0.1	1.1
C	0.30	18	0.19	0.17	10	3.7	0.8	1.4	0.36	1.9
D										
E	0.12	30.3	0.22	0.176	10.4	7.1	1.3	3.3	0.46	1.57
F	0.22	9.0	0.4	0.18	2.4	1.9	1.1	0.2	0.03	0.072
G	0.68	36.5	0.180	0.330	19.82	4.47	1.63	2.22	0.475	3.43
H	0.36	30	0.46	0.17	10	14	2.6	6.7	0.93	4.9
I										3.59
J	0.09	11.9	0.07	0.06	3.77	4.23	0.39	1.14	0.27	2.65
K	0.0640	0.0990	0.0507	0.118	4.15	0.701	1.16	0.971	0.706	0.509
L	0.2	12	0.15	0.2	17	6	1.0	2.0	0.48	2.6
M										
N	0.1	24	0.12	0.24	14.7	3.5	0.8	1.6	0.21	2.0
O	0.02	30	0.05	0.02		0.6	0.6	0.3	0.06	0.5
P	0.26	24	0.41	0.14	8.4	12.7	2.23	5.98	0.82	2.76
Q	0.02	9	0.1	0.02	1.22					
R	0.3	18	0.1	0.2		7.6	1.2	1.6	0.4	1.6
S	0.19	60	0.23	0.35	21	7.3	1.2	3.3	0.42	3.2
T	0.05	30	1	0.3	20	5	1	3	0.5	3
U	0.38	24.5		0.516	31.48	7.332	1.253	3.355	0.456	1.2689
V	0.020	1.0	0.1	0.010	7.6	1.1	0.15	0.25	0.015	0.91
W										
X	0.1	4.51		0.35		6.8	1.2	3.0	0.4	3.0
Y	0.1	5	0.23	0.35	22	14.3	2.6	5.0	0.94	3.2
Z	0.76	31								1.420
AA	0.02	173	0.8	0.619	37	25.39	2.69	10.84	1.01	8.84
AB	0.19	12	0.23	0.51	31	10.6	0.84	4.3	0.46	1.9
AC	0.03	18	0.19	0.17	10	3.4	1.0	2.5	0.40	1.0
AD				0.14						
AE	0.08	7	0.20	0.06	4	4.3	0.8	4	0.18	1.4
AF	0.04	4.33		0.10	2.99					2.19
AG										
AH	0.05	30.6	0.116	0.174	10.5	3.61	0.637	1.61	0.210	0.628
AI	0.06	12	0.19	0.15	9.4	3.7	0.77	2.5	0.16	1.6
AJ		130				16.0	2.7	7.5	1.0	
AK	0.05	2	0.1	0.1	6	1.0	0.2	0.2	0.1	0.4
AL	0.1	0.3		0.02	1.2	3.1	0.11	0.3	0.05	0.7
AM	0.02	16.4		0.236		5.24	1.66	3.21	0.50	3.32
AN	0.3	25	0.1	0.2	9	6	1.5	6	0.6	3
AO	0.04	10	0.2	0.3		5.7	1	2.7	0.5	
AP						0.4	0.1	0.4	0.04	0.1
AQ										
AR										
AS	0.10	6.5	0.15	0.12		1.14	0.54	3.45	0.23	0.18
AT				0.16						
AU										
AV	0.2	50.0	0.2	0.3	20.0	7.0	1.0	3.0	0.4	3.5

Results Sample N159A

	NO₂⁻	NH₄⁺	Cl⁻	SO₄²⁻	o-PO₄³⁻	Boron	DOC	total-P (as PO₄³⁻)	KMnO₄- Index
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.0343	<0.01	38.8	52.0	0.0487	0.066	6.16	0.089	2.40
IFA result	0.0331	<0.01	37.2	51.2	0.0494	0.061	6.18	0.087	2.49
Stability test	0.0326	<0.01	37.2	51.3	0.0488	0.062	6.11	0.094	2.51
A	0.0368	0.0062	39.91	53.69	0.0467	0.064	6.34	0.089	2.65
B	0.0320	<0.015	36.8	49.5	0.0450	0.059	6.5	0.080	
C	0.0341	<0.008	40.5	51.8	0.0481	0.062	6.07	0.092	
D									
E	0.0420	<0.01	36.28	49.74	0.0490	0.063	5.86	0.091	3.34
F	0.0400	<0.003	41.3	45.9	0.0150			0.070	2.44
G	0.0342	<0.04	38.8	53.7	<0.06	0.062	6.17	0.074	
H	0.0248	'0.0125	38.5	51.5	<0.1	0.064	5.98	0.090	
I	0.0340		38.0	52.0	0.051	0.076		0.113	
J	0.0340	<0.04	36.76	50.60	0.0750	0.0591	5.98	0.052	2.56
K	0.0346	<0.010	38.9	52.0	0.0479	0.0673	6.00	0.0878	2.50
L	0.0340	<0.02	39.1	53	0.052	0.063	6.1	0.087	2.60
M		<0.02	36.3	50.9	<0.15		9.36	<0.1	2.57
N	0.0323	<0.010	37.9	52.5	0.051	0.0656	6.06	0.086	
O	0.0337	<0.023	39.92	52.80			6.12		
P	0.0352	0.0132	37.5	50.5	0.0476	0.063	6.17	0.102	2.52
Q							6.76		
R	0.0375	<0.01	39.0	54.5	0.0454	0.0655	NA	NA	NA
S	0.0330	<0.01	39.4	52.2	0.0340	0.059	6.49	0.063	2.61
T	0.0354	0.0230	37.2	52.9	0.050	0.0636	6.82	0.0433	2.25
U	0.03600	<0.0005	38.95	53.19	0.04000	0.06600	6.2	0.08585	2.23
V	0.0374	<0.010	40.1	54.1	0.0530	0.0616	5.73	0.0895	2.28
W	0.0330	0.0054	36.59	48.70	0.0260	0.0554	7.94	0.0797	2.96
X	0.0350	<0.009	37.71	51.43	0.0470	0.064	6.15	0.086	
Y	0.0344	<0.010	37.6	52.0	0.0474	0.0613	6.16	0.0863	2.35
Z	0.0376	0.0133	38.8	53.6	0.0494		6.67	0.078	
AA	0.0356	<0.019	38.40	52.53	0.0449	0.0647	5.58		
AB	0.0322	0.00170	38.7	51.3	0.0460	64.3	6.26		
AC	0.0345	<0.01	38.6	54.8	0.0470	0.0679	6.31	0.0846	2.24
AD					0.0450				
AE	0.0340	<0.01	37.9	49.0			6.15		
AF	0.0351	<0.005	39.0		0.0463			0.0843	
AG									
AH	0.0329	<0.026	38.5	52.0	0.0135	0.0630	6.77	<0.05	2.19
AI	0.0240	<0.01	37.9	51	<0.01		6.2	<0.01	2.41
AJ						56.5			
AK	0.035	<0.006	37.2	50.8	0.054		6.41	0.088	
AL	0.0374	<0.01	39.7	52.9	0.0466	0.061	6.148	0.097	2.30
AM	0.0352	<0.05	38.1	51.9	0.054	0.068	6.38	0.088	
AN	0.0350	<0.013	38.5	52.1	0.0440		6.45	0.087	
AO									
AP			38.1	50.7					
AQ	<0.05	<0.05	39.6	59.2	<0.15				
AR	<0.03	<0.2	38.7	51.0	<0.15	0.094	6.58	<0.15	2.24
AS	0.0310	<0.05	39.95	52.80		0.0475			
AT									
AU						0.068			
AV	0.038	<0.04	37.87	53.19	0.051	0.071	6.10	0.083	1.76

Measurement Uncertainties Sample N159A

	NO₂ ±	NH₄⁺ ±	Cl⁻ ±	SO₄²⁻ ±	o-PO₄³⁻ ±	Boron ±	DOC ±	total-P (as PO₄³⁻) ±	KMnO₄- Index ±
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.0008		0.7	0.5	0.0024	0.001	0.05	0.002	0.12
IFA result	0.0017		1.5	1.0	0.0010	0.005	0.06	0.017	0.37
Stability test	0.0016		1.5	1.0	0.0010	0.005	0.06	0.018	0.38
A	0.0022	0.0012	1.76	2.09	0.0011	0.007	0.63	0.003	0.32
B	0.013	0.055	5.2	2		0.08	0.1	0.02	
C	0.003		2.0	3.1	0.003	0.007	0.61	0.007	
D									
E	0.004		1.81	2.49	0.005	0.0063	1.17	0.009	0.434
F	0.001	0.002	1.34	0.9	0.004			0.006	0.098
G	0.00342		3.49	4.83		0.0087	0.37	0.0074	
H	0.0037	0.007	5.8	7.7		0.013	1.2	0.018	
I	0.004		2.2	7.12	0.004	0.01		0.008	
J	0.0009	0.0017	1.79	3.25	0.0046	0.0127	0.27	0.003	0.17
K	0.00098		0.465	0.965	0.00133	0.00460	0.0733	0.00313	
L	0.004		3.1	3	0.005	0.011	0.7	0.008	0.2
M									
N	0.0042		3.1	4.9	0.007	0.0068	1.12	0.15	
O	0.015	0.080	0.25	3.0			0.03		
P	0.003	0.001	3.38	4.55	0.004	0.011	0.56	0.009	0.23
Q							0.27		
R	0.0038		2.0	5.5	0.002	0.013			
S	0.0033		3.9	5.2	0.0034	0.0059	0.65	0.013	0.52
T	0.01	0.01	3	5	0.01	0.01	0.7	0.015	0.2
U	0.00290		1.948	2.66000	0.0048	0.0079	0.50	0.01287	0.357
V	0.001		0.31	0.92	0.002	0.003	0.15	0.004	0.11
W									
X	0.0035		3.7	5.1	0.005	0.006	0.6	0.009	
Y	0.0082		3.8	5.2	0.0097	0.016	0.62	0.0177	0.5
Z	0.0110	0.0030	5.07	3.27	0.0080		1.20	0.009	
AA	0.009		10.94	14.97	0.012	0.013	1.7		
AB	0.0015	0.00012	2.1	4.2	0.0026	7.2	1.12		
AC	0.0034		2.6	1.8	0.0032	0.0084	1.01	0.0058	0.34
AD					0.0055				
AE	0.005		2.6	3.2			1.28		
AF	0.0035	0	0.40		0.0054			0.0111	
AG									
AH	0.00329		1.15	1.56	0.00135	0.00630	0.677		0.0657
AI	0.0035		3.0	3.1			1.0		0.15
AJ						12.0			
AK	0.002	0.003	0.2	2	0.002		0.2	0.005	
AL	0.002		0.5	3.1	0.003	0.002	0.03	0.002	0.1
AM	0.0087		5.33	4.93	0.015	0.007	1.18	0.015	
AN	0.003		3	4	0.004		1	0.009	
AO									
AP			0.5	0.2					
AQ									
AR									
AS	0.0048		0.79	0.99		0.007			
AT									
AU						0.007			
AV	0.004		4.0	5.0	0.005	0.007	0.6	0.008	0.2

Results Sample N159B

	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		451	1.16	2.29	137	31.3	9.18	42.4	10.4	47.4
IFA result	6.90	455	1.19	2.26	135	32.9	8.89	43.0	10.4	45.7
Stability test	7.11	453	1.07	2.28	136	28.6	8.71	41.2	10.4	48.1
A	7.08	454	0.94	2.30		31.26	8.97	43.66	10.06	48.92
B	7.03	457	1.13	2.18	133	30.6	8.8	40.9	10.4	44.7
C	7.09	454	1.16	2.24	134	31.5	9.09	42.7	10.6	47.7
D										
E	7.03	448	1.15	2.32	136	30.71	9.34	42.31	10.61	45.81
F	6.96	438	1.18	2.19	133.8	29.8	9.7	42.9	10.7	31.7
G	7.4	449	1.17	2.27	135.3	32.8	10.2	43.2	10.8	49.4
H	7.4	451	1.15	2.20	133	30.5	9.43	41.8	11.0	48.0
I										46.8
J	6.83	472	1.16	2.20	134.2	32.8	8.93	41.22	10.16	47.91
K	7.00	453	1.12	2.25	134	30.5	8.85	42.3	10.4	47.6
L	6.7	458	1.16	2.30	137	31.5	9.1	42.3	10.4	49.1
M	7.4	450	1.16	2.31		30.5	9.45	39.9	10.2	46.1
N	6.9	453	1.16	2.25	134.1	31.6	9.1	40.6	10.1	47.5
O	6.95	440	1.193	2.29		32.34	9.38	46.16	12.223	47.34
P	7.13	449	1.14	2.28	136	30.6	9.15	42.2	10.3	46.1
Q	6.83	460	6.2	2.26	138					
R	6.76	455	1.20	2.30	NA	<40	8.7	39.8	9.7	47.2
S	7.05	447	1.18	2.24	137	32.1	9.15	41.4	10.1	48.5
T	7.06	459	6.31	2.29	140	30.4	8.90	42.2	9.94	47.4
U	6.8	454	1.17	2.25	137.3	31.75	9.24	41.97	10.47	47.460
V	6.92	475	5.90	2.29	137	28.2	8.73	39.8	9.03	48.8
W	6.89	454	1.27	2.31	137.89	34.25	9.58	43.21	10.18	43.95
X	8.10	457	1.12	2.30	137.27	30.33	8.74	41.46	9.59	45.69
Y	6.8	456	1.16	2.28	139.1	31.0	9.39	41.9	10.6	48.2
Z	7.86	476								47.58
AA	6.96	452	1.21	2.27	139	33.68	9.02	44.11	10.33	46.64
AB	6.93	442	1.17	2.19	134	31.7	9.27	37.4	10.2	48.7
AC	6.88	451	1.20	2.29	140	32.5	9.41	45.5	12.4	47.0
AD				2.29						
AE	6.42	609	1.20	3.39	206	32.3	9.46	44.2	10.8	45.9
AF	6.81	454		2.26	135					48.2
AG										
AH	6.87	454	1.18	2.27	136	31.8	9.41	42.0	9.76	47.2
AI	6.75	408	1.14	2.24	137	30.9	9.1	42.4	10.4	49.2
AJ		450				31.1	9.4	43.1	10.9	
AK	7.41	450	1.19	2.30	140	30.8	8.95	41.4	10.3	45.8
AL	6.83	443	1.26	2.26	135	34.2	9.89	43.9	11.6	49.4
AM	6.8	450	1.158	2.345	140	31.1	9.29	42.7	10.4	47.6
AN	6.8	453	1.16	2.25	134	31.1	9.28	43.1	10.4	48.2
AO	6.7	451	1.13	2.22		30.4	9.1	41.8	10.5	
AP						32.0	9.14	41.7	10.3	46.5
AQ	6.89	445	1.09	2.30	140.3	36.2	4.56			46.3
AR		441	1.17	2.29	140	31.5	9.34	41.1	10.1	46.8
AS	6.76	449	1.15	2.44	146	29.98	8.87	40.14	9.16	47.91
AT				2.29						
AU										
AV	7.05	461.0	1.22	2.25	137.0	31.53	9.38	42.37	10.42	50.2

Measurement Uncertainties Sample N159B

	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	0.01	0.01	1	0.4	0.12	0.2	0.1	1.1	
IFA result	0.20	6	0.05	0.09	5	1.6	0.44	1.7	0.5	2.3
Stability test	0.20	6	0.04	0.09	5	1.4	0.44	1.6	0.5	2.4
A	0.06	12	0.14	0.21		3.91	1.34	5.81	0.90	1.27
B	0.2	8.0		0.11		5	1	1	0.1	1.1
C	0.30	14	0.10	0.11	7	1.6	0.55	1.7	0.8	2.9
D										
E	0.12	22.4	0.12	0.116	6.81	3.1	0.93	4.2	1.1	2.29
F	0.22	9.0	0.4	0.18	2.4	1.9	1.1	0.2	0.03	0.072
G	0.74	26.9	0.087	0.215	12.85	1.97	1.22	2.81	1.08	5.19
H	0.37	23	0.23	0.11	6.7	6.1	1.9	8.4	2.2	7.2
I										5.33
J	0.10	8.78	0.04	0.04	2.42	1.74	0.29	1.47	0.63	4.02
K	0.0700	0.0849	0.0167	0.0940	2.68	0.665	0.0531	1.03	0.649	0.571
L	0.2	9	0.08	0.1	11	2.5	0.7	2.5	1.1	3.9
M										
N	0.1	18	0.06	0.17	10.2	1.6	0.6	2.0	0.4	2.9
O	0.02	30	0.05	0.02		0.6	0.6	0.3	0.06	0.5
P	0.29	18	0.21	0.09	5.44	5.51	1.65	7.60	1.85	4.15
Q	0.02	7	0.05	0.01	0.61					
R	0.3	14	0.06	0.1			0.9	2.0	1.0	2.4
S	0.21	45	0.12	0.23	14	3.2	0.92	4.1	1.0	4.9
T	0.05	30	0.5	0.2	10	3	1	4	1	5
U	0.41	18.2		0.338	20.59	3.175	0.924	4.197	1.047	1.8984
V	0.026	1.0	0.036	0.065	5.0	0.21	0.17	0.35	0.053	0.80
W										
X	0.1	4.51		0.23		3.0	0.9	4.1	0.9	4.5
Y	0.1	5	0.12	0.23	14	6.2	1.9	6.3	2.2	4.8
Z	0.79	24								2.108
AA	0.02	128	0.36	0.403	25	11.02	1.99	13.72	2.32	13.29
AB	0.21	9	0.12	0.33	20	4.6	0.61	5.4	1.1	2.8
AC	0.03	14	0.10	0.11	7	1.5	0.77	3.2	0.9	1.6
AD				0.09						
AE	0.07	10	0.10	0.09	6	1.9	0.6	5	0.4	2.1
AF	0.04	3.22		0.06	1.95					3.30
AG										
AH	0.05	22.7	0.0590	0.114	6.80	1.59	0.470	2.10	0.488	0.944
AI	0.07	8.8	0.09	0.10	6.1	1.6	0.57	3.2	0.36	2.4
AJ		90				6.5	2.0	8.5	2.2	
AK	0.05	2	0.1	0.1	6	1.0	0.2	0.2	0.1	0.4
AL	0.1	0.3		0.02		0.3	0.11	0.4	0.34	0.8
AM		12.2		0.157		2.15	1.22	4.06	1.06	4.95
AN	0.3	19	0.1	0.1	6	3	1.2	7	1.4	4
AO	0.04	10	0.1	0.2		2.4	0.7	3.3	1.1	
AP						0.1	0.04	0.2	0.1	0.6
AQ										
AR										
AS	0.10	6.4	0.10	0.23		1.41	0.43	2.17	0.24	0.51
AT				0.10						
AU										
AV	0.2	50.0	0.1	0.2	10.0	3.0	1.0	4.0	1.0	5.0

Results Sample N159B

	NO₂⁻	NH₄⁺	Cl⁻	SO₄²⁻	o-PO₄³⁻	Boron	DOC	total-P (as PO₄³⁻)	KMnO₄- Index
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.072	0.0437	17.1	43.1	<0.009	0.096	4.18	<0.009	4.29
IFA result	0.070	0.0433	16.4	42.2	<0.009	0.090	4.18	<0.009	4.39
Stability test	0.071	0.0440	16.5	42.8	<0.009	0.092	4.11	<0.009	4.39
A	0.0768	0.0476	17.22	44.42	0.0057	0.090	4.49	0.00163	4.51
B	0.067	0.0485	16.1	41.3	<0.045	0.091	4.42	<0.01	
C	0.073	0.0478	17.9	43.2	<0.006	0.090	4.10	<0.006	
D									
E	0.085	0.0430	15.64	40.69	<0.01	0.094	3.93	<0.01	5.01
F	0.096	0.0330	19.3	38.0	<0.009			0.0150	3.98
G	0.0730	0.060	17.1	44.2	<0.06	0.094	4.22	<0.06	
H	0.0645	0.055	17.0	42.8	<0.1	0.094	4.25	<0.03	
I	0.069		17.0	43.3	<0.01	0.102		0.0225	
J	0.0720	0.0390	16.26	41.61	0.0270	0.0874	4.46	0.0270	4.72
K	0.0736	0.0496	17.2	43.3	<0.0150	0.0965	4.08	<0.0036	4.31
L	0.072	0.0460	16.9	44.4	<0.009	0.092	4.21	<0.009	4.20
M		0.04	16.0	42.8	<0.15		2.33	<0.1	4.03
N	0.072	0.052	17.1	43.1	<0.010	0.0953	4.13	<0.010	
O	0.0727	0.0534	17.61	43.36			4.42		
P	0.072	0.052	16.5	41.7	<0.01	0.092	4.21	<0.05	4.29
Q							4.59		
R	0.0773	0.0363	17.3	43.4	<0.006	0.0949	NA	NA	NA
S	0.069	0.0440	17.2	43.4	<0.008	0.090	4.45	<0.015	4.53
T	0.095	0.065	15.8	43.8	<0.02	0.0915	4.73	<0.04	4.14
U	0.076	0.04200	17.16	43.98	0.00600	0.093	4.300	<0.0061	4.05
V	0.0758	0.0468	17.3	44.7	<0.015	0.0912	3.97	<0.015	4.15
W	0.0707	0.0416	15.64	39.20	0.0164	0.0829	5.76	0.050	4.46
X	0.0740	0.0460	16.42	41.78	<0.0015	0.100	4.20	<0.0036	
Y	0.0726	0.0446	16.5	42.6	<0.005	0.0879	4.10	<0.005	4.19
Z	0.0775	0.0573	17.1	44.3	<0.015		4.59	<0.015	
AA	0.0752	0.0418	15.75	43.10	<0.031	0.0931	3.89		
AB	0.0704	0.0454	16.8	42.3	0.0090	92.7	4.25		
AC	0.0713	0.0473	17.0	45.2	<0.015	0.0989	3.99	<0.015	4.26
AD					<0.015				
AE	0.070	0.0430	17.2	42.2			4.17		
AF	0.0715	0.0466	17.4		<0.006			<0.006	
AG									
AH	0.0723	0.0450	16.9	42.9	<0.01	0.0927	4.98	<0.05	4.31
AI	0.057	0.041	16.6	41.8	<0.01		4.31	0.0120	4.05
AJ						83.7			
AK	0.074	0.043	16.3	42.2	0.007		4.38	<0.009	
AL	0.0807	0.050	17.5	43.4	<0.01	0.089	4.179	<0.03	4.54
AM	0.0750	0.055	15.6	43.1	<0.010	0.101	4.29	<0.030	
AN	0.073	0.0440	17.1	42.9	<0.01		4.30	<0.013	
AO									
AP			16.6	41.7					
AQ	0.060	<0.05	17.4	44.4	<0.15				
AR	0.084	<0.2	16.8	43.0	<0.15	0.103	4.11	<0.15	4.48
AS	0.074	<0.05	17.72	43.79		0.0792			
AT									
AU						0.098			
AV	0.075	0.045	16.71	44.36	<0.04	0.104	4.05	<0.04	3.53

Measurement Uncertainties Sample N159B

	NO₂⁻ ±	NH₄⁺ ±	Cl⁻ ±	SO₄²⁻ ±	o-PO₄³⁻ ±	Boron ±	DOC ±	total-P (as PO₄³⁻) ±	KMnO₄- Index
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Target value	0.002	0.0046	0.3	0.4		0.001	0.05		0.15
IFA result	0.004	0.0022	0.7	0.8		0.007	0.09		0.66
Stability test	0.004	0.0022	0.7	0.9		0.007	0.09		0.66
A	0.0046	0.0094	0.76	1.73	0.0011	0.010	0.45	0.00033	0.54
B	0.013	0.055	5.2	2		0.08	0.10	0.02	
C	0.006	0.005	0.9	2.6		0.009	0.41		
D									
E	0.009	0.0043	0.78	2.04		0.0094	0.78		0.651
F	0.001	0.002	1.34	0.9	0.004			0.006	0.098
G	0.00730	0.0060	1.54	3.98		0.0131	0.253		
H	0.0097	0.011	2.6	6.4		0.019	0.85		
I	0.009		1.0	5.94		0.01		0.002	
J	0.002	0.0016	0.79	2.68	0.0017	0.0187	0.20	0.0017	0.30
K	0.00094	0.00151	0.481	0.523		0.00438	0.0684		
L	0.009	0.012	1.4	2.7		0.016	0.51		0.3
M									
N	0.007	0.010	1.5	4.0		0.0095	0.81		
O	0.015	0.080	0.25	3.0			0.03		
P	0.006	0.005	1.49	3.75		0.017	0.38		0.39
Q							0.18		
R	0.008	0.004	0.9	4.3		0.02			
S	0.007	0.0044	1.7	4.3		0.009	0.45		0.91
T	0.01	0.01	1.5	4		0.02	0.5		0.5
U	0.00600	0.00420	0.858	2.199	0.00070	0.0112	0.3400		0.648
V	0.003	0.001	0.25	0.75		0.002	0.16		0.13
W									
X	0.0074	0.005	1.6	4.1		0.010	0.4		
Y	0.0174	0.0079	1.7	4.3		0.022	0.411		0.8
Z	0.0210	0.0130	2.24	2.70			0.826		
AA	0.019	0.011	4.49	12.28		0.019	1.18		
AB	0.0032	0.0034	0.93	3.5	0.0005	10.4	0.76		
AC	0.0072	0.0033	1.1	1.5		0.0123	0.64		0.64
AD									
AE	0.010	0.010	1.2	2.88			0.87		
AF	0.0071	0.0070	0.18		0			0	
AG									
AH	0.00723	0.00450	0.507	1.29		0.00927	0.498		0.129
AI	0.0084	0.0030	1.3	2.5			0.72	0.0016	0.25
AJ						17.0			
AK	0.002	0.003	0.2	2	0.002		0.2	0.005	
AL	0.003	0.003	0.5	1.4		0.002	0.02		0.7
AM	0.0185	0.023	2.18	4.09		0.011	0.79		
AN	0.006	0.007	1.1	4			0.7		
AO									
AP			0.4	0.1					
AQ									
AR									
AS	0.012		0.29	0.35		0.003			
AT									
AU						0.01			
AV	0.007	0.005	1.5	4.5		0.01	0.4		0.35

Sample N159A

Parameter Conductivity

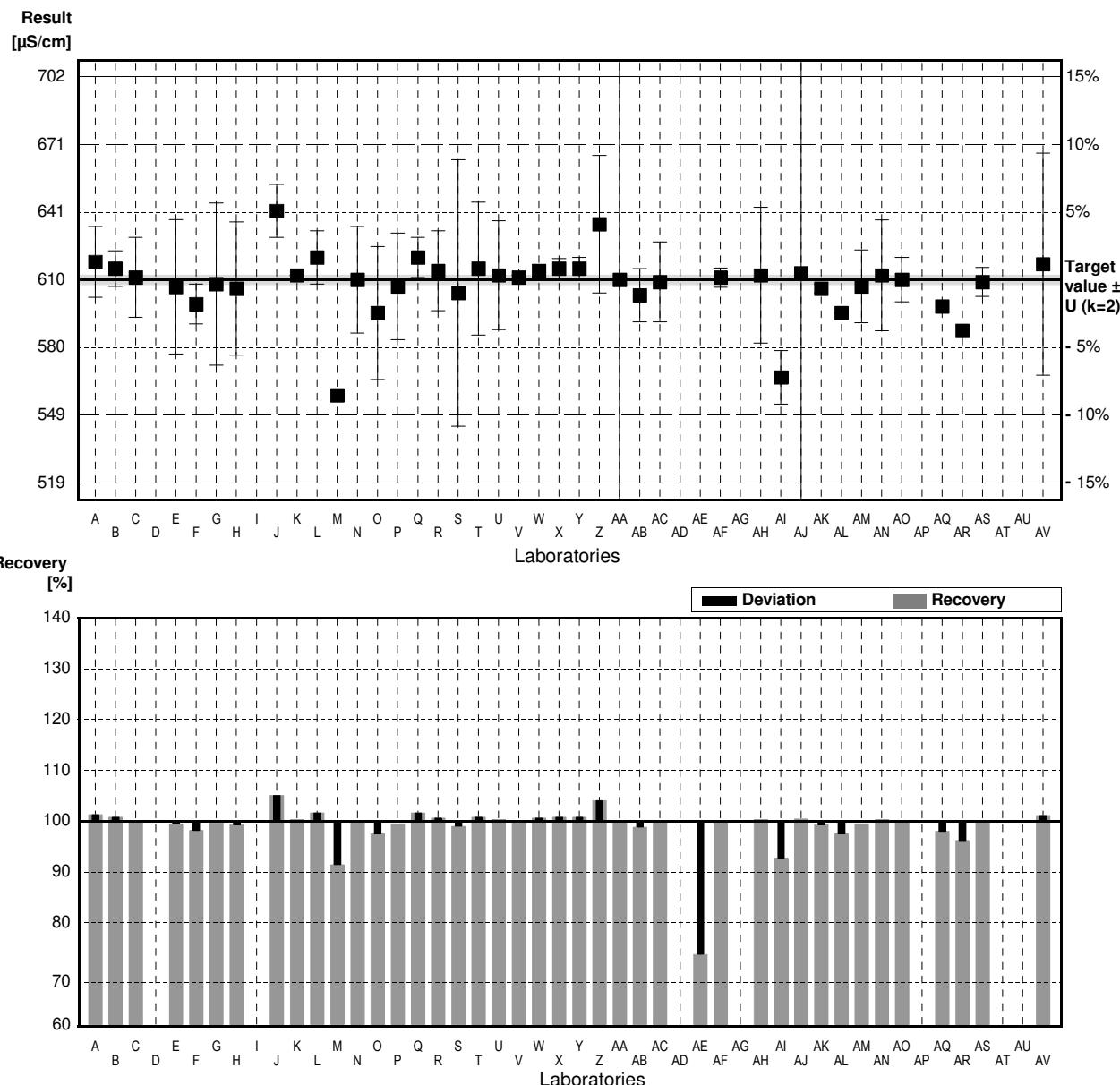
Target value $\pm U$ ($k=2$) 610 $\mu\text{S}/\text{cm}$ \pm 2 $\mu\text{S}/\text{cm}$

IFA result $\pm U$ ($k=2$) 613 $\mu\text{S}/\text{cm}$ \pm 9 $\mu\text{S}/\text{cm}$

Stability test $\pm U$ ($k=2$) 609 $\mu\text{S}/\text{cm}$ \pm 9 $\mu\text{S}/\text{cm}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	618	16	$\mu\text{S}/\text{cm}$	101%	1.01
B	615	8.0	$\mu\text{S}/\text{cm}$	101%	0.63
C	611	18	$\mu\text{S}/\text{cm}$	100%	0.13
D			$\mu\text{S}/\text{cm}$		
E	606.8	30.3	$\mu\text{S}/\text{cm}$	99%	-0.40
F	599	9.0	$\mu\text{S}/\text{cm}$	98%	-1.39
G	608	36.5	$\mu\text{S}/\text{cm}$	100%	-0.25
H	606	30	$\mu\text{S}/\text{cm}$	99%	-0.50
I			$\mu\text{S}/\text{cm}$		
J	641 *	11.9	$\mu\text{S}/\text{cm}$	105%	3.91
K	612	0.0990	$\mu\text{S}/\text{cm}$	100%	0.25
L	620	12	$\mu\text{S}/\text{cm}$	102%	1.26
M	558 *		$\mu\text{S}/\text{cm}$	91%	-6.56
N	610	24	$\mu\text{S}/\text{cm}$	100%	0.00
O	595	30	$\mu\text{S}/\text{cm}$	98%	-1.89
P	607	24	$\mu\text{S}/\text{cm}$	100%	-0.38
Q	620	9	$\mu\text{S}/\text{cm}$	102%	1.26
R	614	18	$\mu\text{S}/\text{cm}$	101%	0.50
S	604	60	$\mu\text{S}/\text{cm}$	99%	-0.76
T	615	30	$\mu\text{S}/\text{cm}$	101%	0.63
U	612	24.5	$\mu\text{S}/\text{cm}$	100%	0.25
V	611	1.0	$\mu\text{S}/\text{cm}$	100%	0.13
W	614		$\mu\text{S}/\text{cm}$	101%	0.50
X	615	4.51	$\mu\text{S}/\text{cm}$	101%	0.63
Y	615	5	$\mu\text{S}/\text{cm}$	101%	0.63
Z	635 *	31	$\mu\text{S}/\text{cm}$	104%	3.15
AA	610	173	$\mu\text{S}/\text{cm}$	100%	0.00
AB	603	12	$\mu\text{S}/\text{cm}$	99%	-0.88
AC	609	18	$\mu\text{S}/\text{cm}$	100%	-0.13
AD			$\mu\text{S}/\text{cm}$		
AE	450 *	7	$\mu\text{S}/\text{cm}$	74%	-20.18
AF	611	4.33	$\mu\text{S}/\text{cm}$	100%	0.13
AG			$\mu\text{S}/\text{cm}$		
AH	612	30.6	$\mu\text{S}/\text{cm}$	100%	0.25
AI	566 *	12	$\mu\text{S}/\text{cm}$	93%	-5.55
AJ	613	130	$\mu\text{S}/\text{cm}$	100%	0.38
AK	606	2	$\mu\text{S}/\text{cm}$	99%	-0.50
AL	595	0.3	$\mu\text{S}/\text{cm}$	98%	-1.89
AM	607	16.4	$\mu\text{S}/\text{cm}$	100%	-0.38
AN	612	25	$\mu\text{S}/\text{cm}$	100%	0.25
AO	610	10	$\mu\text{S}/\text{cm}$	100%	0.00
AP			$\mu\text{S}/\text{cm}$		
AQ	598		$\mu\text{S}/\text{cm}$	98%	-1.51
AR	587 *		$\mu\text{S}/\text{cm}$	96%	-2.90
AS	609	6.5	$\mu\text{S}/\text{cm}$	100%	-0.13
AT			$\mu\text{S}/\text{cm}$		
AU			$\mu\text{S}/\text{cm}$		
AV	617.0	50.0	$\mu\text{S}/\text{cm}$	101%	0.88

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	604 \pm 12	610 \pm 3	$\mu\text{S}/\text{cm}$
Recov. \pm Cl(99%)	99,1 \pm 2,0	100,0 \pm 0,5	%
SD between labs	28	6	$\mu\text{S}/\text{cm}$
RSD between labs	4,7	1,0	%
n for calculation	41	35	



Sample N159B

Parameter Conductivity

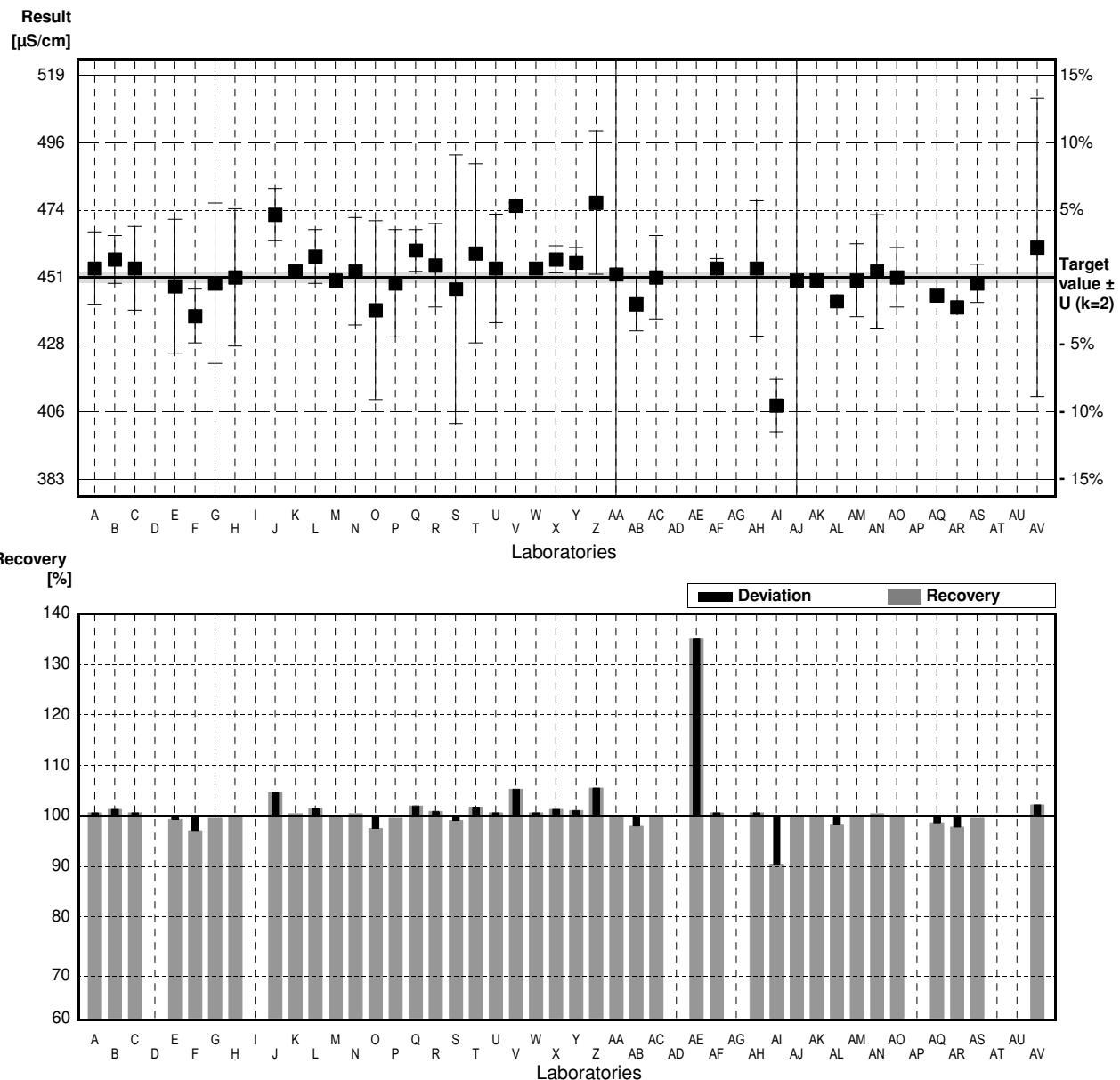
Target value $\pm U$ ($k=2$) 451 $\mu\text{S}/\text{cm}$ \pm 2 $\mu\text{S}/\text{cm}$

IFA result $\pm U$ ($k=2$) 455 $\mu\text{S}/\text{cm}$ \pm 6 $\mu\text{S}/\text{cm}$

Stability test $\pm U$ ($k=2$) 453 $\mu\text{S}/\text{cm}$ \pm 6 $\mu\text{S}/\text{cm}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	454	12	$\mu\text{S}/\text{cm}$	101%	0.51
B	457	8.0	$\mu\text{S}/\text{cm}$	101%	1.02
C	454	14	$\mu\text{S}/\text{cm}$	101%	0.51
D			$\mu\text{S}/\text{cm}$		
E	448	22.4	$\mu\text{S}/\text{cm}$	99%	-0.51
F	438	9.0	$\mu\text{S}/\text{cm}$	97%	-2.22
G	449	26.9	$\mu\text{S}/\text{cm}$	100%	-0.34
H	451	23	$\mu\text{S}/\text{cm}$	100%	0.00
I			$\mu\text{S}/\text{cm}$		
J	472 *	8.78	$\mu\text{S}/\text{cm}$	105%	3.58
K	453	0.0849	$\mu\text{S}/\text{cm}$	100%	0.34
L	458	9	$\mu\text{S}/\text{cm}$	102%	1.19
M	450		$\mu\text{S}/\text{cm}$	100%	-0.17
N	453	18	$\mu\text{S}/\text{cm}$	100%	0.34
O	440	30	$\mu\text{S}/\text{cm}$	98%	-1.88
P	449	18	$\mu\text{S}/\text{cm}$	100%	-0.34
Q	460	7	$\mu\text{S}/\text{cm}$	102%	1.54
R	455	14	$\mu\text{S}/\text{cm}$	101%	0.68
S	447	45	$\mu\text{S}/\text{cm}$	99%	-0.68
T	459	30	$\mu\text{S}/\text{cm}$	102%	1.36
U	454	18.2	$\mu\text{S}/\text{cm}$	101%	0.51
V	475 *	1.0	$\mu\text{S}/\text{cm}$	105%	4.09
W	454		$\mu\text{S}/\text{cm}$	101%	0.51
X	457	4.51	$\mu\text{S}/\text{cm}$	101%	1.02
Y	456	5	$\mu\text{S}/\text{cm}$	101%	0.85
Z	476 *	24	$\mu\text{S}/\text{cm}$	106%	4.26
AA	452	128	$\mu\text{S}/\text{cm}$	100%	0.17
AB	442	9	$\mu\text{S}/\text{cm}$	98%	-1.54
AC	451	14	$\mu\text{S}/\text{cm}$	100%	0.00
AD			$\mu\text{S}/\text{cm}$		
AE	609 *	10	$\mu\text{S}/\text{cm}$	135%	26.95
AF	454	3.22	$\mu\text{S}/\text{cm}$	101%	0.51
AG			$\mu\text{S}/\text{cm}$		
AH	454	22.7	$\mu\text{S}/\text{cm}$	101%	0.51
AI	408 *	8.8	$\mu\text{S}/\text{cm}$	90%	-7.33
AJ	450	90	$\mu\text{S}/\text{cm}$	100%	-0.17
AK	450	2	$\mu\text{S}/\text{cm}$	100%	-0.17
AL	443	0.3	$\mu\text{S}/\text{cm}$	98%	-1.36
AM	450	12.2	$\mu\text{S}/\text{cm}$	100%	-0.17
AN	453	19	$\mu\text{S}/\text{cm}$	100%	0.34
AO	451	10	$\mu\text{S}/\text{cm}$	100%	0.00
AP			$\mu\text{S}/\text{cm}$		
AQ	445		$\mu\text{S}/\text{cm}$	99%	-1.02
AR	441		$\mu\text{S}/\text{cm}$	98%	-1.71
AS	449	6.4	$\mu\text{S}/\text{cm}$	100%	-0.34
AT			$\mu\text{S}/\text{cm}$		
AU			$\mu\text{S}/\text{cm}$		
AV	461.0	50.0	$\mu\text{S}/\text{cm}$	102%	1.71

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	456 \pm 11	451 \pm 3	$\mu\text{S}/\text{cm}$
Recov. \pm Cl(99%)	101.0 \pm 2,5	100.0 \pm 0,6	%
SD between labs	27	6	$\mu\text{S}/\text{cm}$
RSD between labs	5.9	1.2	%
n for calculation	41	36	



Sample N159A

Parameter Total hardness

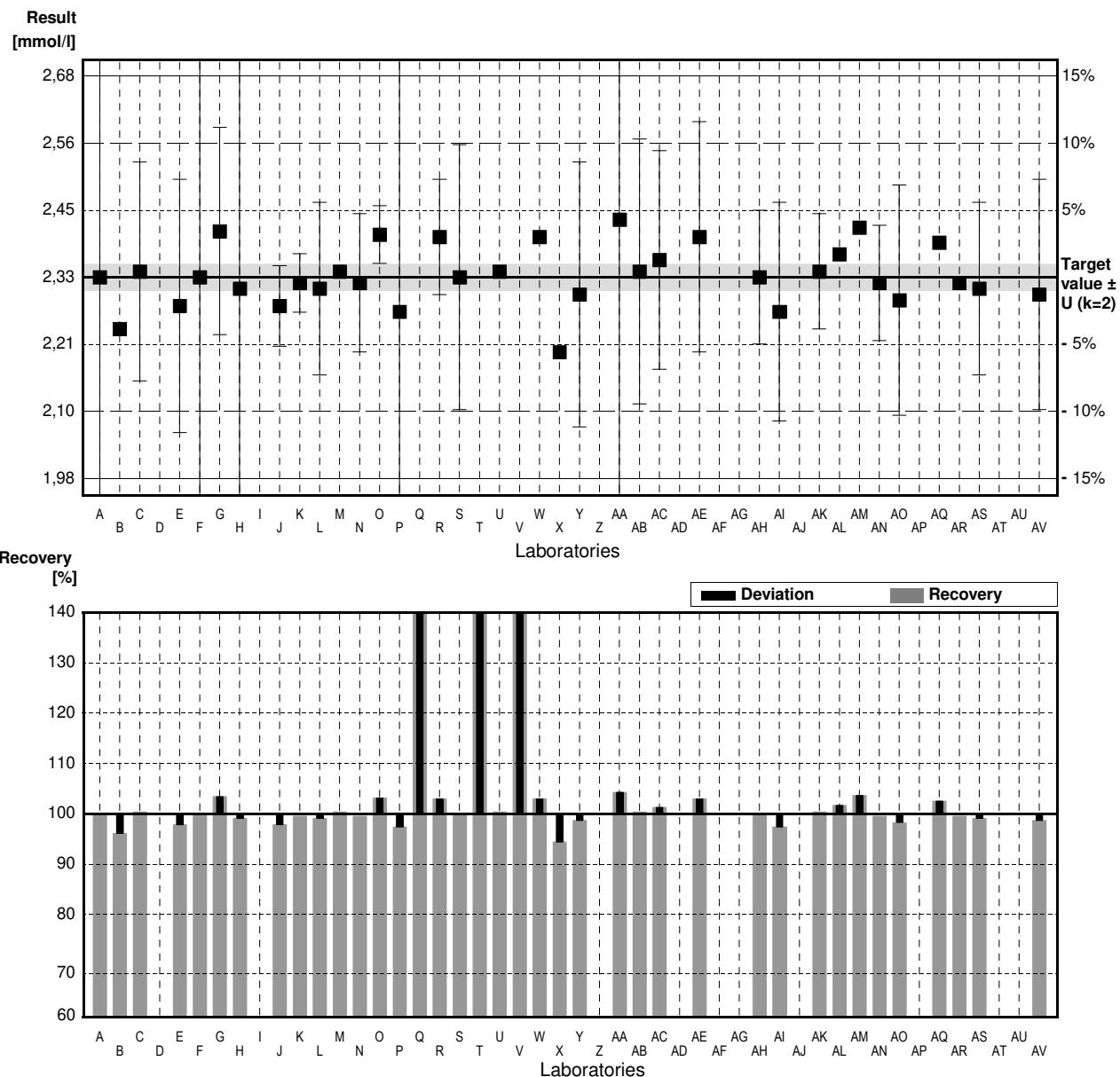
Target value $\pm U$ ($k=2$) 2,33 mmol/l \pm 0,02 mmol/l

IFA result $\pm U$ ($k=2$) 2,36 mmol/l \pm 0,09 mmol/l

Stability test $\pm U$ ($k=2$) 2,15 mmol/l \pm 0,09 mmol/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	2,33	0,35	mmol/l	100%	0,00
B	2,24		mmol/l	96%	-1,33
C	2,34	0,19	mmol/l	100%	0,15
D			mmol/l		
E	2,28	0,22	mmol/l	98%	-0,74
F	2,33	0,4	mmol/l	100%	0,00
G	2,41	0,180	mmol/l	103%	1,18
H	2,31	0,46	mmol/l	99%	-0,30
I			mmol/l		
J	2,28	0,07	mmol/l	98%	-0,74
K	2,32	0,0507	mmol/l	100%	-0,15
L	2,31	0,15	mmol/l	99%	-0,30
M	2,34		mmol/l	100%	0,15
N	2,32	0,12	mmol/l	100%	-0,15
O	2,404	0,05	mmol/l	103%	1,10
P	2,27	0,41	mmol/l	97%	-0,89
Q	12,7 *	0,1	mmol/l	545%	153,47
R	2,40	0,1	mmol/l	103%	1,04
S	2,33	0,23	mmol/l	100%	0,00
T	12,7 *	1	mmol/l	545%	153,47
U	2,34		mmol/l	100%	0,15
V	11,8 *	0,1	mmol/l	506%	140,15
W	2,40		mmol/l	103%	1,04
X	2,20		mmol/l	94%	-1,92
Y	2,30	0,23	mmol/l	99%	-0,44
Z			mmol/l		
AA	2,43	0,8	mmol/l	104%	1,48
AB	2,34	0,23	mmol/l	100%	0,15
AC	2,36	0,19	mmol/l	101%	0,44
AD			mmol/l		
AE	2,40	0,20	mmol/l	103%	1,04
AF			mmol/l		
AG			mmol/l		
AH	2,33	0,116	mmol/l	100%	0,00
AI	2,27	0,19	mmol/l	97%	-0,89
AJ			mmol/l		
AK	2,34	0,1	mmol/l	100%	0,15
AL	2,37		mmol/l	102%	0,59
AM	2,416		mmol/l	104%	1,27
AN	2,32	0,1	mmol/l	100%	-0,15
AO	2,29	0,2	mmol/l	98%	-0,59
AP			mmol/l		
AQ	2,39		mmol/l	103%	0,89
AR	2,32		mmol/l	100%	-0,15
AS	2,31	0,15	mmol/l	99%	-0,30
AT			mmol/l		
AU			mmol/l		
AV	2,30	0,2	mmol/l	99%	-0,44

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	3,13 \pm 1,22	2,33 \pm 0,02	mmol/l
Recov. \pm Cl(99%)	134,2 \pm 52,2	100,1 \pm 1,0	%
SD between labs	2,75	0,05	mmol/l
RSD between labs	88,1	2,2	%
n for calculation	38	35	



Sample N159B

Parameter Total hardness

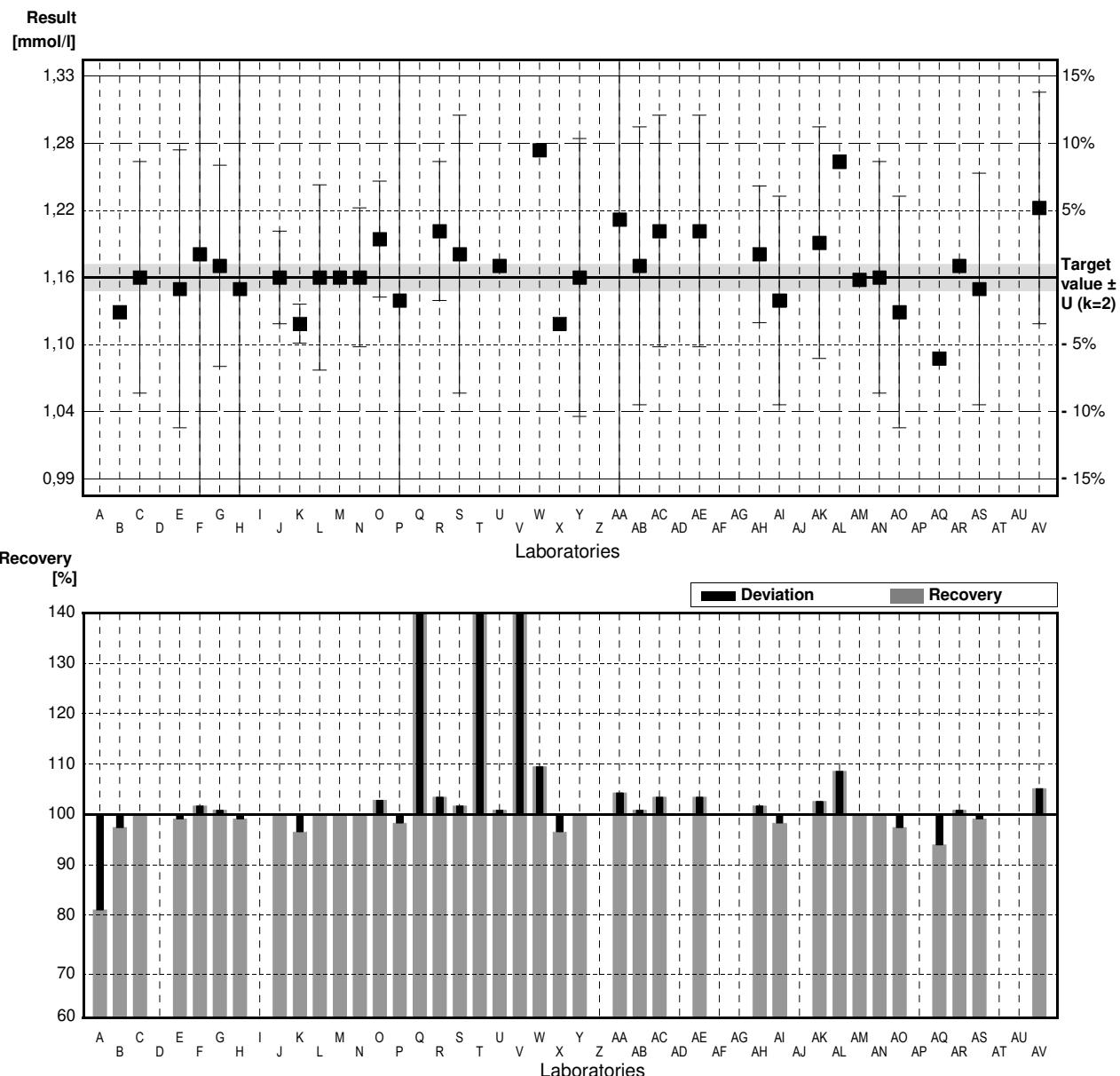
Target value $\pm U$ ($k=2$) 1,16 mmol/l \pm 0,01 mmol/l

IFA result $\pm U$ ($k=2$) 1,19 mmol/l \pm 0,05 mmol/l

Stability test $\pm U$ ($k=2$) 1,07 mmol/l \pm 0,04 mmol/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0,94 *	0,14	mmol/l	81%	-6,54
B	1,13		mmol/l	97%	-0,89
C	1,16	0,10	mmol/l	100%	0,00
D			mmol/l		
E	1,15	0,12	mmol/l	99%	-0,30
F	1,18	0,4	mmol/l	102%	0,59
G	1,17	0,087	mmol/l	101%	0,30
H	1,15	0,23	mmol/l	99%	-0,30
I			mmol/l		
J	1,16	0,04	mmol/l	100%	0,00
K	1,12	0,0167	mmol/l	97%	-1,19
L	1,16	0,08	mmol/l	100%	0,00
M	1,16		mmol/l	100%	0,00
N	1,16	0,06	mmol/l	100%	0,00
O	1,193	0,05	mmol/l	103%	0,98
P	1,14	0,21	mmol/l	98%	-0,59
Q	6,2 *	0,05	mmol/l	534%	149,82
R	1,20	0,06	mmol/l	103%	1,19
S	1,18	0,12	mmol/l	102%	0,59
T	6,31 *	0,5	mmol/l	544%	153,09
U	1,17		mmol/l	101%	0,30
V	5,90 *	0,036	mmol/l	509%	140,90
W	1,27		mmol/l	109%	3,27
X	1,12		mmol/l	97%	-1,19
Y	1,16	0,12	mmol/l	100%	0,00
Z			mmol/l		
AA	1,21	0,36	mmol/l	104%	1,49
AB	1,17	0,12	mmol/l	101%	0,30
AC	1,20	0,10	mmol/l	103%	1,19
AD			mmol/l		
AE	1,20	0,10	mmol/l	103%	1,19
AF			mmol/l		
AG			mmol/l		
AH	1,18	0,0590	mmol/l	102%	0,59
AI	1,14	0,09	mmol/l	98%	-0,59
AJ			mmol/l		
AK	1,19	0,1	mmol/l	103%	0,89
AL	1,26		mmol/l	109%	2,97
AM	1,158		mmol/l	100%	-0,06
AN	1,16	0,1	mmol/l	100%	0,00
AO	1,13	0,1	mmol/l	97%	-0,89
AP			mmol/l		
AQ	1,09		mmol/l	94%	-2,08
AR	1,17		mmol/l	101%	0,30
AS	1,15	0,10	mmol/l	99%	-0,30
AT			mmol/l		
AU			mmol/l		
AV	1,22	0,1	mmol/l	105%	1,78

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	1,56 \pm 0,60	1,17 \pm 0,02	mmol/l
Recov. \pm Cl(99%)	134,1 \pm 51,8	100,8 \pm 1,5	%
SD between labs	1,36	0,04	mmol/l
RSD between labs	87,5	3,1	%
n for calculation	38	34	



Sample N159A

Parameter Alkalinity

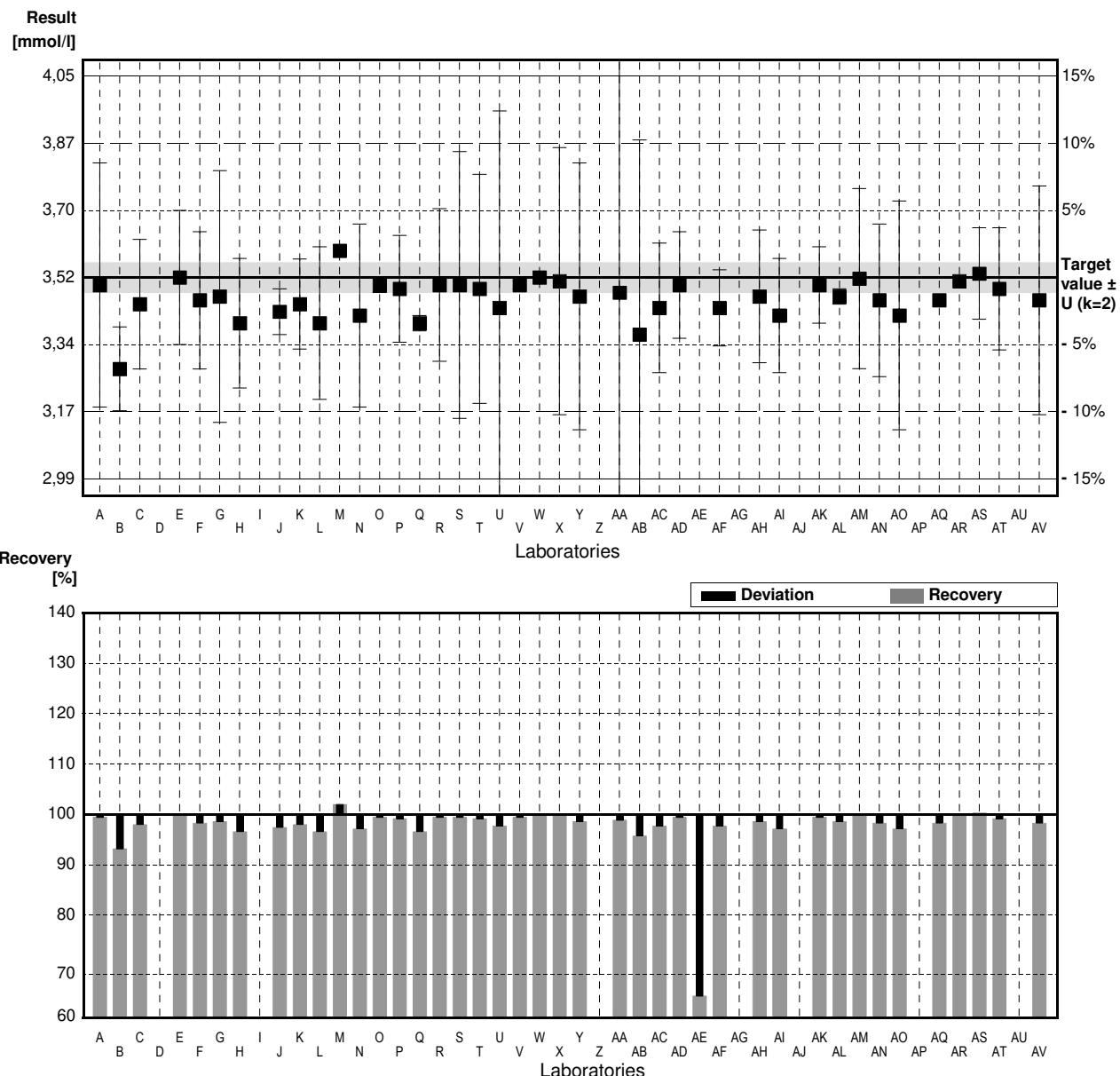
Target value $\pm U$ ($k=2$) 3,52 mmol/l \pm 0,04 mmol/l

IFA result $\pm U$ ($k=2$) 3,46 mmol/l \pm 0,14 mmol/l

Stability test $\pm U$ ($k=2$) 3,49 mmol/l \pm 0,14 mmol/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	3,50	0,32	mmol/l	99%	-0,28
B	3,28 *	0,11	mmol/l	93%	-3,41
C	3,45	0,17	mmol/l	98%	-0,99
D			mmol/l		
E	3,52	0,176	mmol/l	100%	0,00
F	3,46	0,18	mmol/l	98%	-0,85
G	3,47	0,330	mmol/l	99%	-0,71
H	3,40	0,17	mmol/l	97%	-1,70
I			mmol/l		
J	3,43	0,06	mmol/l	97%	-1,28
K	3,45	0,118	mmol/l	98%	-0,99
L	3,40	0,2	mmol/l	97%	-1,70
M	3,59		mmol/l	102%	0,99
N	3,42	0,24	mmol/l	97%	-1,42
O	3,50	0,02	mmol/l	99%	-0,28
P	3,49	0,14	mmol/l	99%	-0,43
Q	3,40	0,02	mmol/l	97%	-1,70
R	3,50	0,2	mmol/l	99%	-0,28
S	3,50	0,35	mmol/l	99%	-0,28
T	3,49	0,3	mmol/l	99%	-0,43
U	3,44	0,516	mmol/l	98%	-1,14
V	3,50	0,010	mmol/l	99%	-0,28
W	3,52		mmol/l	100%	0,00
X	3,51	0,35	mmol/l	100%	-0,14
Y	3,47	0,35	mmol/l	99%	-0,71
Z			mmol/l		
AA	3,48	0,619	mmol/l	99%	-0,57
AB	3,37	0,51	mmol/l	96%	-2,13
AC	3,44	0,17	mmol/l	98%	-1,14
AD	3,50	0,14	mmol/l	99%	-0,28
AE	2,25 *	0,06	mmol/l	64%	-18,04
AF	3,44	0,10	mmol/l	98%	-1,14
AG			mmol/l		
AH	3,47	0,174	mmol/l	99%	-0,71
AI	3,42	0,15	mmol/l	97%	-1,42
AJ			mmol/l		
AK	3,50	0,1	mmol/l	99%	-0,28
AL	3,47	0,02	mmol/l	99%	-0,71
AM	3,517	0,236	mmol/l	100%	-0,04
AN	3,46	0,2	mmol/l	98%	-0,85
AO	3,42	0,3	mmol/l	97%	-1,42
AP			mmol/l		
AQ	3,46		mmol/l	98%	-0,85
AR	3,51		mmol/l	100%	-0,14
AS	3,53	0,12	mmol/l	100%	0,14
AT	3,49	0,16	mmol/l	99%	-0,43
AU			mmol/l		
AV	3,46	0,3	mmol/l	98%	-0,85

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	$3,44 \pm 0,08$	$3,47 \pm 0,02$	mmol/l
Recov. \pm Cl(99%)	$97,6 \pm 2,4$	$98,6 \pm 0,5$	%
SD between labs	0,20	0,04	mmol/l
RSD between labs	5,7	1,3	%
n for calculation	41	39	



Sample N159B

Parameter Alkalinity

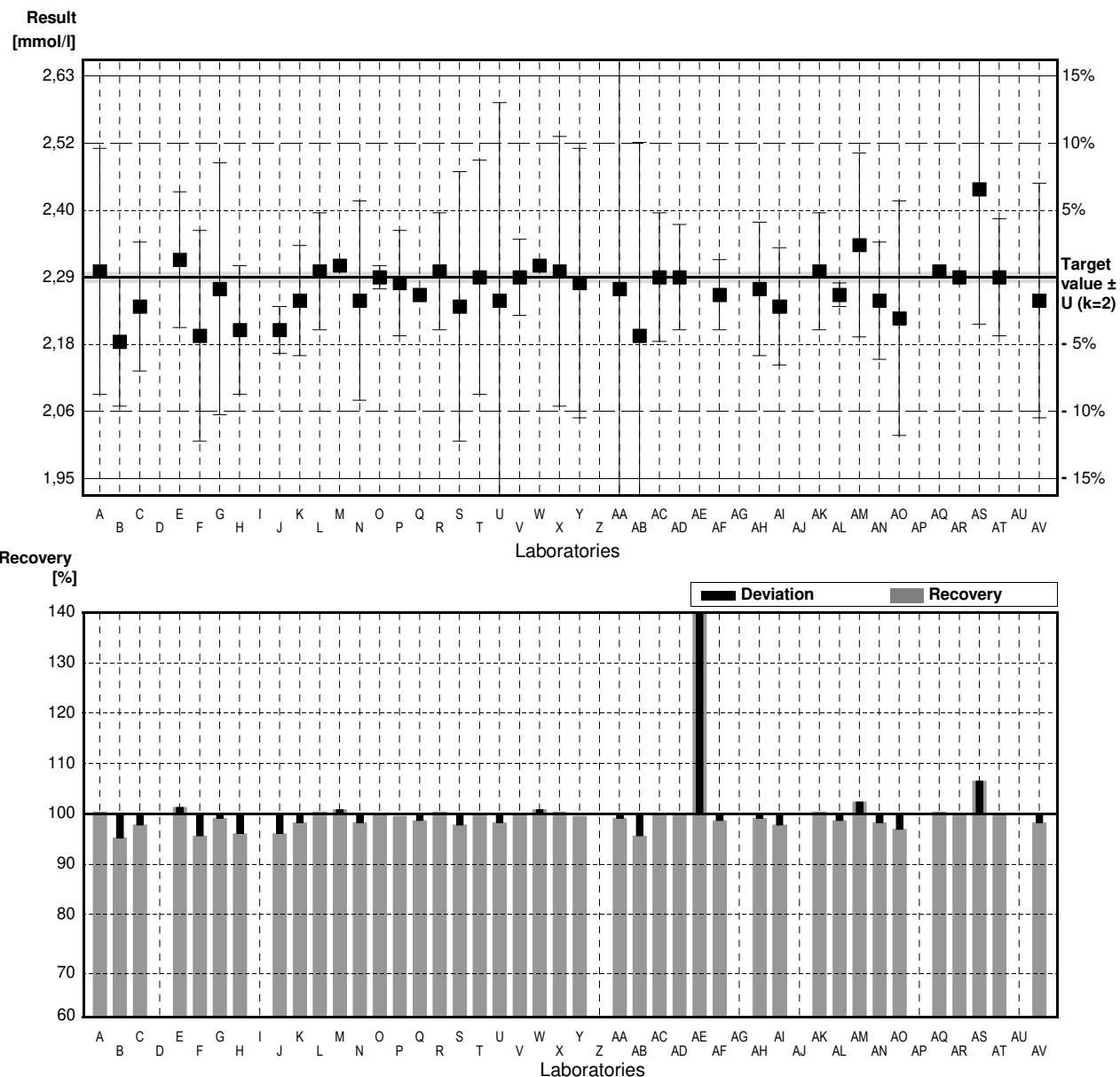
Target value $\pm U$ ($k=2$) 2,29 mmol/l \pm 0,01 mmol/l

IFA result $\pm U$ ($k=2$) 2,26 mmol/l \pm 0,09 mmol/l

Stability test $\pm U$ ($k=2$) 2,28 mmol/l \pm 0,09 mmol/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	2,30	0,21	mmol/l	100%	0,22
B	2,18 *	0,11	mmol/l	95%	-2,40
C	2,24	0,11	mmol/l	98%	-1,09
D			mmol/l		
E	2,32	0,116	mmol/l	101%	0,66
F	2,19	0,18	mmol/l	96%	-2,18
G	2,27	0,215	mmol/l	99%	-0,44
H	2,20	0,11	mmol/l	96%	-1,97
I			mmol/l		
J	2,20	0,04	mmol/l	96%	-1,97
K	2,25	0,0940	mmol/l	98%	-0,87
L	2,30	0,1	mmol/l	100%	0,22
M	2,31		mmol/l	101%	0,44
N	2,25	0,17	mmol/l	98%	-0,87
O	2,29	0,02	mmol/l	100%	0,00
P	2,28	0,09	mmol/l	100%	-0,22
Q	2,26	0,01	mmol/l	99%	-0,66
R	2,30	0,1	mmol/l	100%	0,22
S	2,24	0,23	mmol/l	98%	-1,09
T	2,29	0,2	mmol/l	100%	0,00
U	2,25	0,338	mmol/l	98%	-0,87
V	2,29	0,065	mmol/l	100%	0,00
W	2,31		mmol/l	101%	0,44
X	2,30	0,23	mmol/l	100%	0,22
Y	2,28	0,23	mmol/l	100%	-0,22
Z			mmol/l		
AA	2,27	0,403	mmol/l	99%	-0,44
AB	2,19	0,33	mmol/l	96%	-2,18
AC	2,29	0,11	mmol/l	100%	0,00
AD	2,29	0,09	mmol/l	100%	0,00
AE	3,39 *	0,09	mmol/l	148%	24,02
AF	2,26	0,06	mmol/l	99%	-0,66
AG			mmol/l		
AH	2,27	0,114	mmol/l	99%	-0,44
AI	2,24	0,10	mmol/l	98%	-1,09
AJ			mmol/l		
AK	2,30	0,1	mmol/l	100%	0,22
AL	2,26	0,02	mmol/l	99%	-0,66
AM	2,345	0,157	mmol/l	102%	1,20
AN	2,25	0,1	mmol/l	98%	-0,87
AO	2,22	0,2	mmol/l	97%	-1,53
AP			mmol/l		
AQ	2,30		mmol/l	100%	0,22
AR	2,29		mmol/l	100%	0,00
AS	2,44 *	0,23	mmol/l	107%	3,28
AT	2,29	0,10	mmol/l	100%	0,00
AU			mmol/l		
AV	2,25	0,2	mmol/l	98%	-0,87

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	2,30 \pm 0,08	2,27 \pm 0,02	mmol/l
Recov. \pm Cl(99%)	100,4 \pm 3,3	99,1 \pm 0,7	%
SD between labs	0,18	0,04	mmol/l
RSD between labs	7,9	1,6	%
n for calculation	41	38	



Sample N159A

Parameter Hydrogen carbonate

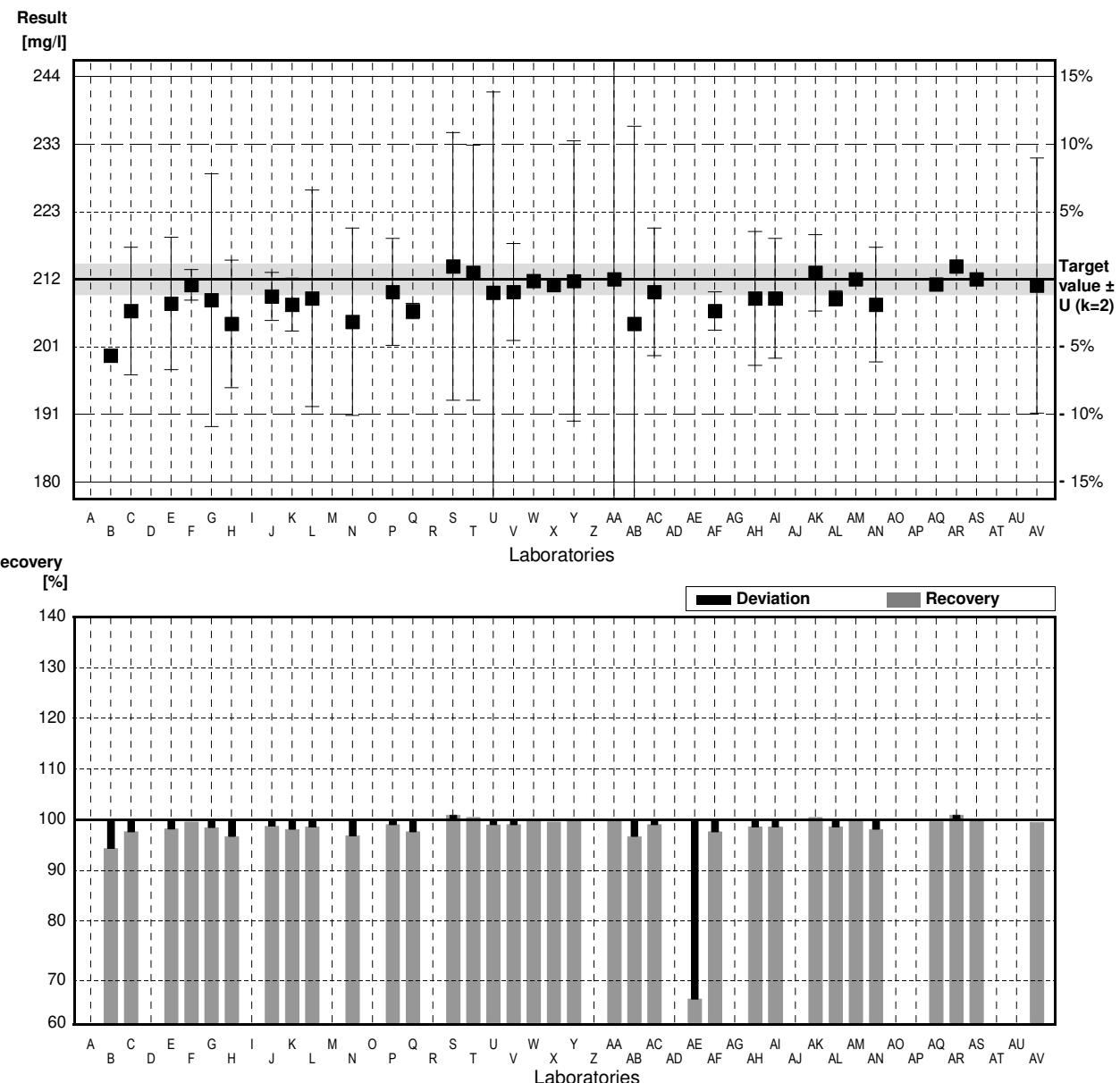
Target value $\pm U$ ($k=2$) 212 mg/l \pm 2 mg/l

IFA result $\pm U$ ($k=2$) 208 mg/l \pm 8 mg/l

Stability test $\pm U$ ($k=2$) 210 mg/l \pm 8 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			mg/l		
B	200 *		mg/l	94%	-2.36
C	207	10	mg/l	98%	-0.98
D			mg/l		
E	208.2	10.4	mg/l	98%	-0.75
F	211.1	2.4	mg/l	100%	-0.18
G	208.7	19.82	mg/l	98%	-0.65
H	205	10	mg/l	97%	-1.38
I			mg/l		
J	209.3	3.77	mg/l	99%	-0.53
K	208	4.15	mg/l	98%	-0.79
L	209	17	mg/l	99%	-0.59
M			mg/l		
N	205.3	14.7	mg/l	97%	-1.32
O			mg/l		
P	210	8.4	mg/l	99%	-0.39
Q	207	1.22	mg/l	98%	-0.98
R	NA		mg/l		
S	214	21	mg/l	101%	0.39
T	213	20	mg/l	100%	0.20
U	209.9	31.48	mg/l	99%	-0.41
V	210	7.6	mg/l	99%	-0.39
W	211.73		mg/l	100%	-0.05
X	211.09		mg/l	100%	-0.18
Y	211.7	22	mg/l	100%	-0.06
Z			mg/l		
AA	212	37	mg/l	100%	0.00
AB	205	31	mg/l	97%	-1.38
AC	210	10	mg/l	99%	-0.39
AD			mg/l		
AE	137 *	4	mg/l	65%	-14.74
AF	207	2.99	mg/l	98%	-0.98
AG			mg/l		
AH	209	10.5	mg/l	99%	-0.59
AI	209	9.4	mg/l	99%	-0.59
AJ			mg/l		
AK	213	6	mg/l	100%	0.20
AL	209	1.2	mg/l	99%	-0.59
AM	212		mg/l	100%	0.00
AN	208	9	mg/l	98%	-0.79
AO			mg/l		
AP			mg/l		
AQ	211.2		mg/l	100%	-0.16
AR	214		mg/l	101%	0.39
AS	212		mg/l	100%	0.00
AT			mg/l		
AU			mg/l		
AV	211.0	20.0	mg/l	100%	-0.20

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	207 \pm 6	210 \pm 1	mg/l
Recov. \pm Cl(99%)	97,8 \pm 2,8	98,9 \pm 0,6	%
SD between labs	13	2	mg/l
RSD between labs	6,2	1,2	%
n for calculation	34	32	



Sample N159B

Parameter Hydrogen carbonate

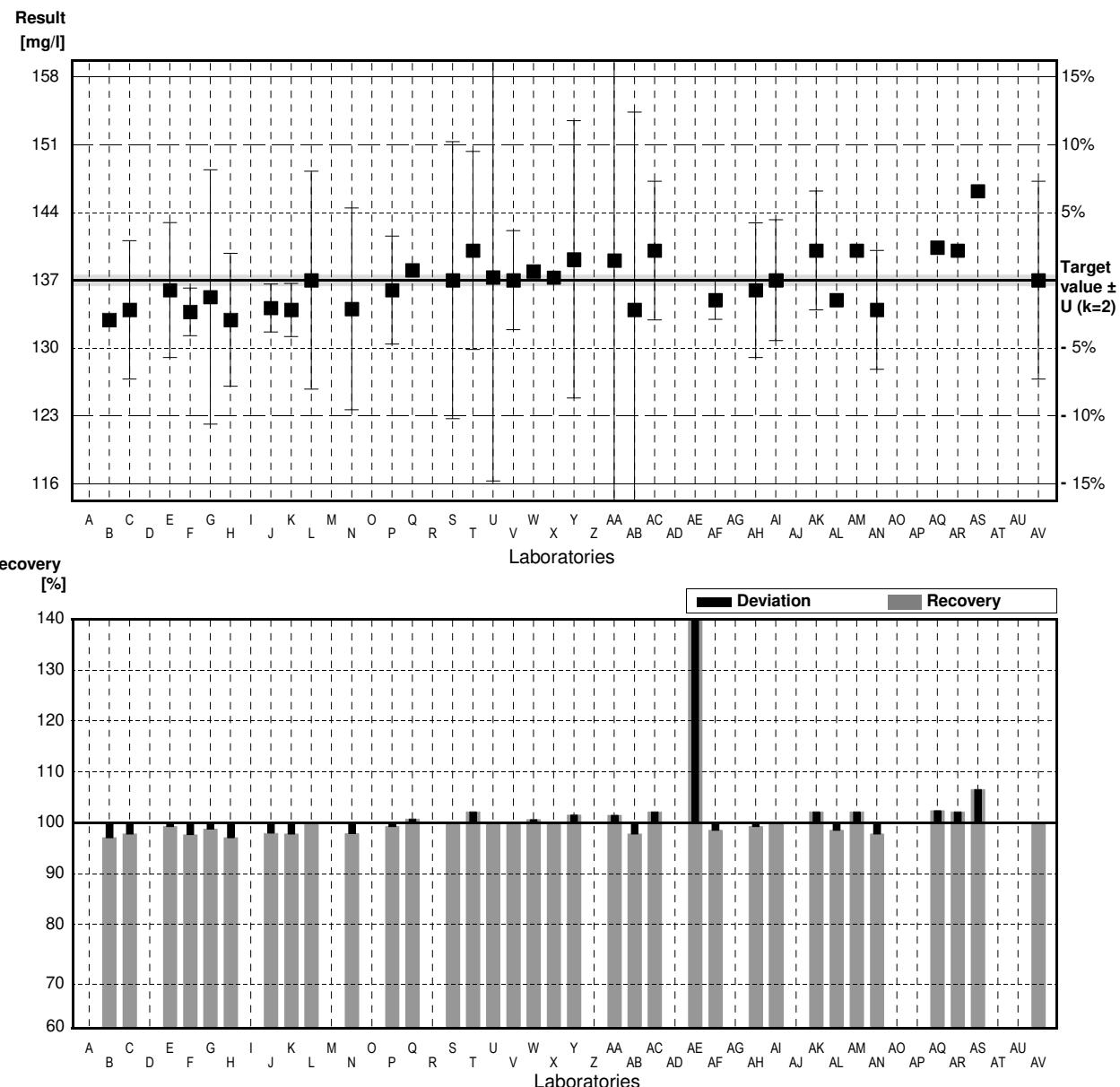
Target value $\pm U$ ($k=2$) 137 mg/l \pm 1 mg/l

IFA result $\pm U$ ($k=2$) 135 mg/l \pm 5 mg/l

Stability test $\pm U$ ($k=2$) 136 mg/l \pm 5 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			mg/l		
B	133		mg/l	97%	-1.22
C	134	7	mg/l	98%	-0.91
D			mg/l		
E	136	6.81	mg/l	99%	-0.30
F	133.8	2.4	mg/l	98%	-0.97
G	135.3	12.85	mg/l	99%	-0.52
H	133	6.7	mg/l	97%	-1.22
I			mg/l		
J	134.2	2.42	mg/l	98%	-0.85
K	134	2.68	mg/l	98%	-0.91
L	137	11	mg/l	100%	0.00
M			mg/l		
N	134.1	10.2	mg/l	98%	-0.88
O			mg/l		
P	136	5.44	mg/l	99%	-0.30
Q	138	0.61	mg/l	101%	0.30
R	NA		mg/l		
S	137	14	mg/l	100%	0.00
T	140	10	mg/l	102%	0.91
U	137.3	20.59	mg/l	100%	0.09
V	137	5.0	mg/l	100%	0.00
W	137.89		mg/l	101%	0.27
X	137.27		mg/l	100%	0.08
Y	139.1	14	mg/l	102%	0.64
Z			mg/l		
AA	139	25	mg/l	101%	0.61
AB	134	20	mg/l	98%	-0.91
AC	140	7	mg/l	102%	0.91
AD			mg/l		
AE	206	*	mg/l	150%	20.99
AF	135	1.95	mg/l	99%	-0.61
AG			mg/l		
AH	136	6.80	mg/l	99%	-0.30
AI	137	6.1	mg/l	100%	0.00
AJ			mg/l		
AK	140	6	mg/l	102%	0.91
AL	135		mg/l	99%	-0.61
AM	140		mg/l	102%	0.91
AN	134	6	mg/l	98%	-0.91
AO			mg/l		
AP			mg/l		
AQ	140.3		mg/l	102%	1.00
AR	140		mg/l	102%	0.91
AS	146		mg/l	107%	2.74
AT			mg/l		
AU			mg/l		
AV	137.0	10.0	mg/l	100%	0.00

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	139 \pm 6	137 \pm 1	mg/l
Recov. \pm Cl(99%)	101.4 \pm 4.2	99.9 \pm 1.0	%
SD between labs	12	3	mg/l
RSD between labs	8.8	2.1	%
n for calculation	34	33	



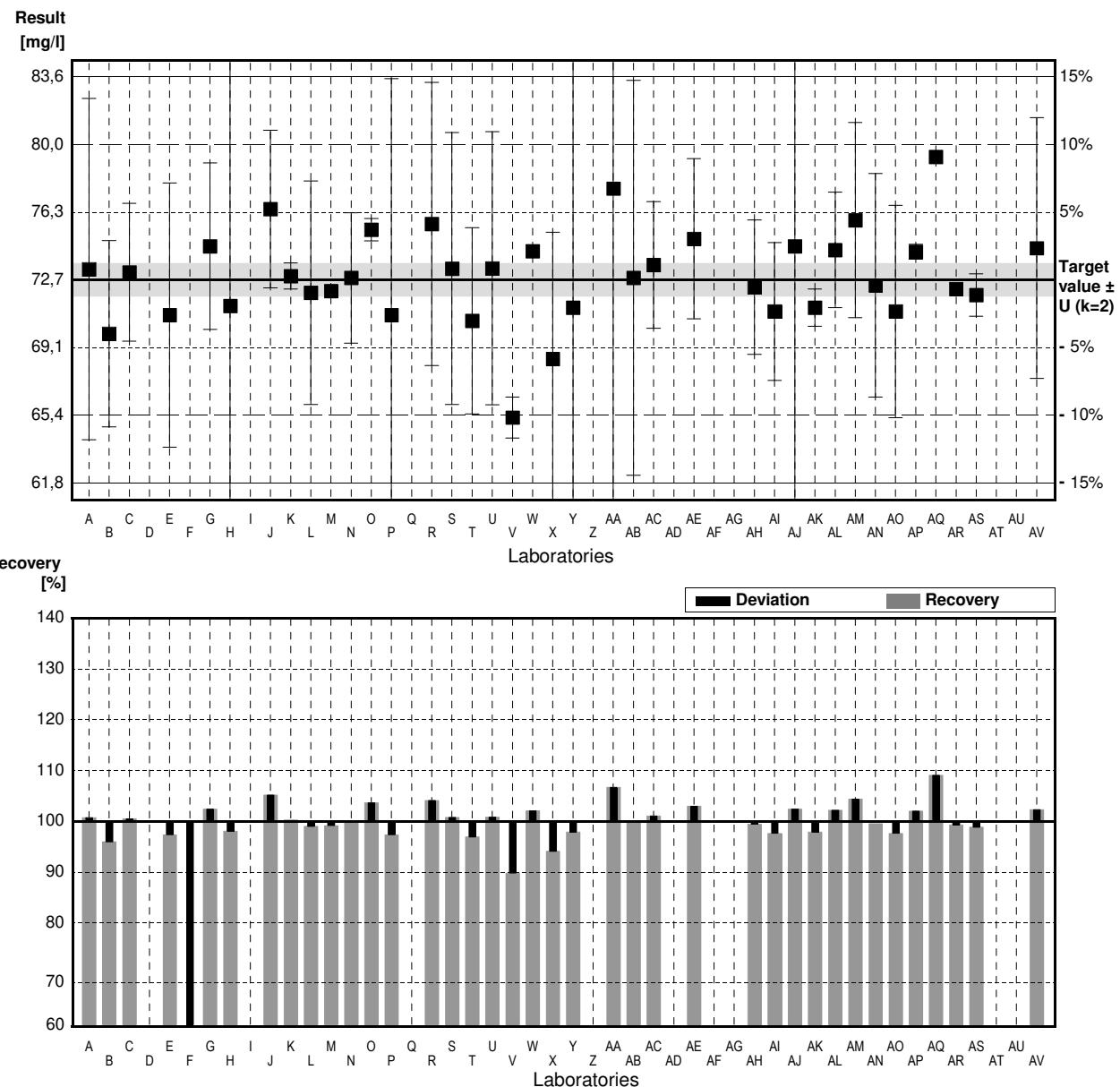
Sample N159A

Parameter Calcium

Target value $\pm U$ ($k=2$) 72,7 mg/l \pm 0,9 mg/l
 IFA result $\pm U$ ($k=2$) 74,7 mg/l \pm 3,0 mg/l
 Stability test $\pm U$ ($k=2$) 66,8 mg/l \pm 2,7 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	73,27	9,16	mg/l	101%	0,24
B	69,8	5	mg/l	96%	-1,21
C	73,1	3,7	mg/l	101%	0,17
D			mg/l		
E	70,80	7,1	mg/l	97%	-0,79
F	34,3 *	1,9	mg/l	47%	-16,01
G	74,5	4,47	mg/l	102%	0,75
H	71,3	14	mg/l	98%	-0,58
I			mg/l		
J	76,5	4,23	mg/l	105%	1,58
K	72,9	0,701	mg/l	100%	0,08
L	72	6	mg/l	99%	-0,29
M	72,1		mg/l	99%	-0,25
N	72,8	3,5	mg/l	100%	0,04
O	75,39	0,6	mg/l	104%	1,12
P	70,8	12,7	mg/l	97%	-0,79
Q			mg/l		
R	75,7	7,6	mg/l	104%	1,25
S	73,3	7,3	mg/l	101%	0,25
T	70,5	5	mg/l	97%	-0,92
U	73,32	7,332	mg/l	101%	0,26
V	65,3 *	1,1	mg/l	90%	-3,08
W	74,23		mg/l	102%	0,64
X	68,45	6,8	mg/l	94%	-1,77
Y	71,2	14,3	mg/l	98%	-0,63
Z			mg/l		
AA	77,60	25,39	mg/l	107%	2,04
AB	72,8	10,6	mg/l	100%	0,04
AC	73,5	3,4	mg/l	101%	0,33
AD			mg/l		
AE	74,9	4,3	mg/l	103%	0,92
AF			mg/l		
AG			mg/l		
AH	72,3	3,61	mg/l	99%	-0,17
AI	71	3,7	mg/l	98%	-0,71
AJ	74,5	16,0	mg/l	102%	0,75
AK	71,2	1,0	mg/l	98%	-0,63
AL	74,3	3,1	mg/l	102%	0,67
AM	75,9	5,24	mg/l	104%	1,33
AN	72,4	6	mg/l	100%	-0,13
AO	71	5,7	mg/l	98%	-0,71
AP	74,2	0,4	mg/l	102%	0,63
AQ	79,3		mg/l	109%	2,75
AR	72,2		mg/l	99%	-0,21
AS	71,88	1,14	mg/l	99%	-0,34
AT			mg/l		
AU			mg/l		
AV	74,40	7,0	mg/l	102%	0,71

