

# **IFA-Proficiency Testing Scheme for Water Analysis**

**Round N154  
Major Ions**

**Sample Dispatch: 9 November 2020**





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Word-version round: N154	Date / Signature:	11.12.2020 W. Kandler

This report has 147 pages.

This report summarises the results of round N154 (major ions) within the IFA-Proficiency Testing Scheme for Water Analysis. The samples N154A and N154B were distributed to 46 participants on Monday, 9 November 2020. 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, 4 December 2020. All participants of this interlaboratory comparison submitted results. To make the participants anonymous, each laboratory obtained a letter code by random.

## Samples

The samples consisted of artificial ground water. For sample preparation, ultrapure water was spiked with solutions of salts and standards in order to simulate the ionic composition of natural Austrian ground water. The following substances were added to the samples: CaCO<sub>3</sub>, CaCl<sub>2</sub>, Ca(NO<sub>3</sub>)<sub>2</sub>, MgSO<sub>4</sub>, Mg(NO<sub>3</sub>)<sub>2</sub>, NaHCO<sub>3</sub>, KHCO<sub>3</sub>, diethyl ethylphosphonate (C<sub>6</sub>H<sub>15</sub>PO<sub>3</sub>, for total-P), potassium hydrogen phthalate (for DOC), sodium salicylate (for KMnO<sub>4</sub>-Index) and certified standard solutions of NaNO<sub>2</sub>, NH<sub>4</sub>Cl, KH<sub>2</sub>PO<sub>4</sub> and H<sub>3</sub>BO<sub>3</sub>. Both samples, N154A and N154B, contained free CO<sub>2</sub>, which was used for dissolution of CaCO<sub>3</sub>. No other substances (e.g. preservatives) were added. The samples were stabilised by sterile filtration and low temperature.

Ammonium was not added to sample N154A and no phosphorus substances were added to sample N154B 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 of samples N154A and N154B 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"). Due to sensitivity drift during the ICP-MS sequence, the results for Ca, Mg and total hardness were not evaluated and the measurement will be repeated.

According to our experience, the samples remain stable up to 18 months for the parameters conductivity, total hardness, alkalinity, Ca<sup>2+</sup>, Mg<sup>2+</sup>, Na<sup>+</sup>, K<sup>+</sup>, NO<sub>3</sub><sup>-</sup>, Cl<sup>-</sup>, SO<sub>4</sub><sup>2-</sup>, boron and HCO<sub>3</sub><sup>-</sup> when stored at 4°C in the dark. For the parameters NH<sub>4</sub><sup>+</sup>, NO<sub>2</sub><sup>-</sup>, o-PO<sub>4</sub><sup>3-</sup> total-P and DOC the samples remain stable several weeks, whereas the first changes normally are observed for NH<sub>4</sub><sup>+</sup>.

## 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, 3<sup>rd</sup> 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 171 µS/cm in sample N154A and 613 µS/cm in sample N154B.

For the pH no target values can be assigned. The results can be compared on the tables. In this kind of samples containing CO<sub>2</sub>, 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 substances for the KMnO<sub>4</sub>-Index, were 1.00 mg/L in sample N154A and 3.52 mg/L in sample N154B. Assuming complete oxidation to carbon dioxide, nitrate and water (considering nitrite and ammonium), the theoretical values were 1.42 mg/L O<sub>2</sub> (N154A) and 4.93 mg/L O<sub>2</sub> (N154B). However, the laboratory mean values were taken as reference values in this report: 1.48 mg/L O<sub>2</sub> for N154A and 4.57 mg/L O<sub>2</sub> for N154B.

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 NH<sub>4</sub><sup>+</sup> in N154A and to <0.009 mg/L o- $PO_4^{3-}$  and <0.009 mg/L total-P (as PO<sub>4</sub><sup>3-</sup>) in N154B, 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 97.8 % (orthophosphate in sample N154A) and 105.2 % (DOC in sample N154A).

The between laboratory CVs covered the range between 0.9 % (conductivity in samples N154A and N154B) and 17.8 % (KMnO<sub>4</sub>-Index in sample N154A).

All confidence intervals of the outlier-corrected laboratory mean values except for DOC in sample N154A ( $105.2\% \pm 2.3\%$ ) encompass the corresponding target values with their uncertainties. For all other parameters, statistically, no difference could be detected between theoretical target concentrations and outlier corrected laboratory means.

## **z-scores**

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

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

z      z-score  
x<sub>i</sub>    result of laboratory  
X      target value or mean value („consensus value“)  
 $\sigma_{PT}$    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 2009 to 2019. 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](http://www.ifatest.eu)) by 6.0%, which is 0.36 mg/L DOC, when based on the target value.

$$z = \frac{x_i - X}{\sigma_{pt}} = \frac{7.00 \text{ mg/L} - 6.02 \text{ mg/L}}{0.36 \text{ mg/L}} \quad 2.7 \quad \text{or} \quad \frac{116\% - 100\%}{6.0\%} \quad 2.7$$

$z$  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)

$\sigma_{pt}$  0.36 mg/L equivalent to 6.0% (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. Z-scores were only calculated, if the target values were higher than these limits. **Thus, no z-scores were calculated for nitrite in sample N154B.**

Parameter	standard deviation for proficiency assessment	Lower limit
Alkalinity K <sub>S4.3</sub>	2.1%	0.2 mmol/L
Ammonium	13%	0.01 mg/L
Boron	8.6%	0.012 mg/L
Calcium	3.3%	9 mg/L
Chloride	3.2%	2 mg/L
el. Conductivity	1.3%	50 µS/cm
DOC	6.0%	1 mg/L
Hydrogen carbonate	2.5%	20 mg/L
KMnO <sub>4</sub> -Index	10%	1 mg/L
Magnesium	3.6%	1 mg/L
Nitrate	3.4%	2 mg/L
Nitrite	5.8%	0.01 mg/L
Orthophosphate	10%	0.015 mg/L
Potassium	4.7%	0.5 mg/L
Sodium	3.4%	1 mg/L
Sulphate	3.1%	3 mg/L
Total hardness	2.8%	0.1 mmol/L
Total-P (as PO <sub>4</sub> <sup>3-</sup> )	11%	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", 3<sup>rd</sup> 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, 11 December 2020

## 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

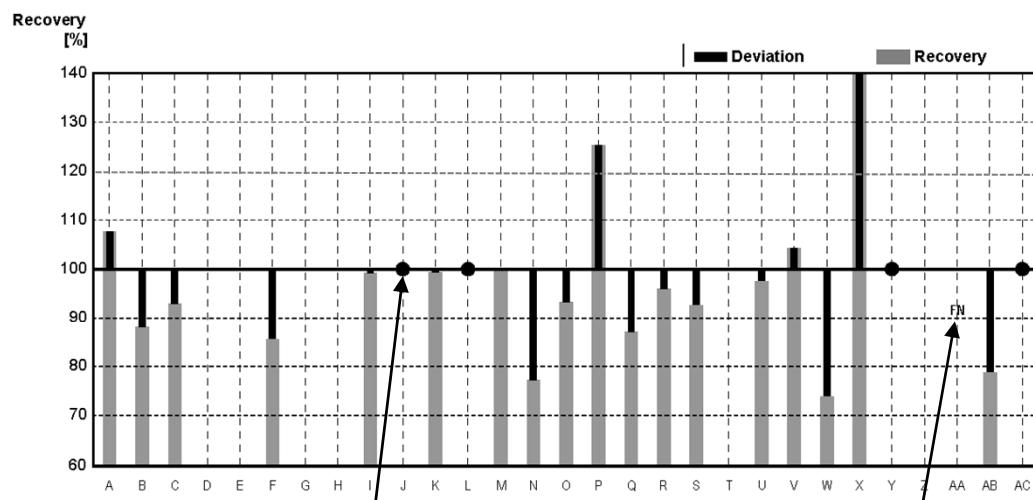


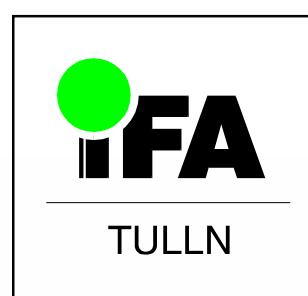
Diagram 2: Recoveries and deviations from target values



# **Illustration of Results Tables and Parameter Oriented Part**

Round N154  
Major Ions

Sample Dispatch: 9 November 2020



## Results Sample N154A

	pH	Cond.	total-Hardn.	K <sub>S 4.3</sub>	HCO <sub>3</sub> <sup>-</sup>	Ca <sup>2+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	NO <sub>3</sub> <sup>-</sup>
Unit		μS/cm	mmol/L	mmol/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value		173	0.438	0.88	50.5	12.7	2.95	15.1	3.18	16.8
IFA result	6.85	173	0.458	0.86	49.3	13.1	3.17	15.6	2.92	16.3
Stability test	7.62	174		0.86	49.3			15.5	3.21	16.5
A										16.99
B	6.88	175	0.460	0.91	51.5	13.0	3.40	14.93	3.18	16.22
C	7.51	172	0.429	0.85	48.8	12.3	2.96	14.2	2.75	17.2
D		173.4								
E	7.0	172	0.450	0.873	50.2	13.1	3.00	15.1	3.12	16.9
F	6.33	174								16.68
G	6.8	173	0.450	0.90	55	12.9	3.00	15.1	3.30	15.8
H	6.6	168	0.430	0.83	50.6	12.4	2.88	14.82	3.00	16.481
I	7.90	180	0.431	0.900	54.9	12.5	2.89	16.0	5.98	15.3
J						14.29	2.90	15.00	3.31	17.06
K	7.34	624		0.92		14.0	2.85	14.5	3.05	16.1
L	7.24	178	0.428	0.870	51.3	12.5	2.83	14.7	3.01	17.1
M	6.6	166	0.460	1.02	59	13.4	3.05	14.9	3.17	17.0
N	7.15	174	2.39	0.90	51.8	12.33	2.89	14.76	3.18	17.03
O		171	0.446	1.06	64.68	13.17	3.08	15.54	3.48	16.87
P	6.77	170	0.453	0.83	50.5	13.1	3.07	15.2	3.34	16.0
Q	7.1	173				12.4	2.93	12.3	2.97	16.7
R						11.97	3.02	14.37	3.21	16.47
S	6.96	174	0.457	0.87	50.2	13.3	3.00	15.0	3.21	16.7
T	7.1	171	0.423	0.89	51	12.1	2.92	14.8	3.15	16.1
U		175	0.412	0.86	49.4	11.9	2.83	15.4	3.24	16.7
V	6.9	173	0.433	0.879	50.6	12.5	2.94	14.8	3.23	16.9
W	6.99	176	0.420	0.846	51.6	12.1	2.86	15.0	3.17	15.8
X	7.28	173	0.480	0.951	58.0	12.5	2.93	14.8	3.13	17.0
Y										
Z	6.79	173	0.442	0.854	52.1	12.6	3.06	15.0	3.20	16.7
AA		170	2.42	0.899	51	12.4	2.92	14.9	3.16	16.5
AB	7.06	173.8	0.442	0.87	50.03	12.76	3.00	14.83	3.06	16.15
AC										16.92
AD	7.35	171.00	0.457	0.89	51.00	13.25	3.08	14.73	3.00	17.56
AE	6.91	179	2.22	0.84	51.25	15.9	<3.0			16.9
AF										16.301
AG	6.79	179.0								
AH	6.6	174	0.440	1.00	58.0	12.4	3.15	15.2	3.32	16.8
AI	6.78	176	<1.2	0.973		<40	<4	14.4	3.11	16.8
AJ	6.82	173	0.429	0.872	53.2	12.3	2.79	12.9	<2.9	16.2
AK	7.1	173	0.438	0.89	51.4	12.7	2.93	15.1	3.15	16.5
AL	7.01	174	0.473	0.872	53.2	13.8	3.13	14.7	3.09	16.3
AM	5.95	167	0.442	0.85	52	12.6	3.11	15.1	3.24	17.182
AN	6.84	173		0.87	50.0					16.1
AO	7.04	174	0.485	0.900		14.0	3.30	14.8	4.00	17.0
AP										
AQ	7.08	172.2		0.90		12.93	3.03	15.22	3.24	16.40
AR	6.9	171	0.450	0.87	53.1		2.95			18.5
AS	6.2	173	0.430	0.90	54	12.8	2.81	15.3	3.18	17.1
AT			0.4433							

### Measurement Uncertainties Sample N154A

	pH ±	Cond. ±	total- Hardn. ±	K <sub>S 4.3</sub> ±	HCO <sub>3</sub> ±	Ca <sup>2+</sup> ±	Mg <sup>2+</sup> ±	Na <sup>+</sup> ±	K <sup>+</sup> ±	NO <sub>3</sub> ±
Unit		µS/cm	mmol/L	mmol/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value		1	0.004	0.01	0.2	0.2	0.03	0.1	0.02	0.3
IFA result	0.20	5	0.023	0.04	2.5	0.8	0.16	1.1	0.18	0.8
Stability test	0.20	5		0.04	2.5			1.1	0.19	0.8
A										0.51
B										
C	0.2	3.1		0.2	1.2	0.1	0.05	0.3	0.28	0.4
D		8.7								
E	0.3	7	0.02	0.03	2	1.1	0.4	2.3	0.5	1.4
F	0.63	8.7								0.739
G	0.1	2	0.1	0.10	2	1	0.5	1	0.5	2
H	0.40	6.7		0.125	7.60	1.24	0.288	1.482	0.30	0.6592
I	0.79	18	0.043	0.090	5.5	1.3	0.29	1.6	0.60	1.5
J						1.29	0.26	1.35	0.23	3.07
K										
L	0.032	3.215	0.003	0.001	0.071	0.106	0.002	0.067	0.017	0.058
M	0.16	4.2	0.046	0.026	1.48	1.34	0.31	0.15	0.32	1.7
N	0.29	4	0.10	0.02	1.1	0.48	0.14	0.71	0.20	1.14
O										
P	0.4	10	0.05	0.05	2.5	2	0.5	2	0.5	2
Q	0.127	4.15				1.40	0.415	1.33	0.475	0.436
R										
S	0.30	6	0.05	0.05	2.6	1.2	0.27	1.2	0.26	1.5
T	0.28	6.8	0.04	0.04	2.0	1.1	0.26	1.3	0.28	1.4
U		0.2	0.043	0.07	0.99	1.72	0.082	0.44	0.024	0.33
V	0.2	4.2		0.059		0.86	0.39	1.41	0.33	1.76
W	0.10	5.3	0.034	0.041	2.5	0.6	0.23	1.1	0.23	0.5
X	0.05	2	0.1	0.1	6.1	1.0	0.2	0.1	0.1	0.1
Y										
Z	0.01	3	0.044	0.035	2.1	1.2	0.33	1.4	0.3	0.8
AA		8.5	0.24	0.225	12.8	1.2	0.29	1.5	0.32	1.7
AB	0.1	4.51		0.09		1.2	0.3	1.5	0.31	1.6
AC										1.02
AD	0.09	5	0.05	0.05	3	0.7	0.2	0.8	0.20	0.9
AE										
AF										0.1
AG										
AH	0.1	10	0.04	0.1	6	1.3	0.32	1.6	0.34	1.7
AI	0.10	5	0.06	0.049				0.7	0.31	0.84
AJ	0.03	2	0.039	0.078	4.79	1.23	0.28	1.29		1.62
AK	0.3	7	0.026	0.08	5.0	0.7	0.23	0.8	0.16	1.0
AL	0.21	17	0.047	0.087	5.3	1.4	0.31	1.5	0.31	1.6
AM	0.31	14.2	0.05	0.04	2.3	1.3	0.31	1.5	0.33	1.76
AN	0.04	1.23		0.02	0.72					1.10
AO	0.02	30	0.05	0.02		0.6	0.6	0.3	0.06	0.5
AP										
AQ	0.22	16.0		0.09		1.29	0.30	1.83	0.49	1.62
AR	0.2	10	0.05	0.07	5.0		0.3			1.8
AS	0.1	3	0.043	0.1	4	1.0	0.17	0.5	0.25	1.2
AT										

## Results Sample N154A

	<b>NO<sub>2</sub><sup>-</sup></b>	<b>NH<sub>4</sub><sup>+</sup></b>	<b>Cl<sup>-</sup></b>	<b>SO<sub>4</sub><sup>2-</sup></b>	<b>o-PO<sub>4</sub><sup>3-</sup></b>	<b>Boron</b>	<b>DOC</b>	<b>total-P (as PO<sub>4</sub><sup>3-</sup>)</b>	<b>KMnO<sub>4</sub>-Index</b>
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.0403	<0.01	10.9	8.81	0.086	0.0152	1.96	0.127	1.48
IFA result	0.0388	<0.01	10.7	8.86	0.086	0.0147	1.97	0.125	1.42
Stability test	0.0384	<0.01	10.7	8.82	0.088	0.0158	1.96	0.126	1.33
A		<0.010			0.075			0.115	
B	0.0360	<0.005	10.69	8.41	0.0797		2.12	0.1196	1.31
C	0.0414	<0.01	12.5	9.1	0.082	<0.02	2.01	0.130	1.22
D					0.0828		1.77		
E	0.0390	<0.013	10.9	8.90	0.082		2.11	0.124	
F	0.0391	<0.012	10.63	8.73	0.0863		2.08	0.287	
G	0.0400	0.00350	10.2	8.70		0.0210	1.98	0.133	1.32
H	0.0390	<0.0006	10.95	9.49	0.083	0.0150	2.10	0.1287	1.50
I	0.0120	0.00470	10.1	7.84	0.0320	14.8	2.20	<0.5	9.70
J		0.0424	11.35	8.91				0.077	
K	0.0420	<0.01	10.5	8.6	0.09		1.95		0.97
L	0.0400	<0.010	11.1	8.97	0.0843	0.0151	2.16	0.108	1.31
M	0.0410	<0.010	10.5	9.1	0.083	0.0210	2.15	0.140	1.36
N	0.0472	0.00100	10.93	8.77			2.02		
O	<0.01		11.01	6.61					
P	0.0353	<0.01	11.0	8.30	<0.1	0.0137	2.10	0.122	1.50
Q			11.0	9.0		0.0430			
R	0.0396	<0.0100	11.62	8.67		0.0144			
S	0.0421	<0.008	11.4	8.96	0.086	0.0159	2.03	0.129	
T	0.0396	<0.010	10.6	8.3	0.086	0.0150	2.05	0.151	1.44
U	0.0386	<0.0100	11.0	9.90	0.0792	<0.020	2.00	0.1254	
V	0.0411	<0.05	10.3	8.9		0.0154	2.01	0.129	
W	0.0743	<0.01	10.1	8.05	0.0883	0.0141	2.09	0.130	1.34
X	0.0415	<0.0064	10.7	8.59	0.0849		2.17	0.127	
Y						0.0171			
Z	0.0390	<0.025	10.9	<10	0.090				
AA	0.0450	<0.010	10.5	8.8	0.093	<0.02	2.19	0.120	1.98
AB	0.0398	<0.026	10.60	8.74	0.079	0.0174	2.05	0.116	
AC			11.02	9.17					1.59
AD	0.04	<0.04	12.35	8.95	0.083		2.06	0.03	1.72
AE	<0.05	<0.05	11.0	<40	<0.15				
AF	0.0390		10.840	9.000	<0.010				
AG									
AH	0.0390	<0.005	11.1	9.1	0.084		2.13	0.117	
AI	0.0391	<0.01	10.9	8.63	0.0296	0.0135			
AJ	0.0404	<0.030	10.9	9.85	0.0792	n.n	1.84	0.0087	
AK	0.0410	<0.010	11.0	8.9	0.084	0.0152	2.02	0.122	
AL	0.0398	<0.01	10.7	8.66	0.0825	0.0142	1.90	0.0879	1.52
AM	0.0460	<0.010	11.739	10.396	0.080	<0.02	2.047	0.1300	1.99
AN	0.0394	0.0077	10.7		0.093			0.142	
AO	0.0390	<0.030	11.16	9.15	<0.050	<0.050	2.20		
AP					0.0307			0.129	
AQ		<0.04	10.83	8.95	<0.13		1.99		
AR	0.0323	<0.01							
AS	0.0380	<0.02	10.9	9.1	0.087	0.0137	2.05	0.118	1.60
AT	0.0440					0.0404			

### Measurement Uncertainties Sample N154A

	$\text{NO}_2^-$ ±	$\text{NH}_4^+$ ±	$\text{Cl}^-$ ±	$\text{SO}_4^{2-}$ ±	$\text{o-PO}_4^{3-}$ ±	Boron ±	DOC ±	total-P (as $\text{PO}_4^{3-}$ ) ±	KMnO <sub>4</sub> - Index ±
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.0006		0.2	0.11	0.001	0.0010	0.04	0.001	0.14
IFA result	0.0019		0.5	0.35	0.003	0.0015	0.08	0.029	0.26
Stability test	0.0019		0.5	0.35	0.004	0.0016	0.08	0.029	0.24
A					0.004			0.004	
B									
C	0.002		0.6	0.3	0.002		0.04	0.005	0.05
D					0.0041		0.089		
E	0.004		0.7	0.6	0.01		0.4	0.02	
F	0.0110		1.391	0.532	0.0150		0.37	0.034	
G	0.01	0.01	1	1		0.01	0.3	0.02	0.2
H	0.0032		0.548	0.475	0.0099	0.0018	0.17	0.0193	0.240
I	0.0012	0.00047	1.0	0.78	0.0032	1.5	0.22		0.97
J		0.0059	1.48	1.60				0.031	
K									
L	0.0003		0.058	0.020	0.0005	0.001	0.021	0.001	0.007
M	0.0041		1.05	0.91	0.0083	0.002	0.22	0.014	0.14
N	0.003		0.51	0.44			0.35		
O									
P	0.007		1.1	0.9		0.003	0.5	0.02	0.2
Q			2.31	1.64		0.0174			
R									
S	0.0050		0.6	0.45	0.009	0.0023	0.19	0.013	
T	0.004		0.95	0.75	0.01	0.002	0.18	0.01	0.13
U	0.0004		0.44	0.06	0.0018		0.08	0.0026	
V	0.0101		1.44	0.85		0.0017	0.37		
W	0.01		0.7	0.27	0.0061	0.002	0.33	0.009	0.20
X	0.0016	0.0030	0.2	2	0.0020		0.2	0.0050	
Y					0.0023				
Z	0.002		0.5		0.004				
AA	0.0045		1.1	0.9	0.014		0.44	0.018	0.20
AB	0.004		1.01	0.87	0.008	0.002	0.21	0.011	
AC			0.80	0.78					0.38
AD	0.004		0.7	0.6	0.005		0.07	0.003	0.17
AE									
AF	0.002		0.2	0.2	0.002				
AG									
AH	0.004		1.1	1.0	0.008		0.21	0.012	
AI	0.0039		0.5	0.86	0.0015	0.0027			
AJ	0.0061		1.09	1.48	0.04		0.37	0.0017	
AK	0.005		1.1	1.0	0.011	0.0029	0.47	0.020	
AL	0.0040		1.1	0.87	0.0083	0.0014	0.19	0.018	0.30
AM	0.0046		1.55	0.559	0.01	0.002	0.37	0.016	0.2
AN	0.0039	0.0012	0.11		0.011			0.019	
AO	0.015	0.080	0.25	3.0	0.07	0.07	0.03		
AP					0.002			0.002	
AQ			1.57	1.39			0.26		
AR	0.003								
AS	0.004		0.8	0.6	0.013	0.0010	0.29	0.021	0.2
AT									

## Results Sample N154B

	pH	Cond.	total-Hardn.	K <sub>S 4.3</sub>	HCO <sub>3</sub> <sup>-</sup>	Ca <sup>2+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	K <sup>+</sup>	NO <sub>3</sub> <sup>-</sup>
Unit		µS/cm	mmol/L	mmol/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value		622	2.11	4.58	277	63.6	12.8	48.8	8.11	25.4
IFA result	6.37	626	2.12	4.49	271	63.7	12.9	49.0	7.65	24.8
Stability test	7.00	628		4.50	271			49.8	8.04	25.1
A										24.28
B	6.37	630	2.11	4.54	276.1	63.8	12.6	48.83	8.18	24.5
C	6.63	640	2.129	4.47	270	63.9	13.0	49.2	9.06	25.6
D		623								
E	6.4	620	2.14	4.50	272	64.5	12.8	48.9	8.06	26.2
F	6.44	624								24.79
G	6.4	622	2.17	4.50	275	65.1	13.2	48.5	8.45	24.9
H	6.3	619	2.11	4.44	270.9	63.69	12.67	47.96	8.04	24.821
I	7.90	620	1.63	4.60	281	44.4	12.6	50.3	7.84	22.7
J						62.96	12.60	47.47	8.34	25.31
K	6.93	406		4.46		67.8	12.2	46.8	7.95	24.8
L	6.63	612	2.17	4.47	269	66.6	12.4	46.3	7.64	25.2
M	6.4	612	2.100	4.62	279	67.2	12.9	47.7	7.95	25.0
N	6.74	621	11.73	4.55	274.4	63.05	12.67	47.76	8.21	25.10
O		614	2.12	4.68	285.6	65.45	13.45	49.04	8.59	26.37
P	6.70	626	2.17	4.35	261	65.3	13.3	47.4	8.28	25.0
Q	6.6	625				67	12.9	40.9	7.7	24.9
R						62.57	12.67	47.4	8.117	23.45
S	7.00	619	2.13	4.52	273	63.3	13.1	48.7	8.00	25.8
T	6.7	614	2.05	4.51	272	62	12.5	47.6	8.0	24.5
U		631	2.07	4.49	271	63.9	11.6	49.0	8.15	25.2
V	6.5	622	2.068	4.576	276	62.0	12.7	49.4	8.31	25.7
W	6.47	624	2.02	4.49	274	60.4	12.4	50.5	7.98	23.8
X	6.90	623	2.13	4.66	284	62.7	12.6	48.4	8.18	25.6
Y										
Z	6.32	638	2.15	4.47	273	64.1	13.3	48.8	8.15	25.0
AA		628	12.1	4.53	273	65	12.8	48.6	8.1	24.5
AB	6.57	623	2.114	4.53	273.32	63.46	12.91	46.97	7.95	24.45
AC										24.61
AD	6.63	618.50	2.075	4.51	272.00	63.65	11.83	49.87	7.65	25.19
AE	6.33	625	11.5	4.41	269.08	65.0	10.04			25.4
AF										24.540
AG	6.31	631								
AH	6.5	625	2.11	4.50	274.6	62.3	13.4	49.6	8.43	25.8
AI	6.26	628	2.13	4.55		64.0	12.9	47.2	7.78	25.6
AJ	6.44	623	2.14	4.51	275.1	60.5	12.5	43.3	6.83	24.8
AK	6.5	620	2.09	4.44	267.8	62.9	12.5	48.2	7.8	25.0
AL	6.58	622	2.18	4.47	272	66.0	12.9	48.3	7.78	25.1
AM	6.04	614	2.09	4.39	270	62.6	12.8	48.8	8.3	25.034
AN	6.32	619		4.51	272					24.3
AO	6.39	624	2.15	4.52		65.0	12.95	48.3	9.20	25.7
AP										
AQ	6.50	627		4.61		63.36	12.92	48.86	8.22	25.12
AR	6.4	614	2.13	4.31	263		12.9			27.3
AS	6.2	625	2.16	4.50	274	65	12.8	49.5	8.2	25.7
AT			2.100							

### Measurement Uncertainties Sample N154B

	pH ±	Cond. ±	total- Hardn.±	K <sub>S 4.3</sub> ±	HCO <sub>3</sub> <sup>-</sup> ±	Ca <sup>2+</sup> ±	Mg <sup>2+</sup> ±	Na <sup>+</sup> ±	K <sup>+</sup> ±	NO <sub>3</sub> <sup>-</sup> ±
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	0.8	0.1	0.5	0.06	0.4	
IFA result	0.20	19	0.11	0.22	14	3.8	0.6	3.4	0.46	1.2
Stability test	0.20	19		0.23	14			3.5	0.48	1.3
A										3.82
B										
C	0.2	2.9		0.03	1.6	1.3	0.2	0.6	0.09	0.4
D		31								
E	0.3	25	0.1	0.2	9	6	1.6	8	1.1	3
F	0.64	31								1.098
G	0.1	3	0.15	0.10	5	2	1	2	1	2
H	0.38	24.8		0.666	40.64	6.369	1.267	4.796	0.804	0.9928
I	0.79	62	0.16	0.46	28	4.4	1.3	5.0	0.78	2.3
J						5.67	1.13	4.27	0.58	4.56
K										
L	0.061	2.517	0.038	0.006	0.577	1.527	0.266	0.936	0.015	0.058
M	0.16	15.3	0.210	0.116	6.98	6.72	0.13	4.77	0.80	2.5
N	0.27	14	0.47	0.10	5.8	2.46	0.60	2.29	0.53	1.68
O										
P	0.4	30	0.3	0.5	13	7	2	5	1	3
Q	0.0283	15.3				6.9	1.78	4.17	1.18	2.37
R										
S	0.30	19	0.23	0.22	13	5.7	1.2	3.9	0.64	2.3
T	0.27	25	0.18	0.18	11	5.5	1.1	4.3	0.72	2.2
U		0.1	0.063	0.14	5.4	1.47	1.25	0.49	0.192	0.29
V	0.2	14.9		0.307		4.28	1.66	4.69	0.85	2.67
W	0.10	19	0.17	0.22	13.2	2.8	1.0	3.6	0.57	0.8
X	0.05	2	0.1	0.1	6.1	1.0	0.2	0.2	0.1	0.1
Y										
Z	0.013	5.7	0.22	0.18	11	6.3	1.5	4.4	0.76	1.2
AA		31.4	1.2	1.13	68	6.5	1.3	4.9	0.8	2.5
AB	0.1	4.51		0.45		6.3	1.2	4.7	0.8	2.5
AC										1.48
AD	0.09	15	0.11	0.04	3	3	0.6	3	0.4	1.3
AE										
AF										0.1
AG										
AH	0.1	10	0.2	0.45	27	6.3	1.4	5.0	0.85	2.6
AI	0.10	19	0.11	0.23		6.4	1.3	2.4	0.78	1.3
AJ	0.03	6	0.19	0.405	24.8	6.05	1.25	4.33	0.68	2.48
AK	0.2	25	0.11	0.30	18.6	3.0	0.8	2.6	0.3	1.6
AL	0.20	62	0.22	0.45	27	6.6	1.29	4.83	0.78	2.5
AM	0.32	52.2	0.25	0.19	12	6.2	1.3	4.8	0.83	2.579
AN	0.04	4.38		0.13	3.93					1.66
AO	0.02	30	0.05	0.02		0.6	0.6	0.3	0.06	0.5
AP										
AQ	0.22	58		0.47		6.34	1.29	5.86	1.23	5.49
AR	0.2	50	0.2	0.4	20		1.3			2.5
AS	0.1	13	0.22	0.3	22	3	0.8	2.0	0.7	1.8
AT										

## Results Sample N154B

	<b>NO<sub>2</sub><sup>-</sup></b>	<b>NH<sub>4</sub><sup>+</sup></b>	<b>Cl<sup>-</sup></b>	<b>SO<sub>4</sub><sup>2-</sup></b>	<b>o-PO<sub>4</sub><sup>3-</sup></b>	<b>Boron</b>	<b>DOC</b>	<b>total-P (as PO<sub>4</sub><sup>3-</sup>)</b>	<b>KMnO<sub>4</sub>- Index</b>
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.0101	0.0313	24.2	41.1	<0.009	0.0406	7.28	<0.009	4.57
IFA result	0.0096	0.0326	24.1	41.4	<0.009	0.0396	7.33	<0.009	4.77
Stability test	0.0095	0.0315	24.3	41.3	<0.009	0.0424	7.31	<0.009	4.74
A		0.0328			<0.019			<0.020	
B	0.0080	<0.005	23.85	39.68	<0.009		7.43	<0.009	4.44
C	0.0113	0.0331	24.2	41.5	<0.01	0.0382	7.20	<0.03	4.01
D					<0.009		7.20		
E	<0.01	0.0310	24.7	41.4	<0.01		7.54	<0.013	
F	<0.0160	0.0359	23.89	41.85	<0.0150		7.26	0.109	
G	0.0100	0.0352	25.0	40.2		0.0400	7.44	0.0190	4.40
H	0.0130	0.0190	24.34	43.49	0.0060	0.0430	7.4	<0.005	4.68
I	0.00190	0.0280	20.6	38.2	0.00150	38.5	7.42	<0.5	22.0
J		0.0676	24.59	40.93					
K	<0.01	0.0400	24.2	42.2	<0.02		7.12		3.89
L	<0.010	0.0296	24.3	42.4	<0.015	0.0401	7.96	<0.015	4.54
M	0.0100	0.0320	24.4	42.3	<0.006	0.0480	7.14	<0.050	4.78
N	0.0130	0.078	24.50	40.98			7.33		
O			25.61	37.99					
P	<0.005	0.0300	24.0	41.0	<0.1	0.0380	7.53	<0.031	4.47
Q			23.9	41.0		0.053			
R	0.0100	0.0257	24.39	36.68		0.0394			
S	0.0124	0.0334	25.0	41.9	<0.006	0.0458	7.32	<0.006	
T	0.0132	0.0407	23.8	40.3	0.0101	0.0420	7.3	<0.050	4.75
U	<0.0100	0.0362	24.5	38.6	[0.002]	0.039	7.38	<0.0150	
V	0.0103	<0.05	24.3	42.3		0.0405	7.45	<0.030	
W	0.0623	0.0314	23.4	38.5	<0.015	0.0420	7.34	<0.015	4.53
X	0.0115	0.0285	24.1	41.1	0.0067		7.98	<0.0092	
Y						0.0454			
Z	0.0095	<0.025	24.9	40.8	<0.03				
AA	0.0110	0.0330	23.8	41.0	<0.020	0.0460	7.8	<0.015	4.51
AB	0.0101	0.0310	24.04	40.77	<0.0055	0.0451	7.29	<0.0010	
AC			23.59	40.06					4.53
AD	0.01	0.04	24.26	39.84	<0.01		7.32	<0.01	4.46
AE	<0.05	<0.05	25.8	<40	<0.15				
AF	0.0200		24.165	40.260	<0.010				
AG									
AH	0.0100	0.0320	24.1	42.6	<0.005		7.36	0.005	
AI	0.0099	0.0293	24.6	41.4	<0.01	0.0357			
AJ	0.0106	n.a	24.5	44.6	<0.020	n.n	7.26	0.129	
AK	0.0110	0.0330	24.5	41.4	<0.010	0.0385	7.18	<0.010	
AL	0.0112	0.0373	24.6	40.8	<0.008	0.0388	7.47	<0.015	4.63
AM	0.0120	0.0240	23.836	41.150	<0.015	0.0389	7.405	<0.015	5.01
AN	0.0105	0.0348	24.3		<0.006			<0.006	
AO	0.0090	0.050	24.98	42.14	<0.050	<0.050	7.00		
AP					<0.01			<0.01	
AQ		0.0517	24.49	41.79	<0.13		7.45		
AR	0.0080	0.0331							
AS	0.0090	0.0320	23.7	41.6	<0.009	0.0380	7.5	<0.009	4.80
AT	0.0163					0.0500			

### Measurement Uncertainties Sample N154B

	$\text{NO}_2^-$ ±	$\text{NH}_4^+$ ±	$\text{Cl}^-$ ±	$\text{SO}_4^{2-}$ ±	$\text{o-PO}_4^{3-}$ ±	Boron ±	DOC ±	total-P (as $\text{PO}_4^{3-}$ ) ±	KMnO <sub>4</sub> - Index ±
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Target value	0.0005	0.0050	0.5	0.5		0.0003	0.05		0.13
IFA result	0.0005	0.0023	1.2	1.7		0.0040	0.29		0.86
Stability test	0.0005	0.0022	1.2	1.7		0.0042	0.29		0.85
A		0.002							
B									
C	0.001	0.001	0.3	0.5		0.0027	0.02		0.3
D					0.0018		0.36		
E		0.005	2	3			1.2		
F		0.0080	3.124	2.548			1.31	0.013	
G	0.01	0.01	2	2		0.01	0.5	0.01	0.4
H	0.0011	0.0019	1.217	2.175	0.0007	0.0052	0.59		0.749
I	0.00019	0.0028	2.1	3.8	0.00015	3.9	0.74		2.2
J		0.0095	3.20	7.37					
K									
L		0.0004	0.115	0.404		0.001	0.040		0.010
M	0.0010	0.003	2.44	4.23		0.005	0.71		0.48
N	0.001	0.013	1.15	2.05			1.28		
O									
P		0.01	3	4		0.008	0.8		0.5
Q			5.5	8.4		0.0091			
R									
S	0.0024	0.0050	1.3	2.1		0.0068	0.66		
T	0.001	0.004	2.1	3.6	0.001	0.01	0.66		0.43
U		0.0023	0.35	1.26		0.001	0.09		
V	0.0025		3.40	4.02		0.0045	1.38		
W	0.0063	0.0022	1.6	1.3		0.0052	1.17		0.68
X	0.0016	0.0030	0.2	2	0.0020		0.2	0.0050	
Y						0.0062			
Z	0.0005		1.2	1.8					
AA	0.0011	0.0083	2.4	4.1		0.0046	1.6		0.45
AB	0.001	0.003	2.40	4.07		0.005	0.73		
AC			1.72	3.41					1.09
AD	0.004	0.001	1.3	2			0.06		0.17
AE									
AF	0.002		0.4	0.3	0.002				
AG									
AH	0.001	0.003	2.5	4.5			0.74		
AI	0.0001	0.0035	1.2	4.1		0.0071			
AJ	0.0016		2.45	8.92	0.04		1.45	0.026	
AK	0.003	0.0074	2.1	3.9		0.0056	1.30		
AL	0.0011	0.0037	2.5	4.1		0.0039	0.75		0.93
AM	0.0012	0.0028	3.15	2.058		0.004	1.34		0.5
AN	0.0010	0.0053	0.25		0			0	
AO	0.015	0.080	0.25	3.0	0.07	0.07	0.03		
AP					0.002			0.002	
AQ		0.0068	3.55	6.48			0.96		
AR	0.001	0.003							
AS	0.001	0.0100	1.9	2.5		0.0027	1.1		0.5
AT									

## Sample N154A

### Parameter Conductivity

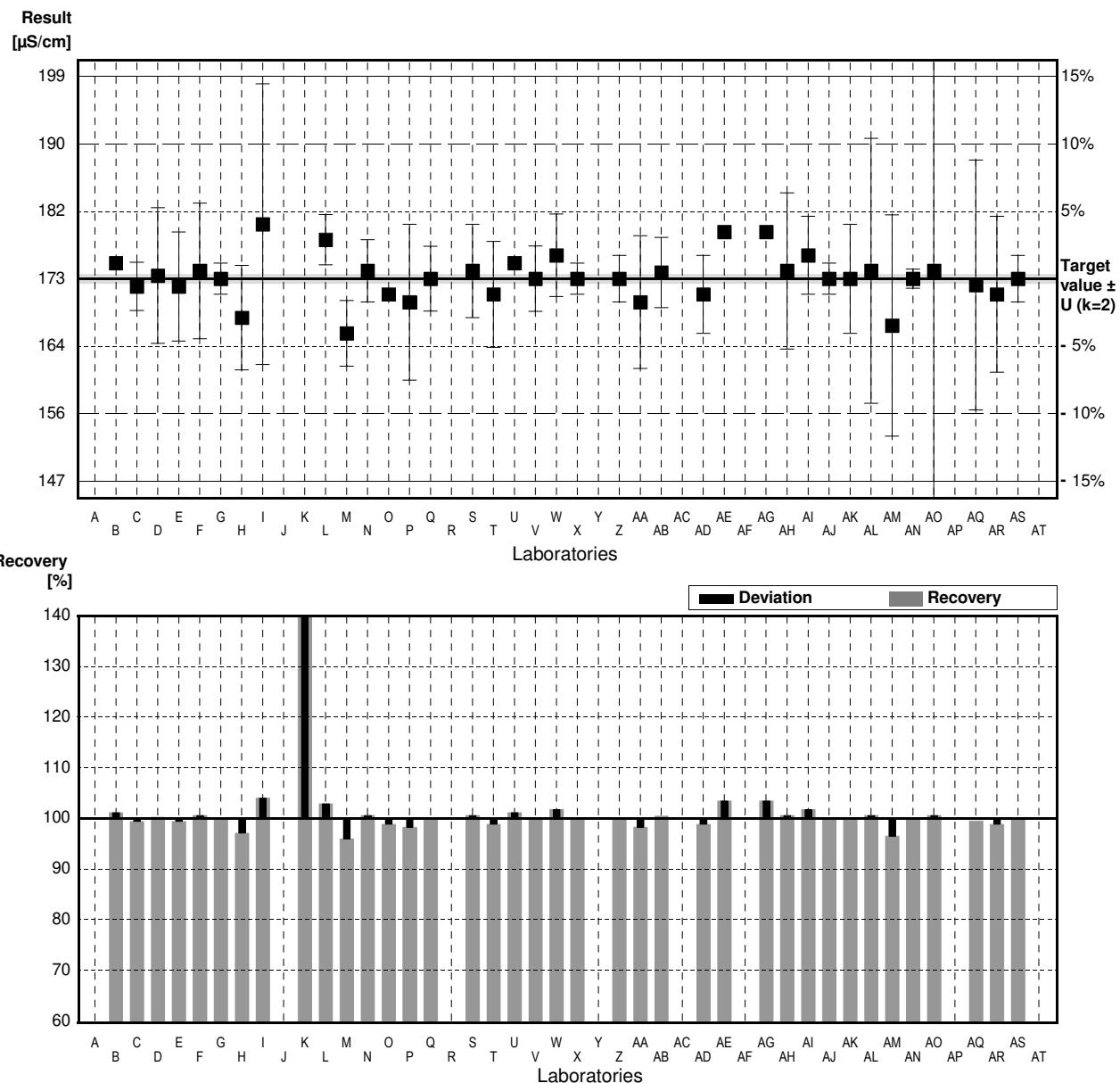
Target value  $\pm U$  ( $k=2$ ) 173  $\mu\text{S}/\text{cm}$   $\pm$  1  $\mu\text{S}/\text{cm}$

IFA result  $\pm U$  ( $k=2$ ) 173  $\mu\text{S}/\text{cm}$   $\pm$  5  $\mu\text{S}/\text{cm}$

Stability test  $\pm U$  ( $k=2$ ) 174  $\mu\text{S}/\text{cm}$   $\pm$  5  $\mu\text{S}/\text{cm}$

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			$\mu\text{S}/\text{cm}$		
B	175		$\mu\text{S}/\text{cm}$	101%	0.89
C	172	3.1	$\mu\text{S}/\text{cm}$	99%	-0.44
D	173.4	8.7	$\mu\text{S}/\text{cm}$	100%	0.18
E	172	7	$\mu\text{S}/\text{cm}$	99%	-0.44
F	174	8.7	$\mu\text{S}/\text{cm}$	101%	0.44
G	173	2	$\mu\text{S}/\text{cm}$	100%	0.00
H	168 *	6.7	$\mu\text{S}/\text{cm}$	97%	-2.22
I	180 *	18	$\mu\text{S}/\text{cm}$	104%	3.11
J			$\mu\text{S}/\text{cm}$		
K	624 *		$\mu\text{S}/\text{cm}$	361%	200.53
L	178 *	3.215	$\mu\text{S}/\text{cm}$	103%	2.22
M	166 *	4.2	$\mu\text{S}/\text{cm}$	96%	-3.11
N	174	4	$\mu\text{S}/\text{cm}$	101%	0.44
O	171		$\mu\text{S}/\text{cm}$	99%	-0.89
P	170	10	$\mu\text{S}/\text{cm}$	98%	-1.33
Q	173	4.15	$\mu\text{S}/\text{cm}$	100%	0.00
R			$\mu\text{S}/\text{cm}$		
S	174	6	$\mu\text{S}/\text{cm}$	101%	0.44
T	171	6.8	$\mu\text{S}/\text{cm}$	99%	-0.89
U	175	0.2	$\mu\text{S}/\text{cm}$	101%	0.89
V	173	4.2	$\mu\text{S}/\text{cm}$	100%	0.00
W	176	5.3	$\mu\text{S}/\text{cm}$	102%	1.33
X	173	2	$\mu\text{S}/\text{cm}$	100%	0.00
Y			$\mu\text{S}/\text{cm}$		
Z	173	3	$\mu\text{S}/\text{cm}$	100%	0.00
AA	170	8.5	$\mu\text{S}/\text{cm}$	98%	-1.33
AB	173.8	4.51	$\mu\text{S}/\text{cm}$	100%	0.36
AC			$\mu\text{S}/\text{cm}$		
AD	171.00	5	$\mu\text{S}/\text{cm}$	99%	-0.89
AE	179 *		$\mu\text{S}/\text{cm}$	103%	2.67
AF			$\mu\text{S}/\text{cm}$		
AG	179.0 *		$\mu\text{S}/\text{cm}$	103%	2.67
AH	174	10	$\mu\text{S}/\text{cm}$	101%	0.44
AI	176	5	$\mu\text{S}/\text{cm}$	102%	1.33
AJ	173	2	$\mu\text{S}/\text{cm}$	100%	0.00
AK	173	7	$\mu\text{S}/\text{cm}$	100%	0.00
AL	174	17	$\mu\text{S}/\text{cm}$	101%	0.44
AM	167 *	14.2	$\mu\text{S}/\text{cm}$	97%	-2.67
AN	173	1.23	$\mu\text{S}/\text{cm}$	100%	0.00
AO	174	30	$\mu\text{S}/\text{cm}$	101%	0.44
AP			$\mu\text{S}/\text{cm}$		
AQ	172.2	16.0	$\mu\text{S}/\text{cm}$	100%	-0.36
AR	171	10	$\mu\text{S}/\text{cm}$	99%	-0.89
AS	173	3	$\mu\text{S}/\text{cm}$	100%	0.00
AT			$\mu\text{S}/\text{cm}$		