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	71,9 \pm 2,9	73,1 \pm 1,0	mg/l
Recov. \pm Cl(99%)	98,9 \pm 4,0	100,6 \pm 1,4	%
SD between labs	6,7	2,2	mg/l
RSD between labs	9,3	3,0	%
n for calculation	39	37	



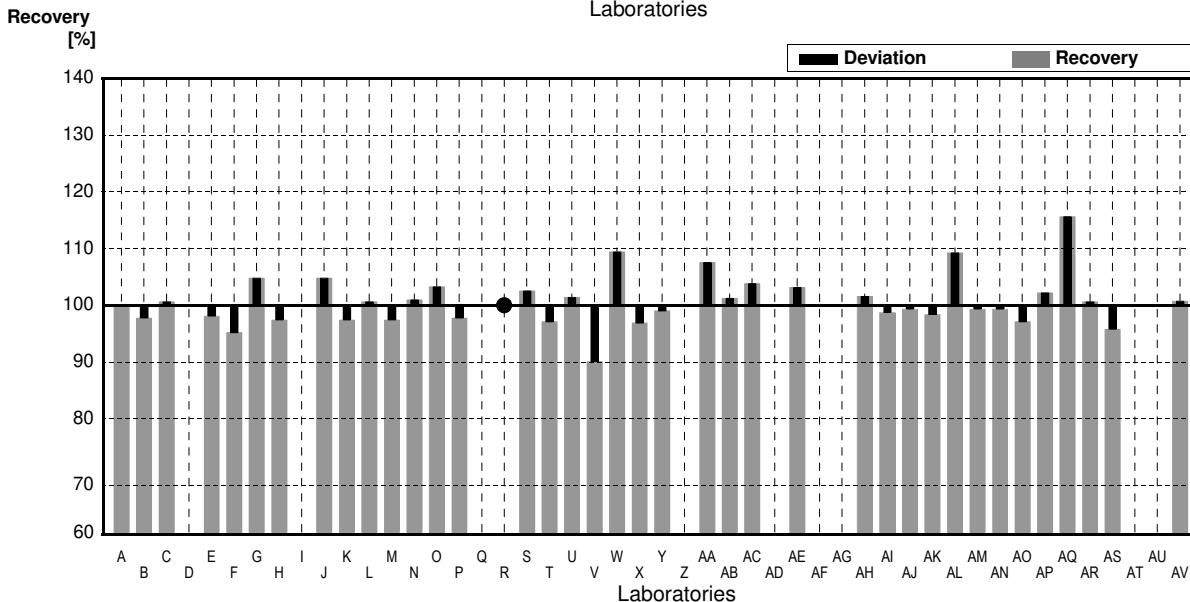
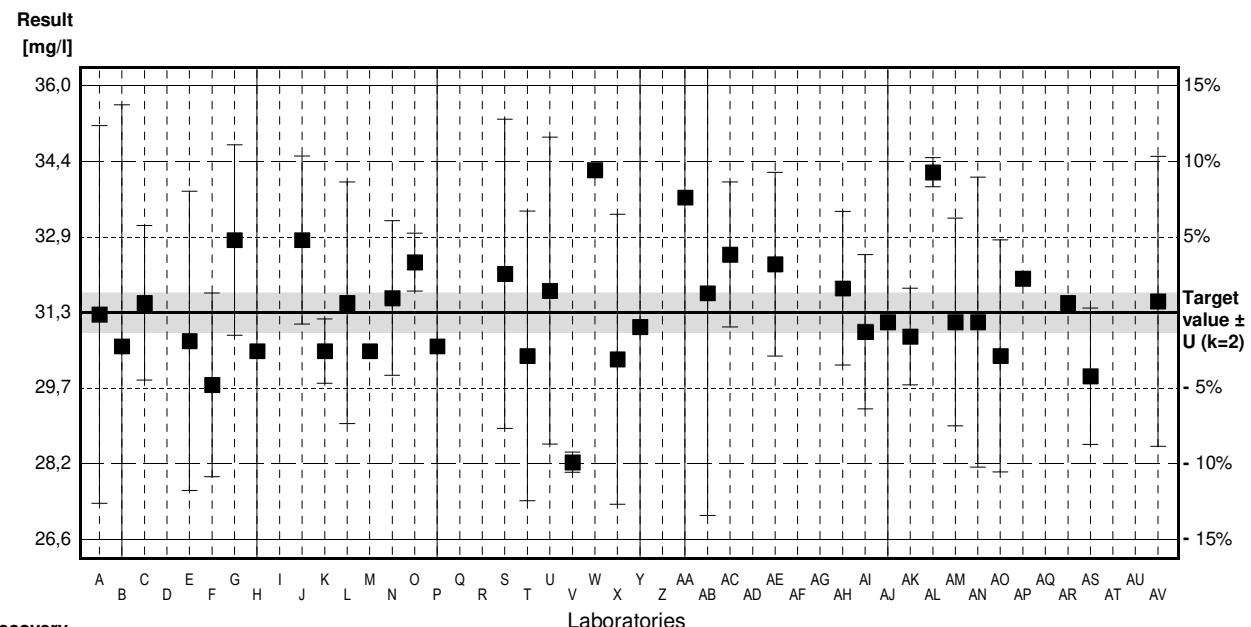
Sample N159B

Parameter Calcium

Target value $\pm U (k=2)$ 31,3 mg/l \pm 0,4 mg/l
 IFA result $\pm U (k=2)$ 32,9 mg/l \pm 1,6 mg/l
 Stability test $\pm U (k=2)$ 28,6 mg/l \pm 1,4 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	31.26	3.91	mg/l	100%	-0.04
B	30.6	5	mg/l	98%	-0.68
C	31.5	1.6	mg/l	101%	0.19
D			mg/l		
E	30.71	3.1	mg/l	98%	-0.57
F	29.8	1.9	mg/l	95%	-1.45
G	32.8	1.97	mg/l	105%	1.45
H	30.5	6.1	mg/l	97%	-0.77
I			mg/l		
J	32.8	1.74	mg/l	105%	1.45
K	30.5	0.665	mg/l	97%	-0.77
L	31.5	2.5	mg/l	101%	0.19
M	30.5		mg/l	97%	-0.77
N	31.6	1.6	mg/l	101%	0.29
O	32.34	0.6	mg/l	103%	1.01
P	30.6	5.51	mg/l	98%	-0.68
Q			mg/l		
R	<40		mg/l	*	
S	32.1	3.2	mg/l	103%	0.77
T	30.4	3	mg/l	97%	-0.87
U	31.75	3.175	mg/l	101%	0.44
V	28.2	0.21	mg/l	90%	-3.00
W	34.25		mg/l	109%	2.86
X	30.33	3.0	mg/l	97%	-0.94
Y	31.0	6.2	mg/l	99%	-0.29
Z			mg/l		
AA	33.68	11.02	mg/l	108%	2.30
AB	31.7	4.6	mg/l	101%	0.39
AC	32.5	1.5	mg/l	104%	1.16
AD			mg/l		
AE	32.3	1.9	mg/l	103%	0.97
AF			mg/l		
AG			mg/l		
AH	31.8	1.59	mg/l	102%	0.48
AI	30.9	1.6	mg/l	99%	-0.39
AJ	31.1	6.5	mg/l	99%	-0.19
AK	30.8	1.0	mg/l	98%	-0.48
AL	34.2	0.3	mg/l	109%	2.81
AM	31.1	2.15	mg/l	99%	-0.19
AN	31.1	3	mg/l	99%	-0.19
AO	30.4	2.4	mg/l	97%	-0.87
AP	32.0	0.1	mg/l	102%	0.68
AQ	36.2 *		mg/l	116%	4.74
AR	31.5		mg/l	101%	0.19
AS	29.98	1.41	mg/l	96%	-1.28
AT			mg/l		
AU			mg/l		
AV	31.53	3.0	mg/l	101%	0.22

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	$31,5 \pm 0,6$	$31,4 \pm 0,5$	mg/l
Recov. \pm Cl(99%)	$100,7 \pm 2,0$	$100,3 \pm 1,7$	%
SD between labs	1,4	1,2	mg/l
RSD between labs	4,5	3,8	%
n for calculation	38	37	



Sample N159A

Parameter Magnesium

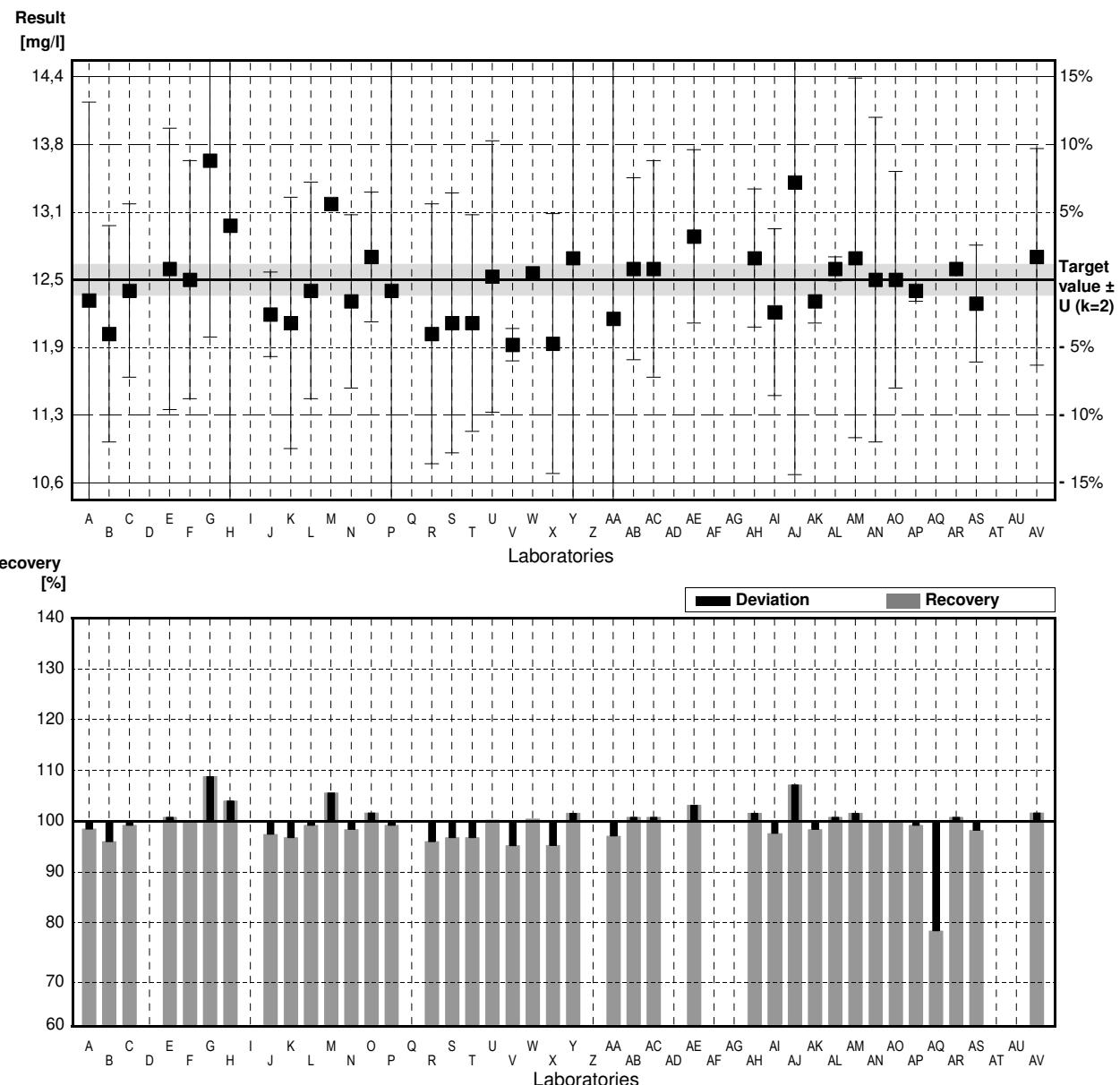
Target value $\pm U$ ($k=2$) 12,5 mg/l \pm 0,1 mg/l

IFA result $\pm U$ ($k=2$) 12,0 mg/l \pm 0,6 mg/l

Stability test $\pm U$ ($k=2$) 11,7 mg/l \pm 0,6 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	12,31	1,83	mg/l	98%	-0,41
B	12,0	1	mg/l	96%	-1,08
C	12,4	0,8	mg/l	99%	-0,22
D			mg/l		
E	12,60	1,3	mg/l	101%	0,22
F	12,5	1,1	mg/l	100%	0,00
G	13,6 *	1,63	mg/l	109%	2,38
H	13,0	2,6	mg/l	104%	1,08
I			mg/l		
J	12,18	0,39	mg/l	97%	-0,69
K	12,1	1,16	mg/l	97%	-0,86
L	12,4	1,0	mg/l	99%	-0,22
M	13,2		mg/l	106%	1,51
N	12,3	0,8	mg/l	98%	-0,43
O	12,71	0,6	mg/l	102%	0,45
P	12,4	2,23	mg/l	99%	-0,22
Q			mg/l		
R	12,0	1,2	mg/l	96%	-1,08
S	12,1	1,2	mg/l	97%	-0,86
T	12,1	1	mg/l	97%	-0,86
U	12,53	1,253	mg/l	100%	0,06
V	11,9	0,15	mg/l	95%	-1,30
W	12,56		mg/l	100%	0,13
X	11,91	1,2	mg/l	95%	-1,28
Y	12,7	2,6	mg/l	102%	0,43
Z			mg/l		
AA	12,14	2,69	mg/l	97%	-0,78
AB	12,6	0,84	mg/l	101%	0,22
AC	12,6	1,0	mg/l	101%	0,22
AD			mg/l		
AE	12,9	0,8	mg/l	103%	0,86
AF			mg/l		
AG			mg/l		
AH	12,7	0,637	mg/l	102%	0,43
AI	12,2	0,77	mg/l	98%	-0,65
AJ	13,4	2,7	mg/l	107%	1,95
AK	12,3	0,2	mg/l	98%	-0,43
AL	12,6	0,11	mg/l	101%	0,22
AM	12,7	1,66	mg/l	102%	0,43
AN	12,5	1,5	mg/l	100%	0,00
AO	12,5	1	mg/l	100%	0,00
AP	12,4	0,1	mg/l	99%	-0,22
AQ	9,80 *		mg/l	78%	-5,84
AR	12,6		mg/l	101%	0,22
AS	12,28	0,54	mg/l	98%	-0,48
AT			mg/l		
AU			mg/l		
AV	12,71	1,0	mg/l	102%	0,45

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	12,4 \pm 0,2	12,5 \pm 0,2	mg/l
Recov. \pm CI(99%)	99,4 \pm 2,0	99,7 \pm 1,2	%
SD between labs	0,6	0,3	mg/l
RSD between labs	4,6	2,7	%
n for calculation	39	37	



Sample N159B

Parameter Magnesium

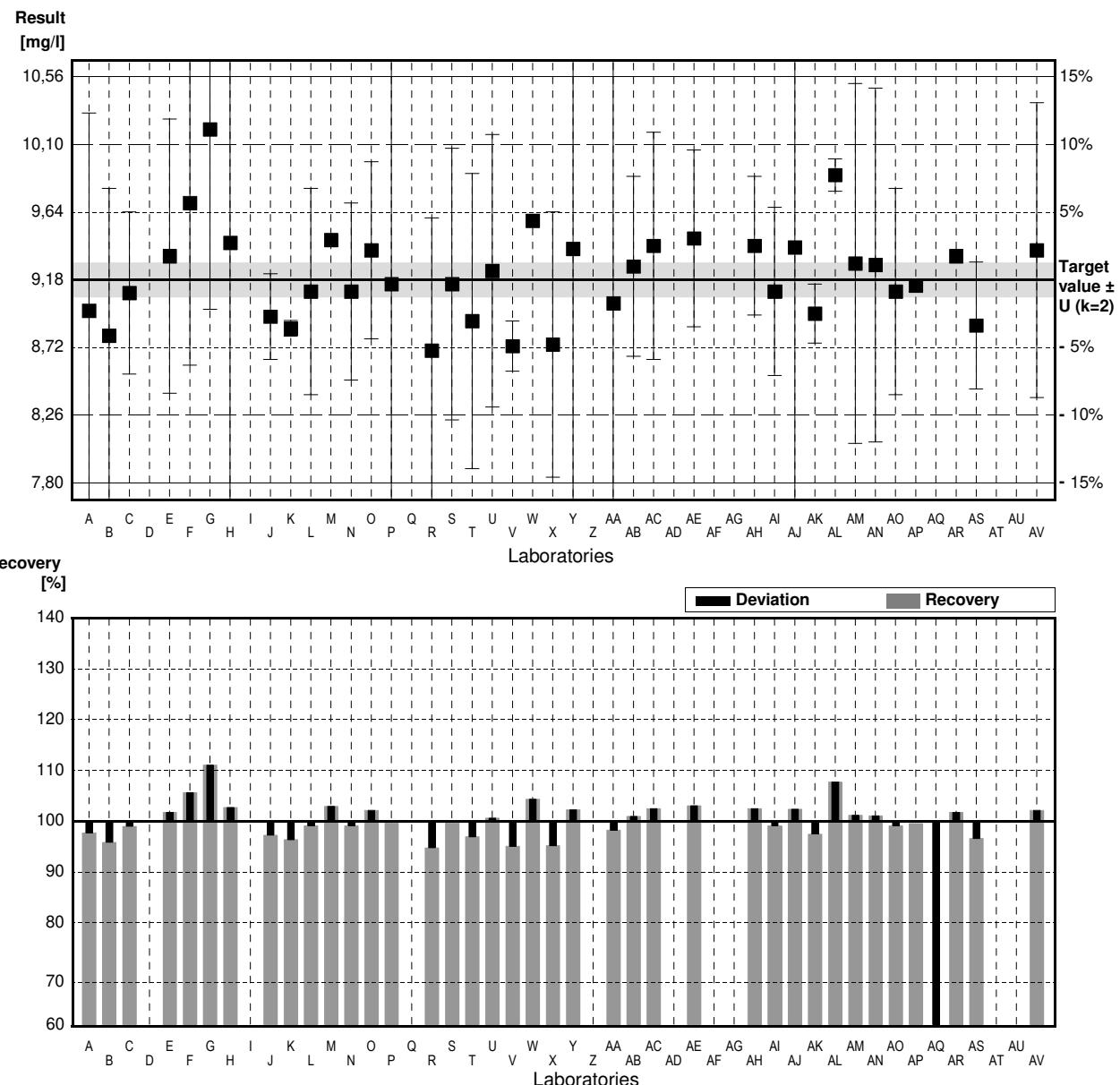
Target value $\pm U$ ($k=2$) 9,18 mg/l \pm 0,12 mg/l

IFA result $\pm U$ ($k=2$) 8,89 mg/l \pm 0,44 mg/l

Stability test $\pm U$ ($k=2$) 8,71 mg/l \pm 0,44 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	8,97	1,34	mg/l	98%	-0,62
B	8,8	1	mg/l	96%	-1,12
C	9,09	0,55	mg/l	99%	-0,26
D			mg/l		
E	9,34	0,93	mg/l	102%	0,47
F	9,7	1,1	mg/l	106%	1,53
G	10,2 *	1,22	mg/l	111%	3,00
H	9,43	1,9	mg/l	103%	0,74
I			mg/l		
J	8,93	0,29	mg/l	97%	-0,74
K	8,85	0,0531	mg/l	96%	-0,97
L	9,1	0,7	mg/l	99%	-0,24
M	9,45		mg/l	103%	0,79
N	9,1	0,6	mg/l	99%	-0,24
O	9,38	0,6	mg/l	102%	0,59
P	9,15	1,65	mg/l	100%	-0,09
Q			mg/l		
R	8,7	0,9	mg/l	95%	-1,41
S	9,15	0,92	mg/l	100%	-0,09
T	8,90	1	mg/l	97%	-0,82
U	9,24	0,924	mg/l	101%	0,18
V	8,73	0,17	mg/l	95%	-1,32
W	9,58		mg/l	104%	1,18
X	8,74	0,9	mg/l	95%	-1,30
Y	9,39	1,9	mg/l	102%	0,62
Z			mg/l		
AA	9,02	1,99	mg/l	98%	-0,47
AB	9,27	0,61	mg/l	101%	0,26
AC	9,41	0,77	mg/l	103%	0,68
AD			mg/l		
AE	9,46	0,6	mg/l	103%	0,82
AF			mg/l		
AG			mg/l		
AH	9,41	0,470	mg/l	103%	0,68
AI	9,1	0,57	mg/l	99%	-0,24
AJ	9,4	2,0	mg/l	102%	0,65
AK	8,95	0,2	mg/l	97%	-0,68
AL	9,89	0,11	mg/l	108%	2,09
AM	9,29	1,22	mg/l	101%	0,32
AN	9,28	1,2	mg/l	101%	0,29
AO	9,1	0,7	mg/l	99%	-0,24
AP	9,14	0,04	mg/l	100%	-0,12
AQ	4,56 *		mg/l	50%	-13,60
AR	9,34		mg/l	102%	0,47
AS	8,87	0,43	mg/l	97%	-0,91
AT			mg/l		
AU			mg/l		
AV	9,38	1,0	mg/l	102%	0,59

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	9,10 \pm 0,35	9,19 \pm 0,12	mg/l
Recov. \pm CI(99%)	99,1 \pm 3,8	100,1 \pm 1,4	%
SD between labs	0,81	0,28	mg/l
RSD between labs	8,9	3,0	%
n for calculation	39	37	



Sample N159A

Parameter Sodium

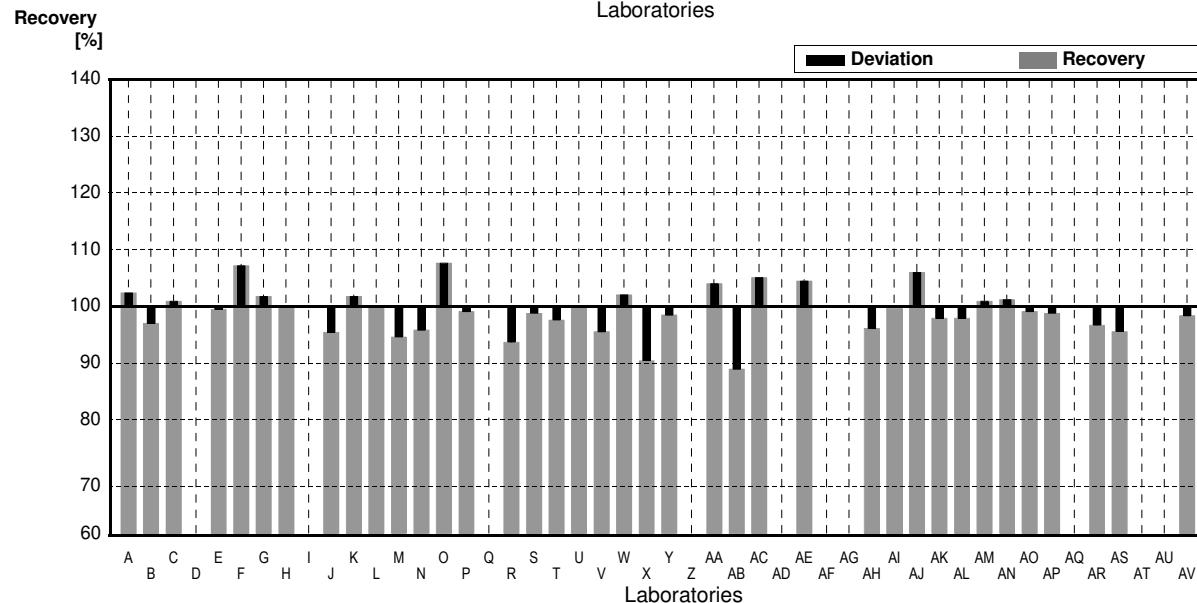
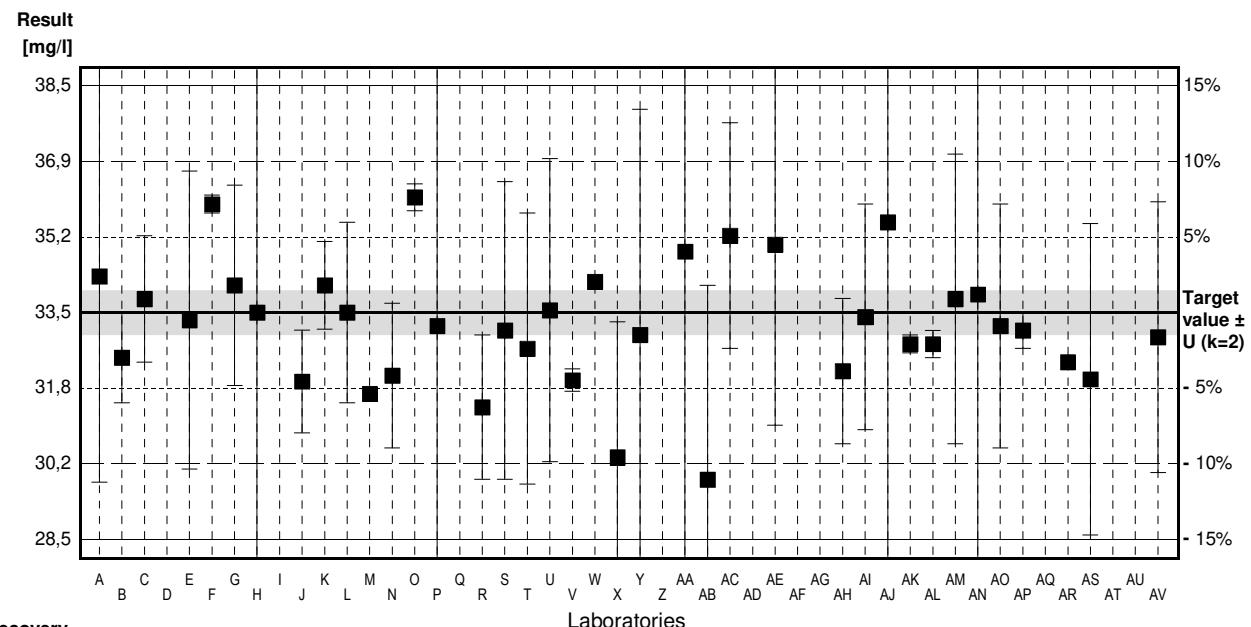
Target value $\pm U$ ($k=2$) 33,5 mg/l \pm 0,5 mg/l

IFA result $\pm U$ ($k=2$) 33,5 mg/l \pm 1,3 mg/l

Stability test $\pm U$ ($k=2$) 32,6 mg/l \pm 1,3 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	34.30	4.56	mg/l	102%	0.70
B	32.5	1	mg/l	97%	-0.88
C	33.8	1.4	mg/l	101%	0.26
D			mg/l		
E	33.33	3.3	mg/l	99%	-0.15
F	35.9	0.2	mg/l	107%	2.11
G	34.1	2.22	mg/l	102%	0.53
H	33.5	6.7	mg/l	100%	0.00
I			mg/l		
J	31.97	1.14	mg/l	95%	-1.34
K	34.1	0.971	mg/l	102%	0.53
L	33.5	2.0	mg/l	100%	0.00
M	31.7		mg/l	95%	-1.58
N	32.1	1.6	mg/l	96%	-1.23
O	36.05	0.3	mg/l	108%	2.24
P	33.2	5.98	mg/l	99%	-0.26
Q			mg/l		
R	31.4	1.6	mg/l	94%	-1.84
S	33.1	3.3	mg/l	99%	-0.35
T	32.7	3	mg/l	98%	-0.70
U	33.55	3.355	mg/l	100%	0.04
V	32.0	0.25	mg/l	96%	-1.32
W	34.18		mg/l	102%	0.60
X	30.29	3.0	mg/l	90%	-2.82
Y	33.0	5.0	mg/l	99%	-0.44
Z			mg/l		
AA	34.85	10.84	mg/l	104%	1.19
AB	29.8	4.3	mg/l	89%	-3.25
AC	35.2	2.5	mg/l	105%	1.49
AD			mg/l		
AE	35.0	4	mg/l	104%	1.32
AF			mg/l		
AG			mg/l		
AH	32.2	1.61	mg/l	96%	-1.14
AI	33.4	2.5	mg/l	100%	-0.09
AJ	35.5	7.5	mg/l	106%	1.76
AK	32.8	0.2	mg/l	98%	-0.61
AL	32.8	0.3	mg/l	98%	-0.61
AM	33.8	3.21	mg/l	101%	0.26
AN	33.9	6	mg/l	101%	0.35
AO	33.2	2.7	mg/l	99%	-0.26
AP	33.1	0.4	mg/l	99%	-0.35
AQ			mg/l		
AR	32.4		mg/l	97%	-0.97
AS	32.02	3.45	mg/l	96%	-1.30
AT			mg/l		
AU			mg/l		
AV	32.95	3.0	mg/l	98%	-0.48

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	$33,2 \pm 0,6$	$33,2 \pm 0,6$	mg/l
Recov. \pm CI(99%)	$99,2 \pm 1,8$	$99,2 \pm 1,8$	%
SD between labs	1,4	1,4	mg/l
RSD between labs	4,1	4,1	%
n for calculation	38	38	



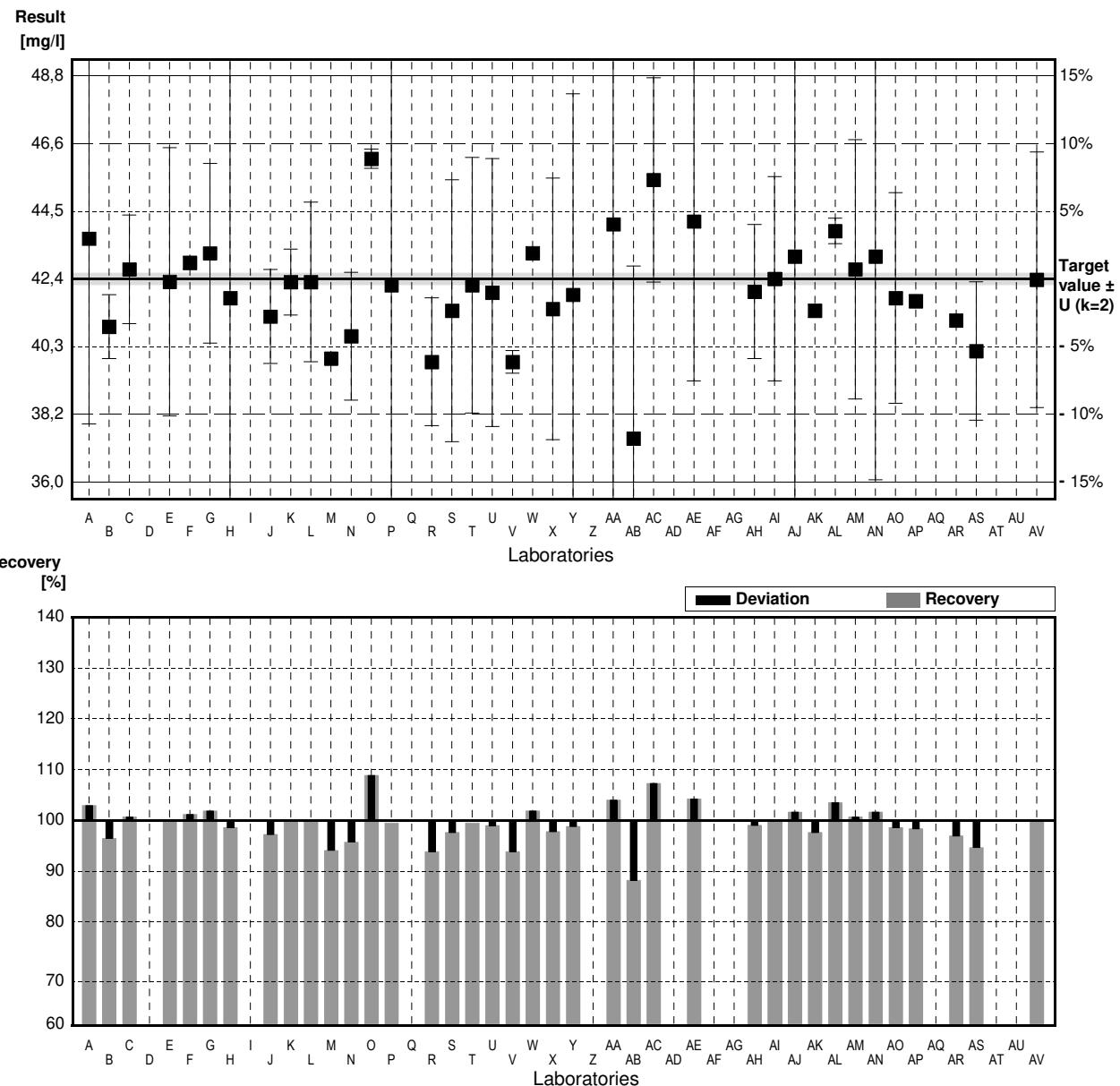
Sample N159B

Parameter Sodium

Target value $\pm U$ ($k=2$) 42,4 mg/l \pm 0,2 mg/l
 IFA result $\pm U$ ($k=2$) 43,0 mg/l \pm 1,7 mg/l
 Stability test $\pm U$ ($k=2$) 41,2 mg/l \pm 1,6 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	43,66	5,81	mg/l	103%	0,87
B	40,9	1	mg/l	96%	-1,04
C	42,7	1,7	mg/l	101%	0,21
D			mg/l		
E	42,31	4,2	mg/l	100%	-0,06
F	42,9	0,2	mg/l	101%	0,35
G	43,2	2,81	mg/l	102%	0,55
H	41,8	8,4	mg/l	99%	-0,42
I			mg/l		
J	41,22	1,47	mg/l	97%	-0,82
K	42,3	1,03	mg/l	100%	-0,07
L	42,3	2,5	mg/l	100%	-0,07
M	39,9		mg/l	94%	-1,73
N	40,6	2,0	mg/l	95%	-1,25
O	46,16 *	0,3	mg/l	109%	2,61
P	42,2	7,60	mg/l	100%	-0,14
Q			mg/l		
R	39,8	2,0	mg/l	94%	-1,80
S	41,4	4,1	mg/l	98%	-0,69
T	42,2	4	mg/l	100%	-0,14
U	41,97	4,197	mg/l	99%	-0,30
V	39,8	0,35	mg/l	94%	-1,80
W	43,21		mg/l	102%	0,56
X	41,46	4,1	mg/l	98%	-0,65
Y	41,9	6,3	mg/l	99%	-0,35
Z			mg/l		
AA	44,11	13,72	mg/l	104%	1,19
AB	37,4 *	5,4	mg/l	88%	-3,47
AC	45,5	3,2	mg/l	107%	2,15
AD			mg/l		
AE	44,2	5	mg/l	104%	1,25
AF			mg/l		
AG			mg/l		
AH	42,0	2,10	mg/l	99%	-0,28
AI	42,4	3,2	mg/l	100%	0,00
AJ	43,1	8,5	mg/l	102%	0,49
AK	41,4	0,2	mg/l	98%	-0,69
AL	43,9	0,4	mg/l	104%	1,04
AM	42,7	4,06	mg/l	101%	0,21
AN	43,1	7	mg/l	102%	0,49
AO	41,8	3,3	mg/l	99%	-0,42
AP	41,7	0,2	mg/l	98%	-0,49
AQ			mg/l		
AR	41,1		mg/l	97%	-0,90
AS	40,14	2,17	mg/l	95%	-1,57
AT			mg/l		
AU			mg/l		
AV	42,37	4,0	mg/l	100%	-0,02

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	42,1 \pm 0,7	42,1 \pm 0,6	mg/l
Recov. \pm Cl(99%)	99,4 \pm 1,7	99,4 \pm 1,4	%
SD between labs	1,6	1,3	mg/l
RSD between labs	3,8	3,1	%
n for calculation	38	36	



Sample N159A

Parameter Potassium

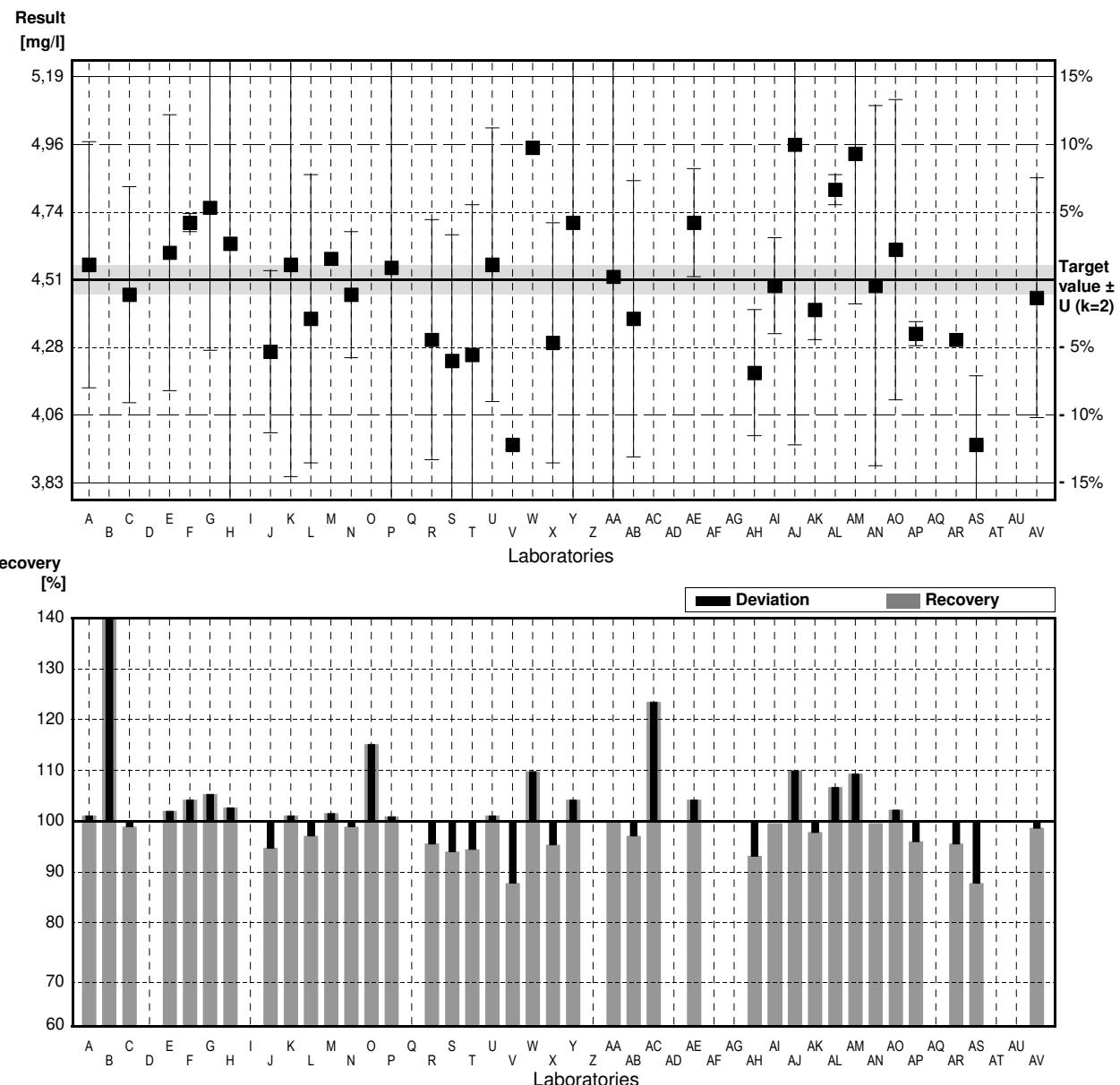
Target value $\pm U$ ($k=2$) 4,51 mg/l \pm 0,05 mg/l

IFA result $\pm U$ ($k=2$) 4,53 mg/l \pm 0,27 mg/l

Stability test $\pm U$ ($k=2$) 4,44 mg/l \pm 0,27 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	4.56	0.41	mg/l	101%	0.25
B	7.4 *	0.1	mg/l	164%	14.24
C	4.46	0.36	mg/l	99%	-0.25
D			mg/l		
E	4.60	0.46	mg/l	102%	0.44
F	4.70	0.03	mg/l	104%	0.94
G	4.75	0.475	mg/l	105%	1.18
H	4.63	0.93	mg/l	103%	0.59
I			mg/l		
J	4.27	0.27	mg/l	95%	-1.18
K	4.56	0.706	mg/l	101%	0.25
L	4.38	0.48	mg/l	97%	-0.64
M	4.58		mg/l	102%	0.34
N	4.46	0.21	mg/l	99%	-0.25
O	5.192	0.06	mg/l	115%	3.36
P	4.55	0.82	mg/l	101%	0.20
Q			mg/l		
R	4.31	0.4	mg/l	96%	-0.99
S	4.24	0.42	mg/l	94%	-1.33
T	4.26	0.5	mg/l	94%	-1.23
U	4.56	0.456	mg/l	101%	0.25
V	3.96	0.015	mg/l	88%	-2.71
W	4.95		mg/l	110%	2.17
X	4.30	0.4	mg/l	95%	-1.03
Y	4.70	0.94	mg/l	104%	0.94
Z			mg/l		
AA	4.52	1.01	mg/l	100%	0.05
AB	4.38	0.46	mg/l	97%	-0.64
AC	5.57 *	0.40	mg/l	124%	5.22
AD			mg/l		
AE	4.70	0.18	mg/l	104%	0.94
AF			mg/l		
AG			mg/l		
AH	4.20	0.210	mg/l	93%	-1.53
AI	4.49	0.16	mg/l	100%	-0.10
AJ	4.96	1.0	mg/l	110%	2.22
AK	4.41	0.1	mg/l	98%	-0.49
AL	4.81	0.05	mg/l	107%	1.48
AM	4.93	0.50	mg/l	109%	2.07
AN	4.49	0.6	mg/l	100%	-0.10
AO	4.61	0.5	mg/l	102%	0.49
AP	4.33	0.04	mg/l	96%	-0.89
AQ			mg/l		
AR	4.31		mg/l	96%	-0.99
AS	3.96	0.23	mg/l	88%	-2.71
AT			mg/l		
AU			mg/l		
AV	4.45	0.4	mg/l	99%	-0.30

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	4,62 \pm 0,25	4,51 \pm 0,12	mg/l
Recov. \pm Cl(99%)	102,4 \pm 5,4	100,1 \pm 2,7	%
SD between labs	0,56	0,26	mg/l
RSD between labs	12,1	5,9	%
n for calculation	38	36	



Sample N159B

Parameter Potassium

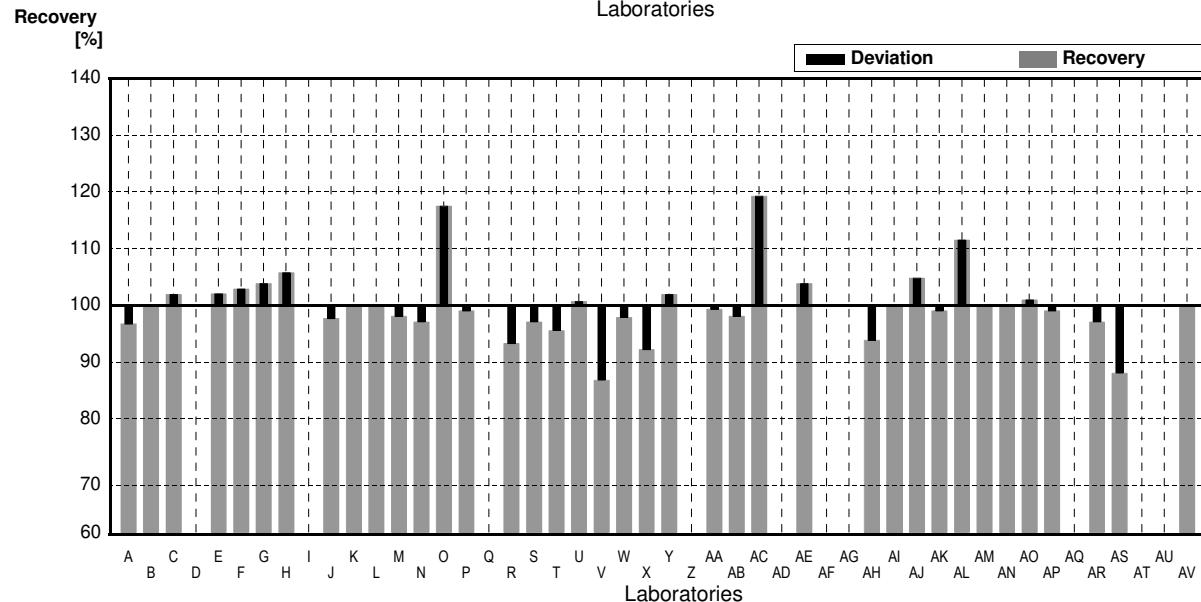
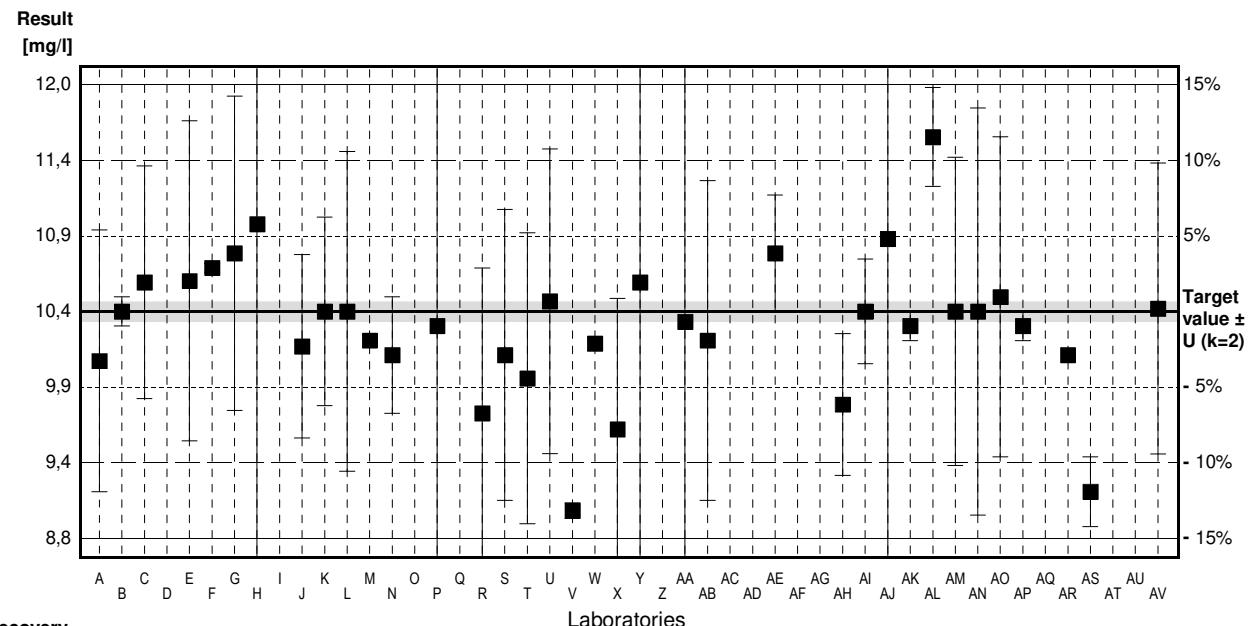
Target value $\pm U$ ($k=2$) 10,4 mg/l \pm 0,1 mg/l

IFA result $\pm U$ ($k=2$) 10,4 mg/l \pm 0,5 mg/l

Stability test $\pm U$ ($k=2$) 10,4 mg/l \pm 0,5 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	10,06	0,90	mg/l	97%	-0,73
B	10,4	0,1	mg/l	100%	0,00
C	10,6	0,8	mg/l	102%	0,43
D			mg/l		
E	10,61	1,1	mg/l	102%	0,45
F	10,7	0,03	mg/l	103%	0,64
G	10,8	1,08	mg/l	104%	0,85
H	11,0	2,2	mg/l	106%	1,28
I			mg/l		
J	10,16	0,63	mg/l	98%	-0,51
K	10,4	0,649	mg/l	100%	0,00
L	10,4	1,1	mg/l	100%	0,00
M	10,2		mg/l	98%	-0,43
N	10,1	0,4	mg/l	97%	-0,64
O	12,223 *	0,06	mg/l	118%	3,90
P	10,3	1,85	mg/l	99%	-0,21
Q			mg/l		
R	9,7	1,0	mg/l	93%	-1,50
S	10,1	1,0	mg/l	97%	-0,64
T	9,94	1	mg/l	96%	-0,98
U	10,47	1,047	mg/l	101%	0,15
V	9,03 *	0,053	mg/l	87%	-2,93
W	10,18		mg/l	98%	-0,47
X	9,59	0,9	mg/l	92%	-1,73
Y	10,6	2,2	mg/l	102%	0,43
Z			mg/l		
AA	10,33	2,32	mg/l	99%	-0,15
AB	10,2	1,1	mg/l	98%	-0,43
AC	12,4 *	0,9	mg/l	119%	4,27
AD			mg/l		
AE	10,8	0,4	mg/l	104%	0,85
AF			mg/l		
AG			mg/l		
AH	9,76	0,488	mg/l	94%	-1,37
AI	10,4	0,36	mg/l	100%	0,00
AJ	10,9	2,2	mg/l	105%	1,07
AK	10,3	0,1	mg/l	99%	-0,21
AL	11,6 *	0,34	mg/l	112%	2,56
AM	10,4	1,06	mg/l	100%	0,00
AN	10,4	1,4	mg/l	100%	0,00
AO	10,5	1,1	mg/l	101%	0,21
AP	10,3	0,1	mg/l	99%	-0,21
AQ			mg/l		
AR	10,1		mg/l	97%	-0,64
AS	9,16 *	0,24	mg/l	88%	-2,65
AT			mg/l		
AU			mg/l		
AV	10,42	1,0	mg/l	100%	0,04

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	10,4 \pm 0,3	10,3 \pm 0,2	mg/l
Recov. \pm CI(99%)	100,1 \pm 2,8	99,4 \pm 1,5	%
SD between labs	0,7	0,3	mg/l
RSD between labs	6,3	3,2	%
n for calculation	38	33	



Sample N159A

Parameter Nitrate

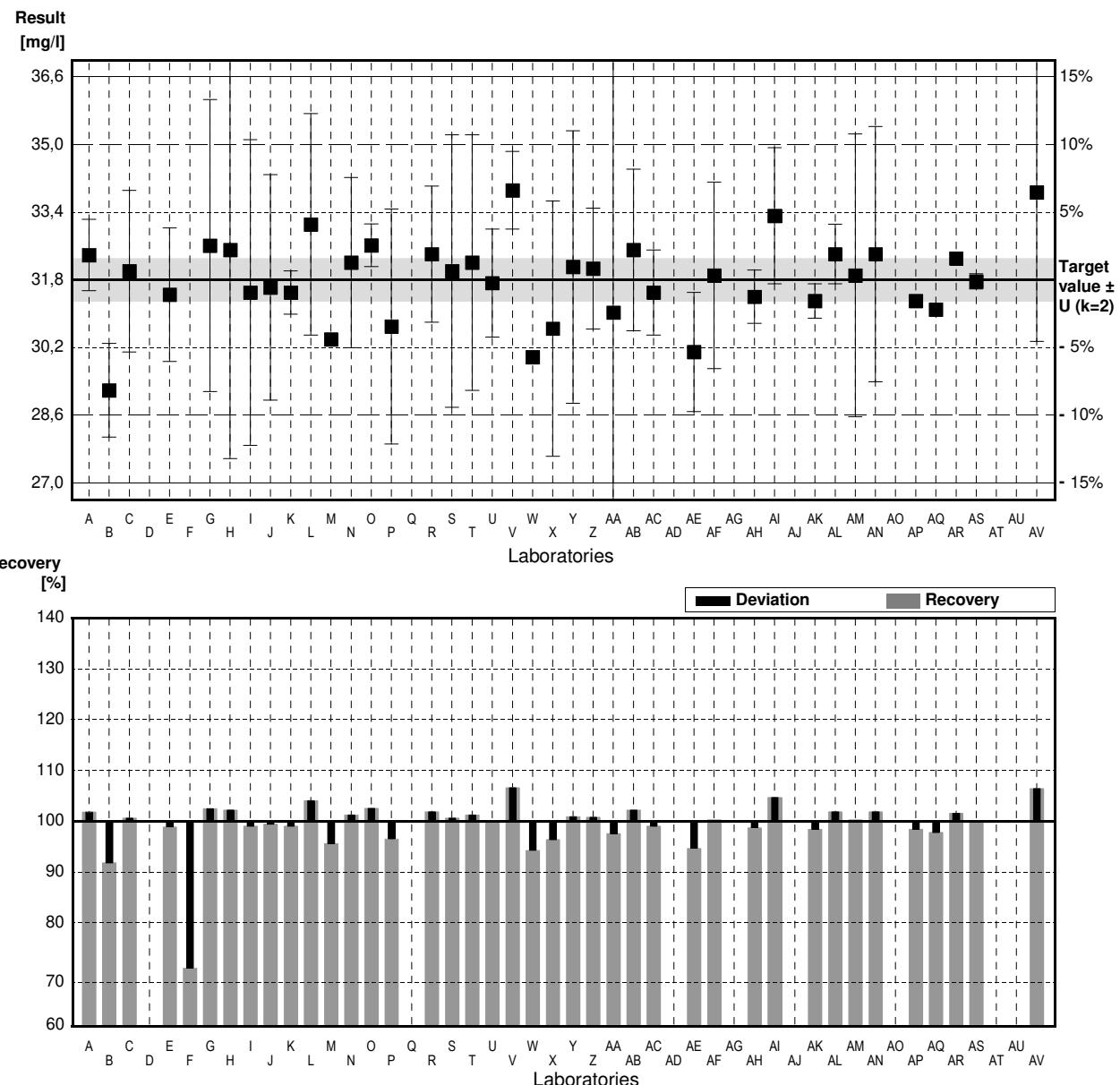
Target value $\pm U$ ($k=2$) 31,8 mg/l \pm 0,5 mg/l

IFA result $\pm U$ ($k=2$) 30,8 mg/l \pm 1,5 mg/l

Stability test $\pm U$ ($k=2$) 31,2 mg/l \pm 1,6 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	32,38	0,84	mg/l	102%	0,55
B	29,2 *	1,1	mg/l	92%	-2,48
C	32,0	1,9	mg/l	101%	0,19
D			mg/l		
E	31,45	1,57	mg/l	99%	-0,33
F	22,6 *	0,072	mg/l	71%	-8,77
G	32,6	3,43	mg/l	103%	0,76
H	32,5	4,9	mg/l	102%	0,67
I	31,5	3,59	mg/l	99%	-0,29
J	31,62	2,65	mg/l	99%	-0,17
K	31,5	0,509	mg/l	99%	-0,29
L	33,1	2,6	mg/l	104%	1,24
M	30,4		mg/l	96%	-1,33
N	32,2	2,0	mg/l	101%	0,38
O	32,61	0,5	mg/l	103%	0,77
P	30,7	2,76	mg/l	97%	-1,05
Q			mg/l		
R	32,4	1,6	mg/l	102%	0,57
S	32,0	3,2	mg/l	101%	0,19
T	32,2	3	mg/l	101%	0,38
U	31,722	1,2689	mg/l	100%	-0,07
V	33,9	0,91	mg/l	107%	2,00
W	29,98		mg/l	94%	-1,73
X	30,65	3,0	mg/l	96%	-1,10
Y	32,1	3,2	mg/l	101%	0,29
Z	32,06	1,420	mg/l	101%	0,25
AA	31,03	8,84	mg/l	98%	-0,73
AB	32,5	1,9	mg/l	102%	0,67
AC	31,5	1,0	mg/l	99%	-0,29
AD			mg/l		
AE	30,1	1,4	mg/l	95%	-1,62
AF	31,9	2,19	mg/l	100%	0,10
AG			mg/l		
AH	31,4	0,628	mg/l	99%	-0,38
AI	33,3	1,6	mg/l	105%	1,43
AJ			mg/l		
AK	31,3	0,4	mg/l	98%	-0,48
AL	32,4	0,7	mg/l	102%	0,57
AM	31,9	3,32	mg/l	100%	0,10
AN	32,4	3	mg/l	102%	0,57
AO			mg/l		
AP	31,3	0,1	mg/l	98%	-0,48
AQ	31,1		mg/l	98%	-0,67
AR	32,3		mg/l	102%	0,48
AS	31,76	0,18	mg/l	100%	-0,04
AT			mg/l		
AU			mg/l		
AV	33,85	3,5	mg/l	106%	1,95

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	$31,6 \pm 0,8$	$31,9 \pm 0,4$	mg/l
Recov. \pm CI(99%)	$99,3 \pm 2,4$	$100,3 \pm 1,2$	%
SD between labs	1,8	0,9	mg/l
RSD between labs	5,5	2,8	%
n for calculation	40	38	



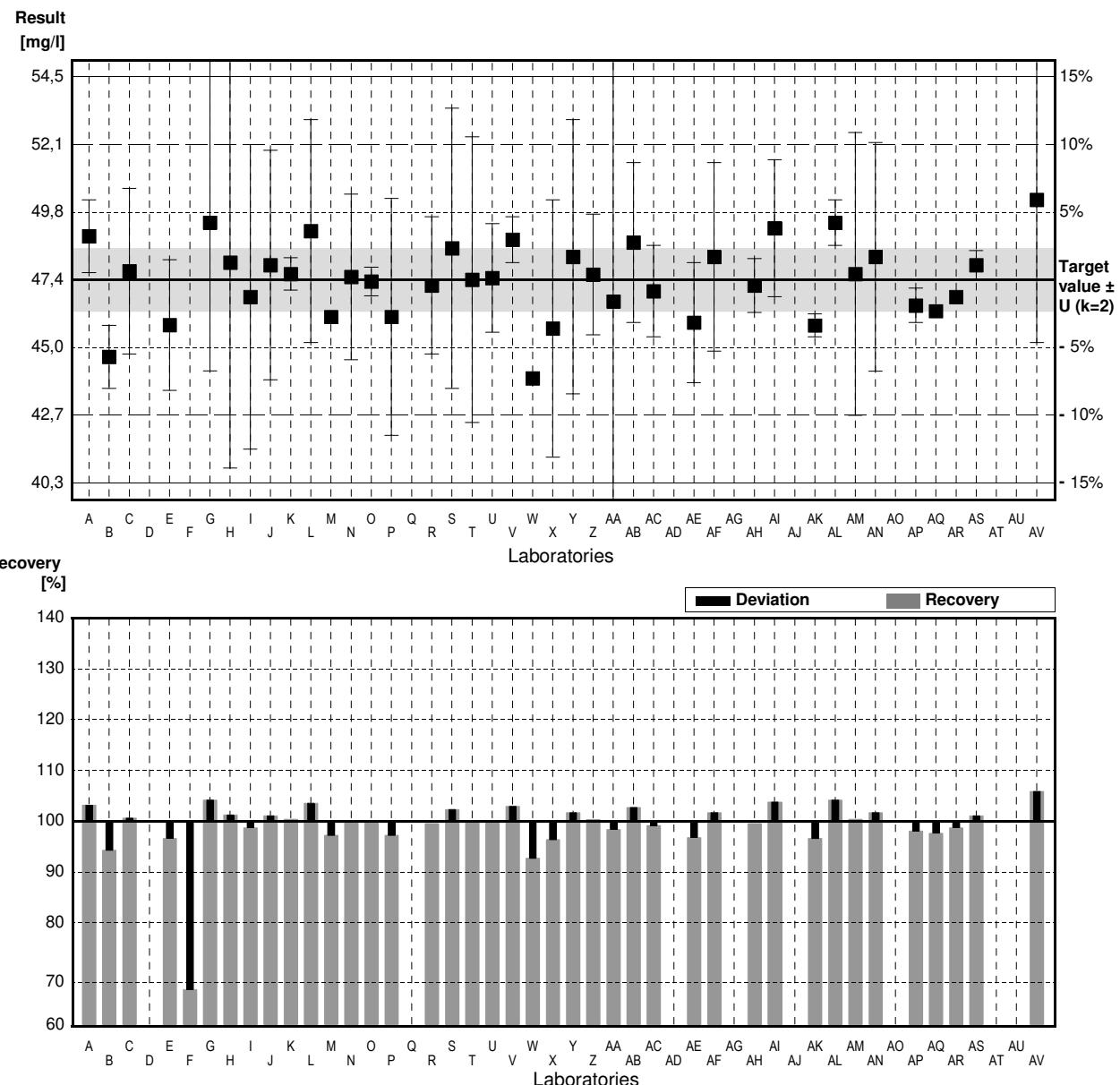
Sample N159B

Parameter Nitrate

Target value $\pm U$ ($k=2$) 47,4 mg/l \pm 1,1 mg/l
 IFA result $\pm U$ ($k=2$) 45,7 mg/l \pm 2,3 mg/l
 Stability test $\pm U$ ($k=2$) 48,1 mg/l \pm 2,4 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	48,92	1,27	mg/l	103%	0,97
B	44,7	1,1	mg/l	94%	-1,73
C	47,7	2,9	mg/l	101%	0,19
D			mg/l		
E	45,81	2,29	mg/l	97%	-1,02
F	31,7 *	0,072	mg/l	67%	-10,04
G	49,4	5,19	mg/l	104%	1,28
H	48,0	7,2	mg/l	101%	0,38
I	46,8	5,33	mg/l	99%	-0,38
J	47,91	4,02	mg/l	101%	0,33
K	47,6	0,571	mg/l	100%	0,13
L	49,1	3,9	mg/l	104%	1,09
M	46,1		mg/l	97%	-0,83
N	47,5	2,9	mg/l	100%	0,06
O	47,34	0,5	mg/l	100%	-0,04
P	46,1	4,15	mg/l	97%	-0,83
Q			mg/l		
R	47,2	2,4	mg/l	100%	-0,13
S	48,5	4,9	mg/l	102%	0,70
T	47,4	5	mg/l	100%	0,00
U	47,460	1,8984	mg/l	100%	0,04
V	48,8	0,80	mg/l	103%	0,90
W	43,95		mg/l	93%	-2,21
X	45,69	4,5	mg/l	96%	-1,09
Y	48,2	4,8	mg/l	102%	0,51
Z	47,58	2,108	mg/l	100%	0,12
AA	46,64	13,29	mg/l	98%	-0,49
AB	48,7	2,8	mg/l	103%	0,83
AC	47,0	1,6	mg/l	99%	-0,26
AD			mg/l		
AE	45,9	2,1	mg/l	97%	-0,96
AF	48,2	3,30	mg/l	102%	0,51
AG			mg/l		
AH	47,2	0,944	mg/l	100%	-0,13
AI	49,2	2,4	mg/l	104%	1,15
AJ			mg/l		
AK	45,8	0,4	mg/l	97%	-1,02
AL	49,4	0,8	mg/l	104%	1,28
AM	47,6	4,95	mg/l	100%	0,13
AN	48,2	4	mg/l	102%	0,51
AO			mg/l		
AP	46,5	0,6	mg/l	98%	-0,58
AQ	46,3		mg/l	98%	-0,70
AR	46,8		mg/l	99%	-0,38
AS	47,91	0,51	mg/l	101%	0,33
AT			mg/l		
AU			mg/l		
AV	50,2	5,0	mg/l	106%	1,79

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	47,0 \pm 1,2	47,4 \pm 0,6	mg/l
Recov. \pm Cl(99%)	99,2 \pm 2,5	100,0 \pm 1,2	%
SD between labs	2,8	1,3	mg/l
RSD between labs	6,0	2,8	%
n for calculation	40	39	



Sample N159A

Parameter Nitrite

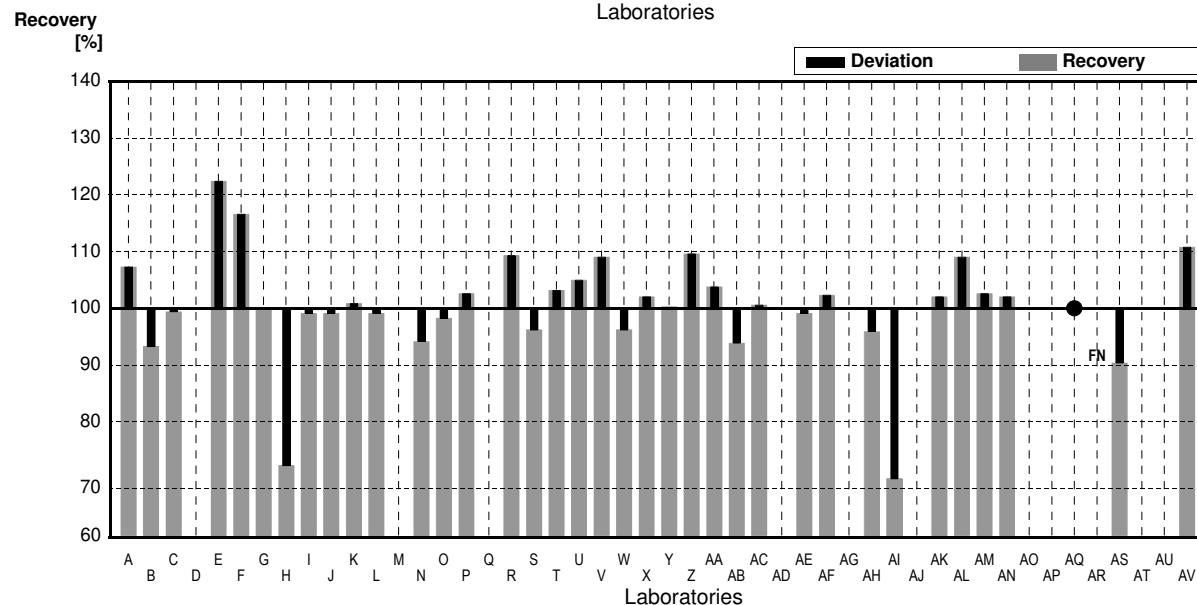
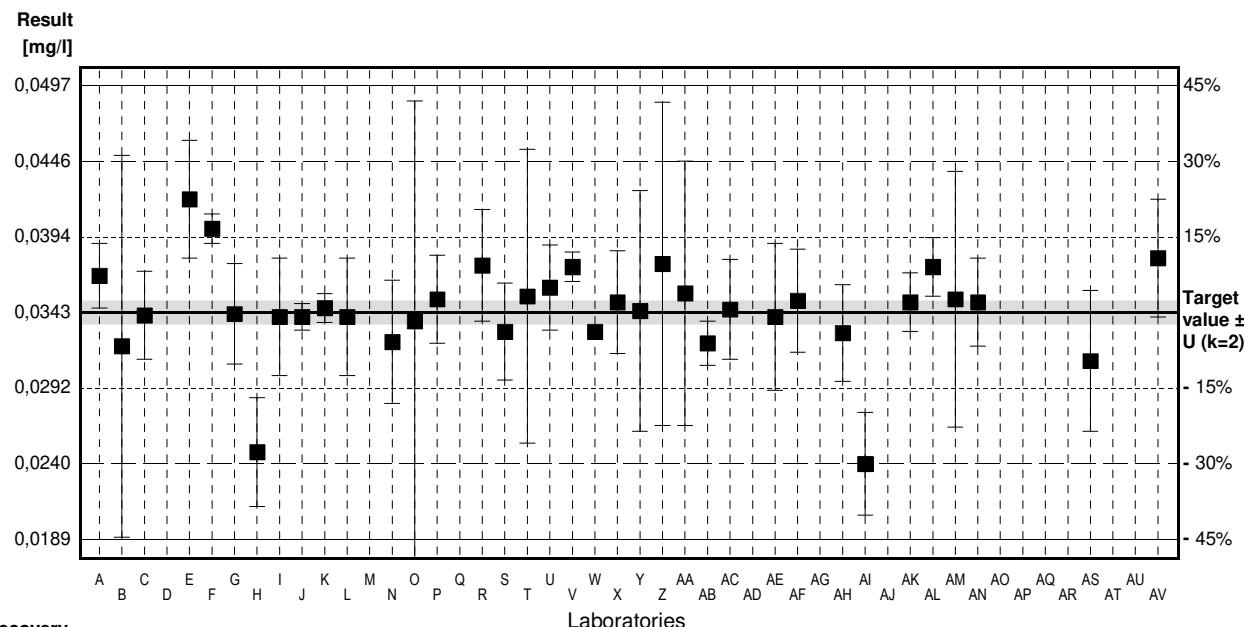
Target value $\pm U$ ($k=2$) 0,0343 mg/l \pm 0,0008 mg/l

IFA result $\pm U$ ($k=2$) 0,0331 mg/l \pm 0,0017 mg/l

Stability test $\pm U$ ($k=2$) 0,0326 mg/l \pm 0,0016 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0,0368	0,0022	mg/l	107%	1,19
B	0,0320	0,013	mg/l	93%	-1,10
C	0,0341	0,003	mg/l	99%	-0,10
D			mg/l		
E	0,0420 *	0,004	mg/l	122%	3,68
F	0,0400	0,001	mg/l	117%	2,72
G	0,0342	0,00342	mg/l	100%	-0,05
H	0,0248 *	0,0037	mg/l	72%	-4,54
I	0,0340	0,004	mg/l	99%	-0,14
J	0,0340	0,0009	mg/l	99%	-0,14
K	0,0346	0,00098	mg/l	101%	0,14
L	0,0340	0,004	mg/l	99%	-0,14
M			mg/l		
N	0,0323	0,0042	mg/l	94%	-0,96
O	0,0337	0,015	mg/l	98%	-0,29
P	0,0352	0,003	mg/l	103%	0,43
Q			mg/l		
R	0,0375	0,0038	mg/l	109%	1,53
S	0,0330	0,0033	mg/l	96%	-0,62
T	0,0354	0,01	mg/l	103%	0,53
U	0,03600	0,00290	mg/l	105%	0,81
V	0,0374	0,001	mg/l	109%	1,48
W	0,0330		mg/l	96%	-0,62
X	0,0350	0,0035	mg/l	102%	0,33
Y	0,0344	0,0082	mg/l	100%	0,05
Z	0,0376	0,0110	mg/l	110%	1,58
AA	0,0356	0,009	mg/l	104%	0,62
AB	0,0322	0,0015	mg/l	94%	-1,00
AC	0,0345	0,0034	mg/l	101%	0,10
AD			mg/l		
AE	0,0340	0,005	mg/l	99%	-0,14
AF	0,0351	0,0035	mg/l	102%	0,38
AG			mg/l		
AH	0,0329	0,00329	mg/l	96%	-0,67
AI	0,0240 *	0,0035	mg/l	70%	-4,92
AJ			mg/l		
AK	0,035	0,002	mg/l	102%	0,33
AL	0,0374	0,002	mg/l	109%	1,48
AM	0,0352	0,0087	mg/l	103%	0,43
AN	0,0350	0,003	mg/l	102%	0,33
AO			mg/l		
AP			mg/l		
AQ	<0,05		mg/l	*	
AR	<0,03		mg/l	FN	
AS	0,0310	0,0048	mg/l	90%	-1,58
AT			mg/l		
AU			mg/l		
AV	0,038	0,004	mg/l	111%	1,77

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,0345 \pm 0,001	0,0349 \pm 0,000	mg/l
Recov. \pm CI(99%)	100,5 \pm 4,4	101,6 \pm 2,7	%
SD between labs	0,0033	0,0020	mg/l
RSD between labs	9,7	5,6	%
n for calculation	36	33	



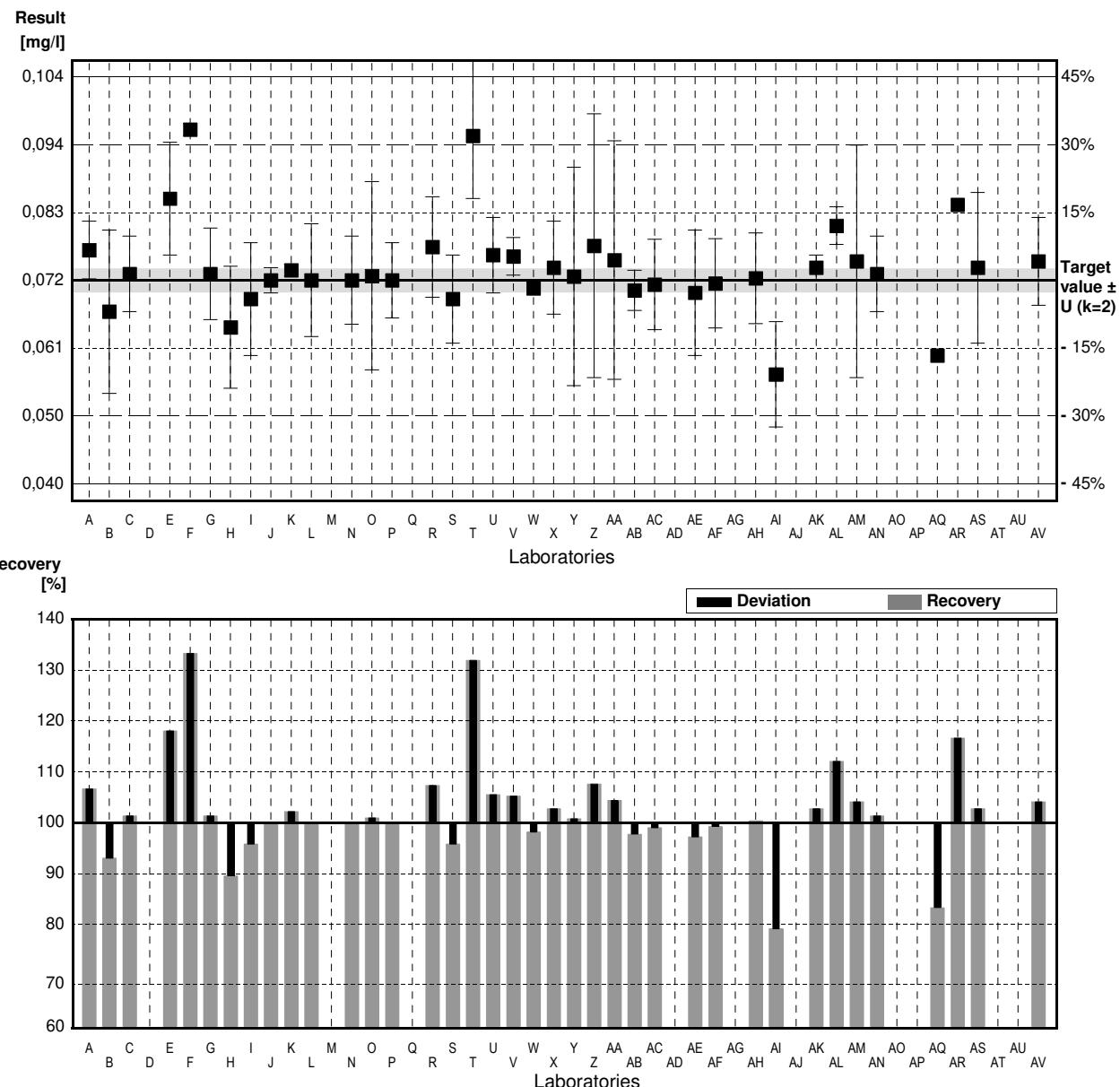
Sample N159B

Parameter Nitrite

Target value $\pm U$ ($k=2$) 0,072 mg/l \pm 0,002 mg/l
 IFA result $\pm U$ ($k=2$) 0,070 mg/l \pm 0,004 mg/l
 Stability test $\pm U$ ($k=2$) 0,071 mg/l \pm 0,004 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0,0768	0,0046	mg/l	107%	1,09
B	0,067	0,013	mg/l	93%	-1,14
C	0,073	0,006	mg/l	101%	0,23
D			mg/l		
E	0,085 *	0,009	mg/l	118%	2,96
F	0,096 *	0,001	mg/l	133%	5,46
G	0,0730	0,00730	mg/l	101%	0,23
H	0,0645	0,0097	mg/l	90%	-1,71
I	0,069	0,009	mg/l	96%	-0,68
J	0,0720	0,002	mg/l	100%	0,00
K	0,0736	0,00094	mg/l	102%	0,36
L	0,072	0,009	mg/l	100%	0,00
M			mg/l		
N	0,072	0,007	mg/l	100%	0,00
O	0,0727	0,015	mg/l	101%	0,16
P	0,072	0,006	mg/l	100%	0,00
Q			mg/l		
R	0,0773	0,008	mg/l	107%	1,21
S	0,069	0,007	mg/l	96%	-0,68
T	0,095 *	0,01	mg/l	132%	5,24
U	0,076	0,00600	mg/l	106%	0,91
V	0,0758	0,003	mg/l	105%	0,87
W	0,0707		mg/l	98%	-0,30
X	0,0740	0,0074	mg/l	103%	0,46
Y	0,0726	0,0174	mg/l	101%	0,14
Z	0,0775	0,0210	mg/l	108%	1,25
AA	0,0752	0,019	mg/l	104%	0,73
AB	0,0704	0,0032	mg/l	98%	-0,36
AC	0,0713	0,0072	mg/l	99%	-0,16
AD			mg/l		
AE	0,070	0,010	mg/l	97%	-0,46
AF	0,0715	0,0071	mg/l	99%	-0,11
AG			mg/l		
AH	0,0723	0,00723	mg/l	100%	0,07
AI	0,057 *	0,0084	mg/l	79%	-3,42
AJ			mg/l		
AK	0,074	0,002	mg/l	103%	0,46
AL	0,0807	0,003	mg/l	112%	1,98
AM	0,0750	0,0185	mg/l	104%	0,68
AN	0,073	0,006	mg/l	101%	0,23
AO			mg/l		
AP			mg/l		
AQ	0,060 *		mg/l	83%	-2,73
AR	0,084 *		mg/l	117%	2,73
AS	0,074	0,012	mg/l	103%	0,46
AT			mg/l		
AU			mg/l		
AV	0,075	0,007	mg/l	104%	0,68

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	0,074 \pm 0,003	0,073 \pm 0,002	mg/l
Recov. \pm Cl(99%)	102,7 \pm 4,5	101,3 \pm 2,2	%
SD between labs	0,007	0,003	mg/l
RSD between labs	9,9	4,4	%
n for calculation	38	32	



Sample N159A

Parameter Ammonium

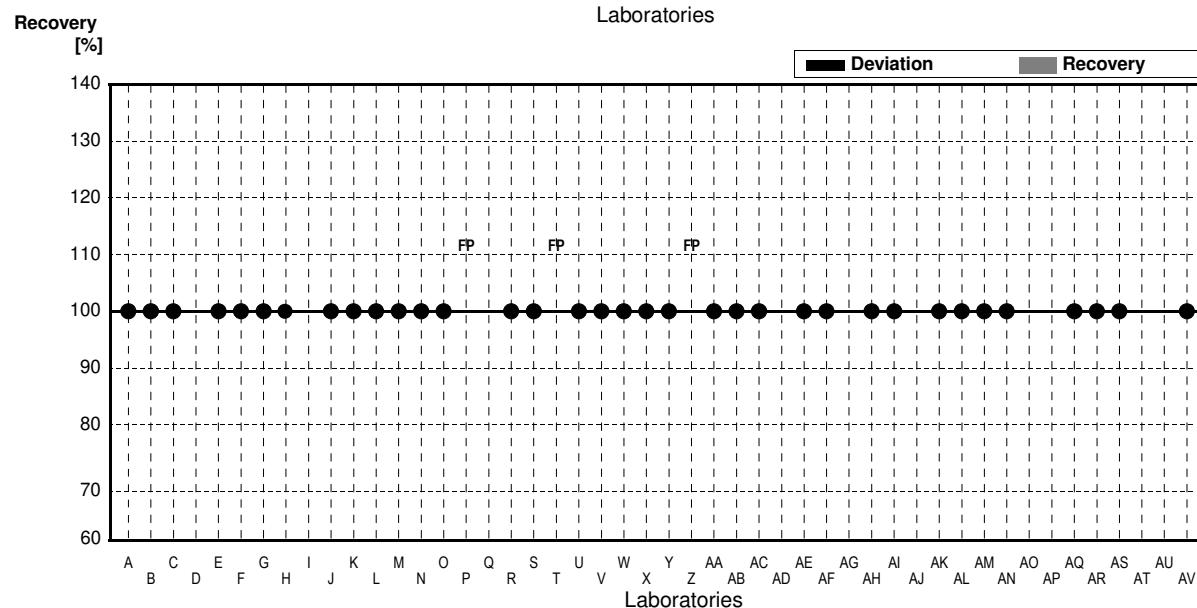
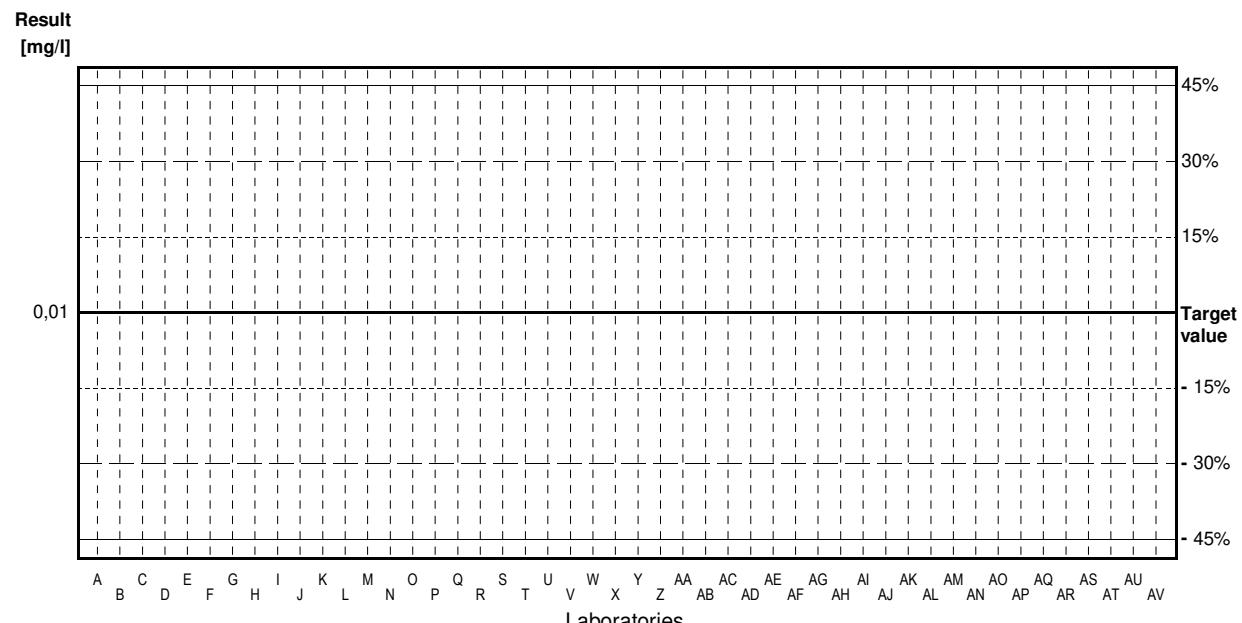
Target value <0,01 mg/l

IFA result <0,01 mg/l

Stability test <0,01 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0,0062	0,0012	mg/l	.	
B	<0,015	0,055	mg/l	.	
C	<0,008		mg/l	.	
D			mg/l		
E	<0,01		mg/l	.	
F	<0,003	0,002	mg/l	.	
G	<0,04		mg/l	.	
H	'0,0125	0,007	mg/l	.	
I			mg/l		
J	<0,04	0,0017	mg/l	.	
K	<0,010		mg/l	.	
L	<0,02		mg/l	.	
M	<0,02		mg/l	.	
N	<0,010		mg/l	.	
O	<0,023	0,080	mg/l	.	
P	0,0132	0,001	mg/l	FP	
Q			mg/l		
R	<0,01		mg/l	.	
S	<0,01		mg/l	.	
T	0,0230	0,01	mg/l	FP	
U	<0,0005		mg/l	.	
V	<0,010		mg/l	.	
W	0,0054		mg/l	.	
X	<0,009		mg/l	.	
Y	<0,010		mg/l	.	
Z	0,0133	0,0030	mg/l	FP	
AA	<0,019		mg/l	.	
AB	0,00170	0,00012	mg/l	.	
AC	<0,01		mg/l	.	
AD			mg/l		
AE	<0,01		mg/l	.	
AF	<0,005	0	mg/l	.	
AG			mg/l		
AH	<0,026		mg/l	.	
AI	<0,01		mg/l	.	
AJ			mg/l		
AK	<0,006	0,003	mg/l	.	
AL	<0,01		mg/l	.	
AM	<0,05		mg/l	.	
AN	<0,013		mg/l	.	
AO			mg/l		
AP			mg/l		
AQ	<0,05		mg/l	.	
AR	<0,2		mg/l	.	
AS	<0,05		mg/l	.	
AT			mg/l		
AU			mg/l		
AV	<0,04		mg/l	.	

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



Sample N159B

Parameter Ammonium

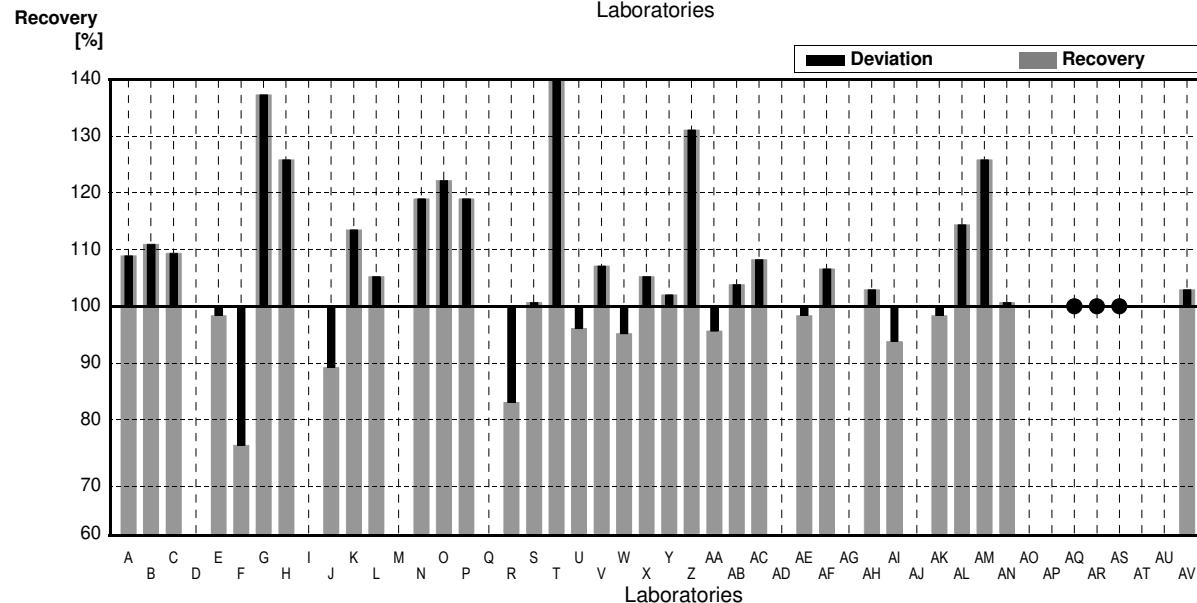
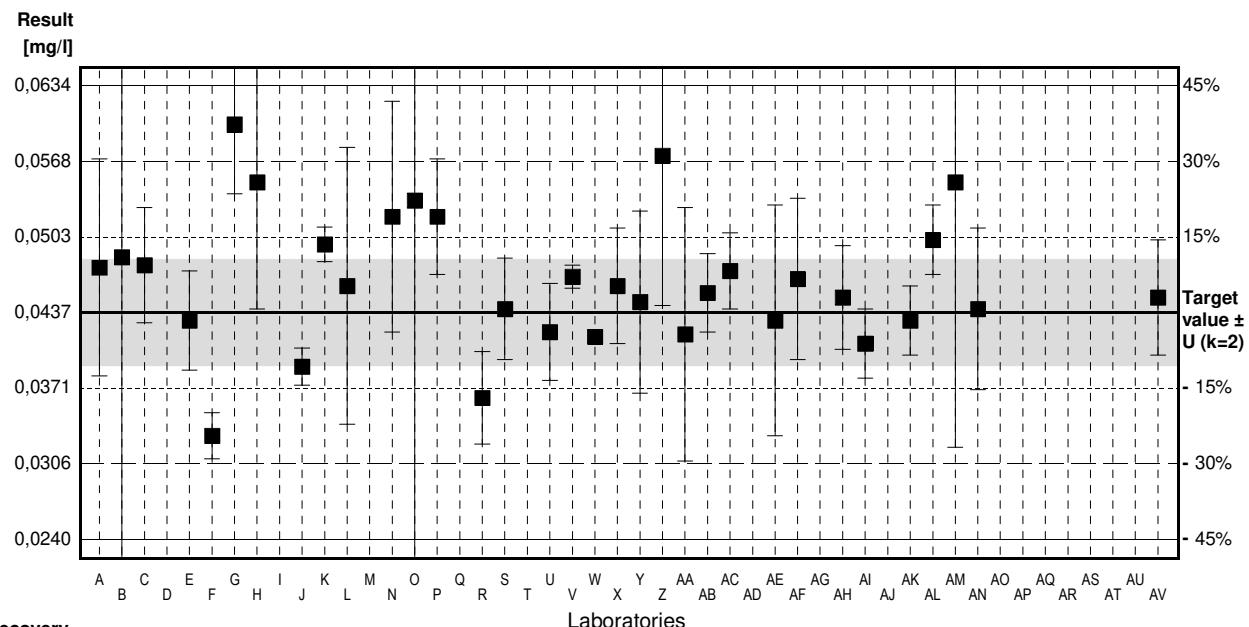
Target value $\pm U$ ($k=2$) 0,0437 mg/l \pm 0,0046 mg/l

IFA result $\pm U$ ($k=2$) 0,0433 mg/l \pm 0,0022 mg/l

Stability test $\pm U$ ($k=2$) 0,0440 mg/l \pm 0,0022 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0,0476	0,0094	mg/l	109%	0,74
B	0,0485	0,055	mg/l	111%	0,92
C	0,0478	0,005	mg/l	109%	0,78
D			mg/l		
E	0,0430	0,0043	mg/l	98%	-0,13
F	0,0330	0,002	mg/l	76%	-2,04
G	0,060	0,0060	mg/l	137%	3,11
H	0,055	0,011	mg/l	126%	2,15
I			mg/l		
J	0,0390	0,0016	mg/l	89%	-0,90
K	0,0496	0,00151	mg/l	114%	1,13
L	0,0460	0,012	mg/l	105%	0,44
M			mg/l		
N	0,052	0,010	mg/l	119%	1,58
O	0,0534	0,080	mg/l	122%	1,85
P	0,052	0,005	mg/l	119%	1,58
Q			mg/l		
R	0,0363	0,004	mg/l	83%	-1,41
S	0,0440	0,0044	mg/l	101%	0,06
T	0,065	*	mg/l	149%	4,06
U	0,04200	0,00420	mg/l	96%	-0,32
V	0,0468	0,001	mg/l	107%	0,59
W	0,0416		mg/l	95%	-0,40
X	0,0460	0,005	mg/l	105%	0,44
Y	0,0446	0,0079	mg/l	102%	0,17
Z	0,0573	0,0130	mg/l	131%	2,59
AA	0,0418	0,011	mg/l	96%	-0,36
AB	0,0454	0,0034	mg/l	104%	0,32
AC	0,0473	0,0033	mg/l	108%	0,69
AD			mg/l		
AE	0,0430	0,010	mg/l	98%	-0,13
AF	0,0466	0,0070	mg/l	107%	0,55
AG			mg/l		
AH	0,0450	0,00450	mg/l	103%	0,25
AI	0,041	0,0030	mg/l	94%	-0,51
AJ			mg/l		
AK	0,043	0,003	mg/l	98%	-0,13
AL	0,050	0,003	mg/l	114%	1,20
AM	0,055	0,023	mg/l	126%	2,15
AN	0,0440	0,007	mg/l	101%	0,06
AO			mg/l		
AP			mg/l		
AQ	<0,05		mg/l	*	
AR	<0,2		mg/l	*	
AS	<0,05		mg/l	*	
AT			mg/l		
AU			mg/l		
AV	0,045	0,005	mg/l	103%	0,25

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	$0,0470 \pm 0,0031$	$0,0464 \pm 0,0028$	mg/l
Recov. \pm Cl(99%)	$107,5 \pm 7,0$	$106,3 \pm 6,3$	%
SD between labs	0,0065	0,0058	mg/l
RSD between labs	13,9	12,5	%
n for calculation	34	33	



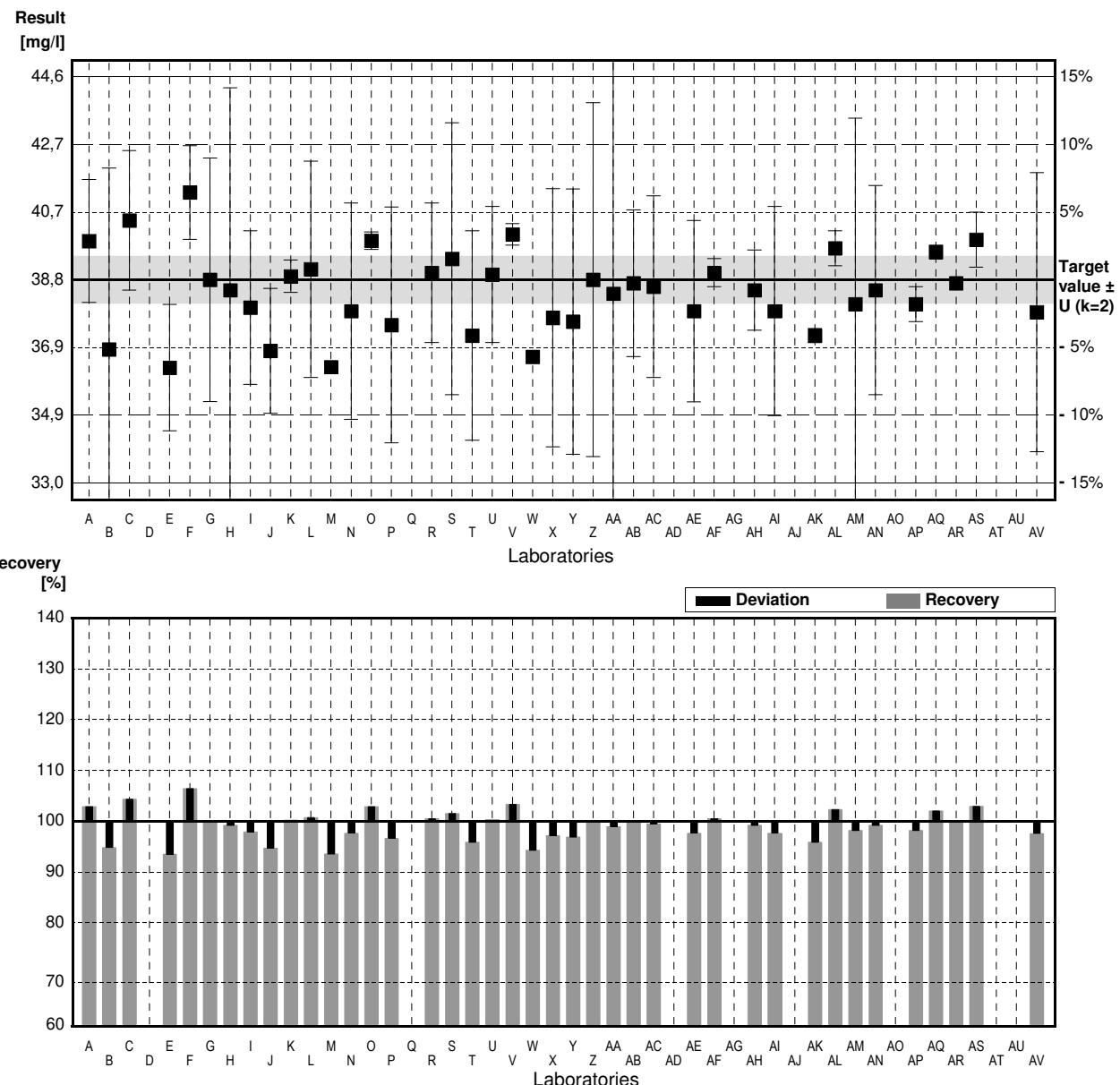
Sample N159A

Parameter Chloride

Target value $\pm U$ ($k=2$) 38,8 mg/l \pm 0,7 mg/l
 IFA result $\pm U$ ($k=2$) 37,2 mg/l \pm 1,5 mg/l
 Stability test $\pm U$ ($k=2$) 37,2 mg/l \pm 1,5 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	39,91	1,76	mg/l	103%	0,95
B	36,8	5,2	mg/l	95%	-1,72
C	40,5	2,0	mg/l	104%	1,46
D			mg/l		
E	36,28	1,81	mg/l	94%	-2,16
F	41,3 *	1,34	mg/l	106%	2,15
G	38,8	3,49	mg/l	100%	0,00
H	38,5	5,8	mg/l	99%	-0,26
I	38,0	2,2	mg/l	98%	-0,69
J	36,76	1,79	mg/l	95%	-1,75
K	38,9	0,465	mg/l	100%	0,09
L	39,1	3,1	mg/l	101%	0,26
M	36,3		mg/l	94%	-2,15
N	37,9	3,1	mg/l	98%	-0,77
O	39,92	0,25	mg/l	103%	0,96
P	37,5	3,38	mg/l	97%	-1,12
Q			mg/l		
R	39,0	2,0	mg/l	101%	0,17
S	39,4	3,9	mg/l	102%	0,52
T	37,2	3	mg/l	96%	-1,37
U	38,95	1,948	mg/l	100%	0,13
V	40,1	0,31	mg/l	103%	1,12
W	36,59		mg/l	94%	-1,90
X	37,71	3,7	mg/l	97%	-0,94
Y	37,6	3,8	mg/l	97%	-1,03
Z	38,8	5,07	mg/l	100%	0,00
AA	38,40	10,94	mg/l	99%	-0,34
AB	38,7	2,1	mg/l	100%	-0,09
AC	38,6	2,6	mg/l	99%	-0,17
AD			mg/l		
AE	37,9	2,6	mg/l	98%	-0,77
AF	39,0	0,40	mg/l	101%	0,17
AG			mg/l		
AH	38,5	1,15	mg/l	99%	-0,26
AI	37,9	3,0	mg/l	98%	-0,77
AJ			mg/l		
AK	37,2	0,2	mg/l	96%	-1,37
AL	39,7	0,5	mg/l	102%	0,77
AM	38,1	5,33	mg/l	98%	-0,60
AN	38,5	3	mg/l	99%	-0,26
AO			mg/l		
AP	38,1	0,5	mg/l	98%	-0,60
AQ	39,6		mg/l	102%	0,69
AR	38,7		mg/l	100%	-0,09
AS	39,95	0,79	mg/l	103%	0,99
AT			mg/l		
AU			mg/l		
AV	37,87	4,0	mg/l	98%	-0,80

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	38,5 \pm 0,5	38,4 \pm 0,5	mg/l
Recov. \pm Cl(99%)	99,1 \pm 1,3	98,9 \pm 1,2	%
SD between labs	1,2	1,1	mg/l
RSD between labs	3,0	2,8	%
n for calculation	40	39	



Sample N159B

Parameter Chloride

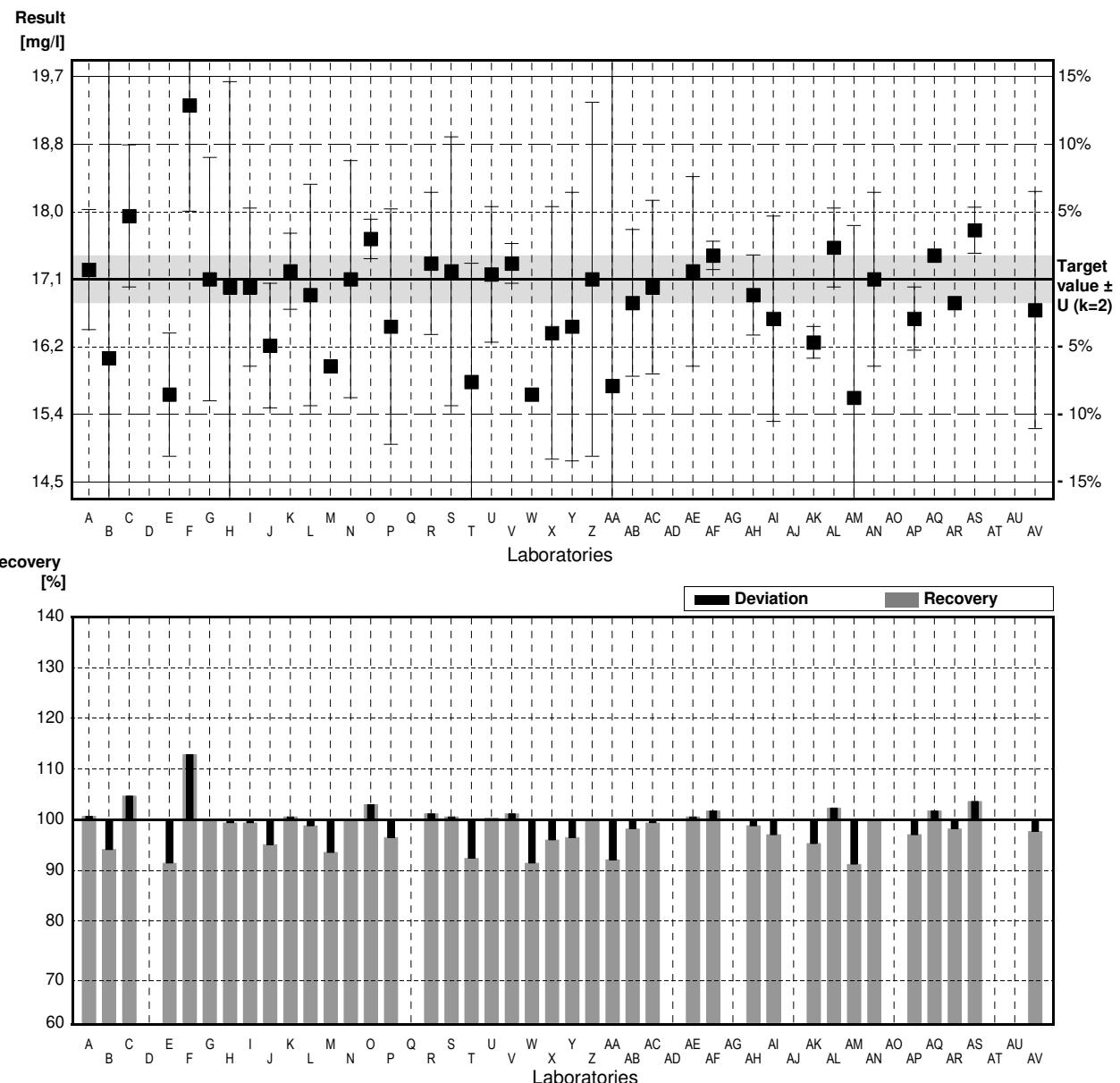
Target value $\pm U$ ($k=2$) 17,1 mg/l \pm 0,3 mg/l

IFA result $\pm U$ ($k=2$) 16,4 mg/l \pm 0,7 mg/l

Stability test $\pm U$ ($k=2$) 16,5 mg/l \pm 0,7 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	17.22	0.76	mg/l	101%	0.23
B	16.1	5.2	mg/l	94%	-1.95
C	17.9	0.9	mg/l	105%	1.56
D			mg/l		
E	15.64	0.78	mg/l	91%	-2.85
F	19.3 *	1.34	mg/l	113%	4.29
G	17.1	1.54	mg/l	100%	0.00
H	17.0	2.6	mg/l	99%	-0.19
I	17.0	1.0	mg/l	99%	-0.19
J	16.26	0.79	mg/l	95%	-1.64
K	17.2	0.481	mg/l	101%	0.19
L	16.9	1.4	mg/l	99%	-0.39
M	16.0		mg/l	94%	-2.14
N	17.1	1.5	mg/l	100%	0.00
O	17.61	0.25	mg/l	103%	0.99
P	16.5	1.49	mg/l	96%	-1.17
Q			mg/l		
R	17.3	0.9	mg/l	101%	0.39
S	17.2	1.7	mg/l	101%	0.19
T	15.8	1.5	mg/l	92%	-2.53
U	17.16	0.858	mg/l	100%	0.12
V	17.3	0.25	mg/l	101%	0.39
W	15.64		mg/l	91%	-2.85
X	16.42	1.6	mg/l	96%	-1.33
Y	16.5	1.7	mg/l	96%	-1.17
Z	17.1	2.24	mg/l	100%	0.00
AA	15.75	4.49	mg/l	92%	-2.63
AB	16.8	0.93	mg/l	98%	-0.58
AC	17.0	1.1	mg/l	99%	-0.19
AD			mg/l		
AE	17.2	1.2	mg/l	101%	0.19
AF	17.4	0.18	mg/l	102%	0.58
AG			mg/l		
AH	16.9	0.507	mg/l	99%	-0.39
AI	16.6	1.3	mg/l	97%	-0.97
AJ			mg/l		
AK	16.3	0.2	mg/l	95%	-1.56
AL	17.5	0.5	mg/l	102%	0.78
AM	15.6	2.18	mg/l	91%	-2.92
AN	17.1	1.1	mg/l	100%	0.00
AO			mg/l		
AP	16.6	0.4	mg/l	97%	-0.97
AQ	17.4		mg/l	102%	0.58
AR	16.8		mg/l	98%	-0.58
AS	17.72	0.29	mg/l	104%	1.21
AT			mg/l		
AU			mg/l		
AV	16.71	1.5	mg/l	98%	-0.76

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	16,9 \pm 0,3	16,8 \pm 0,3	mg/l
Recov. \pm Cl(99%)	98,6 \pm 1,8	98,3 \pm 1,5	%
SD between labs	0,7	0,6	mg/l
RSD between labs	4,3	3,6	%
n for calculation	40	39	



Sample N159A

Parameter Sulphate

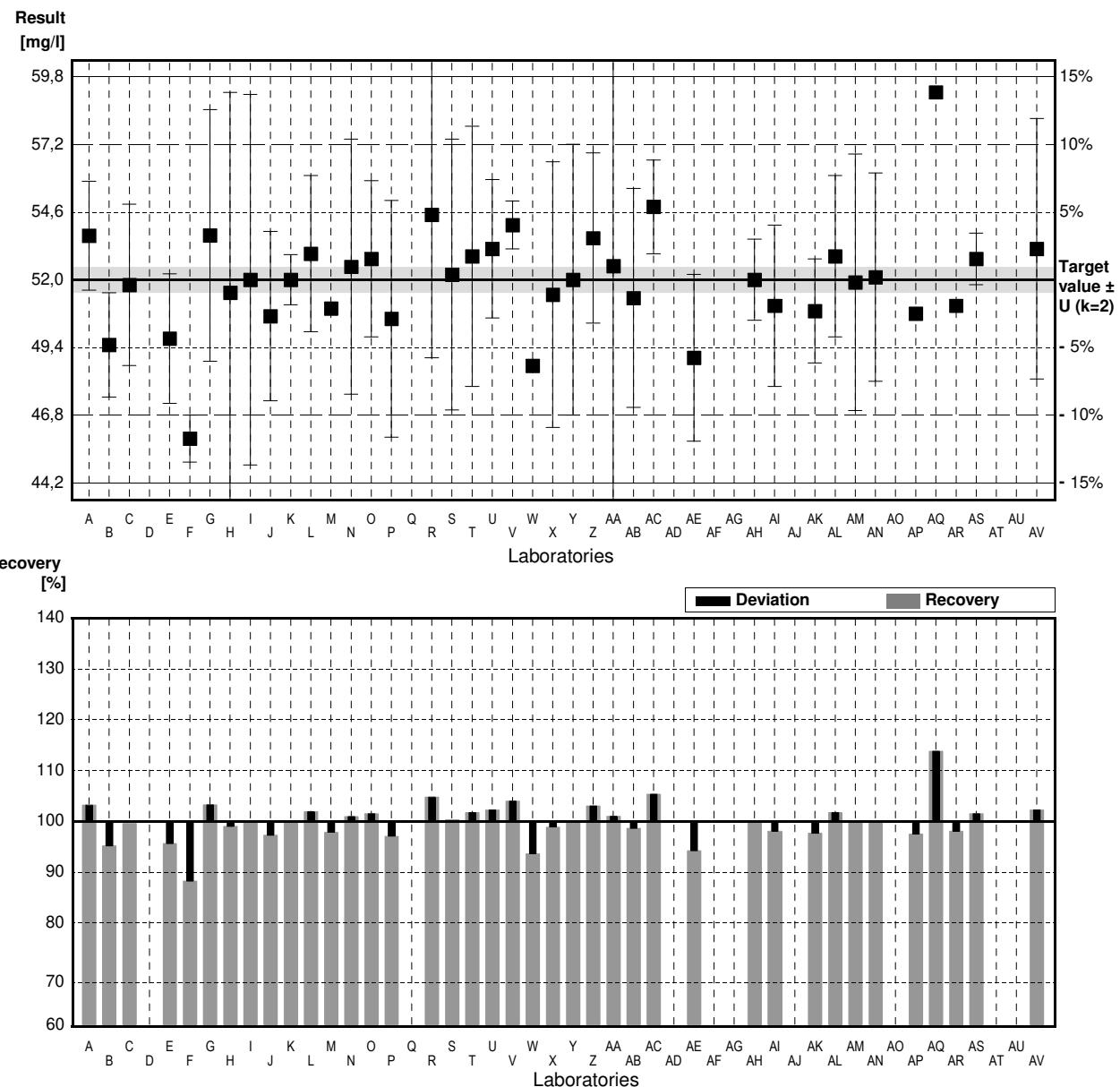
Target value $\pm U$ ($k=2$) 52,0 mg/l \pm 0,5 mg/l

IFA result $\pm U$ ($k=2$) 51,2 mg/l \pm 1,0 mg/l

Stability test $\pm U$ ($k=2$) 51,3 mg/l \pm 1,0 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	53,69	2,09	mg/l	103%	1,05
B	49,5	2	mg/l	95%	-1,55
C	51,8	3,1	mg/l	100%	-0,12
D			mg/l		
E	49,74	2,49	mg/l	96%	-1,40
F	45,9 *	0,9	mg/l	88%	-3,78
G	53,7	4,83	mg/l	103%	1,05
H	51,5	7,7	mg/l	99%	-0,31
I	52,0	7,12	mg/l	100%	0,00
J	50,60	3,25	mg/l	97%	-0,87
K	52,0	0,965	mg/l	100%	0,00
L	53	3	mg/l	102%	0,62
M	50,9		mg/l	98%	-0,68
N	52,5	4,9	mg/l	101%	0,31
O	52,80	3,0	mg/l	102%	0,50
P	50,5	4,55	mg/l	97%	-0,93
Q			mg/l		
R	54,5	5,5	mg/l	105%	1,55
S	52,2	5,2	mg/l	100%	0,12
T	52,9	5	mg/l	102%	0,56
U	53,19	2,66000	mg/l	102%	0,74
V	54,1	0,92	mg/l	104%	1,30
W	48,70		mg/l	94%	-2,05
X	51,43	5,1	mg/l	99%	-0,35
Y	52,0	5,2	mg/l	100%	0,00
Z	53,6	3,27	mg/l	103%	0,99
AA	52,53	14,97	mg/l	101%	0,33
AB	51,3	4,2	mg/l	99%	-0,43
AC	54,8	1,8	mg/l	105%	1,74
AD			mg/l		
AE	49,0	3,2	mg/l	94%	-1,86
AF			mg/l		
AG			mg/l		
AH	52,0	1,56	mg/l	100%	0,00
AI	51	3,1	mg/l	98%	-0,62
AJ			mg/l		
AK	50,8	2	mg/l	98%	-0,74
AL	52,9	3,1	mg/l	102%	0,56
AM	51,9	4,93	mg/l	100%	-0,06
AN	52,1	4	mg/l	100%	0,06
AO			mg/l		
AP	50,7	0,2	mg/l	98%	-0,81
AQ	59,2 *		mg/l	114%	4,47
AR	51,0		mg/l	98%	-0,62
AS	52,80	0,99	mg/l	102%	0,50
AT			mg/l		
AU			mg/l		
AV	53,19	5,0	mg/l	102%	0,74

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	52,0 \pm 0,9	52,0 \pm 0,7	mg/l
Recov. \pm Cl(99%)	100,0 \pm 1,7	99,9 \pm 1,3	%
SD between labs	2,1	1,5	mg/l
RSD between labs	4,0	2,8	%
n for calculation	39	37	



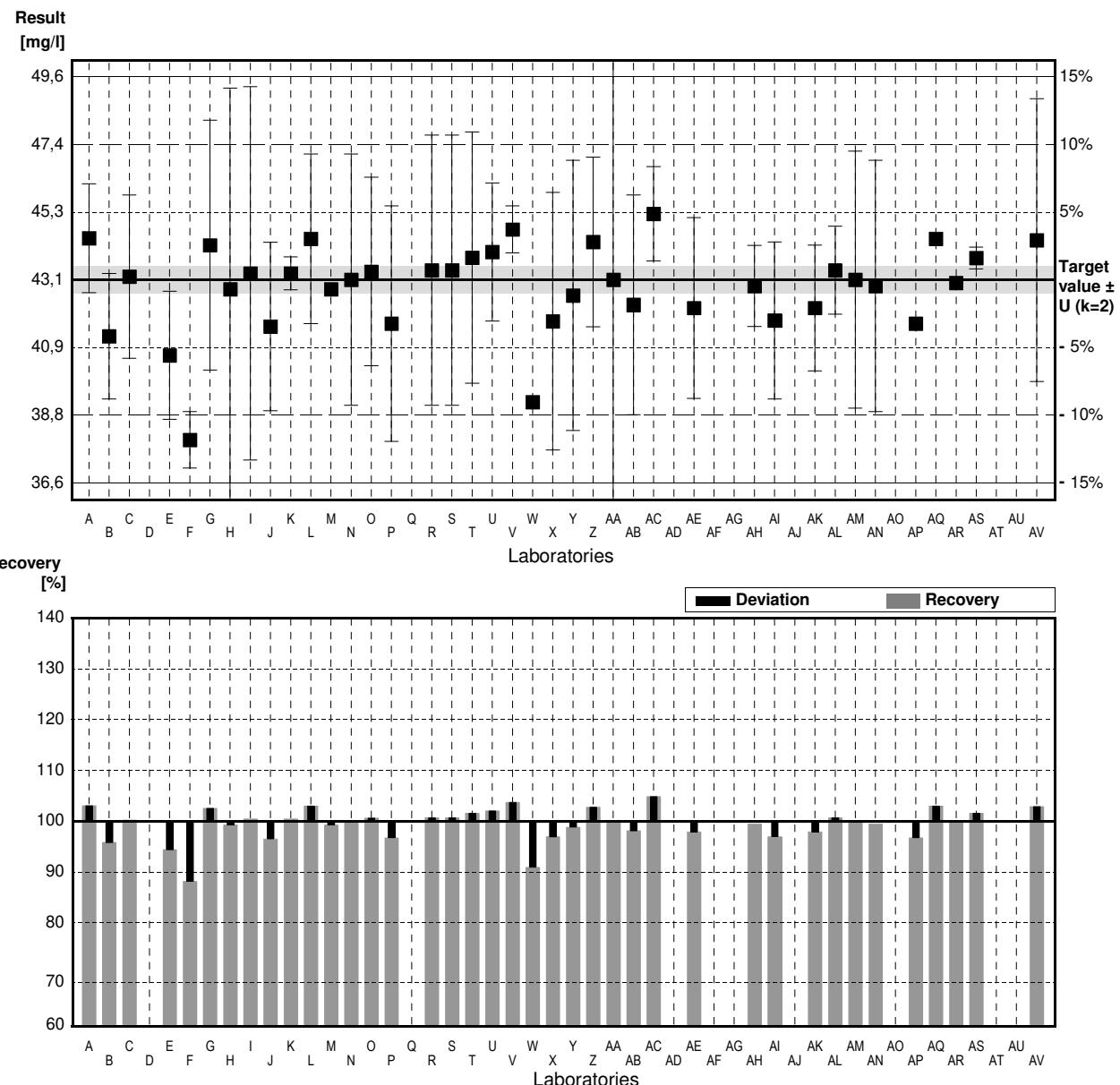
Sample N159B

Parameter Sulphate

Target value $\pm U$ ($k=2$) 43,1 mg/l \pm 0,4 mg/l
 IFA result $\pm U$ ($k=2$) 42,2 mg/l \pm 0,8 mg/l
 Stability test $\pm U$ ($k=2$) 42,8 mg/l \pm 0,9 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	44,42	1,73	mg/l	103%	0,99
B	41,3	2	mg/l	96%	-1,35
C	43,2	2,6	mg/l	100%	0,07
D			mg/l		
E	40,69	2,04	mg/l	94%	-1,80
F	38,0 *	0,9	mg/l	88%	-3,82
G	44,2	3,98	mg/l	103%	0,82
H	42,8	6,4	mg/l	99%	-0,22
I	43,3	5,94	mg/l	100%	0,15
J	41,61	2,68	mg/l	97%	-1,12
K	43,3	0,523	mg/l	100%	0,15
L	44,4	2,7	mg/l	103%	0,97
M	42,8		mg/l	99%	-0,22
N	43,1	4,0	mg/l	100%	0,00
O	43,36	3,0	mg/l	101%	0,19
P	41,7	3,75	mg/l	97%	-1,05
Q			mg/l		
R	43,4	4,3	mg/l	101%	0,22
S	43,4	4,3	mg/l	101%	0,22
T	43,8	4	mg/l	102%	0,52
U	43,98	2,199	mg/l	102%	0,66
V	44,7	0,75	mg/l	104%	1,20
W	39,20		mg/l	91%	-2,92
X	41,78	4,1	mg/l	97%	-0,99
Y	42,6	4,3	mg/l	99%	-0,37
Z	44,3	2,70	mg/l	103%	0,90
AA	43,10	12,28	mg/l	100%	0,00
AB	42,3	3,5	mg/l	98%	-0,60
AC	45,2	1,5	mg/l	105%	1,57
AD			mg/l		
AE	42,2	2,88	mg/l	98%	-0,67
AF			mg/l		
AG			mg/l		
AH	42,9	1,29	mg/l	100%	-0,15
AI	41,8	2,5	mg/l	97%	-0,97
AJ			mg/l		
AK	42,2	2	mg/l	98%	-0,67
AL	43,4	1,4	mg/l	101%	0,22
AM	43,1	4,09	mg/l	100%	0,00
AN	42,9	4	mg/l	100%	-0,15
AO			mg/l		
AP	41,7	0,1	mg/l	97%	-1,05
AQ	44,4		mg/l	103%	0,97
AR	43,0		mg/l	100%	-0,07
AS	43,79	0,35	mg/l	102%	0,52
AT			mg/l		
AU			mg/l		
AV	44,36	4,5	mg/l	103%	0,94

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	$42,9 \pm 0,6$	$43,0 \pm 0,5$	mg/l
Recov. \pm Cl(99%)	$99,5 \pm 1,5$	$99,7 \pm 1,2$	%
SD between labs	1,4	1,2	mg/l
RSD between labs	3,4	2,8	%
n for calculation	39	38	



Sample N159A

Parameter Orthophosphate

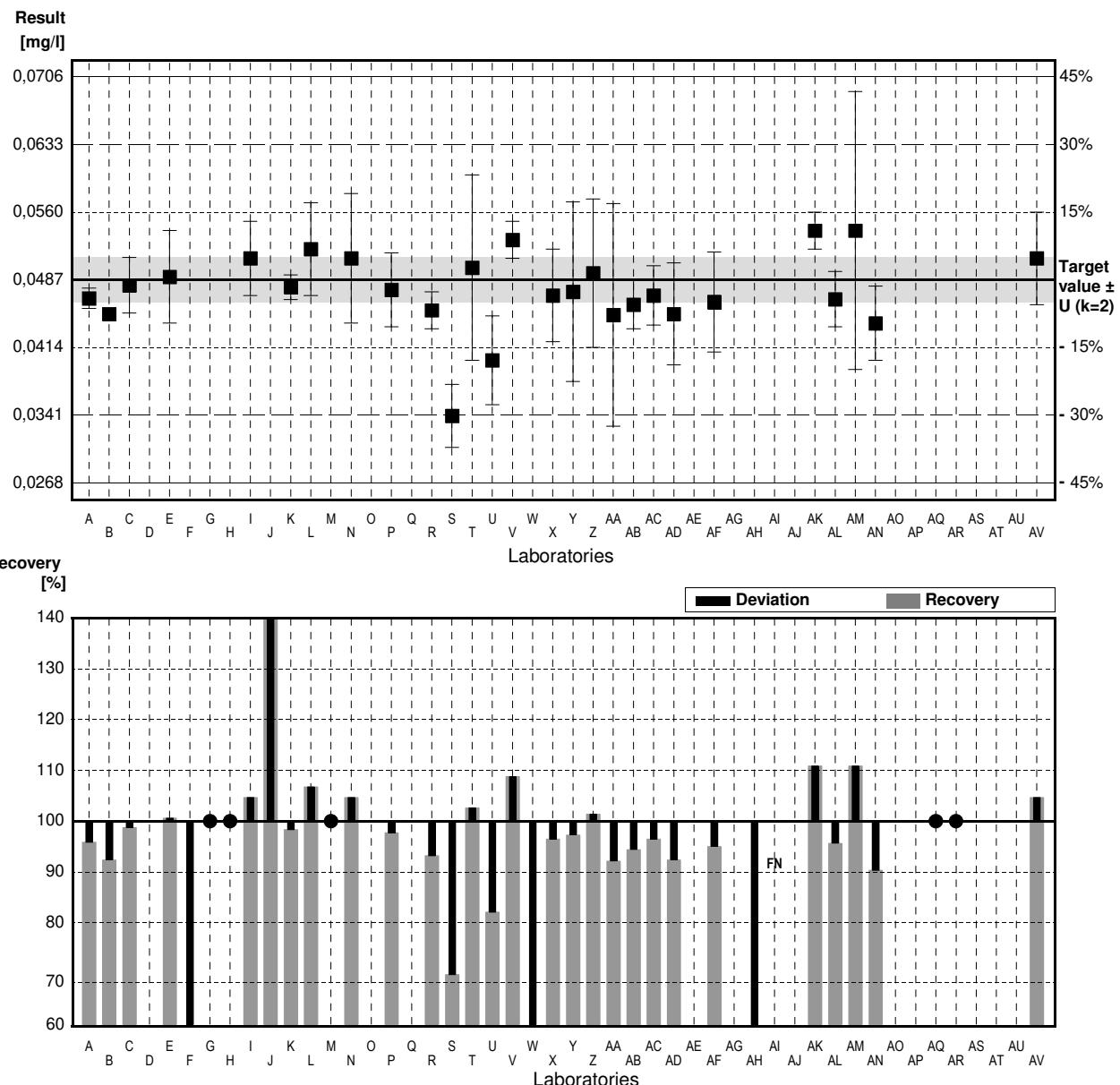
Target value $\pm U$ ($k=2$) 0,0487 mg/l \pm 0,0024 mg/l

IFA result $\pm U$ ($k=2$) 0,0494 mg/l \pm 0,0010 mg/l

Stability test $\pm U$ ($k=2$) 0,0488 mg/l \pm 0,0010 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0,0467	0,0011	mg/l	96%	-0,41
B	0,0450		mg/l	92%	-0,76
C	0,0481	0,003	mg/l	99%	-0,12
D			mg/l		
E	0,0490	0,005	mg/l	101%	0,06
F	0,0150 *	0,004	mg/l	31%	-6,92
G	<0,06		mg/l	*	
H	<0,1		mg/l	*	
I	0,051	0,004	mg/l	105%	0,47
J	0,0750 *	0,0046	mg/l	154%	5,40
K	0,0479	0,00133	mg/l	98%	-0,16
L	0,052	0,005	mg/l	107%	0,68
M	<0,15		mg/l	*	
N	0,051	0,007	mg/l	105%	0,47
O			mg/l		
P	0,0476	0,004	mg/l	98%	-0,23
Q			mg/l		
R	0,0454	0,002	mg/l	93%	-0,68
S	0,0340 *	0,0034	mg/l	70%	-3,02
T	0,050	0,01	mg/l	103%	0,27
U	0,04000	0,0048	mg/l	82%	-1,79
V	0,0530	0,002	mg/l	109%	0,88
W	0,0260 *		mg/l	53%	-4,66
X	0,0470	0,005	mg/l	97%	-0,35
Y	0,0474	0,0097	mg/l	97%	-0,27
Z	0,0494	0,0080	mg/l	101%	0,14
AA	0,0449	0,012	mg/l	92%	-0,78
AB	0,0460	0,0026	mg/l	94%	-0,55
AC	0,0470	0,0032	mg/l	97%	-0,35
AD	0,0450	0,0055	mg/l	92%	-0,76
AE			mg/l		
AF	0,0463	0,0054	mg/l	95%	-0,49
AG			mg/l		
AH	0,0135 *	0,00135	mg/l	28%	-7,23
AI	<0,01		mg/l	FN	
AJ			mg/l		
AK	0,054	0,002	mg/l	111%	1,09
AL	0,0466	0,003	mg/l	96%	-0,43
AM	0,054	0,015	mg/l	111%	1,09
AN	0,0440	0,004	mg/l	90%	-0,97
AO			mg/l		
AP			mg/l		
AQ	<0,15		mg/l	*	
AR	<0,15		mg/l	*	
AS			mg/l		
AT			mg/l		
AU			mg/l		
AV	0,051	0,005	mg/l	105%	0,47

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,0456 \pm 0,005	0,0481 \pm 0,001	mg/l
Recov. \pm CI(99%)	93,6 \pm 11,4	98,7 \pm 3,7	%
SD between labs	0,0112	0,0033	mg/l
RSD between labs	24,6	6,9	%
n for calculation	31	26	



Sample N159B

Parameter Orthophosphate

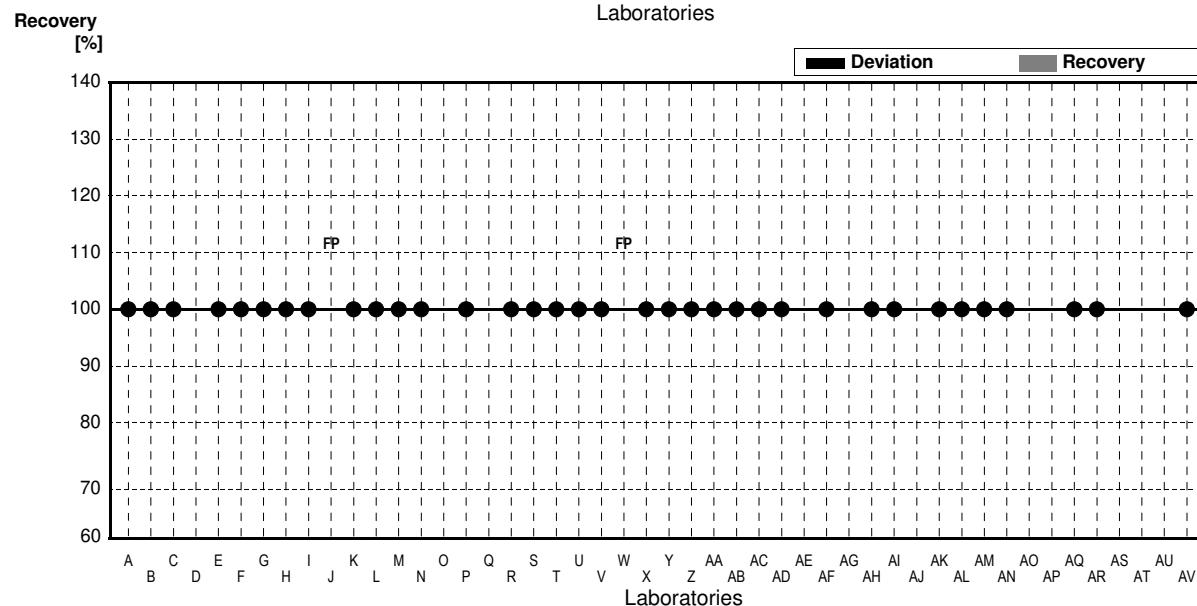
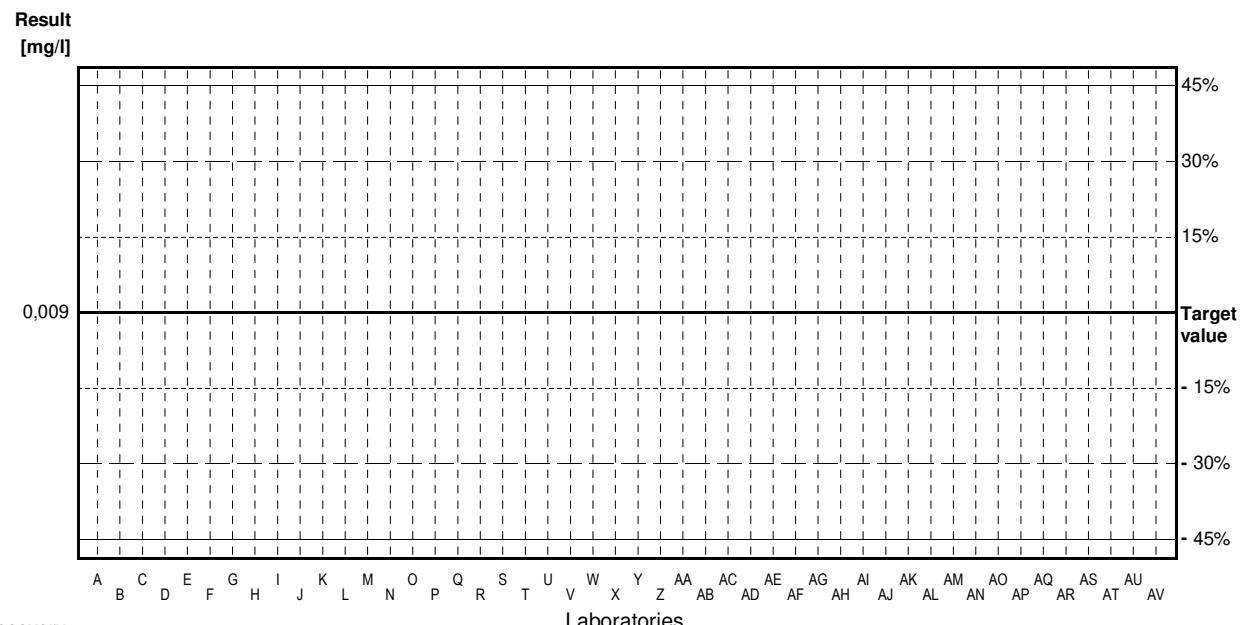
Target value <0.009 mg/l

IFA result <0.009 mg/l

Stability test <0.009 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0.0057	0.0011	mg/l	•	
B	<0.045		mg/l	•	
C	<0.006		mg/l	•	
D			mg/l		
E	<0.01		mg/l	•	
F	<0.009	0.004	mg/l	•	
G	<0.06		mg/l	•	
H	<0.1		mg/l	•	
I	<0.01		mg/l	•	
J	0.0270	0.0017	mg/l	FP	
K	<0.0150		mg/l	•	
L	<0.009		mg/l	•	
M	<0.15		mg/l	•	
N	<0.010		mg/l	•	
O			mg/l		
P	<0.01		mg/l	•	
Q			mg/l		
R	<0.006		mg/l	•	
S	<0.008		mg/l	•	
T	<0.02		mg/l	•	
U	0.00600	0.00070	mg/l	•	
V	<0.015		mg/l	•	
W	0.0164		mg/l	FP	
X	<0.0015		mg/l	•	
Y	<0.005		mg/l	•	
Z	<0.015		mg/l	•	
AA	<0.031		mg/l	•	
AB	0.0090	0.0005	mg/l	•	
AC	<0.015		mg/l	•	
AD	<0.015		mg/l	•	
AE			mg/l		
AF	<0.006	0	mg/l	•	
AG			mg/l		
AH	<0.01		mg/l	•	
AI	<0.01		mg/l	•	
AJ			mg/l		
AK	0.007	0.002	mg/l	•	
AL	<0.01		mg/l	•	
AM	<0.010		mg/l	•	
AN	<0.01		mg/l	•	
AO			mg/l		
AP			mg/l		
AQ	<0.15		mg/l	•	
AR	<0.15		mg/l	•	
AS			mg/l		
AT			mg/l		
AU			mg/l		
AV	<0.04		mg/l	•	

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



Sample N159A

Parameter Boron

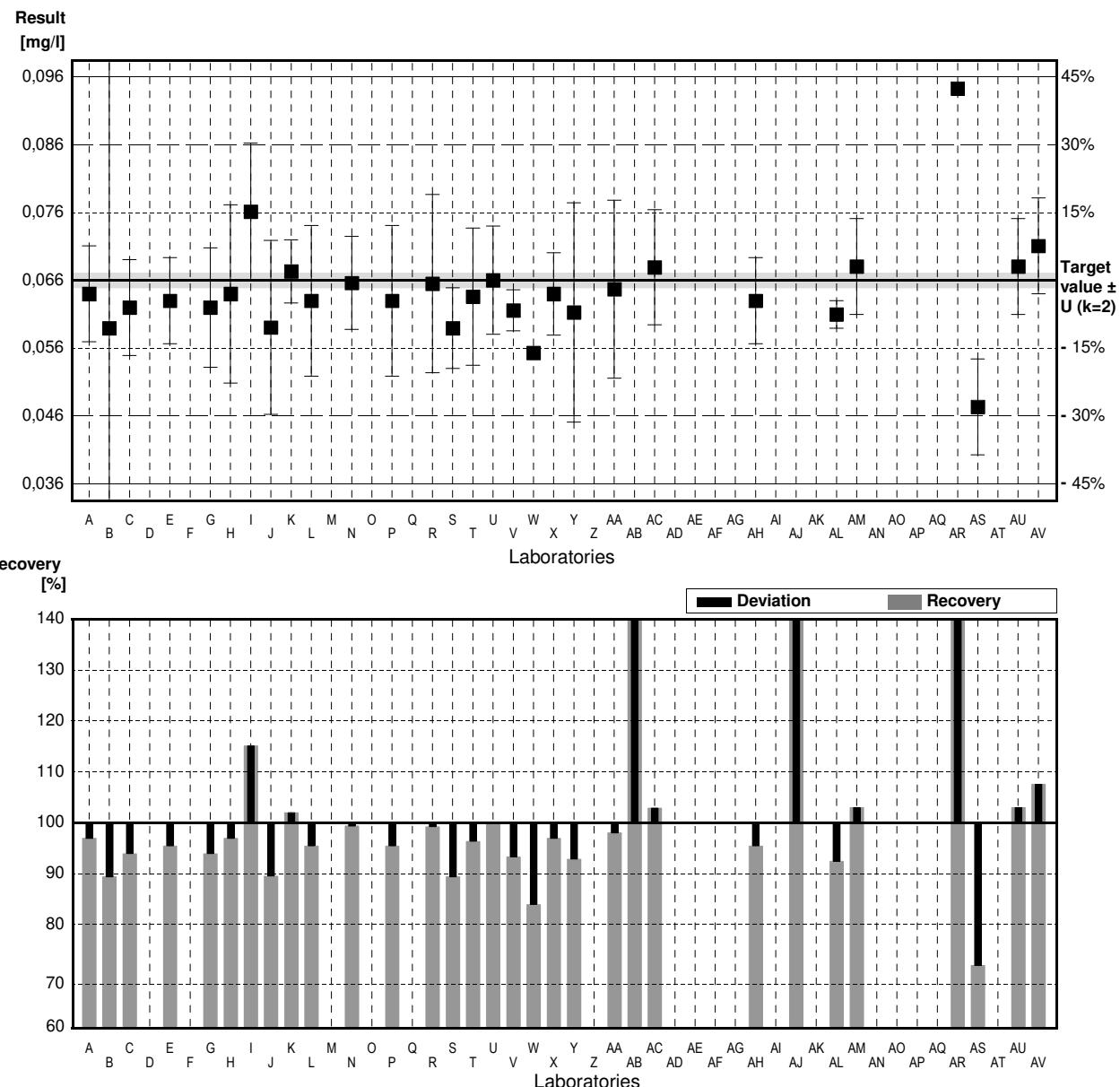
Target value $\pm U$ ($k=2$) 0,066 mg/l \pm 0,001 mg/l

IFA result $\pm U$ ($k=2$) 0,061 mg/l \pm 0,005 mg/l

Stability test $\pm U$ ($k=2$) 0,062 mg/l \pm 0,005 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0.064	0.007	mg/l	97%	-0.39
B	0.059	0.08	mg/l	89%	-1.36
C	0.062	0.007	mg/l	94%	-0.78
D			mg/l		
E	0.063	0.0063	mg/l	95%	-0.58
F			mg/l		
G	0.062	0.0087	mg/l	94%	-0.78
H	0.064	0.013	mg/l	97%	-0.39
I	0.076	0.01	mg/l	115%	1.94
J	0.0591	0.0127	mg/l	90%	-1.34
K	0.0673	0.00460	mg/l	102%	0.25
L	0.063	0.011	mg/l	95%	-0.58
M			mg/l		
N	0.0656	0.0068	mg/l	99%	-0.08
O			mg/l		
P	0.063	0.011	mg/l	95%	-0.58
Q			mg/l		
R	0.0655	0.013	mg/l	99%	-0.10
S	0.059	0.0059	mg/l	89%	-1.36
T	0.0636	0.01	mg/l	96%	-0.47
U	0.06600	0.0079	mg/l	100%	0.00
V	0.0616	0.003	mg/l	93%	-0.85
W	0.0554		mg/l	84%	-2.06
X	0.064	0.006	mg/l	97%	-0.39
Y	0.0613	0.016	mg/l	93%	-0.91
Z			mg/l		
AA	0.0647	0.013	mg/l	98%	-0.25
AB	64.3 *	7.2	mg/l	97424%	12477.47
AC	0.0679	0.0084	mg/l	103%	0.37
AD			mg/l		
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH	0.0630	0.00630	mg/l	95%	-0.58
AI			mg/l		
AJ	56.5 *	12.0	mg/l	85606%	10962.32
AK			mg/l		
AL	0.061	0.002	mg/l	92%	-0.97
AM	0.068	0.007	mg/l	103%	0.39
AN			mg/l		
AO			mg/l		
AP			mg/l		
AQ			mg/l		
AR	0.094 *		mg/l	142%	5.44
AS	0.0475 *	0.007	mg/l	72%	-3.59
AT			mg/l		
AU	0.068	0.007	mg/l	103%	0.39
AV	0.071	0.007	mg/l	108%	0.97

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	$3,957 \pm 7,459$	$0,064 \pm 0,002$	mg/l
Recov. \pm Cl(99%)	$5995,6 \pm 11301$	$97,0 \pm 3,3$	%
SD between labs	15,101	0,004	mg/l
RSD between labs	381,6	6,4	%
n for calculation	31	27	



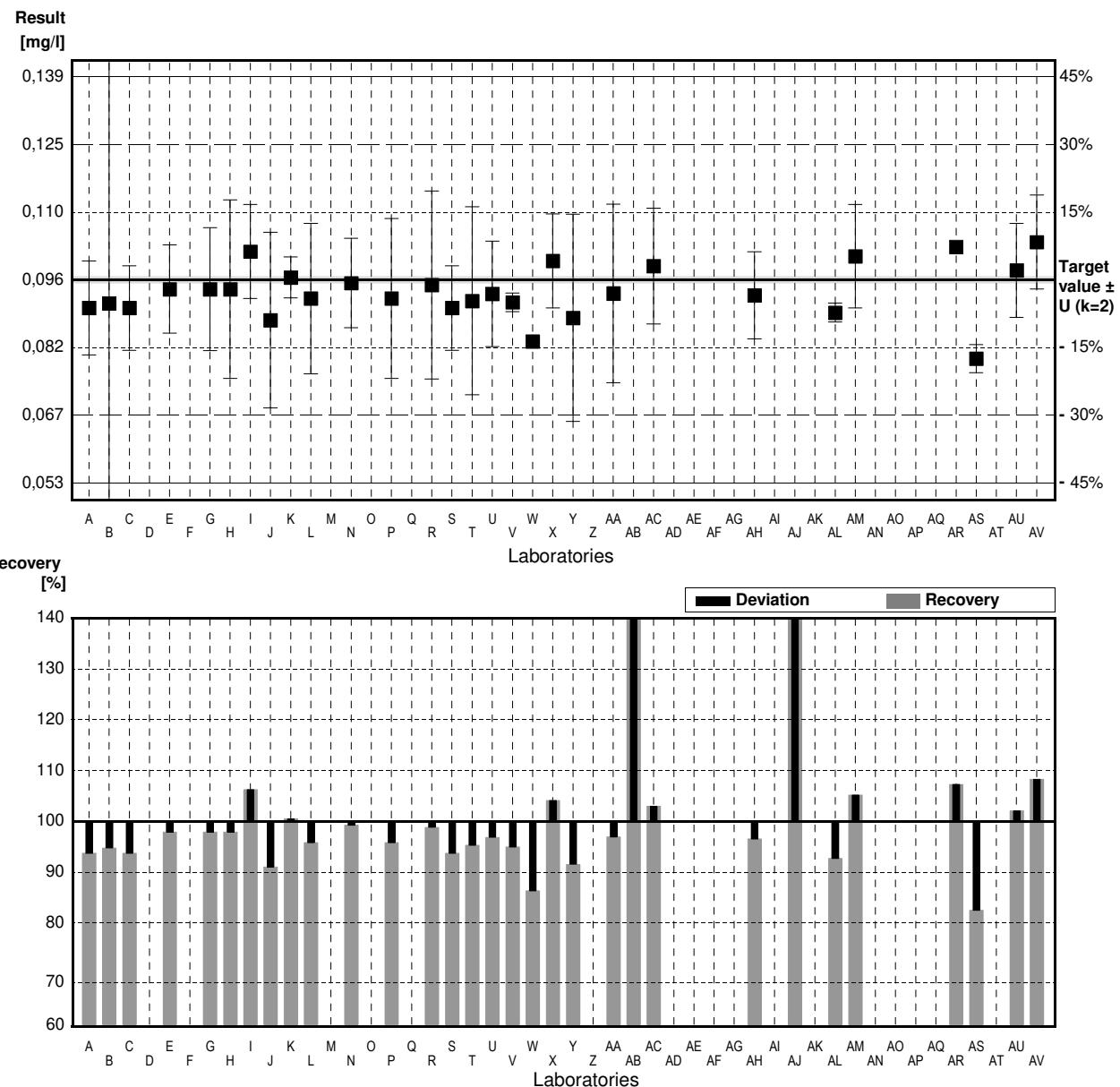
Sample N159B

Parameter Boron

Target value $\pm U$ ($k=2$) 0,096 mg/l \pm 0,001 mg/l
 IFA result $\pm U$ ($k=2$) 0,090 mg/l \pm 0,007 mg/l
 Stability test $\pm U$ ($k=2$) 0,092 mg/l \pm 0,007 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0.090	0.010	mg/l	94%	-0.80
B	0.091	0.08	mg/l	95%	-0.67
C	0.090	0.009	mg/l	94%	-0.80
D			mg/l		
E	0.094	0.0094	mg/l	98%	-0.27
F			mg/l		
G	0.094	0.0131	mg/l	98%	-0.27
H	0.094	0.019	mg/l	98%	-0.27
I	0.102	0.01	mg/l	106%	0.80
J	0.0874	0.0187	mg/l	91%	-1.15
K	0.0965	0.00438	mg/l	101%	0.07
L	0.092	0.016	mg/l	96%	-0.53
M			mg/l		
N	0.0953	0.0095	mg/l	99%	-0.09
O			mg/l		
P	0.092	0.017	mg/l	96%	-0.53
Q			mg/l		
R	0.0949	0.02	mg/l	99%	-0.15
S	0.090	0.009	mg/l	94%	-0.80
T	0.0915	0.02	mg/l	95%	-0.60
U	0.093	0.0112	mg/l	97%	-0.40
V	0.0912	0.002	mg/l	95%	-0.64
W	0.0829		mg/l	86%	-1.75
X	0.100	0.010	mg/l	104%	0.53
Y	0.0879	0.022	mg/l	92%	-1.08
Z			mg/l		
AA	0.0931	0.019	mg/l	97%	-0.39
AB	92,7 *	10,4	mg/l	96563%	12366,99
AC	0.0989	0.0123	mg/l	103%	0.39
AD			mg/l		
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH	0.0927	0.00927	mg/l	97%	-0.44
AI			mg/l		
AJ	83,7 *	17,0	mg/l	87188%	11165,06
AK			mg/l		
AL	0.089	0.002	mg/l	93%	-0.93
AM	0.101	0.011	mg/l	105%	0.67
AN			mg/l		
AO			mg/l		
AP			mg/l		
AQ			mg/l		
AR	0.103		mg/l	107%	0.93
AS	0.0792	0.003	mg/l	83%	-2.24
AT			mg/l		
AU	0.098	0.01	mg/l	102%	0.27
AV	0.104	0.01	mg/l	108%	1.07

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	5,778 \pm 10,88	0,093 \pm 0,003	mg/l
Recov. \pm CI(99%)	6018,4 \pm 11336	97,3 \pm 3,0	%
SD between labs	22,034	0,006	mg/l
RSD between labs	381,4	6,1	%
n for calculation	31	29	



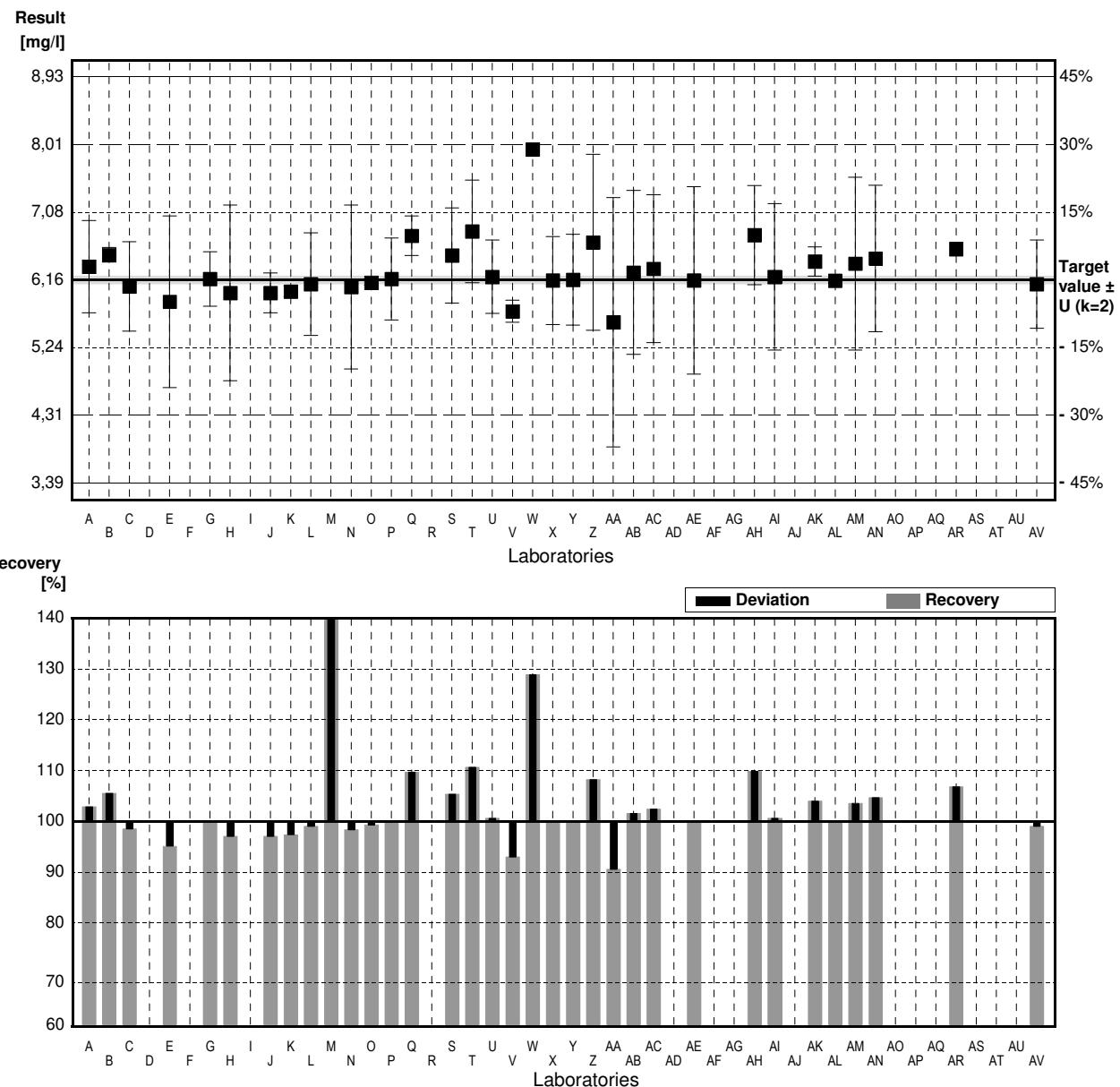
Sample N159A

Parameter DOC

Target value $\pm U$ ($k=2$) 6,16 mg/l \pm 0,05 mg/l
 IFA result $\pm U$ ($k=2$) 6,18 mg/l \pm 0,06 mg/l
 Stability test $\pm U$ ($k=2$) 6,11 mg/l \pm 0,06 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	6,34	0,63	mg/l	103%	0,50
B	6,5	0,1	mg/l	106%	0,94
C	6,07	0,61	mg/l	99%	-0,25
D			mg/l		
E	5,86	1,17	mg/l	95%	-0,83
F			mg/l		
G	6,17	0,37	mg/l	100%	0,03
H	5,98	1,2	mg/l	97%	-0,50
I			mg/l		
J	5,98	0,27	mg/l	97%	-0,50
K	6,00	0,0733	mg/l	97%	-0,44
L	6,1	0,7	mg/l	99%	-0,17
M	9,36	*	mg/l	152%	8,80
N	6,06	1,12	mg/l	98%	-0,28
O	6,12	0,03	mg/l	99%	-0,11
P	6,17	0,56	mg/l	100%	0,03
Q	6,76	0,27	mg/l	110%	1,65
R	NA		mg/l		
S	6,49	0,65	mg/l	105%	0,91
T	6,82	0,7	mg/l	111%	1,82
U	6,2	0,50	mg/l	101%	0,11
V	5,73	0,15	mg/l	93%	-1,18
W	7,94	*	mg/l	129%	4,90
X	6,15	0,6	mg/l	100%	-0,03
Y	6,16	0,62	mg/l	100%	0,00
Z	6,67	1,20	mg/l	108%	1,40
AA	5,58	1,7	mg/l	91%	-1,60
AB	6,26	1,12	mg/l	102%	0,28
AC	6,31	1,01	mg/l	102%	0,41
AD			mg/l		
AE	6,15	1,28	mg/l	100%	-0,03
AF			mg/l		
AG			mg/l		
AH	6,77	0,677	mg/l	110%	1,68
AI	6,2	1,0	mg/l	101%	0,11
AJ			mg/l		
AK	6,41	0,2	mg/l	104%	0,69
AL	6,148	0,03	mg/l	100%	-0,03
AM	6,38	1,18	mg/l	104%	0,61
AN	6,45	1	mg/l	105%	0,80
AO			mg/l		
AP			mg/l		
AQ			mg/l		
AR	6,58		mg/l	107%	1,16
AS			mg/l		
AT			mg/l		
AU			mg/l		
AV	6,10	0,6	mg/l	99%	-0,17

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	$6,38 \pm 0,31$	$6,24 \pm 0,14$	mg/l
Recov. \pm CI(99%)	$103,6 \pm 5,1$	$101,3 \pm 2,3$	%
SD between labs	0,66	0,29	mg/l
RSD between labs	10,4	4,7	%
n for calculation	34	32	



Sample N159B

Parameter DOC

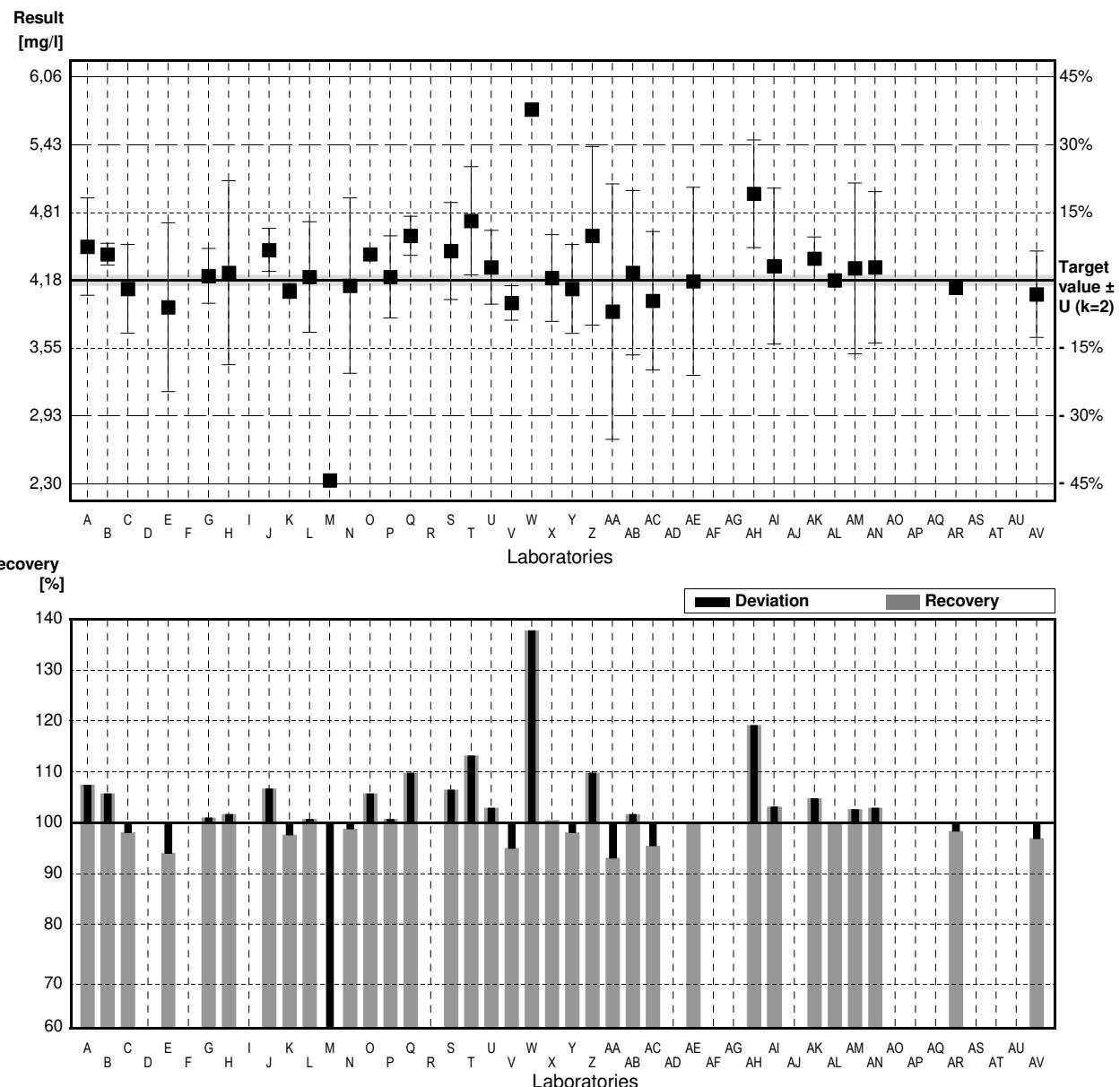
Target value $\pm U$ ($k=2$) 4,18 mg/l \pm 0,05 mg/l

IFA result $\pm U$ ($k=2$) 4,18 mg/l \pm 0,09 mg/l

Stability test $\pm U$ ($k=2$) 4,11 mg/l \pm 0,09 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score	
A	4.49	0.45	mg/l	107%	1.26	
B	4.42	0.10	mg/l	106%	0.97	
C	4.10	0.41	mg/l	98%	-0.32	
D			mg/l			
E	3.93	0.78	mg/l	94%	-1.01	
F			mg/l			
G	4.22	0.253	mg/l	101%	0.16	
H	4.25	0.85	mg/l	102%	0.28	
I			mg/l			
J	4.46	0.20	mg/l	107%	1.14	
K	4.08	0.0684	mg/l	98%	-0.41	
L	4.21	0.51	mg/l	101%	0.12	
M	2.33	*	mg/l	56%	-7.50	
N	4.13	0.81	mg/l	99%	-0.20	
O	4.42	0.03	mg/l	106%	0.97	
P	4.21	0.38	mg/l	101%	0.12	
Q	4.59	0.18	mg/l	110%	1.66	
R	NA		mg/l			
S	4.45	0.45	mg/l	106%	1.09	
T	4.73	0.5	mg/l	113%	2.23	
U	4.300	0.3400	mg/l	103%	0.49	
V	3.97	0.16	mg/l	95%	-0.85	
W	5.76	*	mg/l	138%	6.41	
X	4.20	0.4	mg/l	100%	0.08	
Y	4.10	0.411	mg/l	98%	-0.32	
Z	4.59	0.826	mg/l	110%	1.66	
AA	3.89	1.18	mg/l	93%	-1.18	
AB	4.25	0.76	mg/l	102%	0.28	
AC	3.99	0.64	mg/l	95%	-0.77	
AD			mg/l			
AE	4.17	0.87	mg/l	100%	-0.04	
AF			mg/l			
AG			mg/l			
AH	4.98	*	0.498	mg/l	119%	3.24
AI	4.31	0.72	mg/l	103%	0.53	
AJ			mg/l			
AK	4.38	0.2	mg/l	105%	0.81	
AL	4.179	0.02	mg/l	100%	0.00	
AM	4.29	0.79	mg/l	103%	0.45	
AN	4.30	0.7	mg/l	103%	0.49	
AO			mg/l			
AP			mg/l			
AQ			mg/l			
AR	4.11		mg/l	98%	-0.28	
AS			mg/l			
AT			mg/l			
AU			mg/l			
AV	4.05	0.4	mg/l	97%	-0.53	

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	4,26 \pm 0,23	4,25 \pm 0,10	mg/l
Recov. \pm Cl(99%)	101,9 \pm 5,4	101,7 \pm 2,4	%
SD between labs	0,48	0,20	mg/l
RSD between labs	11,4	4,8	%
n for calculation	34	31	



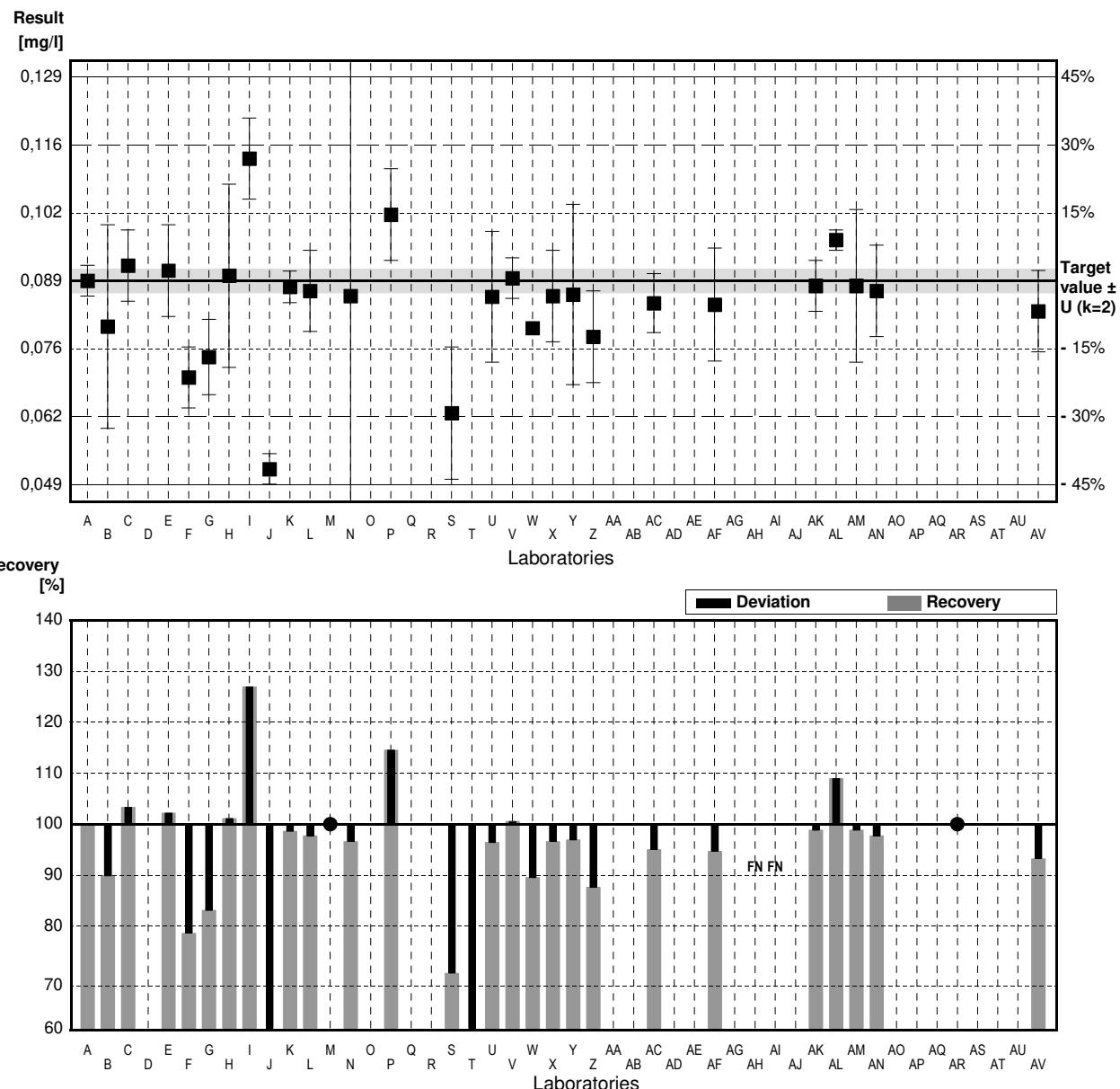
Sample N159A

Parameter Total P (as PO₄)

Target value $\pm U$ ($k=2$) 0,089 mg/l \pm 0,002 mg/l
 IFA result $\pm U$ ($k=2$) 0,087 mg/l \pm 0,017 mg/l
 Stability test $\pm U$ ($k=2$) 0,094 mg/l \pm 0,018 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0,089	0,003	mg/l	100%	0,00
B	0,080	0,02	mg/l	90%	-1,01
C	0,092	0,007	mg/l	103%	0,34
D			mg/l		
E	0,091	0,009	mg/l	102%	0,22
F	0,070	0,006	mg/l	79%	-2,13
G	0,074	0,0074	mg/l	83%	-1,69
H	0,090	0,018	mg/l	101%	0,11
I	0,113 *	0,008	mg/l	127%	2,70
J	0,052 *	0,003	mg/l	58%	-4,16
K	0,0878	0,00313	mg/l	99%	-0,13
L	0,087	0,008	mg/l	98%	-0,22
M	<0,1		mg/l	*	
N	0,086	0,15	mg/l	97%	-0,34
O			mg/l		
P	0,102	0,009	mg/l	115%	1,46
Q			mg/l		
R	NA		mg/l		
S	0,063 *	0,013	mg/l	71%	-2,92
T	0,0433 *	0,015	mg/l	49%	-5,13
U	0,08585	0,01287	mg/l	96%	-0,35
V	0,0895	0,004	mg/l	101%	0,06
W	0,0797		mg/l	90%	-1,04
X	0,086	0,009	mg/l	97%	-0,34
Y	0,0863	0,0177	mg/l	97%	-0,30
Z	0,078	0,009	mg/l	88%	-1,24
AA			mg/l		
AB			mg/l		
AC	0,0846	0,0058	mg/l	95%	-0,49
AD			mg/l		
AE			mg/l		
AF	0,0843	0,0111	mg/l	95%	-0,53
AG			mg/l		
AH	<0,05		mg/l	FN	
AI	<0,01		mg/l	FN	
AJ			mg/l		
AK	0,088	0,005	mg/l	99%	-0,11
AL	0,097	0,002	mg/l	109%	0,90
AM	0,088	0,015	mg/l	99%	-0,11
AN	0,087	0,009	mg/l	98%	-0,22
AO			mg/l		
AP			mg/l		
AQ			mg/l		
AR	<0,15		mg/l	*	
AS			mg/l		
AT			mg/l		
AU			mg/l		
AV	0,083	0,008	mg/l	93%	-0,67

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	0,083 \pm 0,007	0,086 \pm 0,004	mg/l
Recov. \pm Cl(99%)	93,8 \pm 8,1	96,7 \pm 4,3	%
SD between labs	0,014	0,007	mg/l
RSD between labs	16,5	7,8	%
n for calculation	28	24	



Sample N159B

Parameter Total P (as PO₄)

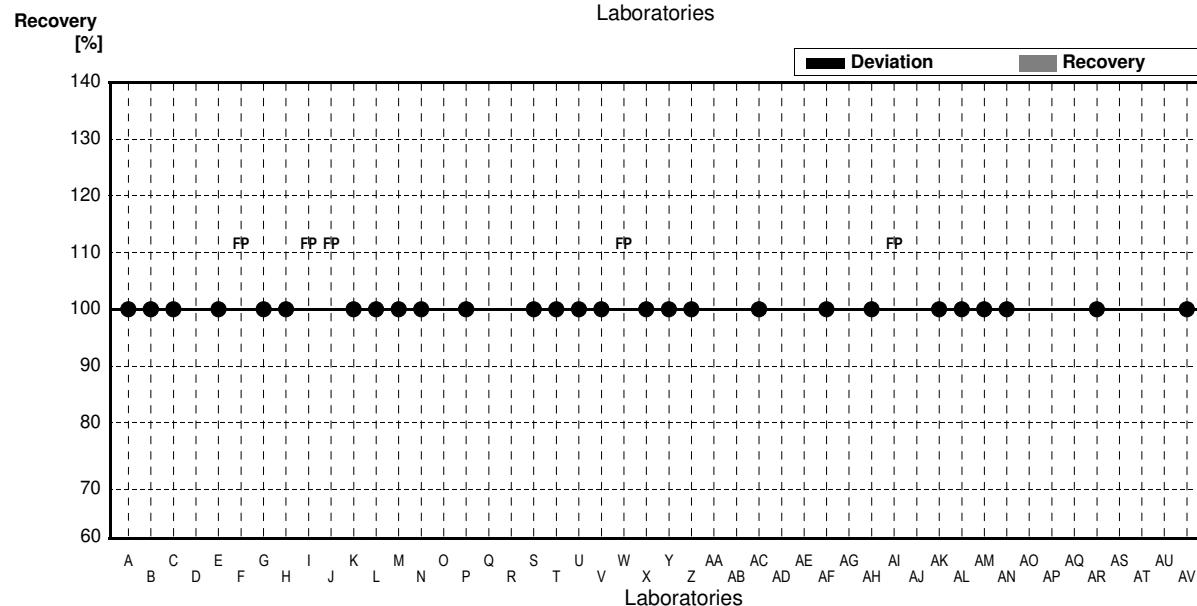
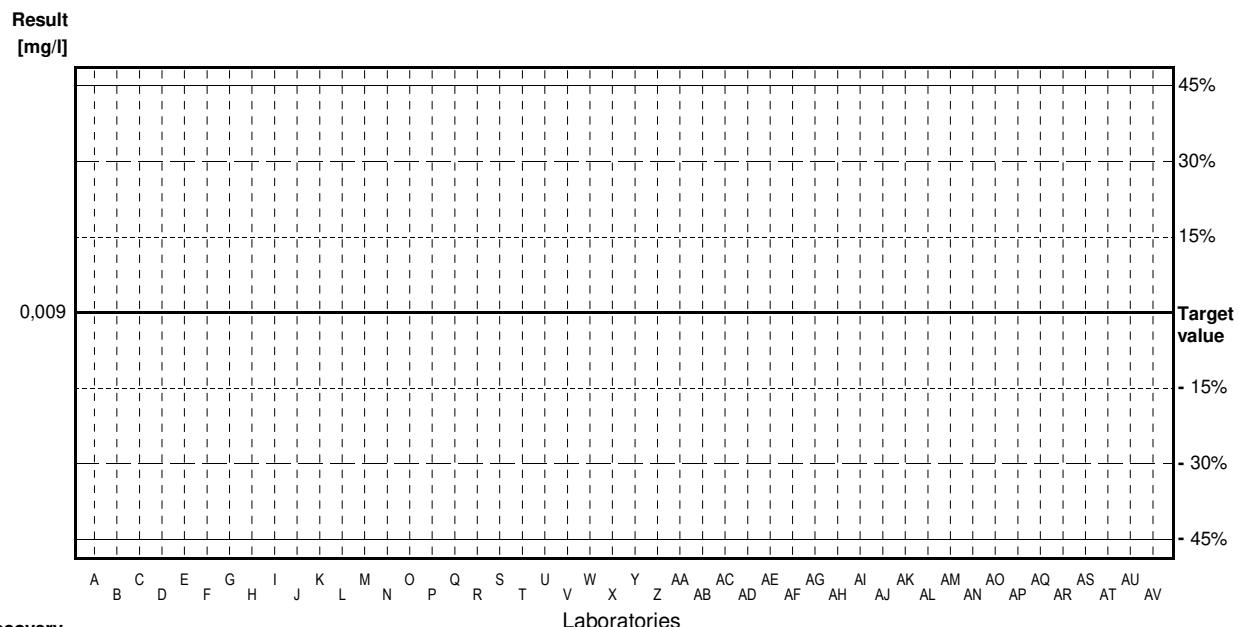
Target value <0.009 mg/l

IFA result <0.009 mg/l

Stability test <0.009 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0.00163	0.00033	mg/l	.	
B	<0.01	0.02	mg/l	.	
C	<0.006		mg/l	.	
D			mg/l		
E	<0.01		mg/l	.	
F	0.0150	0.006	mg/l	FP	
G	<0.06		mg/l	.	
H	<0.03		mg/l	.	
I	0.0225	0.002	mg/l	FP	
J	0.0270	0.0017	mg/l	FP	
K	<0.0036		mg/l	.	
L	<0.009		mg/l	.	
M	<0.1		mg/l	.	
N	<0.010		mg/l	.	
O			mg/l		
P	<0.05		mg/l	.	
Q			mg/l		
R	NA		mg/l		
S	<0.015		mg/l	.	
T	<0.04		mg/l	.	
U	<0.0061		mg/l	.	
V	<0.015		mg/l	.	
W	0.050		mg/l	FP	
X	<0.0036		mg/l	.	
Y	<0.005		mg/l	.	
Z	<0.015		mg/l	.	
AA			mg/l		
AB			mg/l		
AC	<0.015		mg/l	.	
AD			mg/l		
AE			mg/l		
AF	<0.006	0	mg/l	.	
AG			mg/l		
AH	<0.05		mg/l	.	
AI	0.0120	0.0016	mg/l	FP	
AJ			mg/l		
AK	<0.009	0.005	mg/l	.	
AL	<0.03		mg/l	.	
AM	<0.030		mg/l	.	
AN	<0.013		mg/l	.	
AO			mg/l		
AP			mg/l		
AQ			mg/l		
AR	<0.15		mg/l	.	
AS			mg/l		
AT			mg/l		
AU			mg/l		
AV	<0.04		mg/l	.	