	All results	Outliers excl.	Unit
Mean $\pm \text{CI}(99\%)$	185 $\pm 32$	173 $\pm 1$	$\mu\text{S}/\text{cm}$
Recov. $\pm \text{CI}(99\%)$	107.0 $\pm 18.7$	100.0 $\pm 0.5$	%
SD between labs	73	2	$\mu\text{S}/\text{cm}$
RSD between labs	39.6	0.9	%
n for calculation	38	30	



## Sample N154B

### Parameter Conductivity

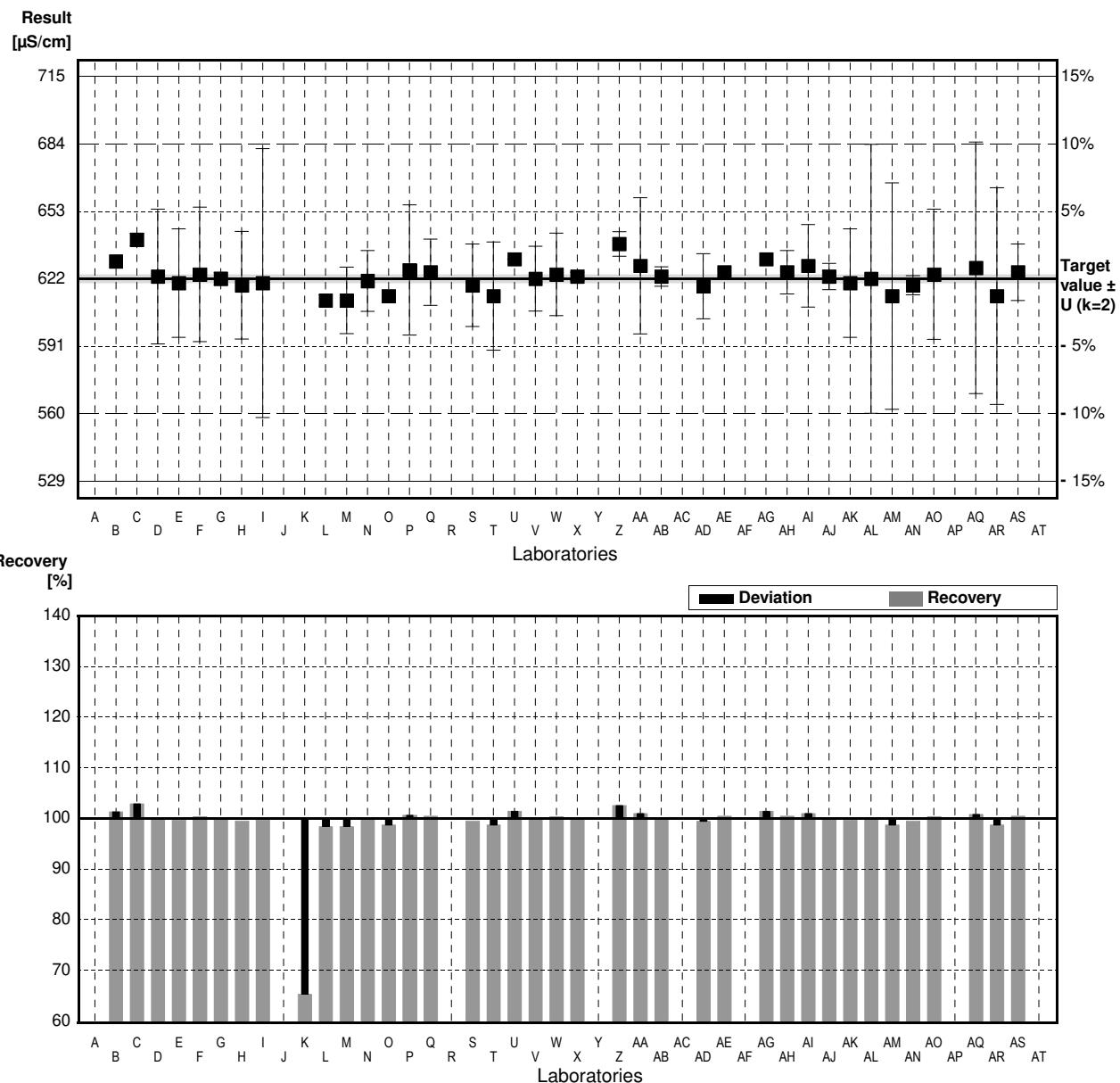
Target value  $\pm U$  ( $k=2$ ) 622  $\mu\text{S}/\text{cm}$   $\pm$  2  $\mu\text{S}/\text{cm}$

IFA result  $\pm U$  ( $k=2$ ) 626  $\mu\text{S}/\text{cm}$   $\pm$  19  $\mu\text{S}/\text{cm}$

Stability test  $\pm U$  ( $k=2$ ) 628  $\mu\text{S}/\text{cm}$   $\pm$  19  $\mu\text{S}/\text{cm}$

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			$\mu\text{S}/\text{cm}$		
B	630	*	$\mu\text{S}/\text{cm}$	101%	0.99
C	640	*	$\mu\text{S}/\text{cm}$	103%	2.23
D	623	31	$\mu\text{S}/\text{cm}$	100%	0.12
E	620	25	$\mu\text{S}/\text{cm}$	100%	-0.25
F	624	31	$\mu\text{S}/\text{cm}$	100%	0.25
G	622	3	$\mu\text{S}/\text{cm}$	100%	0.00
H	619	24.8	$\mu\text{S}/\text{cm}$	100%	-0.37
I	620	62	$\mu\text{S}/\text{cm}$	100%	-0.25
J			$\mu\text{S}/\text{cm}$		
K	406	*	$\mu\text{S}/\text{cm}$	65%	-26.71
L	612	2.517	$\mu\text{S}/\text{cm}$	98%	-1.24
M	612	15.3	$\mu\text{S}/\text{cm}$	98%	-1.24
N	621	14	$\mu\text{S}/\text{cm}$	100%	-0.12
O	614		$\mu\text{S}/\text{cm}$	99%	-0.99
P	626	30	$\mu\text{S}/\text{cm}$	101%	0.49
Q	625	15.3	$\mu\text{S}/\text{cm}$	100%	0.37
R			$\mu\text{S}/\text{cm}$		
S	619	19	$\mu\text{S}/\text{cm}$	100%	-0.37
T	614	25	$\mu\text{S}/\text{cm}$	99%	-0.99
U	631	0.1	$\mu\text{S}/\text{cm}$	101%	1.11
V	622	14.9	$\mu\text{S}/\text{cm}$	100%	0.00
W	624	19	$\mu\text{S}/\text{cm}$	100%	0.25
X	623	2	$\mu\text{S}/\text{cm}$	100%	0.12
Y			$\mu\text{S}/\text{cm}$		
Z	638	5.7	$\mu\text{S}/\text{cm}$	103%	1.98
AA	628	31.4	$\mu\text{S}/\text{cm}$	101%	0.74
AB	623	4.51	$\mu\text{S}/\text{cm}$	100%	0.12
AC			$\mu\text{S}/\text{cm}$		
AD	618.50	15	$\mu\text{S}/\text{cm}$	99%	-0.43
AE	625		$\mu\text{S}/\text{cm}$	100%	0.37
AF			$\mu\text{S}/\text{cm}$		
AG	631		$\mu\text{S}/\text{cm}$	101%	1.11
AH	625	10	$\mu\text{S}/\text{cm}$	100%	0.37
AI	628	19	$\mu\text{S}/\text{cm}$	101%	0.74
AJ	623	6	$\mu\text{S}/\text{cm}$	100%	0.12
AK	620	25	$\mu\text{S}/\text{cm}$	100%	-0.25
AL	622	62	$\mu\text{S}/\text{cm}$	100%	0.00
AM	614	52.2	$\mu\text{S}/\text{cm}$	99%	-0.99
AN	619	4.38	$\mu\text{S}/\text{cm}$	100%	-0.37
AO	624	30	$\mu\text{S}/\text{cm}$	100%	0.25
AP			$\mu\text{S}/\text{cm}$		
AQ	627	58	$\mu\text{S}/\text{cm}$	101%	0.62
AR	614	50	$\mu\text{S}/\text{cm}$	99%	-0.99
AS	625	13	$\mu\text{S}/\text{cm}$	100%	0.37
AT			$\mu\text{S}/\text{cm}$		

	All results	Outliers excl.	Unit
Mean $\pm \text{CI}(99\%)$	617 $\pm 16$	622 $\pm 3$	$\mu\text{S}/\text{cm}$
Recov. $\pm \text{CI}(99\%)$	99.2 $\pm 2.5$	100.1 $\pm 0.4$	%
SD between labs	36	6	$\mu\text{S}/\text{cm}$
RSD between labs	5.8	0.9	%
n for calculation	38	36	



## Sample N154A

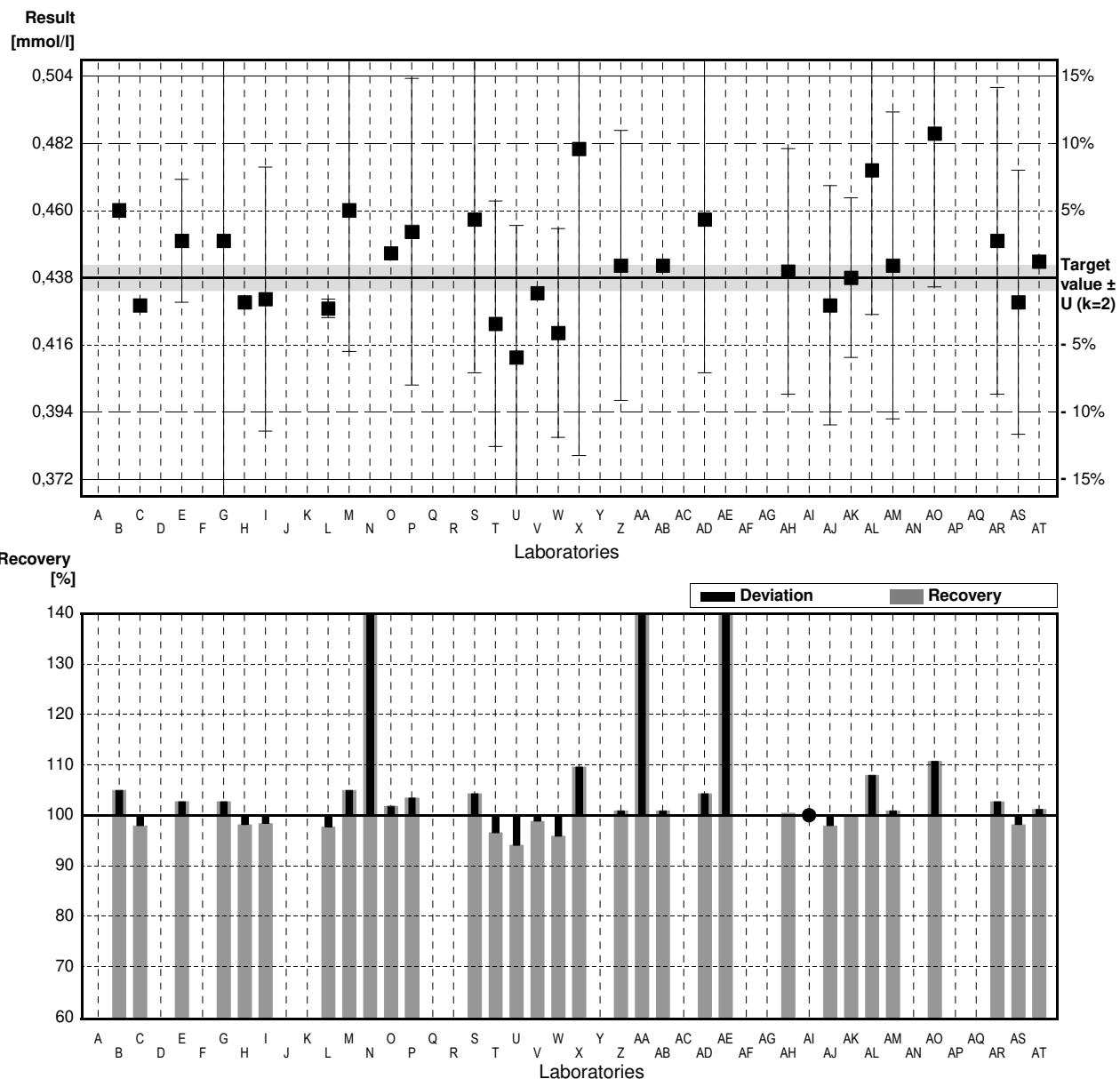
### Parameter Total hardness

Target value  $\pm U$  ( $k=2$ ) 0.438 mmol/l  $\pm$  0,004 mmol/l  
 IFA result  $\pm U$  ( $k=2$ ) 0.458 mmol/l  $\pm$  0,023 mmol/l

### Stability test mmol/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mmol/l		
B	0.460		mmol/l	105%	1,79
C	0.429		mmol/l	98%	-0.73
D			mmol/l		
E	0.450	0.02	mmol/l	103%	0.98
F			mmol/l		
G	0.450	0.1	mmol/l	103%	0.98
H	0.430		mmol/l	98%	-0.65
I	0.431	0.043	mmol/l	98%	-0.57
J			mmol/l		
K			mmol/l		
L	0.428	0.003	mmol/l	98%	-0.82
M	0.460	0.046	mmol/l	105%	1,79
N	2.39 *	0.10	mmol/l	546%	159.17
O	0.446		mmol/l	102%	0.65
P	0.453	0.05	mmol/l	103%	1.22
Q			mmol/l		
R			mmol/l		
S	0.457	0.05	mmol/l	104%	1.55
T	0.423	0.04	mmol/l	97%	-1.22
U	0.412	0.043	mmol/l	94%	-2.12
V	0.433		mmol/l	99%	-0.41
W	0.420	0.034	mmol/l	96%	-1.47
X	0.480	0.1	mmol/l	110%	3.42
Y			mmol/l		
Z	0.442	0.044	mmol/l	101%	0.33
AA	2.42 *	0.24	mmol/l	553%	161.61
AB	0.442		mmol/l	101%	0.33
AC			mmol/l		
AD	0.457	0.05	mmol/l	104%	1.55
AE	2.22 *		mmol/l	507%	145.30
AF			mmol/l		
AG			mmol/l		
AH	0.440	0.04	mmol/l	100%	0.16
AI	<1.2	0.06	mmol/l	*	
AJ	0.429	0.039	mmol/l	98%	-0.73
AK	0.438	0.026	mmol/l	100%	0.00
AL	0.473	0.047	mmol/l	108%	2.85
AM	0.442	0.05	mmol/l	101%	0.33
AN			mmol/l		
AO	0.485	0.05	mmol/l	111%	3.83
AP			mmol/l		
AQ			mmol/l		
AR	0.450	0.05	mmol/l	103%	0.98
AS	0.430	0.043	mmol/l	98%	-0.65
AT	0.4433		mmol/l	101%	0.43

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,628 $\pm$ 0,282	0,444 $\pm$ 0,009	mmol/l
Recov. $\pm$ CI(99%)	143,3 $\pm$ 64,5	101,4 $\pm$ 2,1	%
SD between labs	0,572	0,018	mmol/l
RSD between labs	91,1	4,0	%
n for calculation	31	28	



## Sample N154B

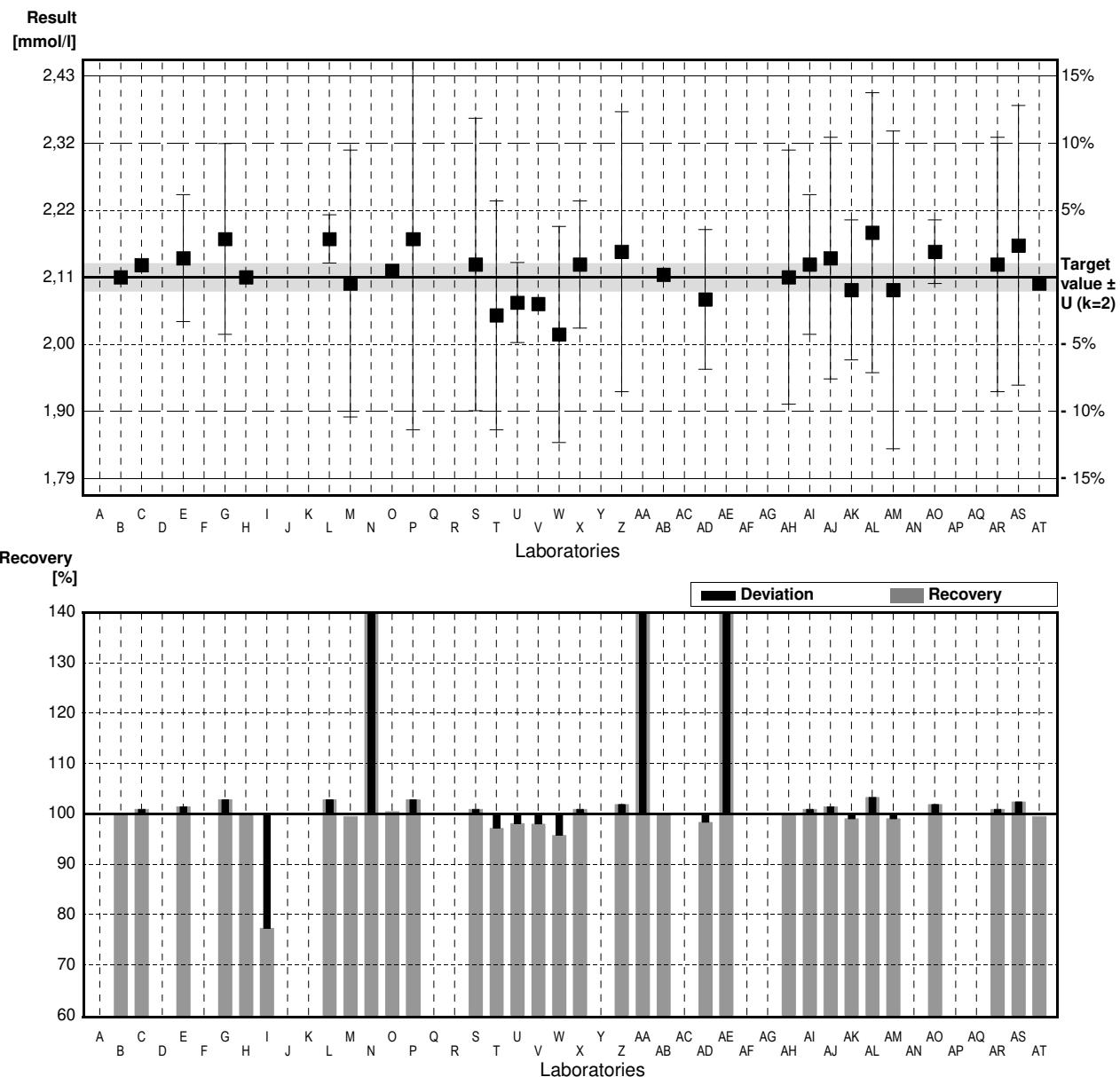
### Parameter Total hardness

Target value  $\pm U$  ( $k=2$ ) 2,11 mmol/l  $\pm$  0,02 mmol/l  
 IFA result  $\pm U$  ( $k=2$ ) 2,12 mmol/l  $\pm$  0,11 mmol/l

### Stability test mmol/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mmol/l		
B	2,11		mmol/l	100%	0,00
C	2,129		mmol/l	101%	0,32
D			mmol/l		
E	2,14	0,1	mmol/l	101%	0,51
F			mmol/l		
G	2,17	0,15	mmol/l	103%	1,02
H	2,11		mmol/l	100%	0,00
I	1,63 *	0,16	mmol/l	77%	-8,12
J			mmol/l		
K			mmol/l		
L	2,17	0,038	mmol/l	103%	1,02
M	2,100	0,210	mmol/l	100%	-0,17
N	11,73 *	0,47	mmol/l	556%	162,83
O	2,12		mmol/l	100%	0,17
P	2,17	0,3	mmol/l	103%	1,02
Q			mmol/l		
R			mmol/l		
S	2,13	0,23	mmol/l	101%	0,34
T	2,05	0,18	mmol/l	97%	-1,02
U	2,07	0,063	mmol/l	98%	-0,68
V	2,068		mmol/l	98%	-0,71
W	2,02	0,17	mmol/l	96%	-1,52
X	2,13	0,1	mmol/l	101%	0,34
Y			mmol/l		
Z	2,15	0,22	mmol/l	102%	0,68
AA	12,1 *	1,2	mmol/l	573%	169,09
AB	2,114		mmol/l	100%	0,07
AC			mmol/l		
AD	2,075	0,11	mmol/l	98%	-0,59
AE	11,5 *		mmol/l	545%	158,94
AF			mmol/l		
AG			mmol/l		
AH	2,11	0,2	mmol/l	100%	0,00
AI	2,13	0,11	mmol/l	101%	0,34
AJ	2,14	0,19	mmol/l	101%	0,51
AK	2,09	0,11	mmol/l	99%	-0,34
AL	2,18	0,22	mmol/l	103%	1,18
AM	2,09	0,25	mmol/l	99%	-0,34
AN			mmol/l		
AO	2,15	0,05	mmol/l	102%	0,68
AP			mmol/l		
AQ			mmol/l		
AR	2,13	0,2	mmol/l	101%	0,34
AS	2,16	0,22	mmol/l	102%	0,85
AT	2,100		mmol/l	100%	-0,17

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	3,01 $\pm$ 1,39	2,12 $\pm$ 0,02	mmol/l
Recov. $\pm$ CI(99%)	142,6 $\pm$ 66,1	100,4 $\pm$ 1,0	%
SD between labs	2,87	0,04	mmol/l
RSD between labs	95,3	1,8	%
n for calculation	32	28	



## Sample N154A

### Parameter Alkalinity

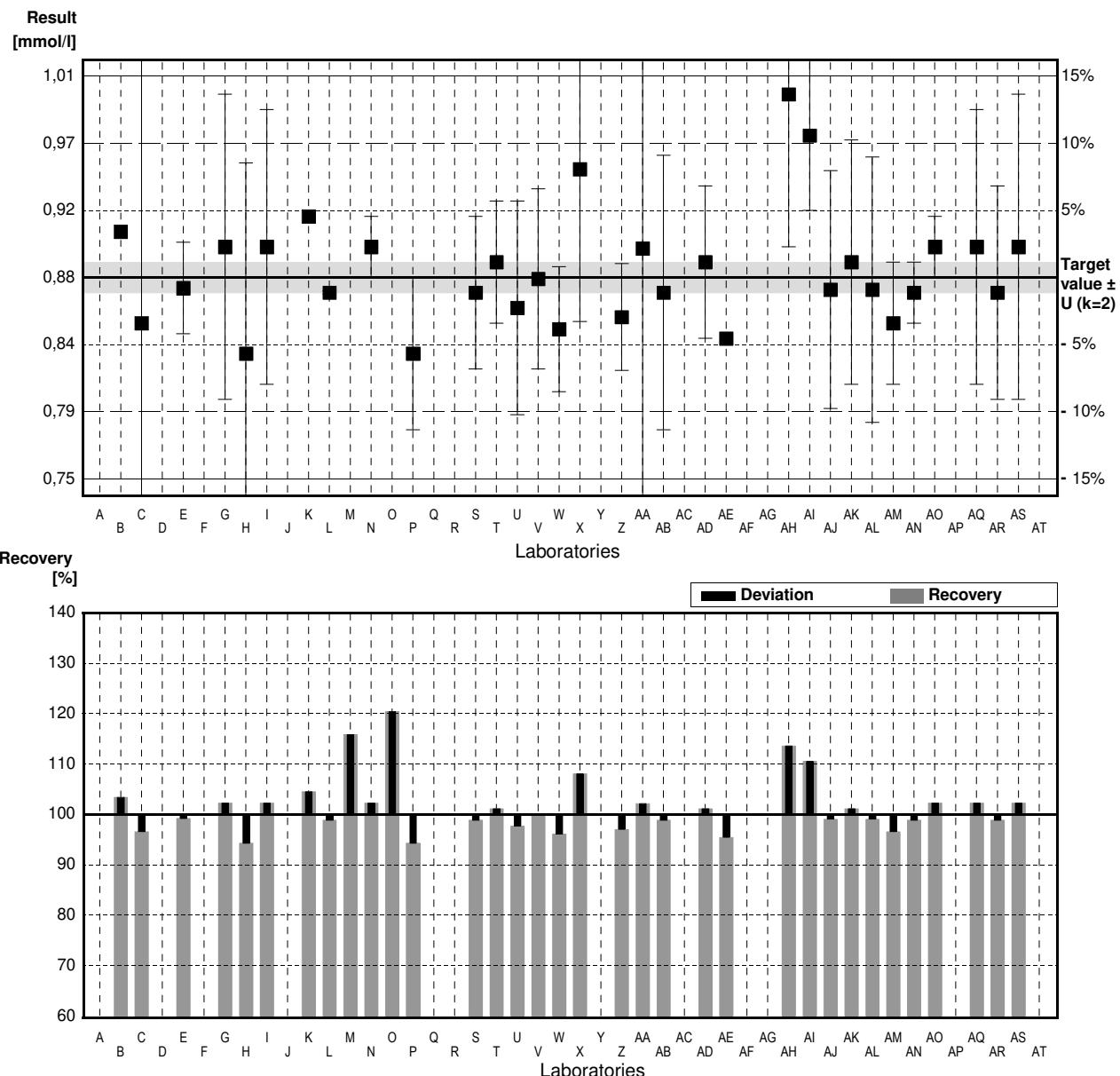
Target value  $\pm U$  ( $k=2$ ) 0.88 mmol/l  $\pm$  0.01 mmol/l

IFA result  $\pm U$  ( $k=2$ ) 0.86 mmol/l  $\pm$  0.04 mmol/l

Stability test  $\pm U$  ( $k=2$ ) 0.86 mmol/l  $\pm$  0.04 mmol/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mmol/l		
B	0.91		mmol/l	103%	1.62
C	0.85	0.2	mmol/l	97%	-1.62
D			mmol/l		
E	0.873	0.03	mmol/l	99%	-0.38
F			mmol/l		
G	0.90	0.10	mmol/l	102%	1.08
H	0.83	0.125	mmol/l	94%	-2.71
I	0.900	0.090	mmol/l	102%	1.08
J			mmol/l		
K	0.92		mmol/l	105%	2.16
L	0.870	0.001	mmol/l	99%	-0.54
M	1.02 *	0.026	mmol/l	116%	7.58
N	0.90	0.02	mmol/l	102%	1.08
O	1.06 *		mmol/l	120%	9.74
P	0.83	0.05	mmol/l	94%	-2.71
Q			mmol/l		
R			mmol/l		
S	0.87	0.05	mmol/l	99%	-0.54
T	0.89	0.04	mmol/l	101%	0.54
U	0.86	0.07	mmol/l	98%	-1.08
V	0.879	0.059	mmol/l	100%	-0.05
W	0.846	0.041	mmol/l	96%	-1.84
X	0.951	0.1	mmol/l	108%	3.84
Y			mmol/l		
Z	0.854	0.035	mmol/l	97%	-1.41
AA	0.899	0.225	mmol/l	102%	1.03
AB	0.87	0.09	mmol/l	99%	-0.54
AC			mmol/l		
AD	0.89	0.05	mmol/l	101%	0.54
AE	0.84		mmol/l	95%	-2.16
AF			mmol/l		
AG			mmol/l		
AH	1.00 *	0.1	mmol/l	114%	6.49
AI	0.973 *	0.049	mmol/l	111%	5.03
AJ	0.872	0.078	mmol/l	99%	-0.43
AK	0.89	0.08	mmol/l	101%	0.54
AL	0.872	0.087	mmol/l	99%	-0.43
AM	0.85	0.04	mmol/l	97%	-1.62
AN	0.87	0.02	mmol/l	99%	-0.54
AO	0.900	0.02	mmol/l	102%	1.08
AP			mmol/l		
AQ	0.90	0.09	mmol/l	102%	1.08
AR	0.87	0.07	mmol/l	99%	-0.54
AS	0.90	0.1	mmol/l	102%	1.08
AT			mmol/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0.89 $\pm$ 0.02	0.88 $\pm$ 0.01	mmol/l
Recov. $\pm$ CI(99%)	101.6 $\pm$ 2.8	99.8 $\pm$ 1.6	%
SD between labs	0.05	0.03	mmol/l
RSD between labs	5.8	3.1	%
n for calculation	34	30	



## Sample N154B

### Parameter Alkalinity

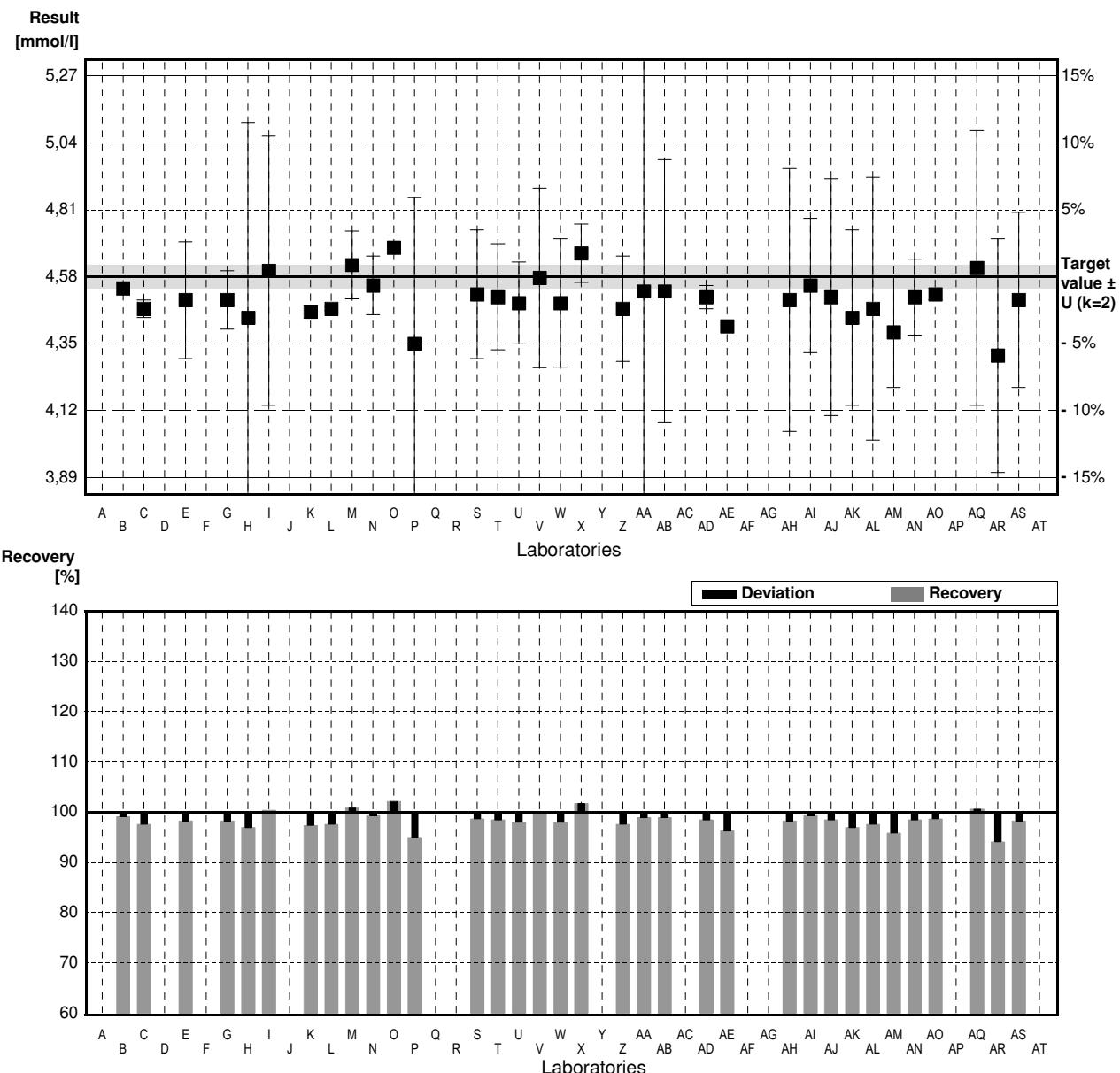
Target value  $\pm U$  ( $k=2$ ) 4,58 mmol/l  $\pm$  0,04 mmol/l

IFA result  $\pm U$  ( $k=2$ ) 4,49 mmol/l  $\pm$  0,22 mmol/l

Stability test  $\pm U$  ( $k=2$ ) 4,50 mmol/l  $\pm$  0,23 mmol/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mmol/l		
B	4,54		mmol/l	99%	-0,42
C	4,47	0,03	mmol/l	98%	-1,14
D			mmol/l		
E	4,50	0,2	mmol/l	98%	-0,83
F			mmol/l		
G	4,50	0,10	mmol/l	98%	-0,83
H	4,44	0,666	mmol/l	97%	-1,46
I	4,60	0,46	mmol/l	100%	0,21
J			mmol/l		
K	4,46		mmol/l	97%	-1,25
L	4,47	0,006	mmol/l	98%	-1,14
M	4,62	0,116	mmol/l	101%	0,42
N	4,55	0,10	mmol/l	99%	-0,31
O	4,68 *		mmol/l	102%	1,04
P	4,35	0,5	mmol/l	95%	-2,39
Q			mmol/l		
R			mmol/l		
S	4,52	0,22	mmol/l	99%	-0,62
T	4,51	0,18	mmol/l	98%	-0,73
U	4,49	0,14	mmol/l	98%	-0,94
V	4,576	0,307	mmol/l	100%	-0,04
W	4,49	0,22	mmol/l	98%	-0,94
X	4,66	0,1	mmol/l	102%	0,83
Y			mmol/l		
Z	4,47	0,18	mmol/l	98%	-1,14
AA	4,53	1,13	mmol/l	99%	-0,52
AB	4,53	0,45	mmol/l	99%	-0,52
AC			mmol/l		
AD	4,51	0,04	mmol/l	98%	-0,73
AE	4,41		mmol/l	96%	-1,77
AF			mmol/l		
AG			mmol/l		
AH	4,50	0,45	mmol/l	98%	-0,83
AI	4,55	0,23	mmol/l	99%	-0,31
AJ	4,51	0,405	mmol/l	98%	-0,73
AK	4,44	0,30	mmol/l	97%	-1,46
AL	4,47	0,45	mmol/l	98%	-1,14
AM	4,39	0,19	mmol/l	96%	-1,98
AN	4,51	0,13	mmol/l	98%	-0,73
AO	4,52	0,02	mmol/l	99%	-0,62
AP			mmol/l		
AQ	4,61	0,47	mmol/l	101%	0,31
AR	4,31 *	0,4	mmol/l	94%	-2,81
AS	4,50	0,3	mmol/l	98%	-0,83
AT			mmol/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	4,51 $\pm$ 0,04	4,51 $\pm$ 0,03	mmol/l
Recov. $\pm$ CI(99%)	98,4 $\pm$ 0,8	98,4 $\pm$ 0,7	%
SD between labs	0,08	0,07	mmol/l
RSD between labs	1,7	1,4	%
n for calculation	34	32	



## Sample N154A

### Parameter Hydrogen carbonate

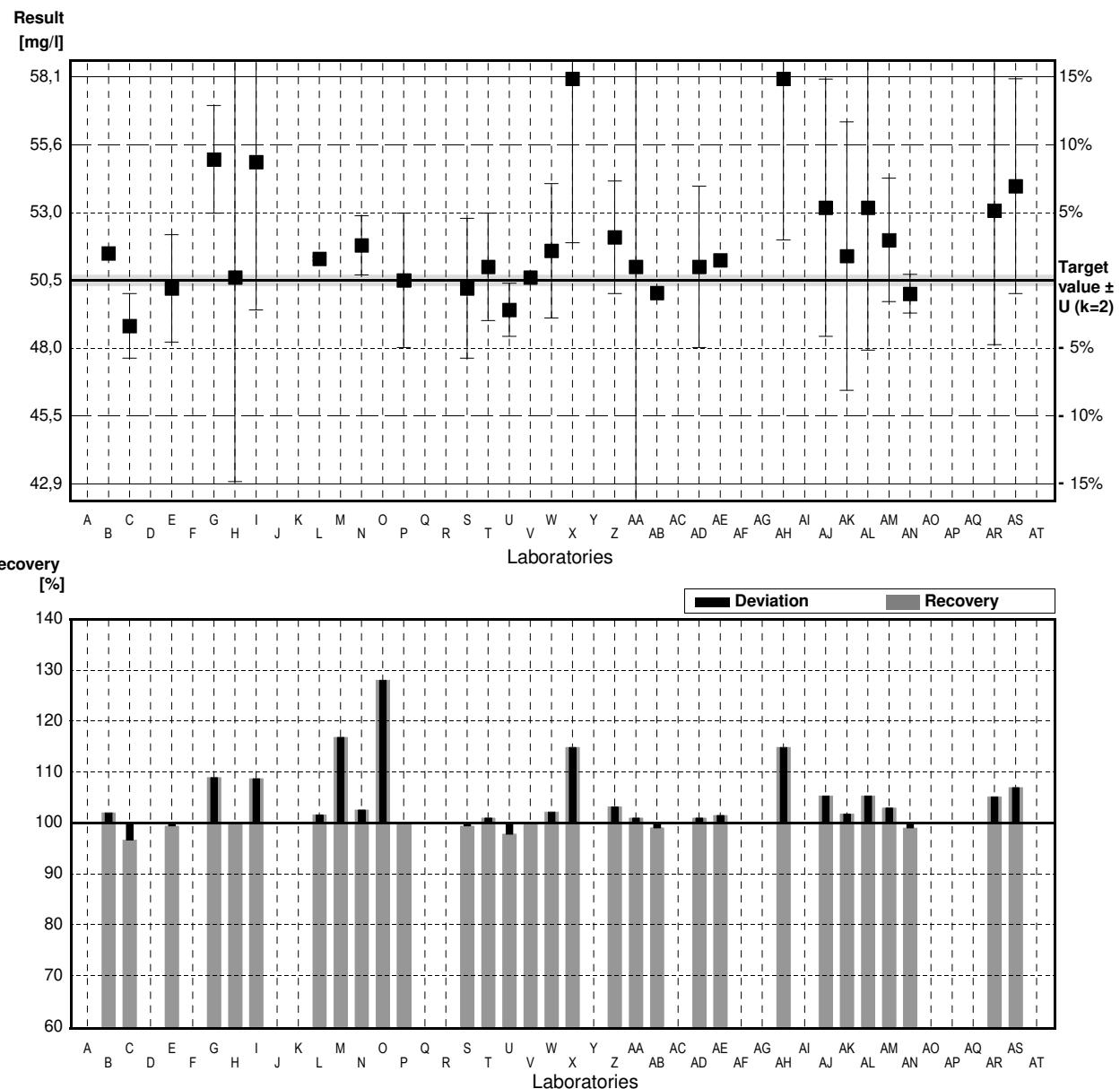
Target value  $\pm U$  ( $k=2$ ) 50,5 mg/l  $\pm$  0,2 mg/l

IFA result  $\pm U$  ( $k=2$ ) 49,3 mg/l  $\pm$  2,5 mg/l

Stability test  $\pm U$  ( $k=2$ ) 49,3 mg/l  $\pm$  2,5 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	51,5		mg/l	102%	0,79
C	48,8	1,2	mg/l	97%	-1,35
D			mg/l		
E	50,2	2	mg/l	99%	-0,24
F			mg/l		
G	55	2	mg/l	109%	3,56
H	50,6	7,60	mg/l	100%	0,08
I	54,9	5,5	mg/l	109%	3,49
J			mg/l		
K			mg/l		
L	51,3	0,071	mg/l	102%	0,63
M	59	*	1,48	117%	6,73
N	51,8	1,1	mg/l	103%	1,03
O	64,68	*	mg/l	128%	11,23
P	50,5	2,5	mg/l	100%	0,00
Q			mg/l		
R			mg/l		
S	50,2	2,6	mg/l	99%	-0,24
T	51	2,0	mg/l	101%	0,40
U	49,4	0,99	mg/l	98%	-0,87
V	50,6		mg/l	100%	0,08
W	51,6	2,5	mg/l	102%	0,87
X	58,0	*	6,1	115%	5,94
Y			mg/l		
Z	52,1	2,1	mg/l	103%	1,27
AA	51	12,8	mg/l	101%	0,40
AB	50,03		mg/l	99%	-0,37
AC			mg/l		
AD	51,00	3	mg/l	101%	0,40
AE	51,25		mg/l	101%	0,59
AF			mg/l		
AG			mg/l		
AH	58,0	*	6	115%	5,94
AI			mg/l		
AJ	53,2	4,79	mg/l	105%	2,14
AK	51,4	5,0	mg/l	102%	0,71
AL	53,2	5,3	mg/l	105%	2,14
AM	52	2,3	mg/l	103%	1,19
AN	50,0	0,72	mg/l	99%	-0,40
AO			mg/l		
AP			mg/l		
AQ			mg/l		
AR	53,1	5,0	mg/l	105%	2,06
AS	54	4	mg/l	107%	2,77
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	52,6 $\pm$ 1,7	51,5 $\pm$ 0,9	mg/l
Recov. $\pm$ CI(99%)	104,2 $\pm$ 3,4	102,0 $\pm$ 1,7	%
SD between labs	3,4	1,6	mg/l
RSD between labs	6,5	3,1	%
n for calculation	30	26	