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



Sample N159A

Parameter KMnO₄-Index

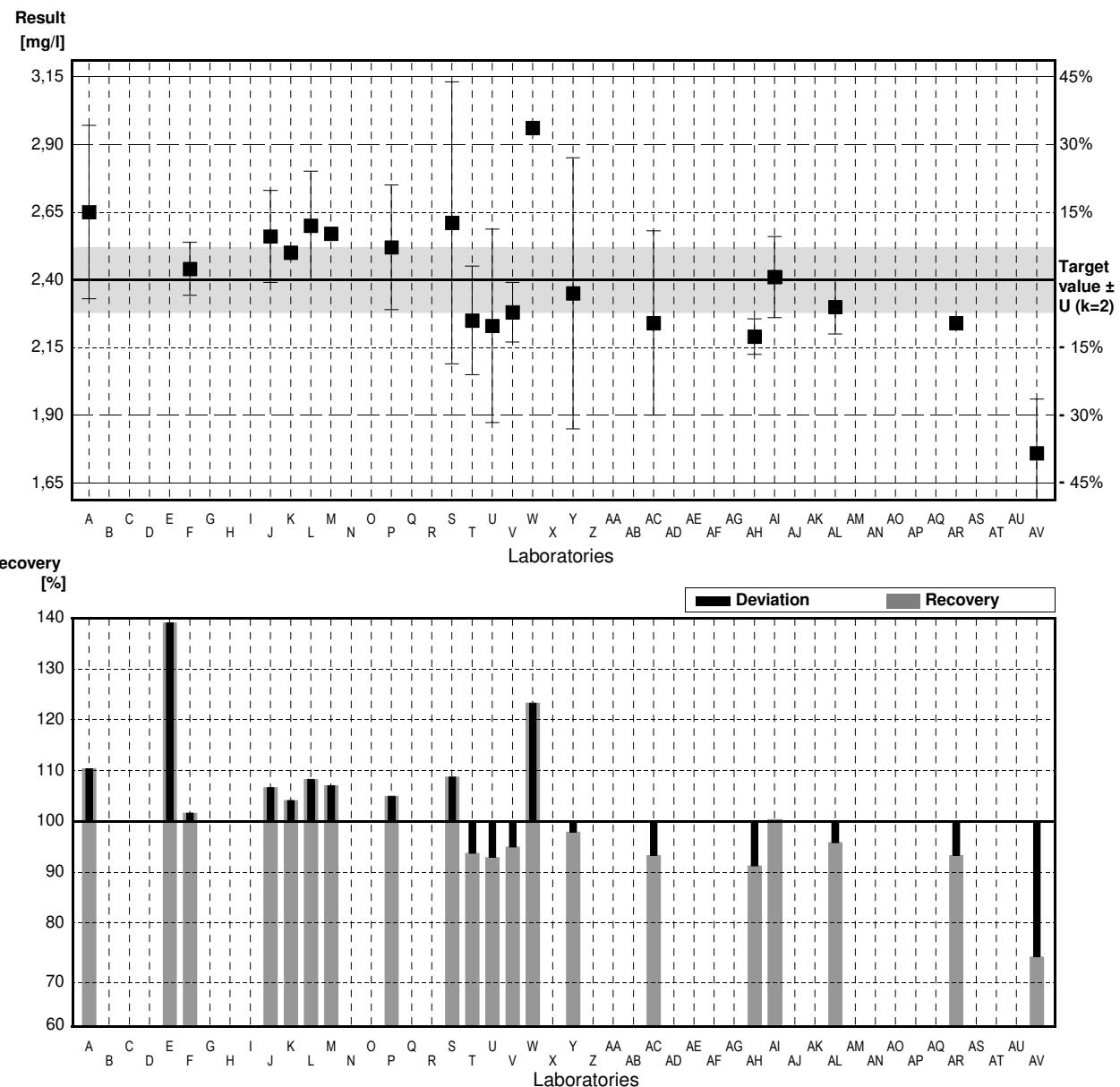
Target value $\pm U$ ($k=2$) 2,40 mg/l \pm 0,12 mg/l

IFA result $\pm U$ ($k=2$) 2,49 mg/l \pm 0,37 mg/l

Stability test $\pm U$ ($k=2$) 2,51 mg/l \pm 0,38 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	2,65	0,32	mg/l	110%	1,04
B			mg/l		
C			mg/l		
D			mg/l		
E	3,34 *	0,434	mg/l	139%	3,92
F	2,44	0,098	mg/l	102%	0,17
G			mg/l		
H			mg/l		
I			mg/l		
J	2,56	0,17	mg/l	107%	0,67
K	2,50		mg/l	104%	0,42
L	2,60	0,2	mg/l	108%	0,83
M	2,57		mg/l	107%	0,71
N			mg/l		
O			mg/l		
P	2,52	0,23	mg/l	105%	0,50
Q			mg/l		
R	NA		mg/l		
S	2,61	0,52	mg/l	109%	0,88
T	2,25	0,2	mg/l	94%	-0,63
U	2,23	0,357	mg/l	93%	-0,71
V	2,28	0,11	mg/l	95%	-0,50
W	2,96		mg/l	123%	2,33
X			mg/l		
Y	2,35	0,5	mg/l	98%	-0,21
Z			mg/l		
AA			mg/l		
AB			mg/l		
AC	2,24	0,34	mg/l	93%	-0,67
AD			mg/l		
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH	2,19	0,0657	mg/l	91%	-0,88
AI	2,41	0,15	mg/l	100%	0,04
AJ			mg/l		
AK			mg/l		
AL	2,30	0,1	mg/l	96%	-0,42
AM			mg/l		
AN			mg/l		
AO			mg/l		
AP			mg/l		
AQ			mg/l		
AR	2,24		mg/l	93%	-0,67
AS			mg/l		
AT			mg/l		
AU			mg/l		
AV	1,76	0,2	mg/l	73%	-2,67

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	2,45 \pm 0,21	2,40 \pm 0,17	mg/l
Recov. \pm Cl(99%)	102,1 \pm 8,6	100,1 \pm 6,9	%
SD between labs	0,32	0,25	mg/l
RSD between labs	13,1	10,4	%
n for calculation	20	19	



Sample N159B

Parameter KMnO₄-Index

Target value $\pm U$ (k=2) 4,29 mg/l \pm 0,15 mg/l

IFA result $\pm U$ (k=2) 4,39 mg/l \pm 0,66 mg/l

Stability test $\pm U$ (k=2) 4,39 mg/l \pm 0,66 mg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	4.51	0.54	mg/l	105%	0.51
B			mg/l		
C			mg/l		
D			mg/l		
E	5.01	0.651	mg/l	117%	1.68
F	3.98	0.098	mg/l	93%	-0.72
G			mg/l		
H			mg/l		
I			mg/l		
J	4.72	0.30	mg/l	110%	1.00
K	4.31		mg/l	100%	0.05
L	4.20	0.3	mg/l	98%	-0.21
M	4.03		mg/l	94%	-0.61
N			mg/l		
O			mg/l		
P	4.29	0.39	mg/l	100%	0.00
Q			mg/l		
R	NA		mg/l		
S	4.53	0.91	mg/l	106%	0.56
T	4.14	0.5	mg/l	97%	-0.35
U	4.05	0.648	mg/l	94%	-0.56
V	4.15	0.13	mg/l	97%	-0.33
W	4.46		mg/l	104%	0.40
X			mg/l		
Y	4.19	0.8	mg/l	98%	-0.23
Z			mg/l		
AA			mg/l		
AB			mg/l		
AC	4.26	0.64	mg/l	99%	-0.07
AD			mg/l		
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH	4.31	0.129	mg/l	100%	0.05
AI	4.05	0.25	mg/l	94%	-0.56
AJ			mg/l		
AK			mg/l		
AL	4.54	0.7	mg/l	106%	0.58
AM			mg/l		
AN			mg/l		
AO			mg/l		
AP			mg/l		
AQ			mg/l		
AR	4.48		mg/l	104%	0.44
AS			mg/l		
AT			mg/l		
AU			mg/l		
AV	3.53	0.35	mg/l	82%	-1.77

	All results	Outliers excl.	Unit
Mean \pm Cl(99%)	4,29 \pm 0,20	4,29 \pm 0,20	mg/l
Recov. \pm Cl(99%)	99,9 \pm 4,7	99,9 \pm 4,7	%
SD between labs	0,31	0,31	mg/l
RSD between labs	7,3	7,3	%
n for calculation	20	20	

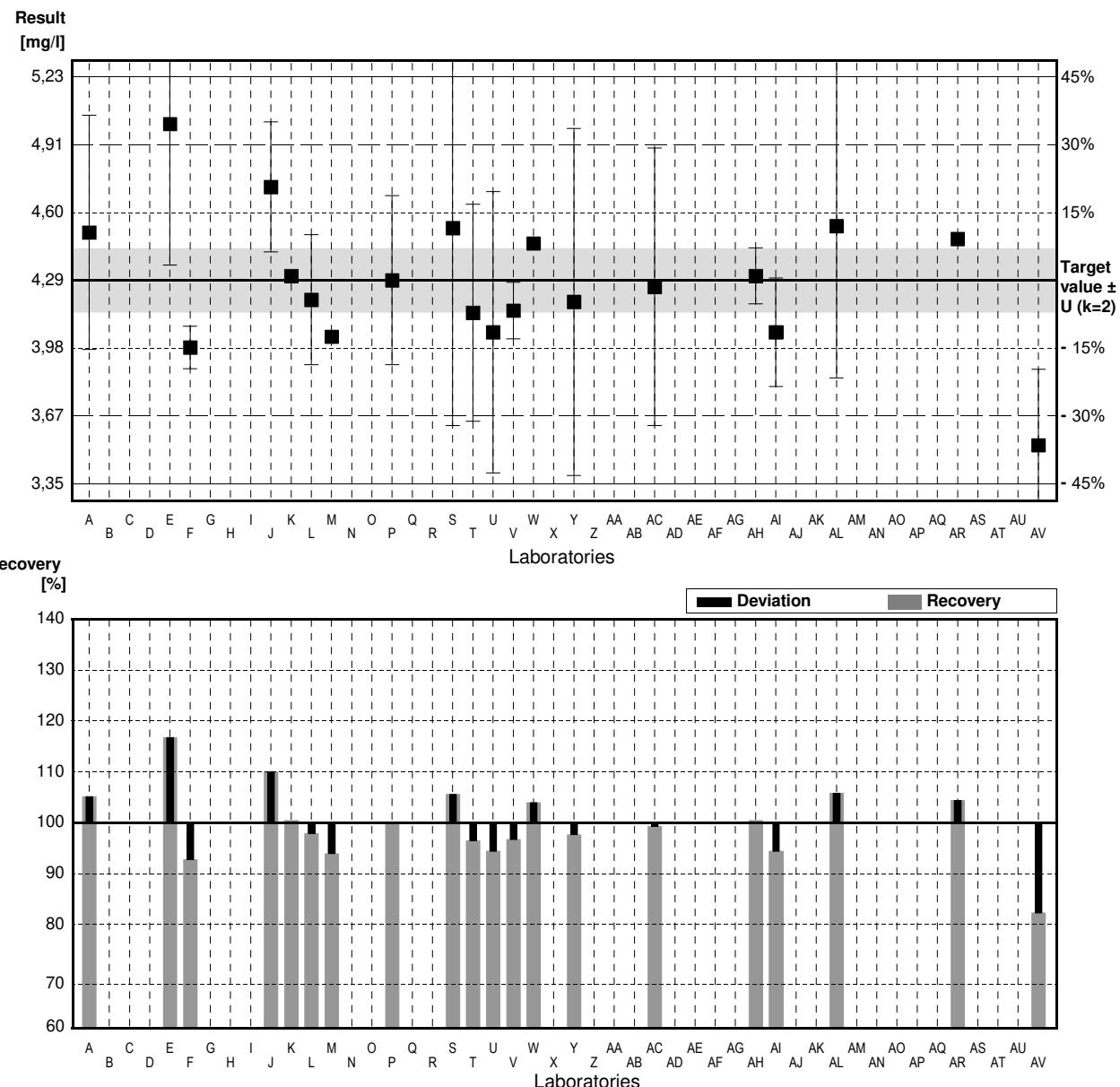


Illustration of Results Laboratory Oriented Part

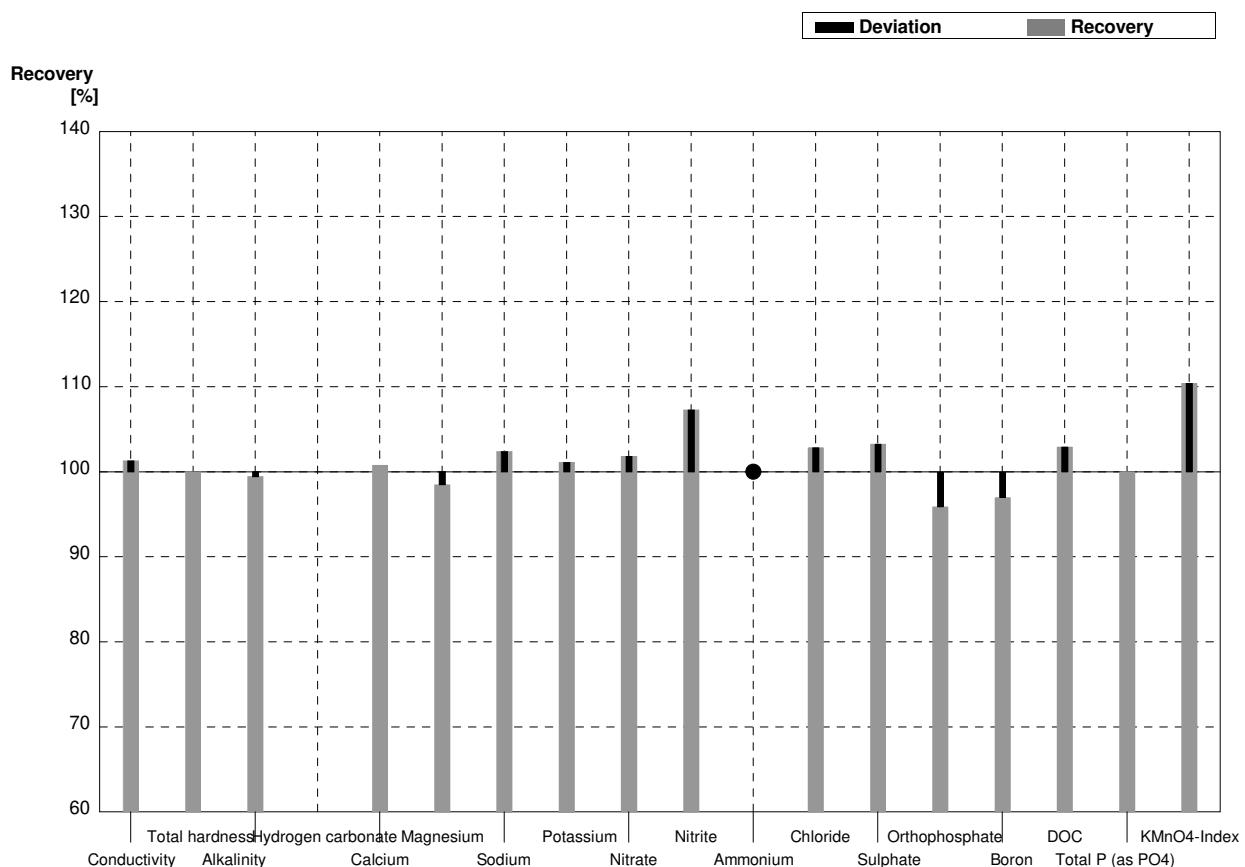
**Round N159
Major Ions**

Sample Dispatch: 8 November 2021



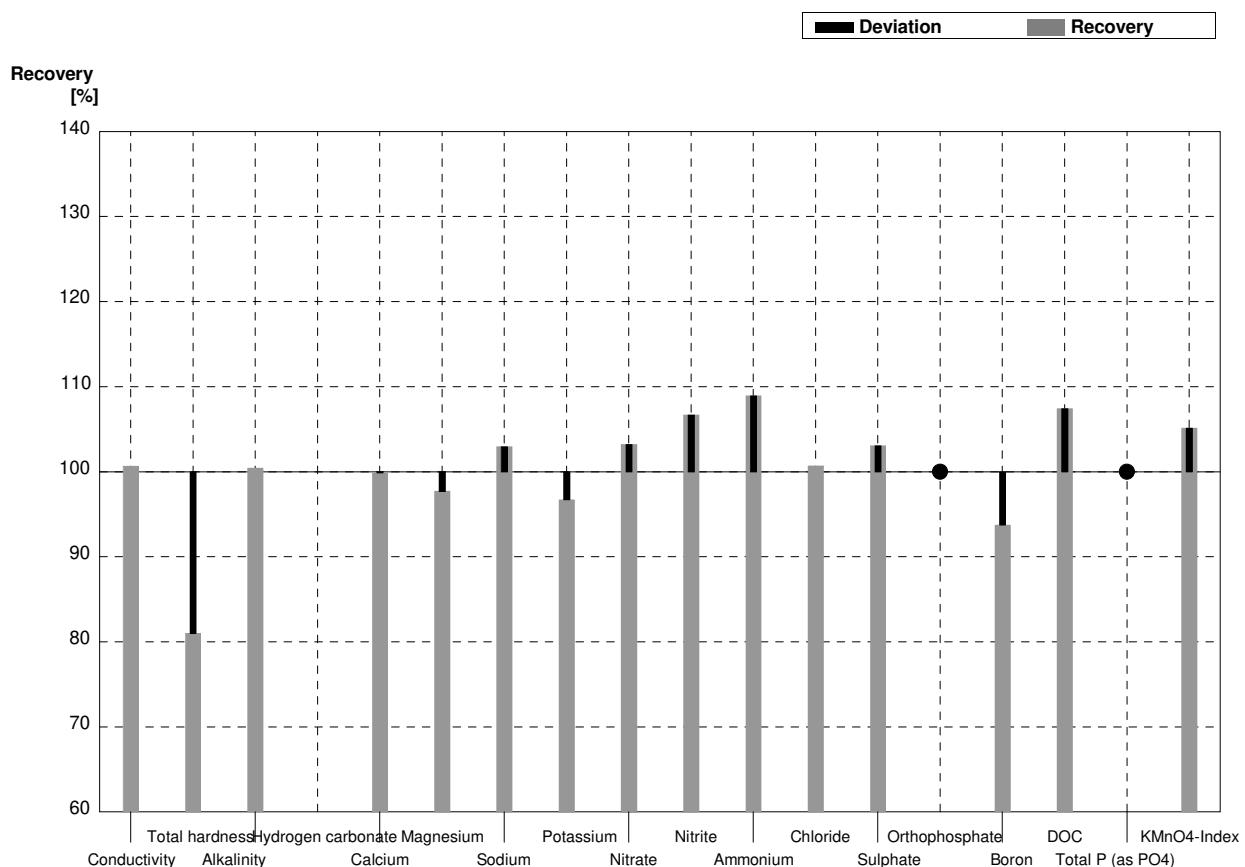
Sample N159A
Laboratory A

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	618	16	$\mu\text{S}/\text{cm}$	101%
Total hardness	2,33	0,02	2,33	0,35	mmol/l	100%
Alkalinity	3,52	0,04	3,50	0,32	mmol/l	99%
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9	73,27	9,16	mg/l	101%
Magnesium	12,5	0,1	12,31	1,83	mg/l	98%
Sodium	33,5	0,5	34,30	4,56	mg/l	102%
Potassium	4,51	0,05	4,56	0,41	mg/l	101%
Nitrate	31,8	0,5	32,38	0,84	mg/l	102%
Nitrite	0,0343	0,0008	0,0368	0,0022	mg/l	107%
Ammonium	<0,01		0,0062	0,0012	mg/l	•
Chloride	38,8	0,7	39,91	1,76	mg/l	103%
Sulphate	52,0	0,5	53,69	2,09	mg/l	103%
Orthophosphate	0,0487	0,0024	0,0467	0,0011	mg/l	96%
Boron	0,066	0,001	0,064	0,007	mg/l	97%
DOC	6,16	0,05	6,34	0,63	mg/l	103%
Total P (as PO ₄)	0,089	0,002	0,089	0,003	mg/l	100%
KMnO ₄ -Index	2,40	0,12	2,65	0,32	mg/l	110%



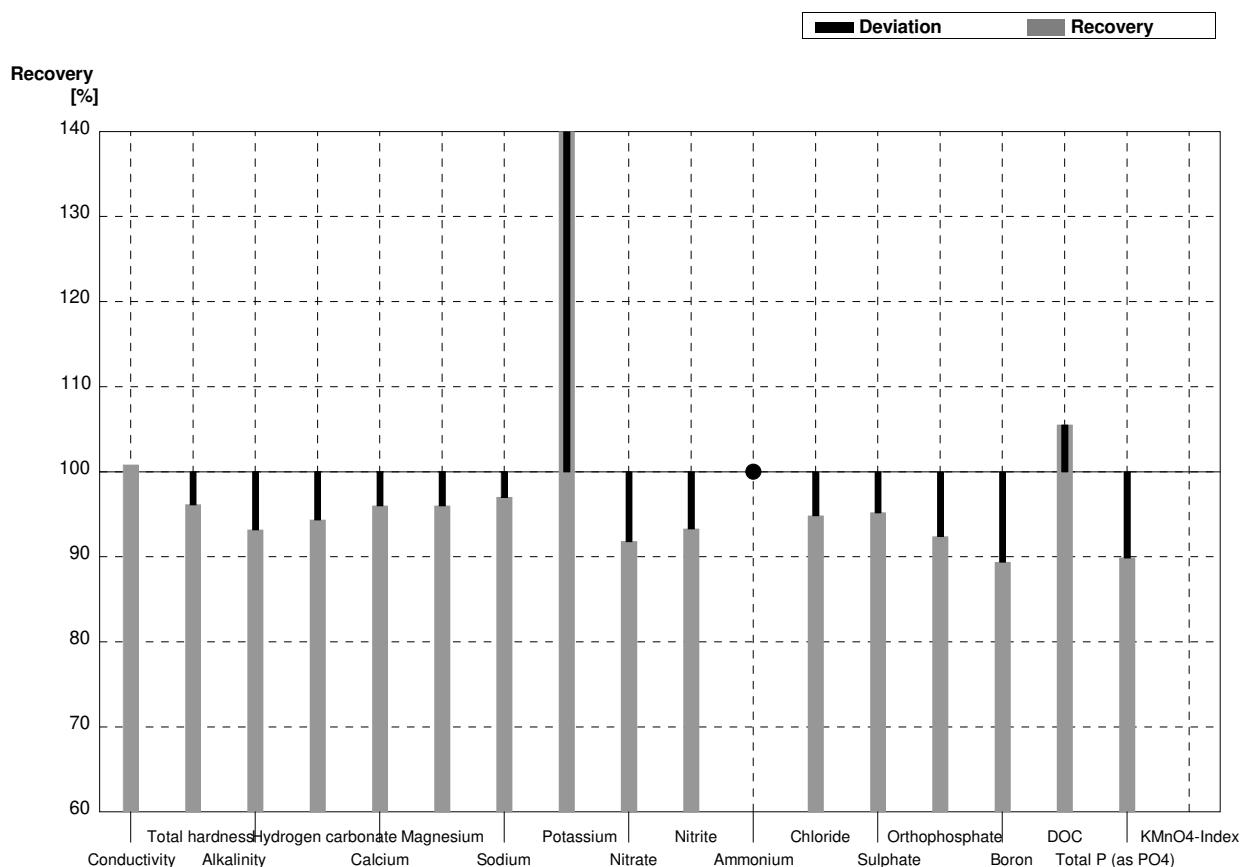
Sample N159B
Laboratory A

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	454	12	$\mu\text{S}/\text{cm}$	101%
Total hardness	1,16	0,01	0,94	0,14	mmol/l	81%
Alkalinity	2,29	0,01	2,30	0,21	mmol/l	100%
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4	31,26	3,91	mg/l	100%
Magnesium	9,18	0,12	8,97	1,34	mg/l	98%
Sodium	42,4	0,2	43,66	5,81	mg/l	103%
Potassium	10,4	0,1	10,06	0,90	mg/l	97%
Nitrate	47,4	1,1	48,92	1,27	mg/l	103%
Nitrite	0,072	0,002	0,0768	0,0046	mg/l	107%
Ammonium	0,0437	0,0046	0,0476	0,0094	mg/l	109%
Chloride	17,1	0,3	17,22	0,76	mg/l	101%
Sulphate	43,1	0,4	44,42	1,73	mg/l	103%
Orthophosphate	<0,009		0,0057	0,0011	mg/l	•
Boron	0,096	0,001	0,090	0,010	mg/l	94%
DOC	4,18	0,05	4,49	0,45	mg/l	107%
Total P (as PO ₄)	<0,009		0,00163	0,00033	mg/l	•
KMnO ₄ -Index	4,29	0,15	4,51	0,54	mg/l	105%



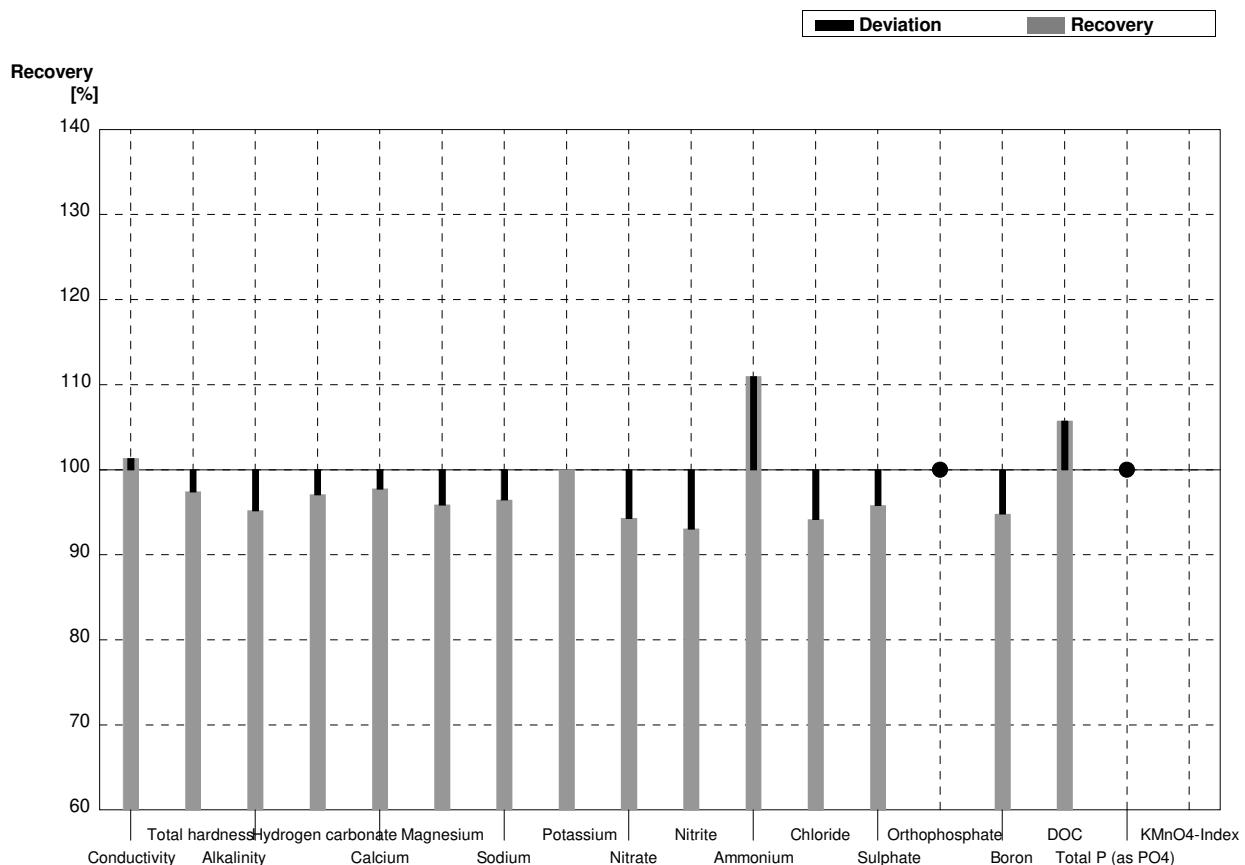
Sample N159A
Laboratory B

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	615	8,0	$\mu\text{S}/\text{cm}$	101%
Total hardness	2,33	0,02	2,24		mmol/l	96%
Alkalinity	3,52	0,04	3,28	0,11	mmol/l	93%
Hydrogen carbonate	212	2	200		mg/l	94%
Calcium	72,7	0,9	69,8	5	mg/l	96%
Magnesium	12,5	0,1	12,0	1	mg/l	96%
Sodium	33,5	0,5	32,5	1	mg/l	97%
Potassium	4,51	0,05	7,4	0,1	mg/l	164%
Nitrate	31,8	0,5	29,2	1,1	mg/l	92%
Nitrite	0,0343	0,0008	0,0320	0,013	mg/l	93%
Ammonium	<0,01		<0,015	0,055	mg/l	•
Chloride	38,8	0,7	36,8	5,2	mg/l	95%
Sulphate	52,0	0,5	49,5	2	mg/l	95%
Orthophosphate	0,0487	0,0024	0,0450		mg/l	92%
Boron	0,066	0,001	0,059	0,08	mg/l	89%
DOC	6,16	0,05	6,5	0,1	mg/l	106%
Total P (as PO ₄)	0,089	0,002	0,080	0,02	mg/l	90%
KMnO ₄ -Index	2,40	0,12			mg/l	



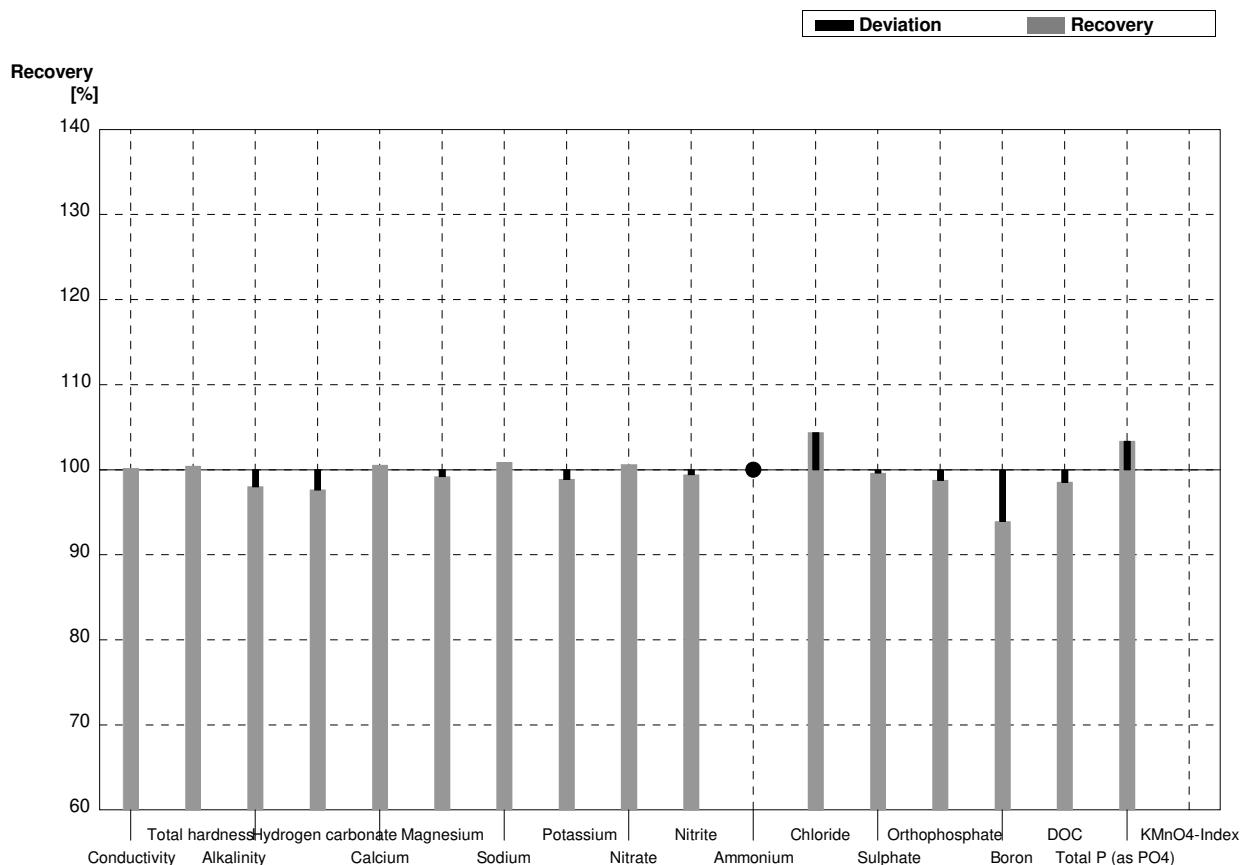
Sample N159B
Laboratory B

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2	457	8,0	µS/cm	101%
Total hardness	1,16	0,01	1,13		mmol/l	97%
Alkalinity	2,29	0,01	2,18	0,11	mmol/l	95%
Hydrogen carbonate	137	1	133		mg/l	97%
Calcium	31,3	0,4	30,6	5	mg/l	98%
Magnesium	9,18	0,12	8,8	1	mg/l	96%
Sodium	42,4	0,2	40,9	1	mg/l	96%
Potassium	10,4	0,1	10,4	0,1	mg/l	100%
Nitrate	47,4	1,1	44,7	1,1	mg/l	94%
Nitrite	0,072	0,002	0,067	0,013	mg/l	93%
Ammonium	0,0437	0,0046	0,0485	0,055	mg/l	111%
Chloride	17,1	0,3	16,1	5,2	mg/l	94%
Sulphate	43,1	0,4	41,3	2	mg/l	96%
Orthophosphate	<0,009		<0,045		mg/l	•
Boron	0,096	0,001	0,091	0,08	mg/l	95%
DOC	4,18	0,05	4,42	0,10	mg/l	106%
Total P (as PO4)	<0,009		<0,01	0,02	mg/l	•
KMnO4-Index	4,29	0,15			mg/l	



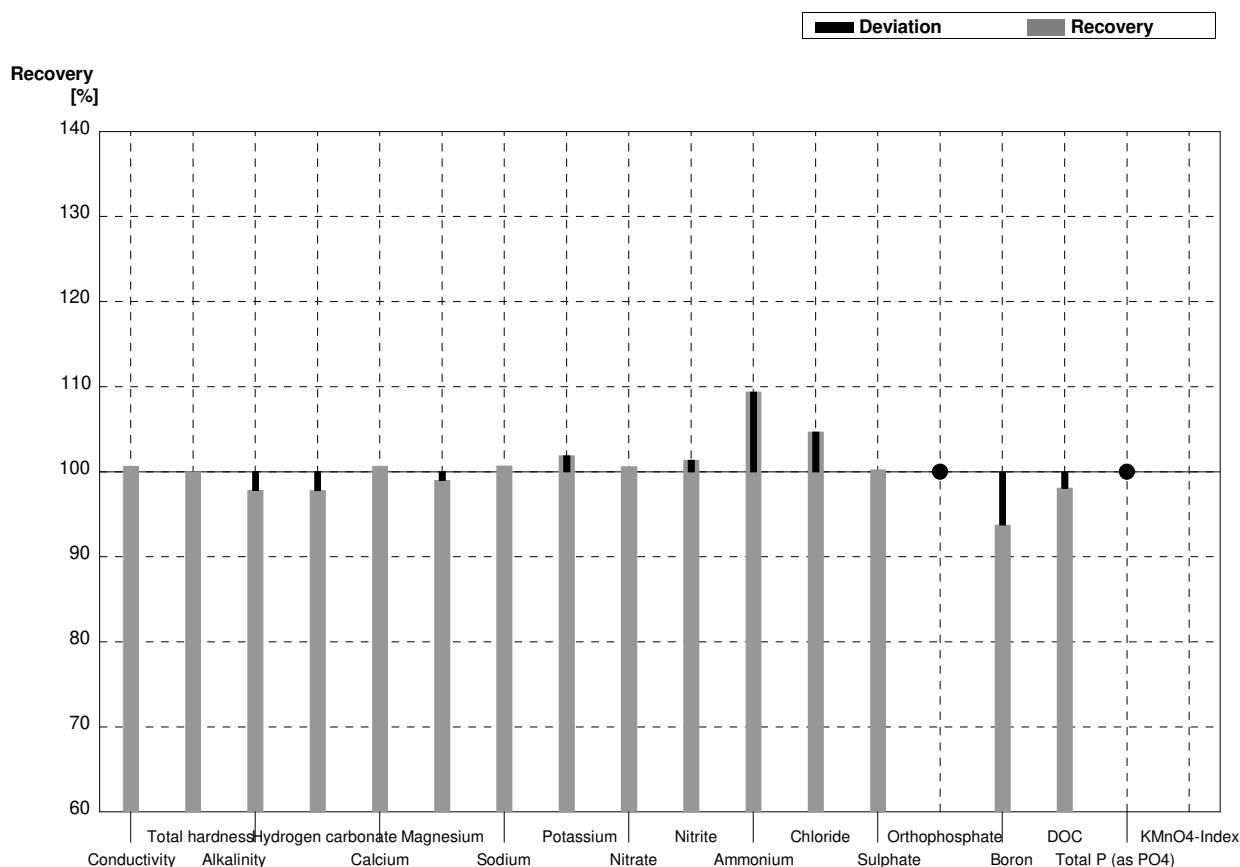
Sample N159A
Laboratory C

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	611	18	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02	2,34	0,19	mmol/l	100%
Alkalinity	3,52	0,04	3,45	0,17	mmol/l	98%
Hydrogen carbonate	212	2	207	10	mg/l	98%
Calcium	72,7	0,9	73,1	3,7	mg/l	101%
Magnesium	12,5	0,1	12,4	0,8	mg/l	99%
Sodium	33,5	0,5	33,8	1,4	mg/l	101%
Potassium	4,51	0,05	4,46	0,36	mg/l	99%
Nitrate	31,8	0,5	32,0	1,9	mg/l	101%
Nitrite	0,0343	0,0008	0,0341	0,003	mg/l	99%
Ammonium	<0,01		<0,008		mg/l	•
Chloride	38,8	0,7	40,5	2,0	mg/l	104%
Sulphate	52,0	0,5	51,8	3,1	mg/l	100%
Orthophosphate	0,0487	0,0024	0,0481	0,003	mg/l	99%
Boron	0,066	0,001	0,062	0,007	mg/l	94%
DOC	6,16	0,05	6,07	0,61	mg/l	99%
Total P (as PO ₄)	0,089	0,002	0,092	0,007	mg/l	103%
KMnO ₄ -Index	2,40	0,12			mg/l	



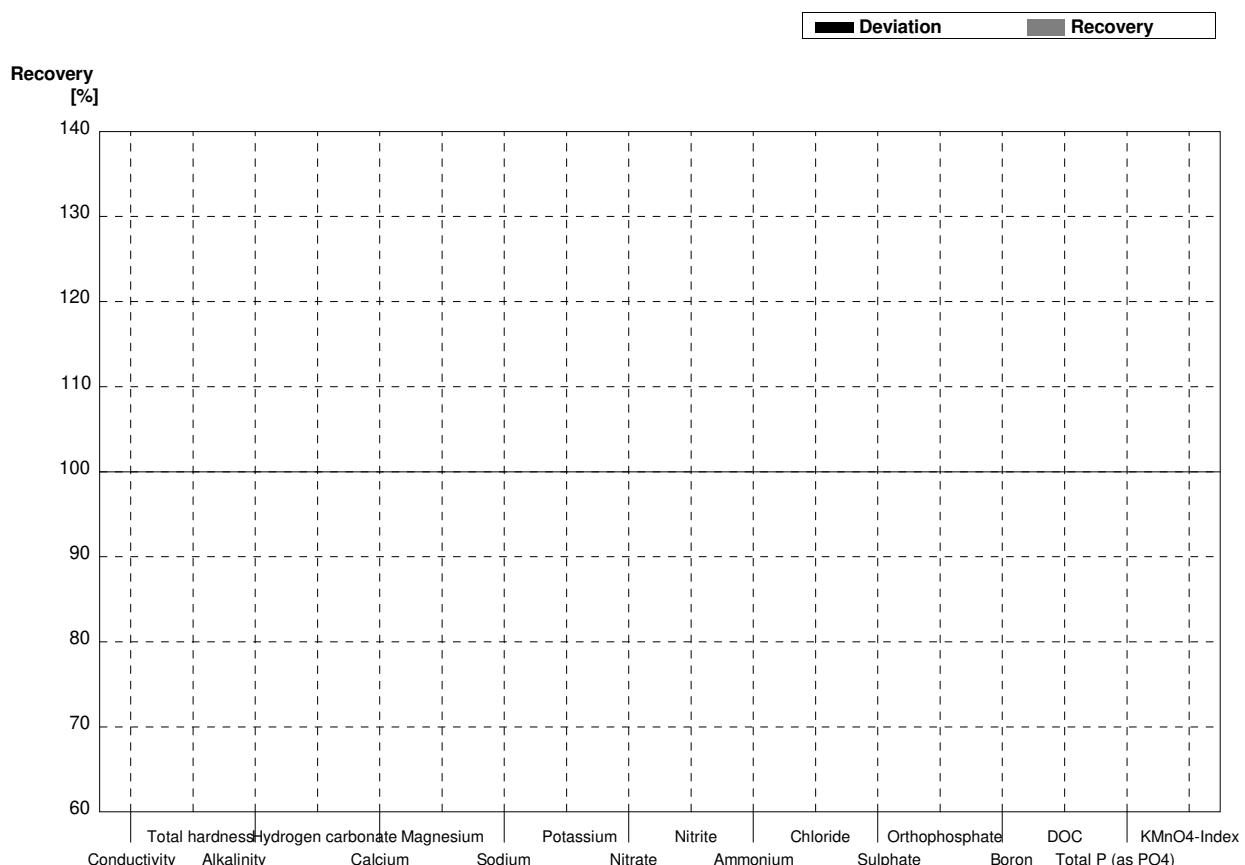
Sample N159B
Laboratory C

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2	454	14	µS/cm	101%
Total hardness	1,16	0,01	1,16	0,10	mmol/l	100%
Alkalinity	2,29	0,01	2,24	0,11	mmol/l	98%
Hydrogen carbonate	137	1	134	7	mg/l	98%
Calcium	31,3	0,4	31,5	1,6	mg/l	101%
Magnesium	9,18	0,12	9,09	0,55	mg/l	99%
Sodium	42,4	0,2	42,7	1,7	mg/l	101%
Potassium	10,4	0,1	10,6	0,8	mg/l	102%
Nitrate	47,4	1,1	47,7	2,9	mg/l	101%
Nitrite	0,072	0,002	0,073	0,006	mg/l	101%
Ammonium	0,0437	0,0046	0,0478	0,005	mg/l	109%
Chloride	17,1	0,3	17,9	0,9	mg/l	105%
Sulphate	43,1	0,4	43,2	2,6	mg/l	100%
Orthophosphate	<0,009		<0,006		mg/l	•
Boron	0,096	0,001	0,090	0,009	mg/l	94%
DOC	4,18	0,05	4,10	0,41	mg/l	98%
Total P (as PO4)	<0,009		<0,006		mg/l	•
KMnO4-Index	4,29	0,15			mg/l	



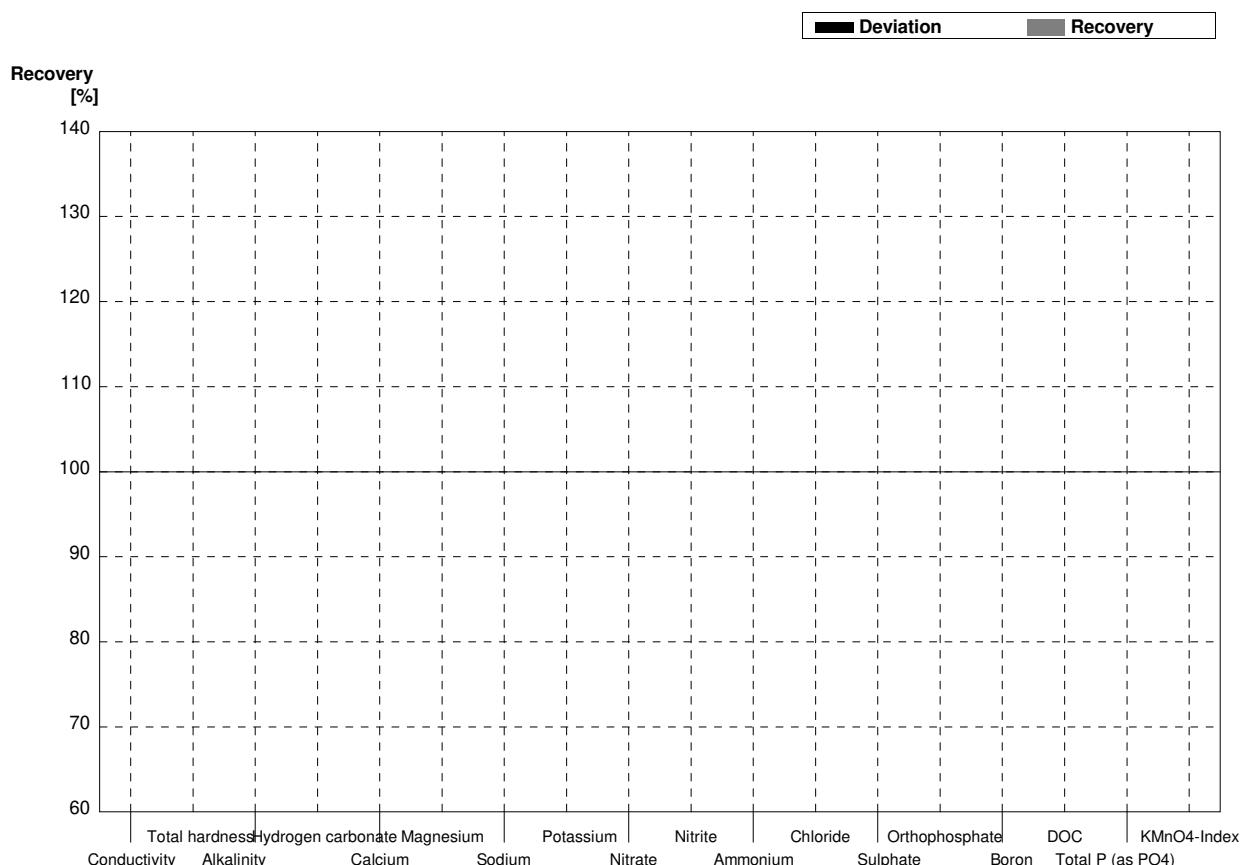
Sample N159A
Laboratory D

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	610	2			µS/cm	
Total hardness	2,33	0,02			mmol/l	
Alkalinity	3,52	0,04			mmol/l	
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9			mg/l	
Magnesium	12,5	0,1			mg/l	
Sodium	33,5	0,5			mg/l	
Potassium	4,51	0,05			mg/l	
Nitrate	31,8	0,5			mg/l	
Nitrite	0,0343	0,0008			mg/l	
Ammonium	<0,01				mg/l	
Chloride	38,8	0,7			mg/l	
Sulphate	52,0	0,5			mg/l	
Orthophosphate	0,0487	0,0024			mg/l	
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05			mg/l	
Total P (as PO ₄)	0,089	0,002			mg/l	
KMnO ₄ -Index	2,40	0,12			mg/l	



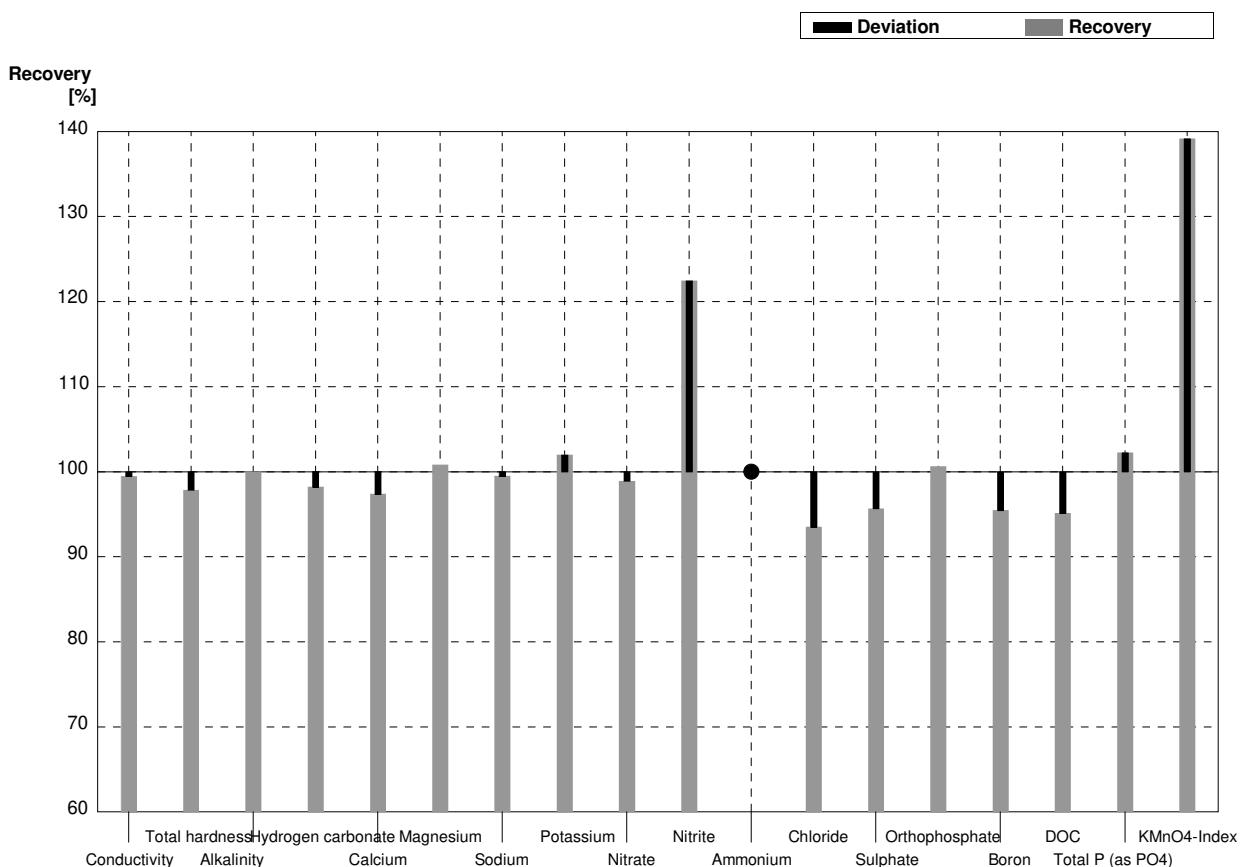
Sample N159B
Laboratory D

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2			µS/cm	
Total hardness	1,16	0,01			mmol/l	
Alkalinity	2,29	0,01			mmol/l	
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4			mg/l	
Magnesium	9,18	0,12			mg/l	
Sodium	42,4	0,2			mg/l	
Potassium	10,4	0,1			mg/l	
Nitrate	47,4	1,1			mg/l	
Nitrite	0,072	0,002			mg/l	
Ammonium	0,0437	0,0046			mg/l	
Chloride	17,1	0,3			mg/l	
Sulphate	43,1	0,4			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	4,29	0,15			mg/l	



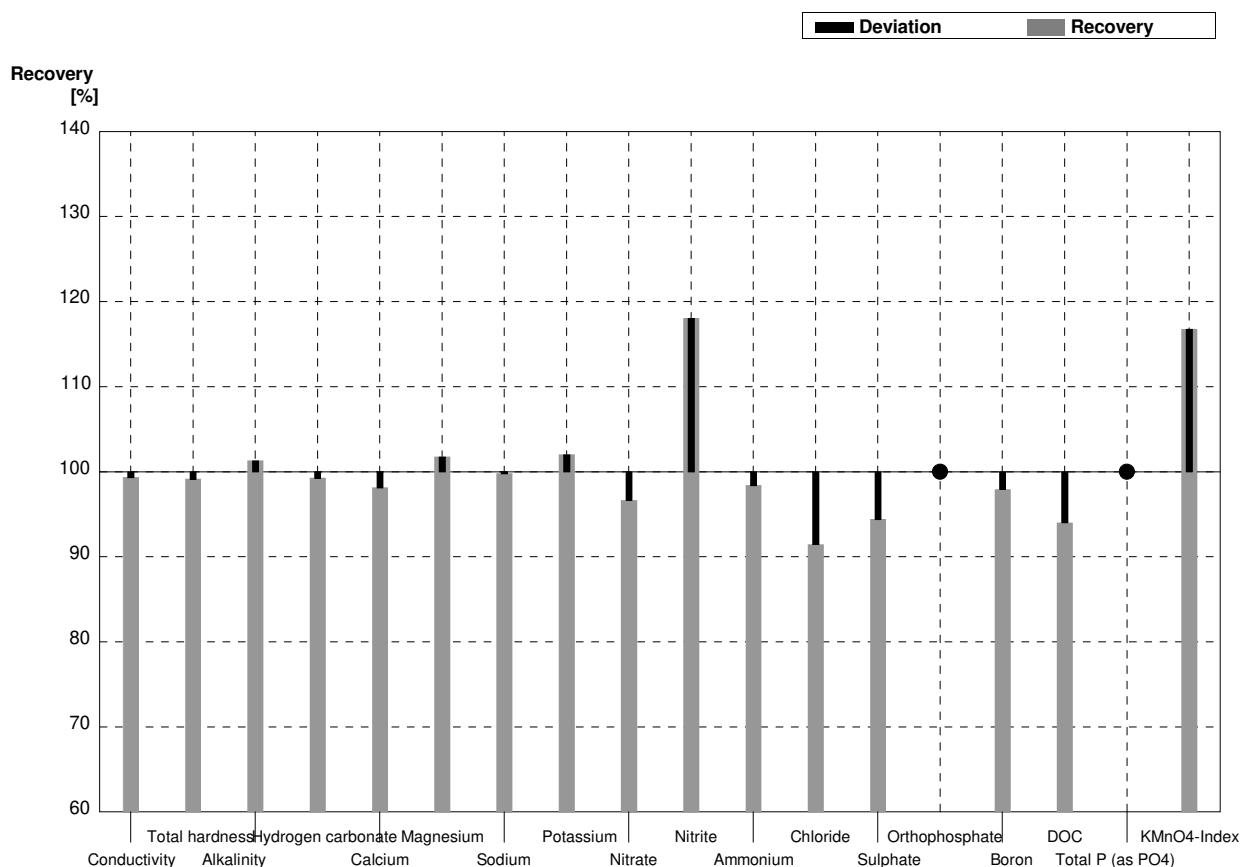
Sample N159A
Laboratory E

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	606,8	30,3	$\mu\text{S}/\text{cm}$	99%
Total hardness	2,33	0,02	2,28	0,22	mmol/l	98%
Alkalinity	3,52	0,04	3,52	0,176	mmol/l	100%
Hydrogen carbonate	212	2	208,2	10,4	mg/l	98%
Calcium	72,7	0,9	70,80	7,1	mg/l	97%
Magnesium	12,5	0,1	12,60	1,3	mg/l	101%
Sodium	33,5	0,5	33,33	3,3	mg/l	99%
Potassium	4,51	0,05	4,60	0,46	mg/l	102%
Nitrate	31,8	0,5	31,45	1,57	mg/l	99%
Nitrite	0,0343	0,0008	0,0420	0,004	mg/l	122%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	38,8	0,7	36,28	1,81	mg/l	94%
Sulphate	52,0	0,5	49,74	2,49	mg/l	96%
Orthophosphate	0,0487	0,0024	0,0490	0,005	mg/l	101%
Boron	0,066	0,001	0,063	0,0063	mg/l	95%
DOC	6,16	0,05	5,86	1,17	mg/l	95%
Total P (as PO ₄)	0,089	0,002	0,091	0,009	mg/l	102%
KMnO ₄ -Index	2,40	0,12	3,34	0,434	mg/l	139%



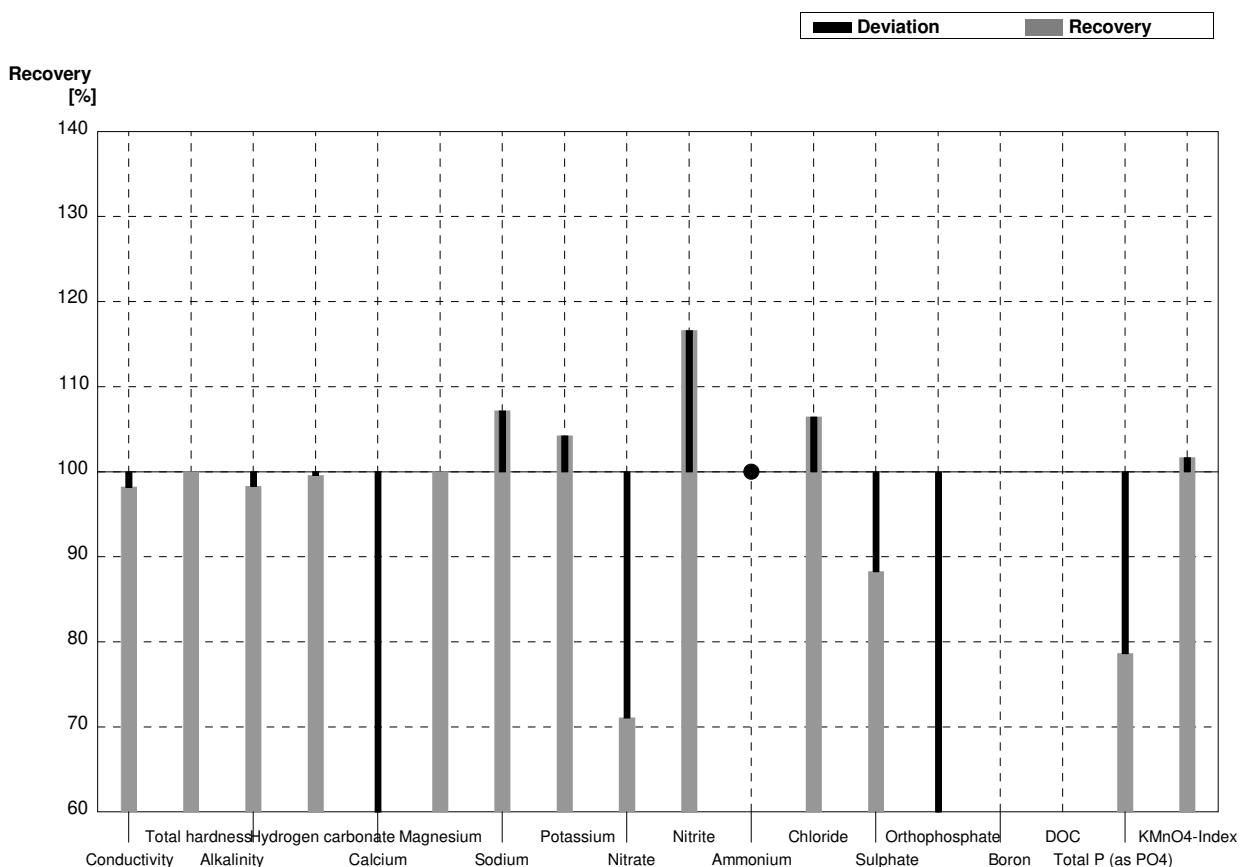
Sample N159B
Laboratory E

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	448	22,4	$\mu\text{S}/\text{cm}$	99%
Total hardness	1,16	0,01	1,15	0,12	mmol/l	99%
Alkalinity	2,29	0,01	2,32	0,116	mmol/l	101%
Hydrogen carbonate	137	1	136	6,81	mg/l	99%
Calcium	31,3	0,4	30,71	3,1	mg/l	98%
Magnesium	9,18	0,12	9,34	0,93	mg/l	102%
Sodium	42,4	0,2	42,31	4,2	mg/l	100%
Potassium	10,4	0,1	10,61	1,1	mg/l	102%
Nitrate	47,4	1,1	45,81	2,29	mg/l	97%
Nitrite	0,072	0,002	0,085	0,009	mg/l	118%
Ammonium	0,0437	0,0046	0,0430	0,0043	mg/l	98%
Chloride	17,1	0,3	15,64	0,78	mg/l	91%
Sulphate	43,1	0,4	40,69	2,04	mg/l	94%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,096	0,001	0,094	0,0094	mg/l	98%
DOC	4,18	0,05	3,93	0,78	mg/l	94%
Total P (as PO ₄)	<0,009		<0,01		mg/l	•
KMnO ₄ -Index	4,29	0,15	5,01	0,651	mg/l	117%



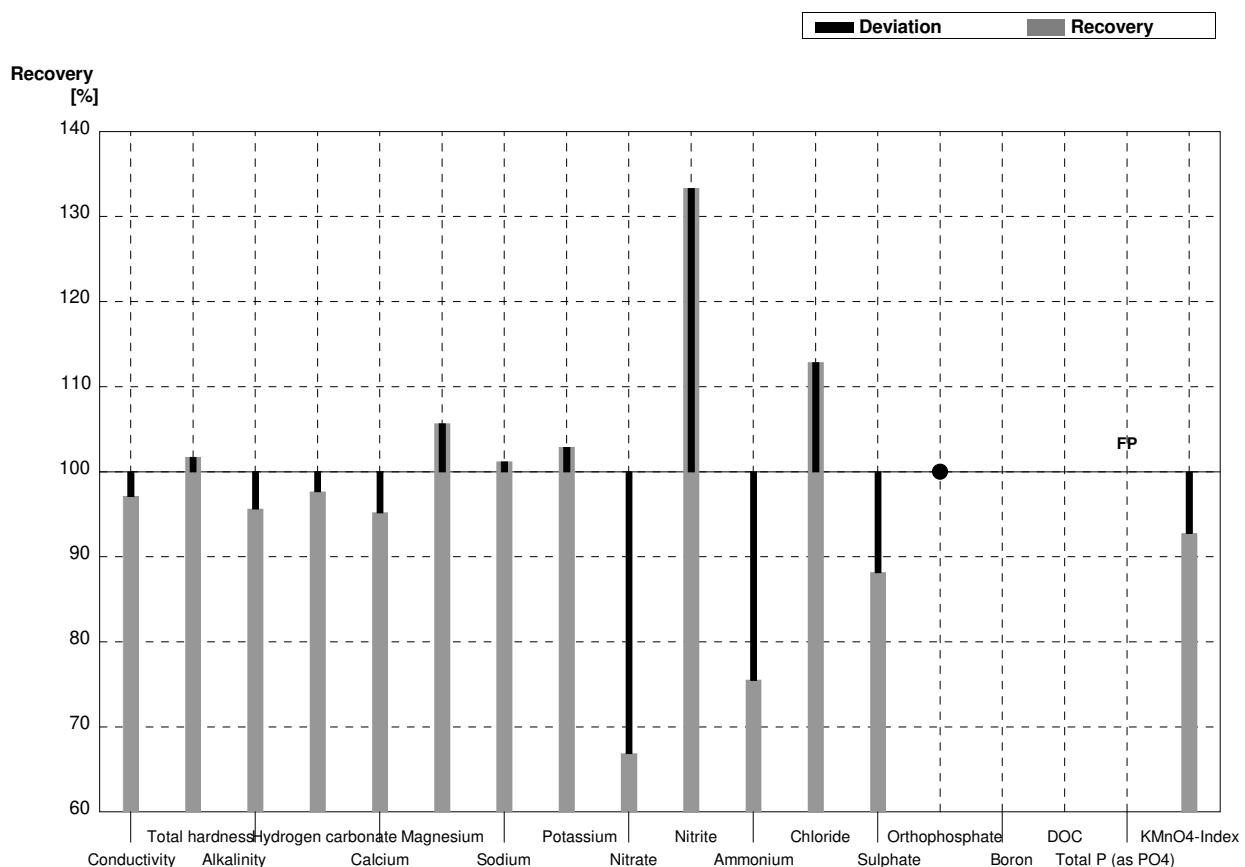
Sample N159A
Laboratory F

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	599	9,0	$\mu\text{S}/\text{cm}$	98%
Total hardness	2,33	0,02	2,33	0,4	mmol/l	100%
Alkalinity	3,52	0,04	3,46	0,18	mmol/l	98%
Hydrogen carbonate	212	2	211,1	2,4	mg/l	100%
Calcium	72,7	0,9	34,3	1,9	mg/l	47%
Magnesium	12,5	0,1	12,5	1,1	mg/l	100%
Sodium	33,5	0,5	35,9	0,2	mg/l	107%
Potassium	4,51	0,05	4,70	0,03	mg/l	104%
Nitrate	31,8	0,5	22,6	0,072	mg/l	71%
Nitrite	0,0343	0,0008	0,0400	0,001	mg/l	117%
Ammonium	<0,01		<0,003	0,002	mg/l	•
Chloride	38,8	0,7	41,3	1,34	mg/l	106%
Sulphate	52,0	0,5	45,9	0,9	mg/l	88%
Orthophosphate	0,0487	0,0024	0,0150	0,004	mg/l	31%
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05			mg/l	
Total P (as PO ₄)	0,089	0,002	0,070	0,006	mg/l	79%
KMnO ₄ -Index	2,40	0,12	2,44	0,098	mg/l	102%



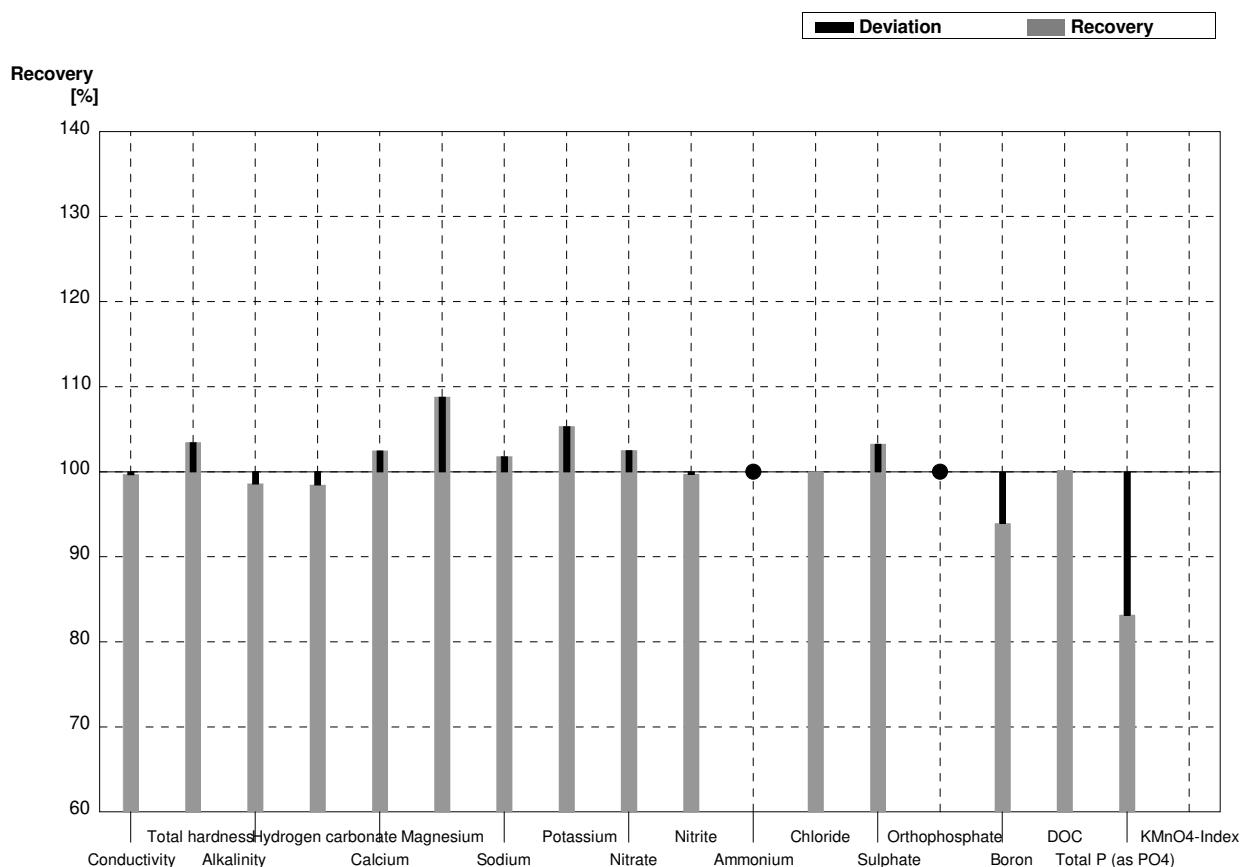
Sample N159B
Laboratory F

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	438	9,0	$\mu\text{S}/\text{cm}$	97%
Total hardness	1,16	0,01	1,18	0,4	mmol/l	102%
Alkalinity	2,29	0,01	2,19	0,18	mmol/l	96%
Hydrogen carbonate	137	1	133,8	2,4	mg/l	98%
Calcium	31,3	0,4	29,8	1,9	mg/l	95%
Magnesium	9,18	0,12	9,7	1,1	mg/l	106%
Sodium	42,4	0,2	42,9	0,2	mg/l	101%
Potassium	10,4	0,1	10,7	0,03	mg/l	103%
Nitrate	47,4	1,1	31,7	0,072	mg/l	67%
Nitrite	0,072	0,002	0,096	0,001	mg/l	133%
Ammonium	0,0437	0,0046	0,0330	0,002	mg/l	76%
Chloride	17,1	0,3	19,3	1,34	mg/l	113%
Sulphate	43,1	0,4	38,0	0,9	mg/l	88%
Orthophosphate	<0,009		<0,009	0,004	mg/l	•
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05			mg/l	
Total P (as PO ₄)	<0,009		0,0150	0,006	mg/l	FP
KMnO ₄ -Index	4,29	0,15	3,98	0,098	mg/l	93%



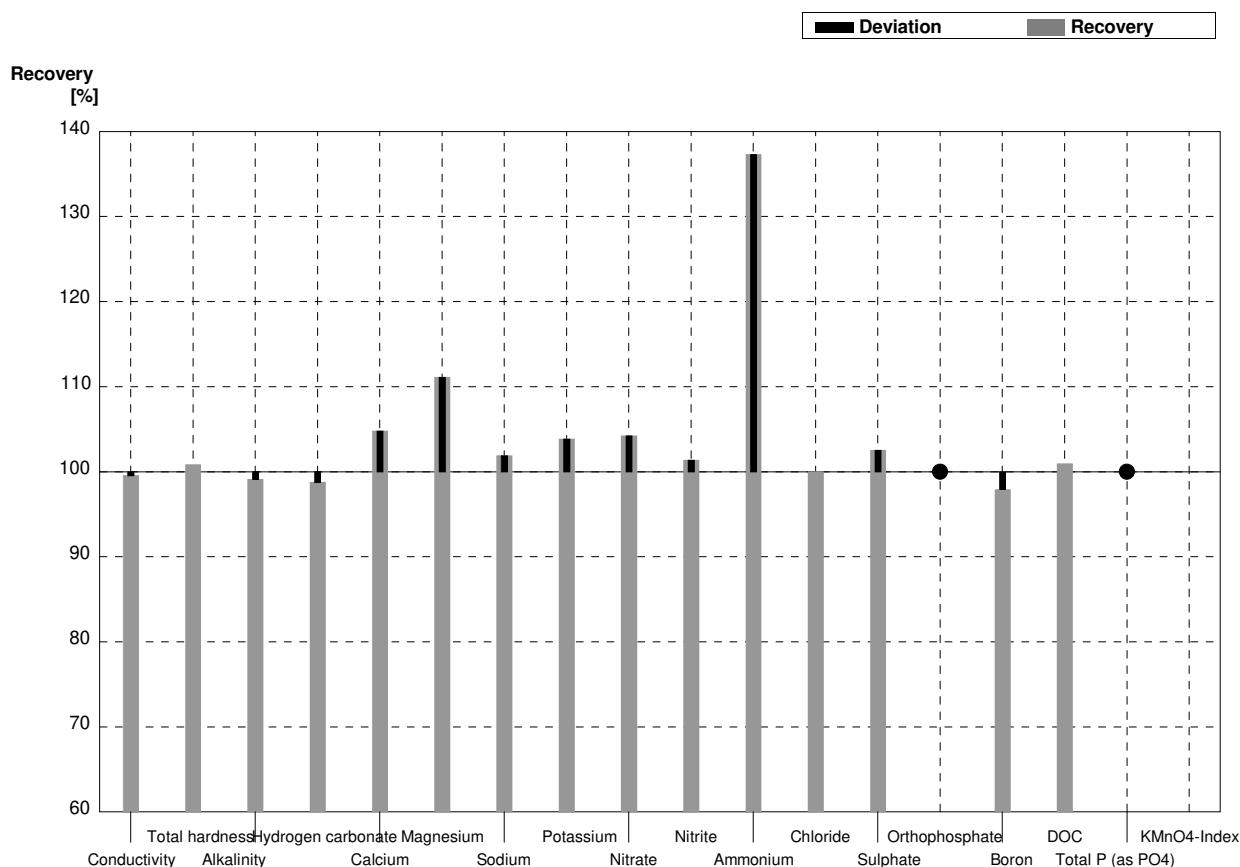
Sample N159A
Laboratory G

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	608	36,5	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02	2,41	0,180	mmol/l	103%
Alkalinity	3,52	0,04	3,47	0,330	mmol/l	99%
Hydrogen carbonate	212	2	208,7	19,82	mg/l	98%
Calcium	72,7	0,9	74,5	4,47	mg/l	102%
Magnesium	12,5	0,1	13,6	1,63	mg/l	109%
Sodium	33,5	0,5	34,1	2,22	mg/l	102%
Potassium	4,51	0,05	4,75	0,475	mg/l	105%
Nitrate	31,8	0,5	32,6	3,43	mg/l	103%
Nitrite	0,0343	0,0008	0,0342	0,00342	mg/l	100%
Ammonium	<0,01		<0,04		mg/l	•
Chloride	38,8	0,7	38,8	3,49	mg/l	100%
Sulphate	52,0	0,5	53,7	4,83	mg/l	103%
Orthophosphate	0,0487	0,0024	<0,06		mg/l	•
Boron	0,066	0,001	0,062	0,0087	mg/l	94%
DOC	6,16	0,05	6,17	0,37	mg/l	100%
Total P (as PO ₄)	0,089	0,002	0,074	0,0074	mg/l	83%
KMnO ₄ -Index	2,40	0,12			mg/l	



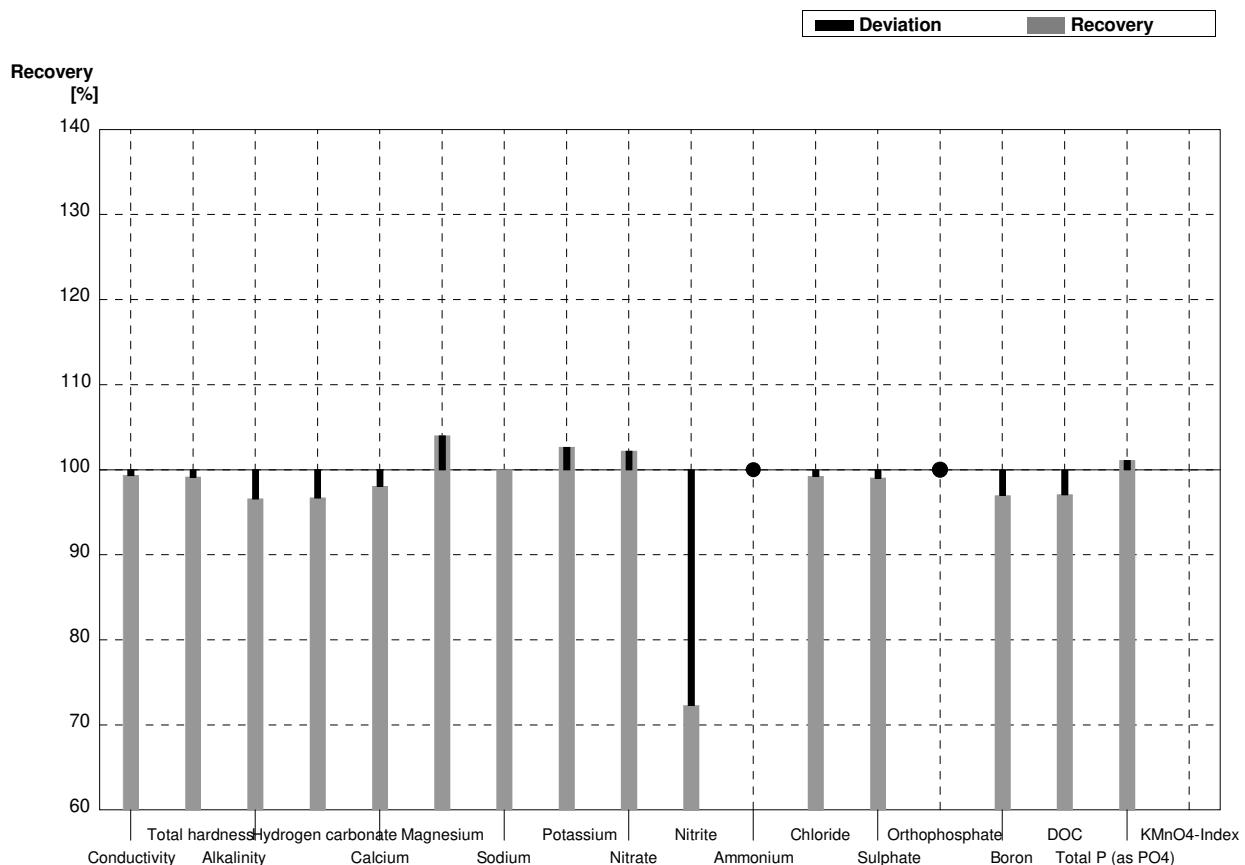
Sample N159B
Laboratory G

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	449	26,9	$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01	1,17	0,087	mmol/l	101%
Alkalinity	2,29	0,01	2,27	0,215	mmol/l	99%
Hydrogen carbonate	137	1	135,3	12,85	mg/l	99%
Calcium	31,3	0,4	32,8	1,97	mg/l	105%
Magnesium	9,18	0,12	10,2	1,22	mg/l	111%
Sodium	42,4	0,2	43,2	2,81	mg/l	102%
Potassium	10,4	0,1	10,8	1,08	mg/l	104%
Nitrate	47,4	1,1	49,4	5,19	mg/l	104%
Nitrite	0,072	0,002	0,0730	0,00730	mg/l	101%
Ammonium	0,0437	0,0046	0,060	0,0060	mg/l	137%
Chloride	17,1	0,3	17,1	1,54	mg/l	100%
Sulphate	43,1	0,4	44,2	3,98	mg/l	103%
Orthophosphate	<0,009		<0,06		mg/l	•
Boron	0,096	0,001	0,094	0,0131	mg/l	98%
DOC	4,18	0,05	4,22	0,253	mg/l	101%
Total P (as PO ₄)	<0,009		<0,06		mg/l	•
KMnO ₄ -Index	4,29	0,15			mg/l	



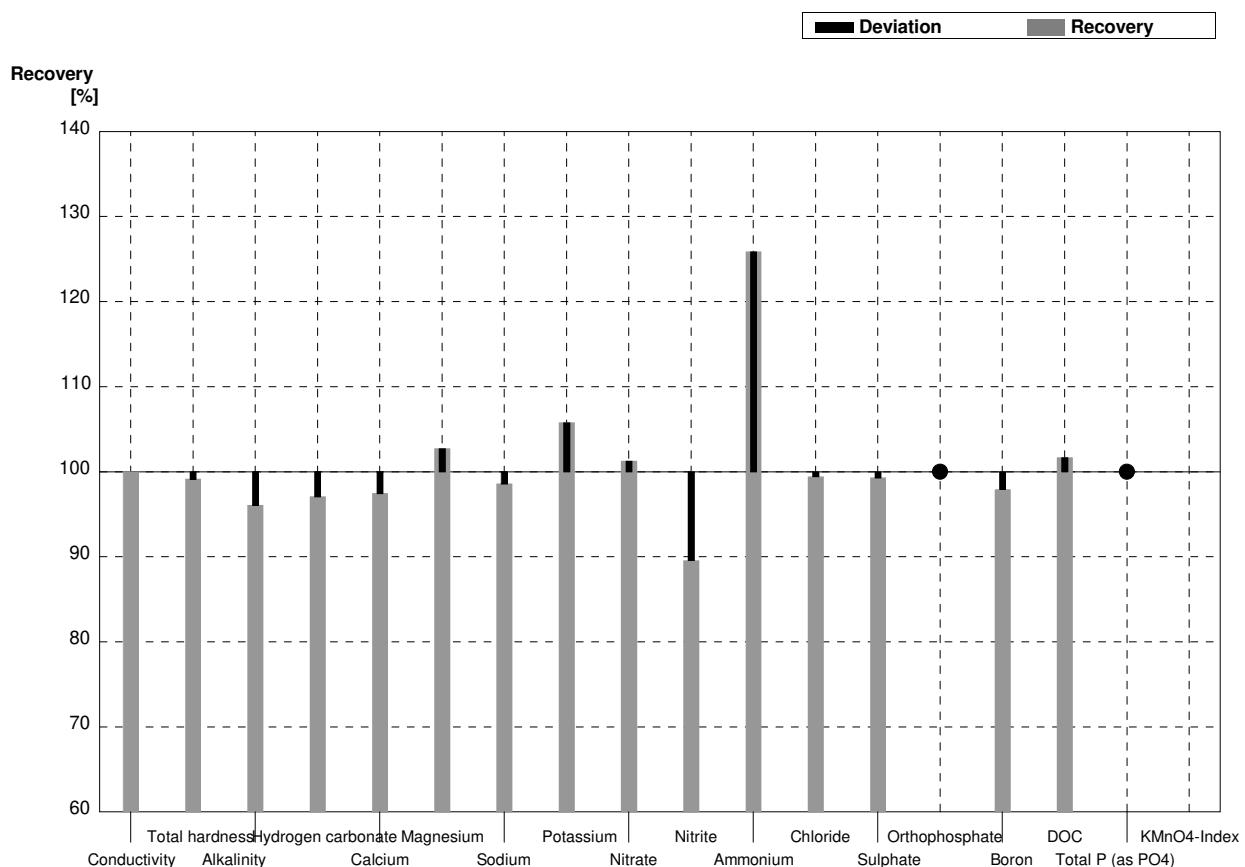
Sample N159A
Laboratory H

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	606	30	$\mu\text{S}/\text{cm}$	99%
Total hardness	2,33	0,02	2,31	0,46	mmol/l	99%
Alkalinity	3,52	0,04	3,40	0,17	mmol/l	97%
Hydrogen carbonate	212	2	205	10	mg/l	97%
Calcium	72,7	0,9	71,3	14	mg/l	98%
Magnesium	12,5	0,1	13,0	2,6	mg/l	104%
Sodium	33,5	0,5	33,5	6,7	mg/l	100%
Potassium	4,51	0,05	4,63	0,93	mg/l	103%
Nitrate	31,8	0,5	32,5	4,9	mg/l	102%
Nitrite	0,0343	0,0008	0,0248	0,0037	mg/l	72%
Ammonium	<0,01		'0,0125	0,007	mg/l	•
Chloride	38,8	0,7	38,5	5,8	mg/l	99%
Sulphate	52,0	0,5	51,5	7,7	mg/l	99%
Orthophosphate	0,0487	0,0024	<0,1		mg/l	•
Boron	0,066	0,001	0,064	0,013	mg/l	97%
DOC	6,16	0,05	5,98	1,2	mg/l	97%
Total P (as PO ₄)	0,089	0,002	0,090	0,018	mg/l	101%
KMnO ₄ -Index	2,40	0,12			mg/l	



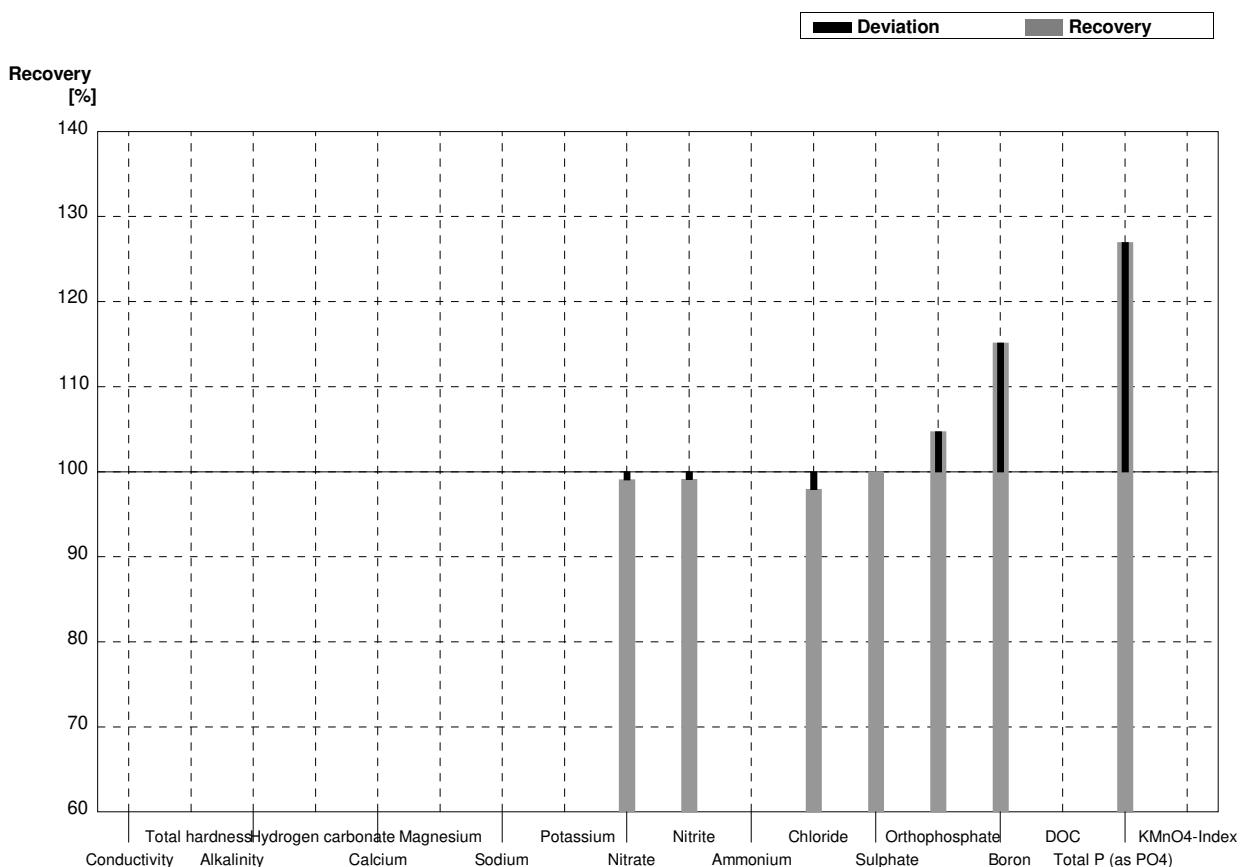
Sample N159B
Laboratory H

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	451	23	$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01	1,15	0,23	mmol/l	99%
Alkalinity	2,29	0,01	2,20	0,11	mmol/l	96%
Hydrogen carbonate	137	1	133	6,7	mg/l	97%
Calcium	31,3	0,4	30,5	6,1	mg/l	97%
Magnesium	9,18	0,12	9,43	1,9	mg/l	103%
Sodium	42,4	0,2	41,8	8,4	mg/l	99%
Potassium	10,4	0,1	11,0	2,2	mg/l	106%
Nitrate	47,4	1,1	48,0	7,2	mg/l	101%
Nitrite	0,072	0,002	0,0645	0,0097	mg/l	90%
Ammonium	0,0437	0,0046	0,055	0,011	mg/l	126%
Chloride	17,1	0,3	17,0	2,6	mg/l	99%
Sulphate	43,1	0,4	42,8	6,4	mg/l	99%
Orthophosphate	<0,009		<0,1		mg/l	•
Boron	0,096	0,001	0,094	0,019	mg/l	98%
DOC	4,18	0,05	4,25	0,85	mg/l	102%
Total P (as PO ₄)	<0,009		<0,03		mg/l	•
KMnO ₄ -Index	4,29	0,15			mg/l	