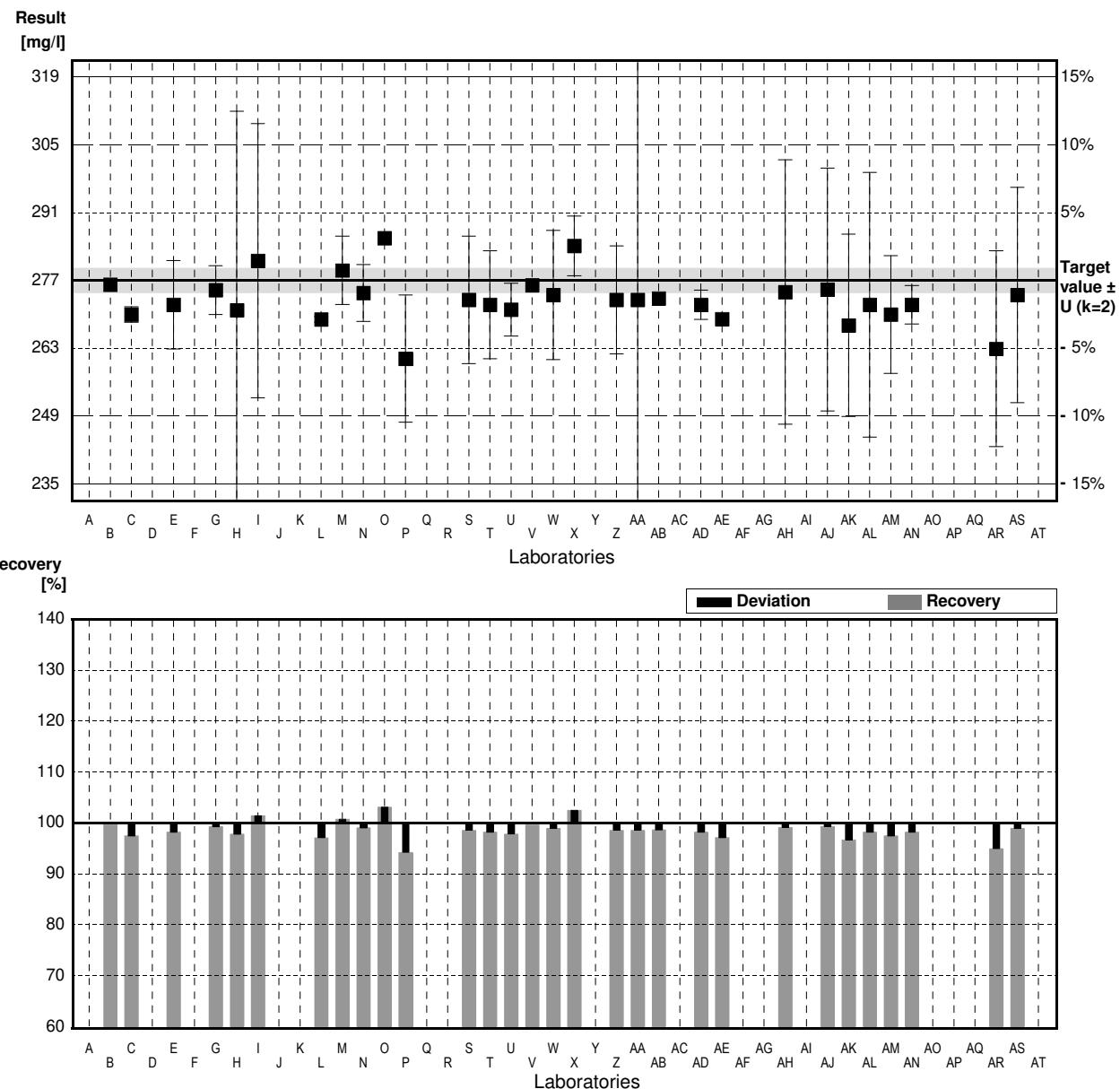
## Sample N154B

### Parameter Hydrogen carbonate

Target value  $\pm U$  ( $k=2$ ) 277 mg/l  $\pm$  2 mg/l  
 IFA result  $\pm U$  ( $k=2$ ) 271 mg/l  $\pm$  14 mg/l  
 Stability test  $\pm U$  ( $k=2$ ) 271 mg/l  $\pm$  14 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	276,1		mg/l	100%	-0.13
C	270	1.6	mg/l	97%	-1.01
D			mg/l		
E	272	9	mg/l	98%	-0.72
F			mg/l		
G	275	5	mg/l	99%	-0.29
H	270,9	40,64	mg/l	98%	-0.88
I	281	28	mg/l	101%	0.58
J			mg/l		
K			mg/l		
L	269	0.577	mg/l	97%	-1.16
M	279	6.98	mg/l	101%	0.29
N	274,4	5,8	mg/l	99%	-0.38
O	285,6 *		mg/l	103%	1.24
P	261 *	13	mg/l	94%	-2.31
Q			mg/l		
R			mg/l		
S	273	13	mg/l	99%	-0.58
T	272	11	mg/l	98%	-0.72
U	271	5,4	mg/l	98%	-0.87
V	276		mg/l	100%	-0.14
W	274	13,2	mg/l	99%	-0.43
X	284 *	6,1	mg/l	103%	1.01
Y			mg/l		
Z	273	11	mg/l	99%	-0.58
AA	273	68	mg/l	99%	-0.58
AB	273,32		mg/l	99%	-0.53
AC			mg/l		
AD	272,00	3	mg/l	98%	-0.72
AE	269,08		mg/l	97%	-1.14
AF			mg/l		
AG			mg/l		
AH	274,6	27	mg/l	99%	-0.35
AI			mg/l		
AJ	275,1	24,8	mg/l	99%	-0.27
AK	267,8	18,6	mg/l	97%	-1.33
AL	272	27	mg/l	98%	-0.72
AM	270	12	mg/l	97%	-1.01
AN	272	3,93	mg/l	98%	-0.72
AO			mg/l		
AP			mg/l		
AQ			mg/l		
AR	263 *	20	mg/l	95%	-2.02
AS	274	22	mg/l	99%	-0.43
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	273 $\pm$ 3	273 $\pm$ 2	mg/l
Recov. $\pm CI(99\%)$	98,6 $\pm$ 0,9	98,6 $\pm$ 0,6	%
SD between labs	5	3	mg/l
RSD between labs	1,9	1,1	%
n for calculation	30	26	



## Sample N154A

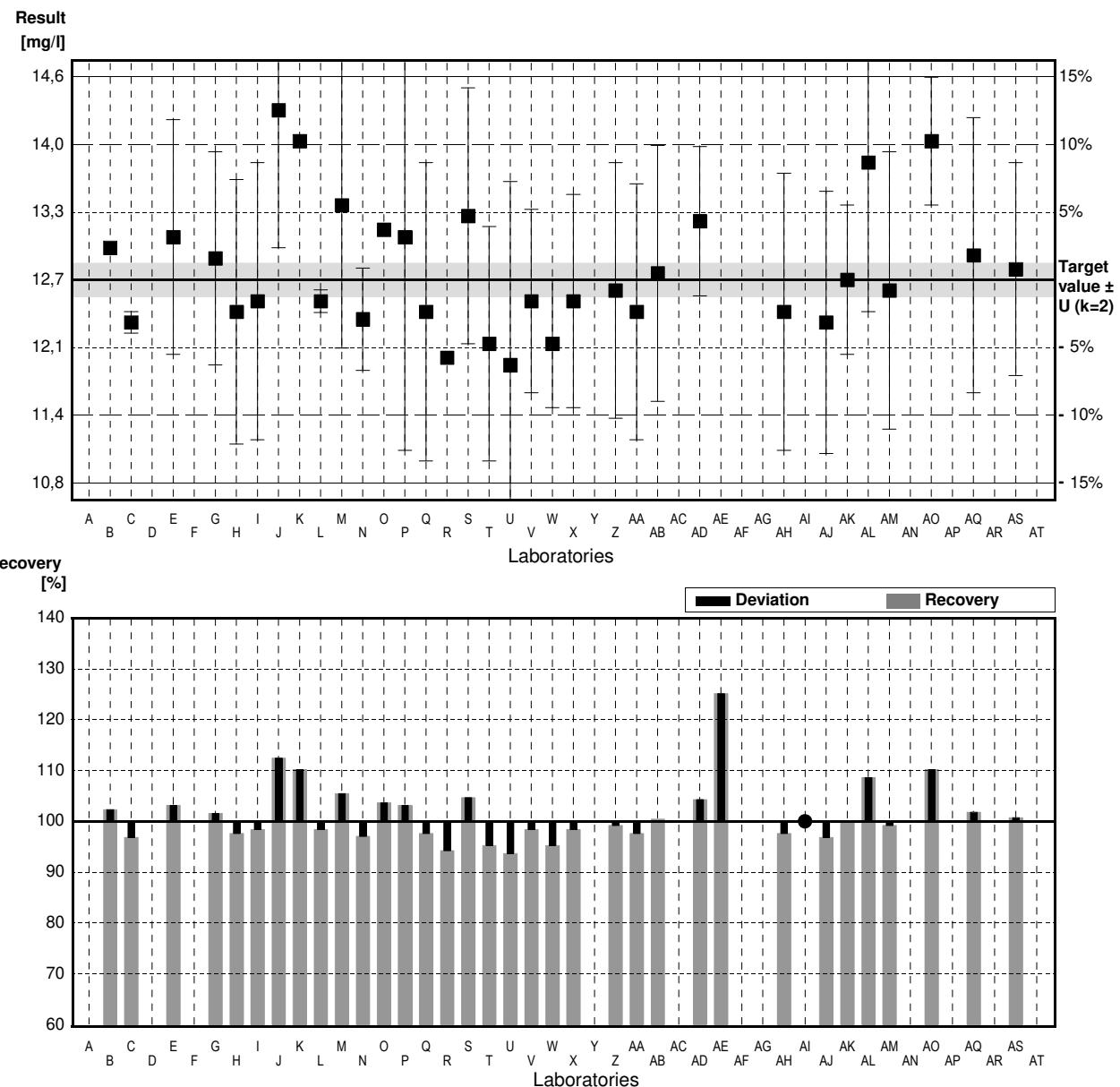
### Parameter Calcium

Target value  $\pm U$  ( $k=2$ ) 12,7 mg/l  $\pm$  0,2 mg/l  
 IFA result  $\pm U$  ( $k=2$ ) 13,1 mg/l  $\pm$  0,8 mg/l

Stability test mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	13.0		mg/l	102%	0.72
C	12.3	0.1	mg/l	97%	-0.95
D			mg/l		
E	13.1	1.1	mg/l	103%	0.95
F			mg/l		
G	12.9	1	mg/l	102%	0.48
H	12.4	1.24	mg/l	98%	-0.72
I	12.5	1.3	mg/l	98%	-0.48
J	14.29 *	1.29	mg/l	113%	3.79
K	14.0		mg/l	110%	3.10
L	12.5	0.106	mg/l	98%	-0.48
M	13.4	1.34	mg/l	106%	1.67
N	12.33	0.48	mg/l	97%	-0.88
O	13.17		mg/l	104%	1.12
P	13.1	2	mg/l	103%	0.95
Q	12.4	1.40	mg/l	98%	-0.72
R	11.97		mg/l	94%	-1.74
S	13.3	1.2	mg/l	105%	1.43
T	12.1	1.1	mg/l	95%	-1.43
U	11.9	1.72	mg/l	94%	-1.91
V	12.5	0.86	mg/l	98%	-0.48
W	12.1	0.6	mg/l	95%	-1.43
X	12.5	1.0	mg/l	98%	-0.48
Y			mg/l		
Z	12.6	1.2	mg/l	99%	-0.24
AA	12.4	1.2	mg/l	98%	-0.72
AB	12.76	1.2	mg/l	100%	0.14
AC			mg/l		
AD	13.25	0.7	mg/l	104%	1.31
AE	15.9 *		mg/l	125%	7.64
AF			mg/l		
AG			mg/l		
AH	12.4	1.3	mg/l	98%	-0.72
AI	<40		mg/l	*	
AJ	12.3	1.23	mg/l	97%	-0.95
AK	12.7	0.7	mg/l	100%	0.00
AL	13.8	1.4	mg/l	109%	2.62
AM	12.6	1.3	mg/l	99%	-0.24
AN			mg/l		
AO	14.0	0.6	mg/l	110%	3.10
AP			mg/l		
AQ	12.93	1.29	mg/l	102%	0.55
AR			mg/l		
AS	12.8	1.0	mg/l	101%	0.24
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	12,9 $\pm$ 0,4	12,8 $\pm$ 0,3	mg/l
Recov. $\pm$ CI(99%)	101,5 $\pm$ 2,9	100,4 $\pm$ 2,1	%
SD between labs	0,8	0,5	mg/l
RSD between labs	6,2	4,3	%
n for calculation	34	32	



## Sample N154B

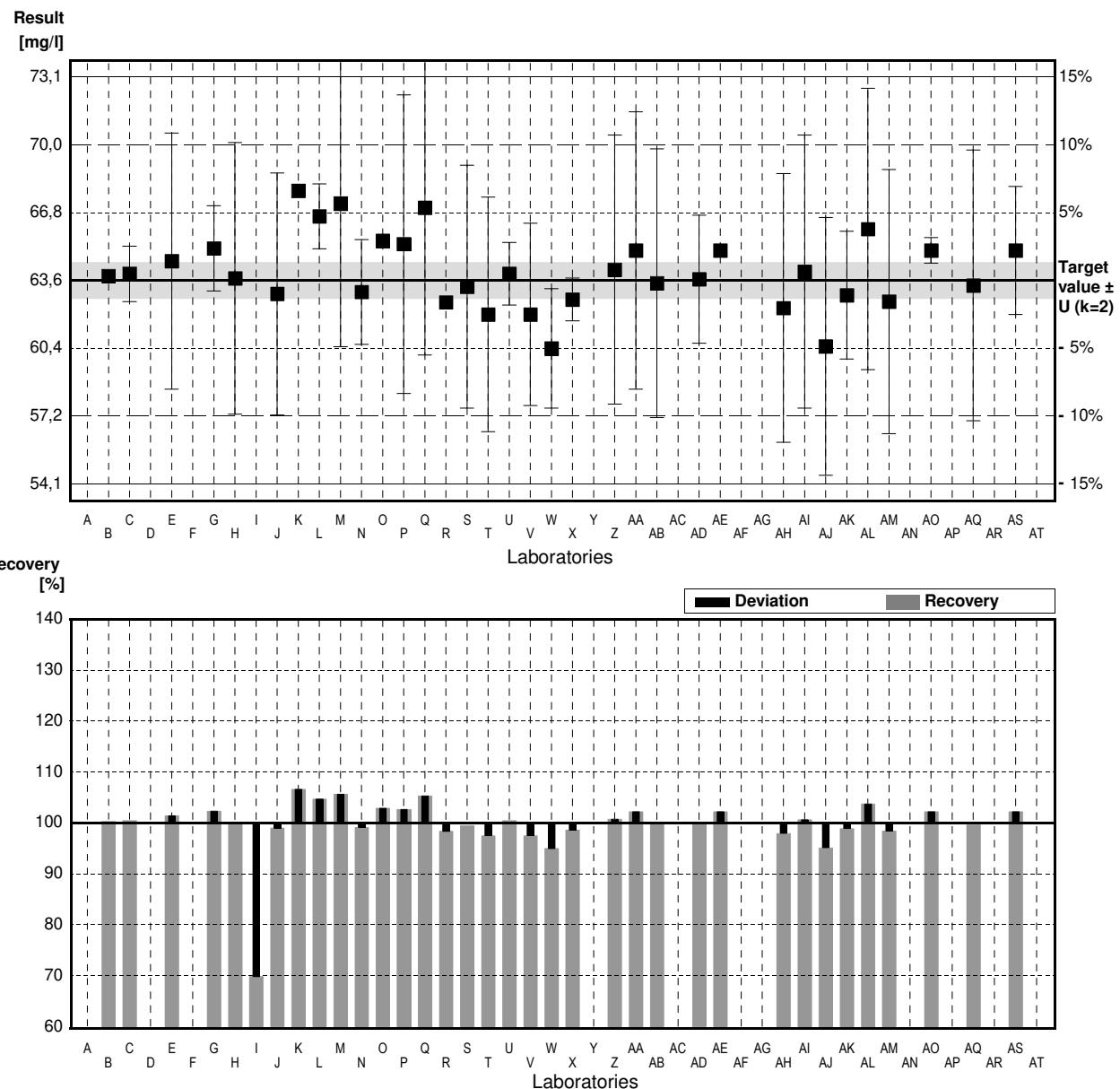
### Parameter Calcium

Target value  $\pm U$  ( $k=2$ ) 63,6 mg/l  $\pm$  0,8 mg/l  
 IFA result  $\pm U$  ( $k=2$ ) 63,7 mg/l  $\pm$  3,8 mg/l

Stability test mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	63,8		mg/l	100%	0,10
C	63,9	1,3	mg/l	100%	0,14
D			mg/l		
E	64,5	6	mg/l	101%	0,43
F			mg/l		
G	65,1	2	mg/l	102%	0,71
H	63,69	6,369	mg/l	100%	0,04
I	44,4 *	4,4	mg/l	70%	-9,15
J	62,96	5,67	mg/l	99%	-0,30
K	67,8		mg/l	107%	2,00
L	66,6	1,527	mg/l	105%	1,43
M	67,2	6,72	mg/l	106%	1,72
N	63,05	2,46	mg/l	99%	-0,26
O	65,45		mg/l	103%	0,88
P	65,3	7	mg/l	103%	0,81
Q	67	6,9	mg/l	105%	1,62
R	62,57		mg/l	98%	-0,49
S	63,3	5,7	mg/l	100%	-0,14
T	62	5,5	mg/l	97%	-0,76
U	63,9	1,47	mg/l	100%	0,14
V	62,0	4,28	mg/l	97%	-0,76
W	60,4	2,8	mg/l	95%	-1,52
X	62,7	1,0	mg/l	99%	-0,43
Y			mg/l		
Z	64,1	6,3	mg/l	101%	0,24
AA	65	6,5	mg/l	102%	0,67
AB	63,46	6,3	mg/l	100%	-0,07
AC			mg/l		
AD	63,65	3	mg/l	100%	0,02
AE	65,0		mg/l	102%	0,67
AF			mg/l		
AG			mg/l		
AH	62,3	6,3	mg/l	98%	-0,62
AI	64,0	6,4	mg/l	101%	0,19
AJ	60,5	6,05	mg/l	95%	-1,48
AK	62,9	3,0	mg/l	99%	-0,33
AL	66,0	6,6	mg/l	104%	1,14
AM	62,6	6,2	mg/l	98%	-0,48
AN			mg/l		
AO	65,0	0,6	mg/l	102%	0,67
AP			mg/l		
AQ	63,36	6,34	mg/l	100%	-0,11
AR			mg/l		
AS	65	3	mg/l	102%	0,67
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	63,4 $\pm$ 1,7	64,0 $\pm$ 0,8	mg/l
Recov. $\pm$ CI(99%)	99,8 $\pm$ 2,7	100,6 $\pm$ 1,3	%
SD between labs	3,7	1,7	mg/l
RSD between labs	5,9	2,7	%
n for calculation	35	34	



## Sample N154A

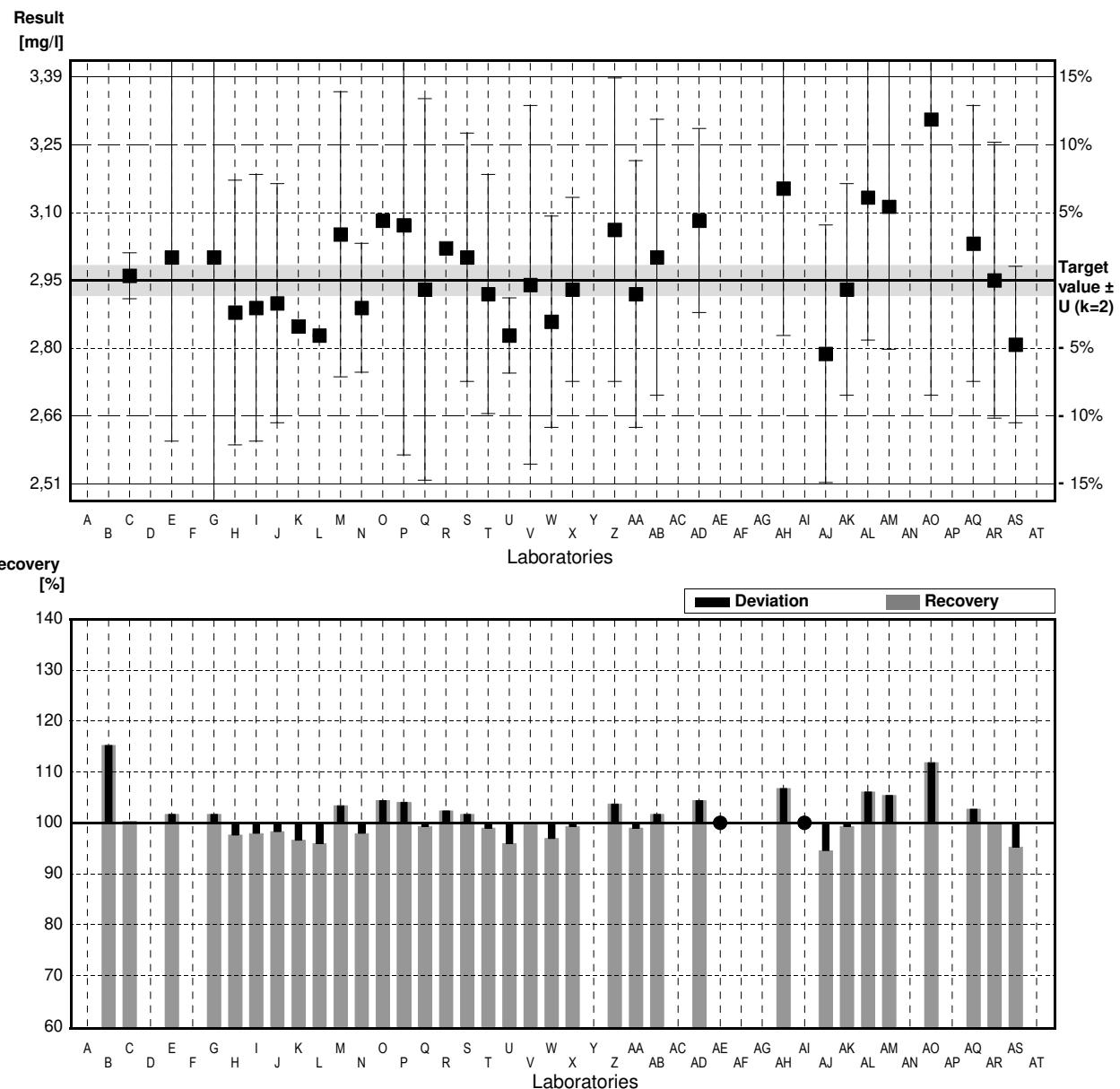
### Parameter Magnesium

Target value  $\pm U$  ( $k=2$ ) 2,95 mg/l  $\pm$  0,03 mg/l  
 IFA result  $\pm U$  ( $k=2$ ) 3,17 mg/l  $\pm$  0,16 mg/l

Stability test mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	3,40 *		mg/l	115%	4,24
C	2,96	0,05	mg/l	100%	0,09
D			mg/l		
E	3,00	0,4	mg/l	102%	0,47
F			mg/l		
G	3,00	0,5	mg/l	102%	0,47
H	2,88	0,288	mg/l	98%	-0,66
I	2,89	0,29	mg/l	98%	-0,56
J	2,90	0,26	mg/l	98%	-0,47
K	2,85		mg/l	97%	-0,94
L	2,83	0,002	mg/l	96%	-1,13
M	3,05	0,31	mg/l	103%	0,94
N	2,89	0,14	mg/l	98%	-0,56
O	3,08		mg/l	104%	1,22
P	3,07	0,5	mg/l	104%	1,13
Q	2,93	0,415	mg/l	99%	-0,19
R	3,02		mg/l	102%	0,66
S	3,00	0,27	mg/l	102%	0,47
T	2,92	0,26	mg/l	99%	-0,28
U	2,83	0,082	mg/l	96%	-1,13
V	2,94	0,39	mg/l	100%	-0,09
W	2,86	0,23	mg/l	97%	-0,85
X	2,93	0,2	mg/l	99%	-0,19
Y			mg/l		
Z	3,06	0,33	mg/l	104%	1,04
AA	2,92	0,29	mg/l	99%	-0,28
AB	3,00	0,3	mg/l	102%	0,47
AC			mg/l		
AD	3,08	0,2	mg/l	104%	1,22
AE	<3,0		mg/l	*	
AF			mg/l		
AG			mg/l		
AH	3,15	0,32	mg/l	107%	1,88
AI	<4		mg/l	*	
AJ	2,79	0,28	mg/l	95%	-1,51
AK	2,93	0,23	mg/l	99%	-0,19
AL	3,13	0,31	mg/l	106%	1,69
AM	3,11	0,31	mg/l	105%	1,51
AN			mg/l		
AO	3,30 *	0,6	mg/l	112%	3,30
AP			mg/l		
AQ	3,03	0,30	mg/l	103%	0,75
AR	2,95	0,3	mg/l	100%	0,00
AS	2,81	0,17	mg/l	95%	-1,32
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	2,99 $\pm$ 0,06	2,96 $\pm$ 0,05	mg/l
Recov. $\pm$ CI(99%)	101,2 $\pm$ 2,1	100,4 $\pm$ 1,6	%
SD between labs	0,13	0,10	mg/l
RSD between labs	4,5	3,3	%
n for calculation	34	32	



## Sample N154B

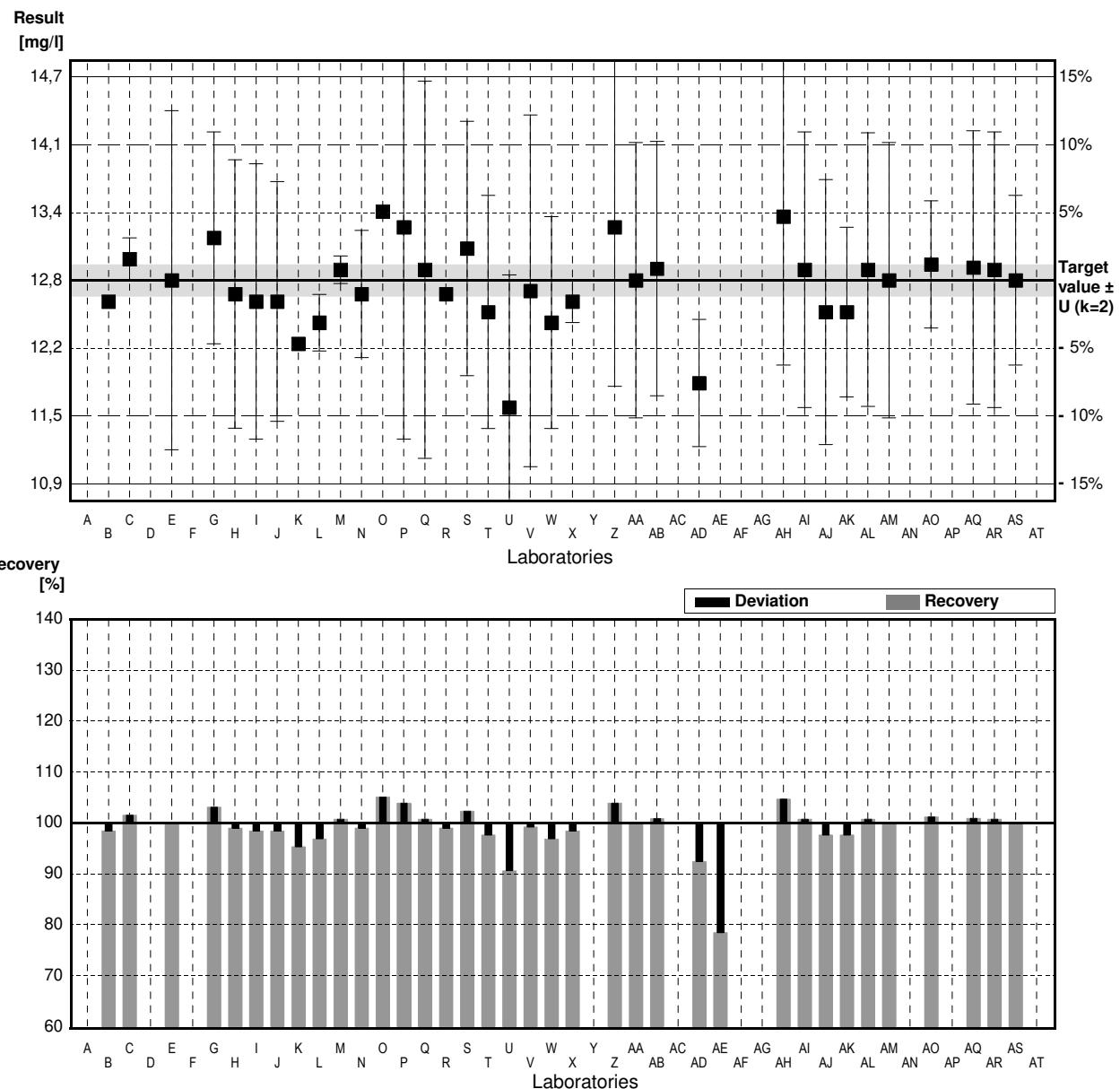
### Parameter Magnesium

Target value  $\pm U$  ( $k=2$ ) 12,8 mg/l  $\pm$  0,1 mg/l  
 IFA result  $\pm U$  ( $k=2$ ) 12,9 mg/l  $\pm$  0,6 mg/l

Stability test mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	12,6		mg/l	98%	-0,43
C	13,0	0,2	mg/l	102%	0,43
D			mg/l		
E	12,8	1,6	mg/l	100%	0,00
F			mg/l		
G	13,2	1	mg/l	103%	0,87
H	12,67	1,267	mg/l	99%	-0,28
I	12,6	1,3	mg/l	98%	-0,43
J	12,60	1,13	mg/l	98%	-0,43
K	12,2		mg/l	95%	-1,30
L	12,4	0,266	mg/l	97%	-0,87
M	12,9	0,13	mg/l	101%	0,22
N	12,67	0,60	mg/l	99%	-0,28
O	13,45		mg/l	105%	1,41
P	13,3	2	mg/l	104%	1,09
Q	12,9	1,78	mg/l	101%	0,22
R	12,67		mg/l	99%	-0,28
S	13,1	1,2	mg/l	102%	0,65
T	12,5	1,1	mg/l	98%	-0,65
U	11,6 *	1,25	mg/l	91%	-2,60
V	12,7	1,66	mg/l	99%	-0,22
W	12,4	1,0	mg/l	97%	-0,87
X	12,6	0,2	mg/l	98%	-0,43
Y			mg/l		
Z	13,3	1,5	mg/l	104%	1,09
AA	12,8	1,3	mg/l	100%	0,00
AB	12,91	1,2	mg/l	101%	0,24
AC			mg/l		
AD	11,83 *	0,6	mg/l	92%	-2,11
AE	10,04 *		mg/l	78%	-5,99
AF			mg/l		
AG			mg/l		
AH	13,4	1,4	mg/l	105%	1,30
AI	12,9	1,3	mg/l	101%	0,22
AJ	12,5	1,25	mg/l	98%	-0,65
AK	12,5	0,8	mg/l	98%	-0,65
AL	12,9	1,29	mg/l	101%	0,22
AM	12,8	1,3	mg/l	100%	0,00
AN			mg/l		
AO	12,95	0,6	mg/l	101%	0,33
AP			mg/l		
AQ	12,92	1,29	mg/l	101%	0,26
AR	12,9	1,3	mg/l	101%	0,22
AS	12,8	0,8	mg/l	100%	0,00
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	12,7 $\pm$ 0,3	12,8 $\pm$ 0,1	mg/l
Recov. $\pm$ CI(99%)	99,0 $\pm$ 2,1	100,1 $\pm$ 1,1	%
SD between labs	0,6	0,3	mg/l
RSD between labs	4,7	2,3	%
n for calculation	36	33	



## Sample N154A

### Parameter Sodium

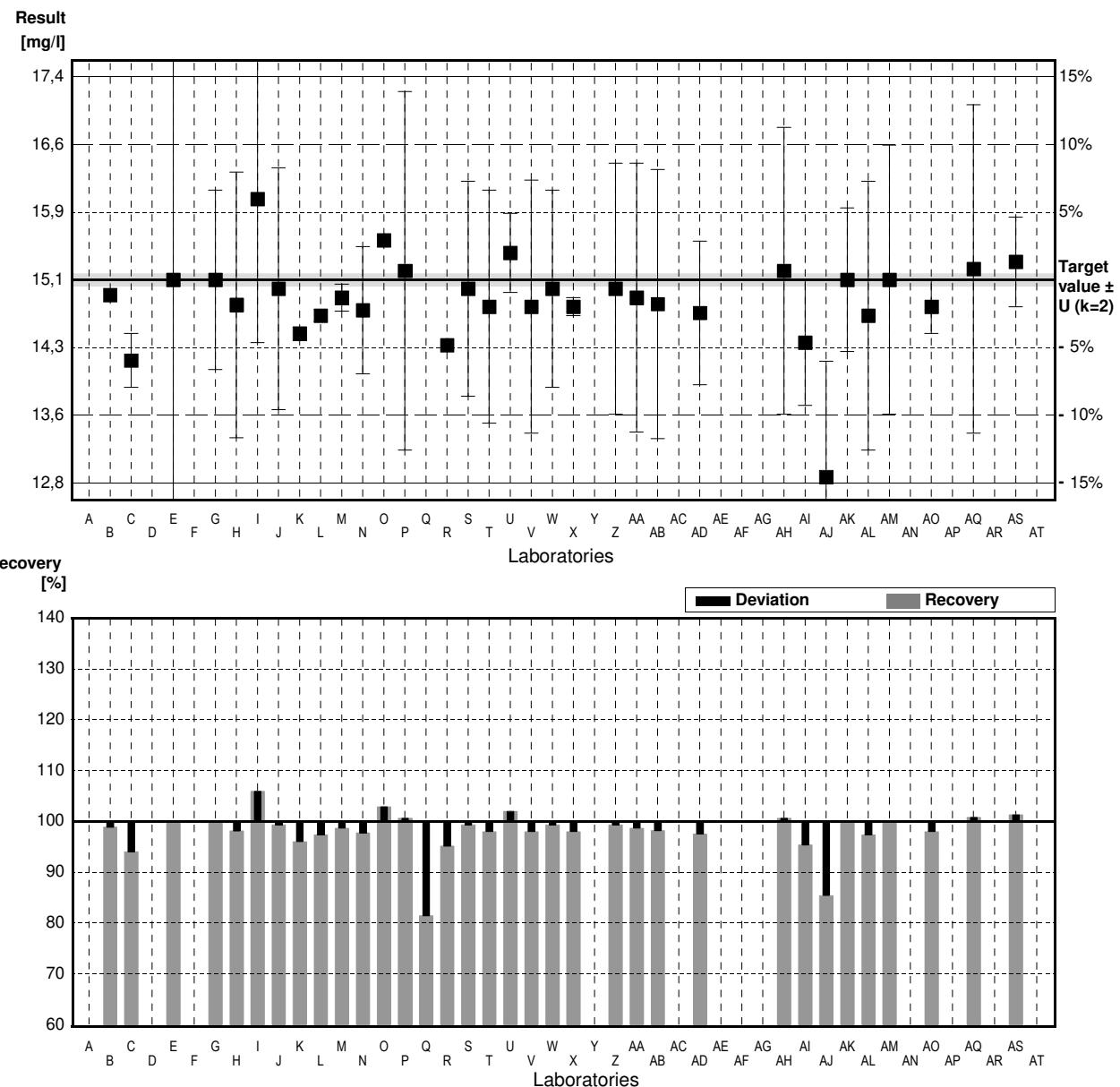
Target value  $\pm U$  ( $k=2$ ) 15,1 mg/l  $\pm$  0,1 mg/l

IFA result  $\pm U$  ( $k=2$ ) 15,6 mg/l  $\pm$  1,1 mg/l

Stability test  $\pm U$  ( $k=2$ ) 15,5 mg/l  $\pm$  1,1 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	14,93		mg/l	99%	-0,33
C	14,2	0,3	mg/l	94%	-1,75
D			mg/l		
E	15,1	2,3	mg/l	100%	0,00
F			mg/l		
G	15,1	1	mg/l	100%	0,00
H	14,82	1,482	mg/l	98%	-0,55
I	16,0 *	1,6	mg/l	106%	1,75
J	15,00	1,35	mg/l	99%	-0,19
K	14,5		mg/l	96%	-1,17
L	14,7	0,067	mg/l	97%	-0,78
M	14,9	0,15	mg/l	99%	-0,39
N	14,76	0,71	mg/l	98%	-0,66
O	15,54		mg/l	103%	0,86
P	15,2	2	mg/l	101%	0,19
Q	12,3 *	1,33	mg/l	81%	-5,45
R	14,37		mg/l	95%	-1,42
S	15,0	1,2	mg/l	99%	-0,19
T	14,8	1,3	mg/l	98%	-0,58
U	15,4	0,44	mg/l	102%	0,58
V	14,8	1,41	mg/l	98%	-0,58
W	15,0	1,1	mg/l	99%	-0,19
X	14,8	0,1	mg/l	98%	-0,58
Y			mg/l		
Z	15,0	1,4	mg/l	99%	-0,19
AA	14,9	1,5	mg/l	99%	-0,39
AB	14,83	1,5	mg/l	98%	-0,53
AC			mg/l		
AD	14,73	0,8	mg/l	98%	-0,72
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH	15,2	1,6	mg/l	101%	0,19
AI	14,4	0,7	mg/l	95%	-1,36
AJ	12,9 *	1,29	mg/l	85%	-4,29
AK	15,1	0,8	mg/l	100%	0,00
AL	14,7	1,5	mg/l	97%	-0,78
AM	15,1	1,5	mg/l	100%	0,00
AN			mg/l		
AO	14,8	0,3	mg/l	98%	-0,58
AP			mg/l		
AQ	15,22	1,83	mg/l	101%	0,23
AR			mg/l		
AS	15,3	0,5	mg/l	101%	0,39
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	14,8 $\pm$ 0,3	14,9 $\pm$ 0,1	mg/l
Recov. $\pm$ CI(99%)	98,1 $\pm$ 2,1	98,7 $\pm$ 1,0	%
SD between labs	0,7	0,3	mg/l
RSD between labs	4,5	2,0	%
n for calculation	34	31	



## Sample N154B

### Parameter Sodium

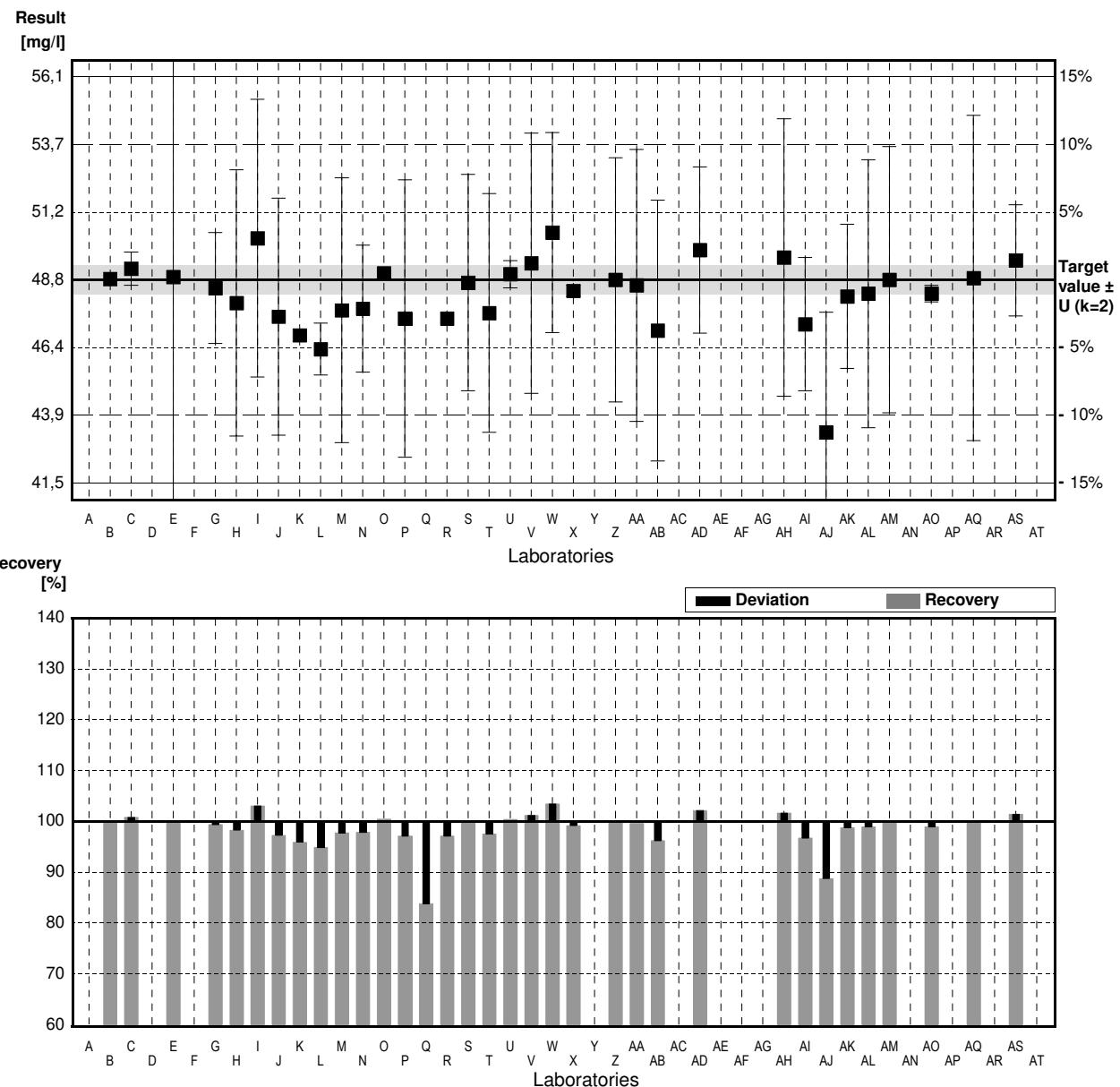
Target value  $\pm U$  ( $k=2$ ) 48.8 mg/l  $\pm$  0,5 mg/l

IFA result  $\pm U$  ( $k=2$ ) 49,0 mg/l  $\pm$  3,4 mg/l

Stability test  $\pm U$  ( $k=2$ ) 49,8 mg/l  $\pm$  3,5 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	48,83		mg/l	100%	0,02
C	49,2	0,6	mg/l	101%	0,24
D			mg/l		
E	48,9	8	mg/l	100%	0,06
F			mg/l		
G	48,5	2	mg/l	99%	-0,18
H	47,96	4,796	mg/l	98%	-0,51
I	50,3	5,0	mg/l	103%	0,90
J	47,47	4,27	mg/l	97%	-0,80
K	46,8		mg/l	96%	-1,21
L	46,3	0,936	mg/l	95%	-1,51
M	47,7	4,77	mg/l	98%	-0,66
N	47,76	2,29	mg/l	98%	-0,63
O	49,04		mg/l	100%	0,14
P	47,4	5	mg/l	97%	-0,84
Q	40,9	*	mg/l	84%	-4,76
R	47,4		mg/l	97%	-0,84
S	48,7	3,9	mg/l	100%	-0,06
T	47,6	4,3	mg/l	98%	-0,72
U	49,0	0,49	mg/l	100%	0,12
V	49,4	4,69	mg/l	101%	0,36
W	50,5	3,6	mg/l	103%	1,02
X	48,4	0,2	mg/l	99%	-0,24
Y			mg/l		
Z	48,8	4,4	mg/l	100%	0,00
AA	48,6	4,9	mg/l	100%	-0,12
AB	46,97	4,7	mg/l	96%	-1,10
AC			mg/l		
AD	49,87	3	mg/l	102%	0,64
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH	49,6	5,0	mg/l	102%	0,48
AI	47,2	2,4	mg/l	97%	-0,96
AJ	43,3	*	mg/l	89%	-3,31
AK	48,2	2,6	mg/l	99%	-0,36
AL	48,3	4,83	mg/l	99%	-0,30
AM	48,8	4,8	mg/l	100%	0,00
AN			mg/l		
AO	48,3	0,3	mg/l	99%	-0,30
AP			mg/l		
AQ	48,86	5,86	mg/l	100%	0,04
AR			mg/l		
AS	49,5	2,0	mg/l	101%	0,42
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	48,1 $\pm$ 0,9	48,4 $\pm$ 0,5	mg/l
Recov. $\pm$ CI(99%)	98,5 $\pm$ 1,8	99,3 $\pm$ 1,0	%
SD between labs	1,8	1,0	mg/l
RSD between labs	3,8	2,1	%
n for calculation	34	32	



## Sample N154A

### Parameter Potassium

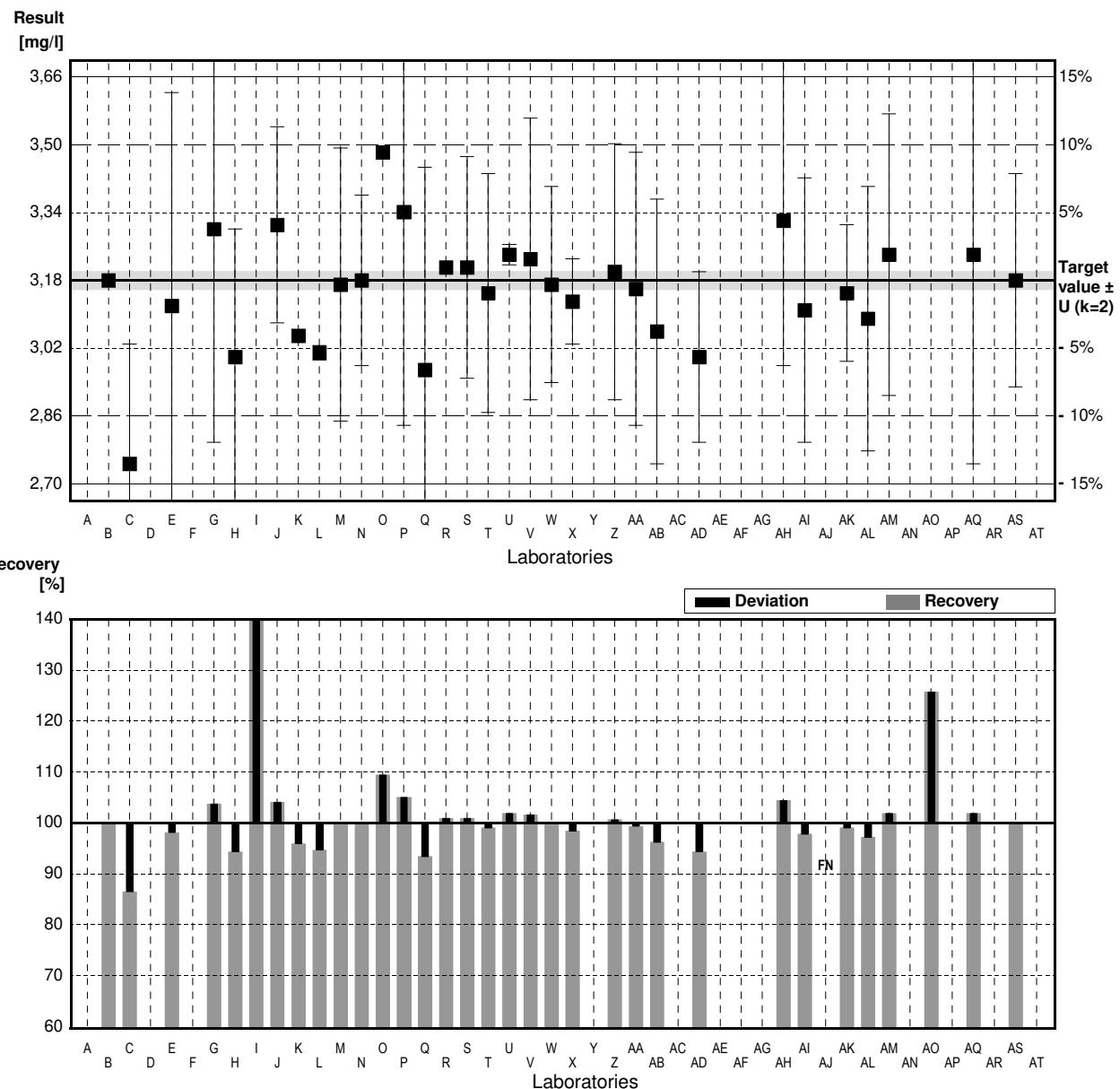
Target value  $\pm U$  ( $k=2$ ) 3,18 mg/l  $\pm$  0,02 mg/l

IFA result  $\pm U$  ( $k=2$ ) 2,92 mg/l  $\pm$  0,18 mg/l

Stability test  $\pm U$  ( $k=2$ ) 3,21 mg/l  $\pm$  0,19 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	3,18	*	mg/l	100%	0,00
C	2,75	*	mg/l	86%	-2,88
D			mg/l		
E	3,12	0,5	mg/l	98%	-0,40
F			mg/l		
G	3,30	0,5	mg/l	104%	0,80
H	3,00	0,30	mg/l	94%	-1,20
I	5,98	*	mg/l	188%	18,73
J	3,31	0,23	mg/l	104%	0,87
K	3,05		mg/l	96%	-0,87
L	3,01	0,017	mg/l	95%	-1,14
M	3,17	0,32	mg/l	100%	-0,07
N	3,18	0,20	mg/l	100%	0,00
O	3,48	*	mg/l	109%	2,01
P	3,34	0,5	mg/l	105%	1,07
Q	2,97	0,475	mg/l	93%	-1,41
R	3,21		mg/l	101%	0,20
S	3,21	0,26	mg/l	101%	0,20
T	3,15	0,28	mg/l	99%	-0,20
U	3,24	0,024	mg/l	102%	0,40
V	3,23	0,33	mg/l	102%	0,33
W	3,17	0,23	mg/l	100%	-0,07
X	3,13	0,1	mg/l	98%	-0,33
Y			mg/l		
Z	3,20	0,3	mg/l	101%	0,13
AA	3,16	0,32	mg/l	99%	-0,13
AB	3,06	0,31	mg/l	96%	-0,80
AC			mg/l		
AD	3,00	0,20	mg/l	94%	-1,20
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH	3,32	0,34	mg/l	104%	0,94
AI	3,11	0,31	mg/l	98%	-0,47
AJ	<2,9		mg/l	FN	
AK	3,15	0,16	mg/l	99%	-0,20
AL	3,09	0,31	mg/l	97%	-0,60
AM	3,24	0,33	mg/l	102%	0,40
AN			mg/l		
AO	4,00	*	mg/l	126%	5,49
AP			mg/l		
AQ	3,24	0,49	mg/l	102%	0,40
AR			mg/l		
AS	3,18	0,25	mg/l	100%	0,00
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	3,27 $\pm$ 0,25	3,16 $\pm$ 0,05	mg/l
Recov. $\pm$ CI(99%)	102,8 $\pm$ 7,9	99,5 $\pm$ 1,6	%
SD between labs	0,52	0,10	mg/l
RSD between labs	16,0	3,1	%
n for calculation	33	29	



## Sample N154B

### Parameter Potassium

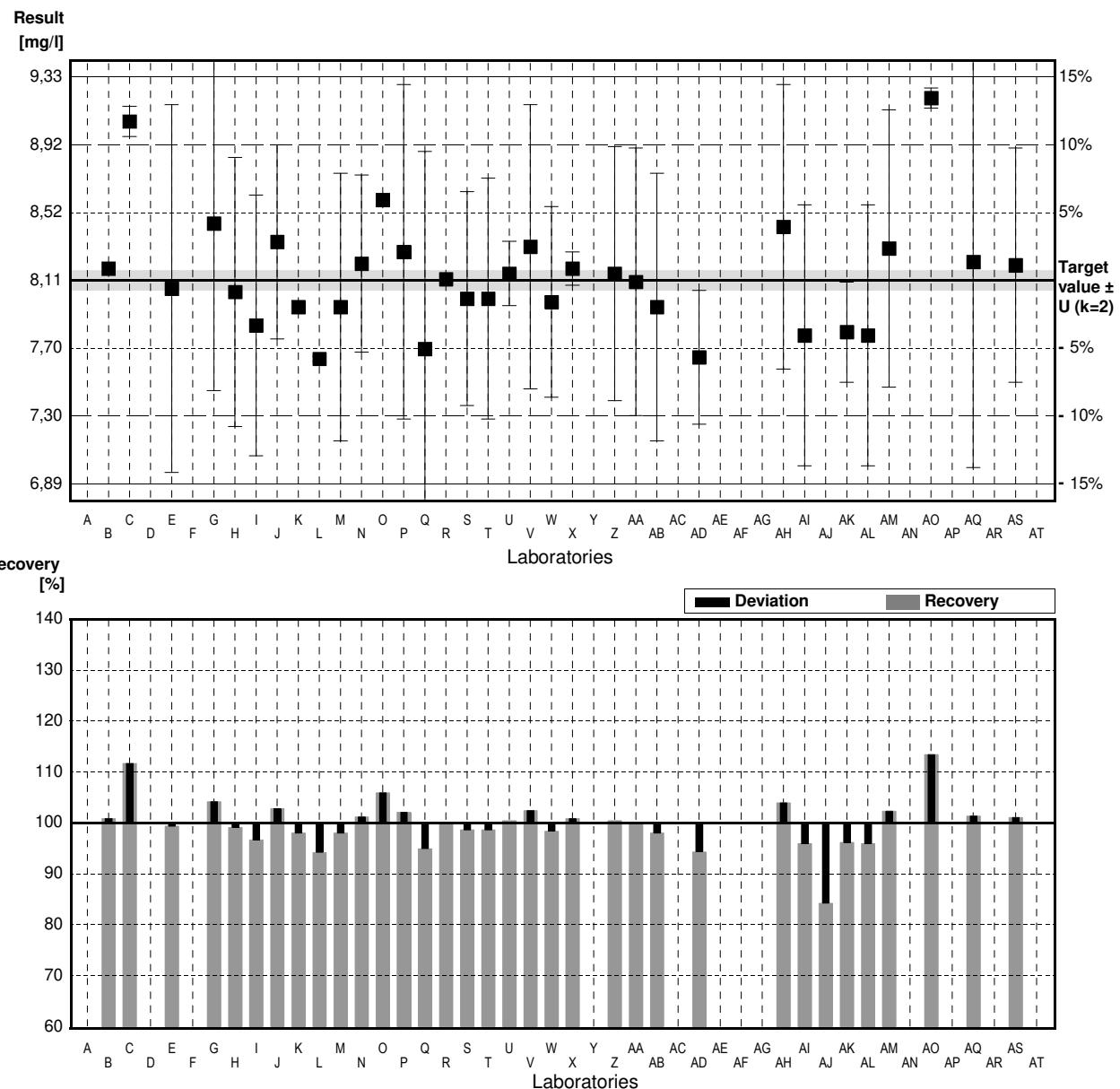
Target value  $\pm U$  ( $k=2$ ) 8,11 mg/l  $\pm$  0,06 mg/l

IFA result  $\pm U$  ( $k=2$ ) 7,65 mg/l  $\pm$  0,46 mg/l

Stability test  $\pm U$  ( $k=2$ ) 8,04 mg/l  $\pm$  0,48 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	8,18	*	mg/l	101%	0,18
C	9,06	*	mg/l	112%	2,49
D			mg/l		
E	8,06	1,1	mg/l	99%	-0,13
F			mg/l		
G	8,45	1	mg/l	104%	0,89
H	8,04	0,804	mg/l	99%	-0,18
I	7,84	0,78	mg/l	97%	-0,71
J	8,34	0,58	mg/l	103%	0,60
K	7,95		mg/l	98%	-0,42
L	7,64	0,015	mg/l	94%	-1,23
M	7,95	0,80	mg/l	98%	-0,42
N	8,21	0,53	mg/l	101%	0,26
O	8,59		mg/l	106%	1,26
P	8,28	1	mg/l	102%	0,45
Q	7,7	1,18	mg/l	95%	-1,08
R	8,117		mg/l	100%	0,02
S	8,00	0,64	mg/l	99%	-0,29
T	8,0	0,72	mg/l	99%	-0,29
U	8,15	0,192	mg/l	100%	0,10
V	8,31	0,85	mg/l	102%	0,52
W	7,98	0,57	mg/l	98%	-0,34
X	8,18	0,1	mg/l	101%	0,18
Y			mg/l		
Z	8,15	0,76	mg/l	100%	0,10
AA	8,1	0,8	mg/l	100%	-0,03
AB	7,95	0,8	mg/l	98%	-0,42
AC			mg/l		
AD	7,65	0,4	mg/l	94%	-1,21
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH	8,43	0,85	mg/l	104%	0,84
AI	7,78	0,78	mg/l	96%	-0,87
AJ	6,83	*	mg/l	84%	-3,36
AK	7,8	0,3	mg/l	96%	-0,81
AL	7,78	0,78	mg/l	96%	-0,87
AM	8,3	0,83	mg/l	102%	0,50
AN			mg/l		
AO	9,20	*	mg/l	113%	2,86
AP			mg/l		
AQ	8,22	1,23	mg/l	101%	0,29
AR			mg/l		
AS	8,2	0,7	mg/l	101%	0,24
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	8,10 $\pm$ 0,19	8,08 $\pm$ 0,12	mg/l
Recov. $\pm$ CI(99%)	99,9 $\pm$ 2,4	99,6 $\pm$ 1,5	%
SD between labs	0,41	0,24	mg/l
RSD between labs	5,0	3,0	%
n for calculation	34	31	



## Sample N154A

### Parameter Nitrate

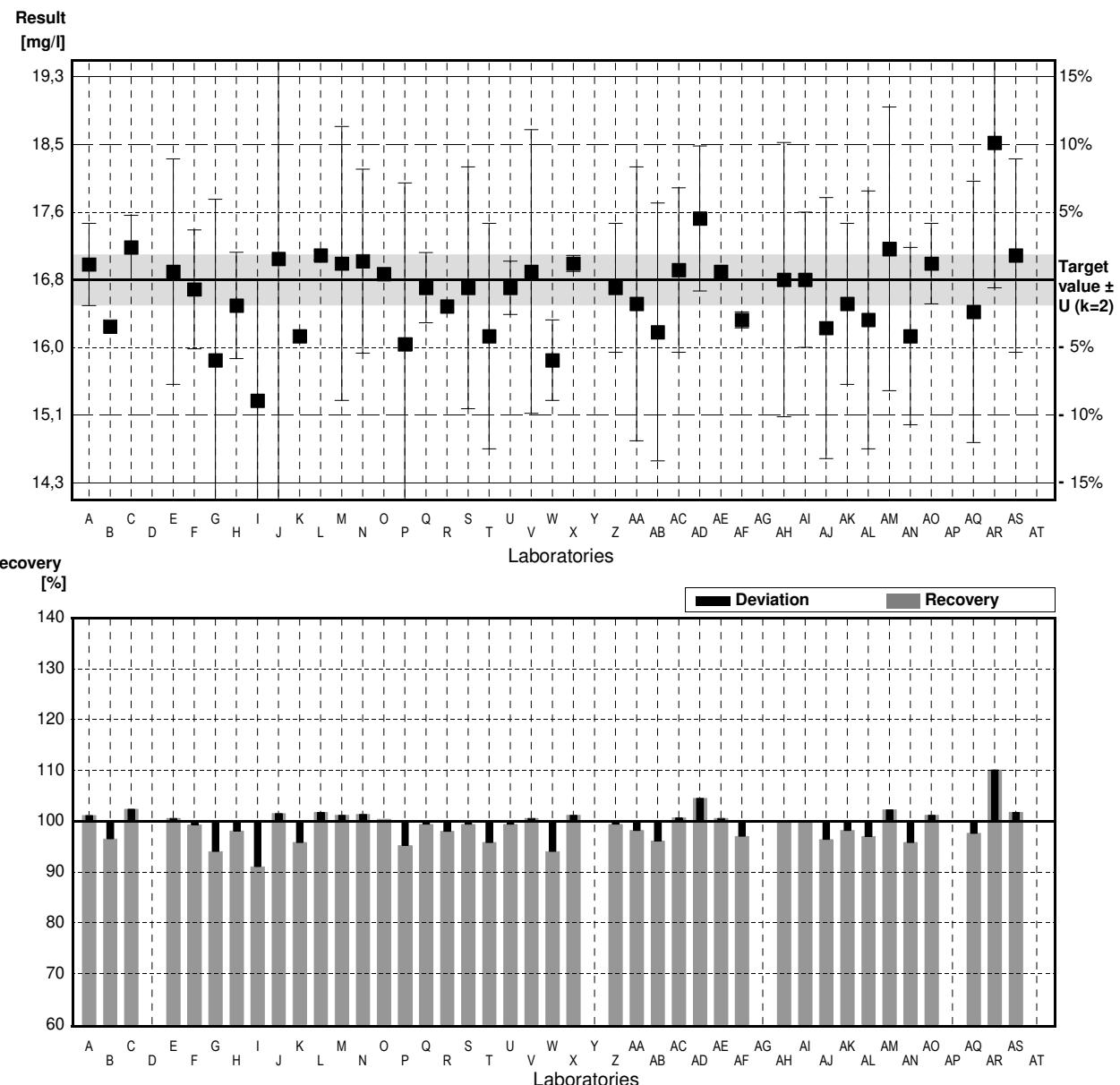
Target value  $\pm U$  ( $k=2$ ) 16.8 mg/l  $\pm$  0.3 mg/l

IFA result  $\pm U$  ( $k=2$ ) 16.3 mg/l  $\pm$  0.8 mg/l

Stability test  $\pm U$  ( $k=2$ ) 16.5 mg/l  $\pm$  0.8 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	16.99	0.51	mg/l	101%	0.33
B	16.22		mg/l	97%	-1.02
C	17.2	0.4	mg/l	102%	0.70
D			mg/l		
E	16.9	1.4	mg/l	101%	0.18
F	16.68	0.739	mg/l	99%	-0.21
G	15.8	2	mg/l	94%	-1.75
H	16.481	0.6592	mg/l	98%	-0.56
I	15.3 *	1.5	mg/l	91%	-2.63
J	17.06	3.07	mg/l	102%	0.46
K	16.1		mg/l	96%	-1.23
L	17.1	0.058	mg/l	102%	0.53
M	17.0	1.7	mg/l	101%	0.35
N	17.03	1.14	mg/l	101%	0.40
O	16.87		mg/l	100%	0.12
P	16.0	2	mg/l	95%	-1.40
Q	16.7	0.436	mg/l	99%	-0.18
R	16.47		mg/l	98%	-0.58
S	16.7	1.5	mg/l	99%	-0.18
T	16.1	1.4	mg/l	96%	-1.23
U	16.7	0.33	mg/l	99%	-0.18
V	16.9	1.76	mg/l	101%	0.18
W	15.8	0.5	mg/l	94%	-1.75
X	17.0	0.1	mg/l	101%	0.35
Y			mg/l		
Z	16.7	0.8	mg/l	99%	-0.18
AA	16.5	1.7	mg/l	98%	-0.53
AB	16.15	1.6	mg/l	96%	-1.14
AC	16.92	1.02	mg/l	101%	0.21
AD	17.56	0.9	mg/l	105%	1.33
AE	16.9		mg/l	101%	0.18
AF	16.301	0.1	mg/l	97%	-0.87
AG			mg/l		
AH	16.8	1.7	mg/l	100%	0.00
AI	16.8	0.84	mg/l	100%	0.00
AJ	16.2	1.62	mg/l	96%	-1.05
AK	16.5	1.0	mg/l	98%	-0.53
AL	16.3	1.6	mg/l	97%	-0.88
AM	17.182	1.76	mg/l	102%	0.67
AN	16.1	1.10	mg/l	96%	-1.23
AO	17.0	0.5	mg/l	101%	0.35
AP			mg/l		
AQ	16.40	1.62	mg/l	98%	-0.70
AR	18.5 *	1.8	mg/l	110%	2.98
AS	17.1	1.2	mg/l	102%	0.53
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	16,7 $\pm$ 0,2	16,6 $\pm$ 0,2	mg/l
Recov. $\pm$ CI(99%)	99,2 $\pm$ 1,4	99,1 $\pm$ 1,1	%
SD between labs	0,5	0,4	mg/l
RSD between labs	3,3	2,5	%
n for calculation	41	39	



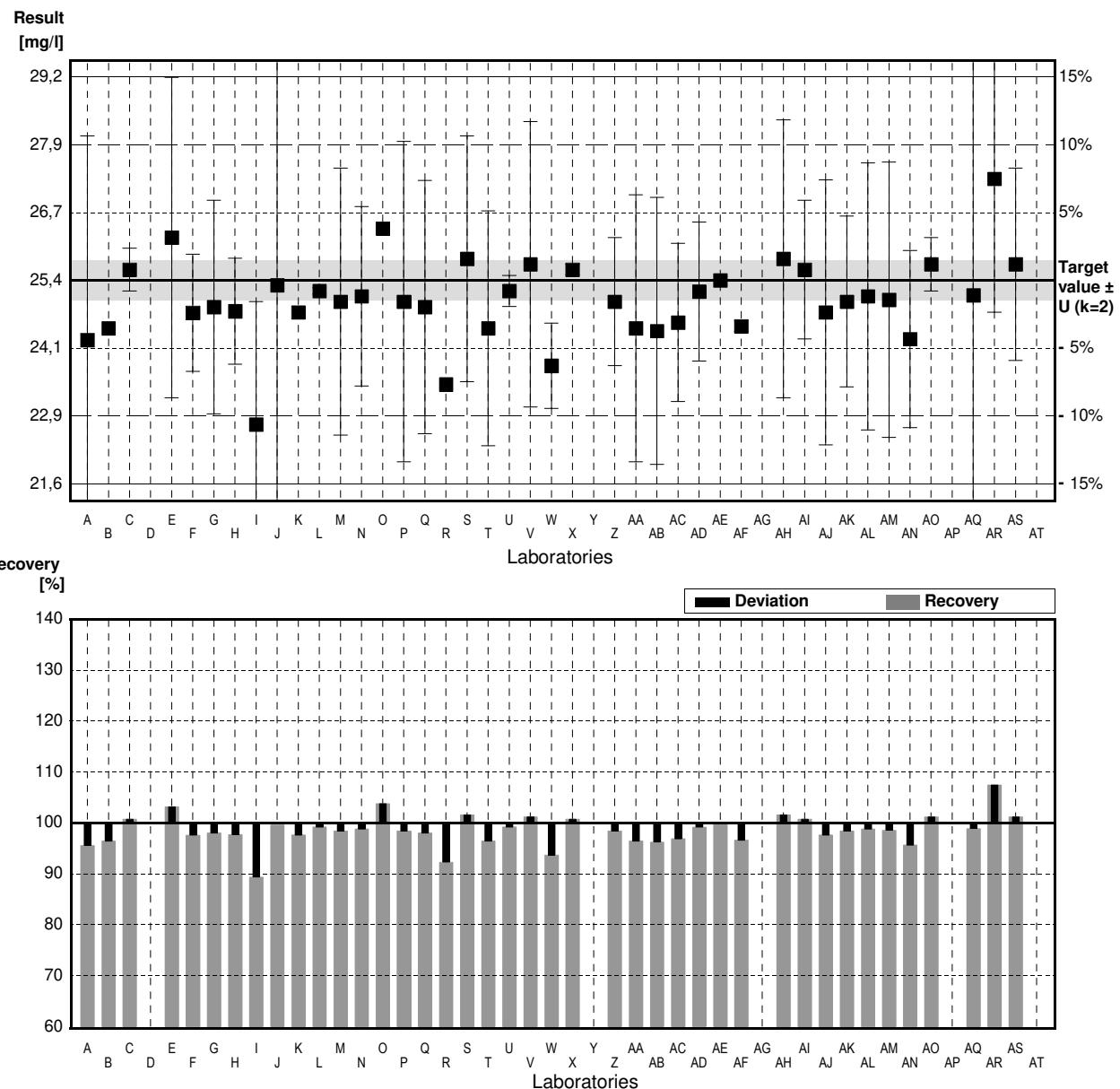
## Sample N154B

### Parameter Nitrate

Target value  $\pm U$  ( $k=2$ ) 25,4 mg/l  $\pm$  0,4 mg/l  
 IFA result  $\pm U$  ( $k=2$ ) 24,8 mg/l  $\pm$  1,2 mg/l  
 Stability test  $\pm U$  ( $k=2$ ) 25,1 mg/l  $\pm$  1,3 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	24.28	3.82	mg/l	96%	-1.30
B	24.5		mg/l	96%	-1.04
C	25.6	0.4	mg/l	101%	0.23
D			mg/l		
E	26.2	3	mg/l	103%	0.93
F	24.79	1.098	mg/l	98%	-0.71
G	24.9	2	mg/l	98%	-0.58
H	24.821	0.9928	mg/l	98%	-0.67
I	22.7 *	2.3	mg/l	89%	-3.13
J	25.31	4.56	mg/l	100%	-0.10
K	24.8		mg/l	98%	-0.69
L	25.2	0.058	mg/l	99%	-0.23
M	25.0	2.5	mg/l	98%	-0.46
N	25.10	1.68	mg/l	99%	-0.35
O	26.37		mg/l	104%	1.12
P	25.0	3	mg/l	98%	-0.46
Q	24.9	2.37	mg/l	98%	-0.58
R	23.45		mg/l	92%	-2.26
S	25.8	2.3	mg/l	102%	0.46
T	24.5	2.2	mg/l	96%	-1.04
U	25.2	0.29	mg/l	99%	-0.23
V	25.7	2.67	mg/l	101%	0.35
W	23.8	0.8	mg/l	94%	-1.85
X	25.6	0.1	mg/l	101%	0.23
Y			mg/l		
Z	25.0	1.2	mg/l	98%	-0.46
AA	24.5	2.5	mg/l	96%	-1.04
AB	24.45	2.5	mg/l	96%	-1.10
AC	24.61	1.48	mg/l	97%	-0.91
AD	25.19	1.3	mg/l	99%	-0.24
AE	25.4		mg/l	100%	0.00
AF	24.540	0.1	mg/l	97%	-1.00
AG			mg/l		
AH	25.8	2.6	mg/l	102%	0.46
AI	25.6	1.3	mg/l	101%	0.23
AJ	24.8	2.48	mg/l	98%	-0.69
AK	25.0	1.6	mg/l	98%	-0.46
AL	25.1	2.5	mg/l	99%	-0.35
AM	25.034	2.579	mg/l	99%	-0.42
AN	24.3	1.66	mg/l	96%	-1.27
AO	25.7	0.5	mg/l	101%	0.35
AP			mg/l		
AQ	25.12	5.49	mg/l	99%	-0.32
AR	27.3 *	2.5	mg/l	107%	2.20
AS	25.7	1.8	mg/l	101%	0.35
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	25,0 $\pm$ 0,3	25,0 $\pm$ 0,3	mg/l
Recov. $\pm$ CI(99%)	98,6 $\pm$ 1,3	98,6 $\pm$ 1,0	%
SD between labs	0,8	0,6	mg/l
RSD between labs	3,1	2,4	%
n for calculation	41	39	



## Sample N154A

### Parameter Nitrite

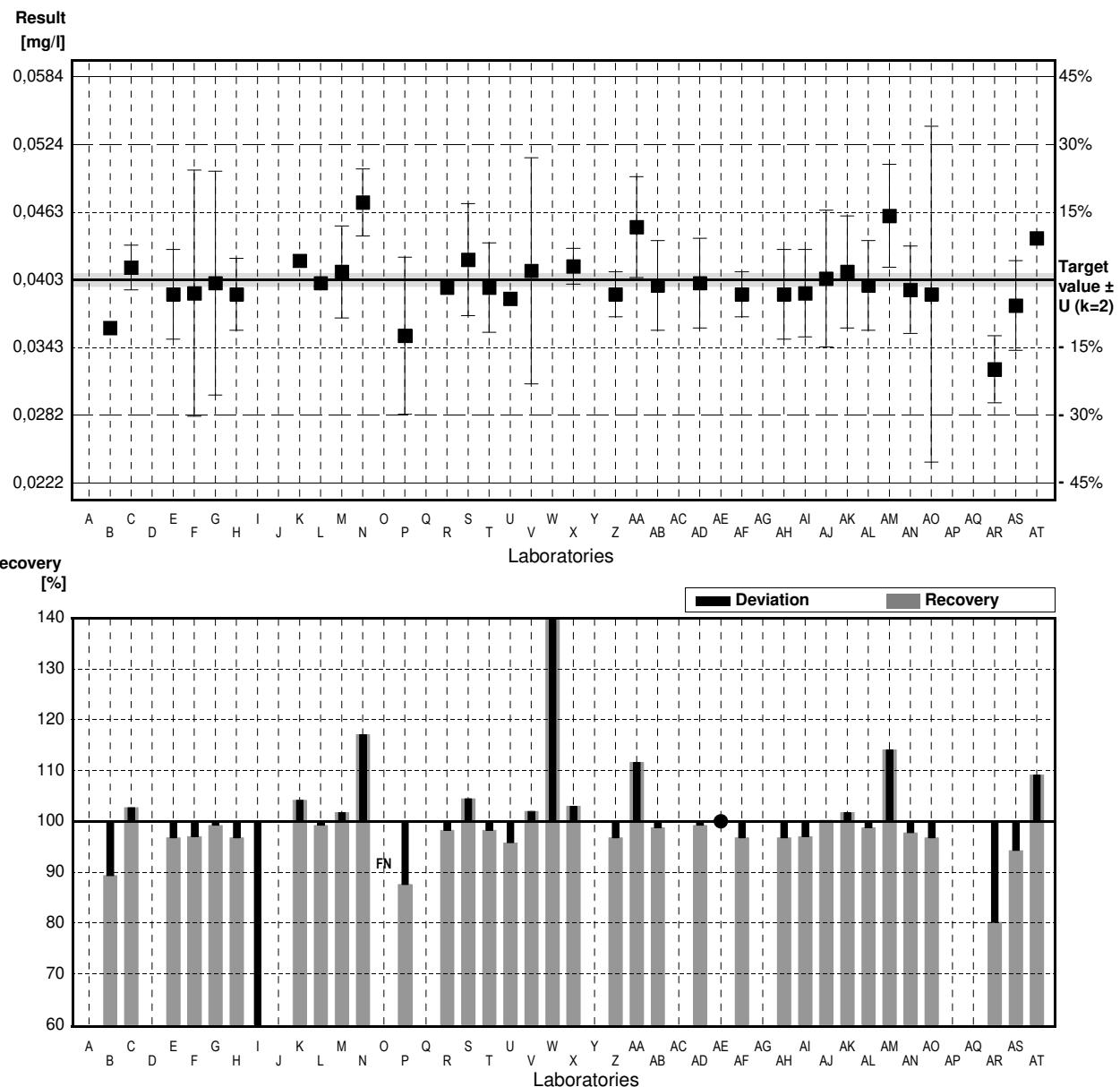
Target value  $\pm U$  ( $k=2$ ) 0,0403 mg/l  $\pm$  0,0006 mg/l

IFA result  $\pm U$  ( $k=2$ ) 0,0388 mg/l  $\pm$  0,0019 mg/l

Stability test  $\pm U$  ( $k=2$ ) 0,0384 mg/l  $\pm$  0,0019 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	0,0360		mg/l	89%	-1,84
C	0,0414	0,002	mg/l	103%	0,47
D			mg/l		
E	0,0390	0,004	mg/l	97%	-0,56
F	0,0391	0,0110	mg/l	97%	-0,51
G	0,0400	0,01	mg/l	99%	-0,13
H	0,0390	0,0032	mg/l	97%	-0,56
I	0,0120 *	0,0012	mg/l	30%	-12,11
J			mg/l		
K	0,0420		mg/l	104%	0,73
L	0,0400	0,0003	mg/l	99%	-0,13
M	0,0410	0,0041	mg/l	102%	0,30
N	0,0472 *	0,003	mg/l	117%	2,95
O	<0,01		mg/l		
P	0,0353	0,007	mg/l	88%	-2,14
Q			mg/l		
R	0,0396		mg/l	98%	-0,30
S	0,0421	0,0050	mg/l	104%	0,77
T	0,0396	0,004	mg/l	98%	-0,30
U	0,0386	0,0004	mg/l	96%	-0,73
V	0,0411	0,0101	mg/l	102%	0,34
W	0,0743 *	0,01	mg/l	184%	14,55
X	0,0415	0,0016	mg/l	103%	0,51
Y			mg/l		
Z	0,0390	0,002	mg/l	97%	-0,56
AA	0,0450	0,0045	mg/l	112%	2,01
AB	0,0398	0,004	mg/l	99%	-0,21
AC			mg/l		
AD	0,04	0,004	mg/l	99%	-0,13
AE	<0,05		mg/l	*	
AF	0,0390	0,002	mg/l	97%	-0,56
AG			mg/l		
AH	0,0390	0,004	mg/l	97%	-0,56
AI	0,0391	0,0039	mg/l	97%	-0,51
AJ	0,0404	0,0061	mg/l	100%	0,04
AK	0,0410	0,005	mg/l	102%	0,30
AL	0,0398	0,0040	mg/l	99%	-0,21
AM	0,0460 *	0,0046	mg/l	114%	2,44
AN	0,0394	0,0039	mg/l	98%	-0,39
AO	0,0390	0,015	mg/l	97%	-0,56
AP			mg/l		
AQ			mg/l		
AR	0,0323 *	0,003	mg/l	80%	-3,42
AS	0,0380	0,004	mg/l	94%	-0,98
AT	0,0440		mg/l	109%	1,58

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,0403 $\pm$ 0,0037	0,0399 $\pm$ 0,0010	mg/l
Recov. $\pm$ CI(99%)	99,9 $\pm$ 9,2	99,1 $\pm$ 2,4	%
SD between labs	0,0081	0,0019	mg/l
RSD between labs	20,0	4,9	%
n for calculation	35	30	



## Sample N154B

### Parameter Nitrite

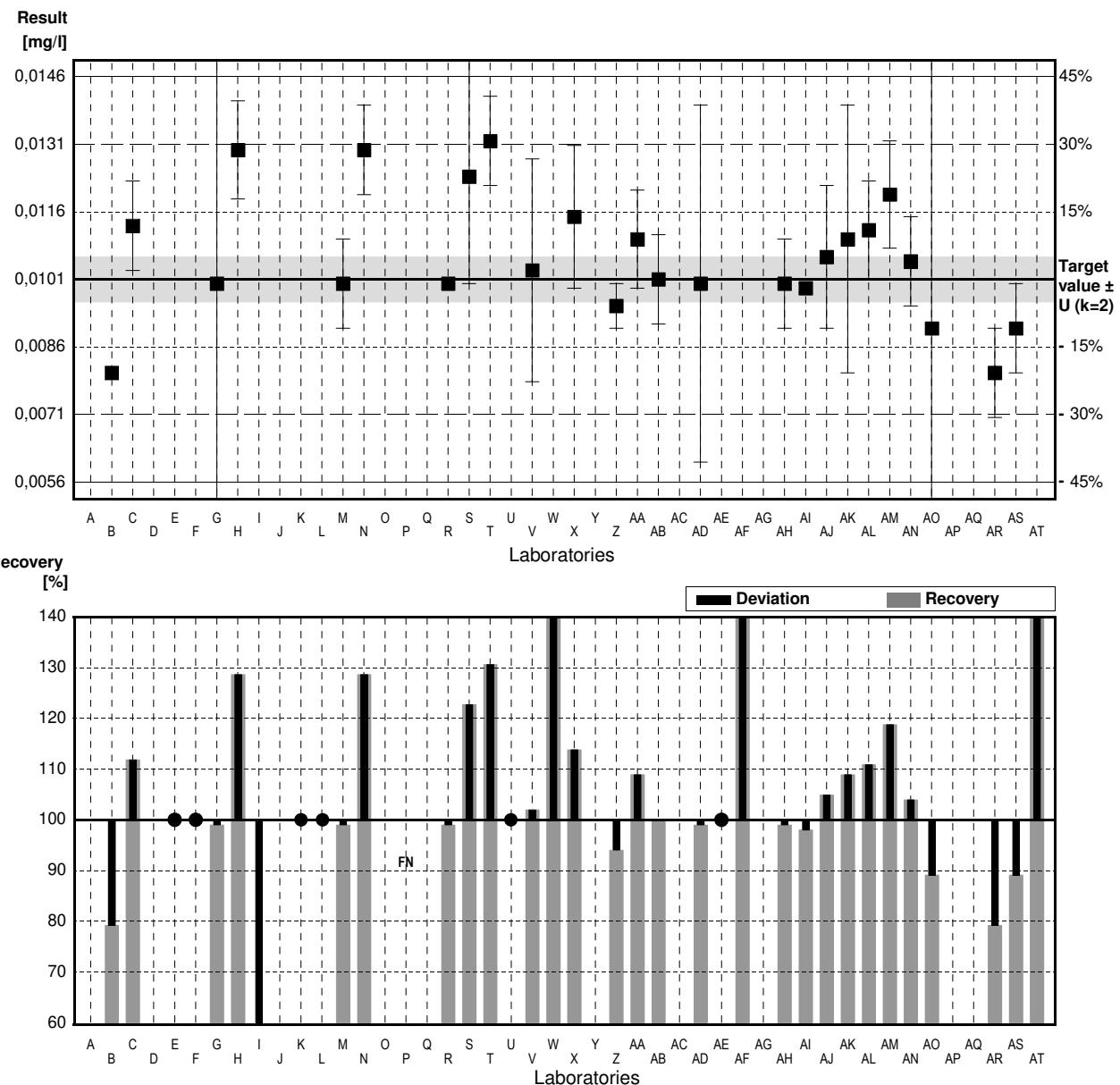
Target value  $\pm U$  ( $k=2$ ) 0,0101 mg/l  $\pm$  0,0005 mg/l

IFA result  $\pm U$  ( $k=2$ ) 0,0096 mg/l  $\pm$  0,0005 mg/l

Stability test  $\pm U$  ( $k=2$ ) 0,0095 mg/l  $\pm$  0,0005 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	0,0080		mg/l	79%	
C	0,0113	0,001	mg/l	112%	
D			mg/l		
E	<0,01		mg/l	*	
F	<0,0160		mg/l	*	
G	0,0100	0,01	mg/l	99%	
H	0,0130	0,0011	mg/l	129%	
I	0,00190 *	0,00019	mg/l	19%	
J			mg/l		
K	<0,01		mg/l	*	
L	<0,010		mg/l	*	
M	0,0100	0,0010	mg/l	99%	
N	0,0130	0,001	mg/l	129%	
O			mg/l		
P	<0,005		mg/l	FN	
Q			mg/l		
R	0,0100		mg/l	99%	
S	0,0124	0,0024	mg/l	123%	
T	0,0132	0,001	mg/l	131%	
U	<0,0100		mg/l	*	
V	0,0103	0,0025	mg/l	102%	
W	0,0623 *	0,0063	mg/l	617%	
X	0,0115	0,0016	mg/l	114%	
Y			mg/l		
Z	0,0095	0,005	mg/l	94%	
AA	0,0110	0,0011	mg/l	109%	
AB	0,0101	0,001	mg/l	100%	
AC			mg/l		
AD	0,01	0,004	mg/l	99%	
AE	<0,05		mg/l	*	
AF	0,0200 *	0,002	mg/l	198%	
AG			mg/l		
AH	0,0100	0,001	mg/l	99%	
AI	0,0099	0,0001	mg/l	98%	
AJ	0,0106	0,0016	mg/l	105%	
AK	0,0110	0,003	mg/l	109%	
AL	0,0112	0,0011	mg/l	111%	
AM	0,0120	0,0012	mg/l	119%	
AN	0,0105	0,0010	mg/l	104%	
AO	0,0090	0,015	mg/l	89%	
AP			mg/l		
AQ			mg/l		
AR	0,0080	0,001	mg/l	79%	
AS	0,0090	0,001	mg/l	89%	
AT	0,0163 *		mg/l	161%	

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,0126 $\pm$ 0,0051	0,0106 $\pm$ 0,0008	mg/l
Recov. $\pm$ CI(99%)	124,6 $\pm$ 50,8	104,8 $\pm$ 7,8	%
SD between labs	0,0100	0,0014	mg/l
RSD between labs	79,5	13,4	%
n for calculation	29	25	



## Sample N154A

### Parameter Ammonium

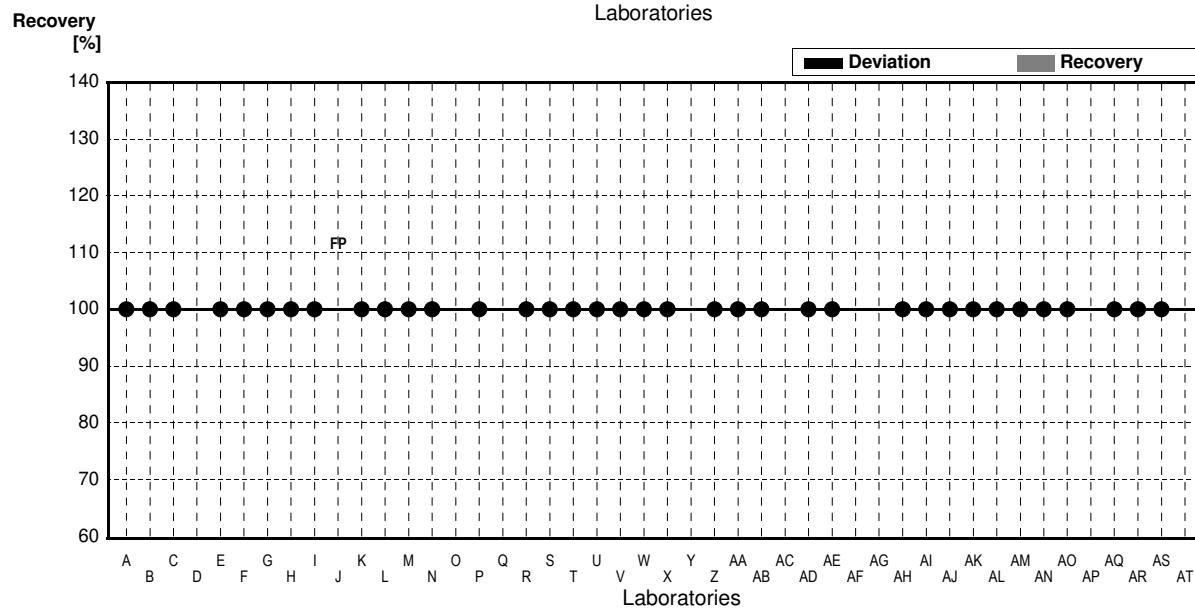
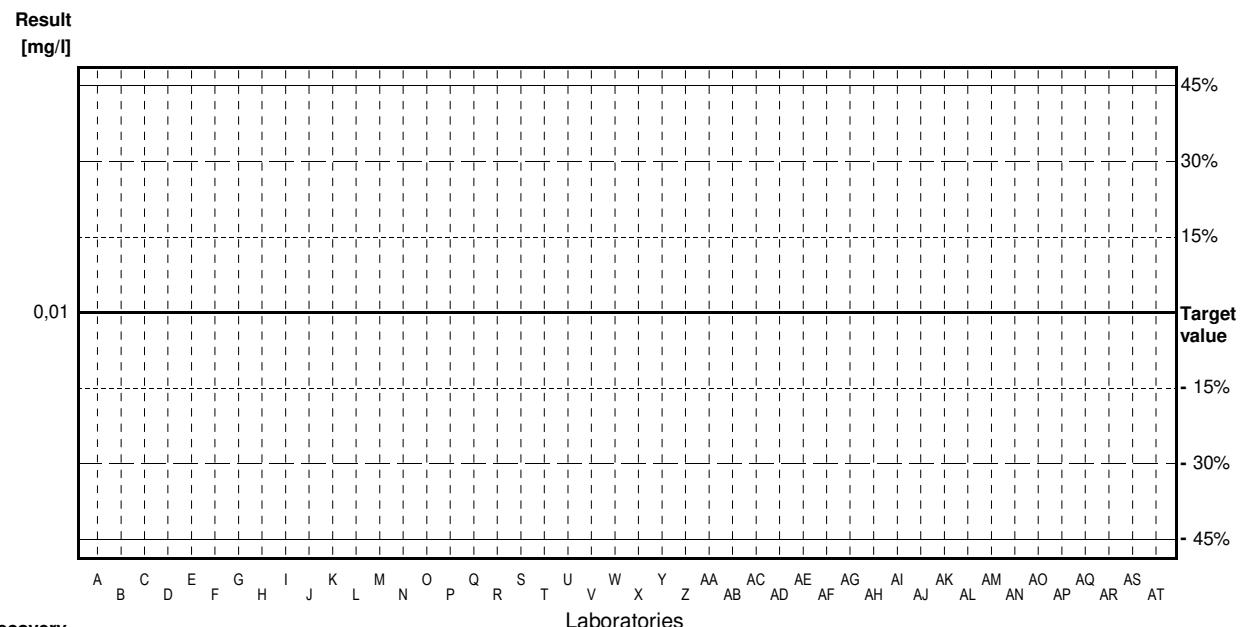
Target value <0,01 mg/l