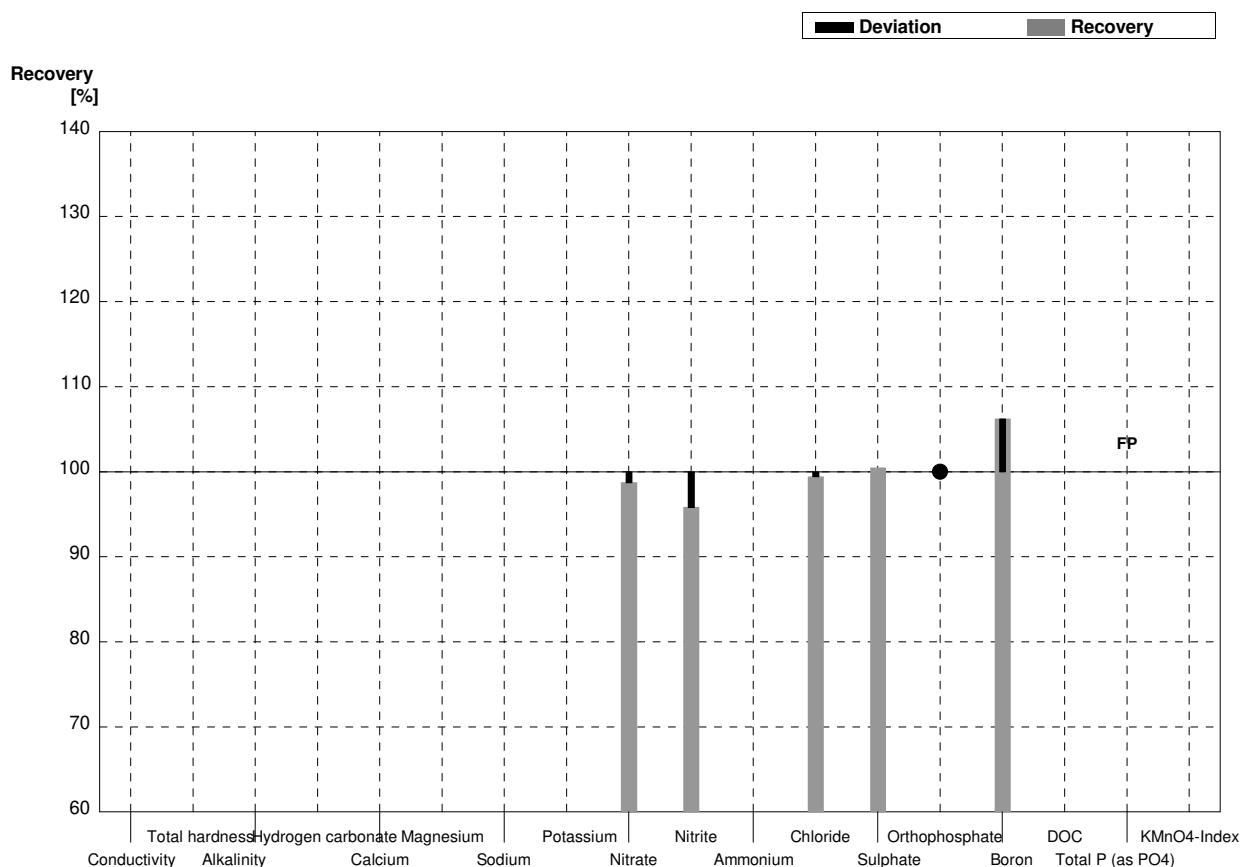
Sample N159A
Laboratory I

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	610	2			µS/cm	
Total hardness	2,33	0,02			mmol/l	
Alkalinity	3,52	0,04			mmol/l	
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9			mg/l	
Magnesium	12,5	0,1			mg/l	
Sodium	33,5	0,5			mg/l	
Potassium	4,51	0,05			mg/l	
Nitrate	31,8	0,5	31,5	3,59	mg/l	99%
Nitrite	0,0343	0,0008	0,0340	0,004	mg/l	99%
Ammonium	<0,01				mg/l	
Chloride	38,8	0,7	38,0	2,2	mg/l	98%
Sulphate	52,0	0,5	52,0	7,12	mg/l	100%
Orthophosphate	0,0487	0,0024	0,051	0,004	mg/l	105%
Boron	0,066	0,001	0,076	0,01	mg/l	115%
DOC	6,16	0,05			mg/l	
Total P (as PO ₄)	0,089	0,002	0,113	0,008	mg/l	127%
KMnO ₄ -Index	2,40	0,12			mg/l	



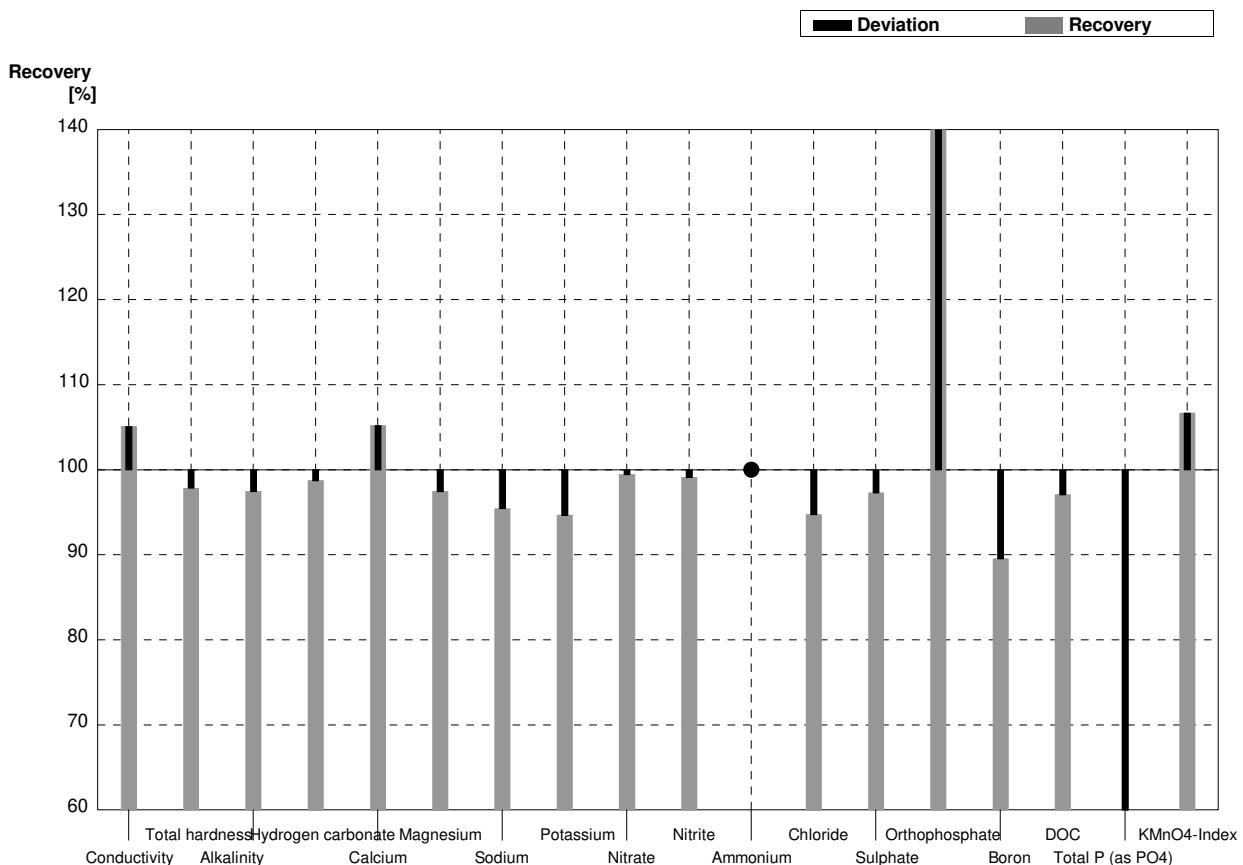
Sample N159B
Laboratory I

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2			$\mu\text{S}/\text{cm}$	
Total hardness	1,16	0,01			mmol/l	
Alkalinity	2,29	0,01			mmol/l	
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4			mg/l	
Magnesium	9,18	0,12			mg/l	
Sodium	42,4	0,2			mg/l	
Potassium	10,4	0,1			mg/l	
Nitrate	47,4	1,1	46,8	5,33	mg/l	99%
Nitrite	0,072	0,002	0,069	0,009	mg/l	96%
Ammonium	0,0437	0,0046			mg/l	
Chloride	17,1	0,3	17,0	1,0	mg/l	99%
Sulphate	43,1	0,4	43,3	5,94	mg/l	100%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,096	0,001	0,102	0,01	mg/l	106%
DOC	4,18	0,05			mg/l	
Total P (as PO ₄)	<0,009		0,0225	0,002	mg/l	FP
KMnO ₄ -Index	4,29	0,15			mg/l	



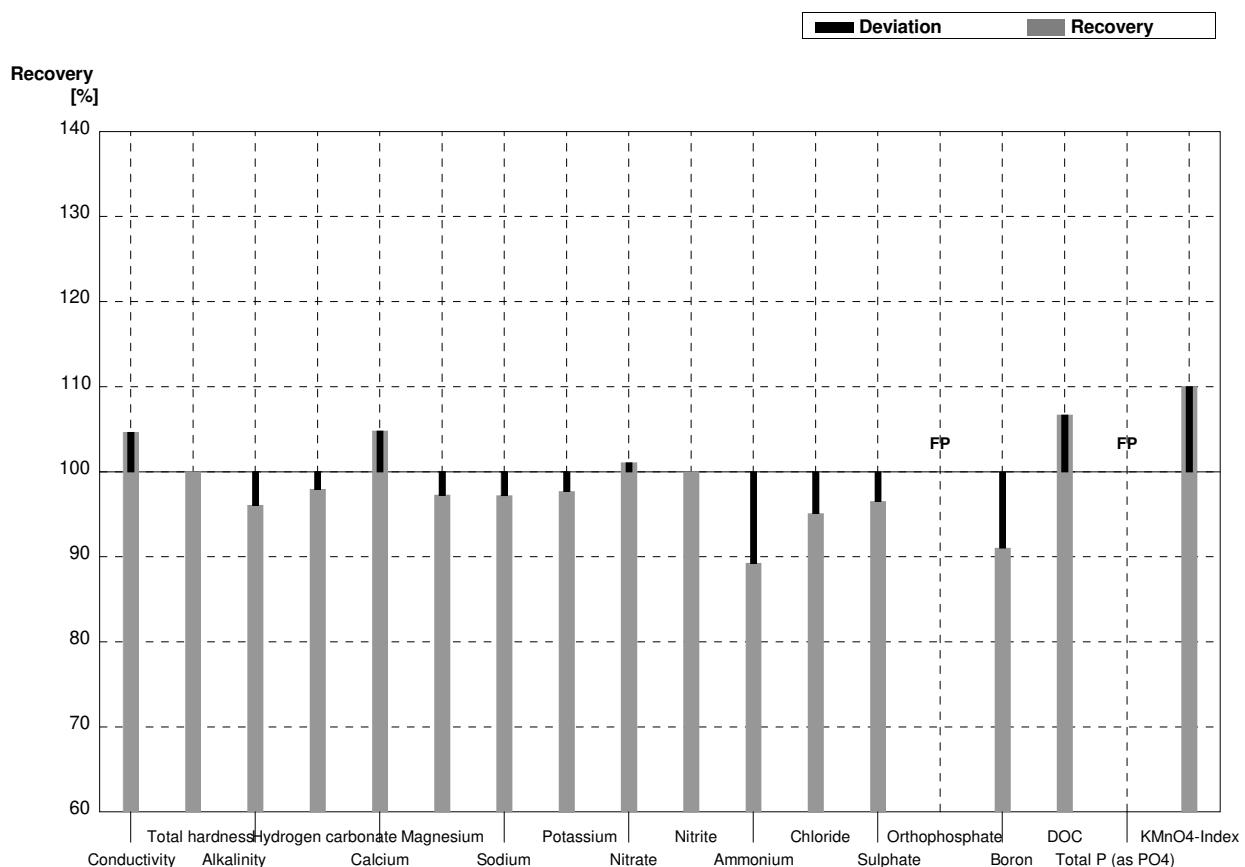
Sample N159A
Laboratory J

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	641	11,9	$\mu\text{S}/\text{cm}$	105%
Total hardness	2,33	0,02	2,28	0,07	mmol/l	98%
Alkalinity	3,52	0,04	3,43	0,06	mmol/l	97%
Hydrogen carbonate	212	2	209,3	3,77	mg/l	99%
Calcium	72,7	0,9	76,5	4,23	mg/l	105%
Magnesium	12,5	0,1	12,18	0,39	mg/l	97%
Sodium	33,5	0,5	31,97	1,14	mg/l	95%
Potassium	4,51	0,05	4,27	0,27	mg/l	95%
Nitrate	31,8	0,5	31,62	2,65	mg/l	99%
Nitrite	0,0343	0,0008	0,0340	0,0009	mg/l	99%
Ammonium	<0,01		<0,04	0,0017	mg/l	•
Chloride	38,8	0,7	36,76	1,79	mg/l	95%
Sulphate	52,0	0,5	50,60	3,25	mg/l	97%
Orthophosphate	0,0487	0,0024	0,0750	0,0046	mg/l	154%
Boron	0,066	0,001	0,0591	0,0127	mg/l	90%
DOC	6,16	0,05	5,98	0,27	mg/l	97%
Total P (as PO ₄)	0,089	0,002	0,052	0,003	mg/l	58%
KMnO ₄ -Index	2,40	0,12	2,56	0,17	mg/l	107%



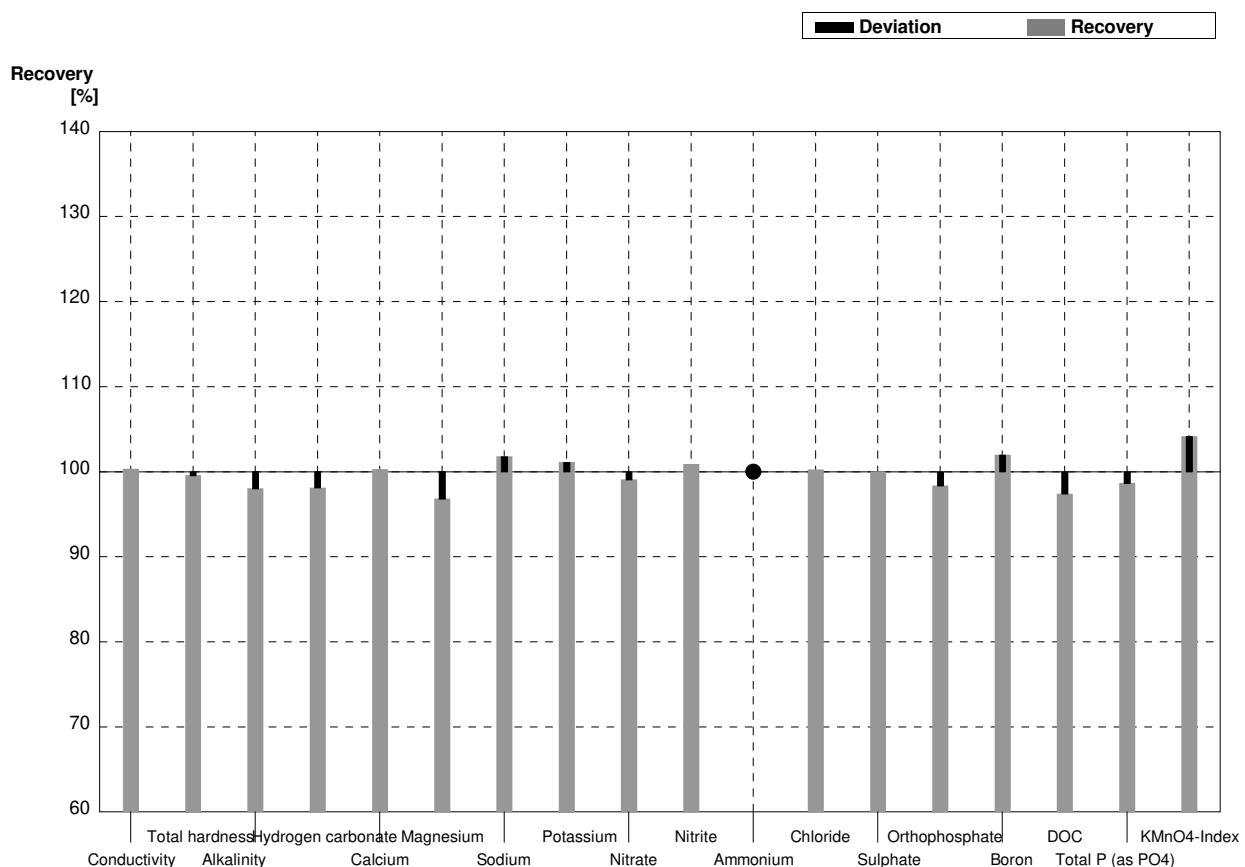
Sample N159B
Laboratory J

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	472	8,78	$\mu\text{S}/\text{cm}$	105%
Total hardness	1,16	0,01	1,16	0,04	mmol/l	100%
Alkalinity	2,29	0,01	2,20	0,04	mmol/l	96%
Hydrogen carbonate	137	1	134,2	2,42	mg/l	98%
Calcium	31,3	0,4	32,8	1,74	mg/l	105%
Magnesium	9,18	0,12	8,93	0,29	mg/l	97%
Sodium	42,4	0,2	41,22	1,47	mg/l	97%
Potassium	10,4	0,1	10,16	0,63	mg/l	98%
Nitrate	47,4	1,1	47,91	4,02	mg/l	101%
Nitrite	0,072	0,002	0,0720	0,002	mg/l	100%
Ammonium	0,0437	0,0046	0,0390	0,0016	mg/l	89%
Chloride	17,1	0,3	16,26	0,79	mg/l	95%
Sulphate	43,1	0,4	41,61	2,68	mg/l	97%
Orthophosphate	<0,009		0,0270	0,0017	mg/l	FP
Boron	0,096	0,001	0,0874	0,0187	mg/l	91%
DOC	4,18	0,05	4,46	0,20	mg/l	107%
Total P (as PO ₄)	<0,009		0,0270	0,0017	mg/l	FP
KMnO ₄ -Index	4,29	0,15	4,72	0,30	mg/l	110%



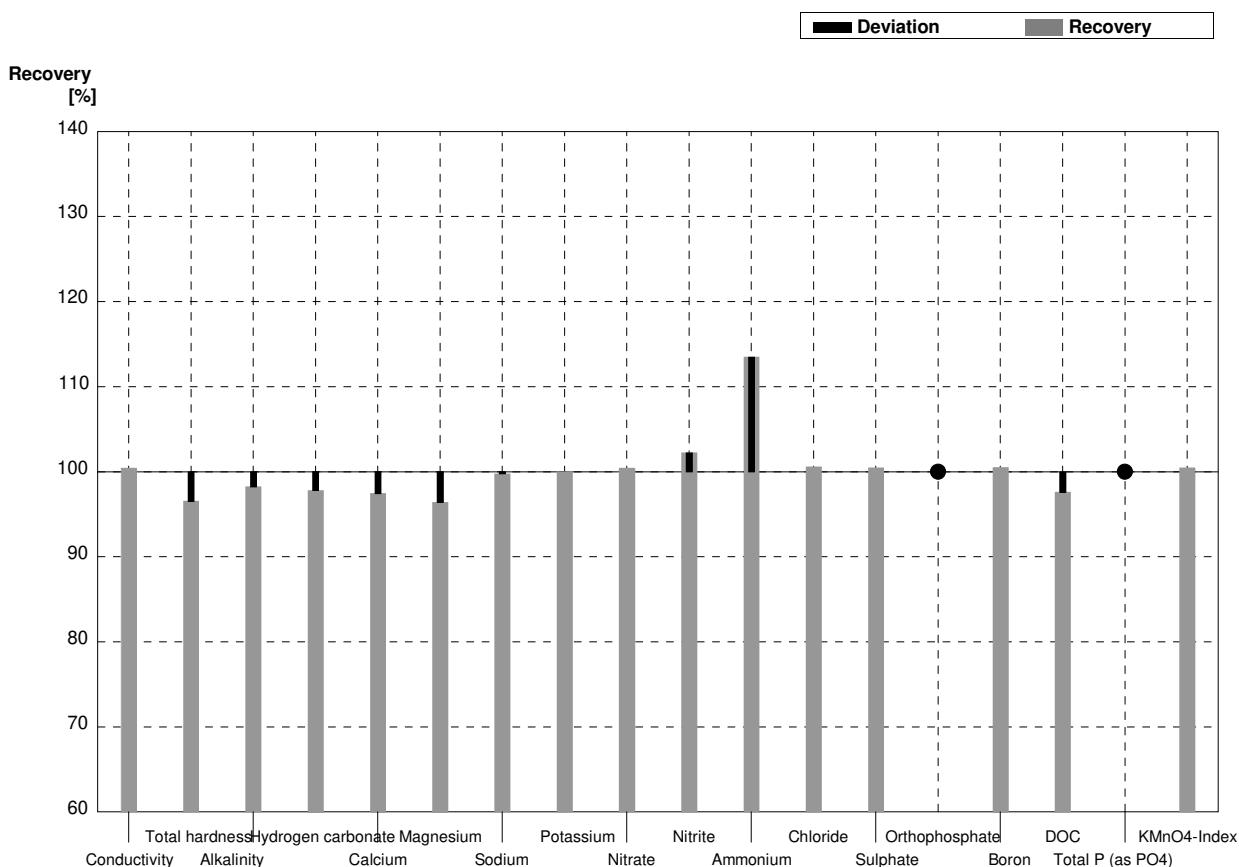
Sample N159A
Laboratory K

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	612	0,0990	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02	2,32	0,0507	mmol/l	100%
Alkalinity	3,52	0,04	3,45	0,118	mmol/l	98%
Hydrogen carbonate	212	2	208	4,15	mg/l	98%
Calcium	72,7	0,9	72,9	0,701	mg/l	100%
Magnesium	12,5	0,1	12,1	1,16	mg/l	97%
Sodium	33,5	0,5	34,1	0,971	mg/l	102%
Potassium	4,51	0,05	4,56	0,706	mg/l	101%
Nitrate	31,8	0,5	31,5	0,509	mg/l	99%
Nitrite	0,0343	0,0008	0,0346	0,00098	mg/l	101%
Ammonium	<0,01		<0,010		mg/l	•
Chloride	38,8	0,7	38,9	0,465	mg/l	100%
Sulphate	52,0	0,5	52,0	0,965	mg/l	100%
Orthophosphate	0,0487	0,0024	0,0479	0,00133	mg/l	98%
Boron	0,066	0,001	0,0673	0,00460	mg/l	102%
DOC	6,16	0,05	6,00	0,0733	mg/l	97%
Total P (as PO ₄)	0,089	0,002	0,0878	0,00313	mg/l	99%
KMnO ₄ -Index	2,40	0,12	2,50		mg/l	104%



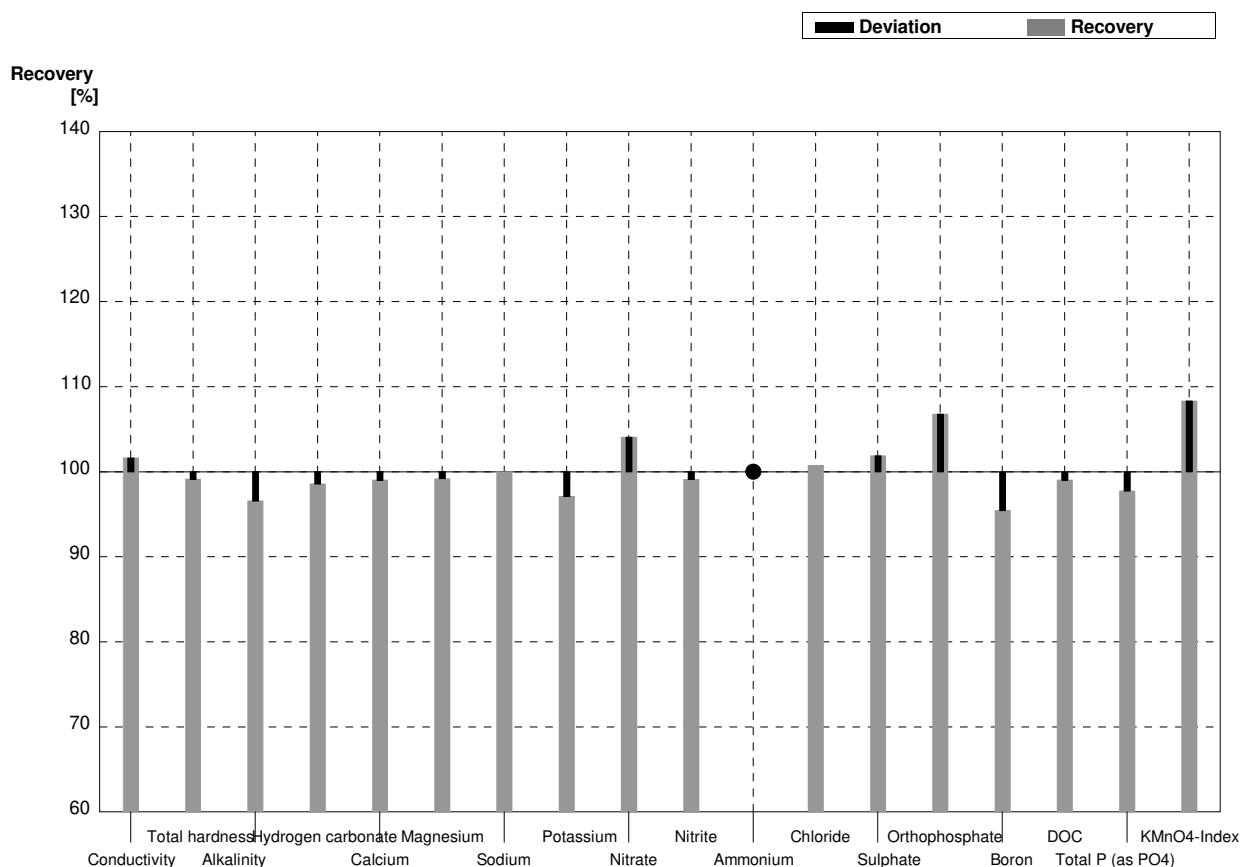
Sample N159B
Laboratory K

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	453	0,0849	$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01	1,12	0,0167	mmol/l	97%
Alkalinity	2,29	0,01	2,25	0,0940	mmol/l	98%
Hydrogen carbonate	137	1	134	2,68	mg/l	98%
Calcium	31,3	0,4	30,5	0,665	mg/l	97%
Magnesium	9,18	0,12	8,85	0,0531	mg/l	96%
Sodium	42,4	0,2	42,3	1,03	mg/l	100%
Potassium	10,4	0,1	10,4	0,649	mg/l	100%
Nitrate	47,4	1,1	47,6	0,571	mg/l	100%
Nitrite	0,072	0,002	0,0736	0,00094	mg/l	102%
Ammonium	0,0437	0,0046	0,0496	0,00151	mg/l	114%
Chloride	17,1	0,3	17,2	0,481	mg/l	101%
Sulphate	43,1	0,4	43,3	0,523	mg/l	100%
Orthophosphate	<0,009		<0,0150		mg/l	•
Boron	0,096	0,001	0,0965	0,00438	mg/l	101%
DOC	4,18	0,05	4,08	0,0684	mg/l	98%
Total P (as PO ₄)	<0,009		<0,0036		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,31		mg/l	100%



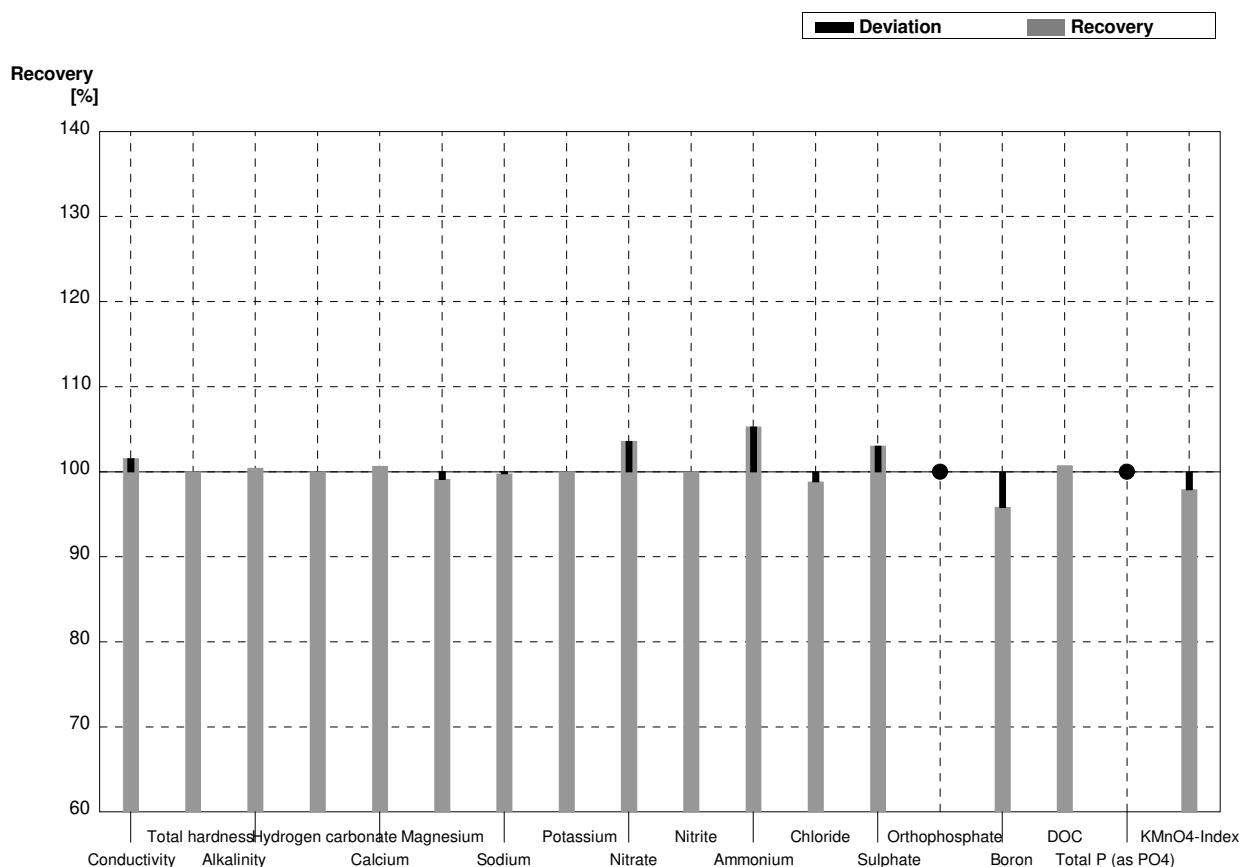
Sample N159A
Laboratory L

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	620	12	$\mu\text{S}/\text{cm}$	102%
Total hardness	2,33	0,02	2,31	0,15	mmol/l	99%
Alkalinity	3,52	0,04	3,40	0,2	mmol/l	97%
Hydrogen carbonate	212	2	209	17	mg/l	99%
Calcium	72,7	0,9	72	6	mg/l	99%
Magnesium	12,5	0,1	12,4	1,0	mg/l	99%
Sodium	33,5	0,5	33,5	2,0	mg/l	100%
Potassium	4,51	0,05	4,38	0,48	mg/l	97%
Nitrate	31,8	0,5	33,1	2,6	mg/l	104%
Nitrite	0,0343	0,0008	0,0340	0,004	mg/l	99%
Ammonium	<0,01		<0,02		mg/l	•
Chloride	38,8	0,7	39,1	3,1	mg/l	101%
Sulphate	52,0	0,5	53	3	mg/l	102%
Orthophosphate	0,0487	0,0024	0,052	0,005	mg/l	107%
Boron	0,066	0,001	0,063	0,011	mg/l	95%
DOC	6,16	0,05	6,1	0,7	mg/l	99%
Total P (as PO ₄)	0,089	0,002	0,087	0,008	mg/l	98%
KMnO ₄ -Index	2,40	0,12	2,60	0,2	mg/l	108%



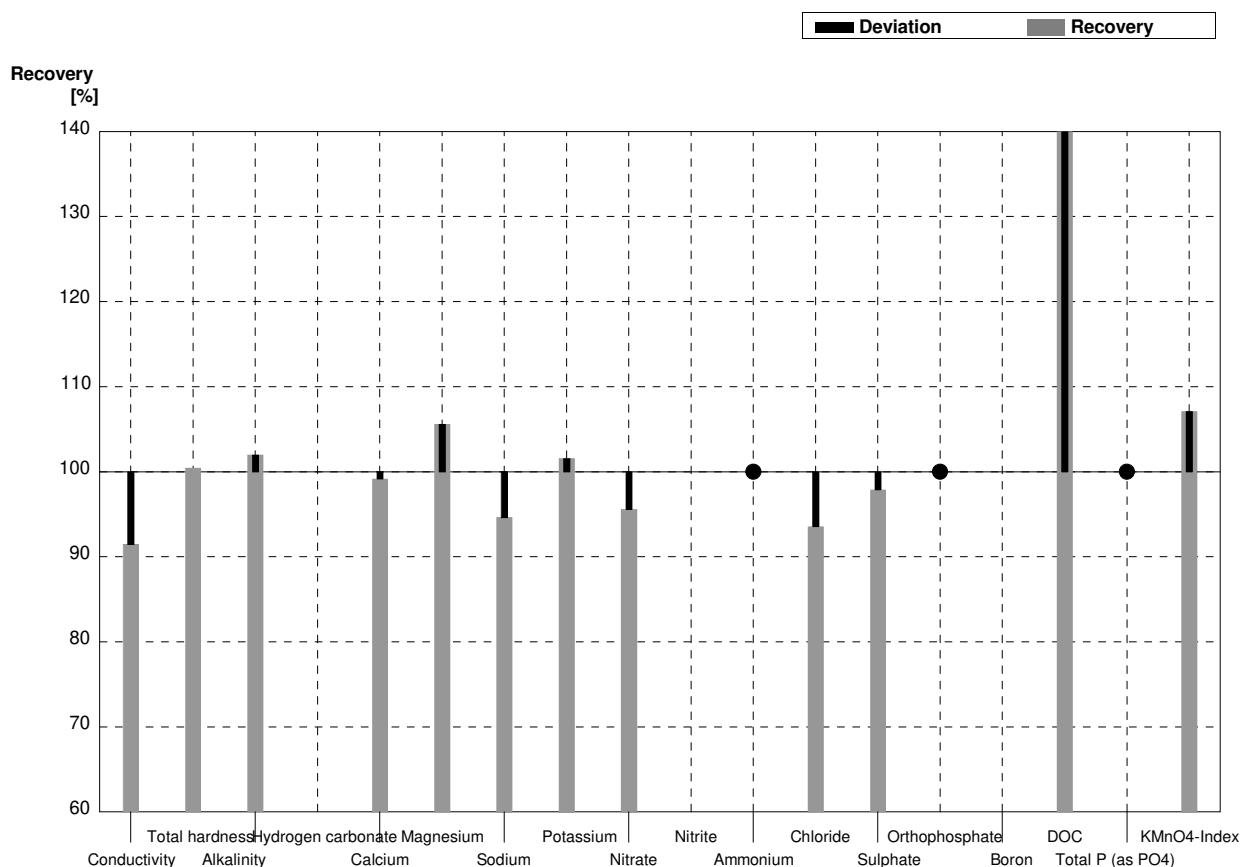
Sample N159B
Laboratory L

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	458	9	$\mu\text{S}/\text{cm}$	102%
Total hardness	1,16	0,01	1,16	0,08	mmol/l	100%
Alkalinity	2,29	0,01	2,30	0,1	mmol/l	100%
Hydrogen carbonate	137	1	137	11	mg/l	100%
Calcium	31,3	0,4	31,5	2,5	mg/l	101%
Magnesium	9,18	0,12	9,1	0,7	mg/l	99%
Sodium	42,4	0,2	42,3	2,5	mg/l	100%
Potassium	10,4	0,1	10,4	1,1	mg/l	100%
Nitrate	47,4	1,1	49,1	3,9	mg/l	104%
Nitrite	0,072	0,002	0,072	0,009	mg/l	100%
Ammonium	0,0437	0,0046	0,0460	0,012	mg/l	105%
Chloride	17,1	0,3	16,9	1,4	mg/l	99%
Sulphate	43,1	0,4	44,4	2,7	mg/l	103%
Orthophosphate	<0,009		<0,009		mg/l	•
Boron	0,096	0,001	0,092	0,016	mg/l	96%
DOC	4,18	0,05	4,21	0,51	mg/l	101%
Total P (as PO ₄)	<0,009		<0,009		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,20	0,3	mg/l	98%



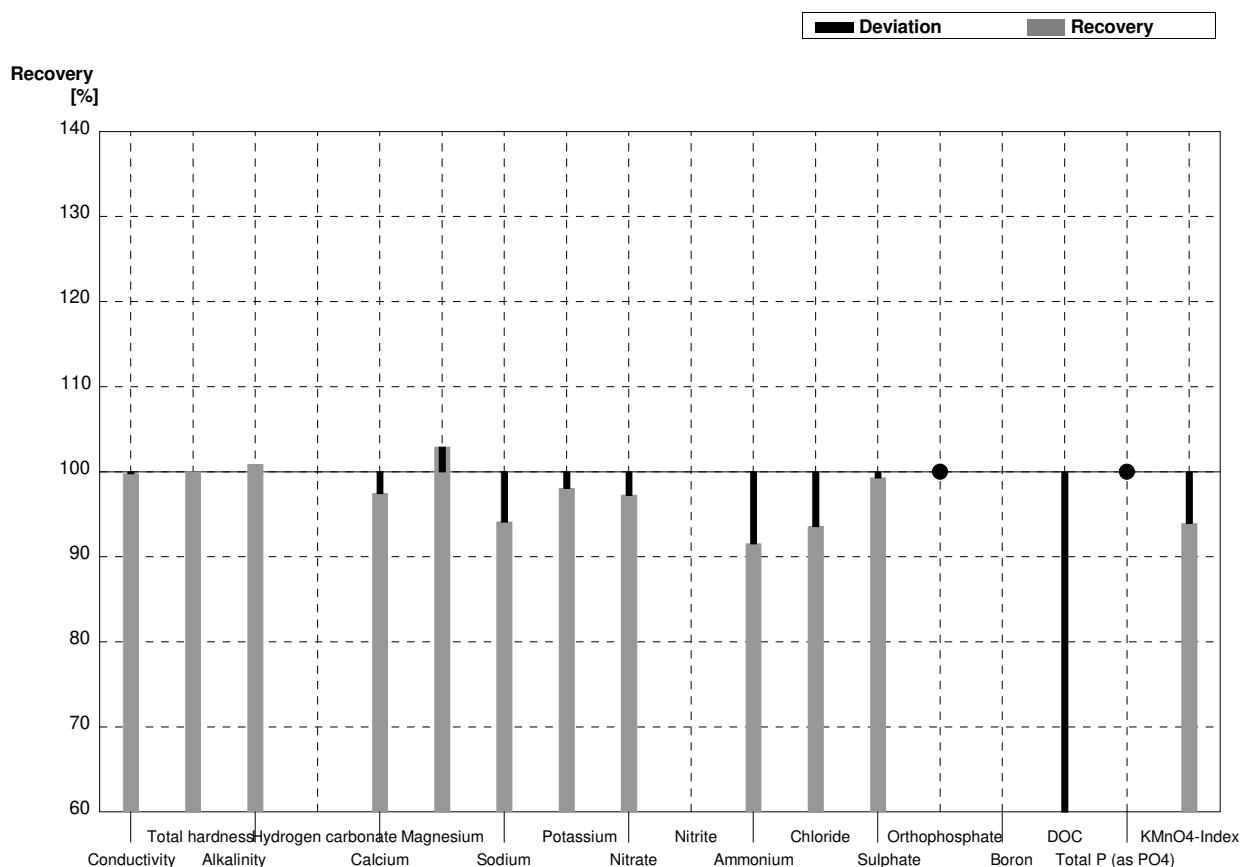
Sample N159A
Laboratory M

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	558		$\mu\text{S}/\text{cm}$	91%
Total hardness	2,33	0,02	2,34		mmol/l	100%
Alkalinity	3,52	0,04	3,59		mmol/l	102%
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9	72,1		mg/l	99%
Magnesium	12,5	0,1	13,2		mg/l	106%
Sodium	33,5	0,5	31,7		mg/l	95%
Potassium	4,51	0,05	4,58		mg/l	102%
Nitrate	31,8	0,5	30,4		mg/l	96%
Nitrite	0,0343	0,0008			mg/l	
Ammonium	<0,01		<0,02		mg/l	•
Chloride	38,8	0,7	36,3		mg/l	94%
Sulphate	52,0	0,5	50,9		mg/l	98%
Orthophosphate	0,0487	0,0024	<0,15		mg/l	•
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05	9,36		mg/l	152%
Total P (as PO ₄)	0,089	0,002	<0,1		mg/l	•
KMnO ₄ -Index	2,40	0,12	2,57		mg/l	107%



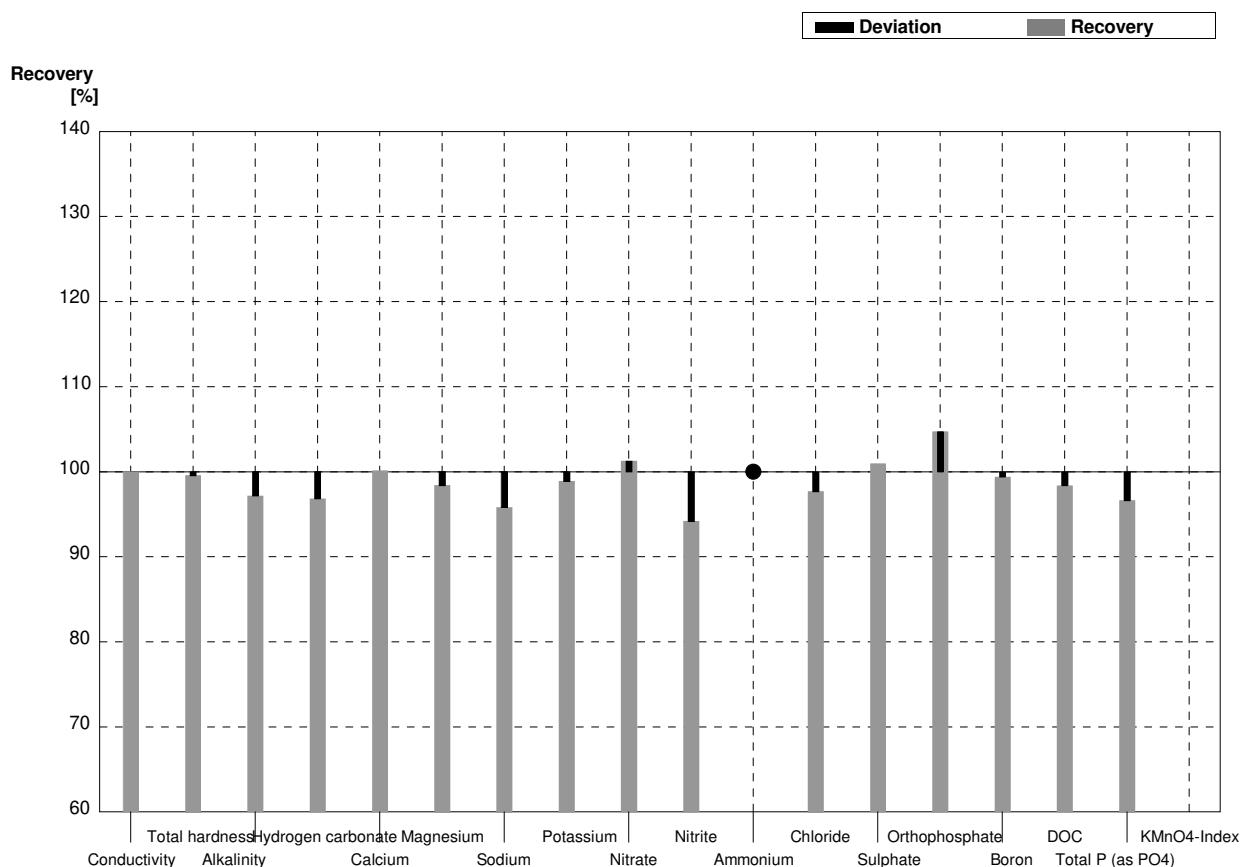
Sample N159B
Laboratory M

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	450		$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01	1,16		mmol/l	100%
Alkalinity	2,29	0,01	2,31		mmol/l	101%
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4	30,5		mg/l	97%
Magnesium	9,18	0,12	9,45		mg/l	103%
Sodium	42,4	0,2	39,9		mg/l	94%
Potassium	10,4	0,1	10,2		mg/l	98%
Nitrate	47,4	1,1	46,1		mg/l	97%
Nitrite	0,072	0,002			mg/l	
Ammonium	0,0437	0,0046	0,04		mg/l	92%
Chloride	17,1	0,3	16,0		mg/l	94%
Sulphate	43,1	0,4	42,8		mg/l	99%
Orthophosphate	<0,009		<0,15		mg/l	•
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05	2,33		mg/l	56%
Total P (as PO ₄)	<0,009		<0,1		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,03		mg/l	94%



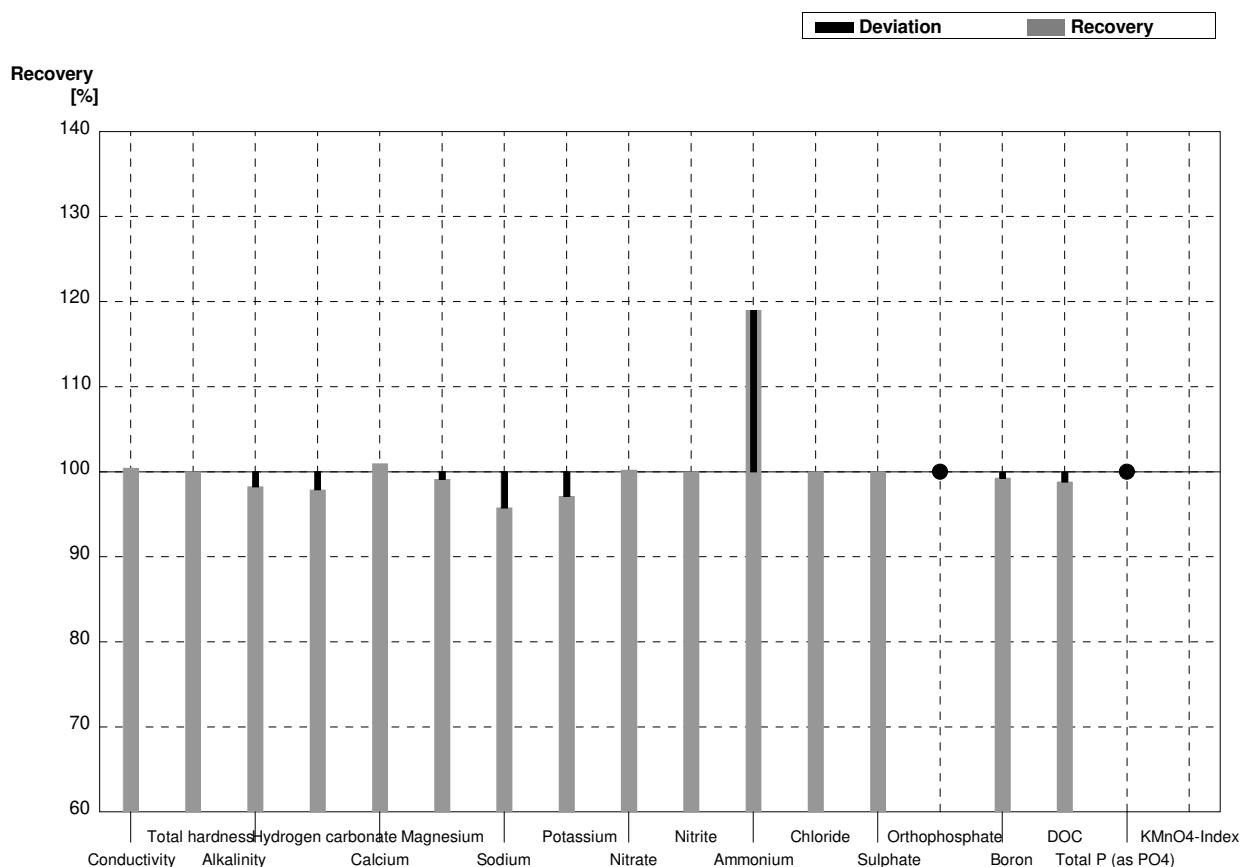
Sample N159A
Laboratory N

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	610	24	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02	2,32	0,12	mmol/l	100%
Alkalinity	3,52	0,04	3,42	0,24	mmol/l	97%
Hydrogen carbonate	212	2	205,3	14,7	mg/l	97%
Calcium	72,7	0,9	72,8	3,5	mg/l	100%
Magnesium	12,5	0,1	12,3	0,8	mg/l	98%
Sodium	33,5	0,5	32,1	1,6	mg/l	96%
Potassium	4,51	0,05	4,46	0,21	mg/l	99%
Nitrate	31,8	0,5	32,2	2,0	mg/l	101%
Nitrite	0,0343	0,0008	0,0323	0,0042	mg/l	94%
Ammonium	<0,01		<0,010		mg/l	•
Chloride	38,8	0,7	37,9	3,1	mg/l	98%
Sulphate	52,0	0,5	52,5	4,9	mg/l	101%
Orthophosphate	0,0487	0,0024	0,051	0,007	mg/l	105%
Boron	0,066	0,001	0,0656	0,0068	mg/l	99%
DOC	6,16	0,05	6,06	1,12	mg/l	98%
Total P (as PO ₄)	0,089	0,002	0,086	0,15	mg/l	97%
KMnO ₄ -Index	2,40	0,12			mg/l	



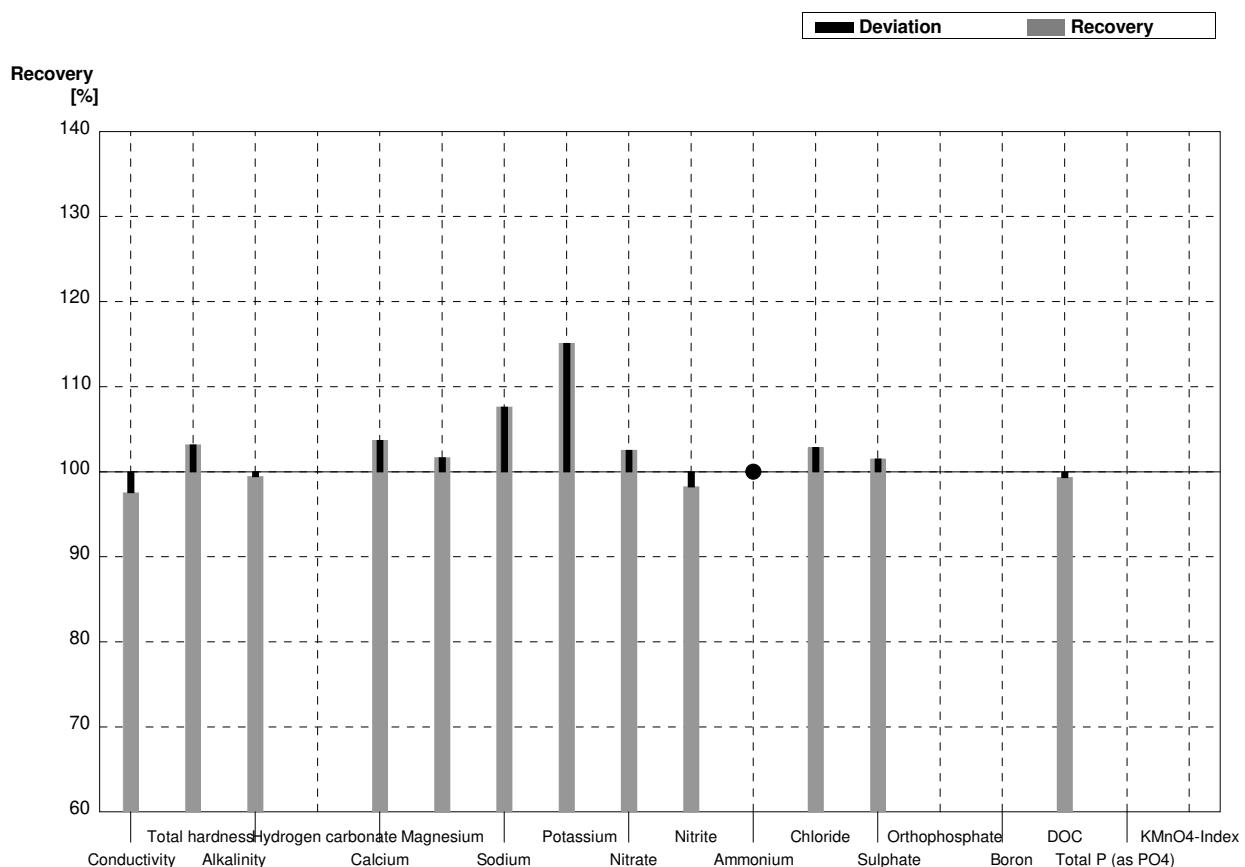
Sample N159B
Laboratory N

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	453	18	$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01	1,16	0,06	mmol/l	100%
Alkalinity	2,29	0,01	2,25	0,17	mmol/l	98%
Hydrogen carbonate	137	1	134,1	10,2	mg/l	98%
Calcium	31,3	0,4	31,6	1,6	mg/l	101%
Magnesium	9,18	0,12	9,1	0,6	mg/l	99%
Sodium	42,4	0,2	40,6	2,0	mg/l	96%
Potassium	10,4	0,1	10,1	0,4	mg/l	97%
Nitrate	47,4	1,1	47,5	2,9	mg/l	100%
Nitrite	0,072	0,002	0,072	0,007	mg/l	100%
Ammonium	0,0437	0,0046	0,052	0,010	mg/l	119%
Chloride	17,1	0,3	17,1	1,5	mg/l	100%
Sulphate	43,1	0,4	43,1	4,0	mg/l	100%
Orthophosphate	<0,009		<0,010		mg/l	•
Boron	0,096	0,001	0,0953	0,0095	mg/l	99%
DOC	4,18	0,05	4,13	0,81	mg/l	99%
Total P (as PO ₄)	<0,009		<0,010		mg/l	•
KMnO ₄ -Index	4,29	0,15			mg/l	



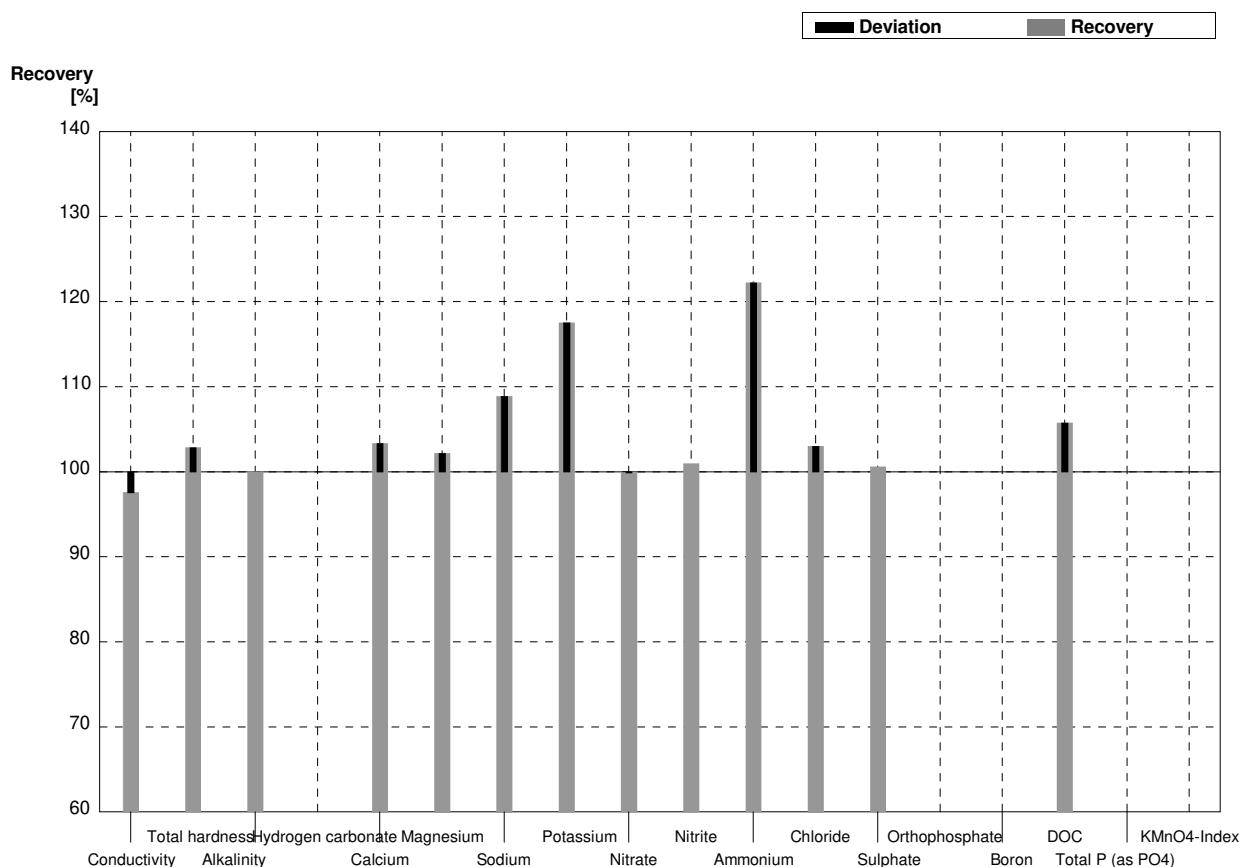
Sample N159A
Laboratory O

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	595	30	$\mu\text{S}/\text{cm}$	98%
Total hardness	2,33	0,02	2,404	0,05	mmol/l	103%
Alkalinity	3,52	0,04	3,50	0,02	mmol/l	99%
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9	75,39	0,6	mg/l	104%
Magnesium	12,5	0,1	12,71	0,6	mg/l	102%
Sodium	33,5	0,5	36,05	0,3	mg/l	108%
Potassium	4,51	0,05	5,192	0,06	mg/l	115%
Nitrate	31,8	0,5	32,61	0,5	mg/l	103%
Nitrite	0,0343	0,0008	0,0337	0,015	mg/l	98%
Ammonium	<0,01		<0,023	0,080	mg/l	•
Chloride	38,8	0,7	39,92	0,25	mg/l	103%
Sulphate	52,0	0,5	52,80	3,0	mg/l	102%
Orthophosphate	0,0487	0,0024			mg/l	
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05	6,12	0,03	mg/l	99%
Total P (as PO ₄)	0,089	0,002			mg/l	
KMnO ₄ -Index	2,40	0,12			mg/l	



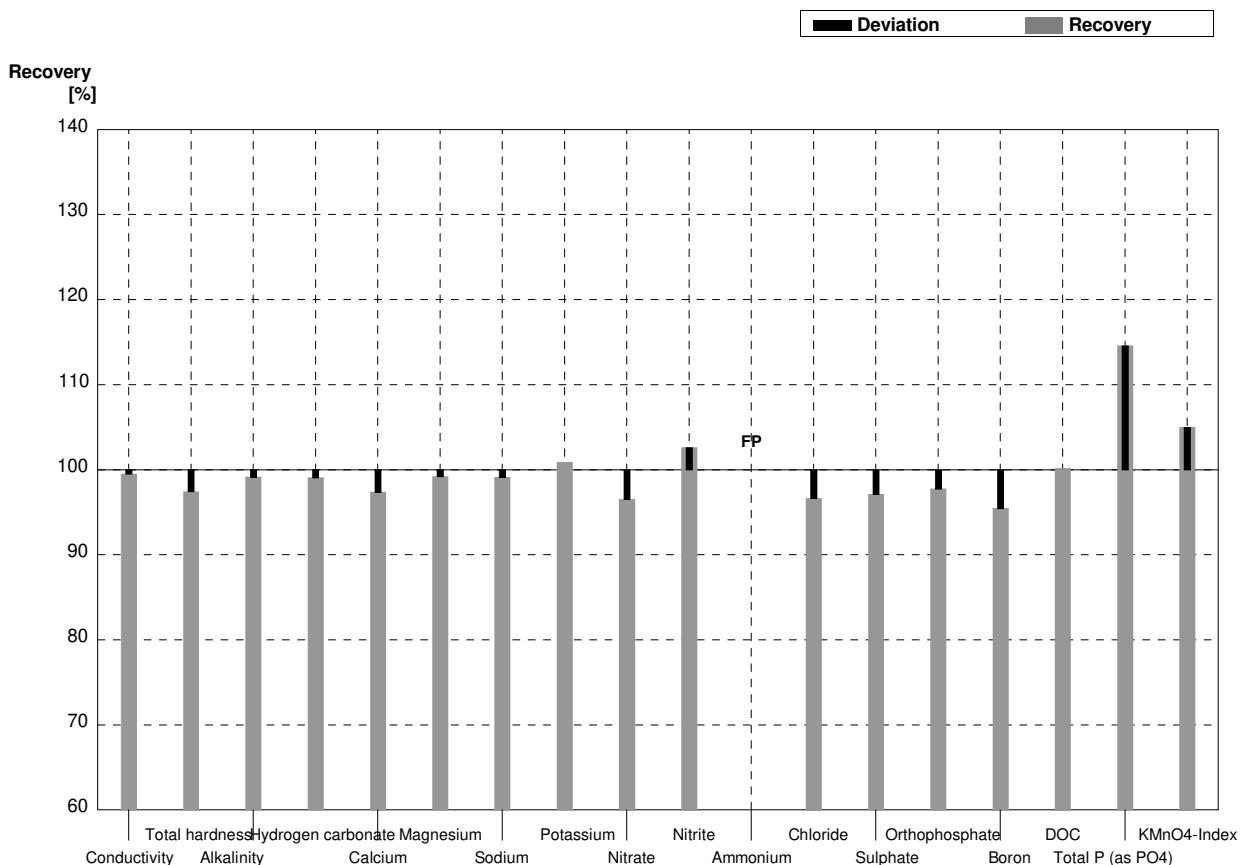
Sample N159B
Laboratory O

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	440	30	$\mu\text{S}/\text{cm}$	98%
Total hardness	1,16	0,01	1,193	0,05	mmol/l	103%
Alkalinity	2,29	0,01	2,29	0,02	mmol/l	100%
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4	32,34	0,6	mg/l	103%
Magnesium	9,18	0,12	9,38	0,6	mg/l	102%
Sodium	42,4	0,2	46,16	0,3	mg/l	109%
Potassium	10,4	0,1	12,223	0,06	mg/l	118%
Nitrate	47,4	1,1	47,34	0,5	mg/l	100%
Nitrite	0,072	0,002	0,0727	0,015	mg/l	101%
Ammonium	0,0437	0,0046	0,0534	0,080	mg/l	122%
Chloride	17,1	0,3	17,61	0,25	mg/l	103%
Sulphate	43,1	0,4	43,36	3,0	mg/l	101%
Orthophosphate	<0,009				mg/l	
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05	4,42	0,03	mg/l	106%
Total P (as PO ₄)	<0,009				mg/l	
KMnO ₄ -Index	4,29	0,15			mg/l	



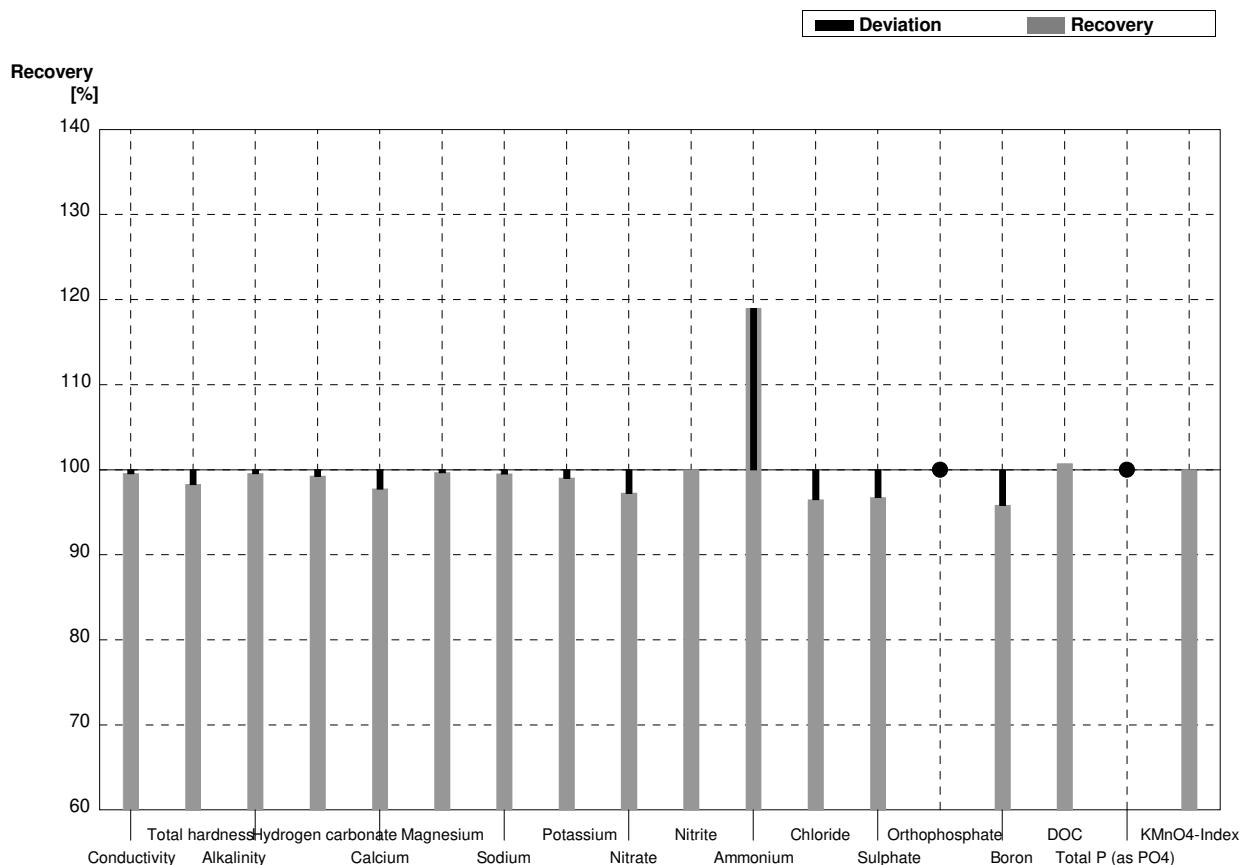
Sample N159A
Laboratory P

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	607	24	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02	2,27	0,41	mmol/l	97%
Alkalinity	3,52	0,04	3,49	0,14	mmol/l	99%
Hydrogen carbonate	212	2	210	8,4	mg/l	99%
Calcium	72,7	0,9	70,8	12,7	mg/l	97%
Magnesium	12,5	0,1	12,4	2,23	mg/l	99%
Sodium	33,5	0,5	33,2	5,98	mg/l	99%
Potassium	4,51	0,05	4,55	0,82	mg/l	101%
Nitrate	31,8	0,5	30,7	2,76	mg/l	97%
Nitrite	0,0343	0,0008	0,0352	0,003	mg/l	103%
Ammonium	<0,01		0,0132	0,001	mg/l	FP
Chloride	38,8	0,7	37,5	3,38	mg/l	97%
Sulphate	52,0	0,5	50,5	4,55	mg/l	97%
Orthophosphate	0,0487	0,0024	0,0476	0,004	mg/l	98%
Boron	0,066	0,001	0,063	0,011	mg/l	95%
DOC	6,16	0,05	6,17	0,56	mg/l	100%
Total P (as PO ₄)	0,089	0,002	0,102	0,009	mg/l	115%
KMnO ₄ -Index	2,40	0,12	2,52	0,23	mg/l	105%



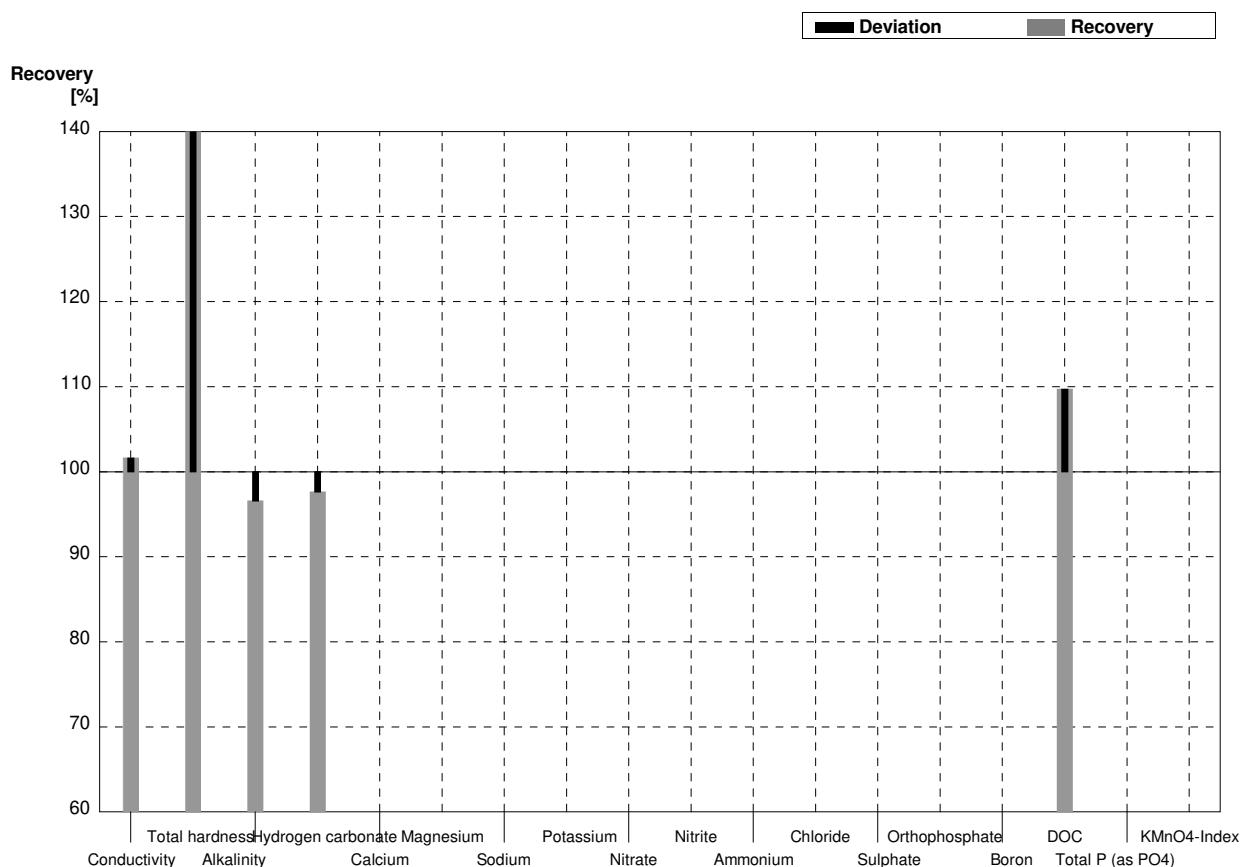
Sample N159B
Laboratory P

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	449	18	$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01	1,14	0,21	mmol/l	98%
Alkalinity	2,29	0,01	2,28	0,09	mmol/l	100%
Hydrogen carbonate	137	1	136	5,44	mg/l	99%
Calcium	31,3	0,4	30,6	5,51	mg/l	98%
Magnesium	9,18	0,12	9,15	1,65	mg/l	100%
Sodium	42,4	0,2	42,2	7,60	mg/l	100%
Potassium	10,4	0,1	10,3	1,85	mg/l	99%
Nitrate	47,4	1,1	46,1	4,15	mg/l	97%
Nitrite	0,072	0,002	0,072	0,006	mg/l	100%
Ammonium	0,0437	0,0046	0,052	0,005	mg/l	119%
Chloride	17,1	0,3	16,5	1,49	mg/l	96%
Sulphate	43,1	0,4	41,7	3,75	mg/l	97%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,096	0,001	0,092	0,017	mg/l	96%
DOC	4,18	0,05	4,21	0,38	mg/l	101%
Total P (as PO ₄)	<0,009		<0,05		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,29	0,39	mg/l	100%



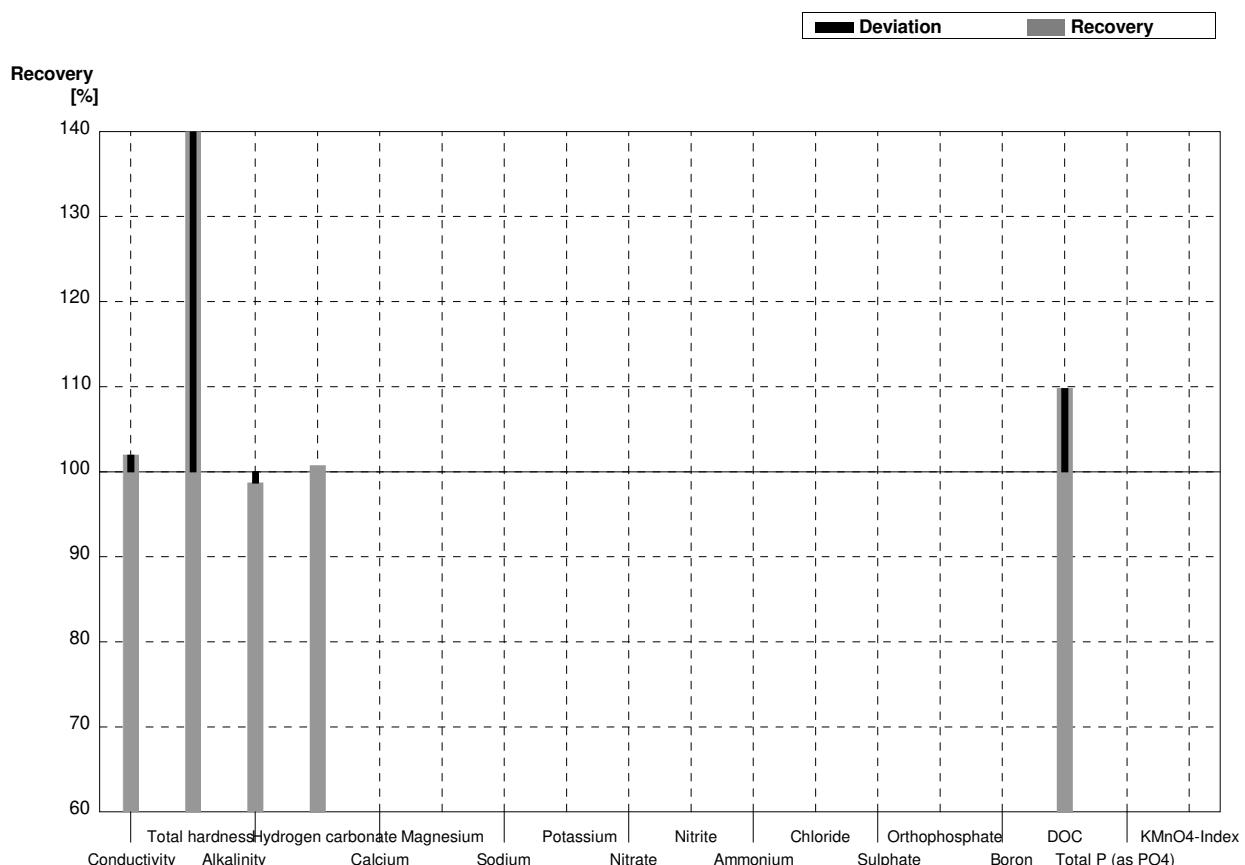
Sample N159A
Laboratory Q

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	610	2	620	9	µS/cm	102%
Total hardness	2,33	0,02	12,7	0,1	mmol/l	545%
Alkalinity	3,52	0,04	3,40	0,02	mmol/l	97%
Hydrogen carbonate	212	2	207	1,22	mg/l	98%
Calcium	72,7	0,9			mg/l	
Magnesium	12,5	0,1			mg/l	
Sodium	33,5	0,5			mg/l	
Potassium	4,51	0,05			mg/l	
Nitrate	31,8	0,5			mg/l	
Nitrite	0,0343	0,0008			mg/l	
Ammonium	<0,01				mg/l	
Chloride	38,8	0,7			mg/l	
Sulphate	52,0	0,5			mg/l	
Orthophosphate	0,0487	0,0024			mg/l	
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05	6,76	0,27	mg/l	110%
Total P (as PO ₄)	0,089	0,002			mg/l	
KMnO ₄ -Index	2,40	0,12			mg/l	



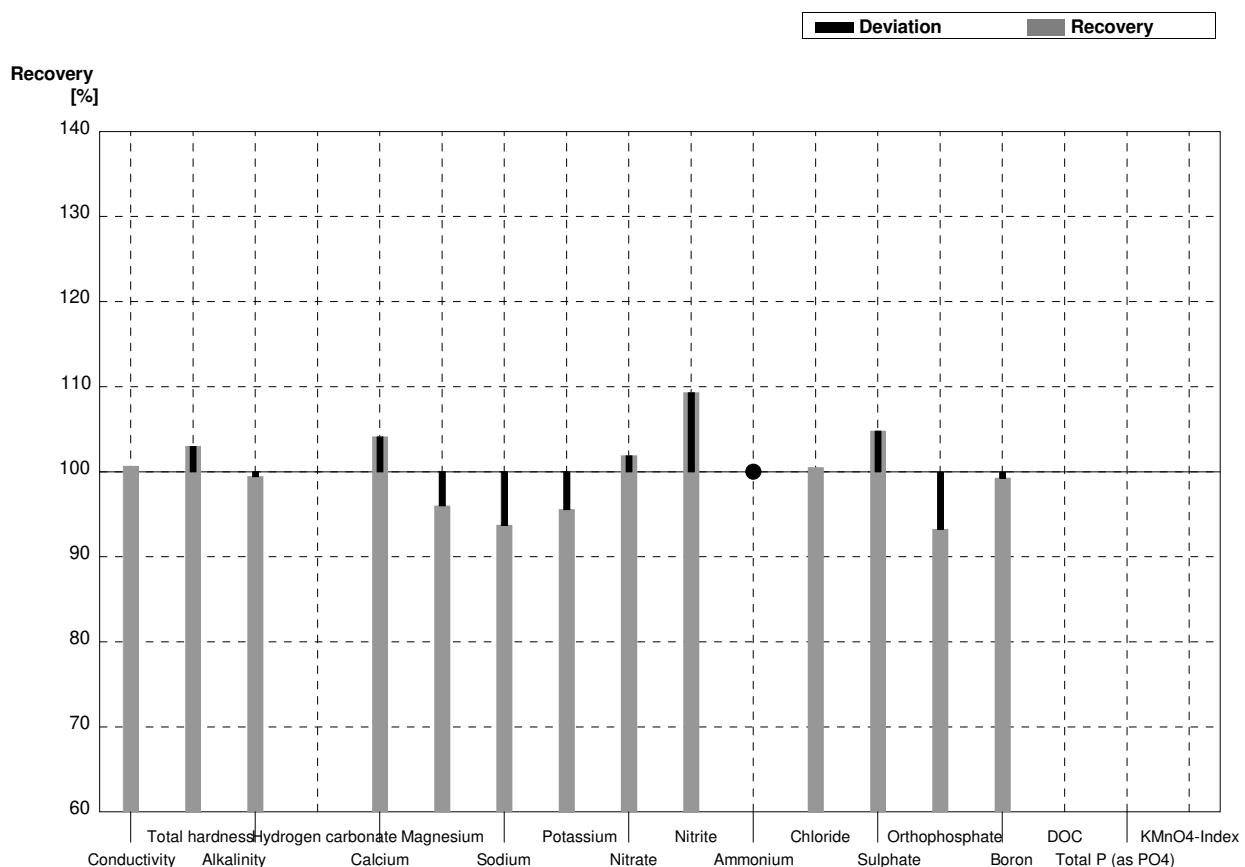
Sample N159B
Laboratory Q

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2	460	7	µS/cm	102%
Total hardness	1,16	0,01	6,2	0,05	mmol/l	534%
Alkalinity	2,29	0,01	2,26	0,01	mmol/l	99%
Hydrogen carbonate	137	1	138	0,61	mg/l	101%
Calcium	31,3	0,4			mg/l	
Magnesium	9,18	0,12			mg/l	
Sodium	42,4	0,2			mg/l	
Potassium	10,4	0,1			mg/l	
Nitrate	47,4	1,1			mg/l	
Nitrite	0,072	0,002			mg/l	
Ammonium	0,0437	0,0046			mg/l	
Chloride	17,1	0,3			mg/l	
Sulphate	43,1	0,4			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05	4,59	0,18	mg/l	110%
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	4,29	0,15			mg/l	



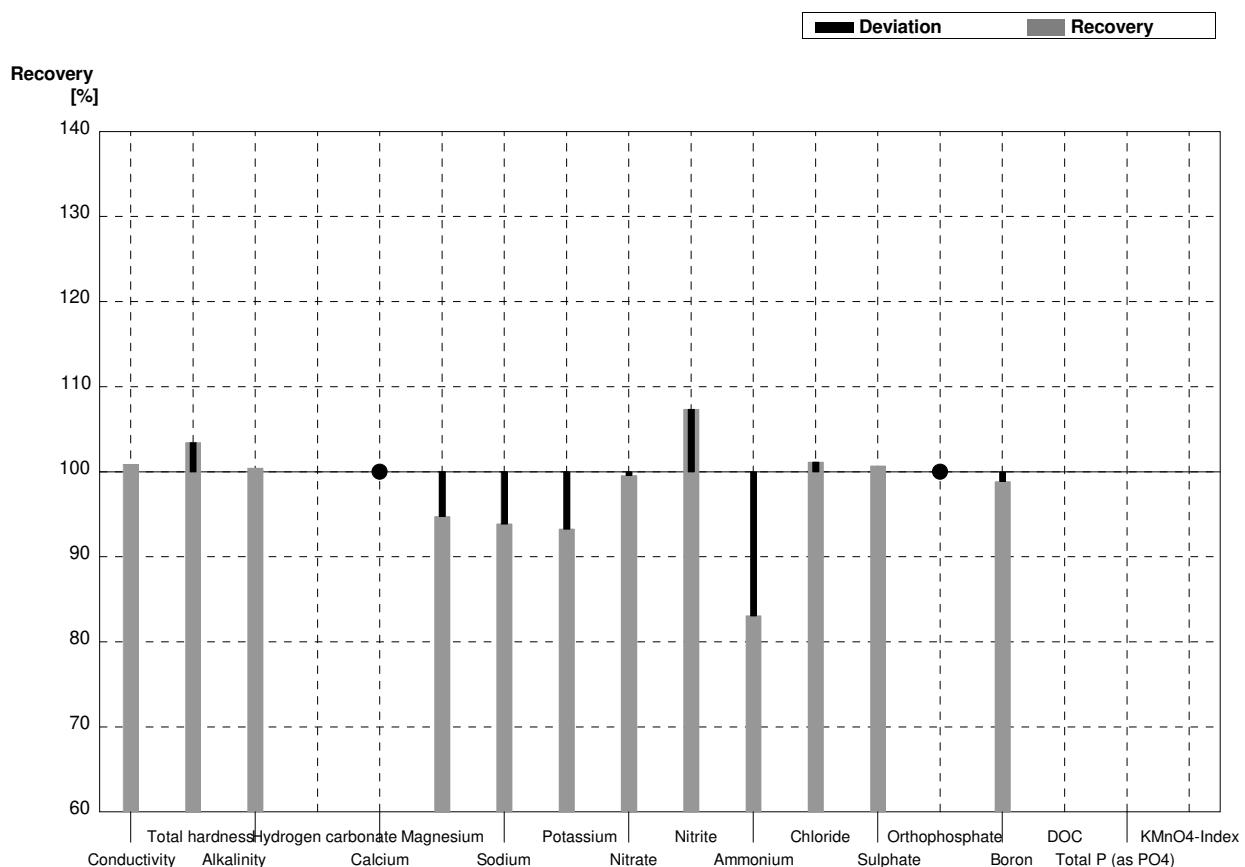
Sample N159A
Laboratory R

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	614	18	$\mu\text{S}/\text{cm}$	101%
Total hardness	2,33	0,02	2,40	0,1	mmol/l	103%
Alkalinity	3,52	0,04	3,50	0,2	mmol/l	99%
Hydrogen carbonate	212	2	NA		mg/l	
Calcium	72,7	0,9	75,7	7,6	mg/l	104%
Magnesium	12,5	0,1	12,0	1,2	mg/l	96%
Sodium	33,5	0,5	31,4	1,6	mg/l	94%
Potassium	4,51	0,05	4,31	0,4	mg/l	96%
Nitrate	31,8	0,5	32,4	1,6	mg/l	102%
Nitrite	0,0343	0,0008	0,0375	0,0038	mg/l	109%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	38,8	0,7	39,0	2,0	mg/l	101%
Sulphate	52,0	0,5	54,5	5,5	mg/l	105%
Orthophosphate	0,0487	0,0024	0,0454	0,002	mg/l	93%
Boron	0,066	0,001	0,0655	0,013	mg/l	99%
DOC	6,16	0,05	NA		mg/l	
Total P (as PO ₄)	0,089	0,002	NA		mg/l	
KMnO ₄ -Index	2,40	0,12	NA		mg/l	



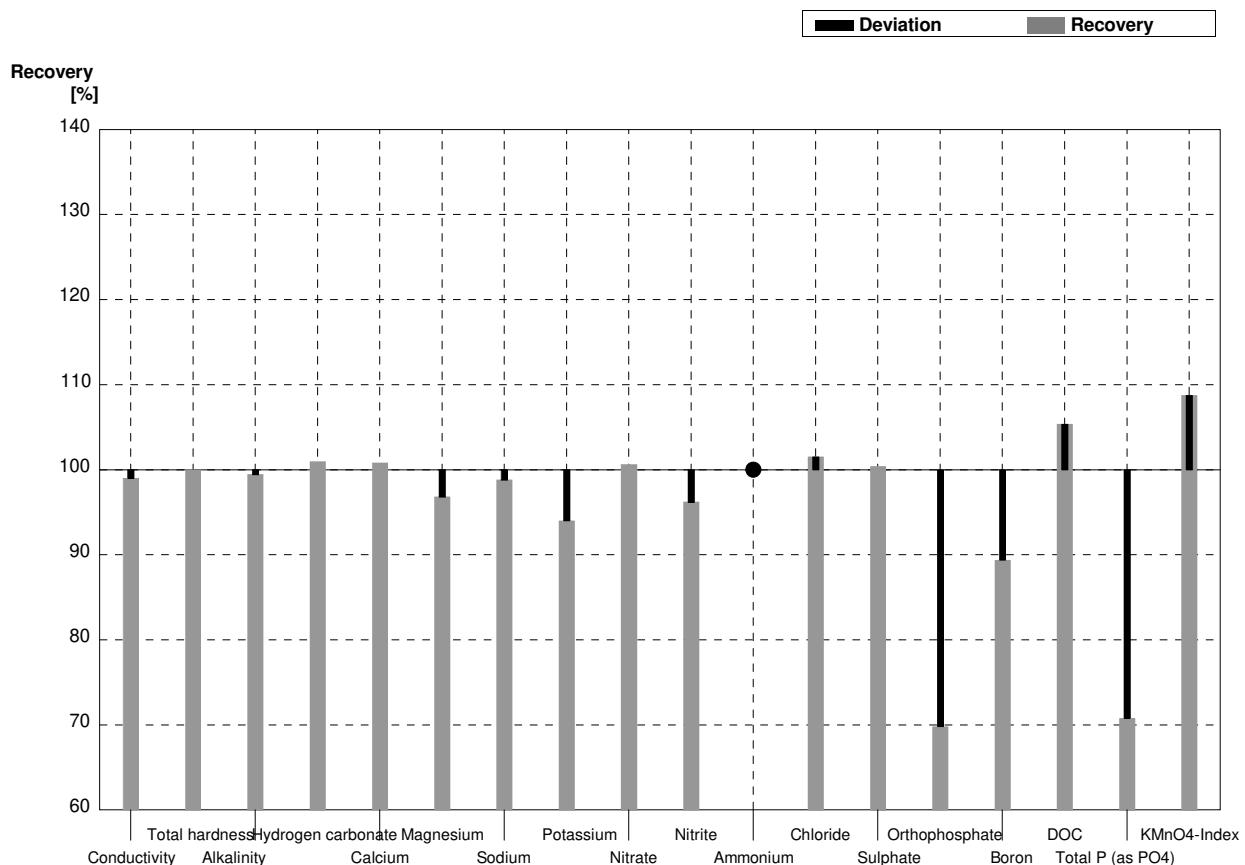
Sample N159B
Laboratory R

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2	455	14	µS/cm	101%
Total hardness	1,16	0,01	1,20	0,06	mmol/l	103%
Alkalinity	2,29	0,01	2,30	0,1	mmol/l	100%
Hydrogen carbonate	137	1	NA		mg/l	
Calcium	31,3	0,4	<40		mg/l	•
Magnesium	9,18	0,12	8,7	0,9	mg/l	95%
Sodium	42,4	0,2	39,8	2,0	mg/l	94%
Potassium	10,4	0,1	9,7	1,0	mg/l	93%
Nitrate	47,4	1,1	47,2	2,4	mg/l	100%
Nitrite	0,072	0,002	0,0773	0,008	mg/l	107%
Ammonium	0,0437	0,0046	0,0363	0,004	mg/l	83%
Chloride	17,1	0,3	17,3	0,9	mg/l	101%
Sulphate	43,1	0,4	43,4	4,3	mg/l	101%
Orthophosphate	<0,009		<0,006		mg/l	•
Boron	0,096	0,001	0,0949	0,02	mg/l	99%
DOC	4,18	0,05	NA		mg/l	
Total P (as PO4)	<0,009		NA		mg/l	
KMnO4-Index	4,29	0,15	NA		mg/l	