IFA result <0,01 mg/l

Stability test <0,01 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	<0,010		mg/l	.	
B	<0,005		mg/l	.	
C	<0,01		mg/l	.	
D			mg/l		
E	<0,013		mg/l	.	
F	<0,012		mg/l	.	
G	0,00350	0,01	mg/l	.	
H	<0,0006		mg/l	.	
I	0,00470	0,00047	mg/l	.	
J	0,0424	0,0059	mg/l	FP	
K	<0,01		mg/l	.	
L	<0,010		mg/l	.	
M	<0,010		mg/l	.	
N	0,00100		mg/l	.	
O			mg/l		
P	<0,01		mg/l	.	
Q			mg/l		
R	<0,0100		mg/l	.	
S	<0,008		mg/l	.	
T	<0,010		mg/l	.	
U	<0,0100		mg/l	.	
V	<0,05		mg/l	.	
W	<0,01		mg/l	.	
X	<0,0064	0,0030	mg/l	.	
Y			mg/l		
Z	<0,025		mg/l	.	
AA	<0,010		mg/l	.	
AB	<0,026		mg/l	.	
AC			mg/l		
AD	<0,04		mg/l	.	
AE	<0,05		mg/l	.	
AF			mg/l		
AG			mg/l		
AH	<0,005		mg/l	.	
AI	<0,01		mg/l	.	
AJ	<0,030		mg/l	.	
AK	<0,010		mg/l	.	
AL	<0,01		mg/l	.	
AM	<0,010		mg/l	.	
AN	0,0077	0,0012	mg/l	.	
AO	<0,030	0,080	mg/l	.	
AP			mg/l		
AQ	<0,04		mg/l	.	
AR	<0,01		mg/l	.	
AS	<0,02		mg/l	.	
AT			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 N154B

### Parameter Ammonium

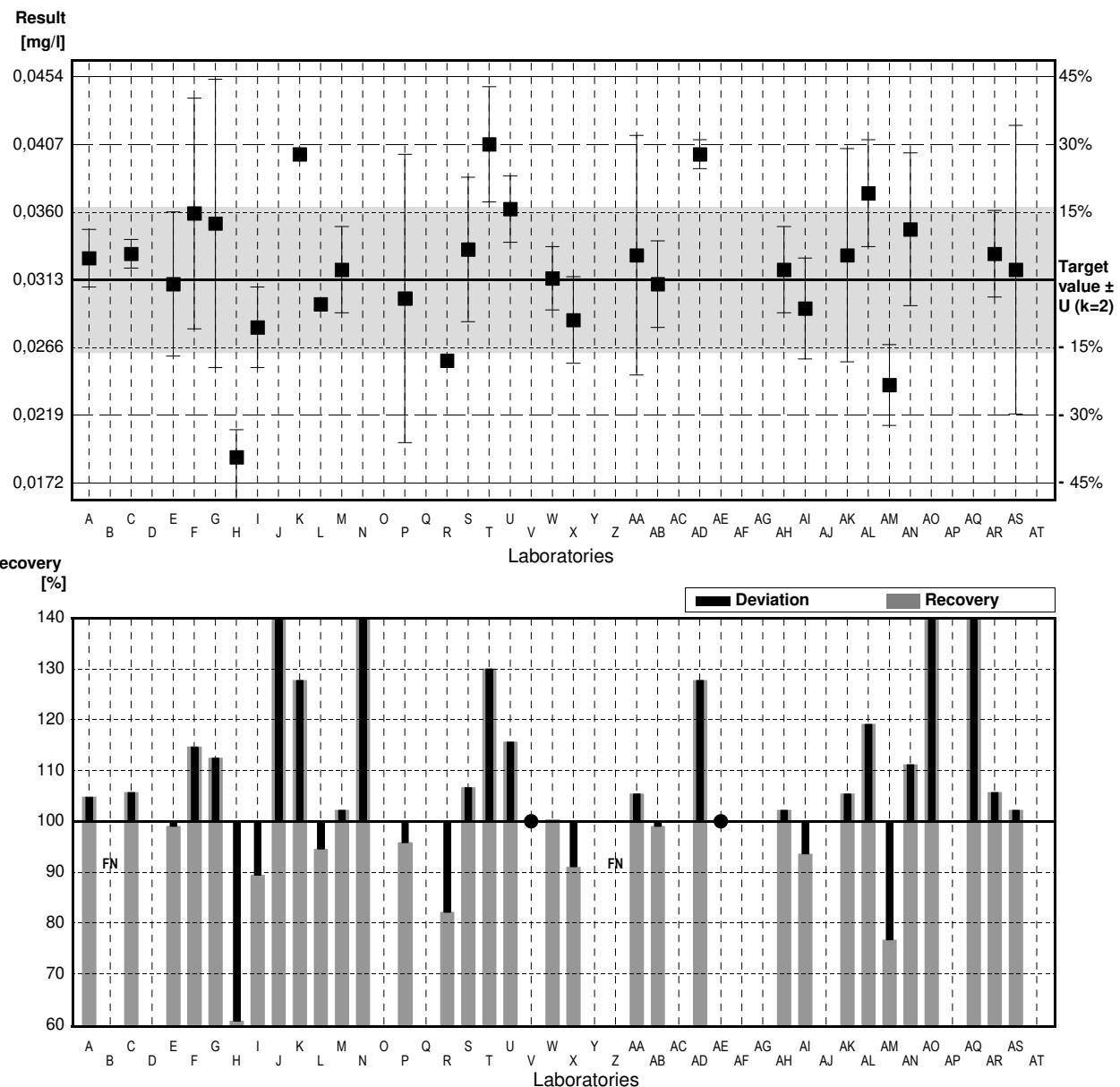
Target value  $\pm U$  ( $k=2$ ) 0,0313 mg/l  $\pm$  0,0050 mg/l

IFA result  $\pm U$  ( $k=2$ ) 0,0326 mg/l  $\pm$  0,0023 mg/l

Stability test  $\pm U$  ( $k=2$ ) 0,0315 mg/l  $\pm$  0,0022 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,0328	0,002	mg/l	105%	0,37
B	<0,005		mg/l	FN	
C	0,0331	0,001	mg/l	106%	0,44
D			mg/l		
E	0,0310	0,005	mg/l	99%	-0,07
F	0,0359	0,0080	mg/l	115%	1,13
G	0,0352	0,01	mg/l	112%	0,96
H	0,0190	0,0019	mg/l	61%	-3,02
I	0,0280	0,0028	mg/l	89%	-0,81
J	0,0676 *	0,0095	mg/l	216%	8,92
K	0,0400		mg/l	128%	2,14
L	0,0296	0,0004	mg/l	95%	-0,42
M	0,0320	0,003	mg/l	102%	0,17
N	0,078 *	0,013	mg/l	249%	11,48
O			mg/l		
P	0,0300	0,01	mg/l	96%	-0,32
Q			mg/l		
R	0,0257		mg/l	82%	-1,38
S	0,0334	0,0050	mg/l	107%	0,52
T	0,0407	0,004	mg/l	130%	2,31
U	0,0362	0,0023	mg/l	116%	1,20
V	<0,05		mg/l	*	
W	0,0314	0,0022	mg/l	100%	0,02
X	0,0285	0,0030	mg/l	91%	-0,69
Y			mg/l		
Z	<0,25		mg/l	FN	
AA	0,0330	0,0083	mg/l	105%	0,42
AB	0,0310	0,003	mg/l	99%	-0,07
AC			mg/l		
AD	0,04	0,001	mg/l	128%	2,14
AE	<0,05		mg/l	*	
AF			mg/l		
AG			mg/l		
AH	0,0320	0,003	mg/l	102%	0,17
AI	0,0293	0,0035	mg/l	94%	-0,49
AJ	n.a.		mg/l		
AK	0,0330	0,0074	mg/l	105%	0,42
AL	0,0373	0,0037	mg/l	119%	1,47
AM	0,0240	0,0028	mg/l	77%	-1,79
AN	0,0348	0,0053	mg/l	111%	0,86
AO	0,050 *	0,080	mg/l	160%	4,60
AP			mg/l		
AQ	0,0517 *	0,0068	mg/l	165%	5,01
AR	0,0331	0,003	mg/l	106%	0,44
AS	0,0320	0,0100	mg/l	102%	0,17
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,0359 $\pm$ 0,0057	0,0322 $\pm$ 0,0025	mg/l
Recov. $\pm$ CI(99%)	114,7 $\pm$ 18,1	102,9 $\pm$ 7,9	%
SD between labs	0,0117	0,0047	mg/l
RSD between labs	32,5	14,7	%
n for calculation	32	28	



## Sample N154A

### Parameter Chloride

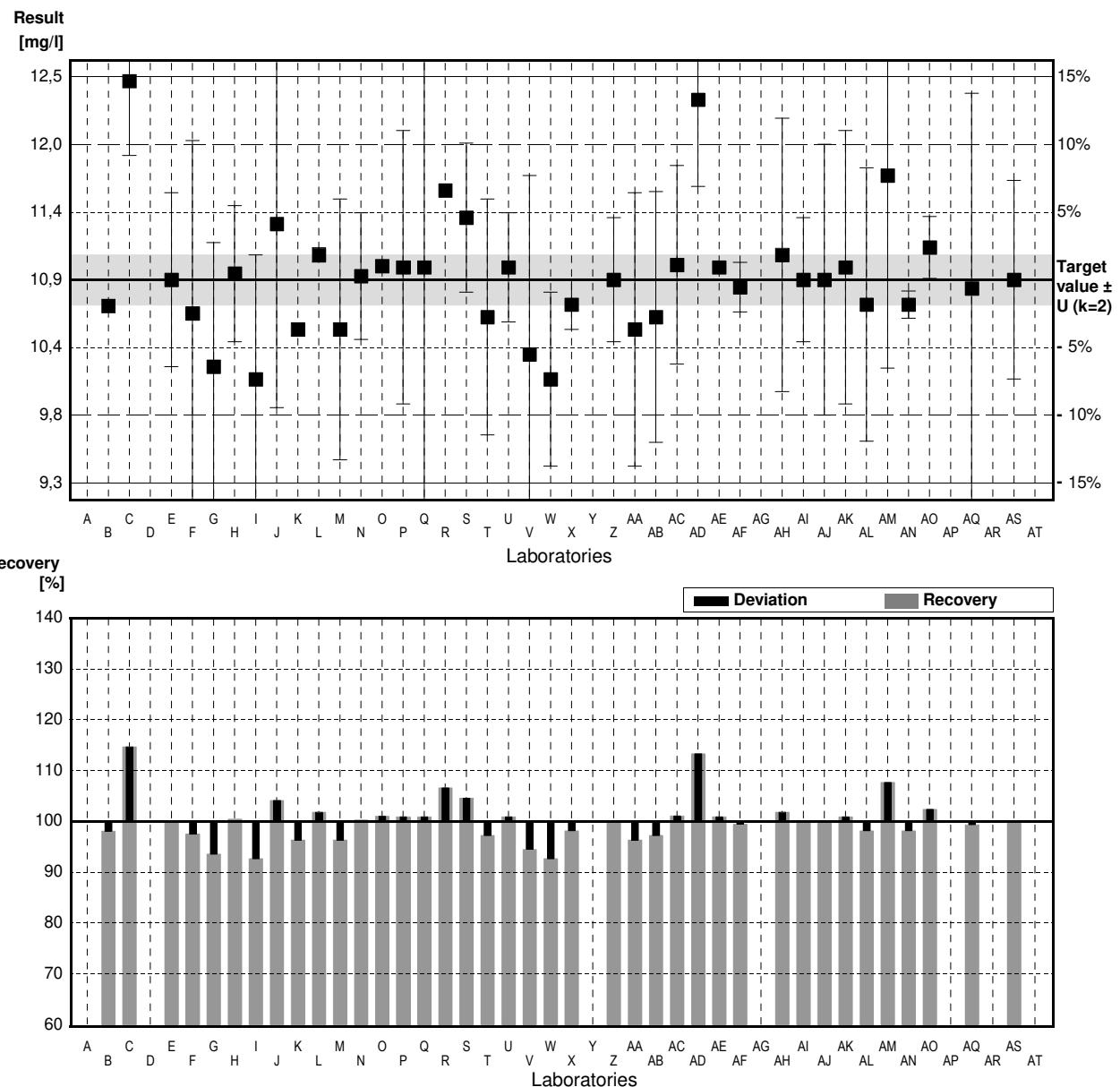
Target value  $\pm U$  ( $k=2$ ) 10,9 mg/l  $\pm$  0,2 mg/l

IFA result  $\pm U$  ( $k=2$ ) 10,7 mg/l  $\pm$  0,5 mg/l

Stability test  $\pm U$  ( $k=2$ ) 10,7 mg/l  $\pm$  0,5 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	10,69	*	mg/l	98%	-0,60
C	12,5	*	mg/l	115%	4,59
D			mg/l		
E	10,9	0,7	mg/l	100%	0,00
F	10,63	1,391	mg/l	98%	-0,77
G	10,2	1	mg/l	94%	-2,01
H	10,95	0,548	mg/l	100%	0,14
I	10,1	1,0	mg/l	93%	-2,29
J	11,35	1,48	mg/l	104%	1,29
K	10,5		mg/l	96%	-1,15
L	11,1	0,058	mg/l	102%	0,57
M	10,5	1,05	mg/l	96%	-1,15
N	10,93	0,51	mg/l	100%	0,09
O	11,01		mg/l	101%	0,32
P	11,0	1,1	mg/l	101%	0,29
Q	11,0	2,31	mg/l	101%	0,29
R	11,62		mg/l	107%	2,06
S	11,4	0,6	mg/l	105%	1,43
T	10,6	0,95	mg/l	97%	-0,86
U	11,0	0,44	mg/l	101%	0,29
V	10,3	1,44	mg/l	94%	-1,72
W	10,1	0,7	mg/l	93%	-2,29
X	10,7	0,2	mg/l	98%	-0,57
Y			mg/l		
Z	10,9	0,5	mg/l	100%	0,00
AA	10,5	1,1	mg/l	96%	-1,15
AB	10,60	1,01	mg/l	97%	-0,86
AC	11,02	0,80	mg/l	101%	0,34
AD	12,35	*	mg/l	113%	4,16
AE	11,0		mg/l	101%	0,29
AF	10,840	0,2	mg/l	99%	-0,17
AG			mg/l		
AH	11,1	1,1	mg/l	102%	0,57
AI	10,9	0,5	mg/l	100%	0,00
AJ	10,9	1,09	mg/l	100%	0,00
AK	11,0	1,1	mg/l	101%	0,29
AL	10,7	1,1	mg/l	98%	-0,57
AM	11,739	1,55	mg/l	108%	2,41
AN	10,7	0,11	mg/l	98%	-0,57
AO	11,16	0,25	mg/l	102%	0,75
AP			mg/l		
AQ	10,83	1,57	mg/l	99%	-0,20
AR			mg/l		
AS	10,9	0,8	mg/l	100%	0,00
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	10,9 $\pm$ 0,2	10,8 $\pm$ 0,2	mg/l
Recov. $\pm$ CI(99%)	100,3 $\pm$ 2,0	99,5 $\pm$ 1,5	%
SD between labs	0,5	0,4	mg/l
RSD between labs	4,6	3,4	%
n for calculation	39	37	



## Sample N154B

### Parameter Chloride

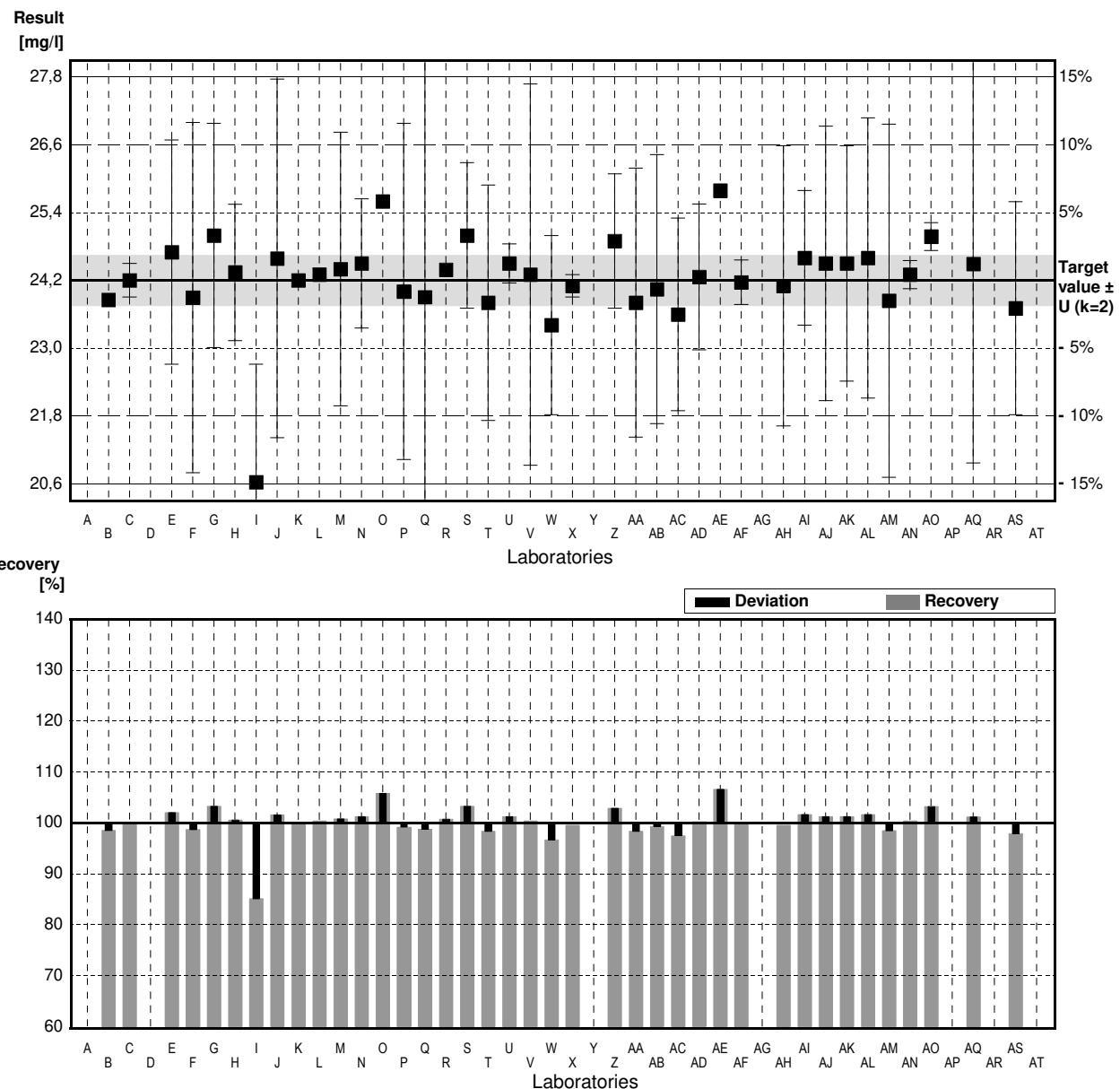
Target value  $\pm U$  ( $k=2$ ) 24,2 mg/l  $\pm$  0,5 mg/l

IFA result  $\pm U$  ( $k=2$ ) 24,1 mg/l  $\pm$  1,2 mg/l

Stability test  $\pm U$  ( $k=2$ ) 24,3 mg/l  $\pm$  1,2 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	23,85		mg/l	99%	-0,45
C	24,2	0,3	mg/l	100%	0,00
D			mg/l		
E	24,7	2	mg/l	102%	0,65
F	23,89	3,124	mg/l	99%	-0,40
G	25,0	2	mg/l	103%	1,03
H	24,34	1,217	mg/l	101%	0,18
I	20,6 *	2,1	mg/l	85%	-4,65
J	24,59	3,20	mg/l	102%	0,50
K	24,2		mg/l	100%	0,00
L	24,3	0,115	mg/l	100%	0,13
M	24,4	2,44	mg/l	101%	0,26
N	24,50	1,15	mg/l	101%	0,39
O	25,61		mg/l	106%	1,82
P	24,0	3	mg/l	99%	-0,26
Q	23,9	5,5	mg/l	99%	-0,39
R	24,39		mg/l	101%	0,25
S	25,0	1,3	mg/l	103%	1,03
T	23,8	2,1	mg/l	98%	-0,52
U	24,5	0,35	mg/l	101%	0,39
V	24,3	3,40	mg/l	100%	0,13
W	23,4	1,6	mg/l	97%	-1,03
X	24,1	0,2	mg/l	100%	-0,13
Y			mg/l		
Z	24,9	1,2	mg/l	103%	0,90
AA	23,8	2,4	mg/l	98%	-0,52
AB	24,04	2,40	mg/l	99%	-0,21
AC	23,59	1,72	mg/l	97%	-0,79
AD	24,26	1,3	mg/l	100%	0,08
AE	25,8 *		mg/l	107%	2,07
AF	24,165	0,4	mg/l	100%	-0,05
AG			mg/l		
AH	24,1	2,5	mg/l	100%	-0,13
AI	24,6	1,2	mg/l	102%	0,52
AJ	24,5	2,45	mg/l	101%	0,39
AK	24,5	2,1	mg/l	101%	0,39
AL	24,6	2,5	mg/l	102%	0,52
AM	23,836	3,15	mg/l	98%	-0,47
AN	24,3	0,25	mg/l	100%	0,13
AO	24,98	0,25	mg/l	103%	1,01
AP			mg/l		
AQ	24,49	3,55	mg/l	101%	0,37
AR			mg/l		
AS	23,7	1,9	mg/l	98%	-0,65
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	24,2 $\pm$ 0,3	24,3 $\pm$ 0,2	mg/l
Recov. $\pm$ CI(99%)	100,2 $\pm$ 1,4	100,4 $\pm$ 0,8	%
SD between labs	0,8	0,5	mg/l
RSD between labs	3,2	1,9	%
n for calculation	39	37	



## Sample N154A

### Parameter Sulphate

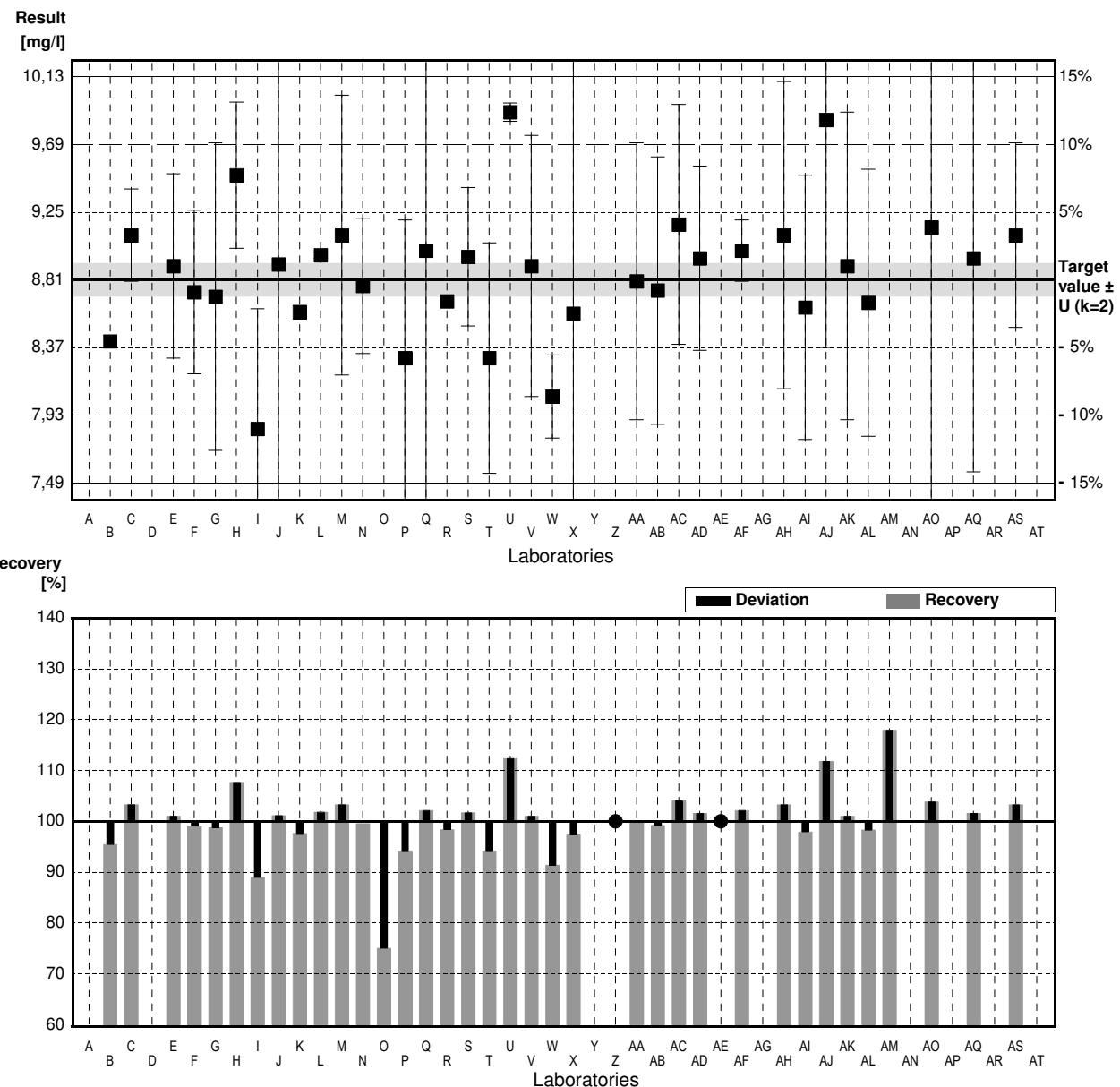
Target value  $\pm U$  ( $k=2$ ) 8,81 mg/l  $\pm$  0,11 mg/l

IFA result  $\pm U$  ( $k=2$ ) 8,86 mg/l  $\pm$  0,35 mg/l

Stability test  $\pm U$  ( $k=2$ ) 8,82 mg/l  $\pm$  0,35 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	8,41		mg/l	95%	-1,46
C	9,1	0,3	mg/l	103%	1,06
D			mg/l		
E	8,90	0,6	mg/l	101%	0,33
F	8,73	0,532	mg/l	99%	-0,29
G	8,70	1	mg/l	99%	-0,40
H	9,49	0,475	mg/l	108%	2,49
I	7,84 *	0,78	mg/l	89%	-3,55
J	8,91	1,60	mg/l	101%	0,37
K	8,6		mg/l	98%	-0,77
L	8,97	0,020	mg/l	102%	0,59
M	9,1	0,91	mg/l	103%	1,06
N	8,77	0,44	mg/l	100%	-0,15
O	6,61 *		mg/l	75%	-8,06
P	8,30	0,9	mg/l	94%	-1,87
Q	9,0	1,64	mg/l	102%	0,70
R	8,67		mg/l	98%	-0,51
S	8,96	0,45	mg/l	102%	0,55
T	8,3	0,75	mg/l	94%	-1,87
U	9,90 *	0,06	mg/l	112%	3,99
V	8,9	0,85	mg/l	101%	0,33
W	8,05	0,27	mg/l	91%	-2,78
X	8,59	2	mg/l	98%	-0,81
Y			mg/l		
Z	<10		mg/l	*	
AA	8,8	0,9	mg/l	100%	-0,04
AB	8,74	0,87	mg/l	99%	-0,26
AC	9,17	0,78	mg/l	104%	1,32
AD	8,95	0,6	mg/l	102%	0,51
AE	<40		mg/l	*	
AF	9,000	0,2	mg/l	102%	0,70
AG			mg/l		
AH	9,1	1,0	mg/l	103%	1,06
AI	8,63	0,86	mg/l	98%	-0,66
AJ	9,85 *	1,48	mg/l	112%	3,81
AK	8,9	1,0	mg/l	101%	0,33
AL	8,66	0,87	mg/l	98%	-0,55
AM	10,396 *	0,559	mg/l	118%	5,81
AN			mg/l		
AO	9,15	3,0	mg/l	104%	1,24
AP			mg/l		
AQ	8,95	1,39	mg/l	102%	0,51
AR			mg/l		
AS	9,1	0,6	mg/l	103%	1,06
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	8,84 $\pm$ 0,28	8,83 $\pm$ 0,15	mg/l
Recov. $\pm$ CI(99%)	100,3 $\pm$ 3,2	100,2 $\pm$ 1,7	%
SD between labs	0,61	0,30	mg/l
RSD between labs	7,0	3,4	%
n for calculation	36	31	



## Sample N154B

### Parameter Sulphate

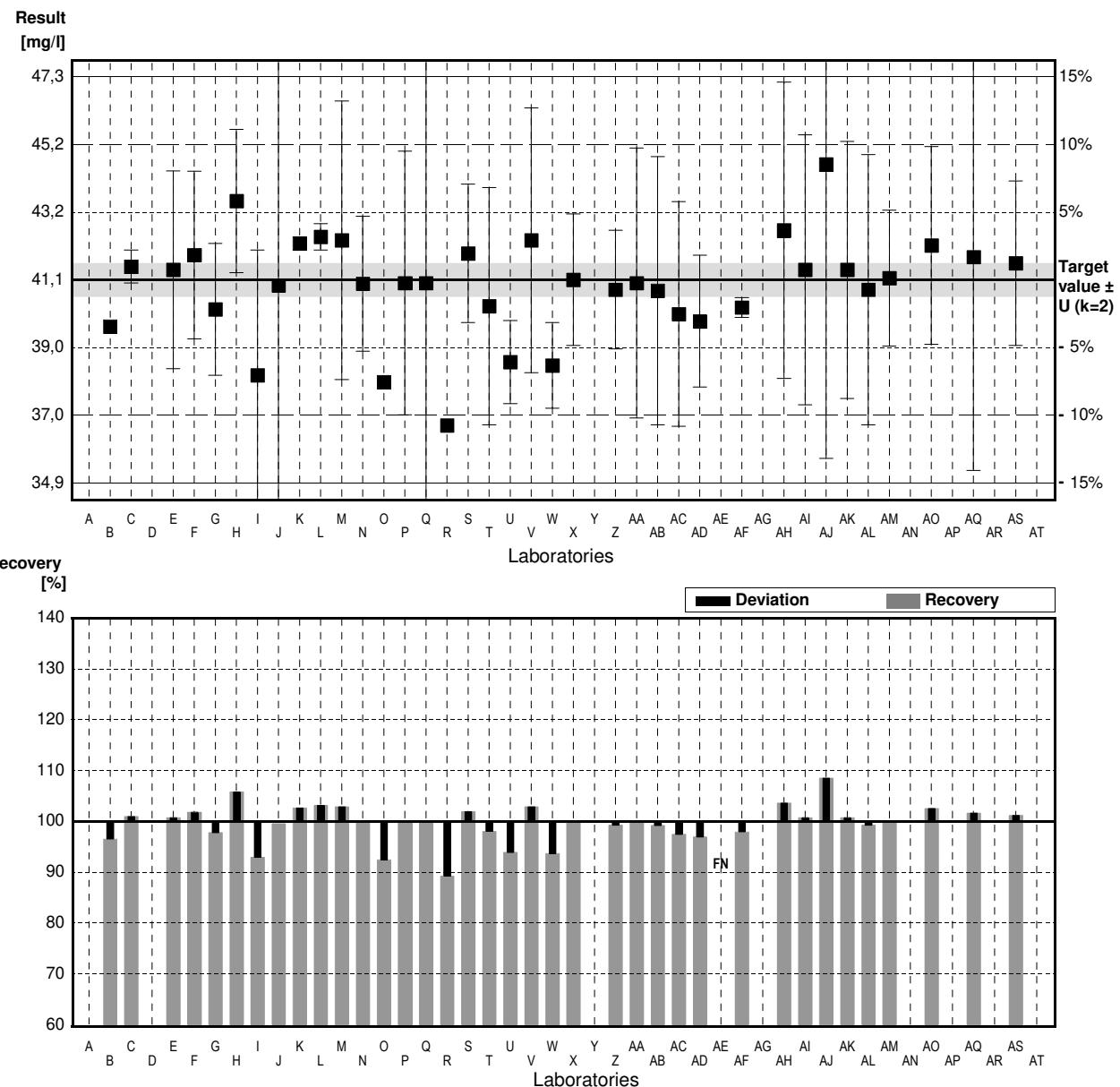
Target value  $\pm U$  ( $k=2$ ) 41,1 mg/l  $\pm$  0,5 mg/l

IFA result  $\pm U$  ( $k=2$ ) 41,4 mg/l  $\pm$  1,7 mg/l

Stability test  $\pm U$  ( $k=2$ ) 41,3 mg/l  $\pm$  1,7 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	39,68		mg/l	97%	-1,11
C	41,5	0,5	mg/l	101%	0,31
D			mg/l		
E	41,4	3	mg/l	101%	0,24
F	41,85	2,548	mg/l	102%	0,59
G	40,2	2	mg/l	98%	-0,71
H	43,49	2,175	mg/l	106%	1,88
I	38,2	3,8	mg/l	93%	-2,28
J	40,93	7,37	mg/l	100%	-0,13
K	42,2		mg/l	103%	0,86
L	42,4	0,404	mg/l	103%	1,02
M	42,3	4,23	mg/l	103%	0,94
N	40,98	2,05	mg/l	100%	-0,09
O	37,99		mg/l	92%	-2,44
P	41,0	4	mg/l	100%	-0,08
Q	41,0	8,4	mg/l	100%	-0,08
R	36,68 *		mg/l	89%	-3,47
S	41,9	2,1	mg/l	102%	0,63
T	40,3	3,6	mg/l	98%	-0,63
U	38,6	1,26	mg/l	94%	-1,96
V	42,3	4,02	mg/l	103%	0,94
W	38,5	1,3	mg/l	94%	-2,04
X	41,1	2	mg/l	100%	0,00
Y			mg/l		
Z	40,8	1,8	mg/l	99%	-0,24
AA	41,0	4,1	mg/l	100%	-0,08
AB	40,77	4,07	mg/l	99%	-0,26
AC	40,06	3,41	mg/l	97%	-0,82
AD	39,84	2	mg/l	97%	-0,99
AE	<40		mg/l	FN	
AF	40,260	0,3	mg/l	98%	-0,66
AG			mg/l		
AH	42,6	4,5	mg/l	104%	1,18
AI	41,4	4,1	mg/l	101%	0,24
AJ	44,6	8,92	mg/l	109%	2,75
AK	41,4	3,9	mg/l	101%	0,24
AL	40,8	4,1	mg/l	99%	-0,24
AM	41,150	2,058	mg/l	100%	0,04
AN			mg/l		
AO	42,14	3,0	mg/l	103%	0,82
AP			mg/l		
AQ	41,79	6,48	mg/l	102%	0,54
AR			mg/l		
AS	41,6	2,5	mg/l	101%	0,39
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	40,9 $\pm$ 0,7	41,1 $\pm$ 0,6	mg/l
Recov. $\pm$ CI(99%)	99,6 $\pm$ 1,7	99,9 $\pm$ 1,5	%
SD between labs	1,5	1,4	mg/l
RSD between labs	3,8	3,4	%
n for calculation	37	36	



## Sample N154A

### Parameter Orthophosphate

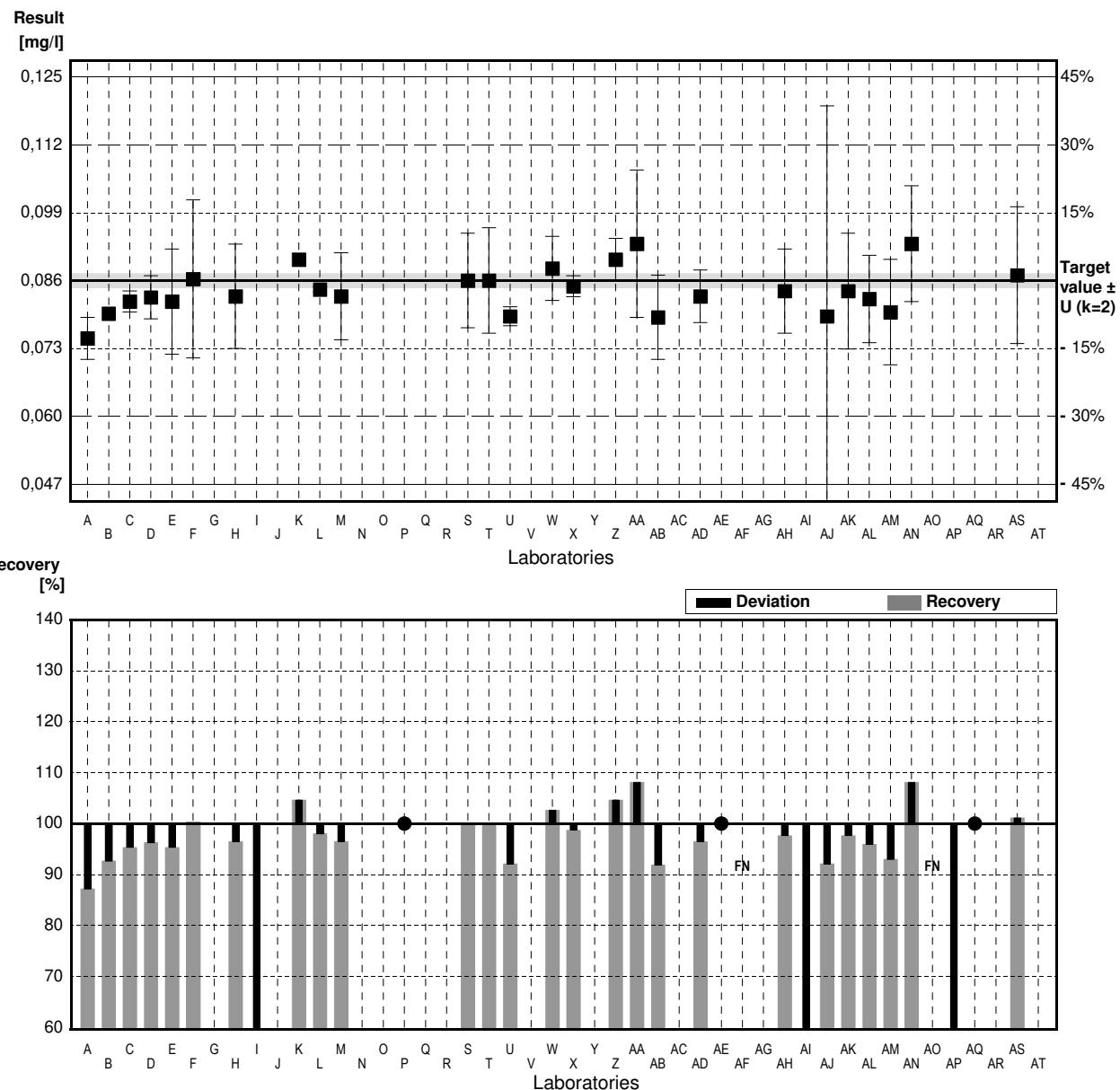
Target value  $\pm U$  ( $k=2$ ) 0,086 mg/l  $\pm$  0,001 mg/l

IFA result  $\pm U$  ( $k=2$ ) 0,086 mg/l  $\pm$  0,003 mg/l

Stability test  $\pm U$  ( $k=2$ ) 0,088 mg/l  $\pm$  0,004 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,075	0,004	mg/l	87%	-1,28
B	0,0797		mg/l	93%	-0,73
C	0,082	0,002	mg/l	95%	-0,47
D	0,0828	0,0041	mg/l	96%	-0,37
E	0,082	0,01	mg/l	95%	-0,47
F	0,0863	0,0150	mg/l	100%	0,03
G			mg/l		
H	0,083	0,0099	mg/l	97%	-0,35
I	0,0320 *	0,0032	mg/l	37%	-6,28
J			mg/l		
K	0,09		mg/l	105%	0,47
L	0,0843	0,0005	mg/l	98%	-0,20
M	0,083	0,0083	mg/l	97%	-0,35
N			mg/l		
O			mg/l		
P	<0,1		mg/l	*	
Q			mg/l		
R			mg/l		
S	0,086	0,009	mg/l	100%	0,00
T	0,086	0,01	mg/l	100%	0,00
U	0,0792	0,0018	mg/l	92%	-0,79
V			mg/l		
W	0,0883	0,0061	mg/l	103%	0,27
X	0,0849	0,0020	mg/l	99%	-0,13
Y			mg/l		
Z	0,090	0,004	mg/l	105%	0,47
AA	0,093	0,014	mg/l	108%	0,81
AB	0,079	0,008	mg/l	92%	-0,81
AC			mg/l		
AD	0,083	0,005	mg/l	97%	-0,35
AE	<0,15		mg/l	*	
AF	<0,010	0,002	mg/l	FN	
AG			mg/l		
AH	0,084	0,008	mg/l	98%	-0,23
AI	0,0296 *	0,0015	mg/l	34%	-6,56
AJ	0,0792	0,04	mg/l	92%	-0,79
AK	0,084	0,011	mg/l	98%	-0,23
AL	0,0825	0,0083	mg/l	96%	-0,41
AM	0,080	0,01	mg/l	93%	-0,70
AN	0,093	0,011	mg/l	108%	0,81
AO	<0,050	0,07	mg/l	FN	
AP	0,0307 *	0,002	mg/l	36%	-6,43
AQ	<0,13		mg/l	*	
AR			mg/l		
AS	0,087	0,013	mg/l	101%	0,12
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,079 $\pm$ 0,009	0,084 $\pm$ 0,002	mg/l
Recov. $\pm$ CI(99%)	91,4 $\pm$ 10,2	97,8 $\pm$ 2,8	%
SD between labs	0,017	0,004	mg/l
RSD between labs	21,7	5,2	%
n for calculation	29	26	



## Sample N154B

### Parameter Orthophosphate

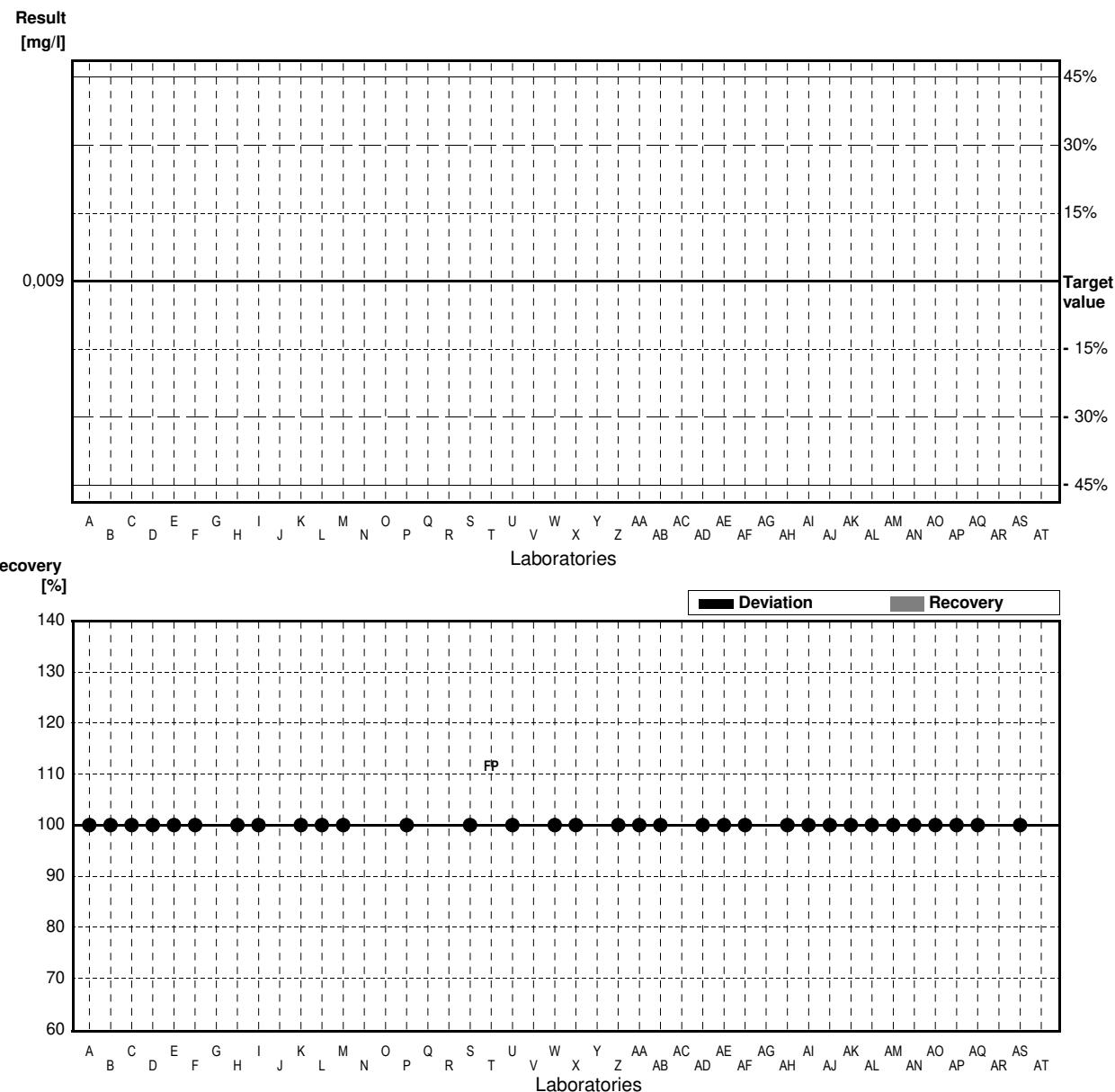
Target value <0.009 mg/l

IFA result <0.009 mg/l

Stability test <0.009 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	<0.019		mg/l	•	
B	<0.009		mg/l	•	
C	<0.01		mg/l	•	
D	<0.009	0.0018	mg/l	•	
E	<0.01		mg/l	•	
F	<0.0150		mg/l	•	
G			mg/l		
H	0.0060	0.0007	mg/l	•	
I	0.00150	0.00015	mg/l	•	
J			mg/l		
K	<0.02		mg/l	•	
L	<0.015		mg/l	•	
M	<0.006		mg/l	•	
N			mg/l		
O			mg/l		
P	<0.1		mg/l	•	
Q			mg/l		
R			mg/l		
S	<0.006		mg/l	•	
T	0.0101	0.001	mg/l	FP	
U	0.0021		mg/l	•	
V			mg/l		
W	<0.015		mg/l	•	
X	0.0067	0.0020	mg/l	•	
Y			mg/l		
Z	<0.03		mg/l	•	
AA	<0.020		mg/l	•	
AB	<0.0055		mg/l	•	
AC			mg/l		
AD	<0.01		mg/l	•	
AE	<0.15		mg/l	•	
AF	<0.010	0.002	mg/l	•	
AG			mg/l		
AH	<0.005		mg/l	•	
AI	<0.01		mg/l	•	
AJ	<0.020	0.04	mg/l	•	
AK	<0.010		mg/l	•	
AL	<0.008		mg/l	•	
AM	<0.015		mg/l	•	
AN	<0.006	0	mg/l	•	
AO	<0.050	0.07	mg/l	•	
AP	<0.01	0.002	mg/l	•	
AQ	<0.13		mg/l	•	
AR			mg/l		
AS	<0.009		mg/l	•	
AT			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 N154A