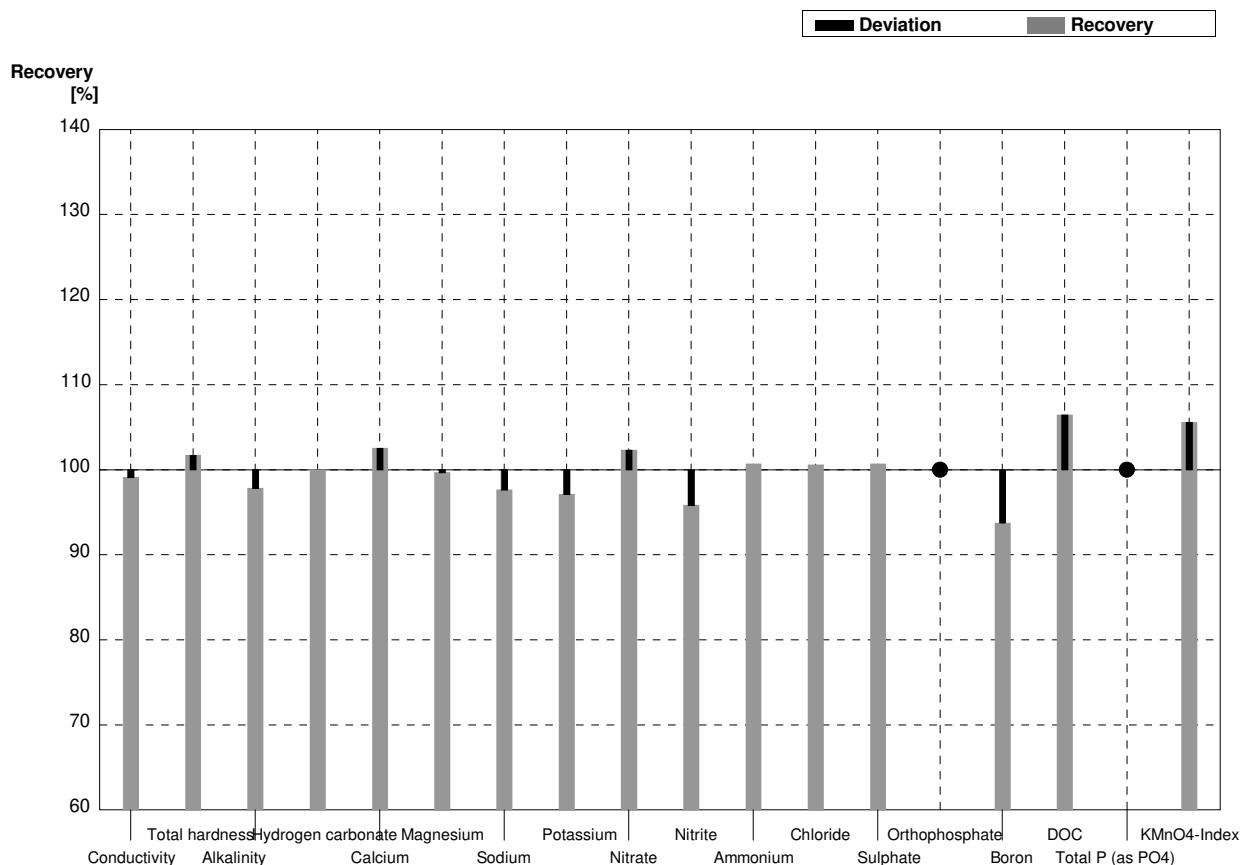
Sample N159A
Laboratory S

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	604	60	$\mu\text{S}/\text{cm}$	99%
Total hardness	2,33	0,02	2,33	0,23	mmol/l	100%
Alkalinity	3,52	0,04	3,50	0,35	mmol/l	99%
Hydrogen carbonate	212	2	214	21	mg/l	101%
Calcium	72,7	0,9	73,3	7,3	mg/l	101%
Magnesium	12,5	0,1	12,1	1,2	mg/l	97%
Sodium	33,5	0,5	33,1	3,3	mg/l	99%
Potassium	4,51	0,05	4,24	0,42	mg/l	94%
Nitrate	31,8	0,5	32,0	3,2	mg/l	101%
Nitrite	0,0343	0,0008	0,0330	0,0033	mg/l	96%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	38,8	0,7	39,4	3,9	mg/l	102%
Sulphate	52,0	0,5	52,2	5,2	mg/l	100%
Orthophosphate	0,0487	0,0024	0,0340	0,0034	mg/l	70%
Boron	0,066	0,001	0,059	0,0059	mg/l	89%
DOC	6,16	0,05	6,49	0,65	mg/l	105%
Total P (as PO ₄)	0,089	0,002	0,063	0,013	mg/l	71%
KMnO ₄ -Index	2,40	0,12	2,61	0,52	mg/l	109%



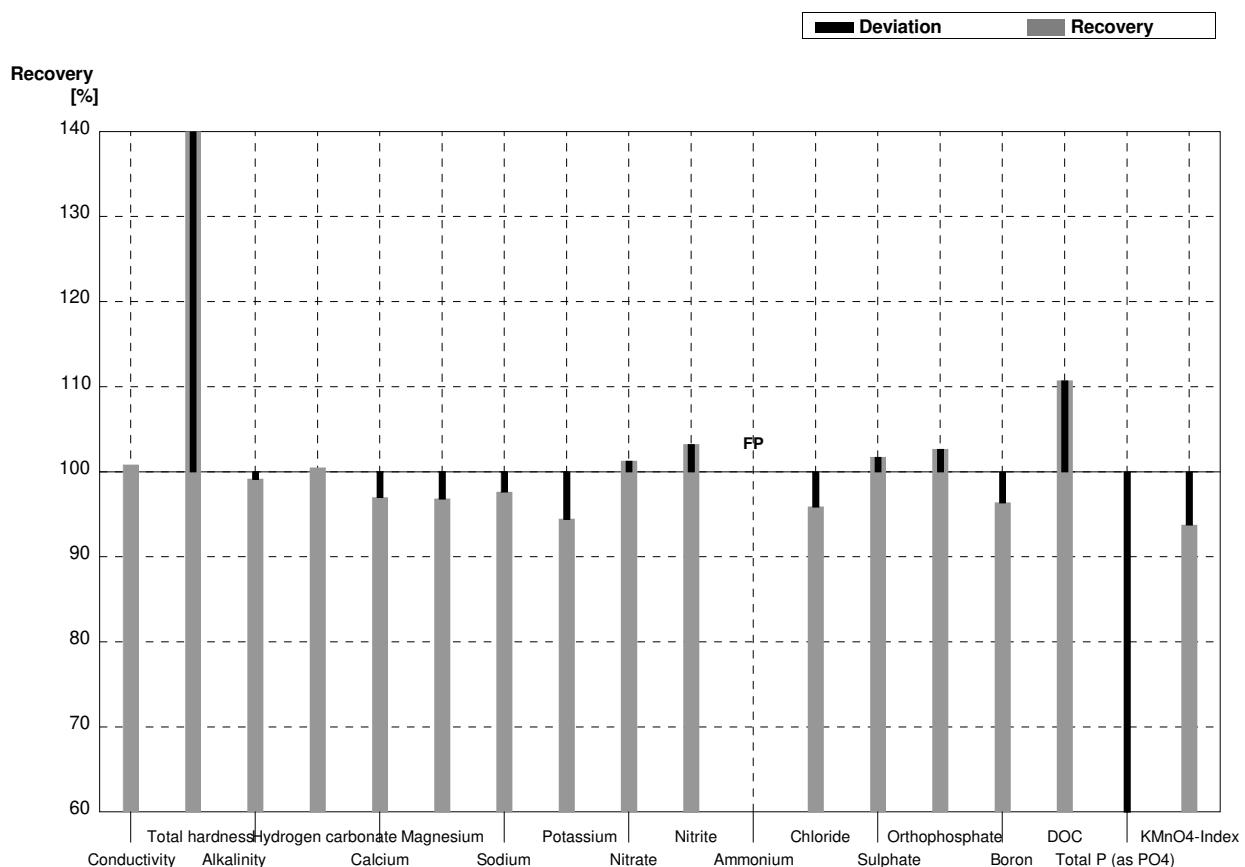
Sample N159B
Laboratory S

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	447	45	$\mu\text{S}/\text{cm}$	99%
Total hardness	1,16	0,01	1,18	0,12	mmol/l	102%
Alkalinity	2,29	0,01	2,24	0,23	mmol/l	98%
Hydrogen carbonate	137	1	137	14	mg/l	100%
Calcium	31,3	0,4	32,1	3,2	mg/l	103%
Magnesium	9,18	0,12	9,15	0,92	mg/l	100%
Sodium	42,4	0,2	41,4	4,1	mg/l	98%
Potassium	10,4	0,1	10,1	1,0	mg/l	97%
Nitrate	47,4	1,1	48,5	4,9	mg/l	102%
Nitrite	0,072	0,002	0,069	0,007	mg/l	96%
Ammonium	0,0437	0,0046	0,0440	0,0044	mg/l	101%
Chloride	17,1	0,3	17,2	1,7	mg/l	101%
Sulphate	43,1	0,4	43,4	4,3	mg/l	101%
Orthophosphate	<0,009		<0,008		mg/l	•
Boron	0,096	0,001	0,090	0,009	mg/l	94%
DOC	4,18	0,05	4,45	0,45	mg/l	106%
Total P (as PO ₄)	<0,009		<0,015		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,53	0,91	mg/l	106%



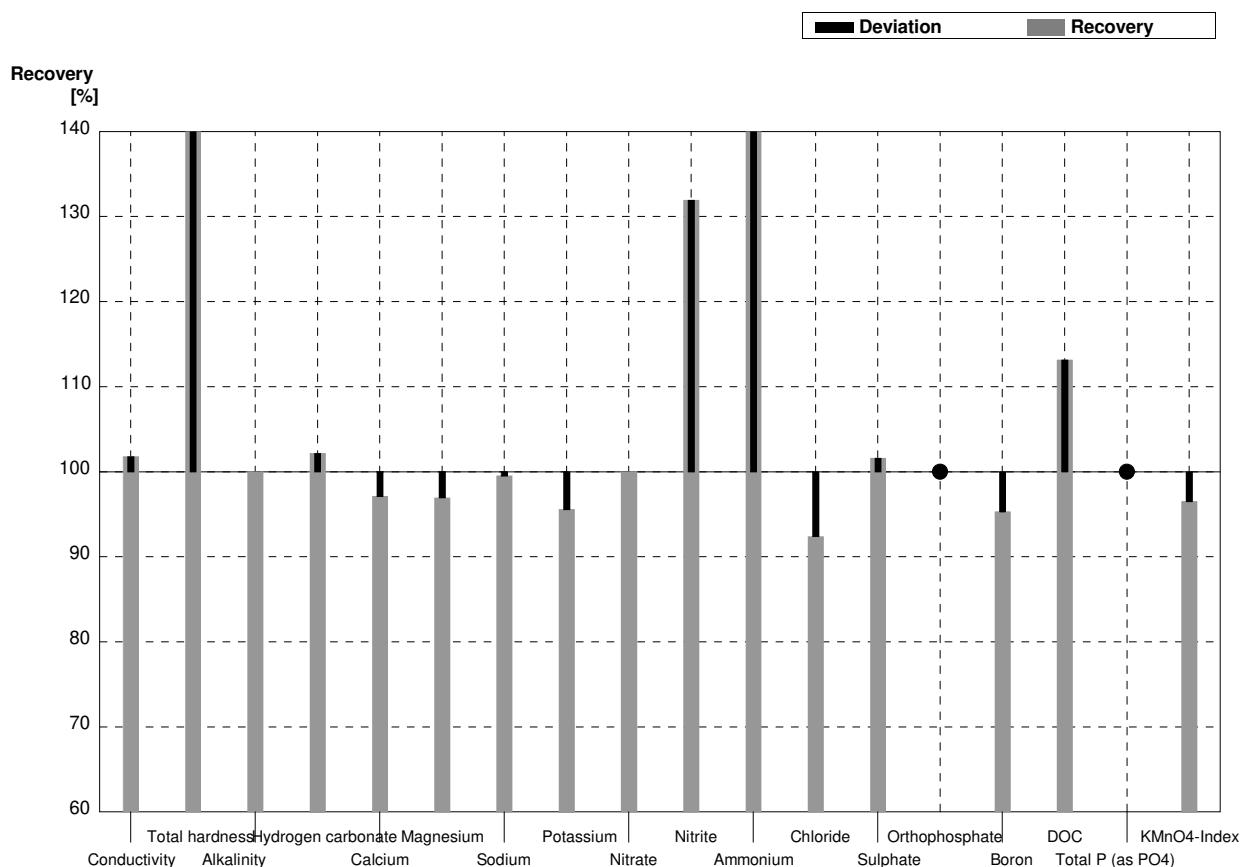
Sample N159A
Laboratory T

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	615	30	$\mu\text{S}/\text{cm}$	101%
Total hardness	2,33	0,02	12,7	1	mmol/l	545%
Alkalinity	3,52	0,04	3,49	0,3	mmol/l	99%
Hydrogen carbonate	212	2	213	20	mg/l	100%
Calcium	72,7	0,9	70,5	5	mg/l	97%
Magnesium	12,5	0,1	12,1	1	mg/l	97%
Sodium	33,5	0,5	32,7	3	mg/l	98%
Potassium	4,51	0,05	4,26	0,5	mg/l	94%
Nitrate	31,8	0,5	32,2	3	mg/l	101%
Nitrite	0,0343	0,0008	0,0354	0,01	mg/l	103%
Ammonium	<0,01		0,0230	0,01	mg/l	FP
Chloride	38,8	0,7	37,2	3	mg/l	96%
Sulphate	52,0	0,5	52,9	5	mg/l	102%
Orthophosphate	0,0487	0,0024	0,050	0,01	mg/l	103%
Boron	0,066	0,001	0,0636	0,01	mg/l	96%
DOC	6,16	0,05	6,82	0,7	mg/l	111%
Total P (as PO ₄)	0,089	0,002	0,0433	0,015	mg/l	49%
KMnO ₄ -Index	2,40	0,12	2,25	0,2	mg/l	94%



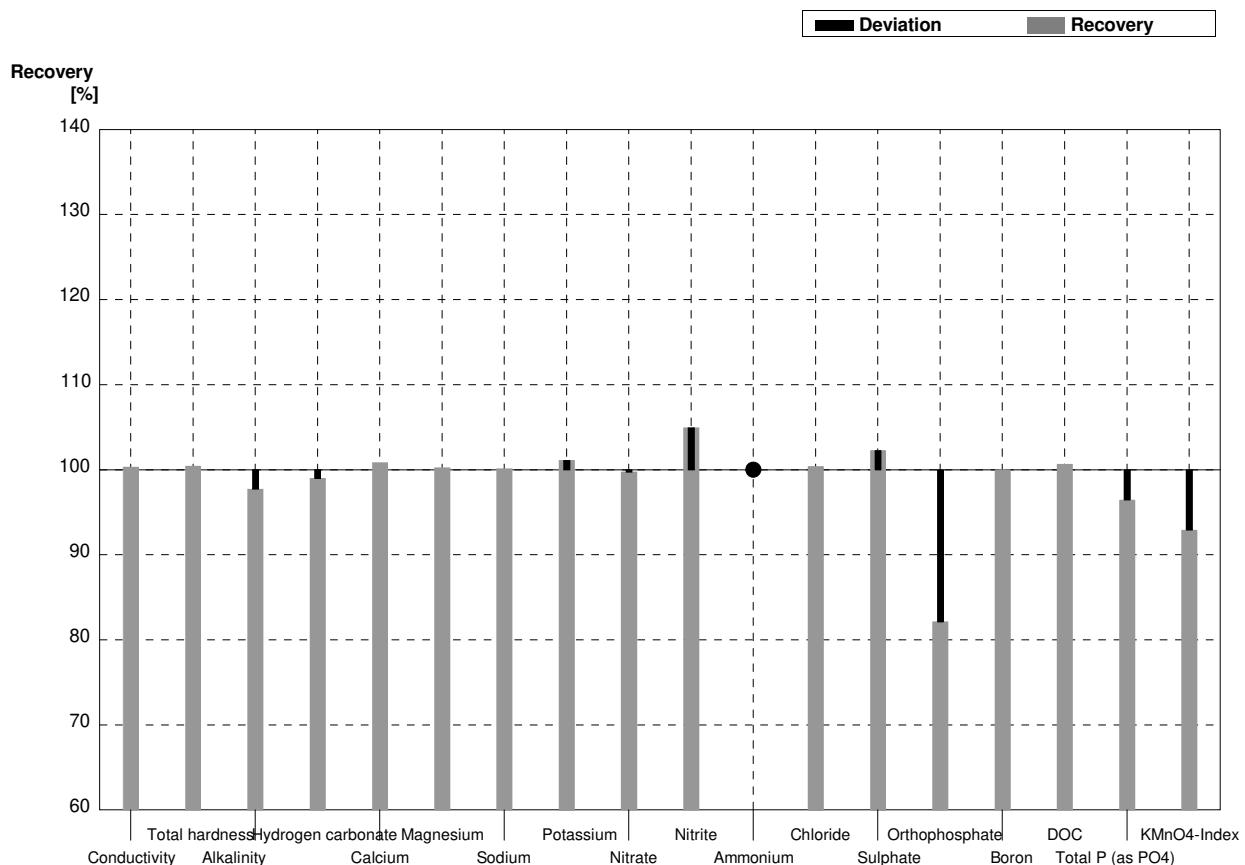
Sample N159B
Laboratory T

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	459	30	$\mu\text{S}/\text{cm}$	102%
Total hardness	1,16	0,01	6,31	0,5	mmol/l	544%
Alkalinity	2,29	0,01	2,29	0,2	mmol/l	100%
Hydrogen carbonate	137	1	140	10	mg/l	102%
Calcium	31,3	0,4	30,4	3	mg/l	97%
Magnesium	9,18	0,12	8,90	1	mg/l	97%
Sodium	42,4	0,2	42,2	4	mg/l	100%
Potassium	10,4	0,1	9,94	1	mg/l	96%
Nitrate	47,4	1,1	47,4	5	mg/l	100%
Nitrite	0,072	0,002	0,095	0,01	mg/l	132%
Ammonium	0,0437	0,0046	0,065	0,01	mg/l	149%
Chloride	17,1	0,3	15,8	1,5	mg/l	92%
Sulphate	43,1	0,4	43,8	4	mg/l	102%
Orthophosphate	<0,009		<0,02		mg/l	•
Boron	0,096	0,001	0,0915	0,02	mg/l	95%
DOC	4,18	0,05	4,73	0,5	mg/l	113%
Total P (as PO ₄)	<0,009		<0,04		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,14	0,5	mg/l	97%



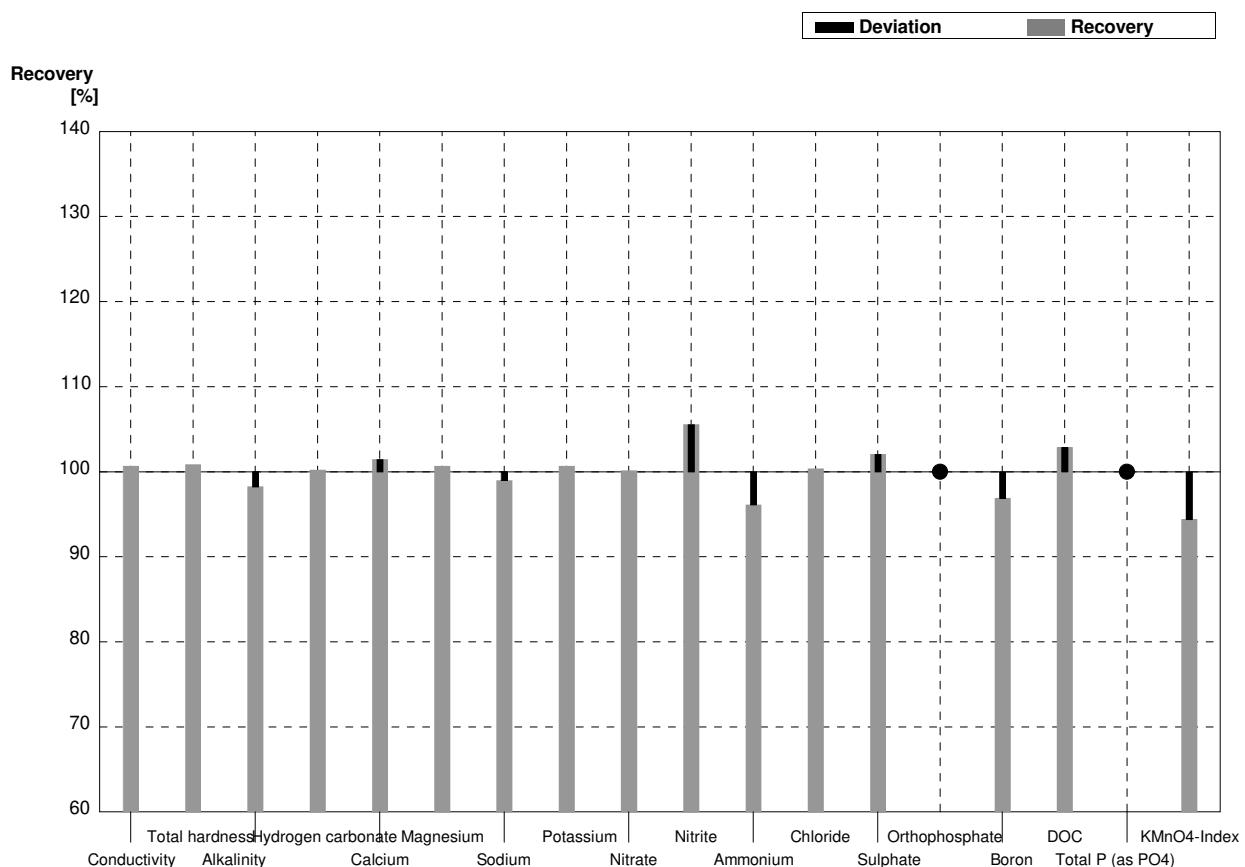
Sample N159A
Laboratory U

Parameter	Target value	\pm U ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	612	24,5	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02	2,34		mmol/l	100%
Alkalinity	3,52	0,04	3,44	0,516	mmol/l	98%
Hydrogen carbonate	212	2	209,9	31,48	mg/l	99%
Calcium	72,7	0,9	73,32	7,332	mg/l	101%
Magnesium	12,5	0,1	12,53	1,253	mg/l	100%
Sodium	33,5	0,5	33,55	3,355	mg/l	100%
Potassium	4,51	0,05	4,56	0,456	mg/l	101%
Nitrate	31,8	0,5	31,722	1,2689	mg/l	100%
Nitrite	0,0343	0,0008	0,03600	0,00290	mg/l	105%
Ammonium	<0,01		<0,0005		mg/l	•
Chloride	38,8	0,7	38,95	1,948	mg/l	100%
Sulphate	52,0	0,5	53,19	2,66000	mg/l	102%
Orthophosphate	0,0487	0,0024	0,04000	0,0048	mg/l	82%
Boron	0,066	0,001	0,06600	0,0079	mg/l	100%
DOC	6,16	0,05	6,2	0,50	mg/l	101%
Total P (as PO ₄)	0,089	0,002	0,08585	0,01287	mg/l	96%
KMnO ₄ -Index	2,40	0,12	2,23	0,357	mg/l	93%



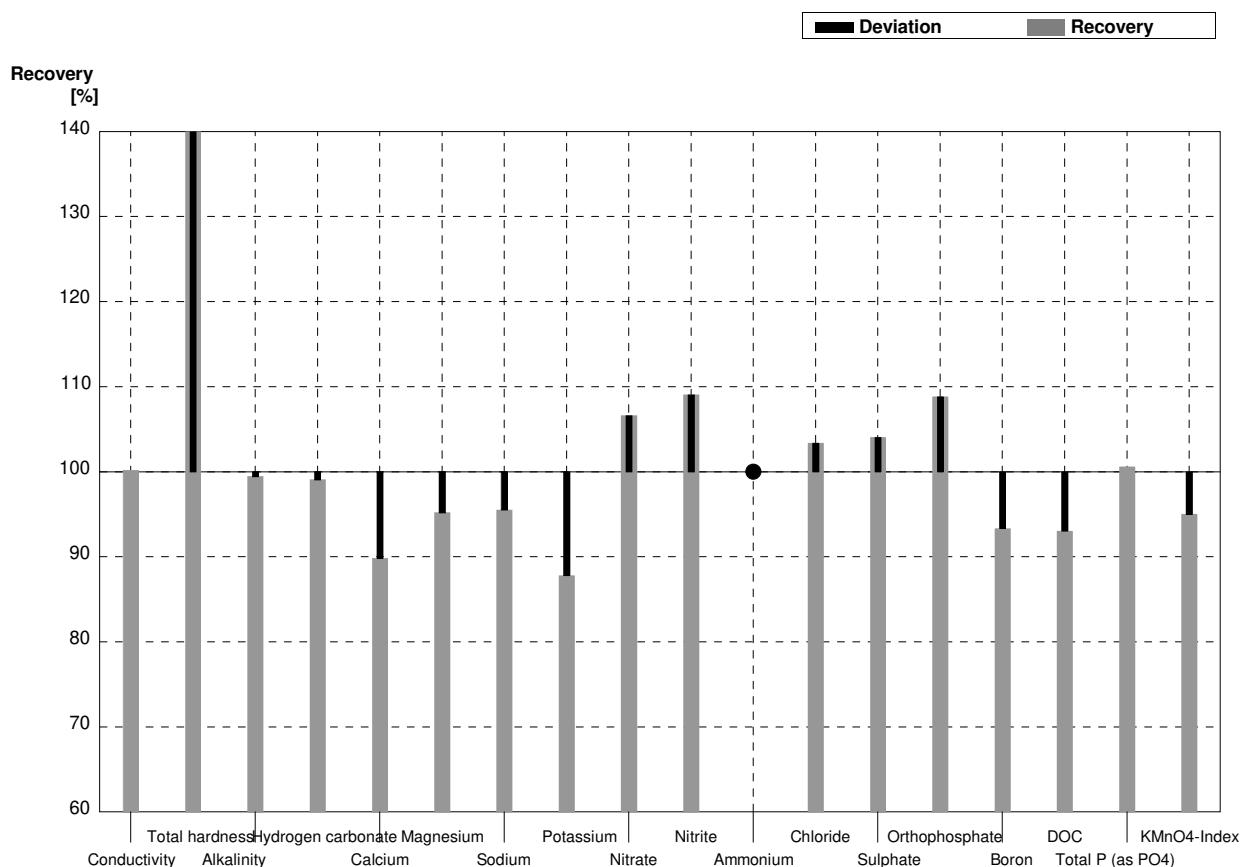
Sample N159B
Laboratory U

Parameter	Target value	\pm U ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	454	18,2	$\mu\text{S}/\text{cm}$	101%
Total hardness	1,16	0,01	1,17		mmol/l	101%
Alkalinity	2,29	0,01	2,25	0,338	mmol/l	98%
Hydrogen carbonate	137	1	137,3	20,59	mg/l	100%
Calcium	31,3	0,4	31,75	3,175	mg/l	101%
Magnesium	9,18	0,12	9,24	0,924	mg/l	101%
Sodium	42,4	0,2	41,97	4,197	mg/l	99%
Potassium	10,4	0,1	10,47	1,047	mg/l	101%
Nitrate	47,4	1,1	47,460	1,8984	mg/l	100%
Nitrite	0,072	0,002	0,076	0,00600	mg/l	106%
Ammonium	0,0437	0,0046	0,04200	0,00420	mg/l	96%
Chloride	17,1	0,3	17,16	0,858	mg/l	100%
Sulphate	43,1	0,4	43,98	2,199	mg/l	102%
Orthophosphate	<0,009		0,00600	0,00070	mg/l	•
Boron	0,096	0,001	0,093	0,0112	mg/l	97%
DOC	4,18	0,05	4,300	0,3400	mg/l	103%
Total P (as PO ₄)	<0,009		<0,0061		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,05	0,648	mg/l	94%



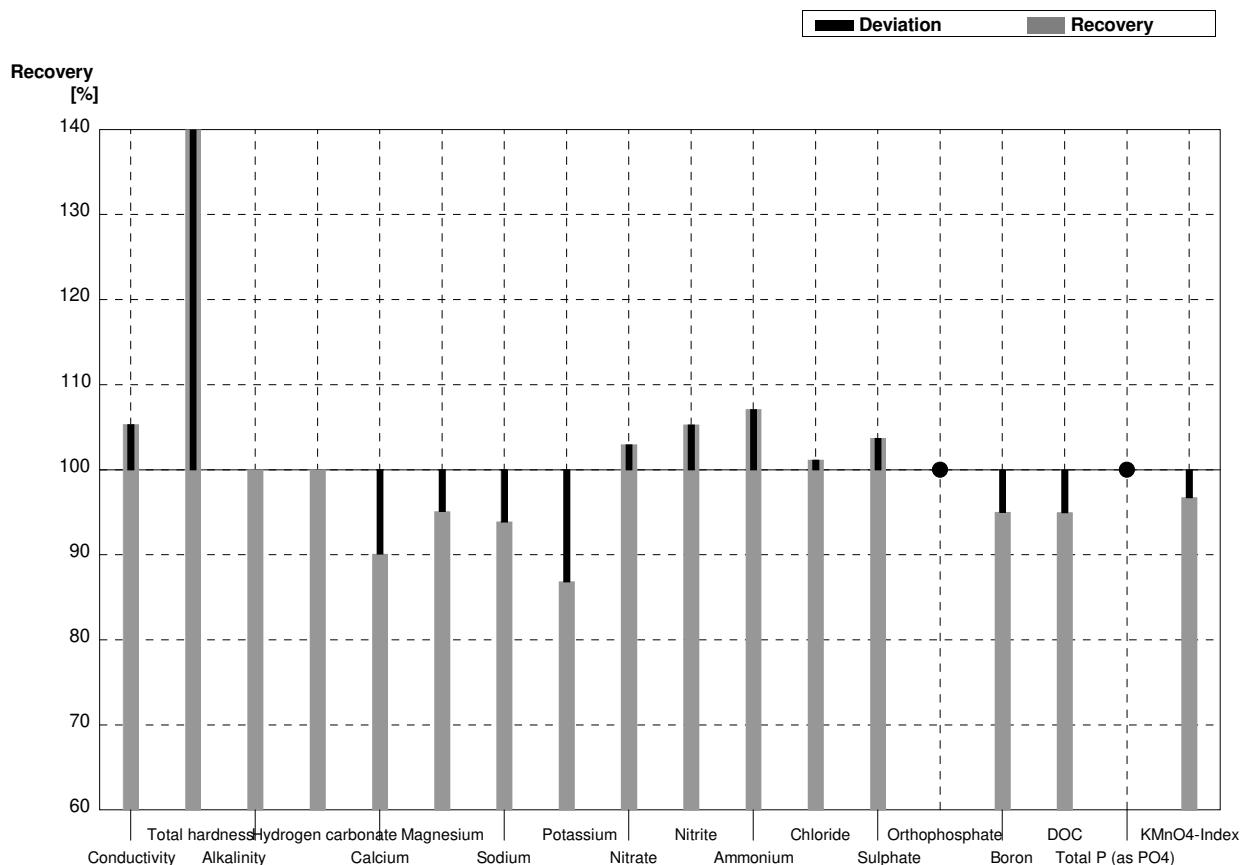
Sample N159A
Laboratory V

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	611	1,0	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02	11,8	0,1	mmol/l	506%
Alkalinity	3,52	0,04	3,50	0,010	mmol/l	99%
Hydrogen carbonate	212	2	210	7,6	mg/l	99%
Calcium	72,7	0,9	65,3	1,1	mg/l	90%
Magnesium	12,5	0,1	11,9	0,15	mg/l	95%
Sodium	33,5	0,5	32,0	0,25	mg/l	96%
Potassium	4,51	0,05	3,96	0,015	mg/l	88%
Nitrate	31,8	0,5	33,9	0,91	mg/l	107%
Nitrite	0,0343	0,0008	0,0374	0,001	mg/l	109%
Ammonium	<0,01		<0,010		mg/l	•
Chloride	38,8	0,7	40,1	0,31	mg/l	103%
Sulphate	52,0	0,5	54,1	0,92	mg/l	104%
Orthophosphate	0,0487	0,0024	0,0530	0,002	mg/l	109%
Boron	0,066	0,001	0,0616	0,003	mg/l	93%
DOC	6,16	0,05	5,73	0,15	mg/l	93%
Total P (as PO ₄)	0,089	0,002	0,0895	0,004	mg/l	101%
KMnO ₄ -Index	2,40	0,12	2,28	0,11	mg/l	95%



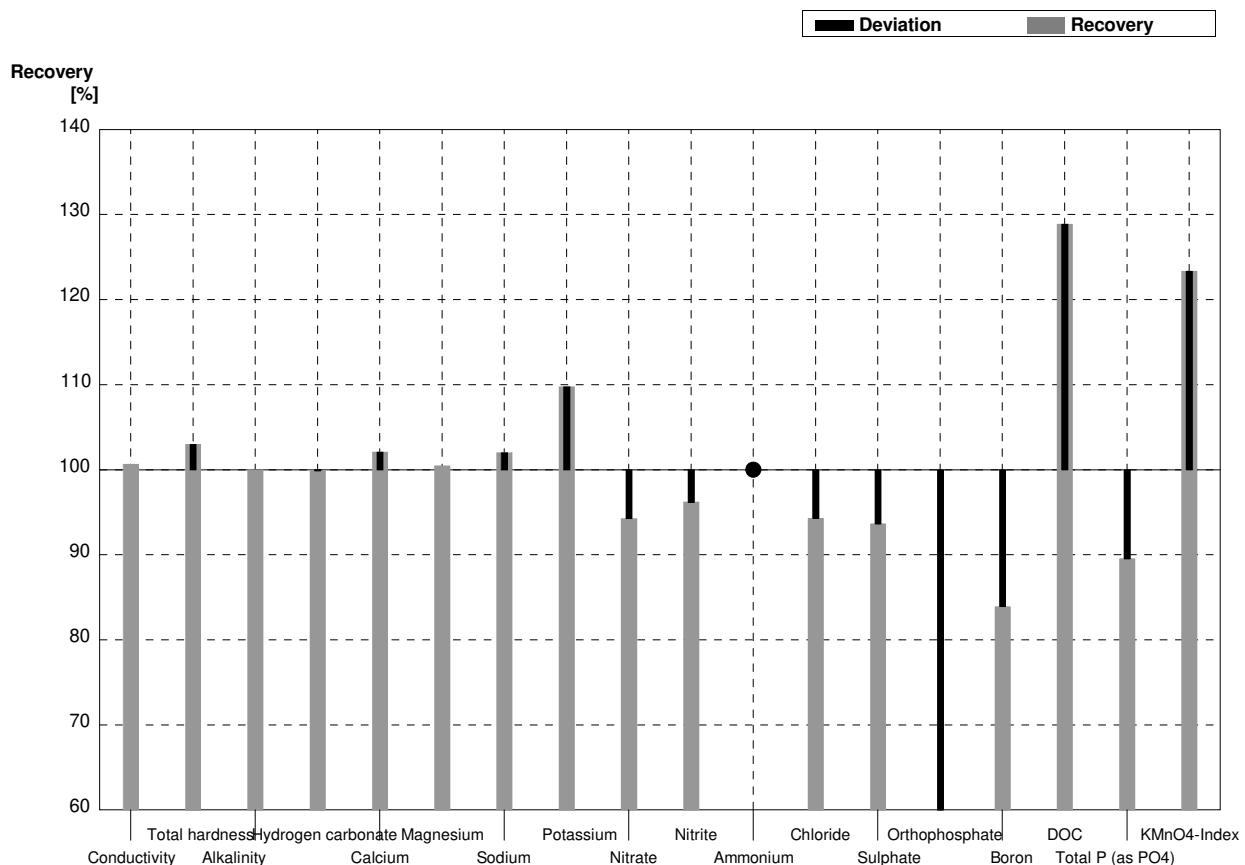
Sample N159B
Laboratory V

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	475	1,0	$\mu\text{S}/\text{cm}$	105%
Total hardness	1,16	0,01	5,90	0,036	mmol/l	509%
Alkalinity	2,29	0,01	2,29	0,065	mmol/l	100%
Hydrogen carbonate	137	1	137	5,0	mg/l	100%
Calcium	31,3	0,4	28,2	0,21	mg/l	90%
Magnesium	9,18	0,12	8,73	0,17	mg/l	95%
Sodium	42,4	0,2	39,8	0,35	mg/l	94%
Potassium	10,4	0,1	9,03	0,053	mg/l	87%
Nitrate	47,4	1,1	48,8	0,80	mg/l	103%
Nitrite	0,072	0,002	0,0758	0,003	mg/l	105%
Ammonium	0,0437	0,0046	0,0468	0,001	mg/l	107%
Chloride	17,1	0,3	17,3	0,25	mg/l	101%
Sulphate	43,1	0,4	44,7	0,75	mg/l	104%
Orthophosphate	<0,009		<0,015		mg/l	•
Boron	0,096	0,001	0,0912	0,002	mg/l	95%
DOC	4,18	0,05	3,97	0,16	mg/l	95%
Total P (as PO ₄)	<0,009		<0,015		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,15	0,13	mg/l	97%



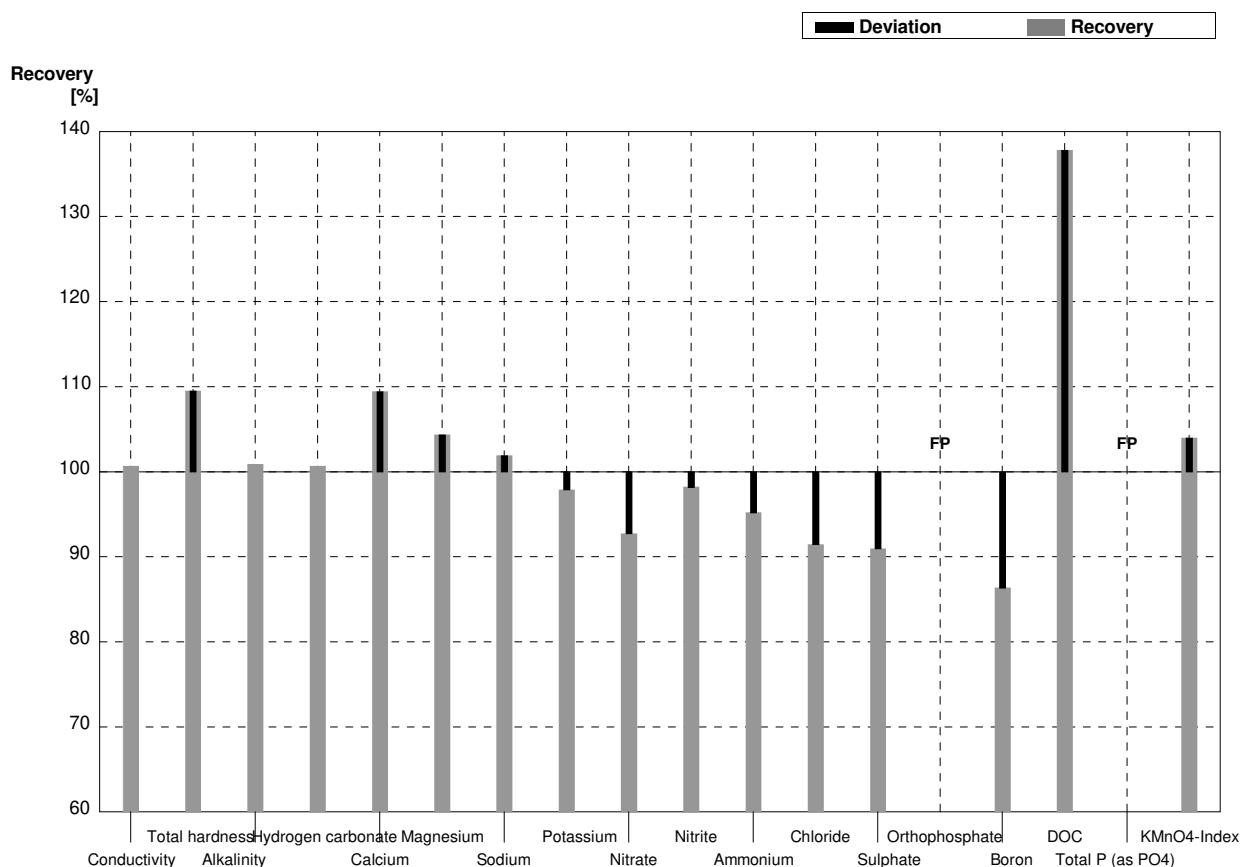
Sample N159A
Laboratory W

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	614		$\mu\text{S}/\text{cm}$	101%
Total hardness	2,33	0,02	2,40		mmol/l	103%
Alkalinity	3,52	0,04	3,52		mmol/l	100%
Hydrogen carbonate	212	2	211,73		mg/l	100%
Calcium	72,7	0,9	74,23		mg/l	102%
Magnesium	12,5	0,1	12,56		mg/l	100%
Sodium	33,5	0,5	34,18		mg/l	102%
Potassium	4,51	0,05	4,95		mg/l	110%
Nitrate	31,8	0,5	29,98		mg/l	94%
Nitrite	0,0343	0,0008	0,0330		mg/l	96%
Ammonium	<0,01		0,0054		mg/l	•
Chloride	38,8	0,7	36,59		mg/l	94%
Sulphate	52,0	0,5	48,70		mg/l	94%
Orthophosphate	0,0487	0,0024	0,0260		mg/l	53%
Boron	0,066	0,001	0,0554		mg/l	84%
DOC	6,16	0,05	7,94		mg/l	129%
Total P (as PO ₄)	0,089	0,002	0,0797		mg/l	90%
KMnO ₄ -Index	2,40	0,12	2,96		mg/l	123%



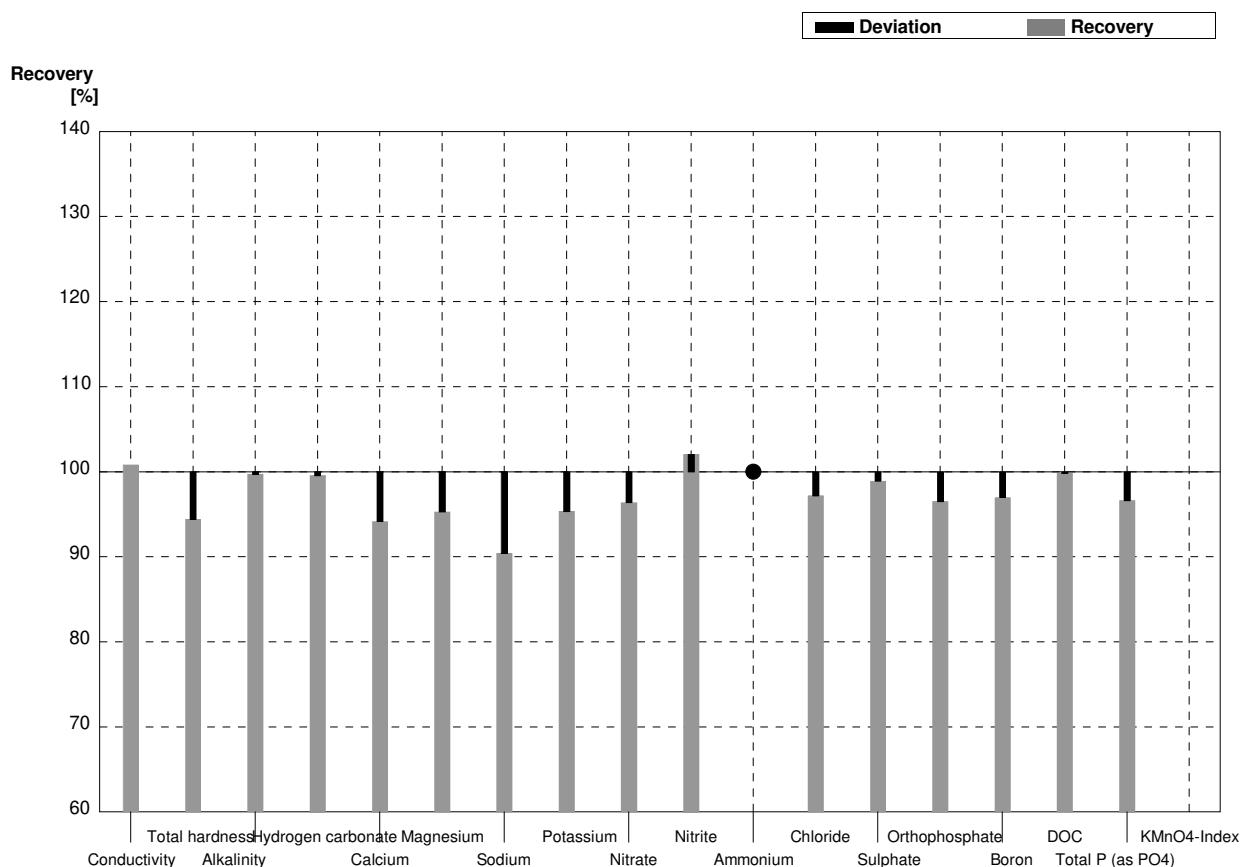
Sample N159B
Laboratory W

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2	454		µS/cm	101%
Total hardness	1,16	0,01	1,27		mmol/l	109%
Alkalinity	2,29	0,01	2,31		mmol/l	101%
Hydrogen carbonate	137	1	137,89		mg/l	101%
Calcium	31,3	0,4	34,25		mg/l	109%
Magnesium	9,18	0,12	9,58		mg/l	104%
Sodium	42,4	0,2	43,21		mg/l	102%
Potassium	10,4	0,1	10,18		mg/l	98%
Nitrate	47,4	1,1	43,95		mg/l	93%
Nitrite	0,072	0,002	0,0707		mg/l	98%
Ammonium	0,0437	0,0046	0,0416		mg/l	95%
Chloride	17,1	0,3	15,64		mg/l	91%
Sulphate	43,1	0,4	39,20		mg/l	91%
Orthophosphate	<0,009		0,0164		mg/l	FP
Boron	0,096	0,001	0,0829		mg/l	86%
DOC	4,18	0,05	5,76		mg/l	138%
Total P (as PO4)	<0,009		0,050		mg/l	FP
KMnO4-Index	4,29	0,15	4,46		mg/l	104%



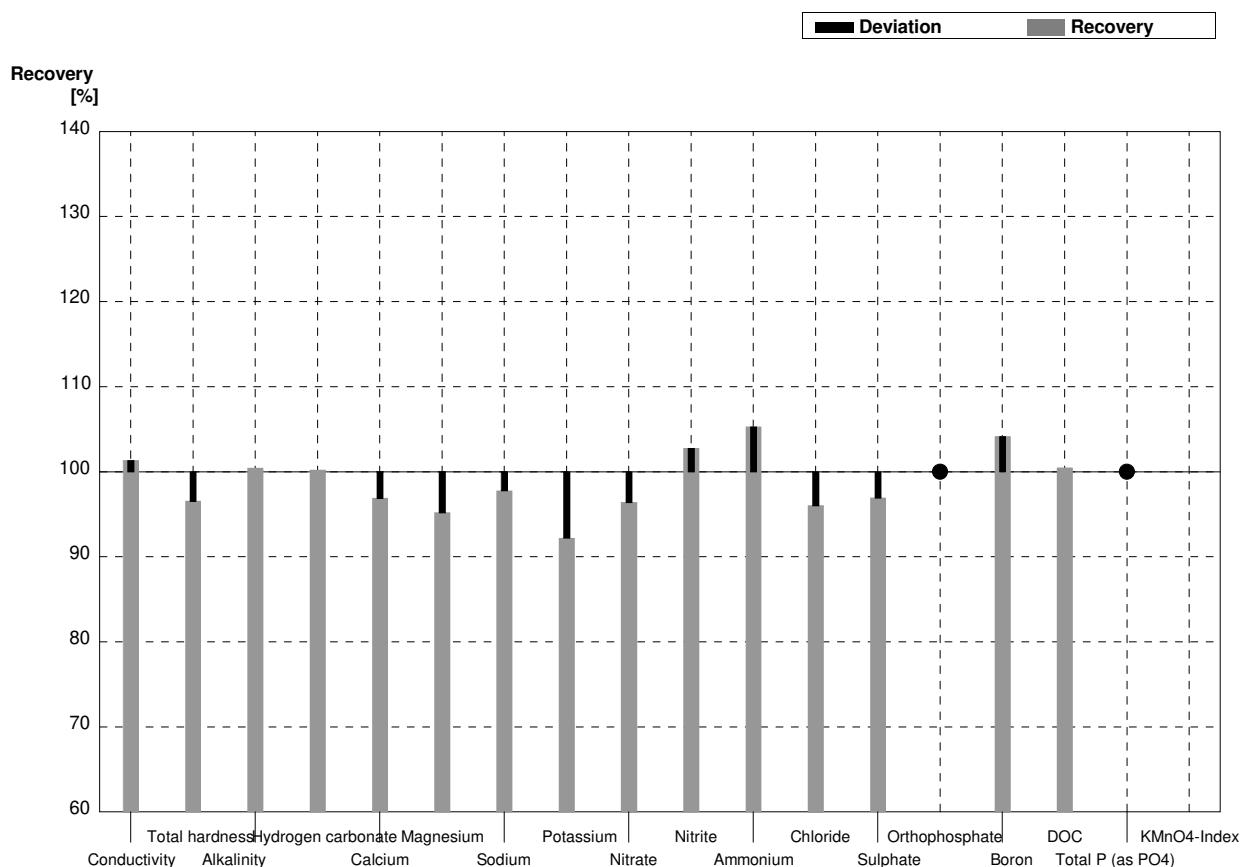
Sample N159A
Laboratory X

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	615	4,51	$\mu\text{S}/\text{cm}$	101%
Total hardness	2,33	0,02	2,20		mmol/l	94%
Alkalinity	3,52	0,04	3,51	0,35	mmol/l	100%
Hydrogen carbonate	212	2	211,09		mg/l	100%
Calcium	72,7	0,9	68,45	6,8	mg/l	94%
Magnesium	12,5	0,1	11,91	1,2	mg/l	95%
Sodium	33,5	0,5	30,29	3,0	mg/l	90%
Potassium	4,51	0,05	4,30	0,4	mg/l	95%
Nitrate	31,8	0,5	30,65	3,0	mg/l	96%
Nitrite	0,0343	0,0008	0,0350	0,0035	mg/l	102%
Ammonium	<0,01		<0,009		mg/l	•
Chloride	38,8	0,7	37,71	3,7	mg/l	97%
Sulphate	52,0	0,5	51,43	5,1	mg/l	99%
Orthophosphate	0,0487	0,0024	0,0470	0,005	mg/l	97%
Boron	0,066	0,001	0,064	0,006	mg/l	97%
DOC	6,16	0,05	6,15	0,6	mg/l	100%
Total P (as PO ₄)	0,089	0,002	0,086	0,009	mg/l	97%
KMnO ₄ -Index	2,40	0,12			mg/l	



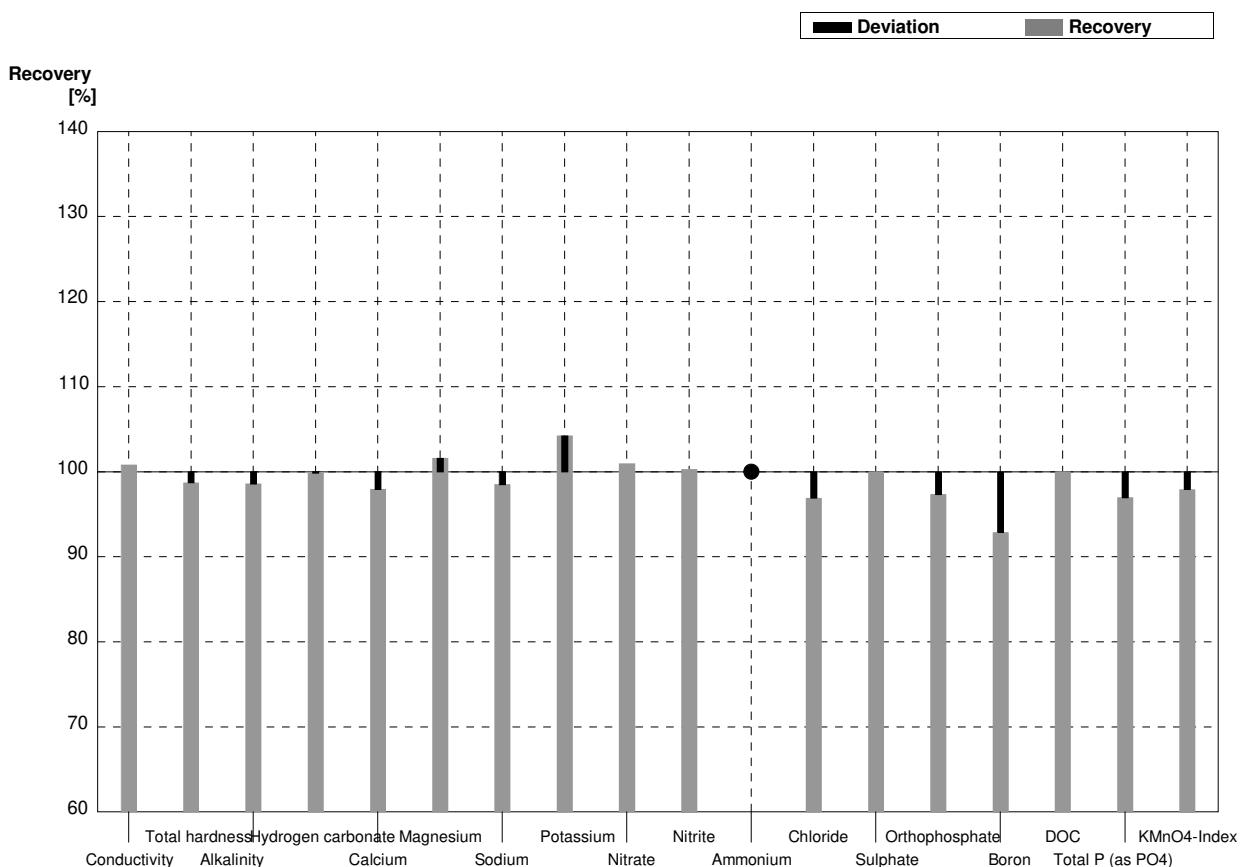
Sample N159B
Laboratory X

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2	457	4,51	µS/cm	101%
Total hardness	1,16	0,01	1,12		mmol/l	97%
Alkalinity	2,29	0,01	2,30	0,23	mmol/l	100%
Hydrogen carbonate	137	1	137,27		mg/l	100%
Calcium	31,3	0,4	30,33	3,0	mg/l	97%
Magnesium	9,18	0,12	8,74	0,9	mg/l	95%
Sodium	42,4	0,2	41,46	4,1	mg/l	98%
Potassium	10,4	0,1	9,59	0,9	mg/l	92%
Nitrate	47,4	1,1	45,69	4,5	mg/l	96%
Nitrite	0,072	0,002	0,0740	0,0074	mg/l	103%
Ammonium	0,0437	0,0046	0,0460	0,005	mg/l	105%
Chloride	17,1	0,3	16,42	1,6	mg/l	96%
Sulphate	43,1	0,4	41,78	4,1	mg/l	97%
Orthophosphate	<0,009		<0,0015		mg/l	•
Boron	0,096	0,001	0,100	0,010	mg/l	104%
DOC	4,18	0,05	4,20	0,4	mg/l	100%
Total P (as PO4)	<0,009		<0,0036		mg/l	•
KMnO4-Index	4,29	0,15			mg/l	



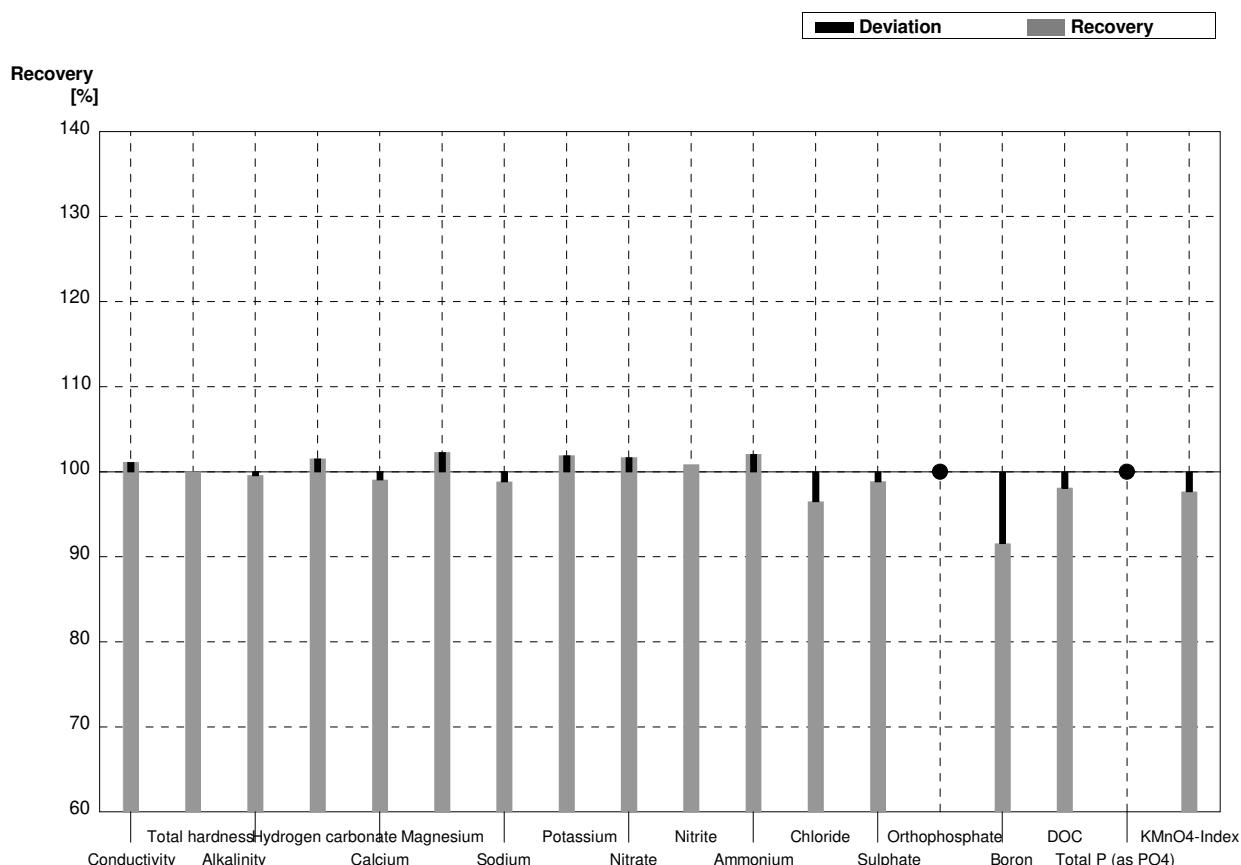
Sample N159A
Laboratory Y

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	615	5	$\mu\text{S}/\text{cm}$	101%
Total hardness	2,33	0,02	2,30	0,23	mmol/l	99%
Alkalinity	3,52	0,04	3,47	0,35	mmol/l	99%
Hydrogen carbonate	212	2	211,7	22	mg/l	100%
Calcium	72,7	0,9	71,2	14,3	mg/l	98%
Magnesium	12,5	0,1	12,7	2,6	mg/l	102%
Sodium	33,5	0,5	33,0	5,0	mg/l	99%
Potassium	4,51	0,05	4,70	0,94	mg/l	104%
Nitrate	31,8	0,5	32,1	3,2	mg/l	101%
Nitrite	0,0343	0,0008	0,0344	0,0082	mg/l	100%
Ammonium	<0,01		<0,010		mg/l	•
Chloride	38,8	0,7	37,6	3,8	mg/l	97%
Sulphate	52,0	0,5	52,0	5,2	mg/l	100%
Orthophosphate	0,0487	0,0024	0,0474	0,0097	mg/l	97%
Boron	0,066	0,001	0,0613	0,016	mg/l	93%
DOC	6,16	0,05	6,16	0,62	mg/l	100%
Total P (as PO ₄)	0,089	0,002	0,0863	0,0177	mg/l	97%
KMnO ₄ -Index	2,40	0,12	2,35	0,5	mg/l	98%



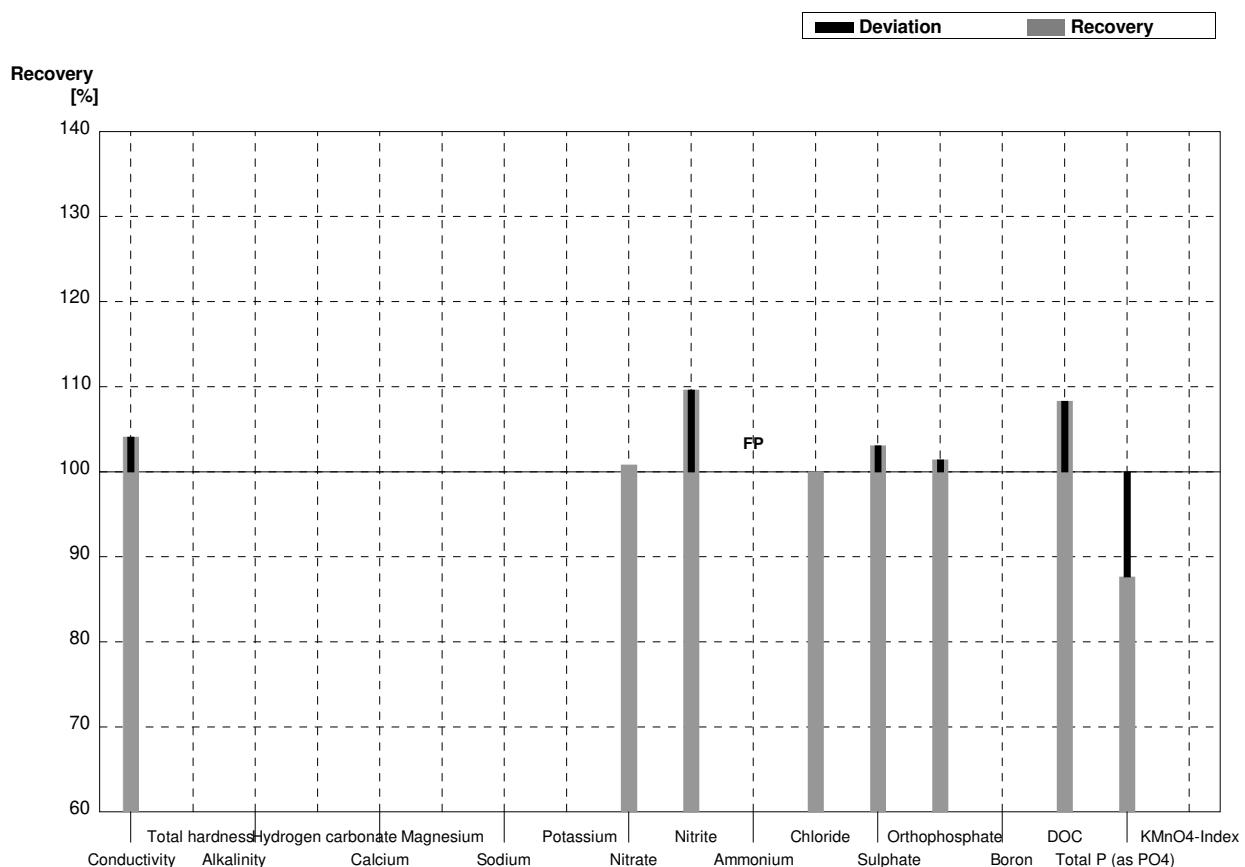
Sample N159B
Laboratory Y

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	456	5	$\mu\text{S}/\text{cm}$	101%
Total hardness	1,16	0,01	1,16	0,12	mmol/l	100%
Alkalinity	2,29	0,01	2,28	0,23	mmol/l	100%
Hydrogen carbonate	137	1	139,1	14	mg/l	102%
Calcium	31,3	0,4	31,0	6,2	mg/l	99%
Magnesium	9,18	0,12	9,39	1,9	mg/l	102%
Sodium	42,4	0,2	41,9	6,3	mg/l	99%
Potassium	10,4	0,1	10,6	2,2	mg/l	102%
Nitrate	47,4	1,1	48,2	4,8	mg/l	102%
Nitrite	0,072	0,002	0,0726	0,0174	mg/l	101%
Ammonium	0,0437	0,0046	0,0446	0,0079	mg/l	102%
Chloride	17,1	0,3	16,5	1,7	mg/l	96%
Sulphate	43,1	0,4	42,6	4,3	mg/l	99%
Orthophosphate	<0,009		<0,005		mg/l	•
Boron	0,096	0,001	0,0879	0,022	mg/l	92%
DOC	4,18	0,05	4,10	0,411	mg/l	98%
Total P (as PO ₄)	<0,009		<0,005		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,19	0,8	mg/l	98%



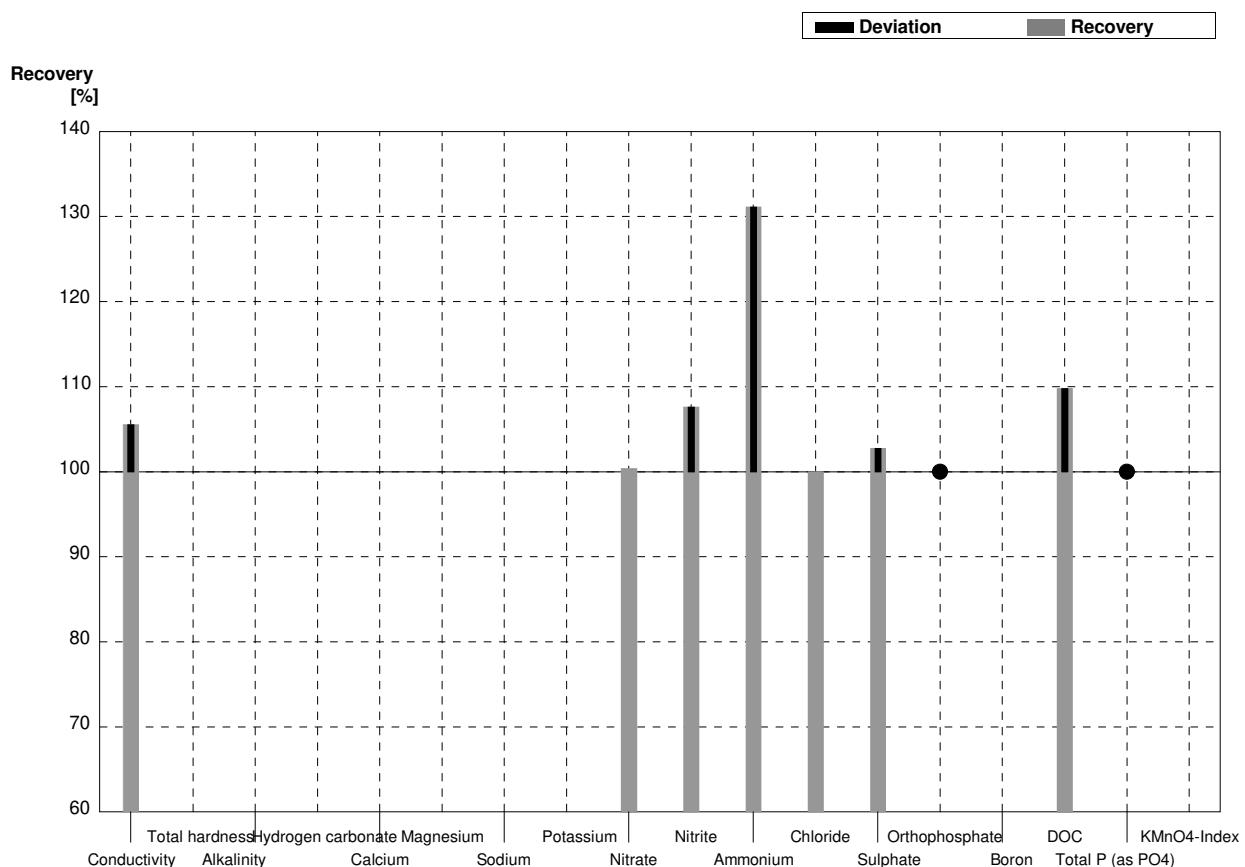
Sample N159A
Laboratory Z

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	635	31	$\mu\text{S}/\text{cm}$	104%
Total hardness	2,33	0,02			mmol/l	
Alkalinity	3,52	0,04			mmol/l	
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9			mg/l	
Magnesium	12,5	0,1			mg/l	
Sodium	33,5	0,5			mg/l	
Potassium	4,51	0,05			mg/l	
Nitrate	31,8	0,5	32,06	1,420	mg/l	101%
Nitrite	0,0343	0,0008	0,0376	0,0110	mg/l	110%
Ammonium	<0,01		0,0133	0,0030	mg/l	FP
Chloride	38,8	0,7	38,8	5,07	mg/l	100%
Sulphate	52,0	0,5	53,6	3,27	mg/l	103%
Orthophosphate	0,0487	0,0024	0,0494	0,0080	mg/l	101%
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05	6,67	1,20	mg/l	108%
Total P (as PO ₄)	0,089	0,002	0,078	0,009	mg/l	88%
KMnO ₄ -Index	2,40	0,12			mg/l	



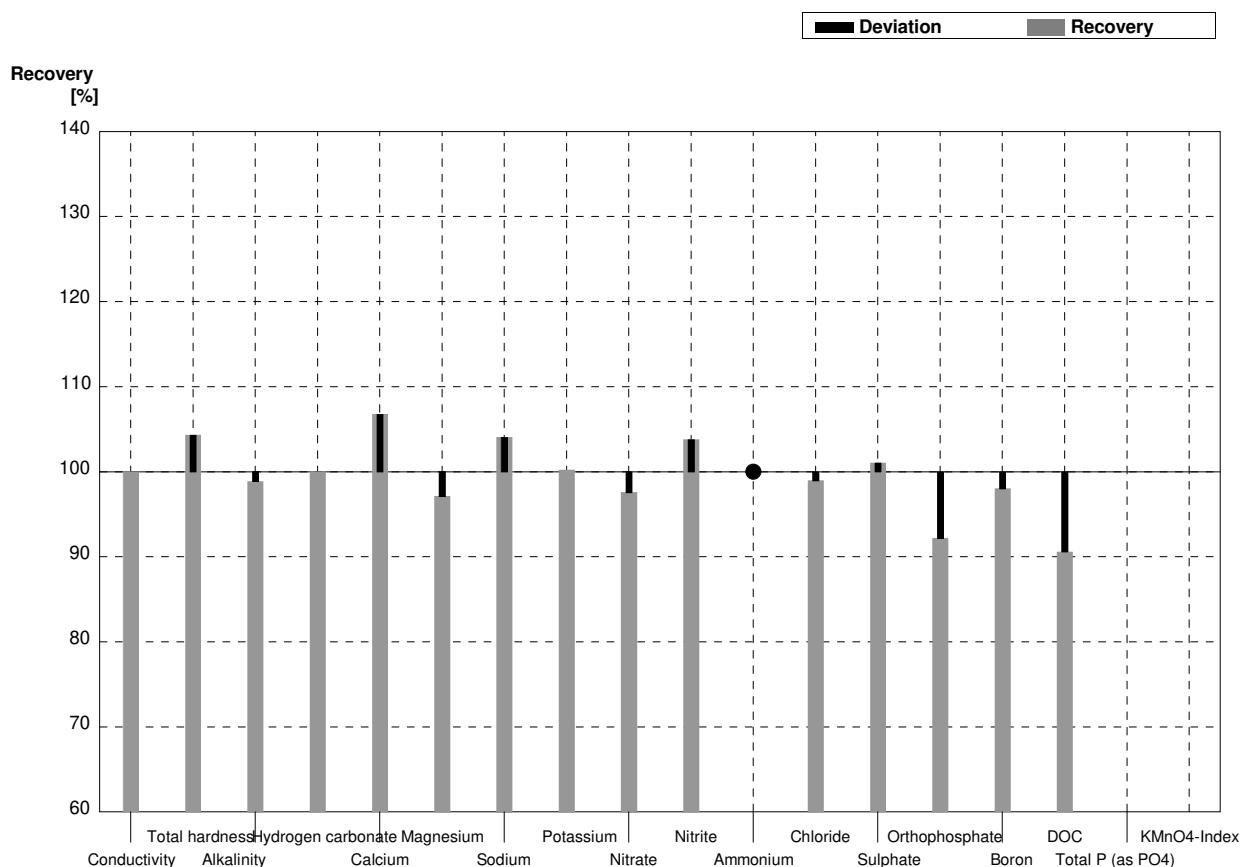
Sample N159B
Laboratory Z

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	476	24	$\mu\text{S}/\text{cm}$	106%
Total hardness	1,16	0,01			mmol/l	
Alkalinity	2,29	0,01			mmol/l	
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4			mg/l	
Magnesium	9,18	0,12			mg/l	
Sodium	42,4	0,2			mg/l	
Potassium	10,4	0,1			mg/l	
Nitrate	47,4	1,1	47,58	2,108	mg/l	100%
Nitrite	0,072	0,002	0,0775	0,0210	mg/l	108%
Ammonium	0,0437	0,0046	0,0573	0,0130	mg/l	131%
Chloride	17,1	0,3	17,1	2,24	mg/l	100%
Sulphate	43,1	0,4	44,3	2,70	mg/l	103%
Orthophosphate	<0,009		<0,015		mg/l	•
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05	4,59	0,826	mg/l	110%
Total P (as PO ₄)	<0,009		<0,015		mg/l	•
KMnO ₄ -Index	4,29	0,15			mg/l	



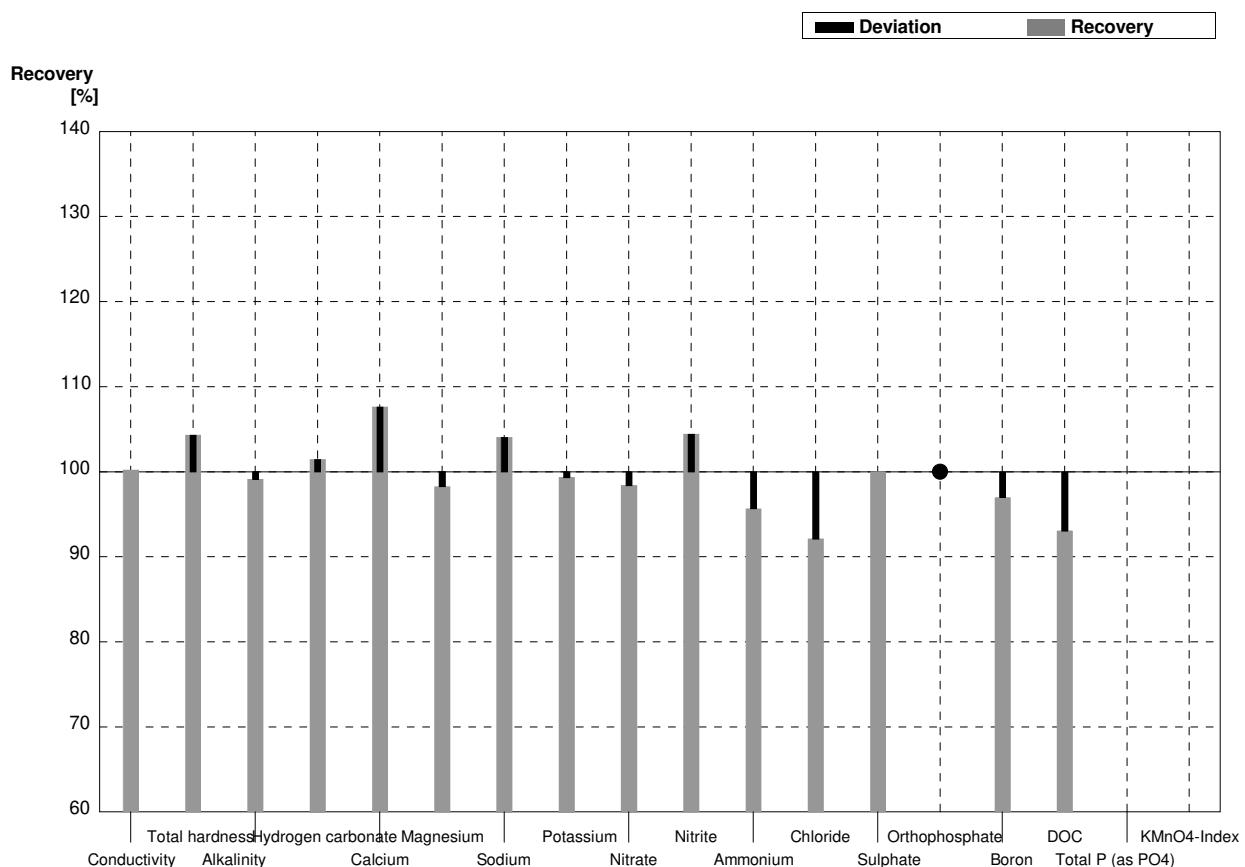
Sample N159A
Laboratory AA

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	610	173	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02	2,43	0,8	mmol/l	104%
Alkalinity	3,52	0,04	3,48	0,619	mmol/l	99%
Hydrogen carbonate	212	2	212	37	mg/l	100%
Calcium	72,7	0,9	77,60	25,39	mg/l	107%
Magnesium	12,5	0,1	12,14	2,69	mg/l	97%
Sodium	33,5	0,5	34,85	10,84	mg/l	104%
Potassium	4,51	0,05	4,52	1,01	mg/l	100%
Nitrate	31,8	0,5	31,03	8,84	mg/l	98%
Nitrite	0,0343	0,0008	0,0356	0,009	mg/l	104%
Ammonium	<0,01		<0,019		mg/l	•
Chloride	38,8	0,7	38,40	10,94	mg/l	99%
Sulphate	52,0	0,5	52,53	14,97	mg/l	101%
Orthophosphate	0,0487	0,0024	0,0449	0,012	mg/l	92%
Boron	0,066	0,001	0,0647	0,013	mg/l	98%
DOC	6,16	0,05	5,58	1,7	mg/l	91%
Total P (as PO ₄)	0,089	0,002			mg/l	
KMnO ₄ -Index	2,40	0,12			mg/l	



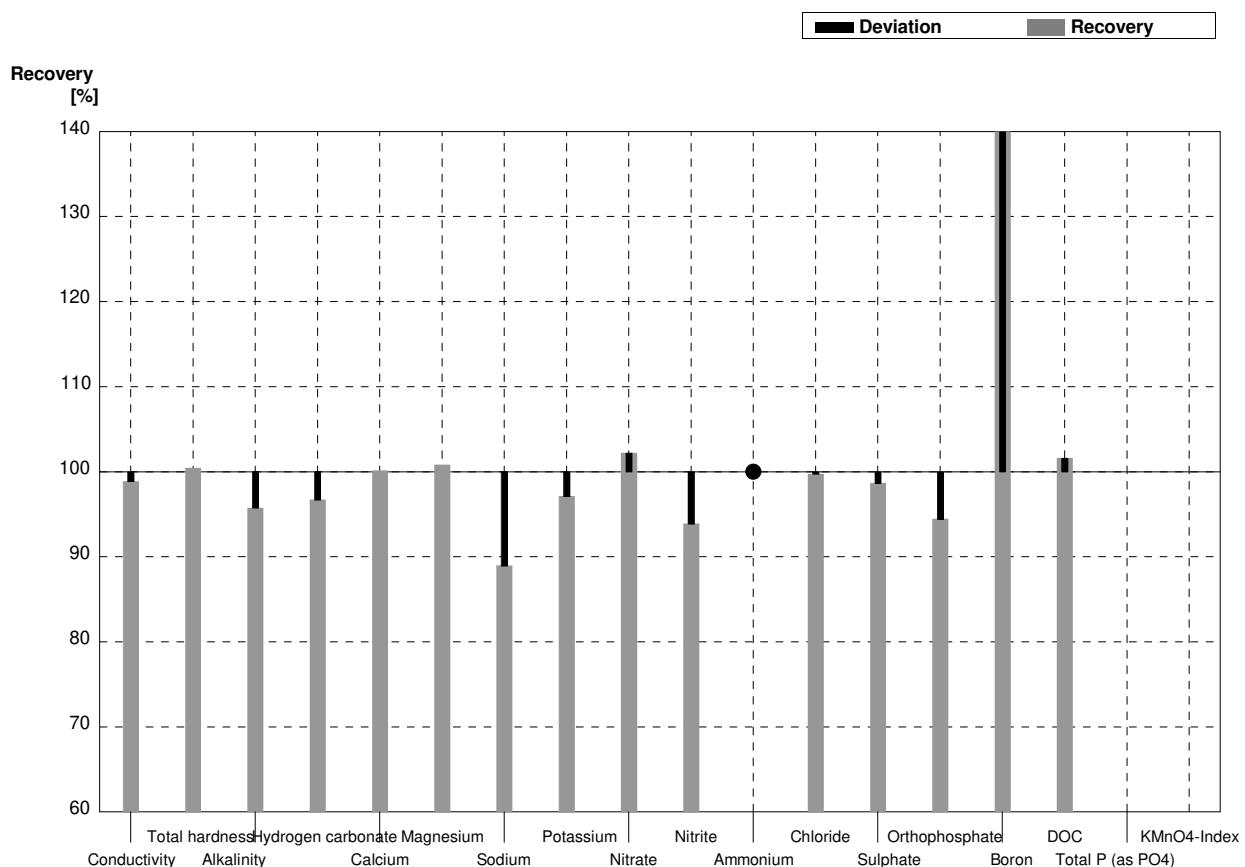
Sample N159B
Laboratory AA

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	452	128	$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01	1,21	0,36	mmol/l	104%
Alkalinity	2,29	0,01	2,27	0,403	mmol/l	99%
Hydrogen carbonate	137	1	139	25	mg/l	101%
Calcium	31,3	0,4	33,68	11,02	mg/l	108%
Magnesium	9,18	0,12	9,02	1,99	mg/l	98%
Sodium	42,4	0,2	44,11	13,72	mg/l	104%
Potassium	10,4	0,1	10,33	2,32	mg/l	99%
Nitrate	47,4	1,1	46,64	13,29	mg/l	98%
Nitrite	0,072	0,002	0,0752	0,019	mg/l	104%
Ammonium	0,0437	0,0046	0,0418	0,011	mg/l	96%
Chloride	17,1	0,3	15,75	4,49	mg/l	92%
Sulphate	43,1	0,4	43,10	12,28	mg/l	100%
Orthophosphate	<0,009		<0,031		mg/l	•
Boron	0,096	0,001	0,0931	0,019	mg/l	97%
DOC	4,18	0,05	3,89	1,18	mg/l	93%
Total P (as PO ₄)	<0,009				mg/l	
KMnO ₄ -Index	4,29	0,15			mg/l	



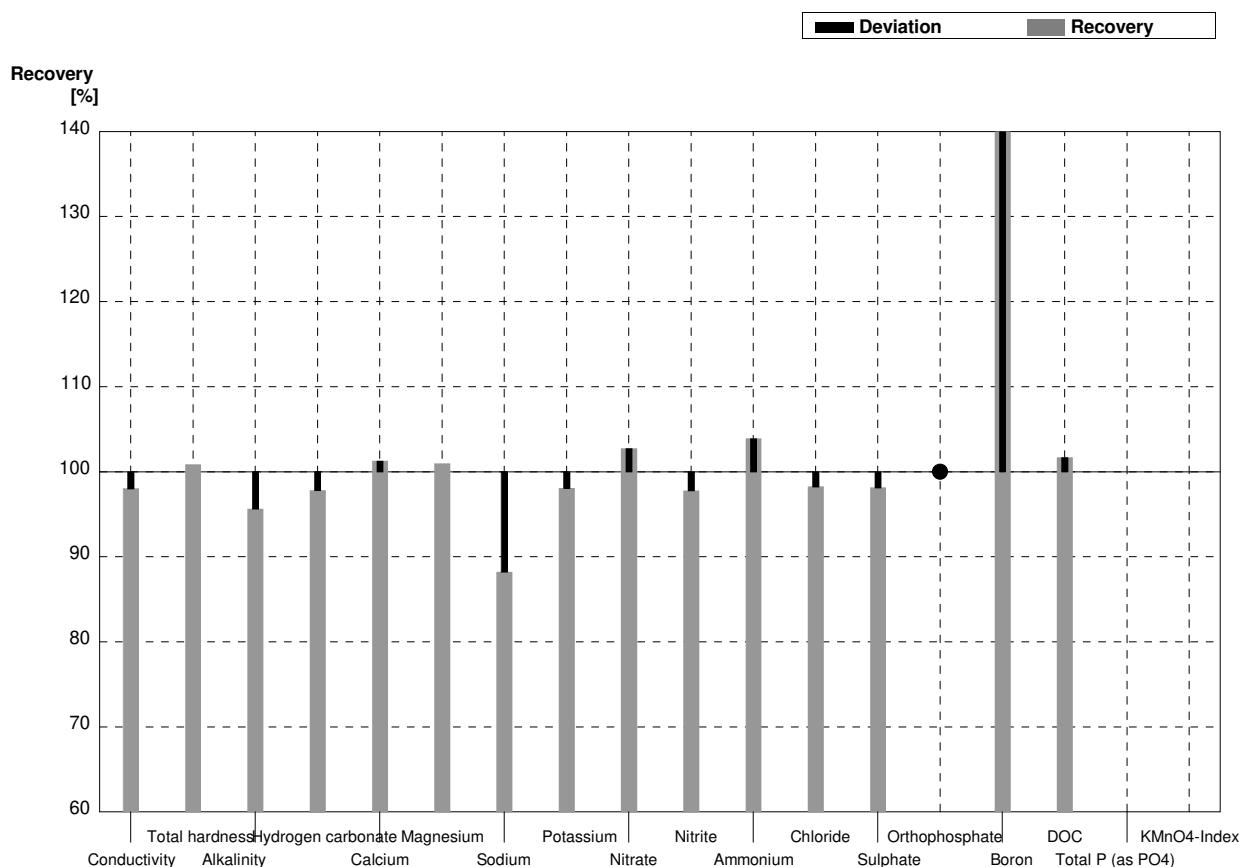
Sample N159A
Laboratory AB

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	603	12	$\mu\text{S}/\text{cm}$	99%
Total hardness	2,33	0,02	2,34	0,23	mmol/l	100%
Alkalinity	3,52	0,04	3,37	0,51	mmol/l	96%
Hydrogen carbonate	212	2	205	31	mg/l	97%
Calcium	72,7	0,9	72,8	10,6	mg/l	100%
Magnesium	12,5	0,1	12,6	0,84	mg/l	101%
Sodium	33,5	0,5	29,8	4,3	mg/l	89%
Potassium	4,51	0,05	4,38	0,46	mg/l	97%
Nitrate	31,8	0,5	32,5	1,9	mg/l	102%
Nitrite	0,0343	0,0008	0,0322	0,0015	mg/l	94%
Ammonium	<0,01		0,00170	0,00012	mg/l	•
Chloride	38,8	0,7	38,7	2,1	mg/l	100%
Sulphate	52,0	0,5	51,3	4,2	mg/l	99%
Orthophosphate	0,0487	0,0024	0,0460	0,0026	mg/l	94%
Boron	0,066	0,001	64,3	7,2	mg/l	97424%
DOC	6,16	0,05	6,26	1,12	mg/l	102%
Total P (as PO ₄)	0,089	0,002			mg/l	
KMnO ₄ -Index	2,40	0,12			mg/l	



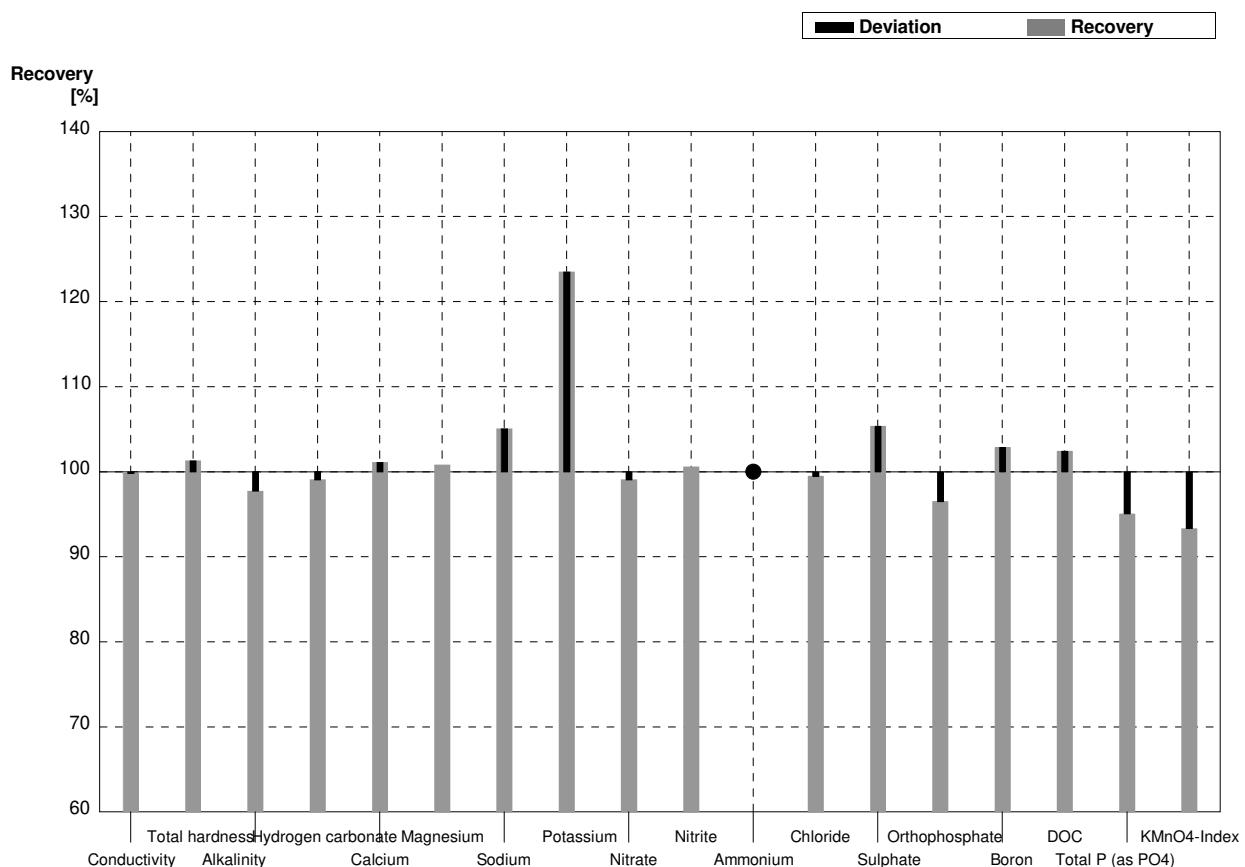
Sample N159B
Laboratory AB

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	442	9	$\mu\text{S}/\text{cm}$	98%
Total hardness	1,16	0,01	1,17	0,12	mmol/l	101%
Alkalinity	2,29	0,01	2,19	0,33	mmol/l	96%
Hydrogen carbonate	137	1	134	20	mg/l	98%
Calcium	31,3	0,4	31,7	4,6	mg/l	101%
Magnesium	9,18	0,12	9,27	0,61	mg/l	101%
Sodium	42,4	0,2	37,4	5,4	mg/l	88%
Potassium	10,4	0,1	10,2	1,1	mg/l	98%
Nitrate	47,4	1,1	48,7	2,8	mg/l	103%
Nitrite	0,072	0,002	0,0704	0,0032	mg/l	98%
Ammonium	0,0437	0,0046	0,0454	0,0034	mg/l	104%
Chloride	17,1	0,3	16,8	0,93	mg/l	98%
Sulphate	43,1	0,4	42,3	3,5	mg/l	98%
Orthophosphate	<0,009		0,0090	0,0005	mg/l	•
Boron	0,096	0,001	92,7	10,4	mg/l	96563%
DOC	4,18	0,05	4,25	0,76	mg/l	102%
Total P (as PO ₄)	<0,009				mg/l	
KMnO ₄ -Index	4,29	0,15			mg/l	



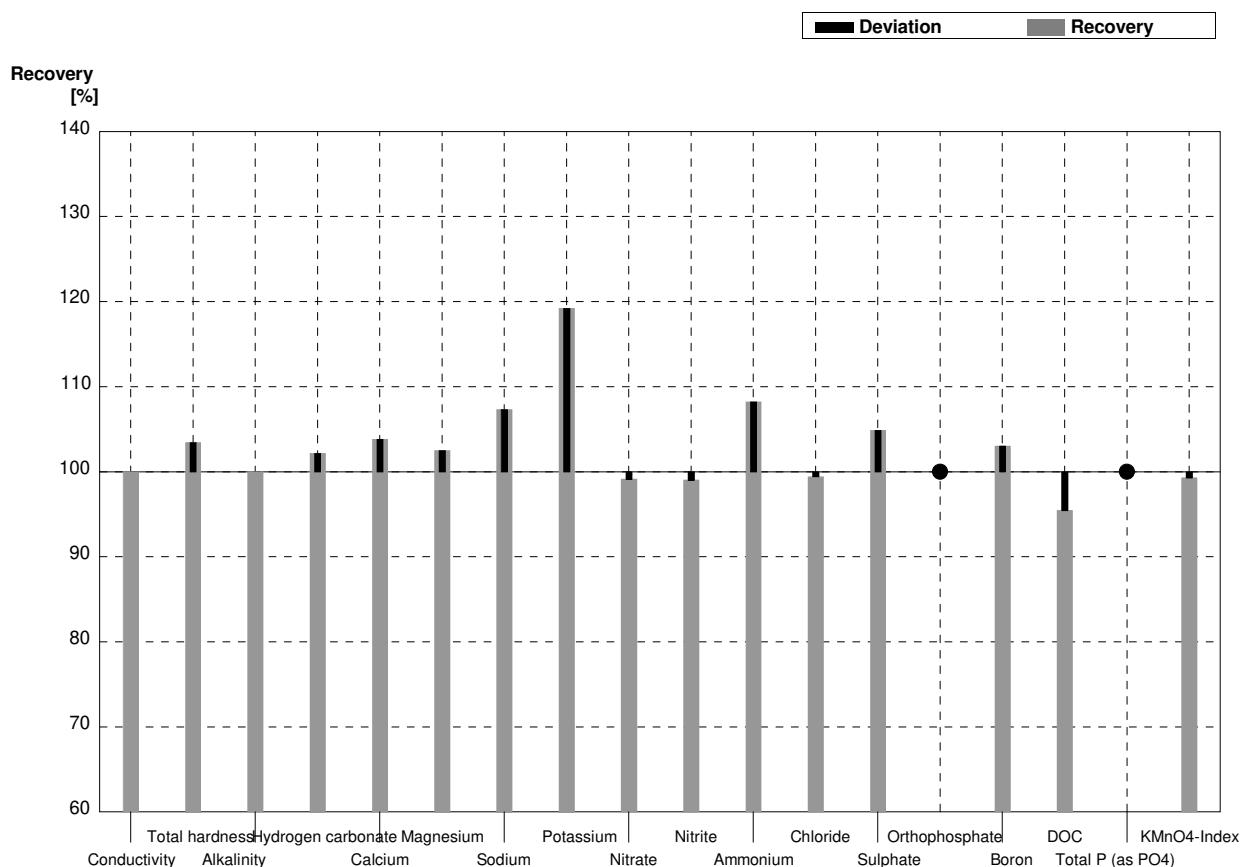
Sample N159A
Laboratory AC

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	609	18	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02	2,36	0,19	mmol/l	101%
Alkalinity	3,52	0,04	3,44	0,17	mmol/l	98%
Hydrogen carbonate	212	2	210	10	mg/l	99%
Calcium	72,7	0,9	73,5	3,4	mg/l	101%
Magnesium	12,5	0,1	12,6	1,0	mg/l	101%
Sodium	33,5	0,5	35,2	2,5	mg/l	105%
Potassium	4,51	0,05	5,57	0,40	mg/l	124%
Nitrate	31,8	0,5	31,5	1,0	mg/l	99%
Nitrite	0,0343	0,0008	0,0345	0,0034	mg/l	101%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	38,8	0,7	38,6	2,6	mg/l	99%
Sulphate	52,0	0,5	54,8	1,8	mg/l	105%
Orthophosphate	0,0487	0,0024	0,0470	0,0032	mg/l	97%
Boron	0,066	0,001	0,0679	0,0084	mg/l	103%
DOC	6,16	0,05	6,31	1,01	mg/l	102%
Total P (as PO ₄)	0,089	0,002	0,0846	0,0058	mg/l	95%
KMnO ₄ -Index	2,40	0,12	2,24	0,34	mg/l	93%



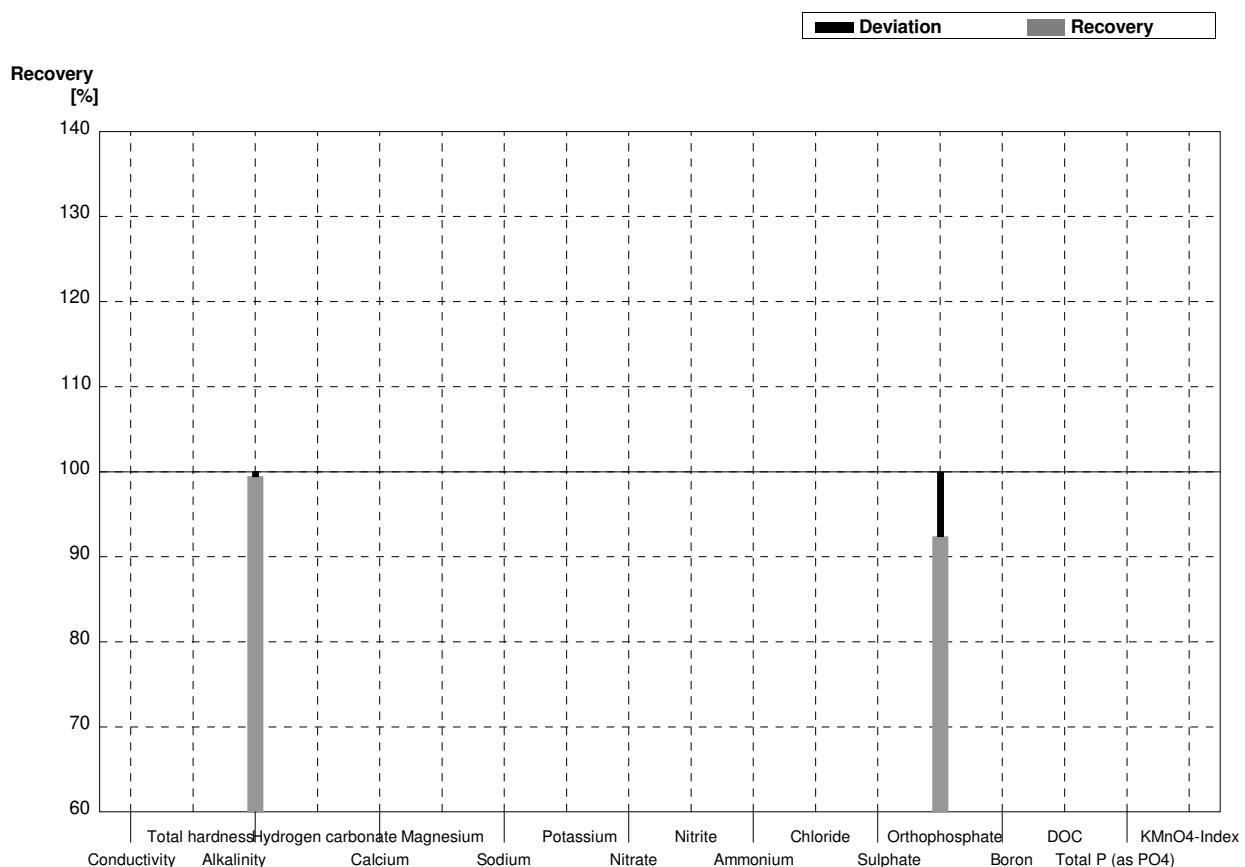
Sample N159B
Laboratory AC

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	451	14	$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01	1,20	0,10	mmol/l	103%
Alkalinity	2,29	0,01	2,29	0,11	mmol/l	100%
Hydrogen carbonate	137	1	140	7	mg/l	102%
Calcium	31,3	0,4	32,5	1,5	mg/l	104%
Magnesium	9,18	0,12	9,41	0,77	mg/l	103%
Sodium	42,4	0,2	45,5	3,2	mg/l	107%
Potassium	10,4	0,1	12,4	0,9	mg/l	119%
Nitrate	47,4	1,1	47,0	1,6	mg/l	99%
Nitrite	0,072	0,002	0,0713	0,0072	mg/l	99%
Ammonium	0,0437	0,0046	0,0473	0,0033	mg/l	108%
Chloride	17,1	0,3	17,0	1,1	mg/l	99%
Sulphate	43,1	0,4	45,2	1,5	mg/l	105%
Orthophosphate	<0,009		<0,015		mg/l	•
Boron	0,096	0,001	0,0989	0,0123	mg/l	103%
DOC	4,18	0,05	3,99	0,64	mg/l	95%
Total P (as PO ₄)	<0,009		<0,015		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,26	0,64	mg/l	99%



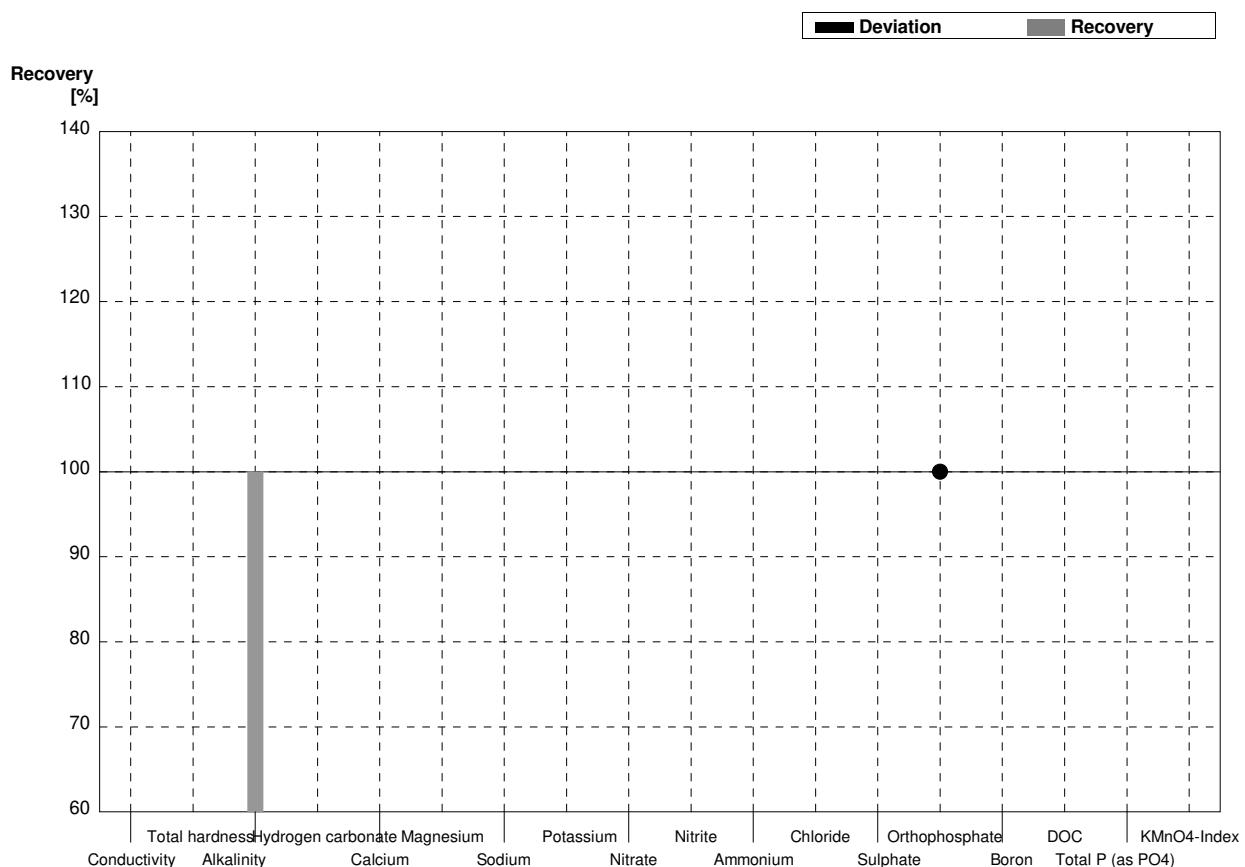
Sample N159A
Laboratory AD

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	610	2			µS/cm	
Total hardness	2,33	0,02			mmol/l	
Alkalinity	3,52	0,04	3,50	0,14	mmol/l	99%
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9			mg/l	
Magnesium	12,5	0,1			mg/l	
Sodium	33,5	0,5			mg/l	
Potassium	4,51	0,05			mg/l	
Nitrate	31,8	0,5			mg/l	
Nitrite	0,0343	0,0008			mg/l	
Ammonium	<0,01				mg/l	
Chloride	38,8	0,7			mg/l	
Sulphate	52,0	0,5			mg/l	
Orthophosphate	0,0487	0,0024	0,0450	0,0055	mg/l	92%
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05			mg/l	
Total P (as PO ₄)	0,089	0,002			mg/l	
KMnO ₄ -Index	2,40	0,12			mg/l	



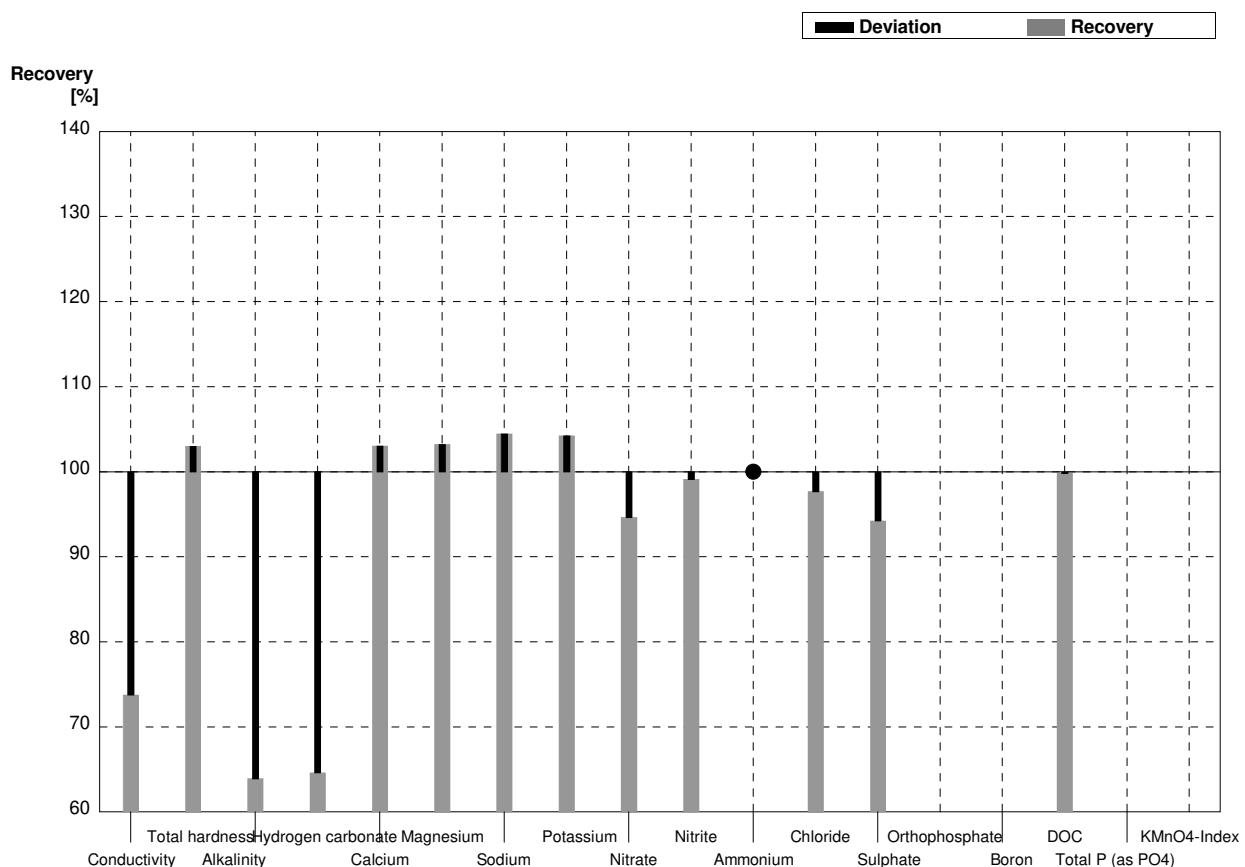
Sample N159B
Laboratory AD

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2			µS/cm	
Total hardness	1,16	0,01			mmol/l	
Alkalinity	2,29	0,01	2,29	0,09	mmol/l	100%
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4			mg/l	
Magnesium	9,18	0,12			mg/l	
Sodium	42,4	0,2			mg/l	
Potassium	10,4	0,1			mg/l	
Nitrate	47,4	1,1			mg/l	
Nitrite	0,072	0,002			mg/l	
Ammonium	0,0437	0,0046			mg/l	
Chloride	17,1	0,3			mg/l	
Sulphate	43,1	0,4			mg/l	
Orthophosphate	<0,009		<0,015		mg/l	•
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	4,29	0,15			mg/l	



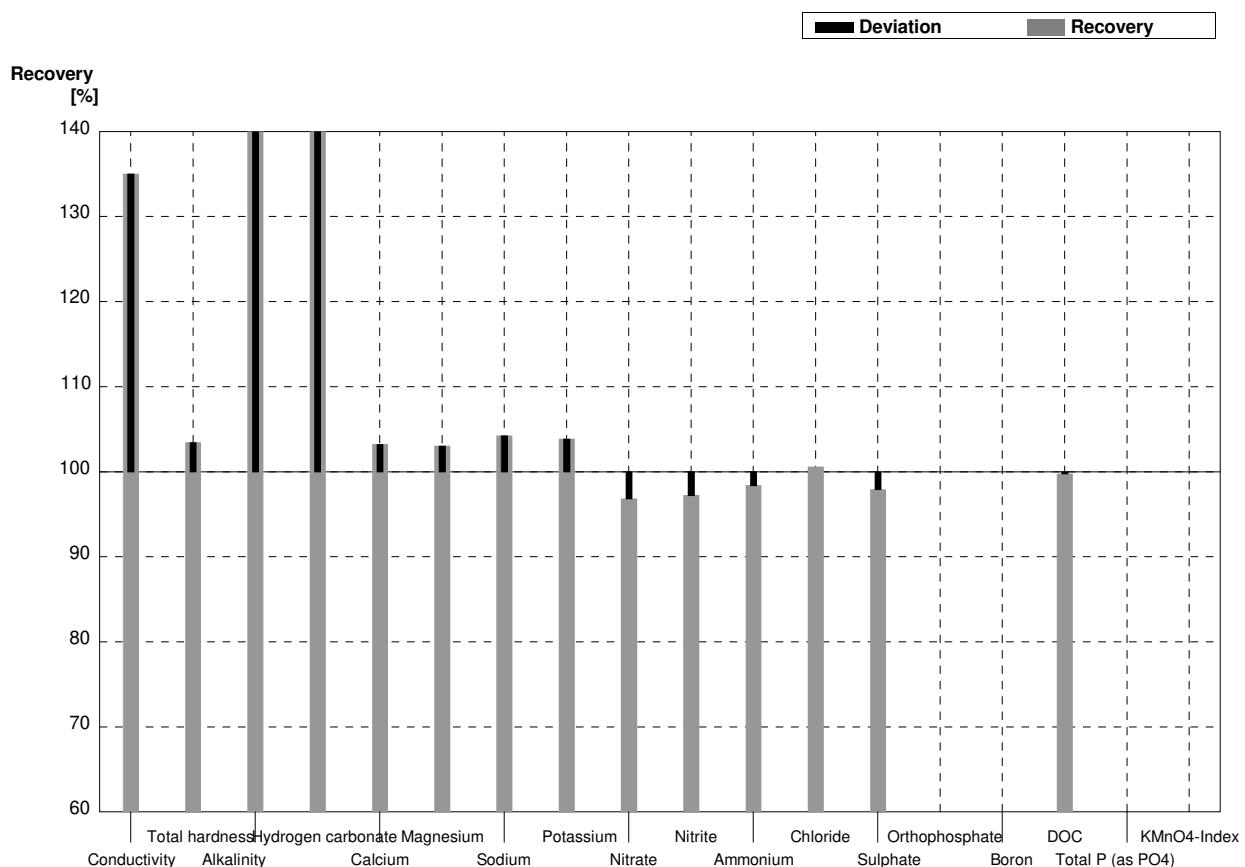
Sample N159A
Laboratory AE

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	450	7	$\mu\text{S}/\text{cm}$	74%
Total hardness	2,33	0,02	2,40	0,20	mmol/l	103%
Alkalinity	3,52	0,04	2,25	0,06	mmol/l	64%
Hydrogen carbonate	212	2	137	4	mg/l	65%
Calcium	72,7	0,9	74,9	4,3	mg/l	103%
Magnesium	12,5	0,1	12,9	0,8	mg/l	103%
Sodium	33,5	0,5	35,0	4	mg/l	104%
Potassium	4,51	0,05	4,70	0,18	mg/l	104%
Nitrate	31,8	0,5	30,1	1,4	mg/l	95%
Nitrite	0,0343	0,0008	0,0340	0,005	mg/l	99%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	38,8	0,7	37,9	2,6	mg/l	98%
Sulphate	52,0	0,5	49,0	3,2	mg/l	94%
Orthophosphate	0,0487	0,0024			mg/l	
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05	6,15	1,28	mg/l	100%
Total P (as PO ₄)	0,089	0,002			mg/l	
KMnO ₄ -Index	2,40	0,12			mg/l	



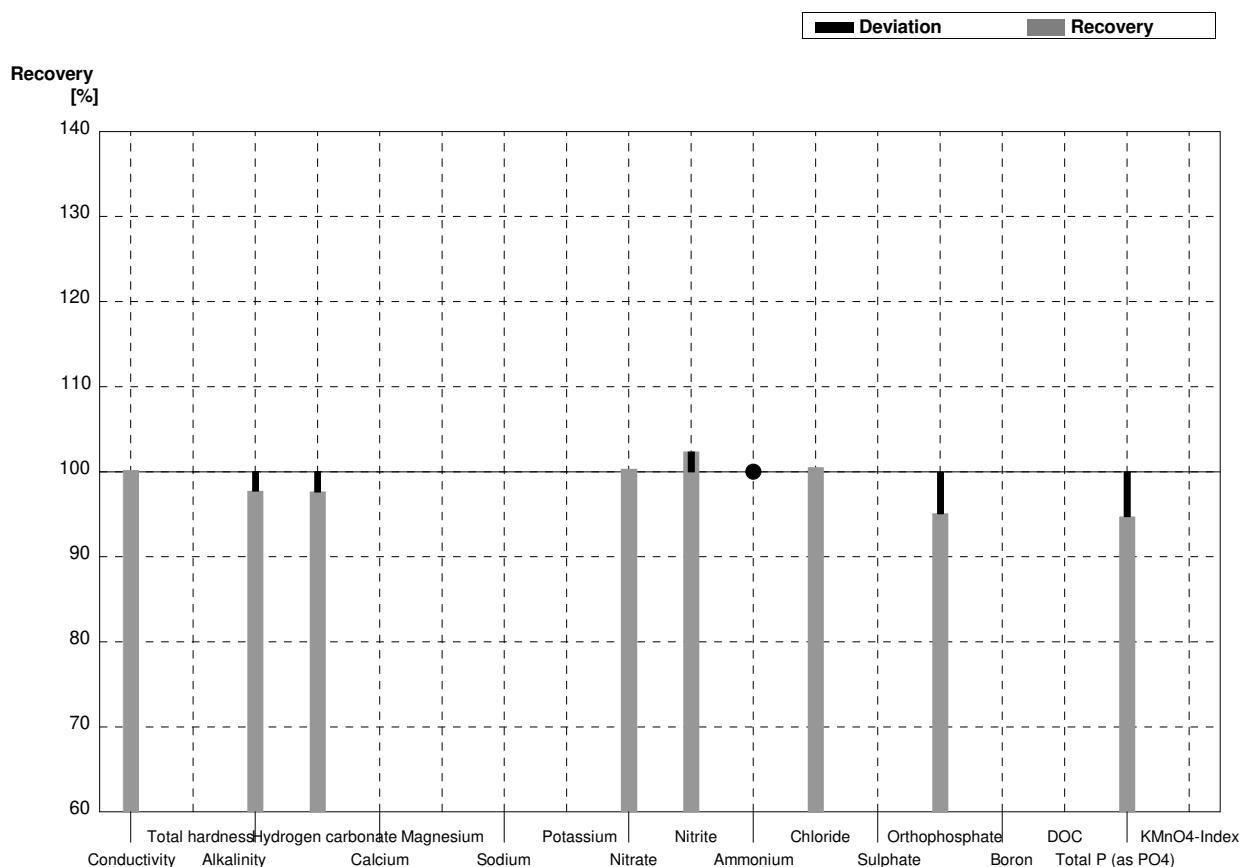
Sample N159B
Laboratory AE

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	609	10	$\mu\text{S}/\text{cm}$	135%
Total hardness	1,16	0,01	1,20	0,10	mmol/l	103%
Alkalinity	2,29	0,01	3,39	0,09	mmol/l	148%
Hydrogen carbonate	137	1	206	6	mg/l	150%
Calcium	31,3	0,4	32,3	1,9	mg/l	103%
Magnesium	9,18	0,12	9,46	0,6	mg/l	103%
Sodium	42,4	0,2	44,2	5	mg/l	104%
Potassium	10,4	0,1	10,8	0,4	mg/l	104%
Nitrate	47,4	1,1	45,9	2,1	mg/l	97%
Nitrite	0,072	0,002	0,070	0,010	mg/l	97%
Ammonium	0,0437	0,0046	0,0430	0,010	mg/l	98%
Chloride	17,1	0,3	17,2	1,2	mg/l	101%
Sulphate	43,1	0,4	42,2	2,88	mg/l	98%
Orthophosphate	<0,009				mg/l	
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05	4,17	0,87	mg/l	100%
Total P (as PO ₄)	<0,009				mg/l	
KMnO ₄ -Index	4,29	0,15			mg/l	



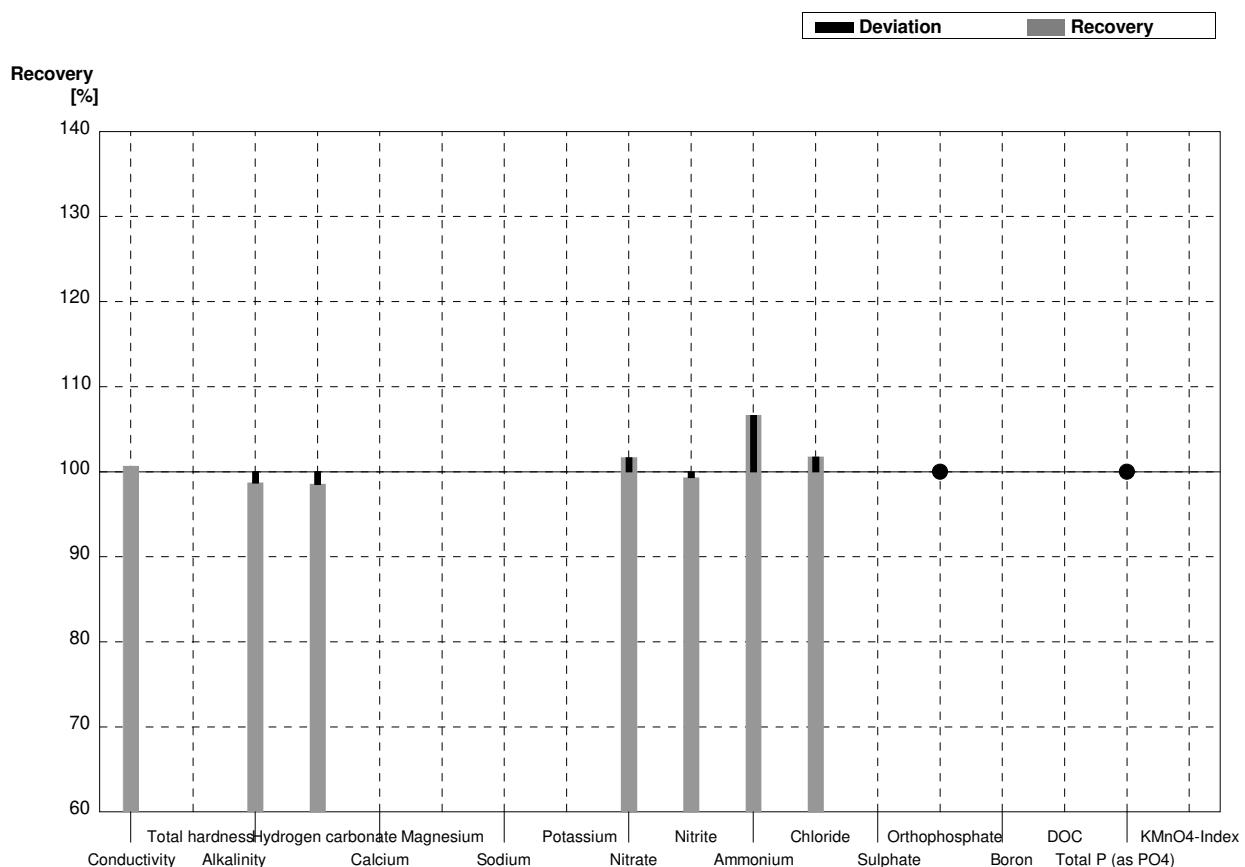
Sample N159A
Laboratory AF

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	611	4,33	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02			mmol/l	
Alkalinity	3,52	0,04	3,44	0,10	mmol/l	98%
Hydrogen carbonate	212	2	207	2,99	mg/l	98%
Calcium	72,7	0,9			mg/l	
Magnesium	12,5	0,1			mg/l	
Sodium	33,5	0,5			mg/l	
Potassium	4,51	0,05			mg/l	
Nitrate	31,8	0,5	31,9	2,19	mg/l	100%
Nitrite	0,0343	0,0008	0,0351	0,0035	mg/l	102%
Ammonium	<0,01		<0,005	0	mg/l	•
Chloride	38,8	0,7	39,0	0,40	mg/l	101%
Sulphate	52,0	0,5			mg/l	
Orthophosphate	0,0487	0,0024	0,0463	0,0054	mg/l	95%
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05			mg/l	
Total P (as PO ₄)	0,089	0,002	0,0843	0,0111	mg/l	95%
KMnO ₄ -Index	2,40	0,12			mg/l	



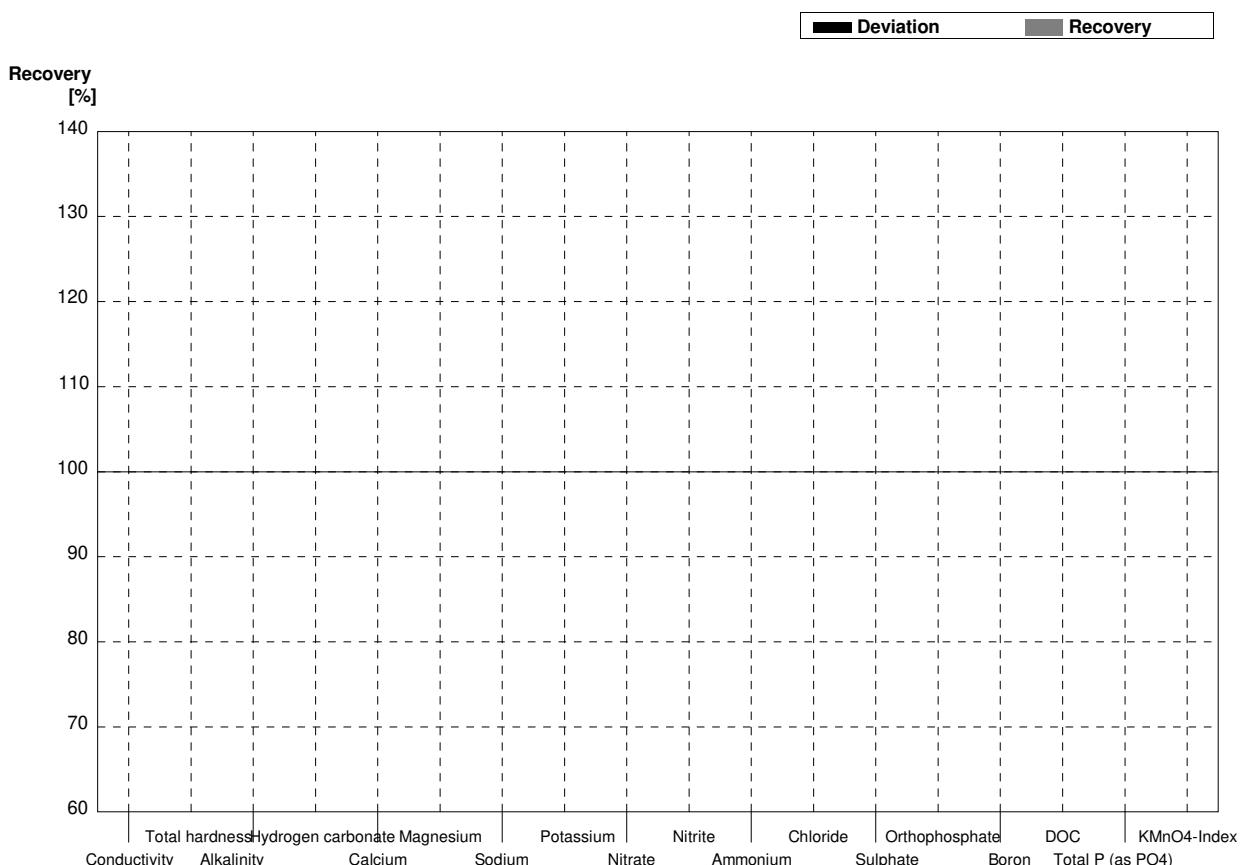
Sample N159B
Laboratory AF

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2	454	3,22	µS/cm	101%
Total hardness	1,16	0,01			mmol/l	
Alkalinity	2,29	0,01	2,26	0,06	mmol/l	99%
Hydrogen carbonate	137	1	135	1,95	mg/l	99%
Calcium	31,3	0,4			mg/l	
Magnesium	9,18	0,12			mg/l	
Sodium	42,4	0,2			mg/l	
Potassium	10,4	0,1			mg/l	
Nitrate	47,4	1,1	48,2	3,30	mg/l	102%
Nitrite	0,072	0,002	0,0715	0,0071	mg/l	99%
Ammonium	0,0437	0,0046	0,0466	0,0070	mg/l	107%
Chloride	17,1	0,3	17,4	0,18	mg/l	102%
Sulphate	43,1	0,4			mg/l	
Orthophosphate	<0,009		<0,006	0	mg/l	•
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05			mg/l	
Total P (as PO4)	<0,009		<0,006	0	mg/l	•
KMnO4-Index	4,29	0,15			mg/l	



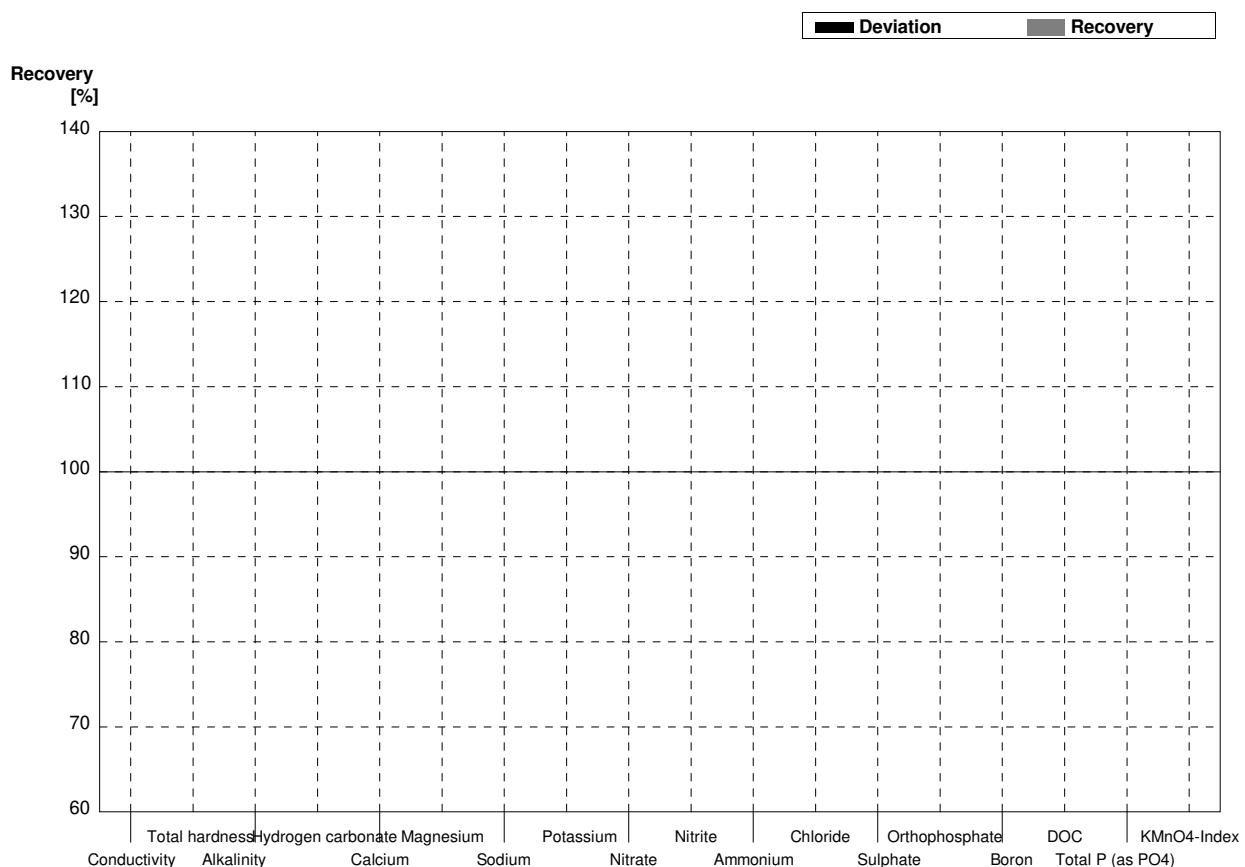
Sample N159A
Laboratory AG

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	610	2			µS/cm	
Total hardness	2,33	0,02			mmol/l	
Alkalinity	3,52	0,04			mmol/l	
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9			mg/l	
Magnesium	12,5	0,1			mg/l	
Sodium	33,5	0,5			mg/l	
Potassium	4,51	0,05			mg/l	
Nitrate	31,8	0,5			mg/l	
Nitrite	0,0343	0,0008			mg/l	
Ammonium	<0,01				mg/l	
Chloride	38,8	0,7			mg/l	
Sulphate	52,0	0,5			mg/l	
Orthophosphate	0,0487	0,0024			mg/l	
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05			mg/l	
Total P (as PO4)	0,089	0,002			mg/l	
KMnO4-Index	2,40	0,12			mg/l	



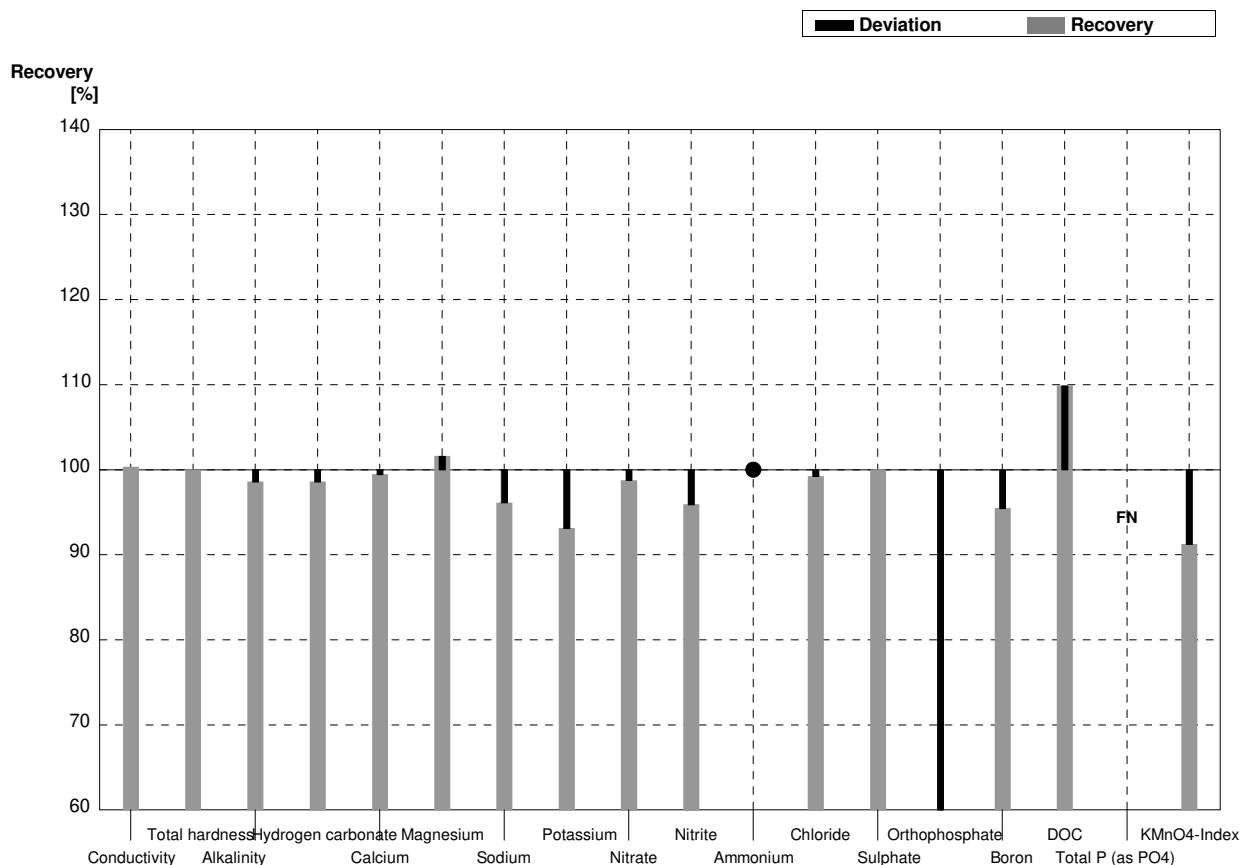
Sample N159B
Laboratory AG

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2			µS/cm	
Total hardness	1,16	0,01			mmol/l	
Alkalinity	2,29	0,01			mmol/l	
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4			mg/l	
Magnesium	9,18	0,12			mg/l	
Sodium	42,4	0,2			mg/l	
Potassium	10,4	0,1			mg/l	
Nitrate	47,4	1,1			mg/l	
Nitrite	0,072	0,002			mg/l	
Ammonium	0,0437	0,0046			mg/l	
Chloride	17,1	0,3			mg/l	
Sulphate	43,1	0,4			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05			mg/l	
Total P (as PO ₄)	<0,009				mg/l	
KMnO ₄ -Index	4,29	0,15			mg/l	



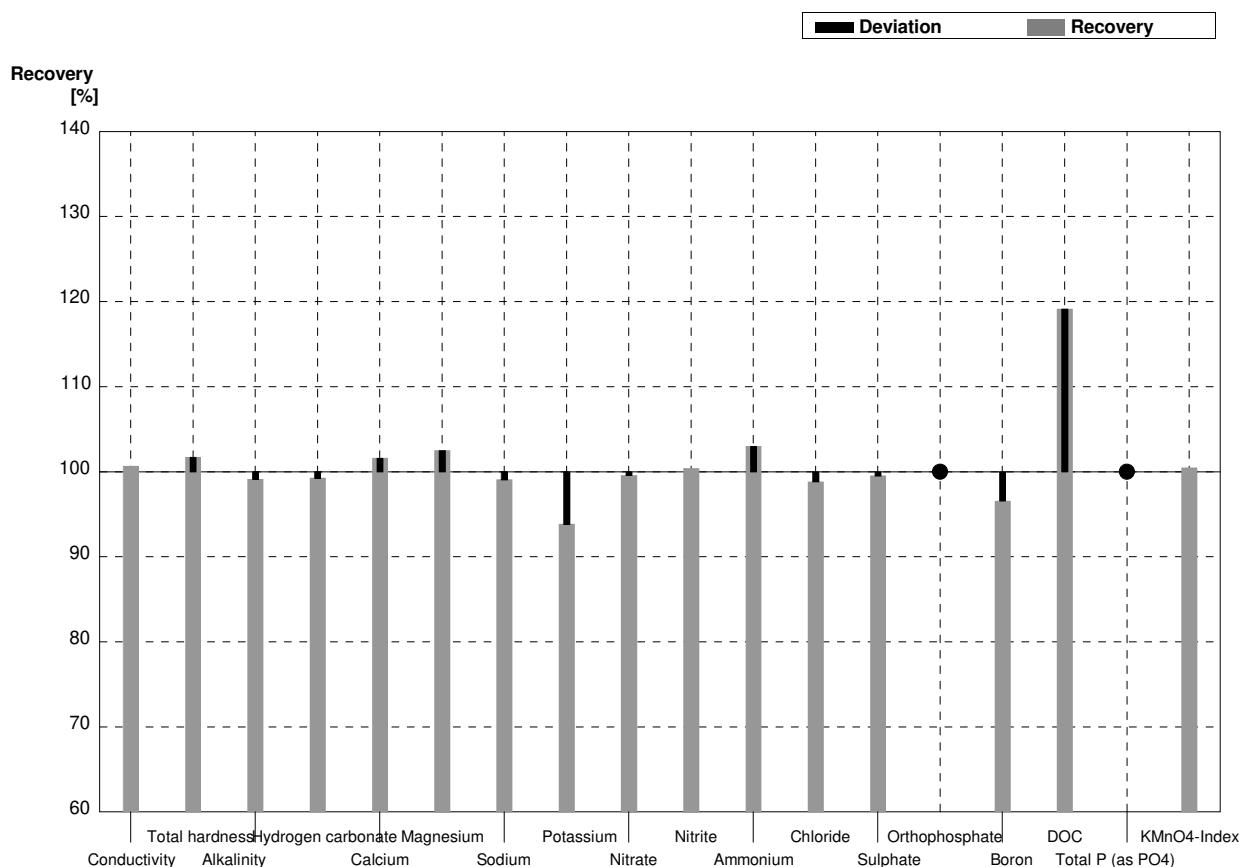
Sample N159A
Laboratory AH

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	612	30,6	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02	2,33	0,116	mmol/l	100%
Alkalinity	3,52	0,04	3,47	0,174	mmol/l	99%
Hydrogen carbonate	212	2	209	10,5	mg/l	99%
Calcium	72,7	0,9	72,3	3,61	mg/l	99%
Magnesium	12,5	0,1	12,7	0,637	mg/l	102%
Sodium	33,5	0,5	32,2	1,61	mg/l	96%
Potassium	4,51	0,05	4,20	0,210	mg/l	93%
Nitrate	31,8	0,5	31,4	0,628	mg/l	99%
Nitrite	0,0343	0,0008	0,0329	0,00329	mg/l	96%
Ammonium	<0,01		<0,026		mg/l	•
Chloride	38,8	0,7	38,5	1,15	mg/l	99%
Sulphate	52,0	0,5	52,0	1,56	mg/l	100%
Orthophosphate	0,0487	0,0024	0,0135	0,00135	mg/l	28%
Boron	0,066	0,001	0,0630	0,00630	mg/l	95%
DOC	6,16	0,05	6,77	0,677	mg/l	110%
Total P (as PO ₄)	0,089	0,002	<0,05		mg/l	FN
KMnO ₄ -Index	2,40	0,12	2,19	0,0657	mg/l	91%



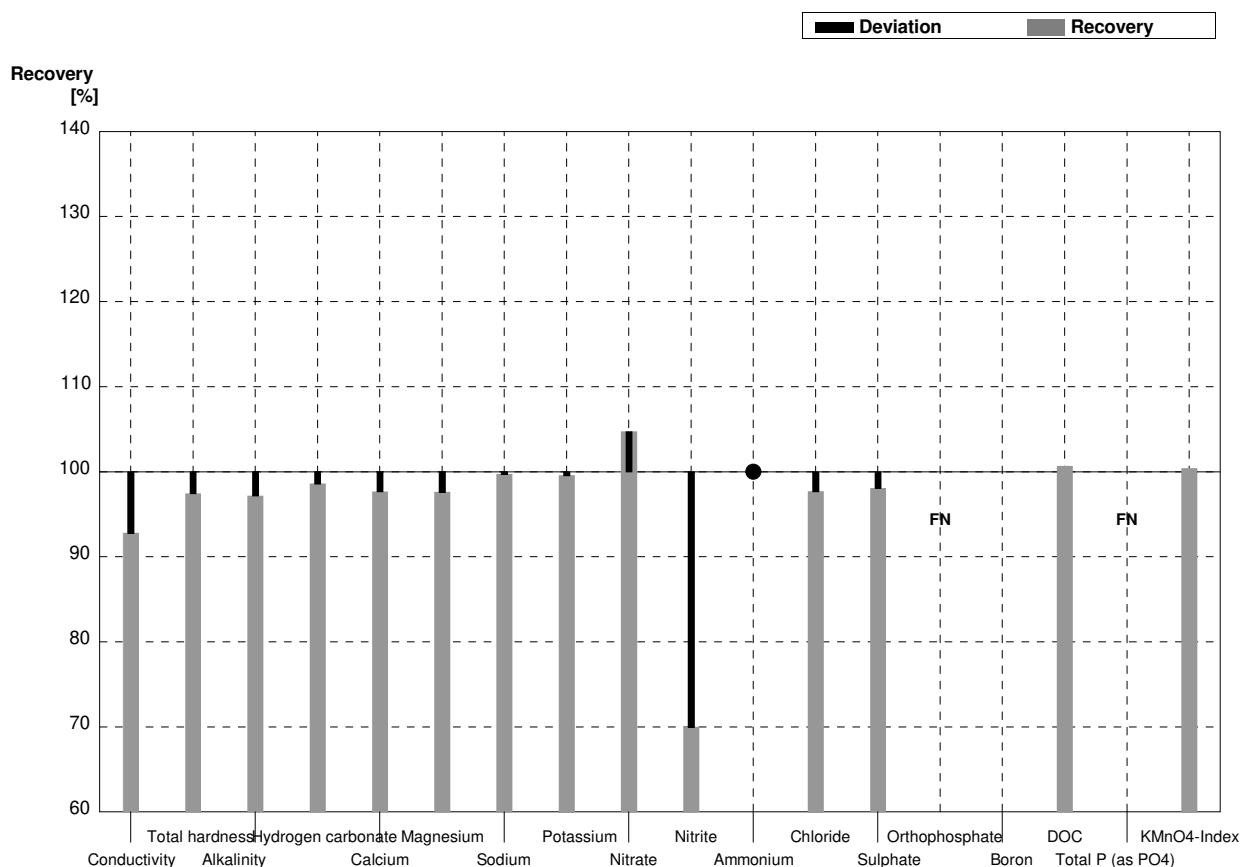
Sample N159B
Laboratory AH

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	454	22,7	$\mu\text{S}/\text{cm}$	101%
Total hardness	1,16	0,01	1,18	0,0590	mmol/l	102%
Alkalinity	2,29	0,01	2,27	0,114	mmol/l	99%
Hydrogen carbonate	137	1	136	6,80	mg/l	99%
Calcium	31,3	0,4	31,8	1,59	mg/l	102%
Magnesium	9,18	0,12	9,41	0,470	mg/l	103%
Sodium	42,4	0,2	42,0	2,10	mg/l	99%
Potassium	10,4	0,1	9,76	0,488	mg/l	94%
Nitrate	47,4	1,1	47,2	0,944	mg/l	100%
Nitrite	0,072	0,002	0,0723	0,00723	mg/l	100%
Ammonium	0,0437	0,0046	0,0450	0,00450	mg/l	103%
Chloride	17,1	0,3	16,9	0,507	mg/l	99%
Sulphate	43,1	0,4	42,9	1,29	mg/l	100%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,096	0,001	0,0927	0,00927	mg/l	97%
DOC	4,18	0,05	4,98	0,498	mg/l	119%
Total P (as PO ₄)	<0,009		<0,05		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,31	0,129	mg/l	100%



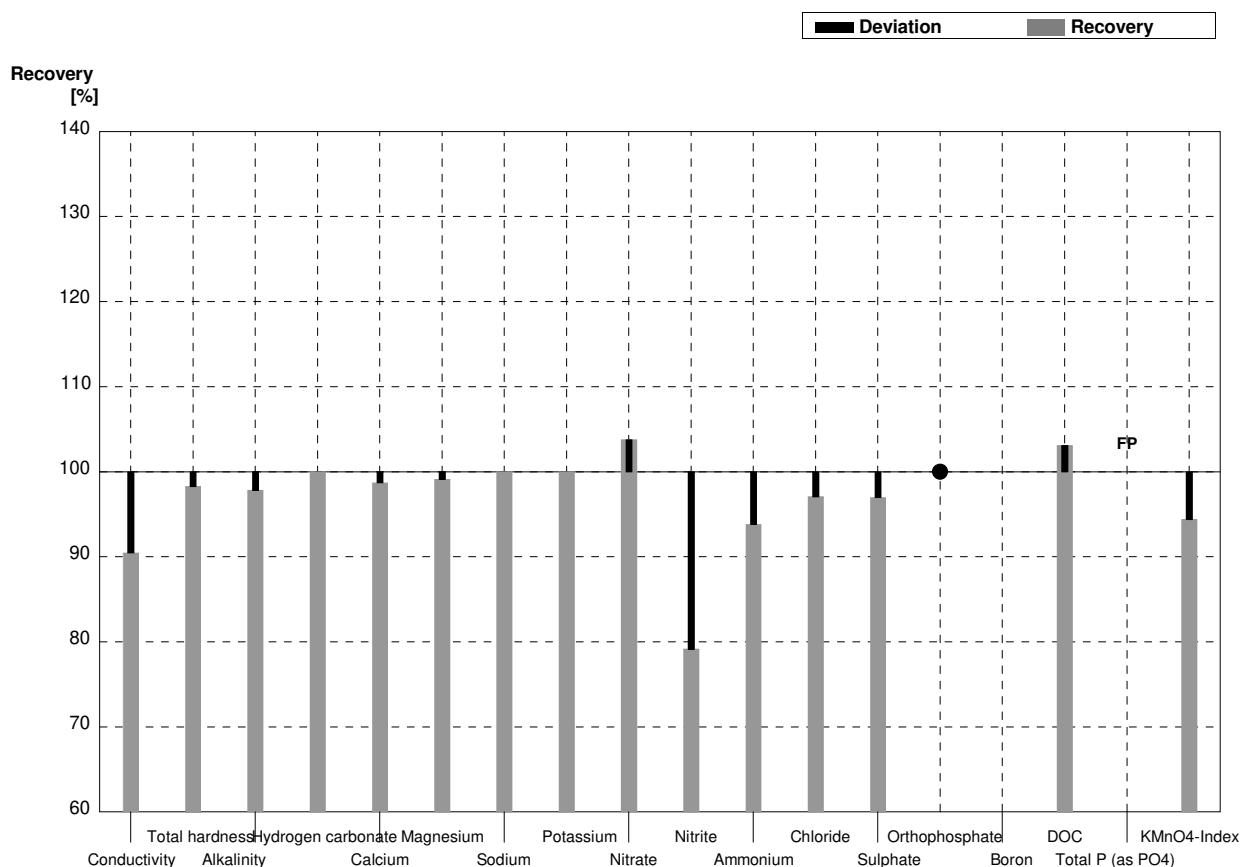
Sample N159A
Laboratory AI

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	566	12	$\mu\text{S}/\text{cm}$	93%
Total hardness	2,33	0,02	2,27	0,19	mmol/l	97%
Alkalinity	3,52	0,04	3,42	0,15	mmol/l	97%
Hydrogen carbonate	212	2	209	9,4	mg/l	99%
Calcium	72,7	0,9	71	3,7	mg/l	98%
Magnesium	12,5	0,1	12,2	0,77	mg/l	98%
Sodium	33,5	0,5	33,4	2,5	mg/l	100%
Potassium	4,51	0,05	4,49	0,16	mg/l	100%
Nitrate	31,8	0,5	33,3	1,6	mg/l	105%
Nitrite	0,0343	0,0008	0,0240	0,0035	mg/l	70%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	38,8	0,7	37,9	3,0	mg/l	98%
Sulphate	52,0	0,5	51	3,1	mg/l	98%
Orthophosphate	0,0487	0,0024	<0,01		mg/l	FN
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05	6,2	1,0	mg/l	101%
Total P (as PO ₄)	0,089	0,002	<0,01		mg/l	FN
KMnO ₄ -Index	2,40	0,12	2,41	0,15	mg/l	100%



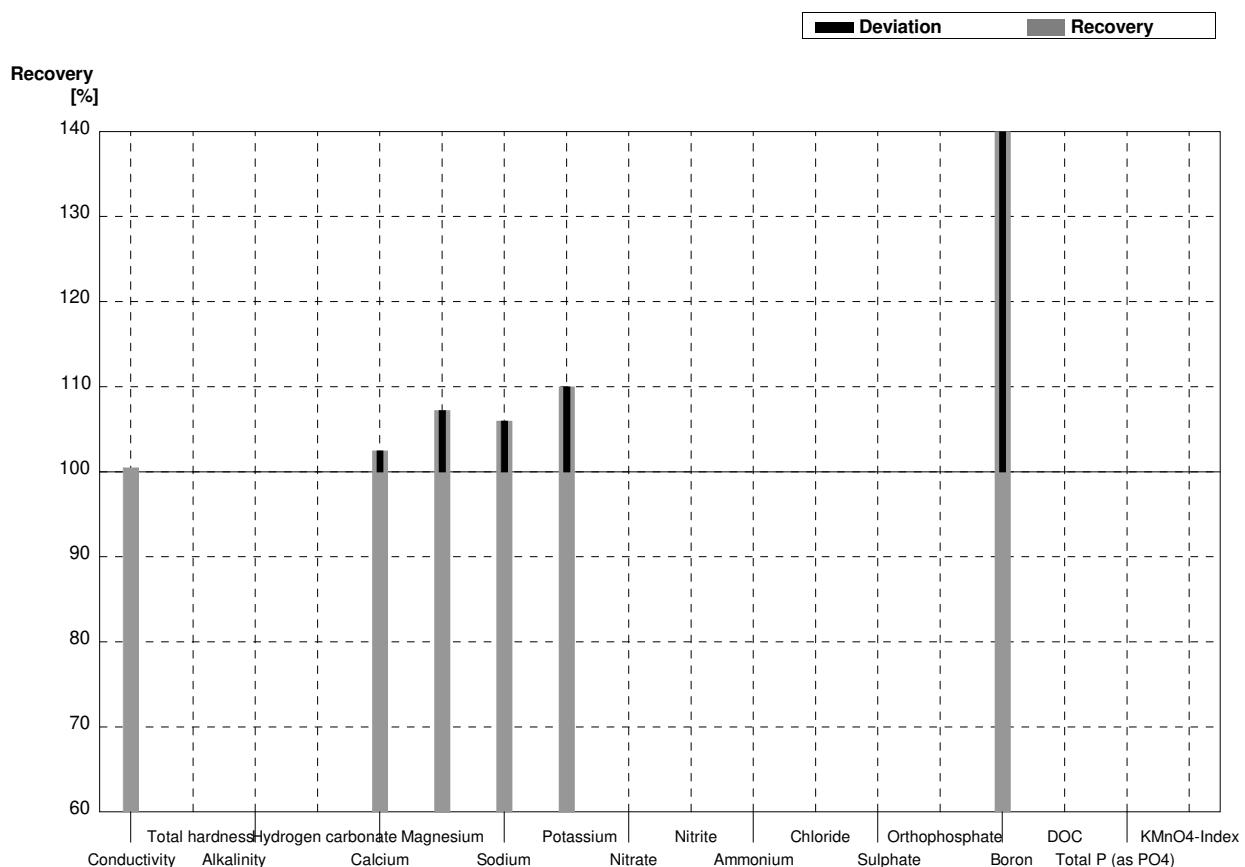
Sample N159B
Laboratory AI

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	408	8,8	$\mu\text{S}/\text{cm}$	90%
Total hardness	1,16	0,01	1,14	0,09	mmol/l	98%
Alkalinity	2,29	0,01	2,24	0,10	mmol/l	98%
Hydrogen carbonate	137	1	137	6,1	mg/l	100%
Calcium	31,3	0,4	30,9	1,6	mg/l	99%
Magnesium	9,18	0,12	9,1	0,57	mg/l	99%
Sodium	42,4	0,2	42,4	3,2	mg/l	100%
Potassium	10,4	0,1	10,4	0,36	mg/l	100%
Nitrate	47,4	1,1	49,2	2,4	mg/l	104%
Nitrite	0,072	0,002	0,057	0,0084	mg/l	79%
Ammonium	0,0437	0,0046	0,041	0,0030	mg/l	94%
Chloride	17,1	0,3	16,6	1,3	mg/l	97%
Sulphate	43,1	0,4	41,8	2,5	mg/l	97%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05	4,31	0,72	mg/l	103%
Total P (as PO ₄)	<0,009		0,0120	0,0016	mg/l	FP
KMnO ₄ -Index	4,29	0,15	4,05	0,25	mg/l	94%



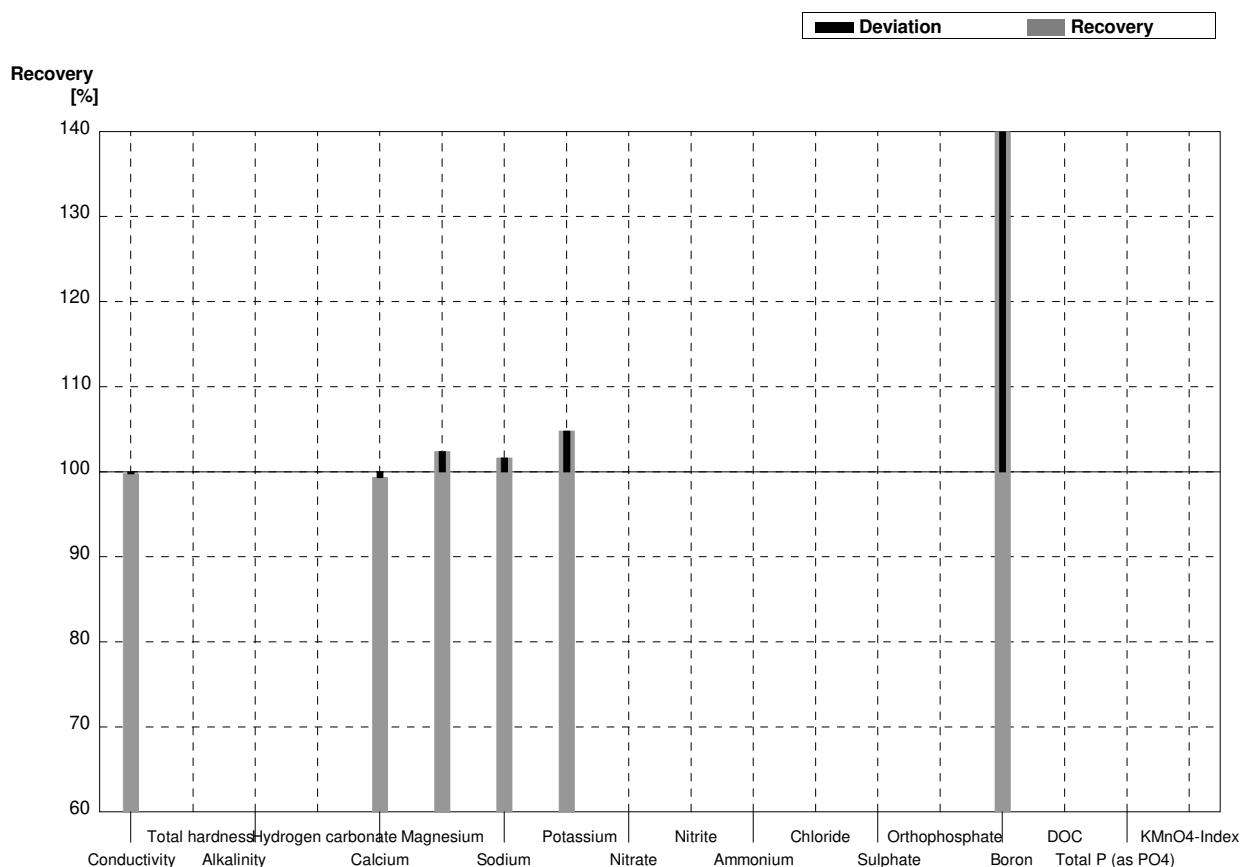
Sample N159A
Laboratory AJ

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	613	130	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02			mmol/l	
Alkalinity	3,52	0,04			mmol/l	
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9	74,5	16,0	mg/l	102%
Magnesium	12,5	0,1	13,4	2,7	mg/l	107%
Sodium	33,5	0,5	35,5	7,5	mg/l	106%
Potassium	4,51	0,05	4,96	1,0	mg/l	110%
Nitrate	31,8	0,5			mg/l	
Nitrite	0,0343	0,0008			mg/l	
Ammonium	<0,01				mg/l	
Chloride	38,8	0,7			mg/l	
Sulphate	52,0	0,5			mg/l	
Orthophosphate	0,0487	0,0024			mg/l	
Boron	0,066	0,001	56,5	12,0	mg/l	85606%
DOC	6,16	0,05			mg/l	
Total P (as PO ₄)	0,089	0,002			mg/l	
KMnO ₄ -Index	2,40	0,12			mg/l	



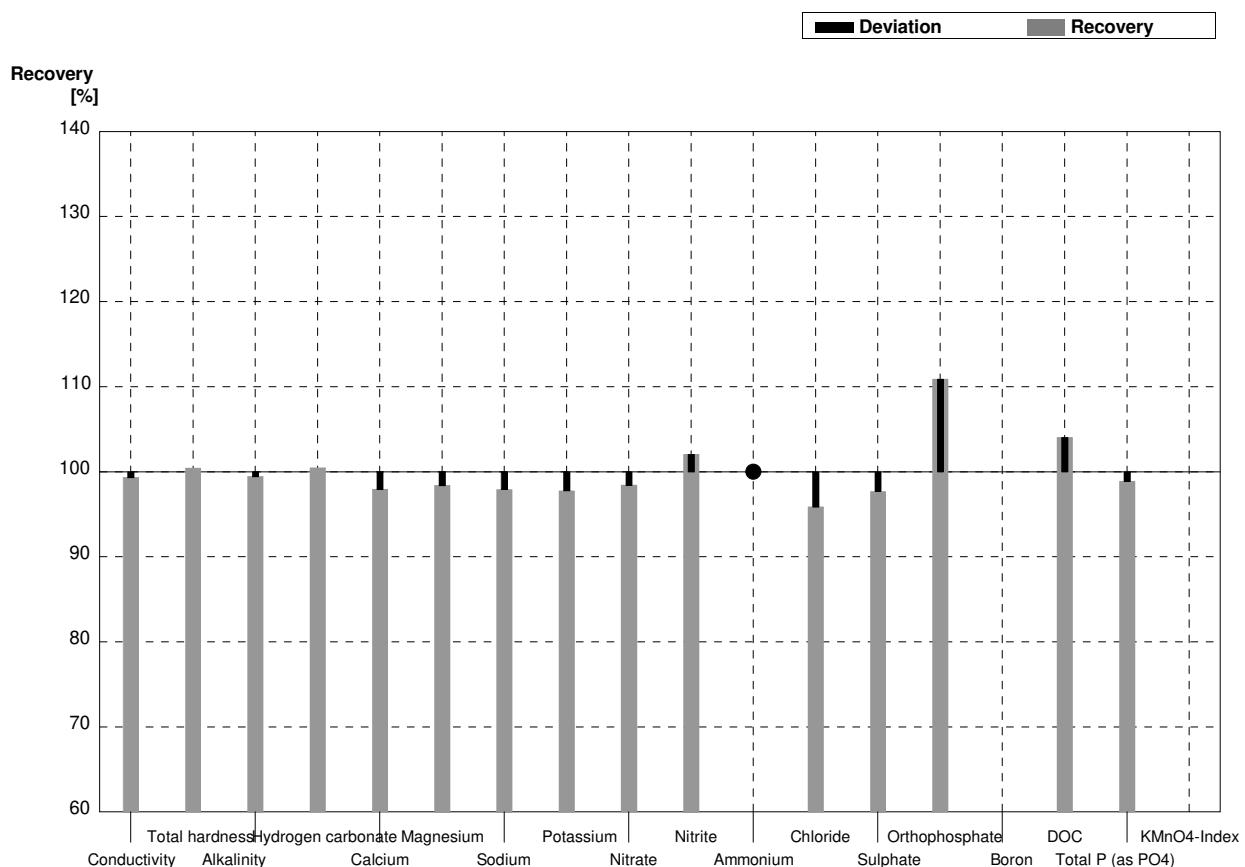
Sample N159B
Laboratory AJ

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	450	90	$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01			mmol/l	
Alkalinity	2,29	0,01			mmol/l	
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4	31,1	6,5	mg/l	99%
Magnesium	9,18	0,12	9,4	2,0	mg/l	102%
Sodium	42,4	0,2	43,1	8,5	mg/l	102%
Potassium	10,4	0,1	10,9	2,2	mg/l	105%
Nitrate	47,4	1,1			mg/l	
Nitrite	0,072	0,002			mg/l	
Ammonium	0,0437	0,0046			mg/l	
Chloride	17,1	0,3			mg/l	
Sulphate	43,1	0,4			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,096	0,001	83,7	17,0	mg/l	87188%
DOC	4,18	0,05			mg/l	
Total P (as PO ₄)	<0,009				mg/l	
KMnO ₄ -Index	4,29	0,15			mg/l	



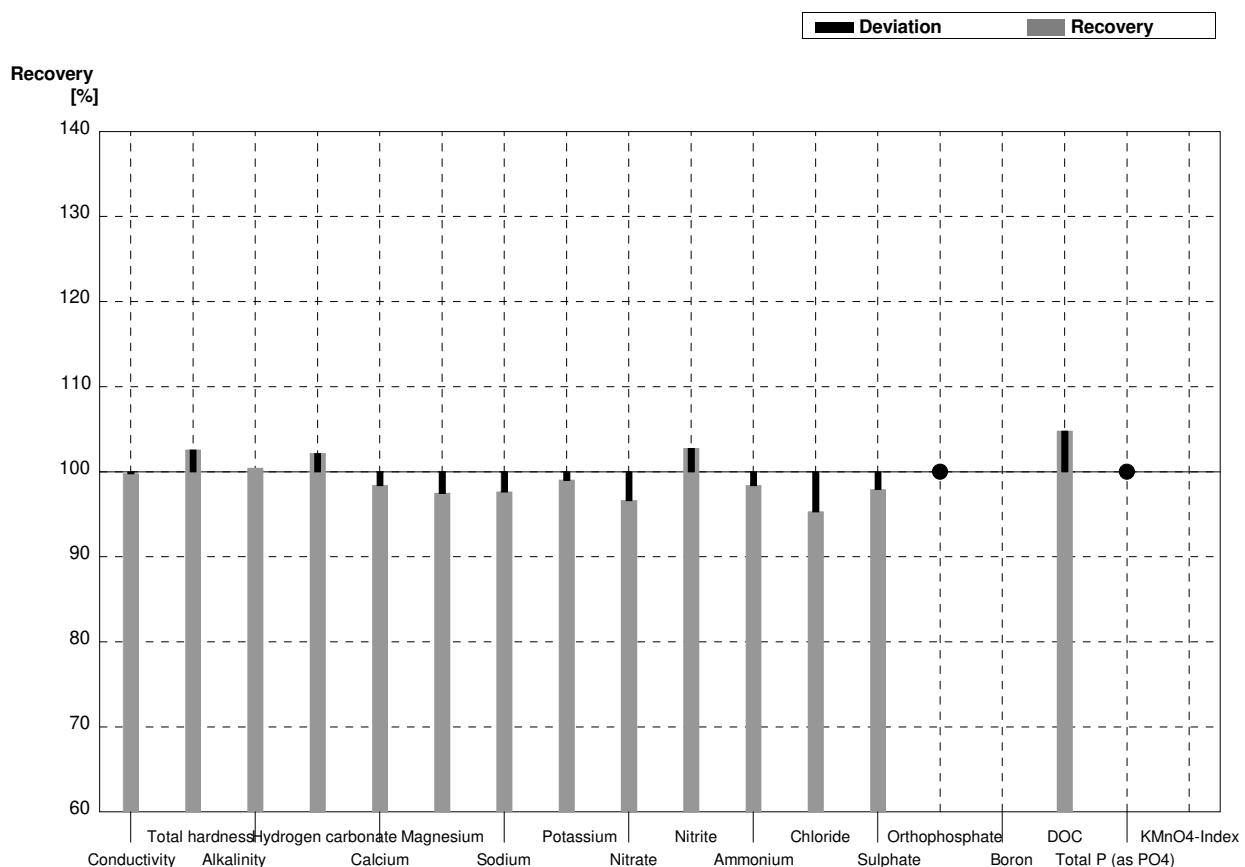
Sample N159A
Laboratory AK

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	606	2	$\mu\text{S}/\text{cm}$	99%
Total hardness	2,33	0,02	2,34	0,1	mmol/l	100%
Alkalinity	3,52	0,04	3,50	0,1	mmol/l	99%
Hydrogen carbonate	212	2	213	6	mg/l	100%
Calcium	72,7	0,9	71,2	1,0	mg/l	98%
Magnesium	12,5	0,1	12,3	0,2	mg/l	98%
Sodium	33,5	0,5	32,8	0,2	mg/l	98%
Potassium	4,51	0,05	4,41	0,1	mg/l	98%
Nitrate	31,8	0,5	31,3	0,4	mg/l	98%
Nitrite	0,0343	0,0008	0,035	0,002	mg/l	102%
Ammonium	<0,01		<0,006	0,003	mg/l	•
Chloride	38,8	0,7	37,2	0,2	mg/l	96%
Sulphate	52,0	0,5	50,8	2	mg/l	98%
Orthophosphate	0,0487	0,0024	0,054	0,002	mg/l	111%
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05	6,41	0,2	mg/l	104%
Total P (as PO ₄)	0,089	0,002	0,088	0,005	mg/l	99%
KMnO ₄ -Index	2,40	0,12			mg/l	



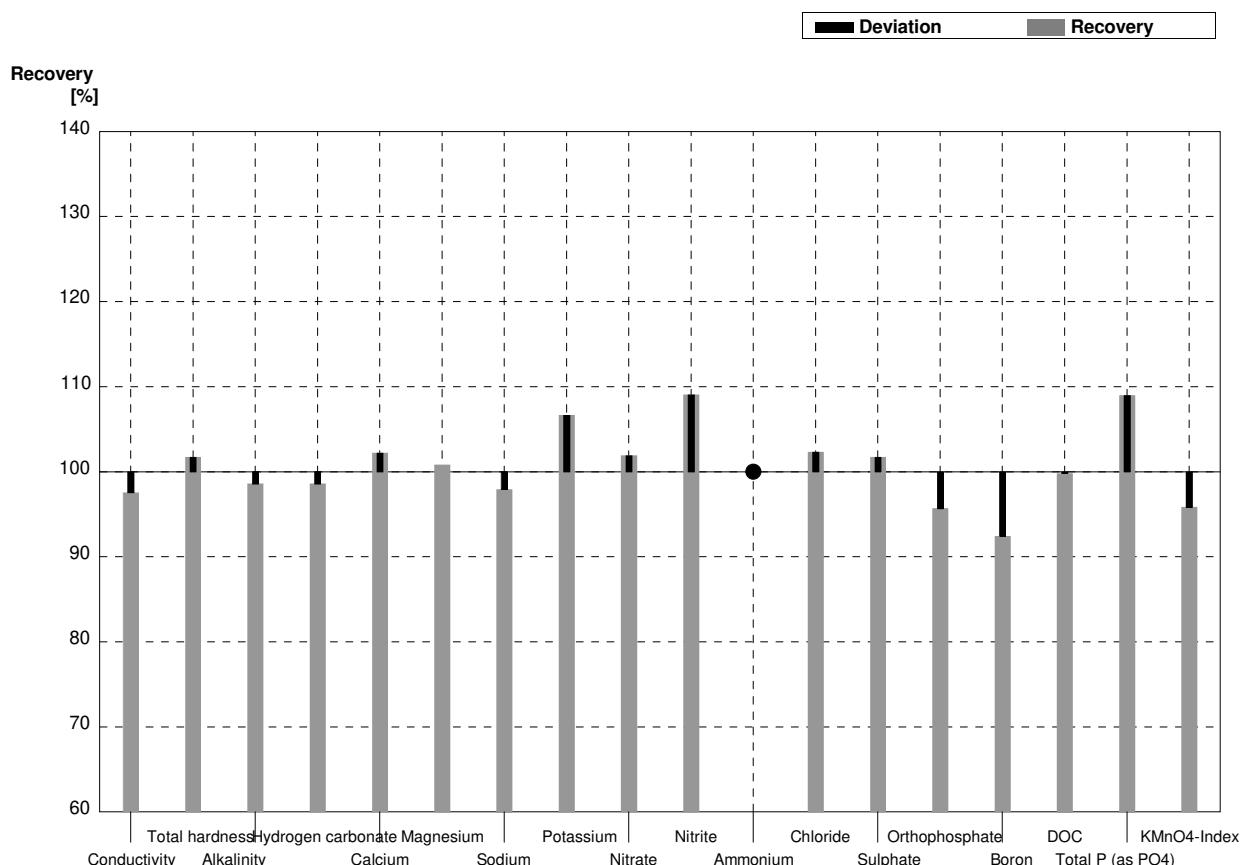
Sample N159B
Laboratory AK

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	450	2	$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01	1,19	0,1	mmol/l	103%
Alkalinity	2,29	0,01	2,30	0,1	mmol/l	100%
Hydrogen carbonate	137	1	140	6	mg/l	102%
Calcium	31,3	0,4	30,8	1,0	mg/l	98%
Magnesium	9,18	0,12	8,95	0,2	mg/l	97%
Sodium	42,4	0,2	41,4	0,2	mg/l	98%
Potassium	10,4	0,1	10,3	0,1	mg/l	99%
Nitrate	47,4	1,1	45,8	0,4	mg/l	97%
Nitrite	0,072	0,002	0,074	0,002	mg/l	103%
Ammonium	0,0437	0,0046	0,043	0,003	mg/l	98%
Chloride	17,1	0,3	16,3	0,2	mg/l	95%
Sulphate	43,1	0,4	42,2	2	mg/l	98%
Orthophosphate	<0,009		0,007	0,002	mg/l	•
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05	4,38	0,2	mg/l	105%
Total P (as PO ₄)	<0,009		<0,009	0,005	mg/l	•
KMnO ₄ -Index	4,29	0,15			mg/l	



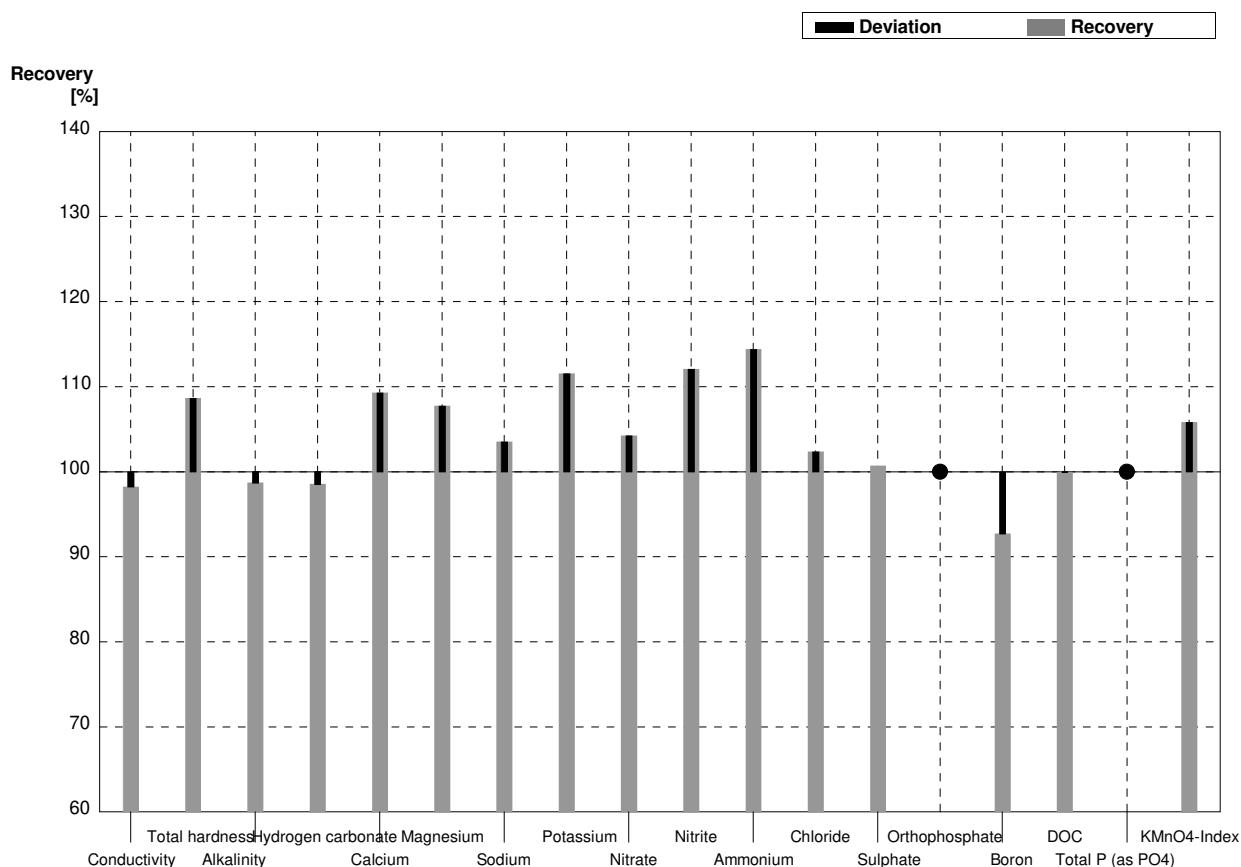
Sample N159A
Laboratory AL

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	595	0,3	$\mu\text{S}/\text{cm}$	98%
Total hardness	2,33	0,02	2,37		mmol/l	102%
Alkalinity	3,52	0,04	3,47	0,02	mmol/l	99%
Hydrogen carbonate	212	2	209	1,2	mg/l	99%
Calcium	72,7	0,9	74,3	3,1	mg/l	102%
Magnesium	12,5	0,1	12,6	0,11	mg/l	101%
Sodium	33,5	0,5	32,8	0,3	mg/l	98%
Potassium	4,51	0,05	4,81	0,05	mg/l	107%
Nitrate	31,8	0,5	32,4	0,7	mg/l	102%
Nitrite	0,0343	0,0008	0,0374	0,002	mg/l	109%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	38,8	0,7	39,7	0,5	mg/l	102%
Sulphate	52,0	0,5	52,9	3,1	mg/l	102%
Orthophosphate	0,0487	0,0024	0,0466	0,003	mg/l	96%
Boron	0,066	0,001	0,061	0,002	mg/l	92%
DOC	6,16	0,05	6,148	0,03	mg/l	100%
Total P (as PO ₄)	0,089	0,002	0,097	0,002	mg/l	109%
KMnO ₄ -Index	2,40	0,12	2,30	0,1	mg/l	96%