### Parameter Boron

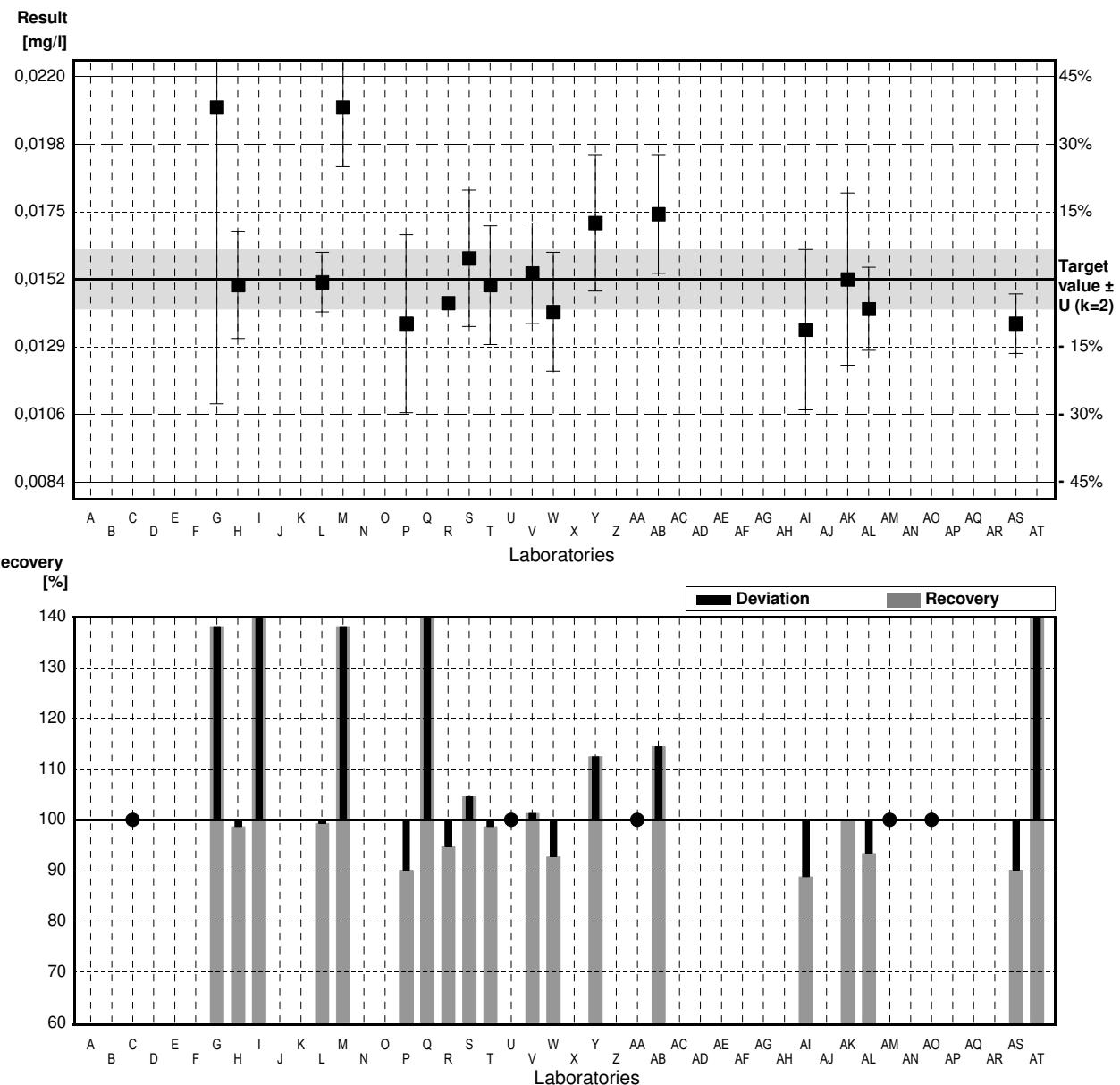
Target value  $\pm U$  ( $k=2$ ) 0,0152 mg/l  $\pm$  0,0010 mg/l

IFA result  $\pm U$  ( $k=2$ ) 0,0147 mg/l  $\pm$  0,0015 mg/l

Stability test  $\pm U$  ( $k=2$ ) 0,0158 mg/l  $\pm$  0,0016 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B			mg/l		
C	<0.02		mg/l	*	
D			mg/l		
E			mg/l		
F			mg/l		
G	0,0210	0,01	mg/l	138%	4,44
H	0,0150	0,0018	mg/l	99%	-0,15
I	14,8	*	1,5	97368%	11310,28
J			mg/l		
K			mg/l		
L	0,0151	0,001	mg/l	99%	-0,08
M	0,0210	0,002	mg/l	138%	4,44
N			mg/l		
O			mg/l		
P	0,0137	0,003	mg/l	90%	-1,15
Q	0,0430	*	0,0174	283%	21,27
R	0,0144		mg/l	95%	-0,61
S	0,0159	0,0023	mg/l	105%	0,54
T	0,0150	0,002	mg/l	99%	-0,15
U	<0,020		mg/l	*	
V	0,0154	0,0017	mg/l	101%	0,15
W	0,0141	0,002	mg/l	93%	-0,84
X			mg/l		
Y	0,0171	0,0023	mg/l	113%	1,45
Z			mg/l		
AA	<0,02		mg/l	*	
AB	0,0174	0,002	mg/l	114%	1,68
AC			mg/l		
AD			mg/l		
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH			mg/l		
AI	0,0135	0,0027	mg/l	89%	-1,30
AJ	n.n		mg/l		
AK	0,0152	0,0029	mg/l	100%	0,00
AL	0,0142	0,0014	mg/l	93%	-0,76
AM	<0,02	0,002	mg/l	*	
AN			mg/l		
AO	<0,050	0,07	mg/l	*	
AP			mg/l		
AQ			mg/l		
AR			mg/l		
AS	0,0137	0,0010	mg/l	90%	-1,15
AT	0,0404	*	mg/l	266%	19,28

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,7966 $\pm$ 2,2406	0,0157 $\pm$ 0,0017	mg/l
Recov. $\pm$ CI(99%)	5240,7 $\pm$ 14740,	103,5 $\pm$ 11,3	%
SD between labs	3,3911	0,0023	mg/l
RSD between labs	425,7	14,9	%
n for calculation	19	16	



## Sample N154B

### Parameter Boron

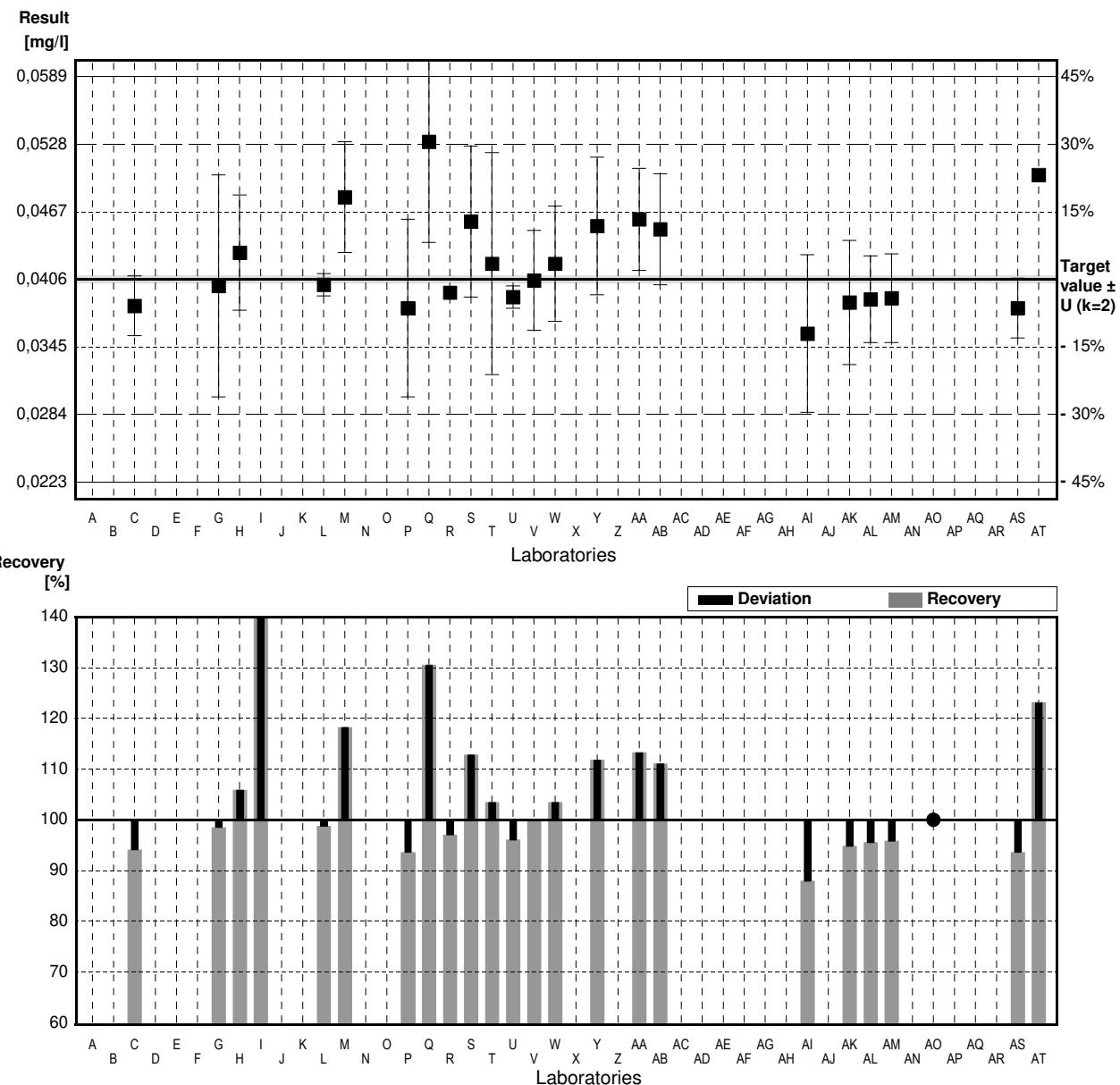
Target value  $\pm U$  ( $k=2$ ) 0,0406 mg/l  $\pm$  0,0003 mg/l

IFA result  $\pm U$  ( $k=2$ ) 0,0396 mg/l  $\pm$  0,0040 mg/l

Stability test  $\pm U$  ( $k=2$ ) 0,0424 mg/l  $\pm$  0,0042 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B			mg/l		
C	0,0382	0,0027	mg/l	94%	-0,69
D			mg/l		
E			mg/l		
F			mg/l		
G	0,0400	0,01	mg/l	99%	-0,17
H	0,0430	*	mg/l	106%	0,69
I	38,5	*	mg/l	94828%	11014,84
J			mg/l		
K			mg/l		
L	0,0401	0,001	mg/l	99%	-0,14
M	0,0480	0,005	mg/l	118%	2,12
N			mg/l		
O			mg/l		
P	0,0380	0,008	mg/l	94%	-0,74
Q	0,053	*	mg/l	131%	3,55
R	0,0394		mg/l	97%	-0,34
S	0,0458	0,0068	mg/l	113%	1,49
T	0,0420	0,01	mg/l	103%	0,40
U	0,039	0,001	mg/l	96%	-0,46
V	0,0405	0,0045	mg/l	100%	-0,03
W	0,0420	0,0052	mg/l	103%	0,40
X			mg/l		
Y	0,0454	0,0062	mg/l	112%	1,37
Z			mg/l		
AA	0,0460	0,0046	mg/l	113%	1,55
AB	0,0451	0,005	mg/l	111%	1,29
AC			mg/l		
AD			mg/l		
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH			mg/l		
AI	0,0357	0,0071	mg/l	88%	-1,40
AJ	n.n		mg/l		
AK	0,0385	0,0056	mg/l	95%	-0,60
AL	0,0388	0,0039	mg/l	96%	-0,52
AM	0,0389	0,004	mg/l	96%	-0,49
AN			mg/l		
AO	<0,050	0,07	mg/l	*	
AP			mg/l		
AQ			mg/l		
AR			mg/l		
AS	0,0380	0,0027	mg/l	94%	-0,74
AT	0,0500		mg/l	123%	2,69

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	1,7141 $\pm$ 4,7153	0,0415 $\pm$ 0,0024	mg/l
Recov. $\pm$ CI(99%)	4222,0 $\pm$ 11614,	102,3 $\pm$ 5,9	%
SD between labs	8,0190	0,0038	mg/l
RSD between labs	467,8	9,2	%
n for calculation	23	21	



## Sample N154A

### Parameter DOC

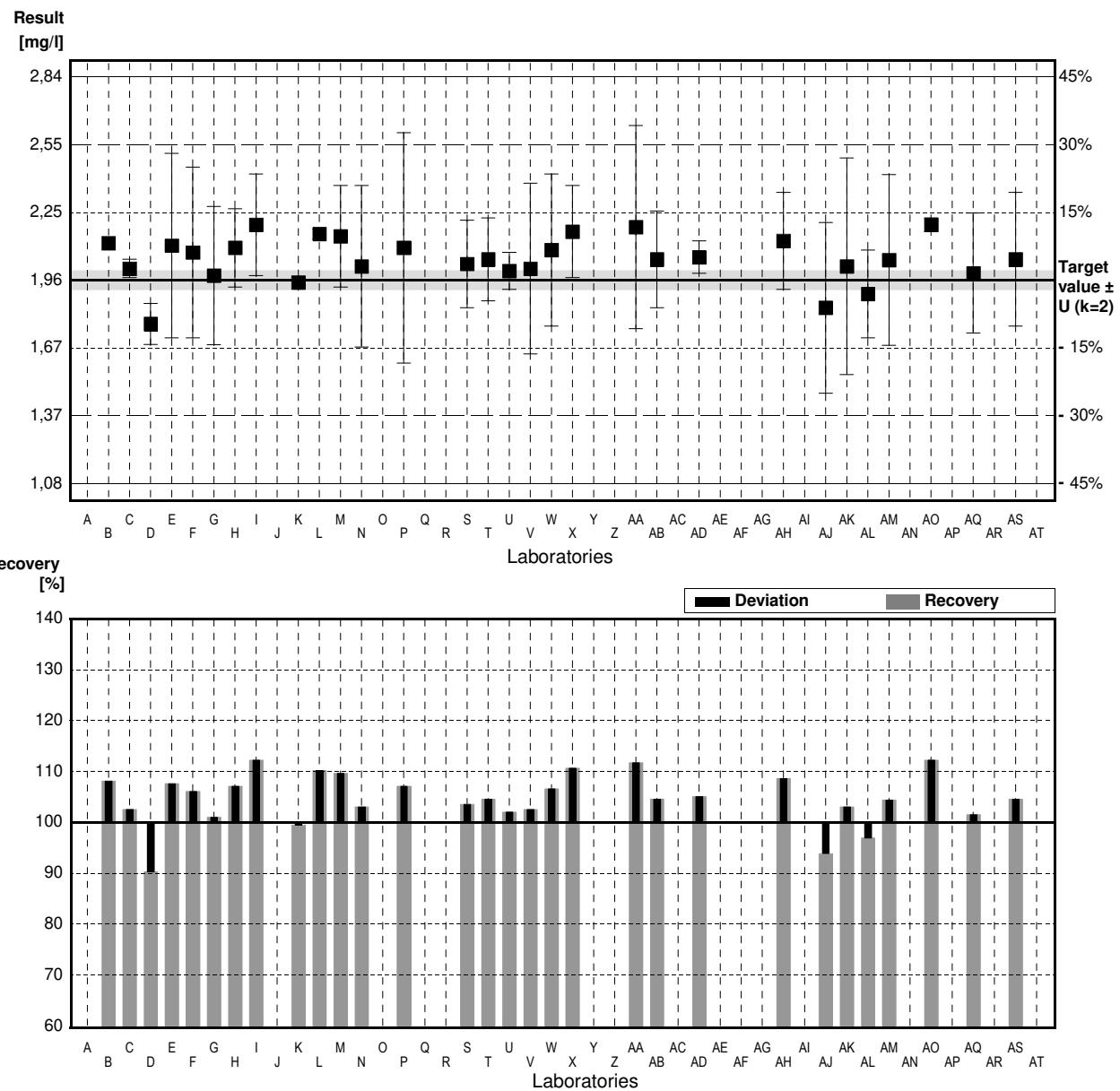
Target value  $\pm U$  ( $k=2$ ) 1,96 mg/l  $\pm$  0,04 mg/l

IFA result  $\pm U$  ( $k=2$ ) 1,97 mg/l  $\pm$  0,08 mg/l

Stability test  $\pm U$  ( $k=2$ ) 1,96 mg/l  $\pm$  0,08 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	2,12		mg/l	108%	1,36
C	2,01	0,04	mg/l	103%	0,43
D	1,77 *	0,089	mg/l	90%	-1,62
E	2,11	0,4	mg/l	108%	1,28
F	2,08	0,37	mg/l	106%	1,02
G	1,98	0,3	mg/l	101%	0,17
H	2,10	0,17	mg/l	107%	1,19
I	2,20	0,22	mg/l	112%	2,04
J			mg/l		
K	1,95		mg/l	99%	-0,09
L	2,16	0,021	mg/l	110%	1,70
M	2,15	0,22	mg/l	110%	1,62
N	2,02	0,35	mg/l	103%	0,51
O			mg/l		
P	2,10	0,5	mg/l	107%	1,19
Q			mg/l		
R			mg/l		
S	2,03	0,19	mg/l	104%	0,60
T	2,05	0,18	mg/l	105%	0,77
U	2,00	0,08	mg/l	102%	0,34
V	2,01	0,37	mg/l	103%	0,43
W	2,09	0,33	mg/l	107%	1,11
X	2,17	0,2	mg/l	111%	1,79
Y			mg/l		
Z			mg/l		
AA	2,19	0,44	mg/l	112%	1,96
AB	2,05	0,21	mg/l	105%	0,77
AC			mg/l		
AD	2,06	0,07	mg/l	105%	0,85
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH	2,13	0,21	mg/l	109%	1,45
AI			mg/l		
AJ	1,84	0,37	mg/l	94%	-1,02
AK	2,02	0,47	mg/l	103%	0,51
AL	1,90	0,19	mg/l	97%	-0,51
AM	2,047	0,37	mg/l	104%	0,74
AN			mg/l		
AO	2,20	0,03	mg/l	112%	2,04
AP			mg/l		
AQ	1,99	0,26	mg/l	102%	0,26
AR			mg/l		
AS	2,05	0,29	mg/l	105%	0,77
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	2,05 $\pm$ 0,05	2,06 $\pm$ 0,04	mg/l
Recov. $\pm$ CI(99%)	104,7 $\pm$ 2,6	105,2 $\pm$ 2,3	%
SD between labs	0,10	0,09	mg/l
RSD between labs	4,9	4,2	%
n for calculation	30	29	



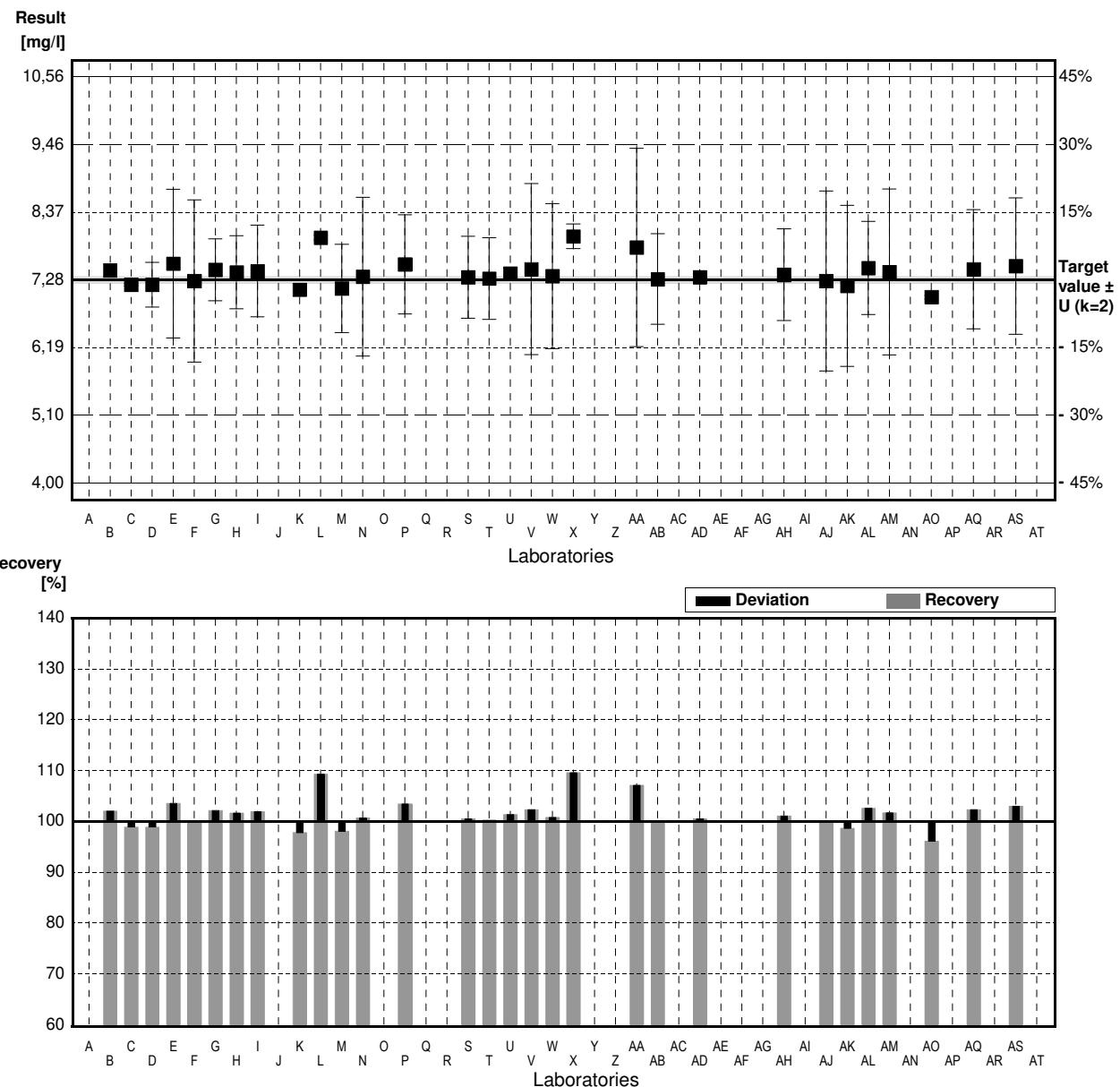
## Sample N154B

### Parameter DOC

Target value  $\pm U$  ( $k=2$ ) 7,28 mg/l  $\pm$  0,05 mg/l  
 IFA result  $\pm U$  ( $k=2$ ) 7,33 mg/l  $\pm$  0,29 mg/l  
 Stability test  $\pm U$  ( $k=2$ ) 7,31 mg/l  $\pm$  0,29 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	7,43		mg/l	102%	0,34
C	7,20	0,02	mg/l	99%	-0,18
D	7,20	0,36	mg/l	99%	-0,18
E	7,54	1,2	mg/l	104%	0,60
F	7,26	1,31	mg/l	100%	-0,05
G	7,44	0,5	mg/l	102%	0,37
H	7,4	0,59	mg/l	102%	0,27
I	7,42	0,74	mg/l	102%	0,32
J			mg/l		
K	7,12		mg/l	98%	-0,37
L	7,96 *	0,040	mg/l	109%	1,56
M	7,14	0,71	mg/l	98%	-0,32
N	7,33	1,28	mg/l	101%	0,11
O			mg/l		
P	7,53	0,8	mg/l	103%	0,57
Q			mg/l		
R			mg/l		
S	7,32	0,66	mg/l	101%	0,09
T	7,3	0,66	mg/l	100%	0,05
U	7,38	0,09	mg/l	101%	0,23
V	7,45	1,38	mg/l	102%	0,39
W	7,34	1,17	mg/l	101%	0,14
X	7,98 *	0,2	mg/l	110%	1,60
Y			mg/l		
Z			mg/l		
AA	7,8 *	1,6	mg/l	107%	1,19
AB	7,29	0,73	mg/l	100%	0,02
AC			mg/l		
AD	7,32	0,06	mg/l	101%	0,09
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH	7,36	0,74	mg/l	101%	0,18
AI			mg/l		
AJ	7,26	1,45	mg/l	100%	-0,05
AK	7,18	1,30	mg/l	99%	-0,23
AL	7,47	0,75	mg/l	103%	0,43
AM	7,405	1,34	mg/l	102%	0,29
AN			mg/l		
AO	7,00	0,03	mg/l	96%	-0,64
AP			mg/l		
AQ	7,45	0,96	mg/l	102%	0,39
AR			mg/l		
AS	7,5	1,1	mg/l	103%	0,50
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	7,39 $\pm$ 0,11	7,33 $\pm$ 0,07	mg/l
Recov. $\pm$ CI(99%)	101,5 $\pm$ 1,5	100,8 $\pm$ 1,0	%
SD between labs	0,22	0,13	mg/l
RSD between labs	3,0	1,8	%
n for calculation	30	27	



## Sample N154A

### Parameter Total P (as PO4)

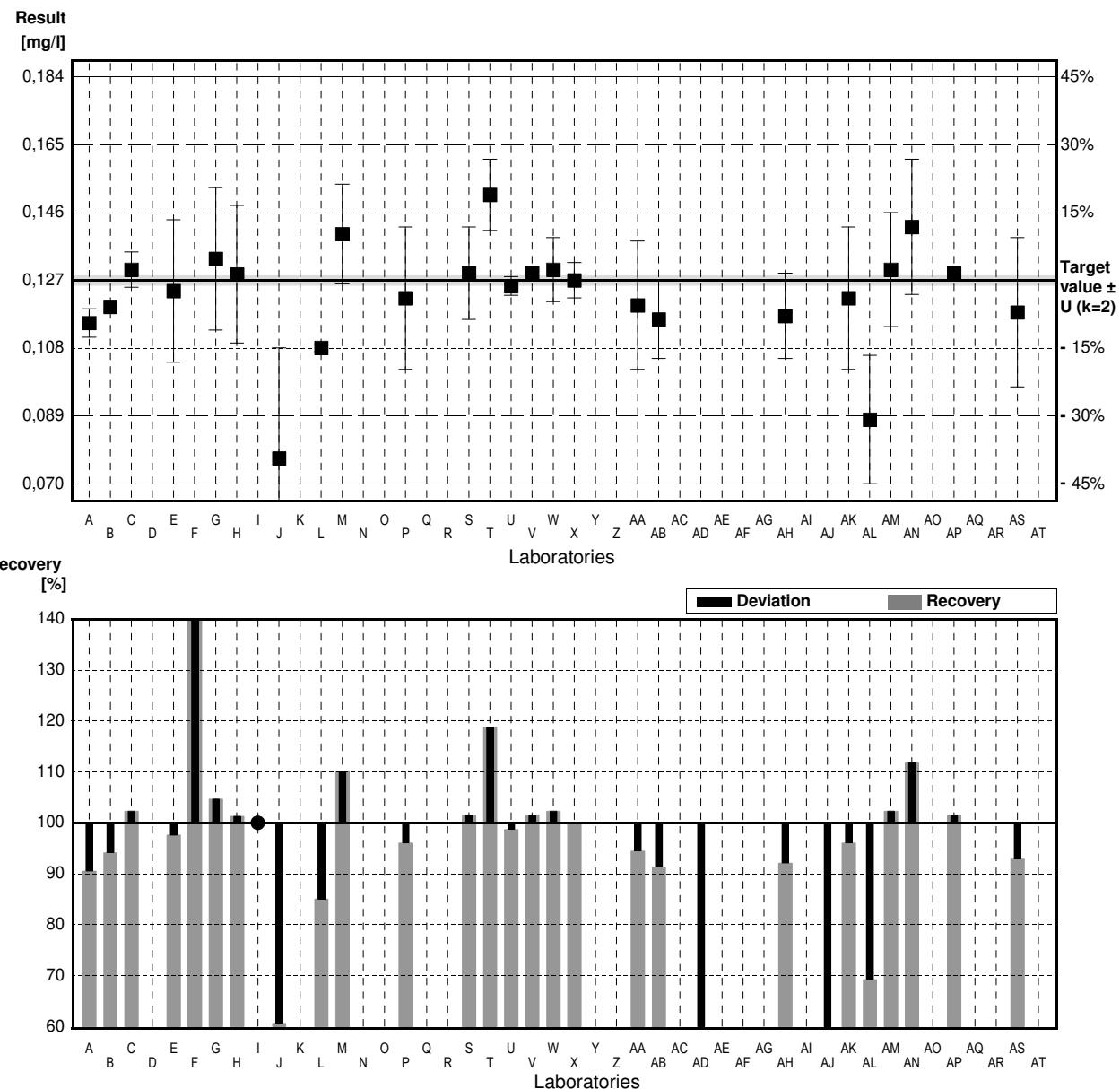
Target value  $\pm U$  ( $k=2$ ) 0,127 mg/l  $\pm$  0,001 mg/l

IFA result  $\pm U$  ( $k=2$ ) 0,125 mg/l  $\pm$  0,029 mg/l

Stability test  $\pm U$  ( $k=2$ ) 0,126 mg/l  $\pm$  0,029 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,115	0,004	mg/l	91%	-0,86
B	0,1196		mg/l	94%	-0,53
C	0,130	0,005	mg/l	102%	0,21
D			mg/l		
E	0,124	0,02	mg/l	98%	-0,21
F	0,287 *	0,034	mg/l	226%	11,45
G	0,133	0,02	mg/l	105%	0,43
H	0,1287	0,0193	mg/l	101%	0,12
I	<0,5		mg/l	*	
J	0,077 *	0,031	mg/l	61%	-3,58
K			mg/l		
L	0,108	0,001	mg/l	85%	-1,36
M	0,140	0,014	mg/l	110%	0,93
N			mg/l		
O			mg/l		
P	0,122	0,02	mg/l	96%	-0,36
Q			mg/l		
R			mg/l		
S	0,129	0,013	mg/l	102%	0,14
T	0,151	0,01	mg/l	119%	1,72
U	0,1254	0,0026	mg/l	99%	-0,11
V	0,129		mg/l	102%	0,14
W	0,130	0,009	mg/l	102%	0,21
X	0,127	0,0050	mg/l	100%	0,00
Y			mg/l		
Z			mg/l		
AA	0,120	0,018	mg/l	94%	-0,50
AB	0,116	0,011	mg/l	91%	-0,79
AC			mg/l		
AD	0,03 *	0,003	mg/l	24%	-6,94
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH	0,117	0,012	mg/l	92%	-0,72
AI			mg/l		
AJ	0,0087 *	0,0017	mg/l	7%	-8,47
AK	0,122	0,020	mg/l	96%	-0,36
AL	0,0879 *	0,018	mg/l	69%	-2,80
AM	0,1300	0,016	mg/l	102%	0,21
AN	0,142	0,019	mg/l	112%	1,07
AO			mg/l		
AP	0,129	0,002	mg/l	102%	0,14
AQ			mg/l		
AR			mg/l		
AS	0,118	0,021	mg/l	93%	-0,64
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,121 $\pm$ 0,023	0,126 $\pm$ 0,006	mg/l
Recov. $\pm$ CI(99%)	95,5 $\pm$ 18,5	99,5 $\pm$ 4,4	%
SD between labs	0,045	0,010	mg/l
RSD between labs	36,9	7,6	%
n for calculation	28	23	



## Sample N154B

### Parameter Total P (as PO4)

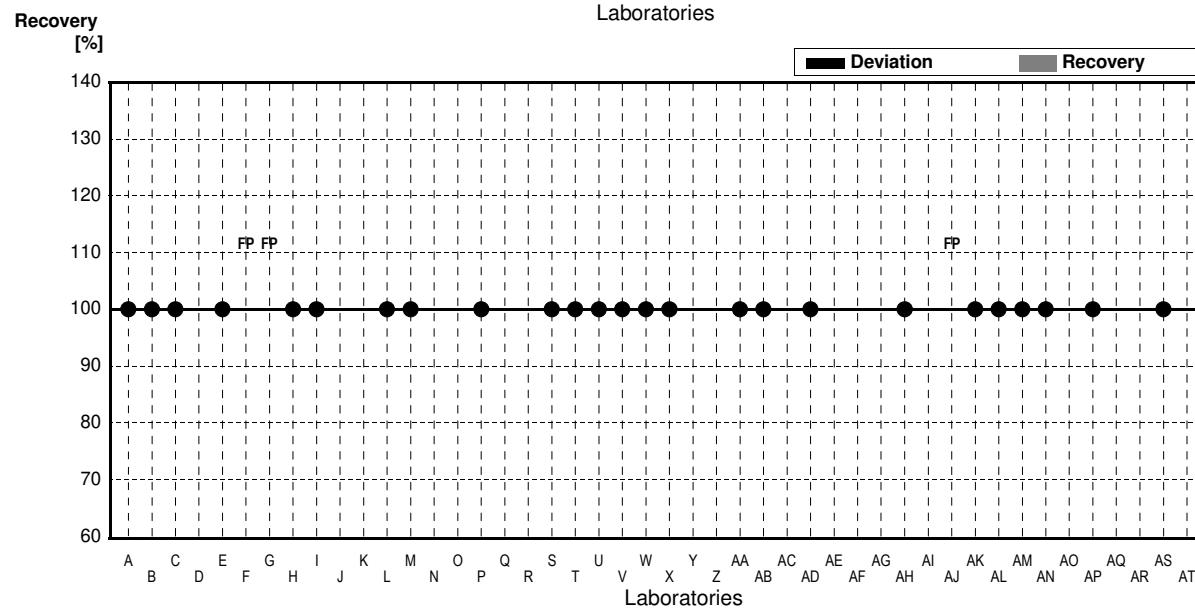
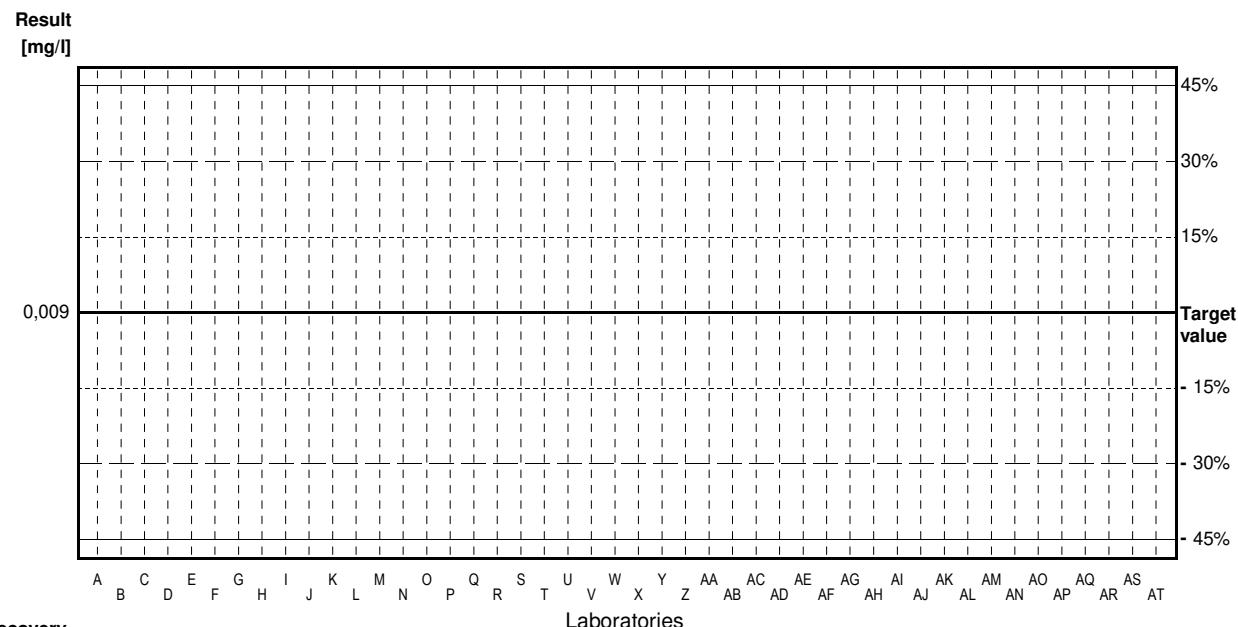
Target value <0.009 mg/l

IFA result <0.009 mg/l

Stability test <0.009 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<0.020		mg/l	.	
B	<0.009		mg/l	.	
C	<0.03		mg/l	.	
D			mg/l		
E	<0.013		mg/l	.	
F	0.109	0.013	mg/l	FP	
G	0.0190	0.01	mg/l	FP	
H	<0.005		mg/l	.	
I	<0.5		mg/l	.	
J			mg/l		
K			mg/l		
L	<0.015		mg/l	.	
M	<0.050		mg/l	.	
N			mg/l		
O			mg/l		
P	<0.031		mg/l	.	
Q			mg/l		
R			mg/l		
S	<0.006		mg/l	.	
T	<0.050		mg/l	.	
U	<0.0150		mg/l	.	
V	<0.030		mg/l	.	
W	<0.015		mg/l	.	
X	<0.0092	0.0050	mg/l	.	
Y			mg/l		
Z			mg/l		
AA	<0.015		mg/l	.	
AB	<0.0010		mg/l	.	
AC			mg/l		
AD	<0.01		mg/l	.	
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH	0.005		mg/l	.	
AI			mg/l		
AJ	0.129	0.026	mg/l	FP	
AK	<0.010		mg/l	.	
AL	<0.015		mg/l	.	
AM	<0.015		mg/l	.	
AN	<0.006	0	mg/l	.	
AO			mg/l		
AP	<0.01	0.002	mg/l	.	
AQ			mg/l		
AR			mg/l		
AS	<0.009		mg/l	.	
AT			mg/l		

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



## Sample N154A

### Parameter KMnO<sub>4</sub>-Index

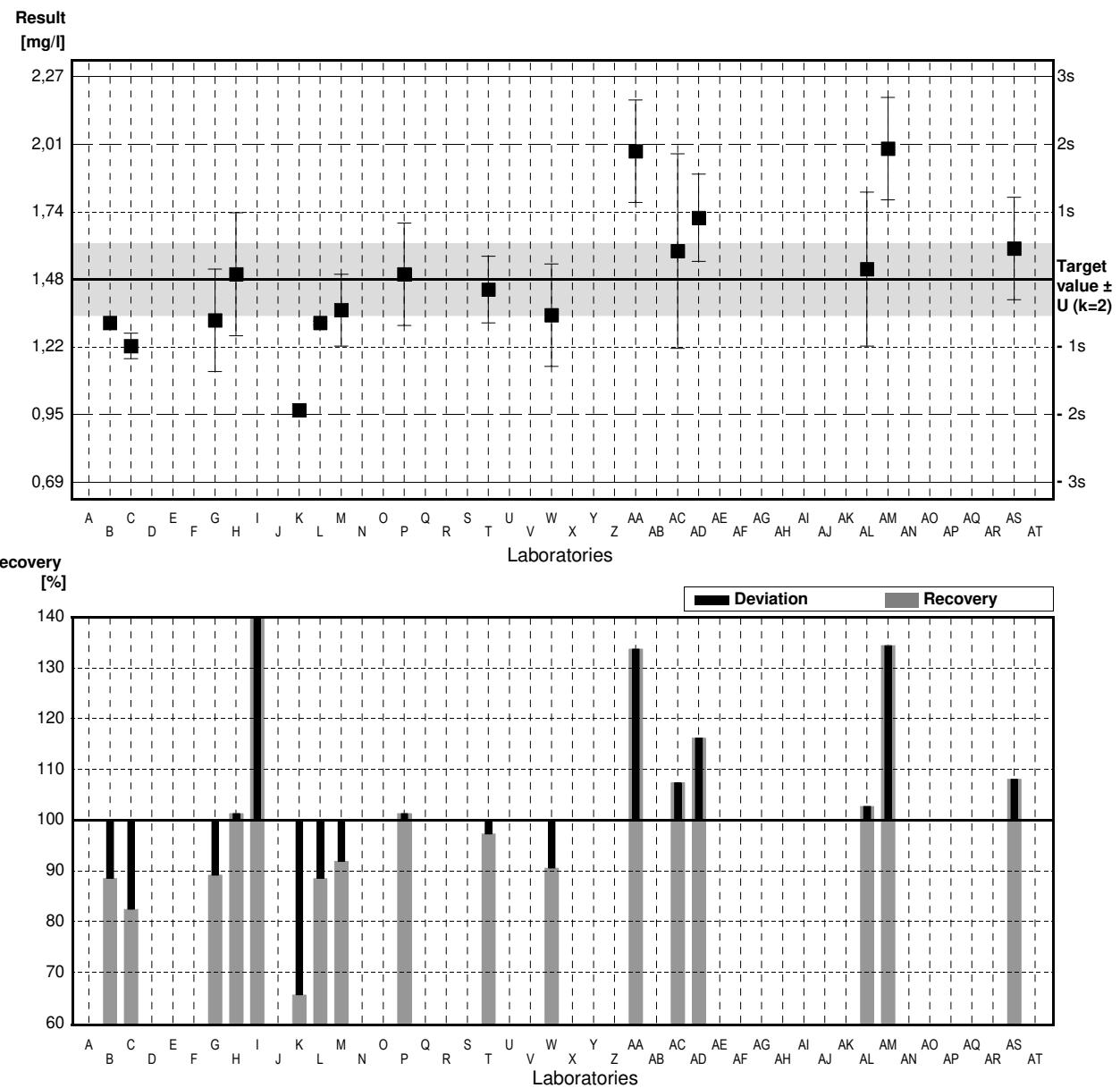
Target value  $\pm U$  ( $k=2$ ) 1,48 mg/l  $\pm$  0,14 mg/l

IFA result  $\pm U$  ( $k=2$ ) 1,42 mg/l  $\pm$  0,26 mg/l

Stability test  $\pm U$  ( $k=2$ ) 1,33 mg/l  $\pm$  0,24 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	1,31		mg/l	89%	-1,15
C	1,22	0,05	mg/l	82%	-1,76
D			mg/l		
E			mg/l		
F			mg/l		
G	1,32	0,2	mg/l	89%	-1,08
H	1,50	0,240	mg/l	101%	0,14
I	9,70 *	0,97	mg/l	655%	55,54
J			mg/l		
K	0,97		mg/l	66%	-3,45
L	1,31	0,007	mg/l	89%	-1,15
M	1,36	0,14	mg/l	92%	-0,81
N			mg/l		
O			mg/l		
P	1,50	0,2	mg/l	101%	0,14
Q			mg/l		
R			mg/l		
S			mg/l		
T	1,44	0,13	mg/l	97%	-0,27
U			mg/l		
V			mg/l		
W	1,34	0,20	mg/l	91%	-0,95
X			mg/l		
Y			mg/l		
Z			mg/l		
AA	1,98	0,20	mg/l	134%	3,38
AB			mg/l		
AC	1,59	0,38	mg/l	107%	0,74
AD	1,72	0,17	mg/l	116%	1,62
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH			mg/l		
AI			mg/l		
AJ			mg/l		
AK			mg/l		
AL	1,52	0,30	mg/l	103%	0,27
AM	1,99	0,2	mg/l	134%	3,45
AN			mg/l		
AO			mg/l		
AP			mg/l		
AQ			mg/l		
AR			mg/l		
AS	1,60	0,2	mg/l	108%	0,81
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	1,96 $\pm$ 1,42	1,48 $\pm$ 0,19	mg/l
Recov. $\pm$ CI(99%)	132,6 $\pm$ 96,2	100,0 $\pm$ 13,1	%
SD between labs	2,01	0,26	mg/l
RSD between labs	102,4	17,8	%
n for calculation	17	16	



## Sample N154B

### Parameter KMnO<sub>4</sub>-Index

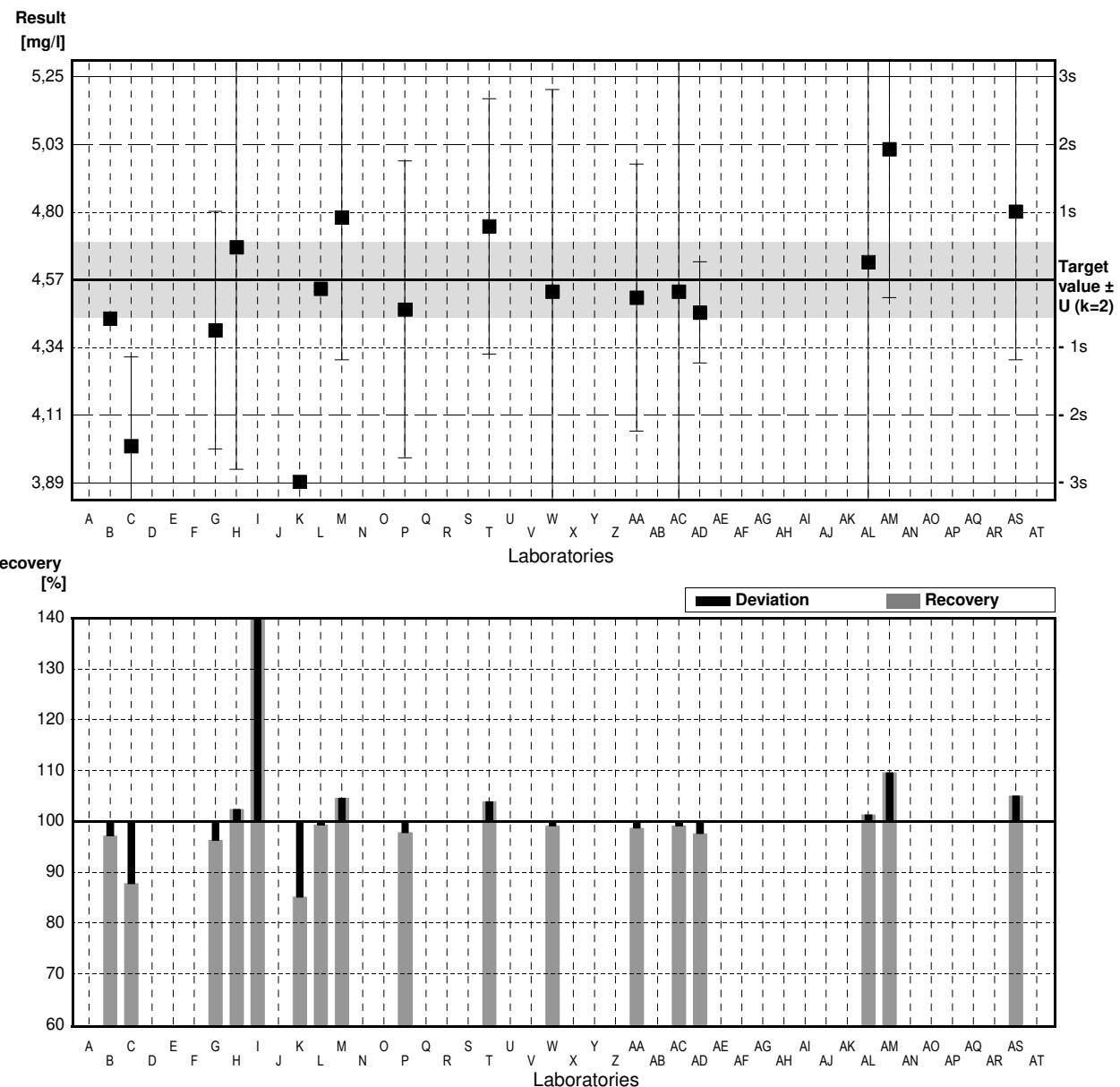
Target value  $\pm U$  (k=2) 4,57 mg/l  $\pm$  0,13 mg/l

IFA result  $\pm U$  (k=2) 4,77 mg/l  $\pm$  0,86 mg/l

Stability test  $\pm U$  (k=2) 4,74 mg/l  $\pm$  0,85 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A			mg/l		
B	4,44		mg/l	97%	-0,28
C	4,01	0,3	mg/l	88%	-1,23
D			mg/l		
E			mg/l		
F			mg/l		
G	4,40	0,4	mg/l	96%	-0,37
H	4,68	0,749	mg/l	102%	0,24
I	22,0 *	2,2	mg/l	481%	38,14
J			mg/l		
K	3,89 *		mg/l	85%	-1,49
L	4,54	0,010	mg/l	99%	-0,07
M	4,78	0,48	mg/l	105%	0,46
N			mg/l		
O			mg/l		
P	4,47	0,5	mg/l	98%	-0,22
Q			mg/l		
R			mg/l		
S			mg/l		
T	4,75	0,43	mg/l	104%	0,39
U			mg/l		
V			mg/l		
W	4,53	0,68	mg/l	99%	-0,09
X			mg/l		
Y			mg/l		
Z			mg/l		
AA	4,51	0,45	mg/l	99%	-0,13
AB			mg/l		
AC	4,53	1,09	mg/l	99%	-0,09
AD	4,46	0,17	mg/l	98%	-0,24
AE			mg/l		
AF			mg/l		
AG			mg/l		
AH			mg/l		
AI			mg/l		
AJ			mg/l		
AK			mg/l		
AL	4,63	0,93	mg/l	101%	0,13
AM	5,01	0,5	mg/l	110%	0,96
AN			mg/l		
AO			mg/l		
AP			mg/l		
AQ			mg/l		
AR			mg/l		
AS	4,80	0,5	mg/l	105%	0,50
AT			mg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	5,55 $\pm$ 3,01	4,57 $\pm$ 0,18	mg/l
Recov. $\pm$ CI(99%)	121,5 $\pm$ 65,8	100,0 $\pm$ 3,8	%
SD between labs	4,25	0,23	mg/l
RSD between labs	76,4	5,0	%
n for calculation	17	15	





# **Illustration of Results Laboratory Oriented Part**

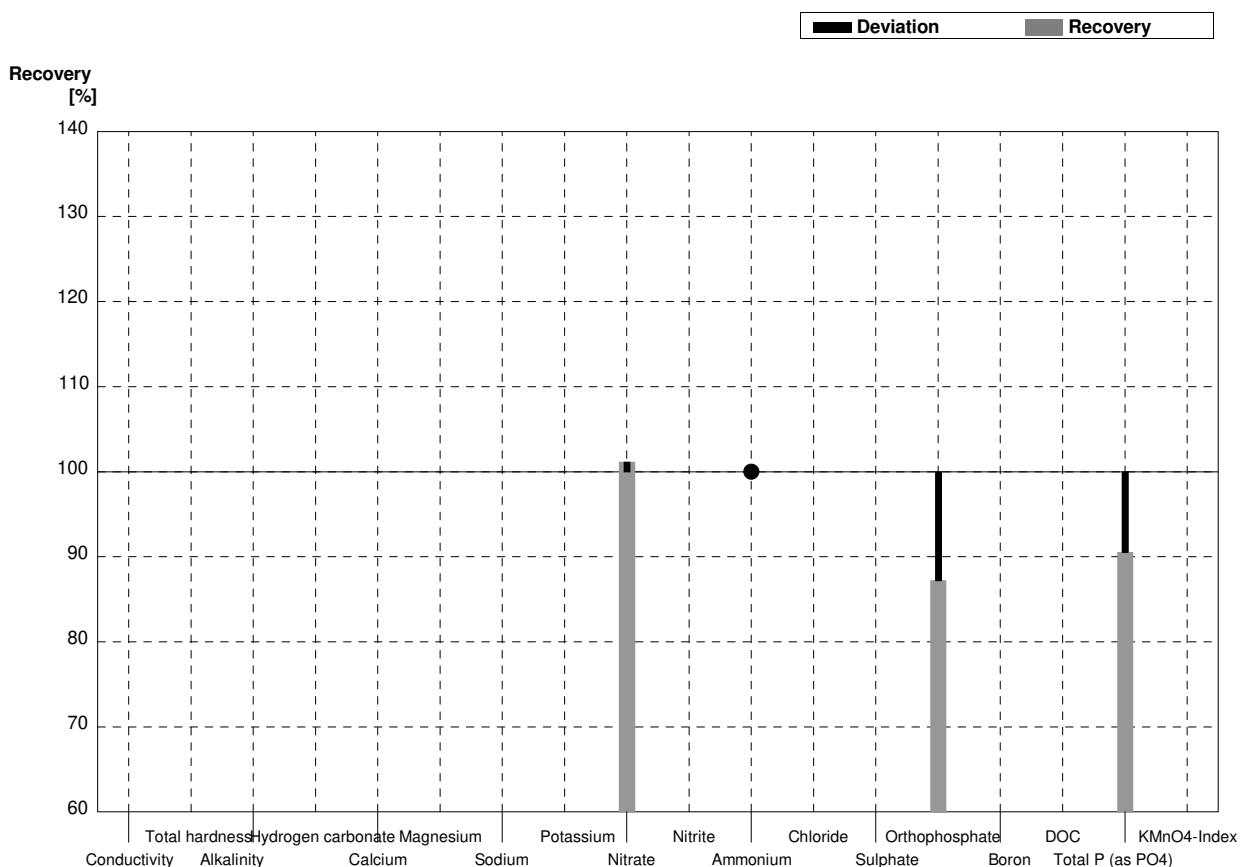
**Round N154  
Major Ions**

**Sample Dispatch: 9 November 2020**



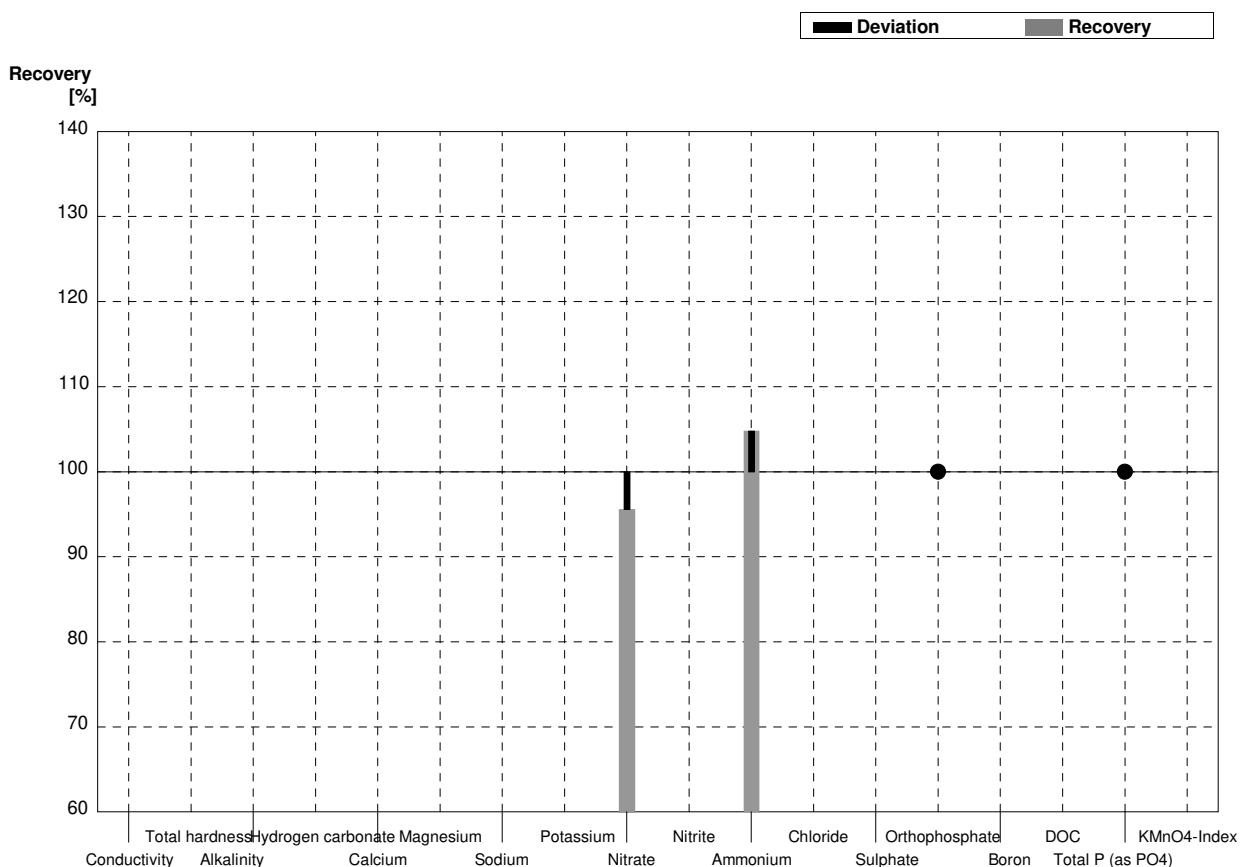
**Sample N154A**  
**Laboratory A**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1			$\mu\text{S}/\text{cm}$	
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01			$\text{mmol/l}$	
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2			$\text{mg/l}$	
Magnesium	2,95	0,03			$\text{mg/l}$	
Sodium	15,1	0,1			$\text{mg/l}$	
Potassium	3,18	0,02			$\text{mg/l}$	
Nitrate	16,8	0,3	16,99	0,51	$\text{mg/l}$	101%
Nitrite	0,0403	0,0006			$\text{mg/l}$	
Ammonium	<0,01		<0,010		$\text{mg/l}$	•
Chloride	10,9	0,2			$\text{mg/l}$	
Sulphate	8,81	0,11			$\text{mg/l}$	
Orthophosphate	0,086	0,001	0,075	0,004	$\text{mg/l}$	87%
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001	0,115	0,004	$\text{mg/l}$	91%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



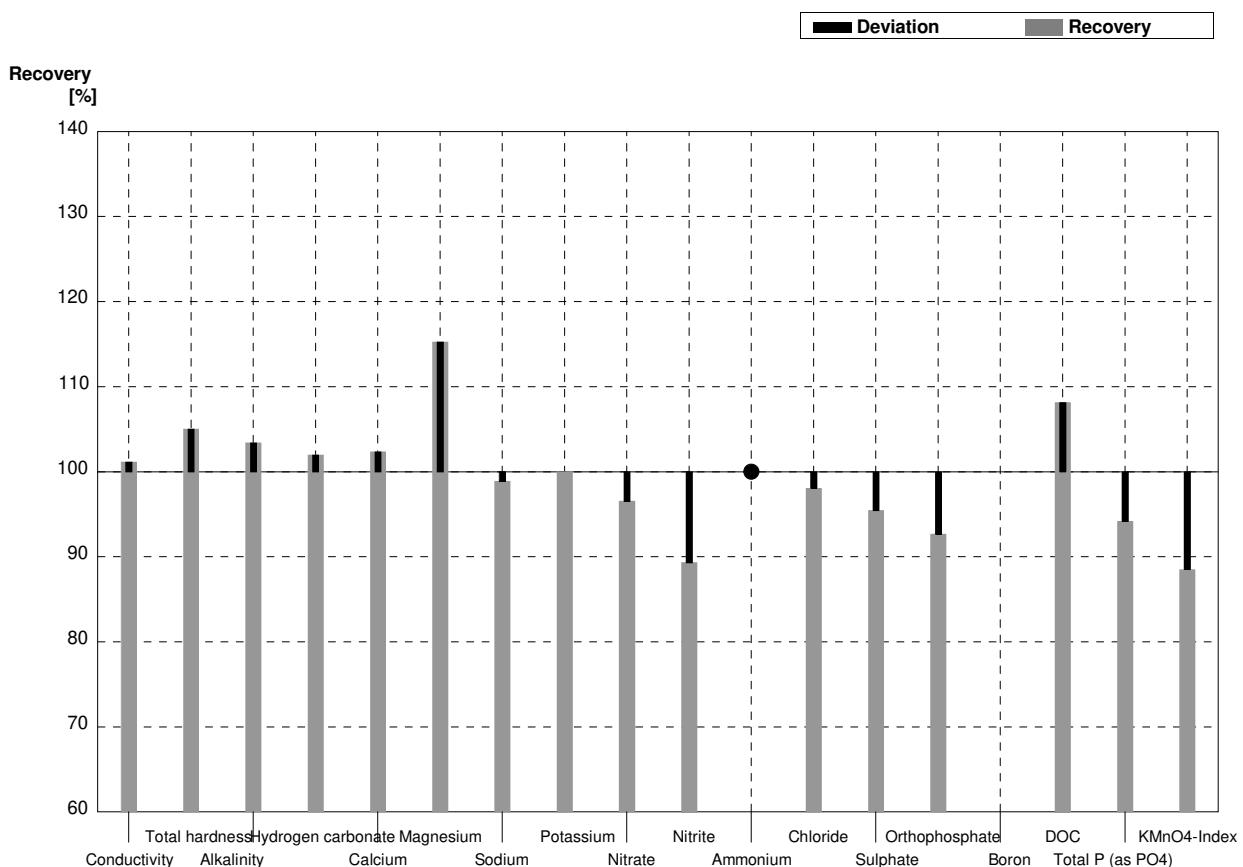
**Sample N154B**  
**Laboratory A**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2			$\mu\text{S}/\text{cm}$	
Total hardness	2,11	0,02			$\text{mmol/l}$	
Alkalinity	4,58	0,04			$\text{mmol/l}$	
Hydrogen carbonate	277	2			$\text{mg/l}$	
Calcium	63,6	0,8			$\text{mg/l}$	
Magnesium	12,8	0,1			$\text{mg/l}$	
Sodium	48,8	0,5			$\text{mg/l}$	
Potassium	8,11	0,06			$\text{mg/l}$	
Nitrate	25,4	0,4	24,28	3,82	$\text{mg/l}$	96%
Nitrite	0,0101	0,0005			$\text{mg/l}$	
Ammonium	0,0313	0,0050	0,0328	0,002	$\text{mg/l}$	105%
Chloride	24,2	0,5			$\text{mg/l}$	
Sulphate	41,1	0,5			$\text{mg/l}$	
Orthophosphate	<0,009		<0,019		$\text{mg/l}$	•
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	<0,009		<0,020		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



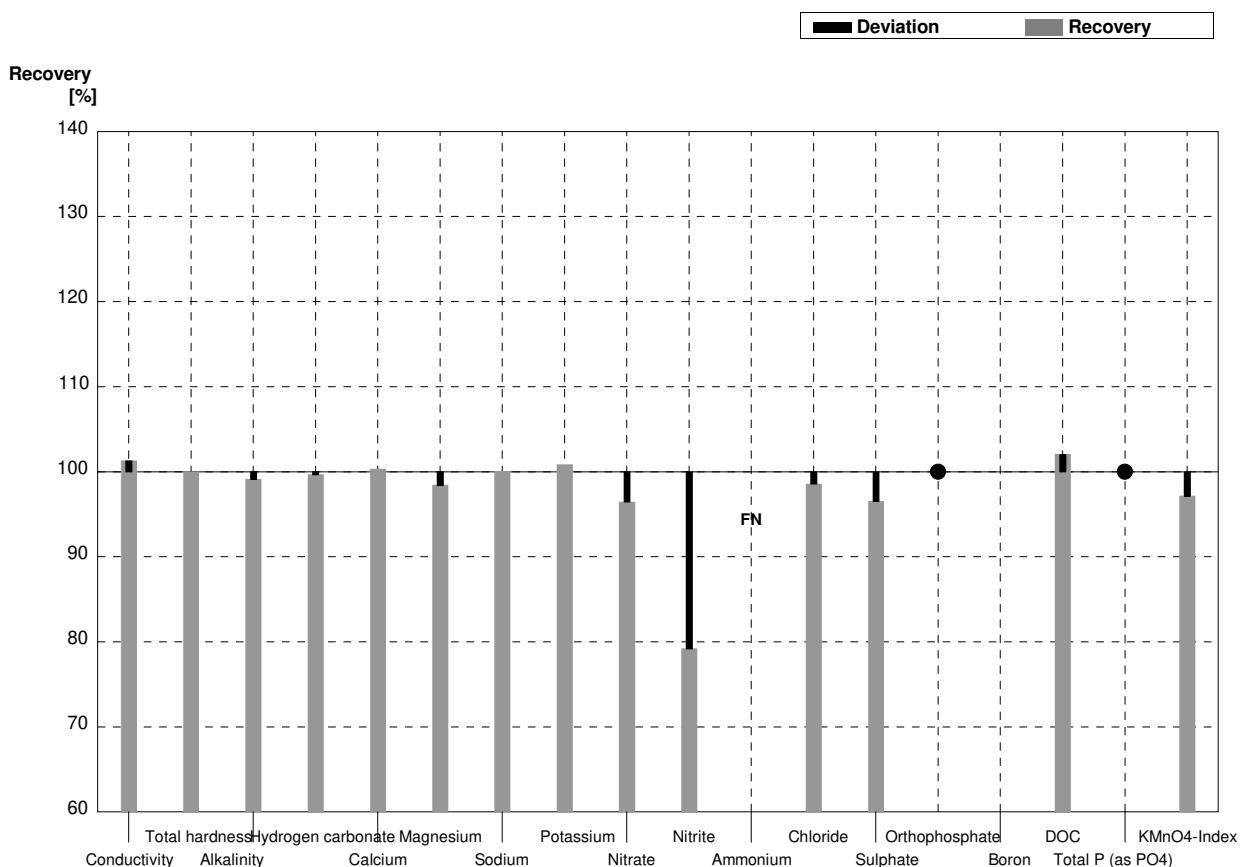
**Sample N154A**  
**Laboratory B**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	175		$\mu\text{S}/\text{cm}$	101%
Total hardness	0,438	0,004	0,460		$\text{mmol/l}$	105%
Alkalinity	0,88	0,01	0,91		$\text{mmol/l}$	103%
Hydrogen carbonate	50,5	0,2	51,5		$\text{mg/l}$	102%
Calcium	12,7	0,2	13,0		$\text{mg/l}$	102%
Magnesium	2,95	0,03	3,40		$\text{mg/l}$	115%
Sodium	15,1	0,1	14,93		$\text{mg/l}$	99%
Potassium	3,18	0,02	3,18		$\text{mg/l}$	100%
Nitrate	16,8	0,3	16,22		$\text{mg/l}$	97%
Nitrite	0,0403	0,0006	0,0360		$\text{mg/l}$	89%
Ammonium	<0,01		<0,005		$\text{mg/l}$	•
Chloride	10,9	0,2	10,69		$\text{mg/l}$	98%
Sulphate	8,81	0,11	8,41		$\text{mg/l}$	95%
Orthophosphate	0,086	0,001	0,0797		$\text{mg/l}$	93%
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04	2,12		$\text{mg/l}$	108%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,1196		$\text{mg/l}$	94%
KMnO <sub>4</sub> -Index	1,48	0,14	1,31		$\text{mg/l}$	89%



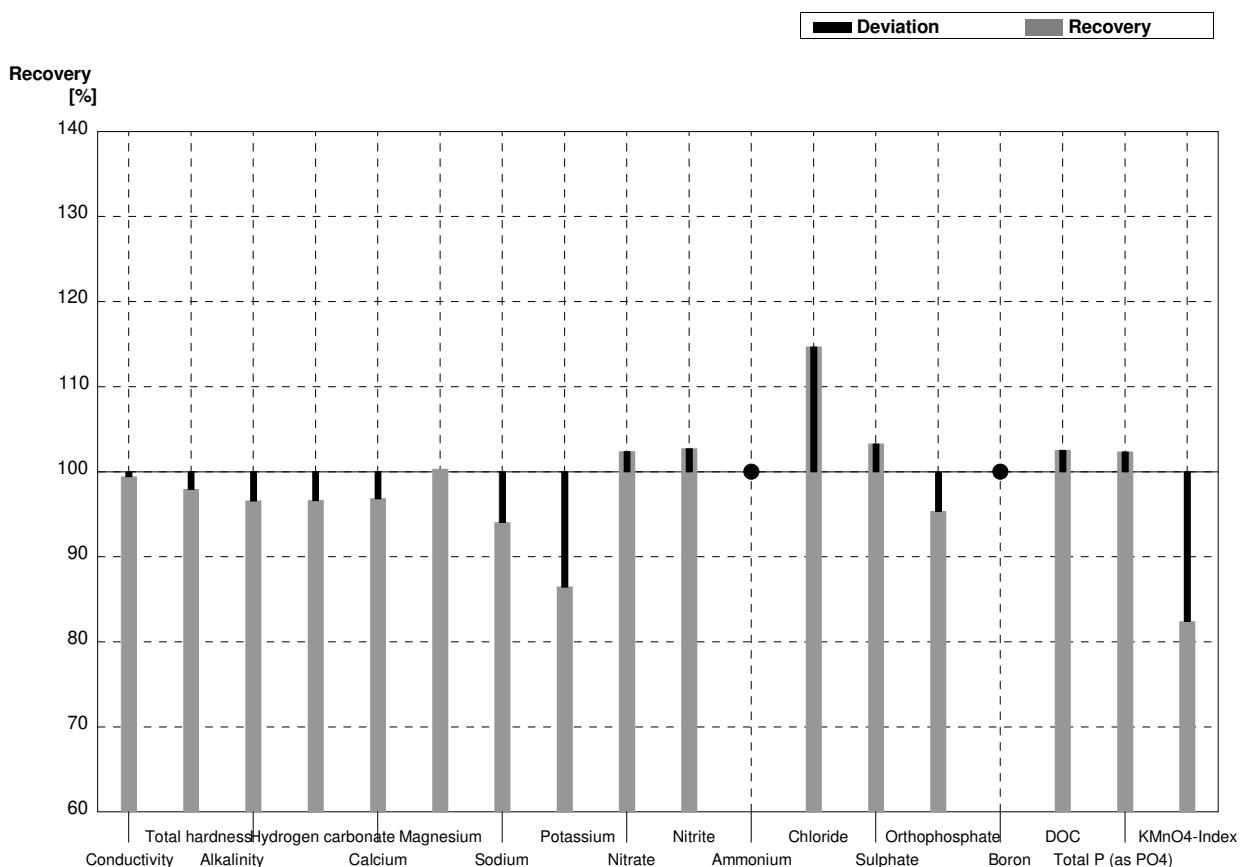
**Sample N154B**  
**Laboratory B**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	630		$\mu\text{S}/\text{cm}$	101%
Total hardness	2,11	0,02	2,11		$\text{mmol/l}$	100%
Alkalinity	4,58	0,04	4,54		$\text{mmol/l}$	99%
Hydrogen carbonate	277	2	276,1		$\text{mg/l}$	100%
Calcium	63,6	0,8	63,8		$\text{mg/l}$	100%
Magnesium	12,8	0,1	12,6		$\text{mg/l}$	98%
Sodium	48,8	0,5	48,83		$\text{mg/l}$	100%
Potassium	8,11	0,06	8,18		$\text{mg/l}$	101%
Nitrate	25,4	0,4	24,5		$\text{mg/l}$	96%
Nitrite	0,0101	0,0005	0,0080		$\text{mg/l}$	79%
Ammonium	0,0313	0,0050	<0,005		$\text{mg/l}$	FN
Chloride	24,2	0,5	23,85		$\text{mg/l}$	99%
Sulphate	41,1	0,5	39,68		$\text{mg/l}$	97%
Orthophosphate	<0,009		<0,009		$\text{mg/l}$	•
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05	7,43		$\text{mg/l}$	102%
Total P (as PO <sub>4</sub> )	<0,009		<0,009		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	4,44		$\text{mg/l}$	97%



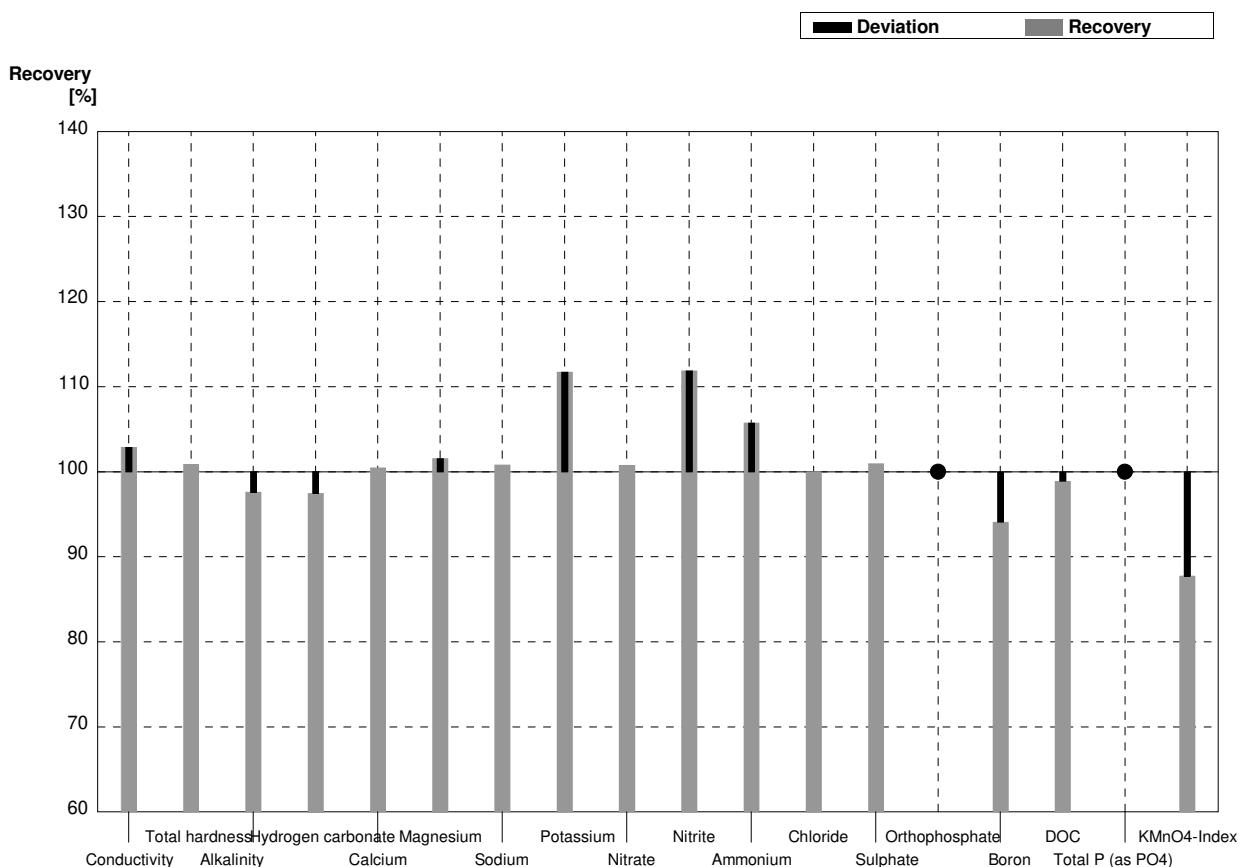
**Sample N154A**  
**Laboratory C**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	172	3,1	$\mu\text{S}/\text{cm}$	99%
Total hardness	0,438	0,004	0,429		$\text{mmol/l}$	98%
Alkalinity	0,88	0,01	0,85	0,2	$\text{mmol/l}$	97%
Hydrogen carbonate	50,5	0,2	48,8	1,2	$\text{mg/l}$	97%
Calcium	12,7	0,2	12,3	0,1	$\text{mg/l}$	97%
Magnesium	2,95	0,03	2,96	0,05	$\text{mg/l}$	100%
Sodium	15,1	0,1	14,2	0,3	$\text{mg/l}$	94%
Potassium	3,18	0,02	2,75	0,28	$\text{mg/l}$	86%
Nitrate	16,8	0,3	17,2	0,4	$\text{mg/l}$	102%
Nitrite	0,0403	0,0006	0,0414	0,002	$\text{mg/l}$	103%
Ammonium	<0,01		<0,01		$\text{mg/l}$	•
Chloride	10,9	0,2	12,5	0,6	$\text{mg/l}$	115%
Sulphate	8,81	0,11	9,1	0,3	$\text{mg/l}$	103%
Orthophosphate	0,086	0,001	0,082	0,002	$\text{mg/l}$	95%
Boron	0,0152	0,0010	<0,02		$\text{mg/l}$	•
DOC	1,96	0,04	2,01	0,04	$\text{mg/l}$	103%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,130	0,005	$\text{mg/l}$	102%
KMnO <sub>4</sub> -Index	1,48	0,14	1,22	0,05	$\text{mg/l}$	82%



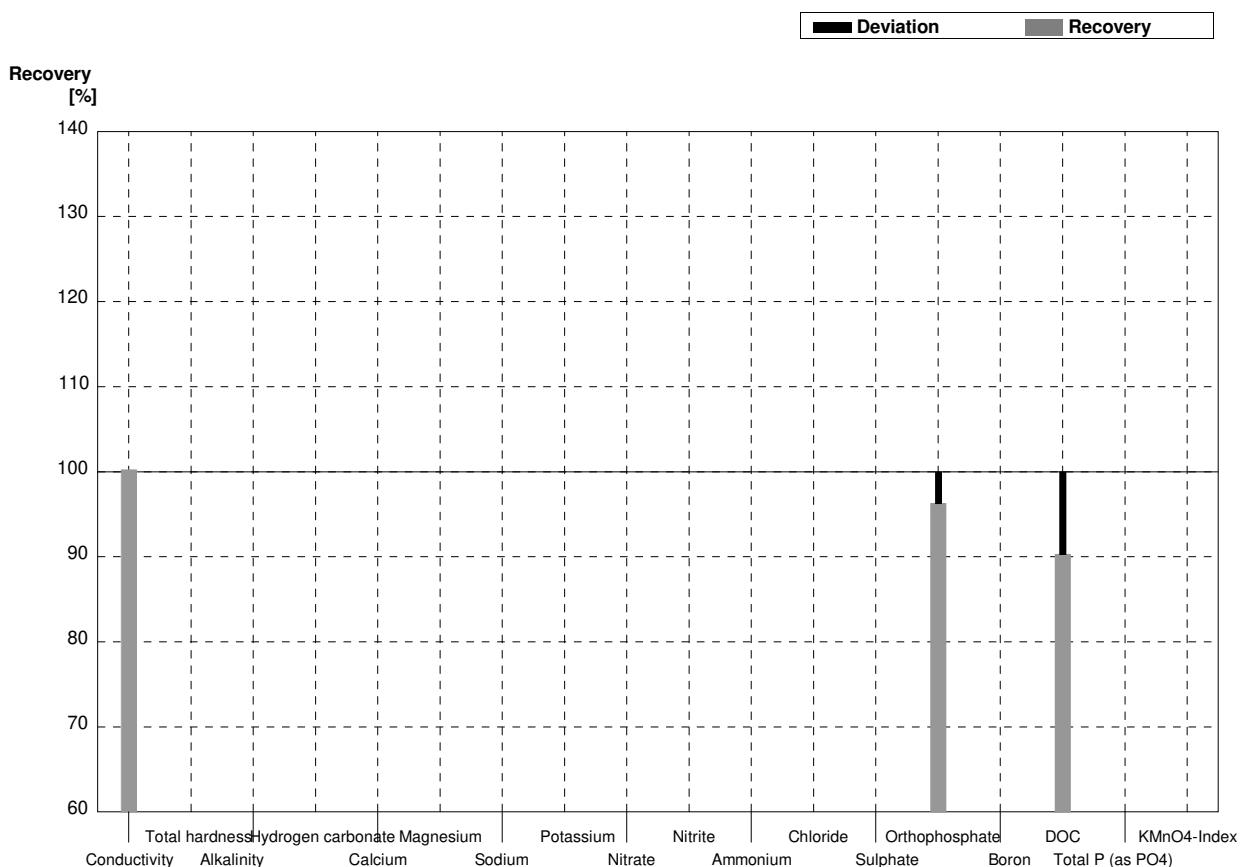
**Sample N154B**  
**Laboratory C**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	640	2,9	$\mu\text{S}/\text{cm}$	103%
Total hardness	2,11	0,02	2,129		$\text{mmol/l}$	101%
Alkalinity	4,58	0,04	4,47	0,03	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	270	1,6	$\text{mg/l}$	97%
Calcium	63,6	0,8	63,9	1,3	$\text{mg/l}$	100%
Magnesium	12,8	0,1	13,0	0,2	$\text{mg/l}$	102%
Sodium	48,8	0,5	49,2	0,6	$\text{mg/l}$	101%
Potassium	8,11	0,06	9,06	0,09	$\text{mg/l}$	112%
Nitrate	25,4	0,4	25,6	0,4	$\text{mg/l}$	101%
Nitrite	0,0101	0,0005	0,0113	0,001	$\text{mg/l}$	112%
Ammonium	0,0313	0,0050	0,0331	0,001	$\text{mg/l}$	106%
Chloride	24,2	0,5	24,2	0,3	$\text{mg/l}$	100%
Sulphate	41,1	0,5	41,5	0,5	$\text{mg/l}$	101%
Orthophosphate	<0,009		<0,01		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0382	0,0027	$\text{mg/l}$	94%
DOC	7,28	0,05	7,20	0,02	$\text{mg/l}$	99%
Total P (as PO <sub>4</sub> )	<0,009		<0,03		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	4,01	0,3	$\text{mg/l}$	88%



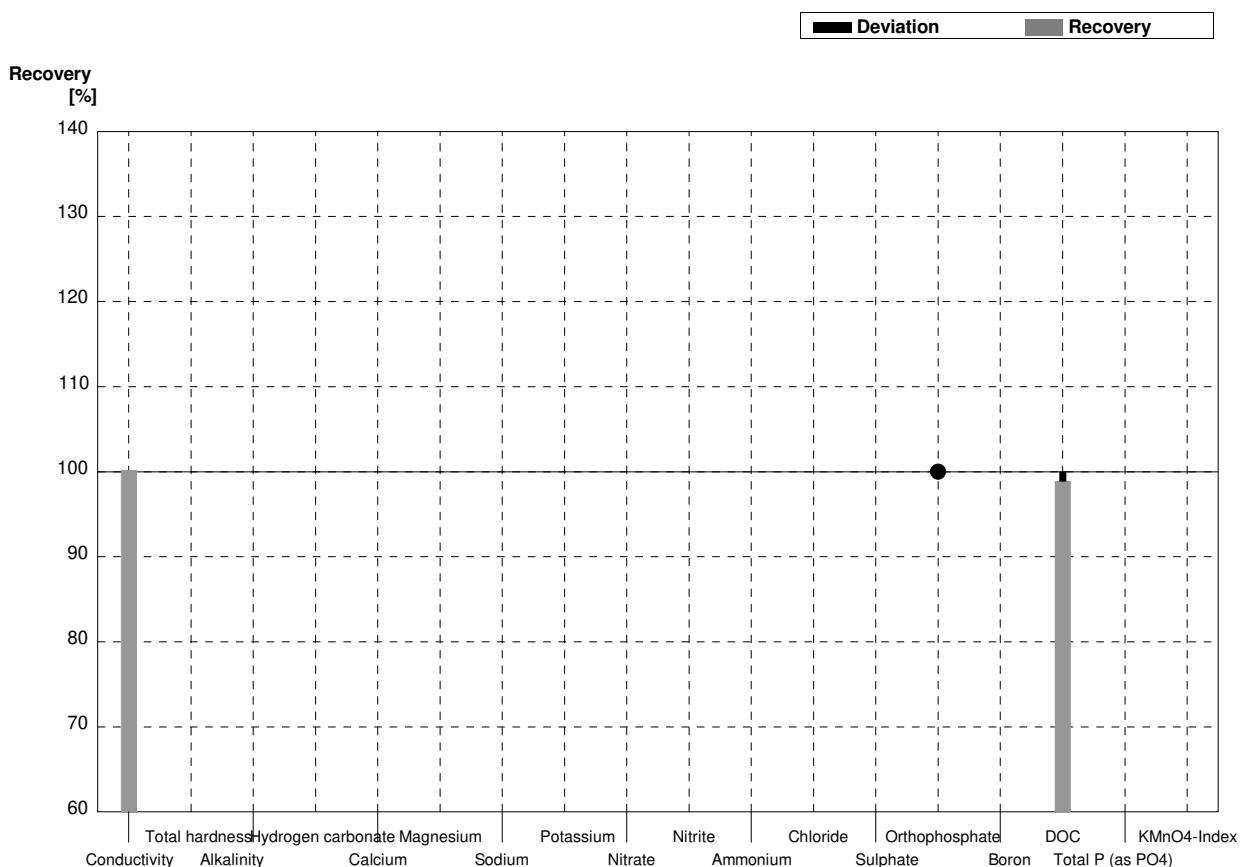
**Sample N154A**  
**Laboratory D**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	173,4	8,7	$\mu\text{S}/\text{cm}$	100%
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01			$\text{mmol/l}$	
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2			$\text{mg/l}$	
Magnesium	2,95	0,03			$\text{mg/l}$	
Sodium	15,1	0,1			$\text{mg/l}$	
Potassium	3,18	0,02			$\text{mg/l}$	
Nitrate	16,8	0,3			$\text{mg/l}$	
Nitrite	0,0403	0,0006			$\text{mg/l}$	
Ammonium	<0,01				$\text{mg/l}$	
Chloride	10,9	0,2			$\text{mg/l}$	
Sulphate	8,81	0,11			$\text{mg/l}$	
Orthophosphate	0,086	0,001	0,0828	0,0041	$\text{mg/l}$	96%
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04	1,77	0,089	$\text{mg/l}$	90%
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