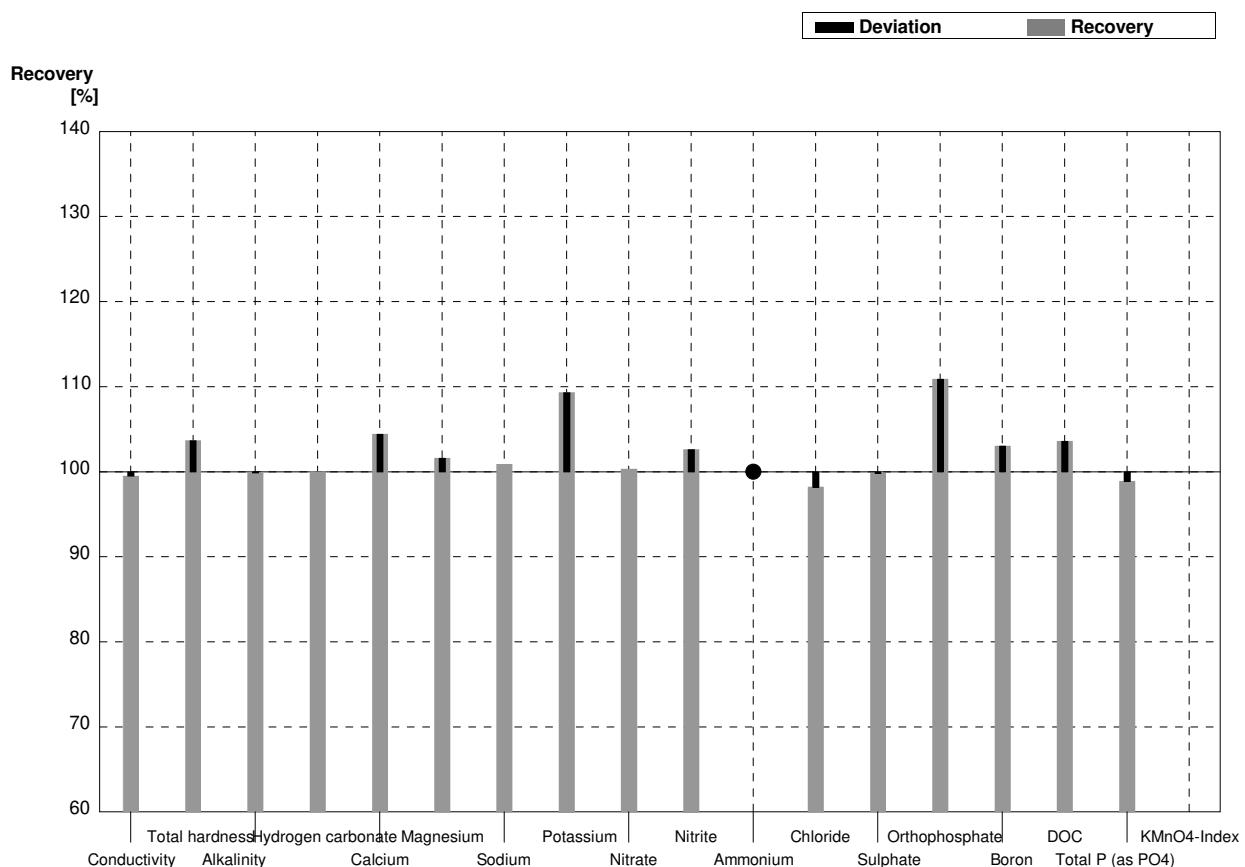
Sample N159B
Laboratory AL

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	443	0,3	$\mu\text{S}/\text{cm}$	98%
Total hardness	1,16	0,01	1,26		mmol/l	109%
Alkalinity	2,29	0,01	2,26	0,02	mmol/l	99%
Hydrogen carbonate	137	1	135		mg/l	99%
Calcium	31,3	0,4	34,2	0,3	mg/l	109%
Magnesium	9,18	0,12	9,89	0,11	mg/l	108%
Sodium	42,4	0,2	43,9	0,4	mg/l	104%
Potassium	10,4	0,1	11,6	0,34	mg/l	112%
Nitrate	47,4	1,1	49,4	0,8	mg/l	104%
Nitrite	0,072	0,002	0,0807	0,003	mg/l	112%
Ammonium	0,0437	0,0046	0,050	0,003	mg/l	114%
Chloride	17,1	0,3	17,5	0,5	mg/l	102%
Sulphate	43,1	0,4	43,4	1,4	mg/l	101%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,096	0,001	0,089	0,002	mg/l	93%
DOC	4,18	0,05	4,179	0,02	mg/l	100%
Total P (as PO ₄)	<0,009		<0,03		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,54	0,7	mg/l	106%



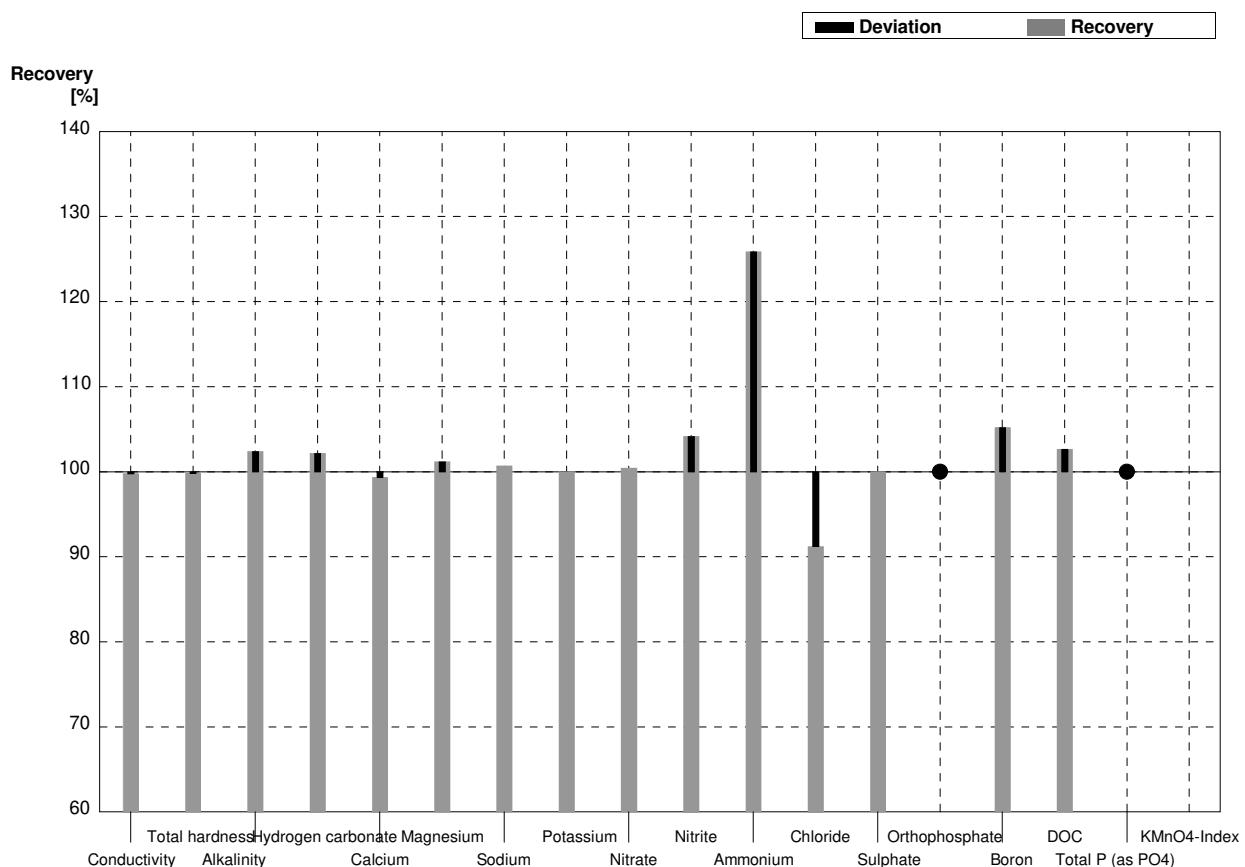
Sample N159A
Laboratory AM

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	607	16,4	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02	2,416		mmol/l	104%
Alkalinity	3,52	0,04	3,517	0,236	mmol/l	100%
Hydrogen carbonate	212	2	212		mg/l	100%
Calcium	72,7	0,9	75,9	5,24	mg/l	104%
Magnesium	12,5	0,1	12,7	1,66	mg/l	102%
Sodium	33,5	0,5	33,8	3,21	mg/l	101%
Potassium	4,51	0,05	4,93	0,50	mg/l	109%
Nitrate	31,8	0,5	31,9	3,32	mg/l	100%
Nitrite	0,0343	0,0008	0,0352	0,0087	mg/l	103%
Ammonium	<0,01		<0,05		mg/l	•
Chloride	38,8	0,7	38,1	5,33	mg/l	98%
Sulphate	52,0	0,5	51,9	4,93	mg/l	100%
Orthophosphate	0,0487	0,0024	0,054	0,015	mg/l	111%
Boron	0,066	0,001	0,068	0,007	mg/l	103%
DOC	6,16	0,05	6,38	1,18	mg/l	104%
Total P (as PO ₄)	0,089	0,002	0,088	0,015	mg/l	99%
KMnO ₄ -Index	2,40	0,12			mg/l	



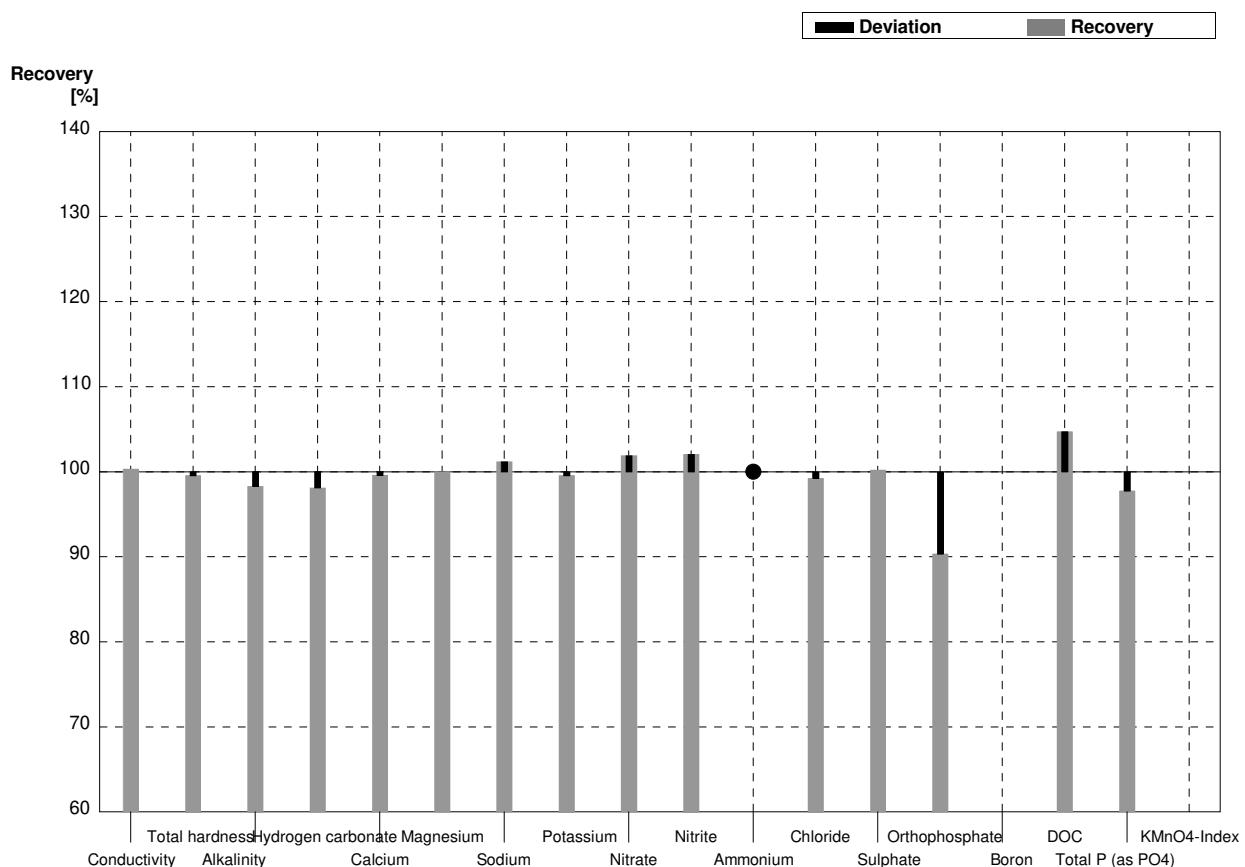
Sample N159B
Laboratory AM

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	450	12,2	$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01	1,158		mmol/l	100%
Alkalinity	2,29	0,01	2,345	0,157	mmol/l	102%
Hydrogen carbonate	137	1	140		mg/l	102%
Calcium	31,3	0,4	31,1	2,15	mg/l	99%
Magnesium	9,18	0,12	9,29	1,22	mg/l	101%
Sodium	42,4	0,2	42,7	4,06	mg/l	101%
Potassium	10,4	0,1	10,4	1,06	mg/l	100%
Nitrate	47,4	1,1	47,6	4,95	mg/l	100%
Nitrite	0,072	0,002	0,0750	0,0185	mg/l	104%
Ammonium	0,0437	0,0046	0,055	0,023	mg/l	126%
Chloride	17,1	0,3	15,6	2,18	mg/l	91%
Sulphate	43,1	0,4	43,1	4,09	mg/l	100%
Orthophosphate	<0,009		<0,010		mg/l	•
Boron	0,096	0,001	0,101	0,011	mg/l	105%
DOC	4,18	0,05	4,29	0,79	mg/l	103%
Total P (as PO ₄)	<0,009		<0,030		mg/l	•
KMnO ₄ -Index	4,29	0,15			mg/l	



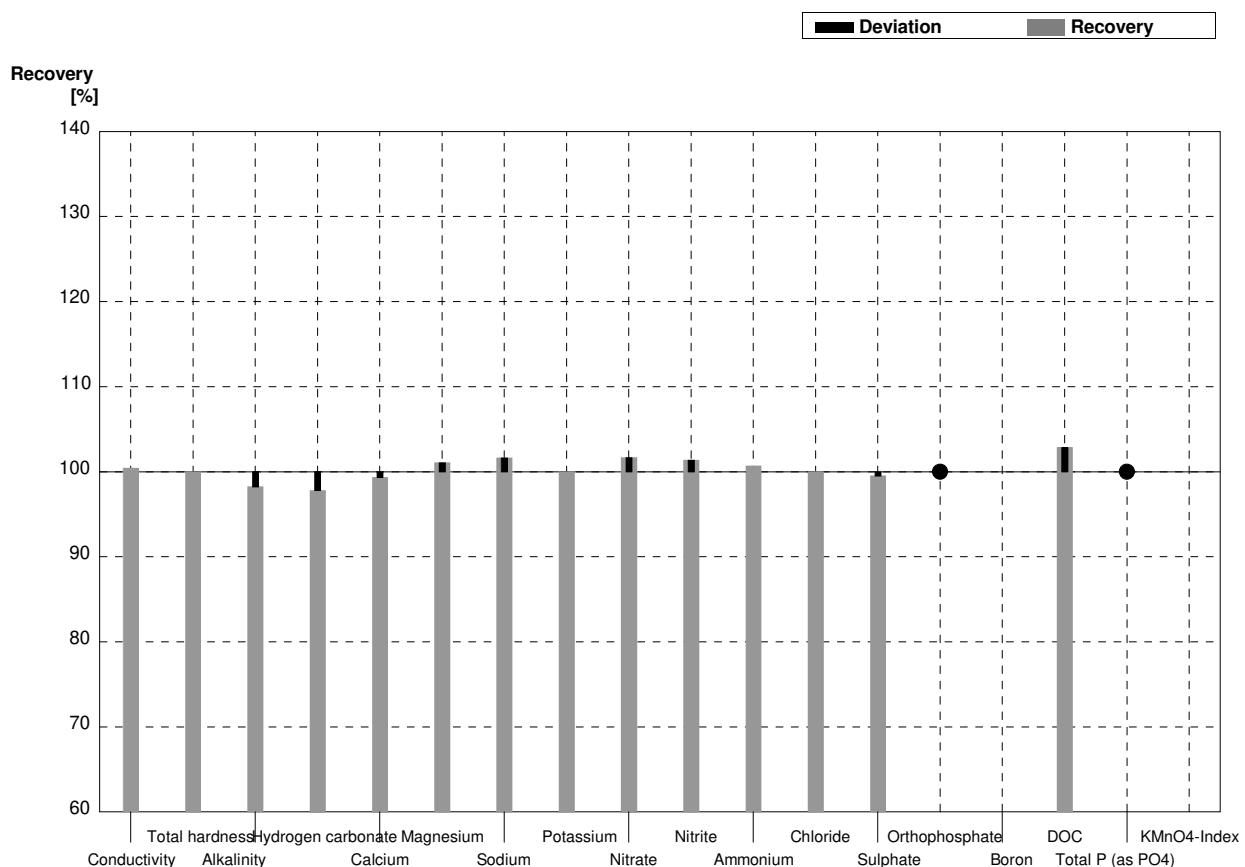
Sample N159A
Laboratory AN

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	612	25	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,33	0,02	2,32	0,1	mmol/l	100%
Alkalinity	3,52	0,04	3,46	0,2	mmol/l	98%
Hydrogen carbonate	212	2	208	9	mg/l	98%
Calcium	72,7	0,9	72,4	6	mg/l	100%
Magnesium	12,5	0,1	12,5	1,5	mg/l	100%
Sodium	33,5	0,5	33,9	6	mg/l	101%
Potassium	4,51	0,05	4,49	0,6	mg/l	100%
Nitrate	31,8	0,5	32,4	3	mg/l	102%
Nitrite	0,0343	0,0008	0,0350	0,003	mg/l	102%
Ammonium	<0,01		<0,013		mg/l	•
Chloride	38,8	0,7	38,5	3	mg/l	99%
Sulphate	52,0	0,5	52,1	4	mg/l	100%
Orthophosphate	0,0487	0,0024	0,0440	0,004	mg/l	90%
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05	6,45	1	mg/l	105%
Total P (as PO ₄)	0,089	0,002	0,087	0,009	mg/l	98%
KMnO ₄ -Index	2,40	0,12			mg/l	



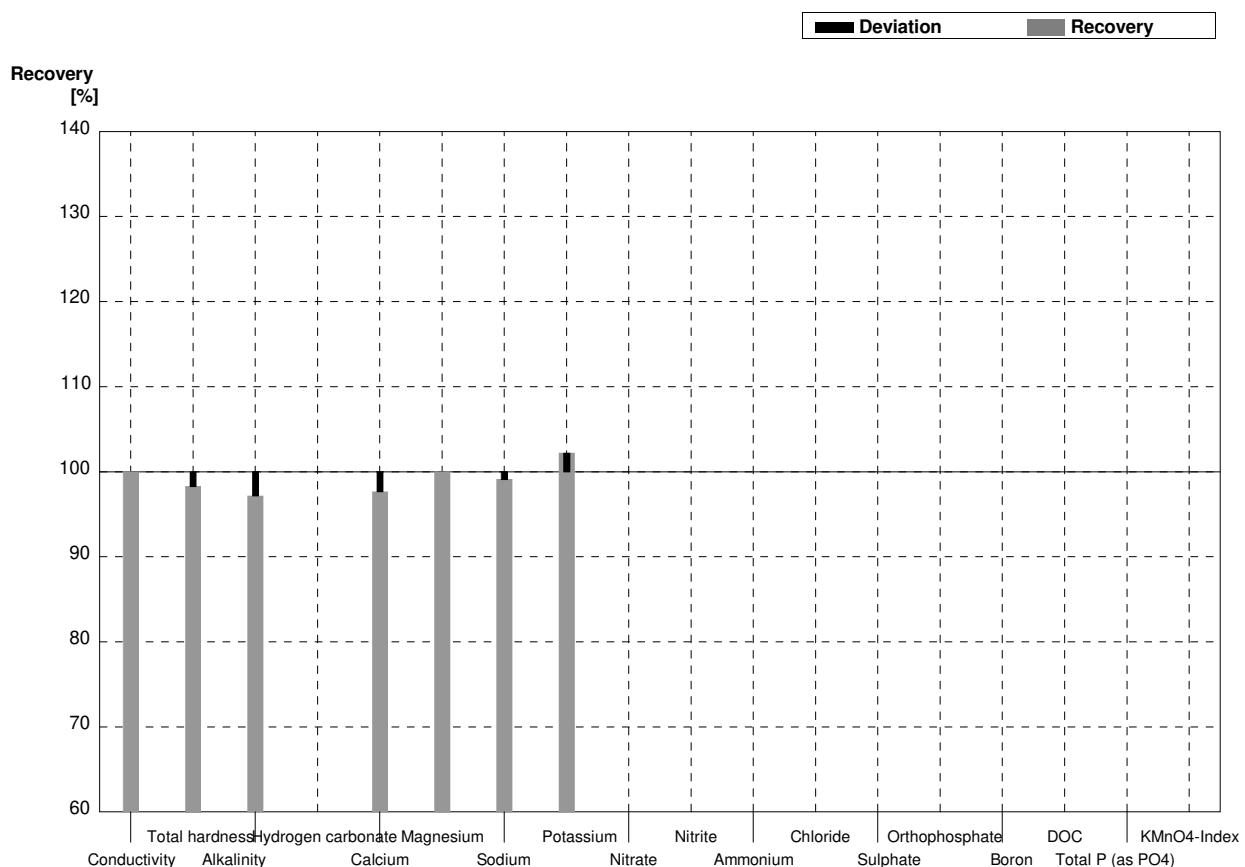
Sample N159B
Laboratory AN

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2	453	19	µS/cm	100%
Total hardness	1,16	0,01	1,16	0,1	mmol/l	100%
Alkalinity	2,29	0,01	2,25	0,1	mmol/l	98%
Hydrogen carbonate	137	1	134	6	mg/l	98%
Calcium	31,3	0,4	31,1	3	mg/l	99%
Magnesium	9,18	0,12	9,28	1,2	mg/l	101%
Sodium	42,4	0,2	43,1	7	mg/l	102%
Potassium	10,4	0,1	10,4	1,4	mg/l	100%
Nitrate	47,4	1,1	48,2	4	mg/l	102%
Nitrite	0,072	0,002	0,073	0,006	mg/l	101%
Ammonium	0,0437	0,0046	0,0440	0,007	mg/l	101%
Chloride	17,1	0,3	17,1	1,1	mg/l	100%
Sulphate	43,1	0,4	42,9	4	mg/l	100%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05	4,30	0,7	mg/l	103%
Total P (as PO4)	<0,009		<0,013		mg/l	•
KMnO4-Index	4,29	0,15			mg/l	



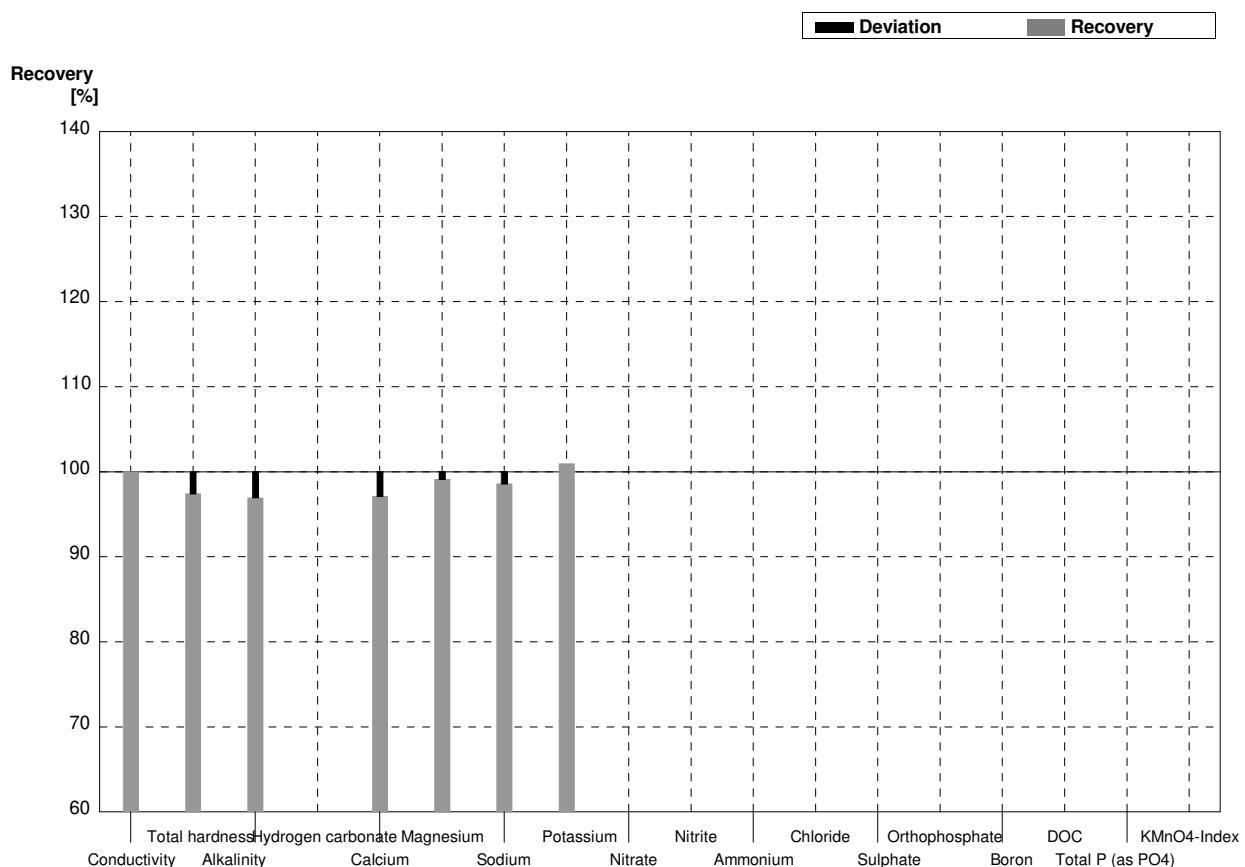
Sample N159A
Laboratory AO

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	610	2	610	10	µS/cm	100%
Total hardness	2,33	0,02	2,29	0,2	mmol/l	98%
Alkalinity	3,52	0,04	3,42	0,3	mmol/l	97%
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9	71	5,7	mg/l	98%
Magnesium	12,5	0,1	12,5	1	mg/l	100%
Sodium	33,5	0,5	33,2	2,7	mg/l	99%
Potassium	4,51	0,05	4,61	0,5	mg/l	102%
Nitrate	31,8	0,5			mg/l	
Nitrite	0,0343	0,0008			mg/l	
Ammonium	<0,01				mg/l	
Chloride	38,8	0,7			mg/l	
Sulphate	52,0	0,5			mg/l	
Orthophosphate	0,0487	0,0024			mg/l	
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05			mg/l	
Total P (as PO ₄)	0,089	0,002			mg/l	
KMnO ₄ -Index	2,40	0,12			mg/l	



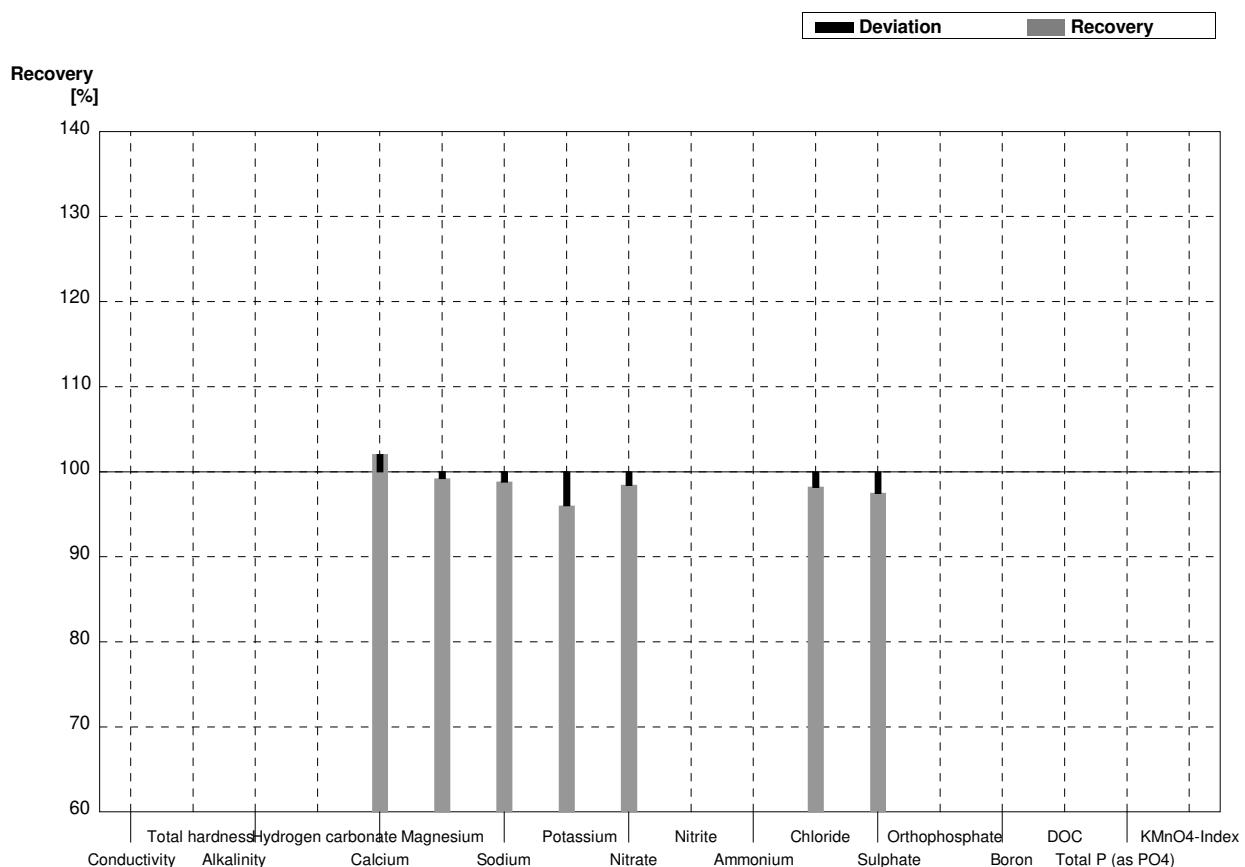
Sample N159B
Laboratory AO

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	451	10	$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01	1,13	0,1	mmol/l	97%
Alkalinity	2,29	0,01	2,22	0,2	mmol/l	97%
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4	30,4	2,4	mg/l	97%
Magnesium	9,18	0,12	9,1	0,7	mg/l	99%
Sodium	42,4	0,2	41,8	3,3	mg/l	99%
Potassium	10,4	0,1	10,5	1,1	mg/l	101%
Nitrate	47,4	1,1			mg/l	
Nitrite	0,072	0,002			mg/l	
Ammonium	0,0437	0,0046			mg/l	
Chloride	17,1	0,3			mg/l	
Sulphate	43,1	0,4			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05			mg/l	
Total P (as PO ₄)	<0,009				mg/l	
KMnO ₄ -Index	4,29	0,15			mg/l	



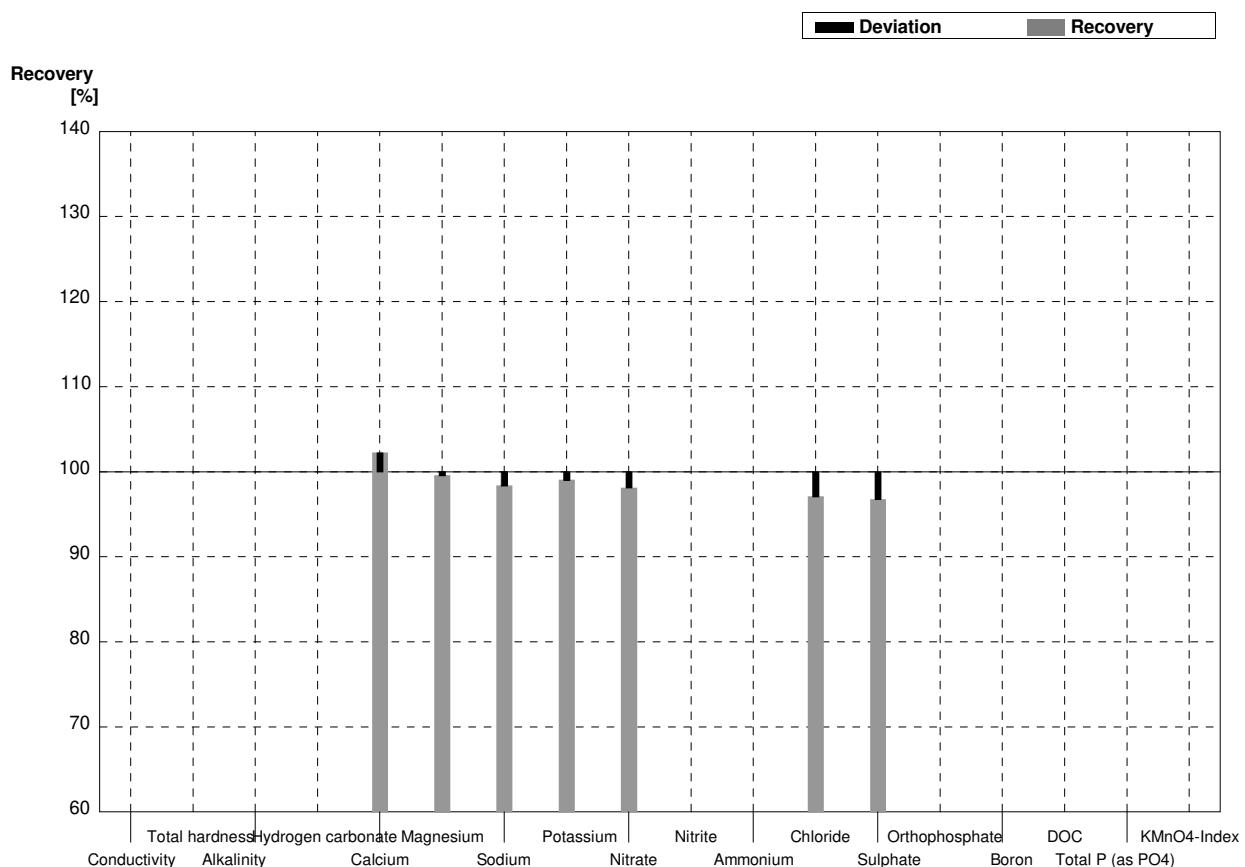
Sample N159A
Laboratory AP

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2			$\mu\text{S}/\text{cm}$	
Total hardness	2,33	0,02			mmol/l	
Alkalinity	3,52	0,04			mmol/l	
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9	74,2	0,4	mg/l	102%
Magnesium	12,5	0,1	12,4	0,1	mg/l	99%
Sodium	33,5	0,5	33,1	0,4	mg/l	99%
Potassium	4,51	0,05	4,33	0,04	mg/l	96%
Nitrate	31,8	0,5	31,3	0,1	mg/l	98%
Nitrite	0,0343	0,0008			mg/l	
Ammonium	<0,01				mg/l	
Chloride	38,8	0,7	38,1	0,5	mg/l	98%
Sulphate	52,0	0,5	50,7	0,2	mg/l	98%
Orthophosphate	0,0487	0,0024			mg/l	
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05			mg/l	
Total P (as PO ₄)	0,089	0,002			mg/l	
KMnO ₄ -Index	2,40	0,12			mg/l	



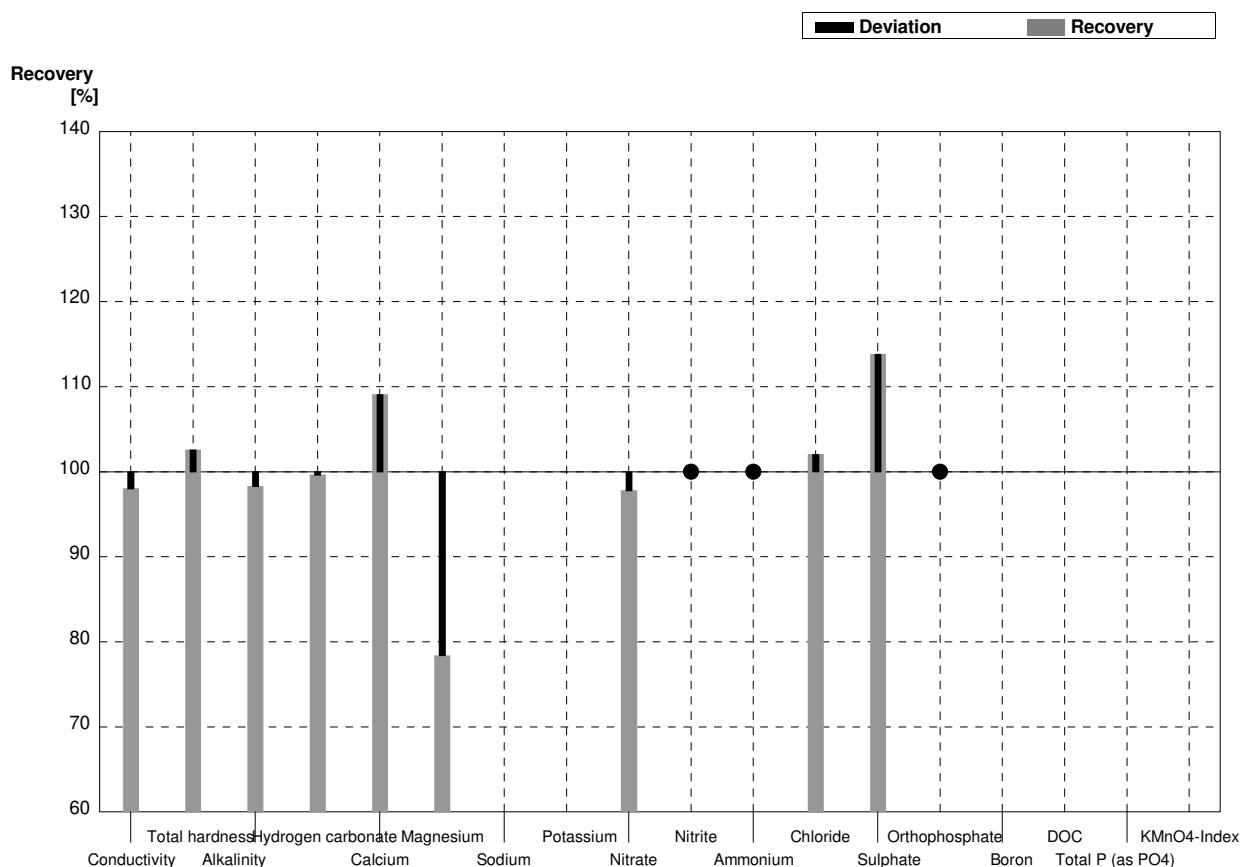
Sample N159B
Laboratory AP

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2			$\mu\text{S}/\text{cm}$	
Total hardness	1,16	0,01			mmol/l	
Alkalinity	2,29	0,01			mmol/l	
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4	32,0	0,1	mg/l	102%
Magnesium	9,18	0,12	9,14	0,04	mg/l	100%
Sodium	42,4	0,2	41,7	0,2	mg/l	98%
Potassium	10,4	0,1	10,3	0,1	mg/l	99%
Nitrate	47,4	1,1	46,5	0,6	mg/l	98%
Nitrite	0,072	0,002			mg/l	
Ammonium	0,0437	0,0046			mg/l	
Chloride	17,1	0,3	16,6	0,4	mg/l	97%
Sulphate	43,1	0,4	41,7	0,1	mg/l	97%
Orthophosphate	<0,009				mg/l	
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05			mg/l	
Total P (as PO ₄)	<0,009				mg/l	
KMnO ₄ -Index	4,29	0,15			mg/l	



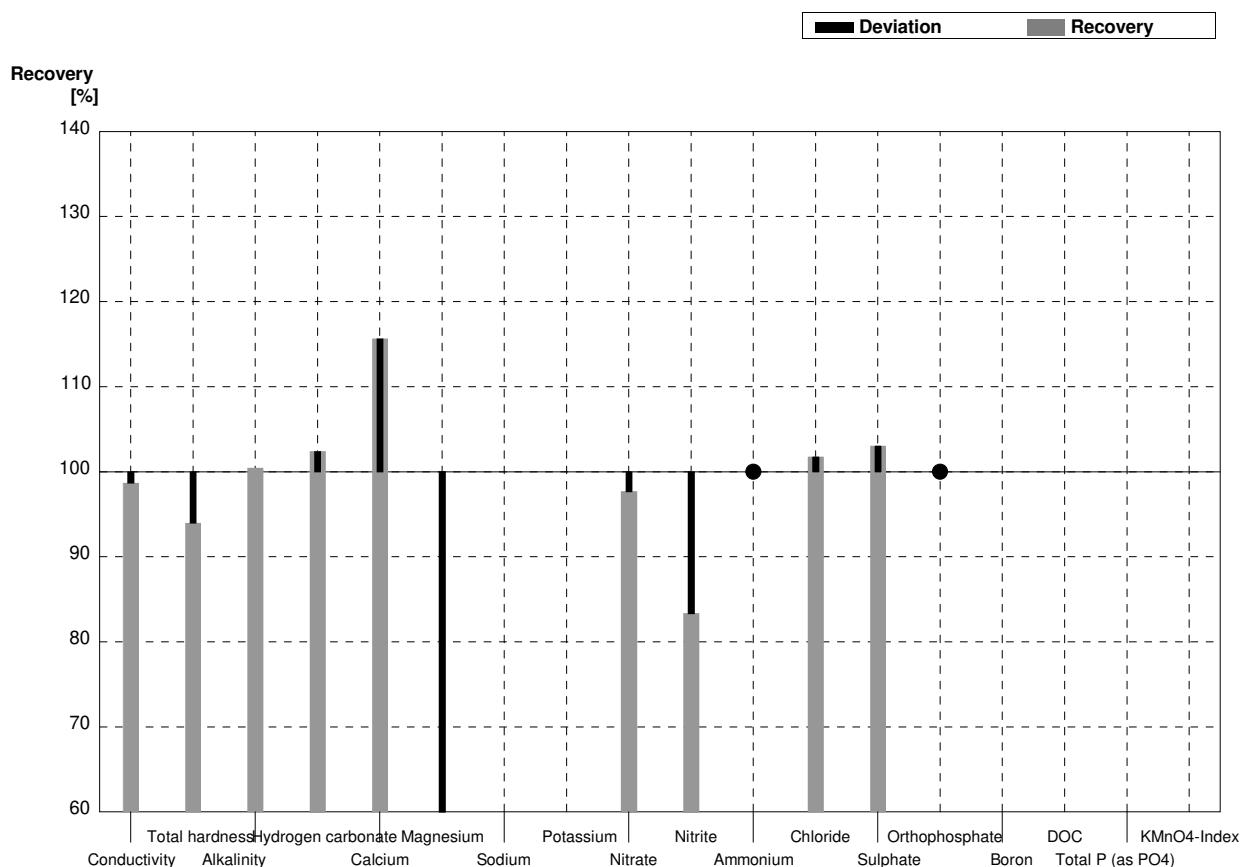
Sample N159A
Laboratory AQ

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	610	2	598		µS/cm	98%
Total hardness	2,33	0,02	2,39		mmol/l	103%
Alkalinity	3,52	0,04	3,46		mmol/l	98%
Hydrogen carbonate	212	2	211,2		mg/l	100%
Calcium	72,7	0,9	79,3		mg/l	109%
Magnesium	12,5	0,1	9,80		mg/l	78%
Sodium	33,5	0,5			mg/l	
Potassium	4,51	0,05			mg/l	
Nitrate	31,8	0,5	31,1		mg/l	98%
Nitrite	0,0343	0,0008	<0,05		mg/l	•
Ammonium	<0,01		<0,05		mg/l	•
Chloride	38,8	0,7	39,6		mg/l	102%
Sulphate	52,0	0,5	59,2		mg/l	114%
Orthophosphate	0,0487	0,0024	<0,15		mg/l	•
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05			mg/l	
Total P (as PO4)	0,089	0,002			mg/l	
KMnO4-Index	2,40	0,12			mg/l	



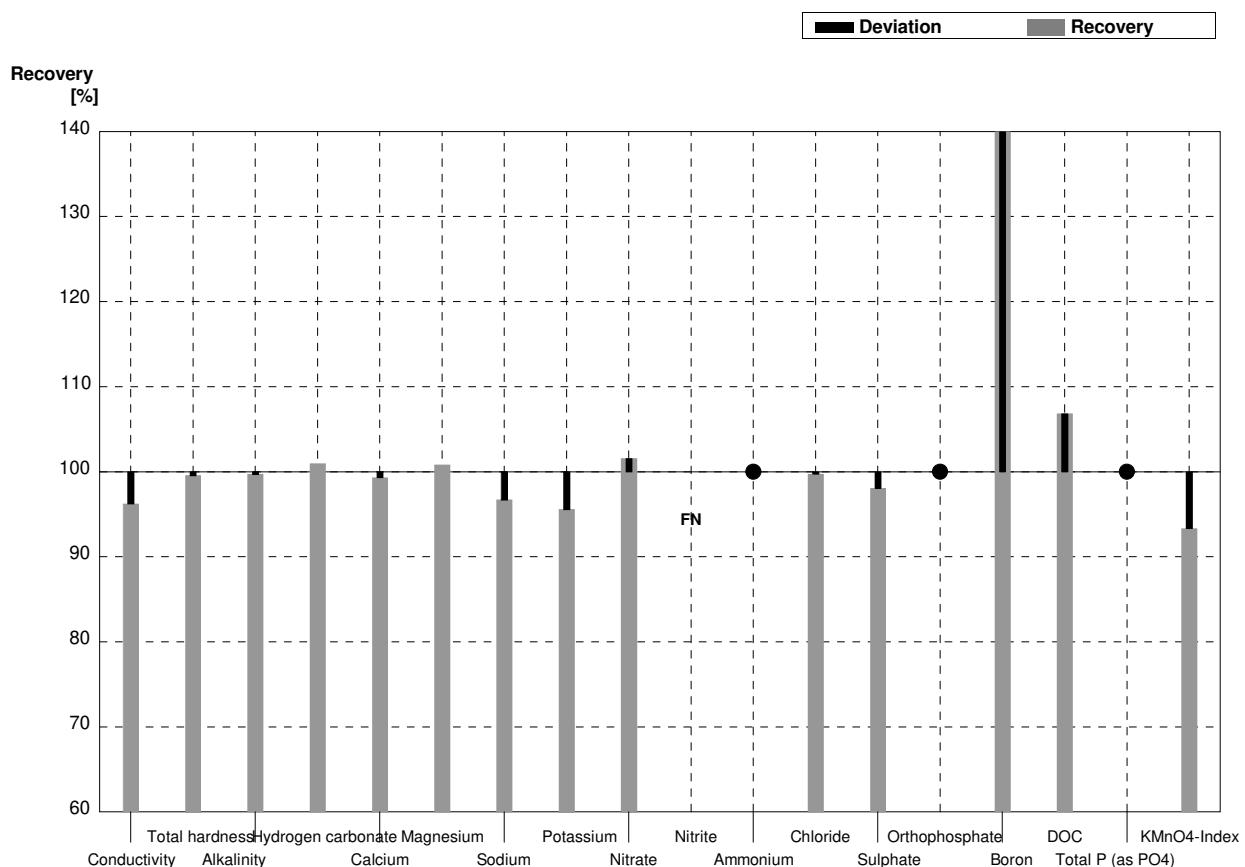
Sample N159B
Laboratory AQ

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	445		$\mu\text{S}/\text{cm}$	99%
Total hardness	1,16	0,01	1,09		mmol/l	94%
Alkalinity	2,29	0,01	2,30		mmol/l	100%
Hydrogen carbonate	137	1	140,3		mg/l	102%
Calcium	31,3	0,4	36,2		mg/l	116%
Magnesium	9,18	0,12	4,56		mg/l	50%
Sodium	42,4	0,2			mg/l	
Potassium	10,4	0,1			mg/l	
Nitrate	47,4	1,1	46,3		mg/l	98%
Nitrite	0,072	0,002	0,060		mg/l	83%
Ammonium	0,0437	0,0046	<0,05		mg/l	•
Chloride	17,1	0,3	17,4		mg/l	102%
Sulphate	43,1	0,4	44,4		mg/l	103%
Orthophosphate	<0,009		<0,15		mg/l	•
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05			mg/l	
Total P (as PO ₄)	<0,009				mg/l	
KMnO ₄ -Index	4,29	0,15			mg/l	



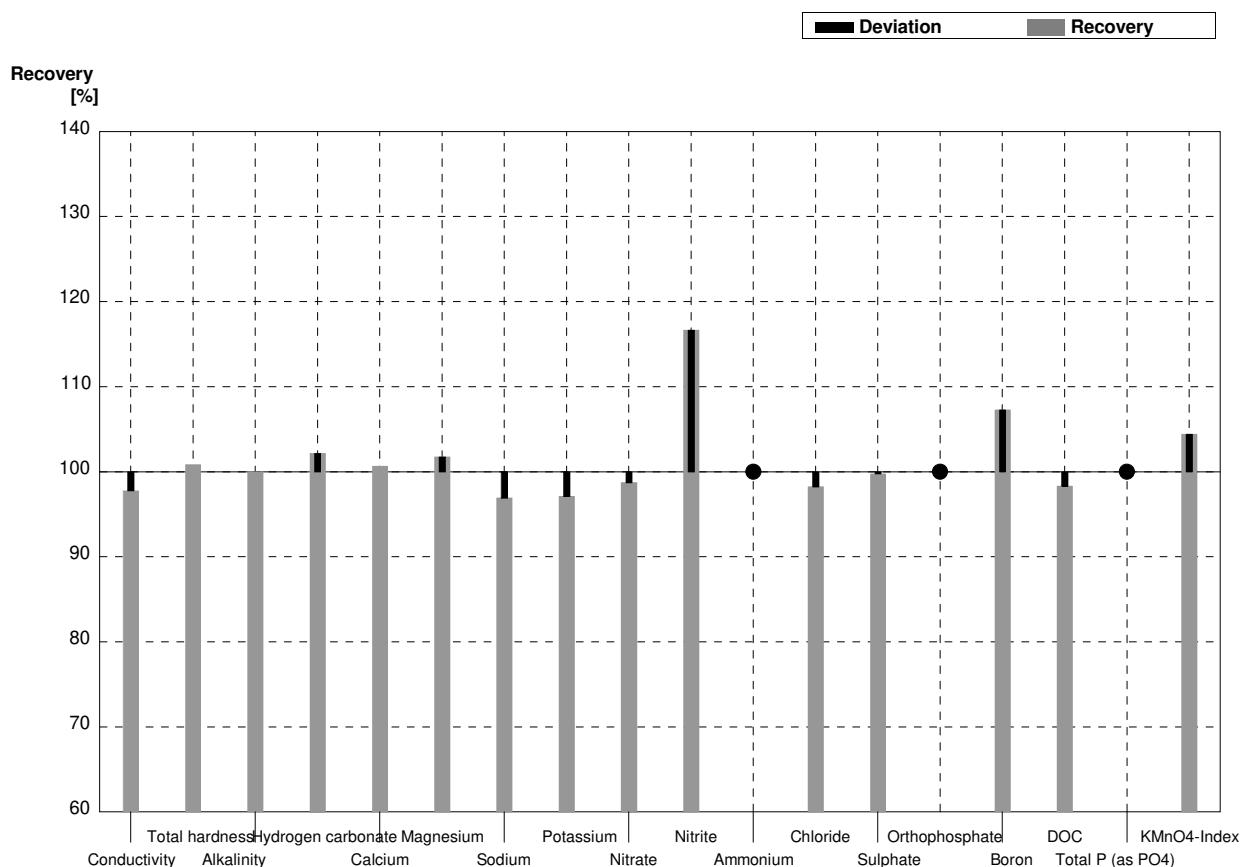
Sample N159A
Laboratory AR

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	587		$\mu\text{S}/\text{cm}$	96%
Total hardness	2,33	0,02	2,32		mmol/l	100%
Alkalinity	3,52	0,04	3,51		mmol/l	100%
Hydrogen carbonate	212	2	214		mg/l	101%
Calcium	72,7	0,9	72,2		mg/l	99%
Magnesium	12,5	0,1	12,6		mg/l	101%
Sodium	33,5	0,5	32,4		mg/l	97%
Potassium	4,51	0,05	4,31		mg/l	96%
Nitrate	31,8	0,5	32,3		mg/l	102%
Nitrite	0,0343	0,0008	<0,03		mg/l	FN
Ammonium	<0,01		<0,2		mg/l	•
Chloride	38,8	0,7	38,7		mg/l	100%
Sulphate	52,0	0,5	51,0		mg/l	98%
Orthophosphate	0,0487	0,0024	<0,15		mg/l	•
Boron	0,066	0,001	0,094		mg/l	142%
DOC	6,16	0,05	6,58		mg/l	107%
Total P (as PO ₄)	0,089	0,002	<0,15		mg/l	•
KMnO ₄ -Index	2,40	0,12	2,24		mg/l	93%



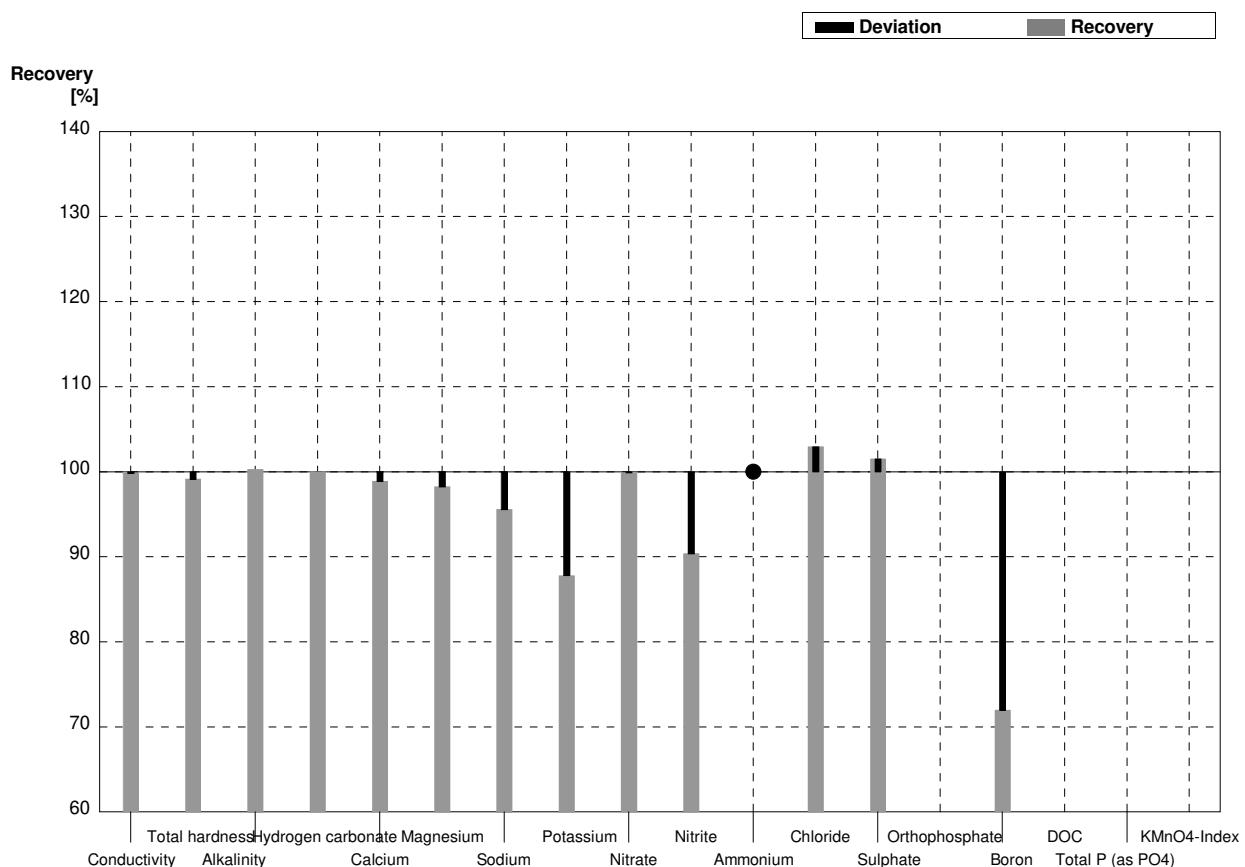
Sample N159B
Laboratory AR

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	441		$\mu\text{S}/\text{cm}$	98%
Total hardness	1,16	0,01	1,17		mmol/l	101%
Alkalinity	2,29	0,01	2,29		mmol/l	100%
Hydrogen carbonate	137	1	140		mg/l	102%
Calcium	31,3	0,4	31,5		mg/l	101%
Magnesium	9,18	0,12	9,34		mg/l	102%
Sodium	42,4	0,2	41,1		mg/l	97%
Potassium	10,4	0,1	10,1		mg/l	97%
Nitrate	47,4	1,1	46,8		mg/l	99%
Nitrite	0,072	0,002	0,084		mg/l	117%
Ammonium	0,0437	0,0046	<0,2		mg/l	•
Chloride	17,1	0,3	16,8		mg/l	98%
Sulphate	43,1	0,4	43,0		mg/l	100%
Orthophosphate	<0,009		<0,15		mg/l	•
Boron	0,096	0,001	0,103		mg/l	107%
DOC	4,18	0,05	4,11		mg/l	98%
Total P (as PO ₄)	<0,009		<0,15		mg/l	•
KMnO ₄ -Index	4,29	0,15	4,48		mg/l	104%



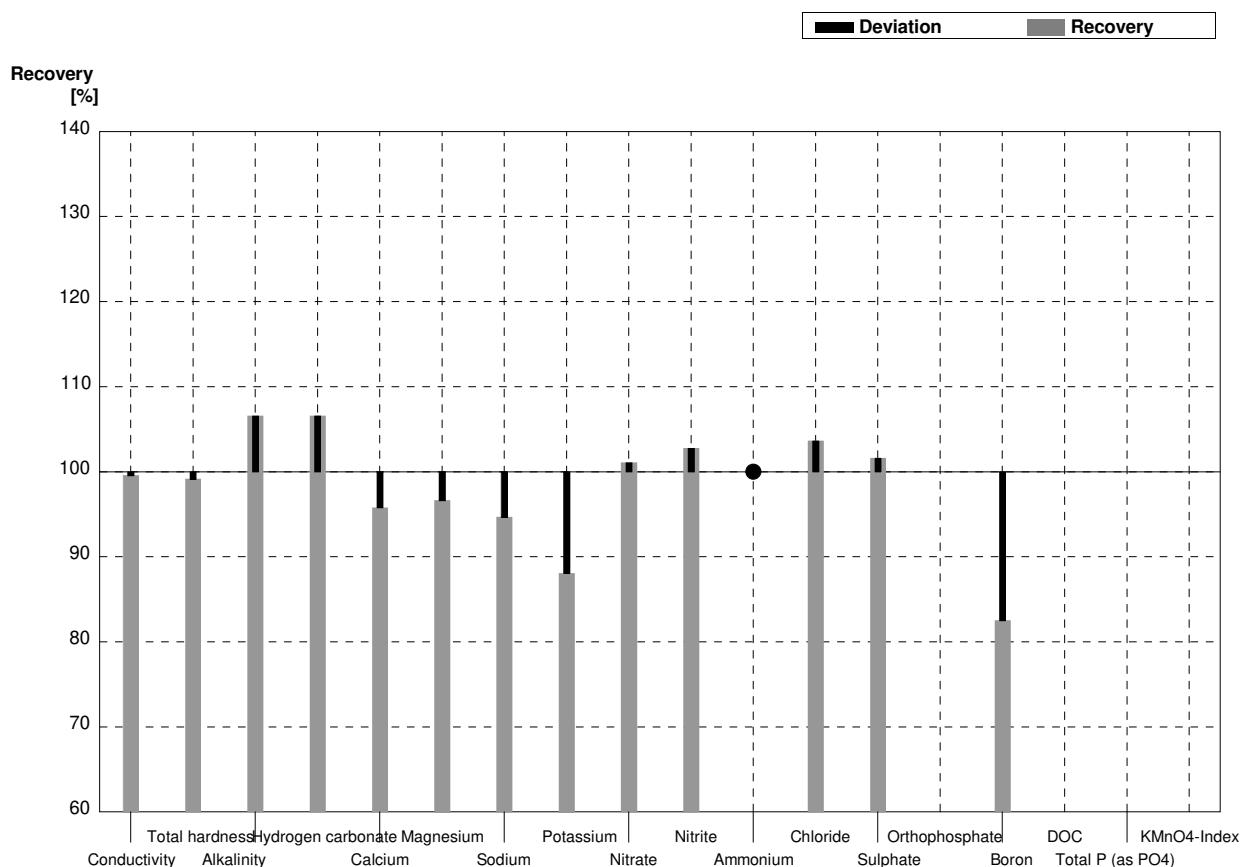
Sample N159A
Laboratory AS

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	610	2	609	6,5	µS/cm	100%
Total hardness	2,33	0,02	2,31	0,15	mmol/l	99%
Alkalinity	3,52	0,04	3,53	0,12	mmol/l	100%
Hydrogen carbonate	212	2	212		mg/l	100%
Calcium	72,7	0,9	71,88	1,14	mg/l	99%
Magnesium	12,5	0,1	12,28	0,54	mg/l	98%
Sodium	33,5	0,5	32,02	3,45	mg/l	96%
Potassium	4,51	0,05	3,96	0,23	mg/l	88%
Nitrate	31,8	0,5	31,76	0,18	mg/l	100%
Nitrite	0,0343	0,0008	0,0310	0,0048	mg/l	90%
Ammonium	<0,01		<0,05		mg/l	•
Chloride	38,8	0,7	39,95	0,79	mg/l	103%
Sulphate	52,0	0,5	52,80	0,99	mg/l	102%
Orthophosphate	0,0487	0,0024			mg/l	
Boron	0,066	0,001	0,0475	0,007	mg/l	72%
DOC	6,16	0,05			mg/l	
Total P (as PO4)	0,089	0,002			mg/l	
KMnO4-Index	2,40	0,12			mg/l	



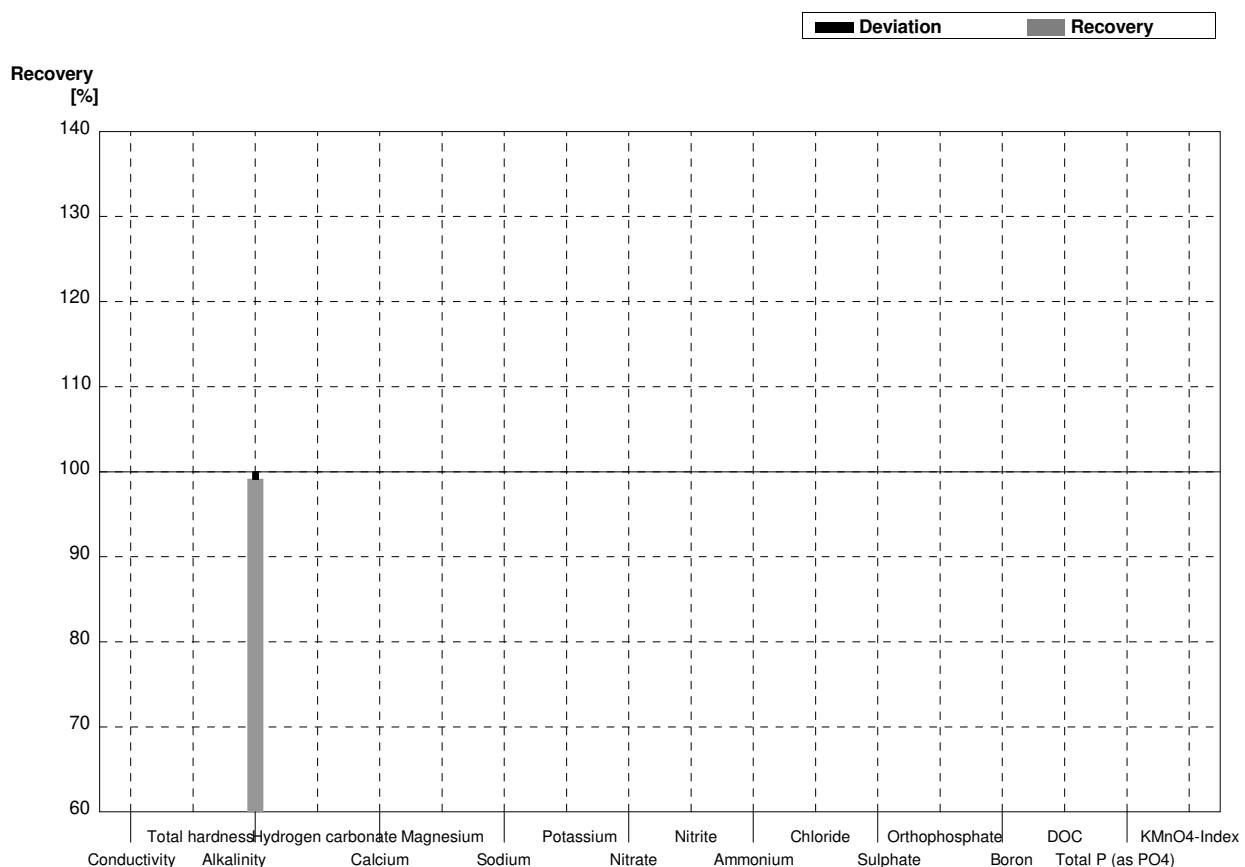
Sample N159B
Laboratory AS

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	449	6,4	$\mu\text{S}/\text{cm}$	100%
Total hardness	1,16	0,01	1,15	0,10	mmol/l	99%
Alkalinity	2,29	0,01	2,44	0,23	mmol/l	107%
Hydrogen carbonate	137	1	146		mg/l	107%
Calcium	31,3	0,4	29,98	1,41	mg/l	96%
Magnesium	9,18	0,12	8,87	0,43	mg/l	97%
Sodium	42,4	0,2	40,14	2,17	mg/l	95%
Potassium	10,4	0,1	9,16	0,24	mg/l	88%
Nitrate	47,4	1,1	47,91	0,51	mg/l	101%
Nitrite	0,072	0,002	0,074	0,012	mg/l	103%
Ammonium	0,0437	0,0046	<0,05		mg/l	•
Chloride	17,1	0,3	17,72	0,29	mg/l	104%
Sulphate	43,1	0,4	43,79	0,35	mg/l	102%
Orthophosphate	<0,009				mg/l	
Boron	0,096	0,001	0,0792	0,003	mg/l	83%
DOC	4,18	0,05			mg/l	
Total P (as PO ₄)	<0,009				mg/l	
KMnO ₄ -Index	4,29	0,15			mg/l	



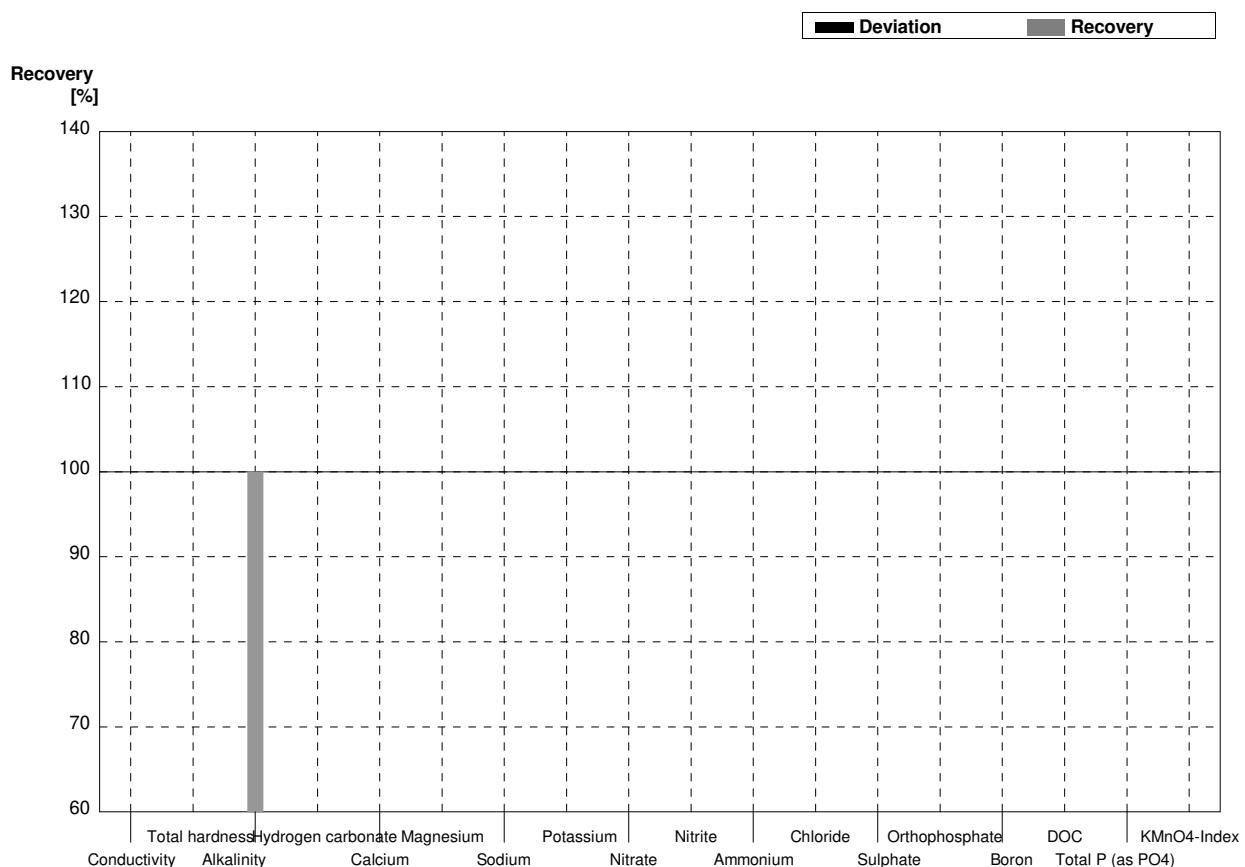
Sample N159A
Laboratory AT

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	610	2			µS/cm	
Total hardness	2,33	0,02			mmol/l	
Alkalinity	3,52	0,04	3,49	0,16	mmol/l	99%
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9			mg/l	
Magnesium	12,5	0,1			mg/l	
Sodium	33,5	0,5			mg/l	
Potassium	4,51	0,05			mg/l	
Nitrate	31,8	0,5			mg/l	
Nitrite	0,0343	0,0008			mg/l	
Ammonium	<0,01				mg/l	
Chloride	38,8	0,7			mg/l	
Sulphate	52,0	0,5			mg/l	
Orthophosphate	0,0487	0,0024			mg/l	
Boron	0,066	0,001			mg/l	
DOC	6,16	0,05			mg/l	
Total P (as PO4)	0,089	0,002			mg/l	
KMnO4-Index	2,40	0,12			mg/l	



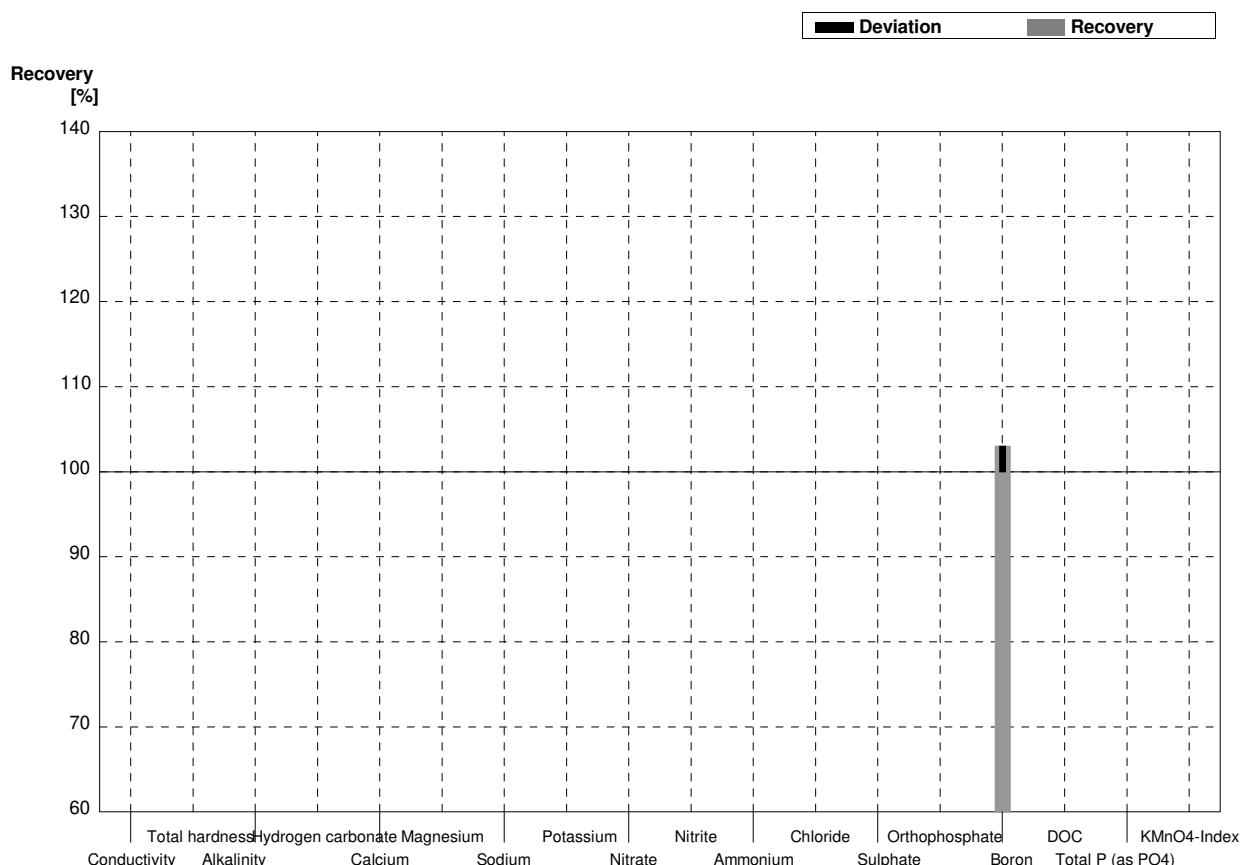
Sample N159B
Laboratory AT

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2			µS/cm	
Total hardness	1,16	0,01			mmol/l	
Alkalinity	2,29	0,01	2,29	0,10	mmol/l	100%
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4			mg/l	
Magnesium	9,18	0,12			mg/l	
Sodium	42,4	0,2			mg/l	
Potassium	10,4	0,1			mg/l	
Nitrate	47,4	1,1			mg/l	
Nitrite	0,072	0,002			mg/l	
Ammonium	0,0437	0,0046			mg/l	
Chloride	17,1	0,3			mg/l	
Sulphate	43,1	0,4			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,096	0,001			mg/l	
DOC	4,18	0,05			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	4,29	0,15			mg/l	



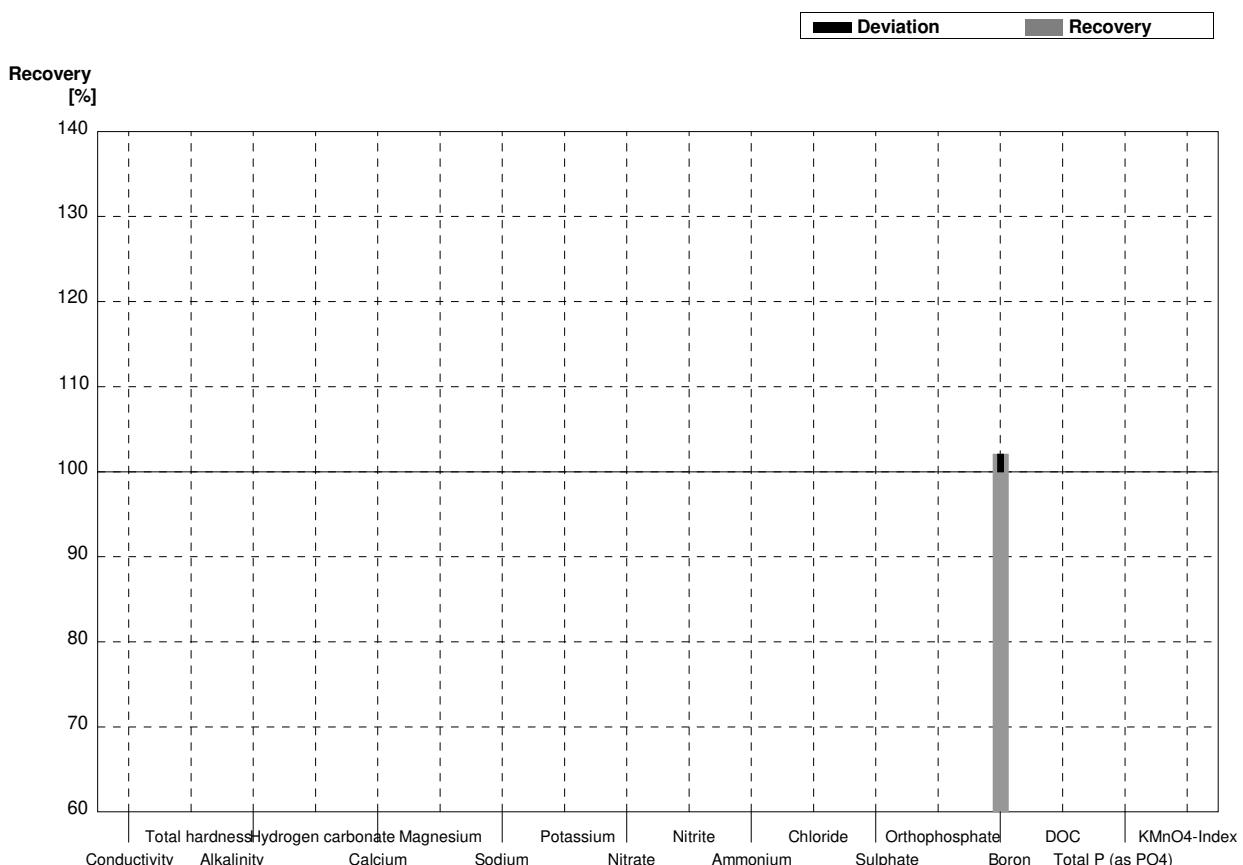
Sample N159A
Laboratory AU

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	610	2			µS/cm	
Total hardness	2,33	0,02			mmol/l	
Alkalinity	3,52	0,04			mmol/l	
Hydrogen carbonate	212	2			mg/l	
Calcium	72,7	0,9			mg/l	
Magnesium	12,5	0,1			mg/l	
Sodium	33,5	0,5			mg/l	
Potassium	4,51	0,05			mg/l	
Nitrate	31,8	0,5			mg/l	
Nitrite	0,0343	0,0008			mg/l	
Ammonium	<0,01				mg/l	
Chloride	38,8	0,7			mg/l	
Sulphate	52,0	0,5			mg/l	
Orthophosphate	0,0487	0,0024			mg/l	
Boron	0,066	0,001	0,068	0,007	mg/l	103%
DOC	6,16	0,05			mg/l	
Total P (as PO ₄)	0,089	0,002			mg/l	
KMnO ₄ -Index	2,40	0,12			mg/l	



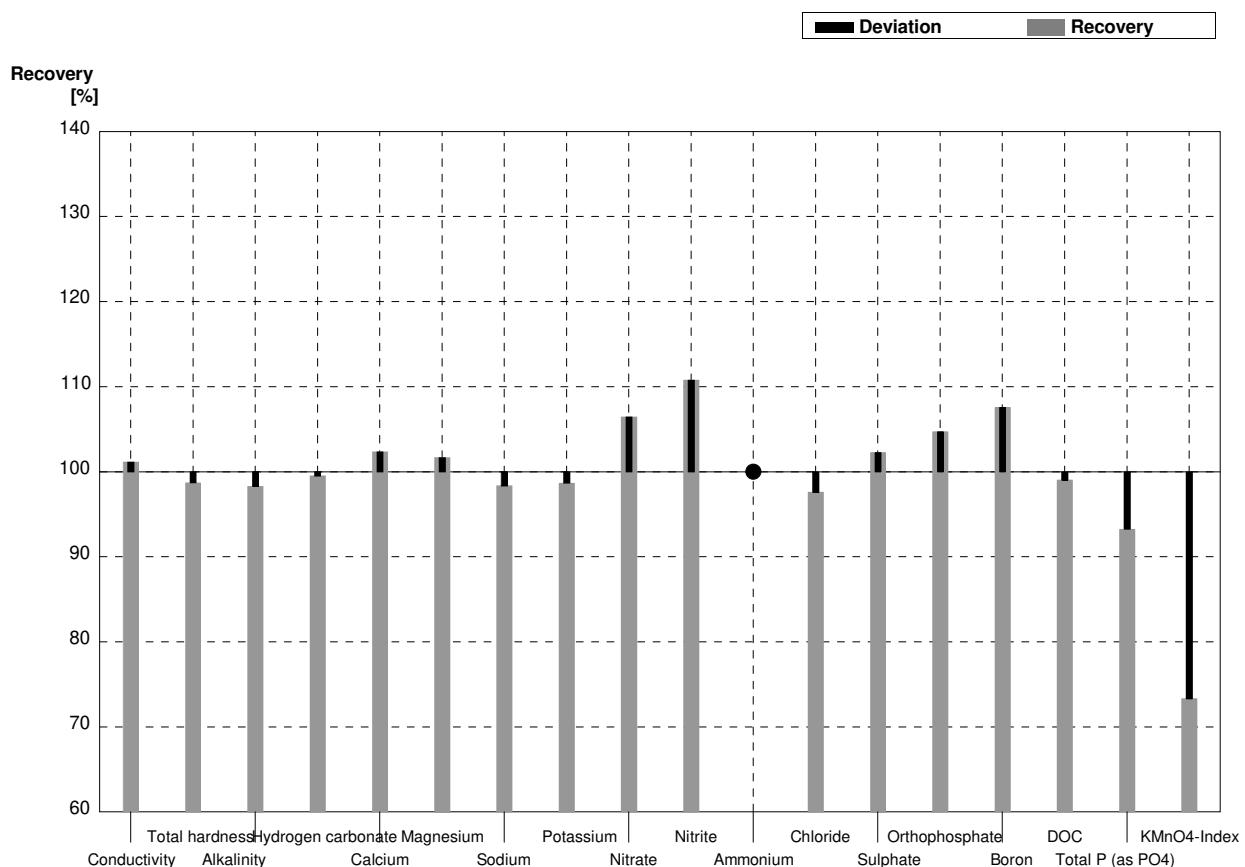
Sample N159B
Laboratory AU

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	451	2			µS/cm	
Total hardness	1,16	0,01			mmol/l	
Alkalinity	2,29	0,01			mmol/l	
Hydrogen carbonate	137	1			mg/l	
Calcium	31,3	0,4			mg/l	
Magnesium	9,18	0,12			mg/l	
Sodium	42,4	0,2			mg/l	
Potassium	10,4	0,1			mg/l	
Nitrate	47,4	1,1			mg/l	
Nitrite	0,072	0,002			mg/l	
Ammonium	0,0437	0,0046			mg/l	
Chloride	17,1	0,3			mg/l	
Sulphate	43,1	0,4			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,096	0,001	0,098	0,01	mg/l	102%
DOC	4,18	0,05			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	4,29	0,15			mg/l	



Sample N159A
Laboratory AV

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	610	2	617,0	50,0	$\mu\text{S}/\text{cm}$	101%
Total hardness	2,33	0,02	2,30	0,2	mmol/l	99%
Alkalinity	3,52	0,04	3,46	0,3	mmol/l	98%
Hydrogen carbonate	212	2	211,0	20,0	mg/l	100%
Calcium	72,7	0,9	74,40	7,0	mg/l	102%
Magnesium	12,5	0,1	12,71	1,0	mg/l	102%
Sodium	33,5	0,5	32,95	3,0	mg/l	98%
Potassium	4,51	0,05	4,45	0,4	mg/l	99%
Nitrate	31,8	0,5	33,85	3,5	mg/l	106%
Nitrite	0,0343	0,0008	0,038	0,004	mg/l	111%
Ammonium	<0,01		<0,04		mg/l	•
Chloride	38,8	0,7	37,87	4,0	mg/l	98%
Sulphate	52,0	0,5	53,19	5,0	mg/l	102%
Orthophosphate	0,0487	0,0024	0,051	0,005	mg/l	105%
Boron	0,066	0,001	0,071	0,007	mg/l	108%
DOC	6,16	0,05	6,10	0,6	mg/l	99%
Total P (as PO ₄)	0,089	0,002	0,083	0,008	mg/l	93%
KMnO ₄ -Index	2,40	0,12	1,76	0,2	mg/l	73%



Sample N159B
Laboratory AV

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Conductivity	451	2	461,0	50,0	$\mu\text{S}/\text{cm}$	102%
Total hardness	1,16	0,01	1,22	0,1	mmol/l	105%
Alkalinity	2,29	0,01	2,25	0,2	mmol/l	98%
Hydrogen carbonate	137	1	137,0	10,0	mg/l	100%
Calcium	31,3	0,4	31,53	3,0	mg/l	101%
Magnesium	9,18	0,12	9,38	1,0	mg/l	102%
Sodium	42,4	0,2	42,37	4,0	mg/l	100%
Potassium	10,4	0,1	10,42	1,0	mg/l	100%
Nitrate	47,4	1,1	50,2	5,0	mg/l	106%
Nitrite	0,072	0,002	0,075	0,007	mg/l	104%
Ammonium	0,0437	0,0046	0,045	0,005	mg/l	103%
Chloride	17,1	0,3	16,71	1,5	mg/l	98%
Sulphate	43,1	0,4	44,36	4,5	mg/l	103%
Orthophosphate	<0,009		<0,04		mg/l	•
Boron	0,096	0,001	0,104	0,01	mg/l	108%
DOC	4,18	0,05	4,05	0,4	mg/l	97%
Total P (as PO ₄)	<0,009		<0,04		mg/l	•
KMnO ₄ -Index	4,29	0,15	3,53	0,35	mg/l	82%