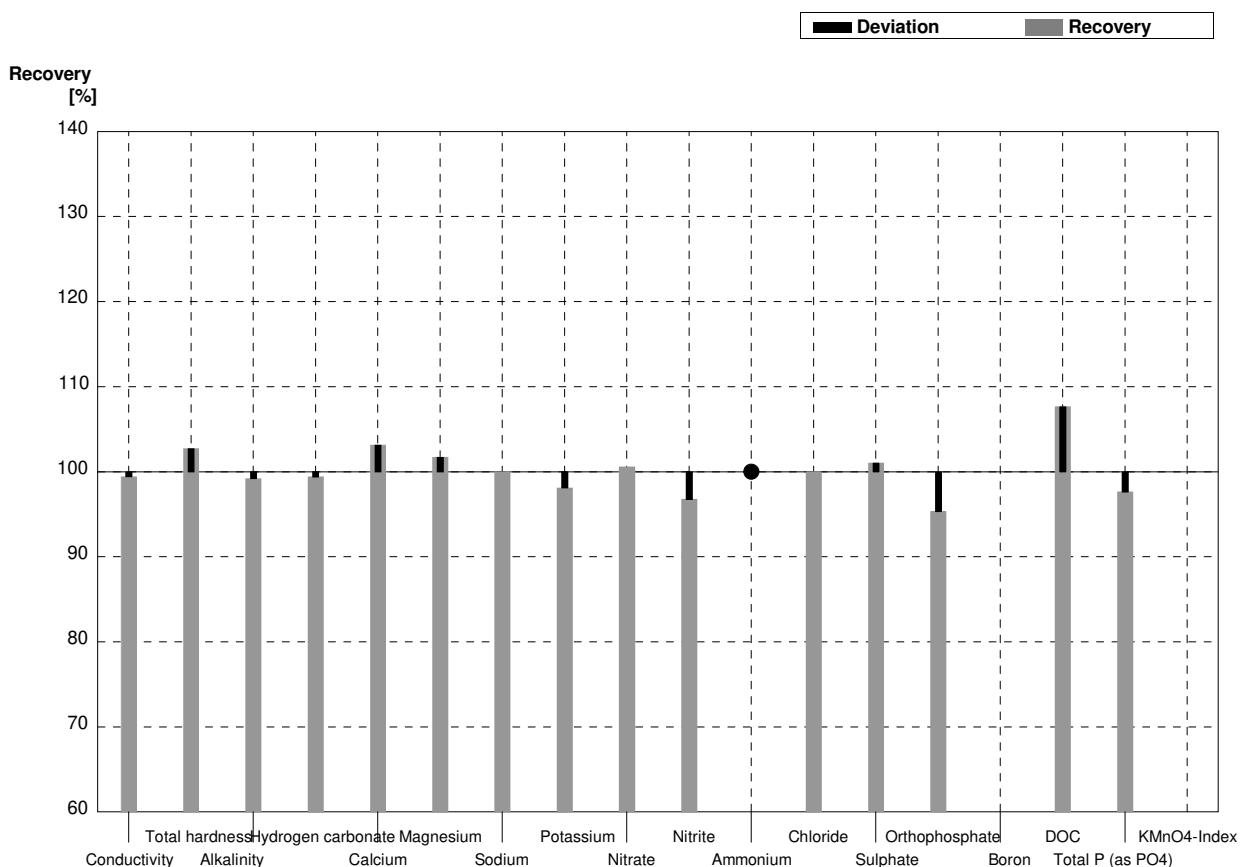
**Sample N154B**  
**Laboratory D**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	622	2	623	31	µS/cm	100%
Total hardness	2,11	0,02			mmol/l	
Alkalinity	4,58	0,04			mmol/l	
Hydrogen carbonate	277	2			mg/l	
Calcium	63,6	0,8			mg/l	
Magnesium	12,8	0,1			mg/l	
Sodium	48,8	0,5			mg/l	
Potassium	8,11	0,06			mg/l	
Nitrate	25,4	0,4			mg/l	
Nitrite	0,0101	0,0005			mg/l	
Ammonium	0,0313	0,0050			mg/l	
Chloride	24,2	0,5			mg/l	
Sulphate	41,1	0,5			mg/l	
Orthophosphate	<0,009		<0,009	0,0018	mg/l	•
Boron	0,0406	0,0003			mg/l	
DOC	7,28	0,05	7,20	0,36	mg/l	99%
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	4,57	0,13			mg/l	



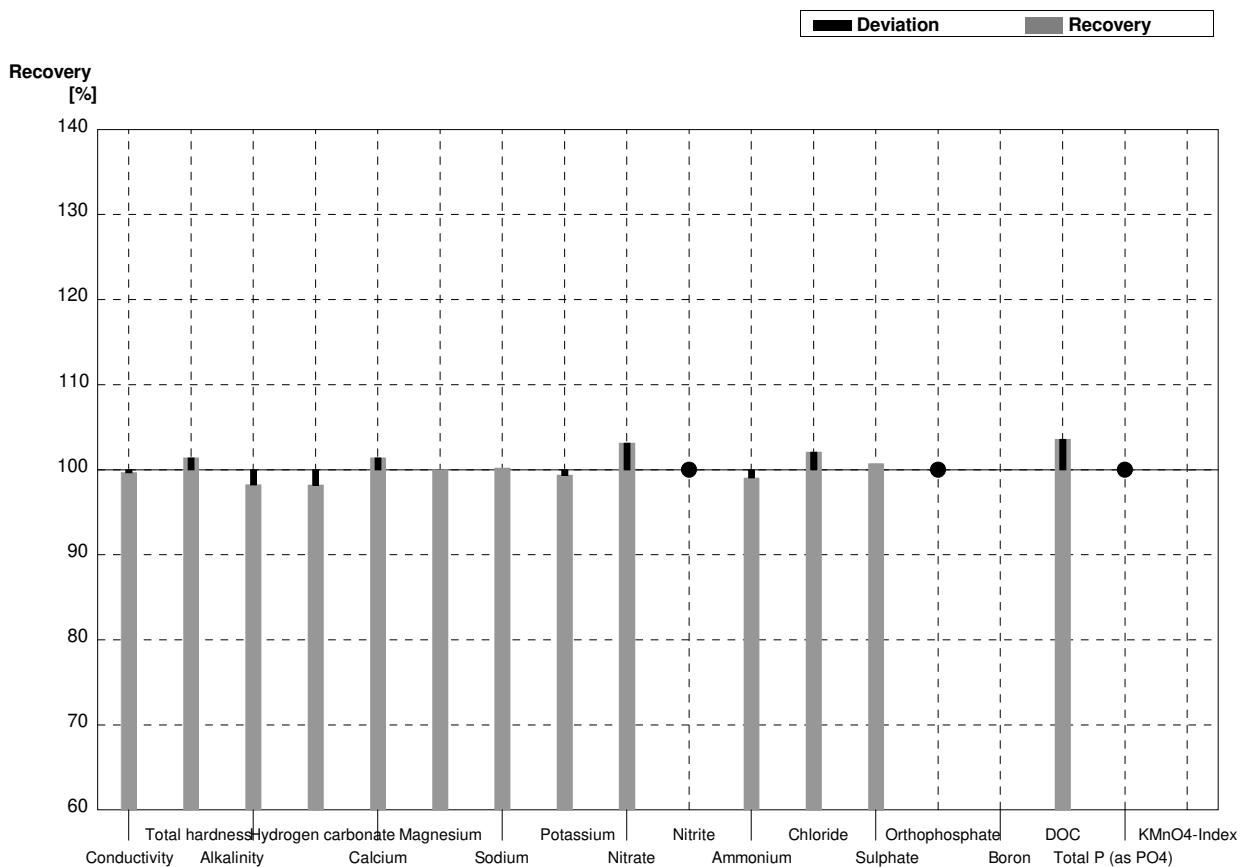
**Sample N154A**  
**Laboratory E**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	172	7	$\mu\text{S}/\text{cm}$	99%
Total hardness	0,438	0,004	0,450	0,02	$\text{mmol/l}$	103%
Alkalinity	0,88	0,01	0,873	0,03	$\text{mmol/l}$	99%
Hydrogen carbonate	50,5	0,2	50,2	2	$\text{mg/l}$	99%
Calcium	12,7	0,2	13,1	1,1	$\text{mg/l}$	103%
Magnesium	2,95	0,03	3,00	0,4	$\text{mg/l}$	102%
Sodium	15,1	0,1	15,1	2,3	$\text{mg/l}$	100%
Potassium	3,18	0,02	3,12	0,5	$\text{mg/l}$	98%
Nitrate	16,8	0,3	16,9	1,4	$\text{mg/l}$	101%
Nitrite	0,0403	0,0006	0,0390	0,004	$\text{mg/l}$	97%
Ammonium	<0,01		<0,013		$\text{mg/l}$	•
Chloride	10,9	0,2	10,9	0,7	$\text{mg/l}$	100%
Sulphate	8,81	0,11	8,90	0,6	$\text{mg/l}$	101%
Orthophosphate	0,086	0,001	0,082	0,01	$\text{mg/l}$	95%
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04	2,11	0,4	$\text{mg/l}$	108%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,124	0,02	$\text{mg/l}$	98%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



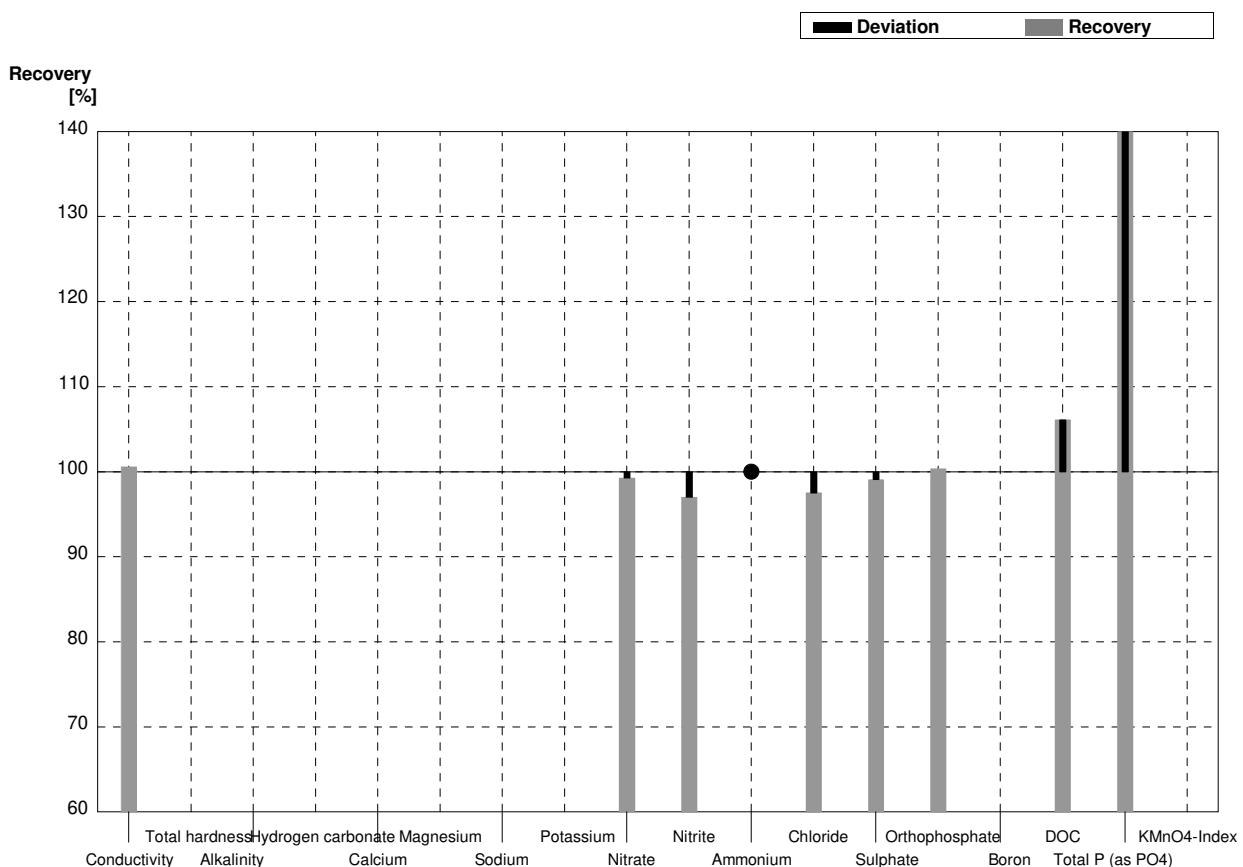
**Sample N154B**  
**Laboratory E**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	620	25	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,14	0,1	$\text{mmol/l}$	101%
Alkalinity	4,58	0,04	4,50	0,2	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	272	9	$\text{mg/l}$	98%
Calcium	63,6	0,8	64,5	6	$\text{mg/l}$	101%
Magnesium	12,8	0,1	12,8	1,6	$\text{mg/l}$	100%
Sodium	48,8	0,5	48,9	8	$\text{mg/l}$	100%
Potassium	8,11	0,06	8,06	1,1	$\text{mg/l}$	99%
Nitrate	25,4	0,4	26,2	3	$\text{mg/l}$	103%
Nitrite	0,0101	0,0005	<0,01		$\text{mg/l}$	•
Ammonium	0,0313	0,0050	0,0310	0,005	$\text{mg/l}$	99%
Chloride	24,2	0,5	24,7	2	$\text{mg/l}$	102%
Sulphate	41,1	0,5	41,4	3	$\text{mg/l}$	101%
Orthophosphate	<0,009		<0,01		$\text{mg/l}$	•
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05	7,54	1,2	$\text{mg/l}$	104%
Total P (as PO <sub>4</sub> )	<0,009		<0,013		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



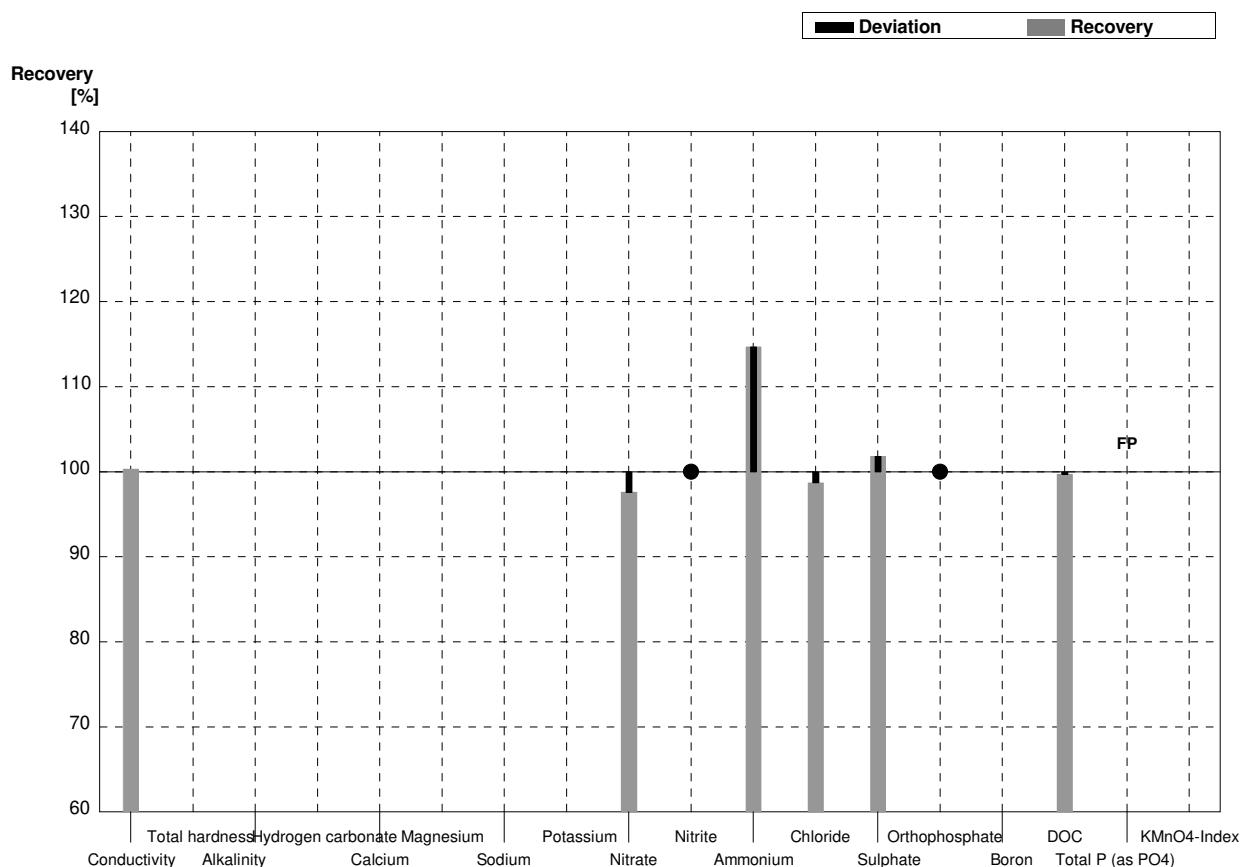
**Sample N154A**  
**Laboratory F**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	174	8,7	$\mu\text{S}/\text{cm}$	101%
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01			$\text{mmol/l}$	
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2			$\text{mg/l}$	
Magnesium	2,95	0,03			$\text{mg/l}$	
Sodium	15,1	0,1			$\text{mg/l}$	
Potassium	3,18	0,02			$\text{mg/l}$	
Nitrate	16,8	0,3	16,68	0,739	$\text{mg/l}$	99%
Nitrite	0,0403	0,0006	0,0391	0,0110	$\text{mg/l}$	97%
Ammonium	<0,01		<0,012		$\text{mg/l}$	•
Chloride	10,9	0,2	10,63	1,391	$\text{mg/l}$	98%
Sulphate	8,81	0,11	8,73	0,532	$\text{mg/l}$	99%
Orthophosphate	0,086	0,001	0,0863	0,0150	$\text{mg/l}$	100%
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04	2,08	0,37	$\text{mg/l}$	106%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,287	0,034	$\text{mg/l}$	226%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



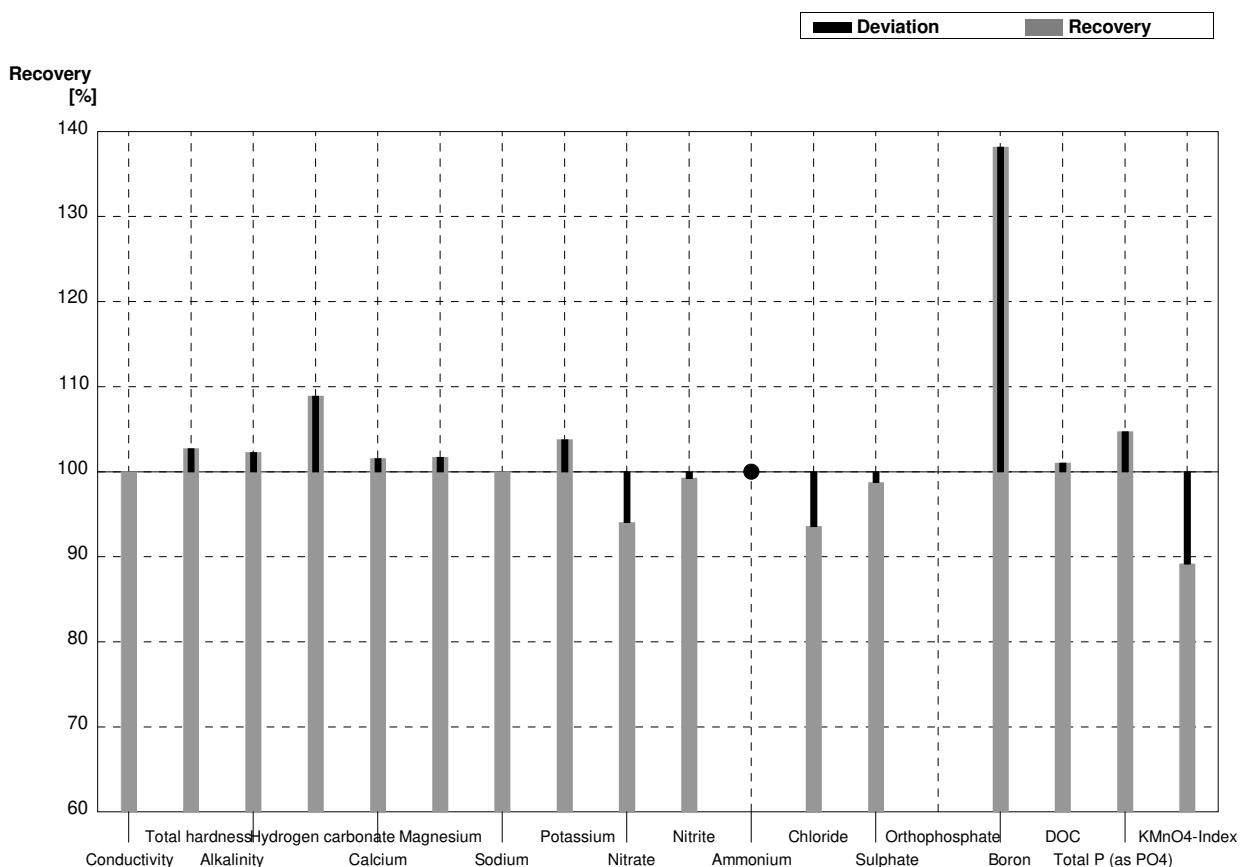
**Sample N154B**  
**Laboratory F**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	624	31	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02			$\text{mmol/l}$	
Alkalinity	4,58	0,04			$\text{mmol/l}$	
Hydrogen carbonate	277	2			$\text{mg/l}$	
Calcium	63,6	0,8			$\text{mg/l}$	
Magnesium	12,8	0,1			$\text{mg/l}$	
Sodium	48,8	0,5			$\text{mg/l}$	
Potassium	8,11	0,06			$\text{mg/l}$	
Nitrate	25,4	0,4	24,79	1,098	$\text{mg/l}$	98%
Nitrite	0,0101	0,0005	<0,0160		$\text{mg/l}$	•
Ammonium	0,0313	0,0050	0,0359	0,0080	$\text{mg/l}$	115%
Chloride	24,2	0,5	23,89	3,124	$\text{mg/l}$	99%
Sulphate	41,1	0,5	41,85	2,548	$\text{mg/l}$	102%
Orthophosphate	<0,009		<0,0150		$\text{mg/l}$	•
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05	7,26	1,31	$\text{mg/l}$	100%
Total P (as PO <sub>4</sub> )	<0,009		0,109	0,013	$\text{mg/l}$	FP
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



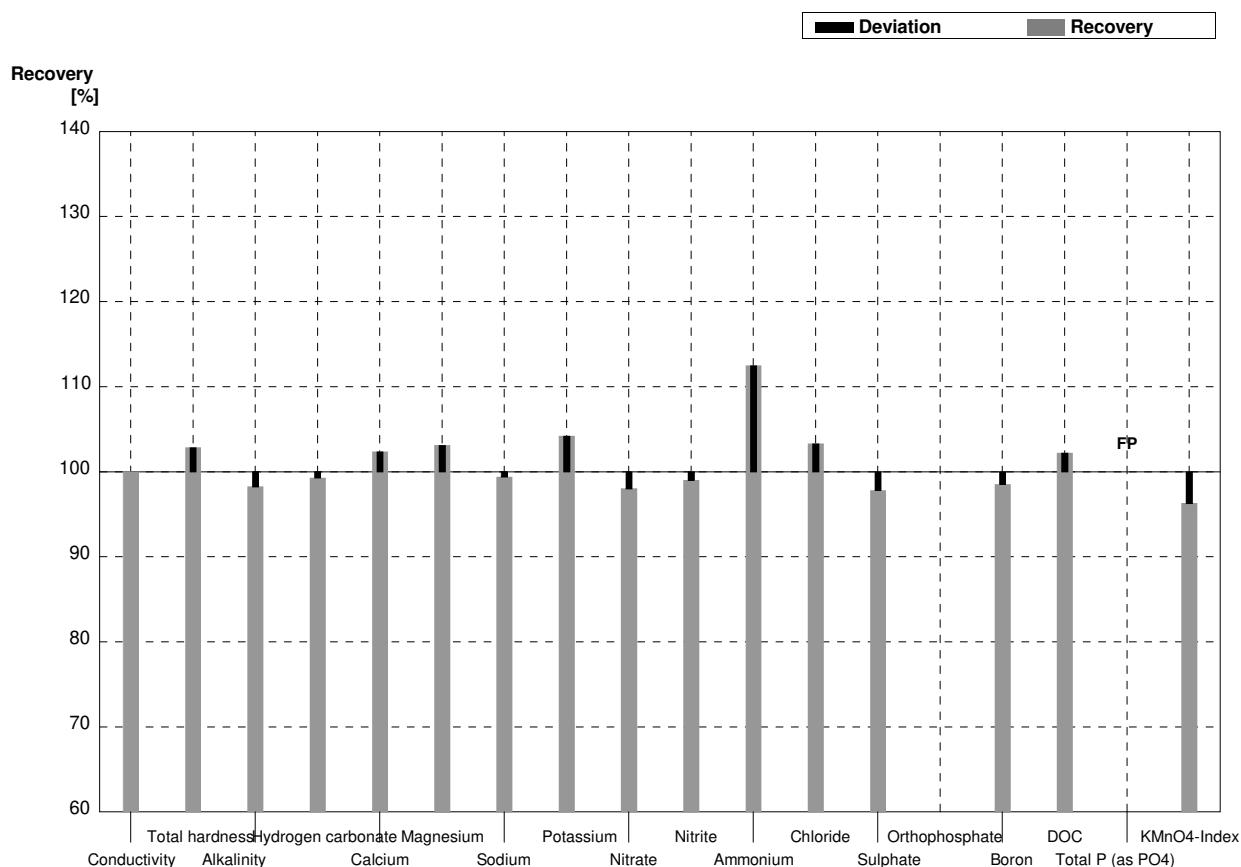
**Sample N154A**  
**Laboratory G**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	173	2	$\mu\text{S}/\text{cm}$	100%
Total hardness	0,438	0,004	0,450	0,1	$\text{mmol/l}$	103%
Alkalinity	0,88	0,01	0,90	0,10	$\text{mmol/l}$	102%
Hydrogen carbonate	50,5	0,2	55	2	$\text{mg/l}$	109%
Calcium	12,7	0,2	12,9	1	$\text{mg/l}$	102%
Magnesium	2,95	0,03	3,00	0,5	$\text{mg/l}$	102%
Sodium	15,1	0,1	15,1	1	$\text{mg/l}$	100%
Potassium	3,18	0,02	3,30	0,5	$\text{mg/l}$	104%
Nitrate	16,8	0,3	15,8	2	$\text{mg/l}$	94%
Nitrite	0,0403	0,0006	0,0400	0,01	$\text{mg/l}$	99%
Ammonium	<0,01		0,00350	0,01	$\text{mg/l}$	•
Chloride	10,9	0,2	10,2	1	$\text{mg/l}$	94%
Sulphate	8,81	0,11	8,70	1	$\text{mg/l}$	99%
Orthophosphate	0,086	0,001			$\text{mg/l}$	
Boron	0,0152	0,0010	0,0210	0,01	$\text{mg/l}$	138%
DOC	1,96	0,04	1,98	0,3	$\text{mg/l}$	101%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,133	0,02	$\text{mg/l}$	105%
KMnO <sub>4</sub> -Index	1,48	0,14	1,32	0,2	$\text{mg/l}$	89%



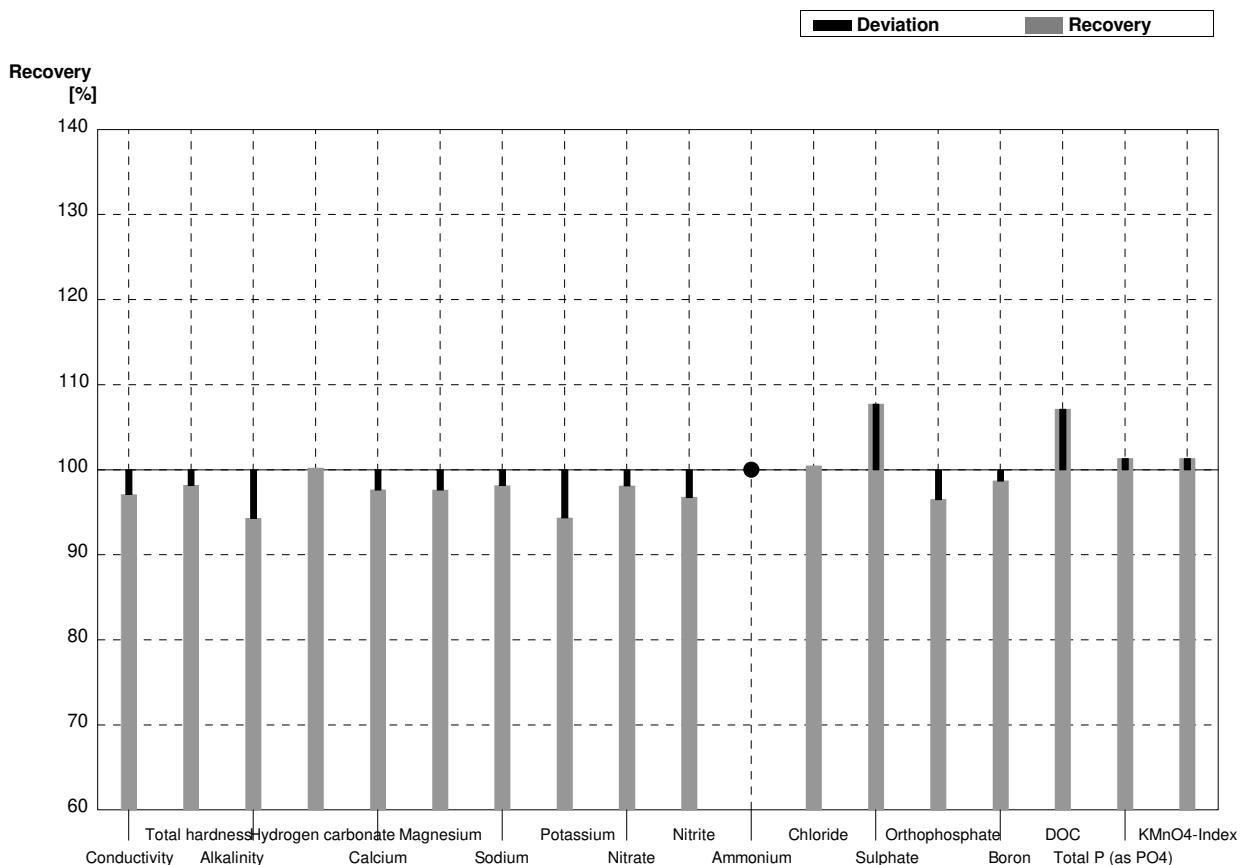
**Sample N154B**  
**Laboratory G**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	622	3	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,17	0,15	$\text{mmol/l}$	103%
Alkalinity	4,58	0,04	4,50	0,10	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	275	5	$\text{mg/l}$	99%
Calcium	63,6	0,8	65,1	2	$\text{mg/l}$	102%
Magnesium	12,8	0,1	13,2	1	$\text{mg/l}$	103%
Sodium	48,8	0,5	48,5	2	$\text{mg/l}$	99%
Potassium	8,11	0,06	8,45	1	$\text{mg/l}$	104%
Nitrate	25,4	0,4	24,9	2	$\text{mg/l}$	98%
Nitrite	0,0101	0,0005	0,0100	0,01	$\text{mg/l}$	99%
Ammonium	0,0313	0,0050	0,0352	0,01	$\text{mg/l}$	112%
Chloride	24,2	0,5	25,0	2	$\text{mg/l}$	103%
Sulphate	41,1	0,5	40,2	2	$\text{mg/l}$	98%
Orthophosphate	<0,009				$\text{mg/l}$	
Boron	0,0406	0,0003	0,0400	0,01	$\text{mg/l}$	99%
DOC	7,28	0,05	7,44	0,5	$\text{mg/l}$	102%
Total P (as PO <sub>4</sub> )	<0,009		0,0190	0,01	$\text{mg/l}$	FP
KMnO <sub>4</sub> -Index	4,57	0,13	4,40	0,4	$\text{mg/l}$	96%



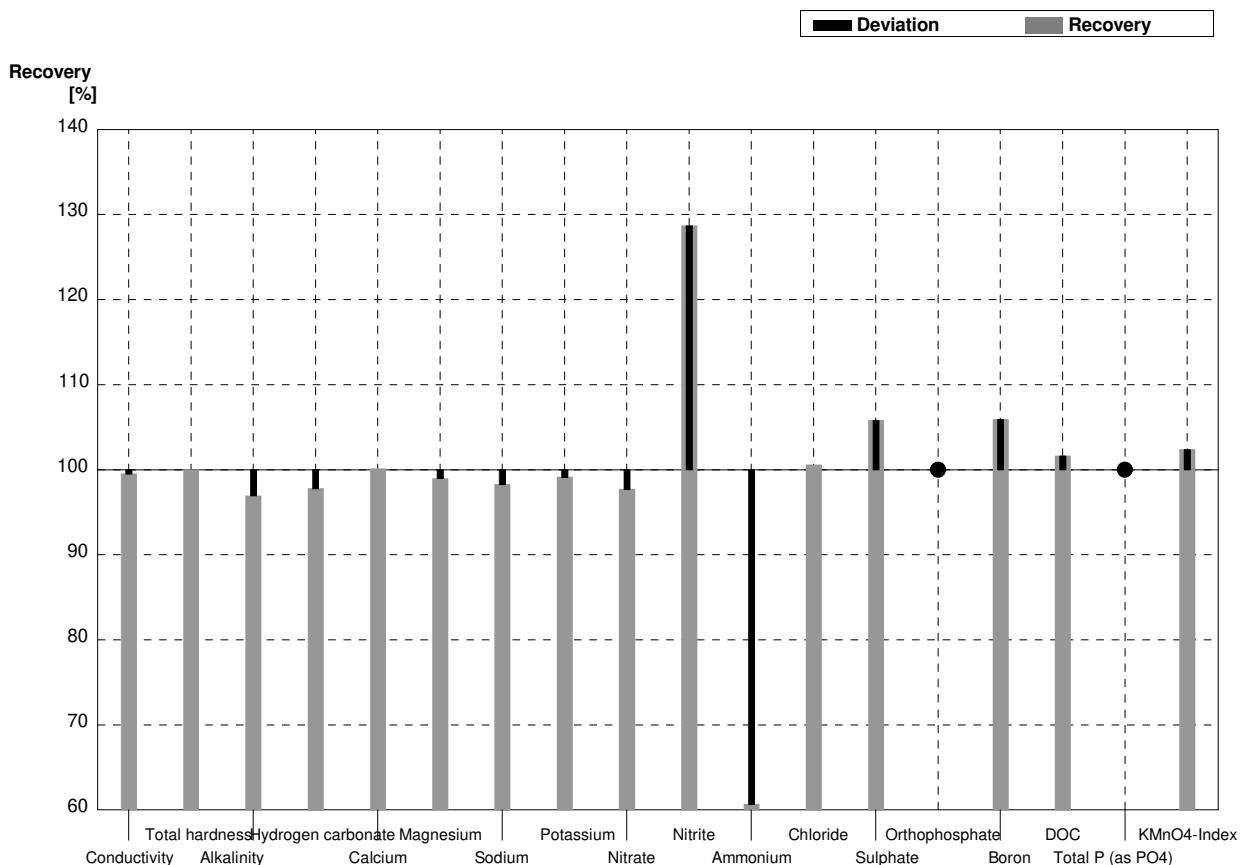
**Sample N154A**  
**Laboratory H**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	168	6,7	$\mu\text{S}/\text{cm}$	97%
Total hardness	0,438	0,004	0,430		$\text{mmol/l}$	98%
Alkalinity	0,88	0,01	0,83	0,125	$\text{mmol/l}$	94%
Hydrogen carbonate	50,5	0,2	50,6	7,60	$\text{mg/l}$	100%
Calcium	12,7	0,2	12,4	1,24	$\text{mg/l}$	98%
Magnesium	2,95	0,03	2,88	0,288	$\text{mg/l}$	98%
Sodium	15,1	0,1	14,82	1,482	$\text{mg/l}$	98%
Potassium	3,18	0,02	3,00	0,30	$\text{mg/l}$	94%
Nitrate	16,8	0,3	16,481	0,6592	$\text{mg/l}$	98%
Nitrite	0,0403	0,0006	0,0390	0,0032	$\text{mg/l}$	97%
Ammonium	<0,01		<0,0006		$\text{mg/l}$	•
Chloride	10,9	0,2	10,95	0,548	$\text{mg/l}$	100%
Sulphate	8,81	0,11	9,49	0,475	$\text{mg/l}$	108%
Orthophosphate	0,086	0,001	0,083	0,0099	$\text{mg/l}$	97%
Boron	0,0152	0,0010	0,0150	0,0018	$\text{mg/l}$	99%
DOC	1,96	0,04	2,10	0,17	$\text{mg/l}$	107%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,1287	0,0193	$\text{mg/l}$	101%
KMnO <sub>4</sub> -Index	1,48	0,14	1,50	0,240	$\text{mg/l}$	101%



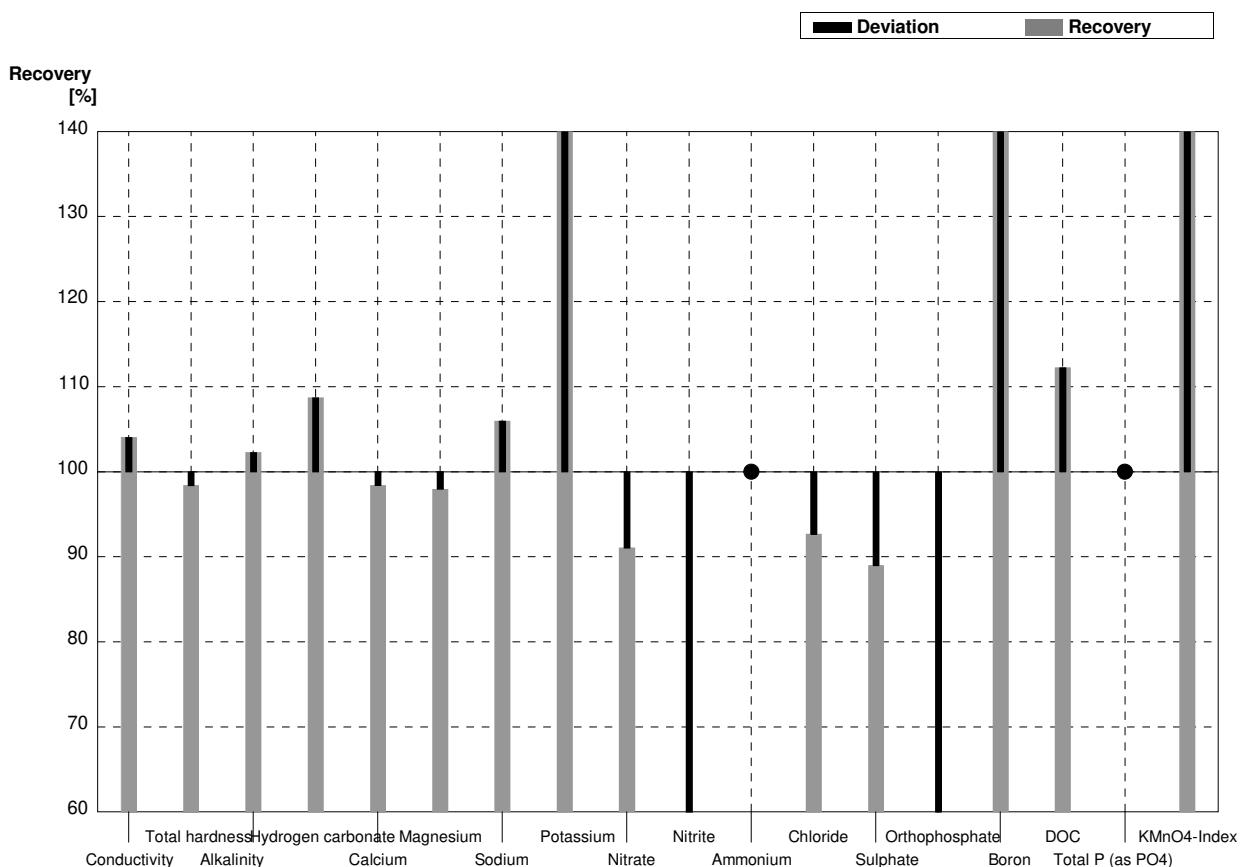
**Sample N154B**  
**Laboratory H**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	619	24,8	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,11		$\text{mmol/l}$	100%
Alkalinity	4,58	0,04	4,44	0,666	$\text{mmol/l}$	97%
Hydrogen carbonate	277	2	270,9	40,64	$\text{mg/l}$	98%
Calcium	63,6	0,8	63,69	6,369	$\text{mg/l}$	100%
Magnesium	12,8	0,1	12,67	1,267	$\text{mg/l}$	99%
Sodium	48,8	0,5	47,96	4,796	$\text{mg/l}$	98%
Potassium	8,11	0,06	8,04	0,804	$\text{mg/l}$	99%
Nitrate	25,4	0,4	24,821	0,9928	$\text{mg/l}$	98%
Nitrite	0,0101	0,0005	0,0130	0,0011	$\text{mg/l}$	129%
Ammonium	0,0313	0,0050	0,0190	0,0019	$\text{mg/l}$	61%
Chloride	24,2	0,5	24,34	1,217	$\text{mg/l}$	101%
Sulphate	41,1	0,5	43,49	2,175	$\text{mg/l}$	106%
Orthophosphate	<0,009		0,0060	0,0007	$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0430	0,0052	$\text{mg/l}$	106%
DOC	7,28	0,05	7,4	0,59	$\text{mg/l}$	102%
Total P (as PO <sub>4</sub> )	<0,009		<0,005		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	4,68	0,749	$\text{mg/l}$	102%



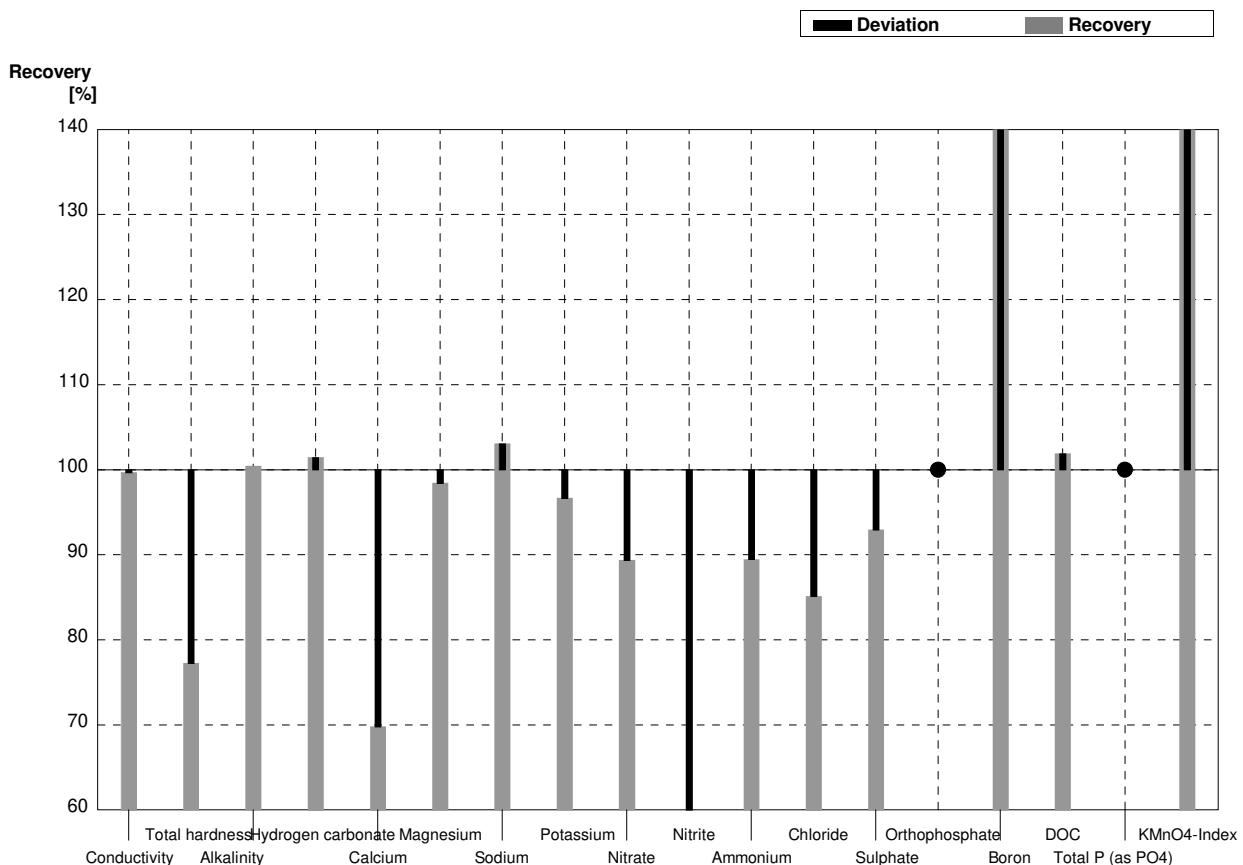
**Sample N154A**  
**Laboratory I**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	180	18	$\mu\text{S}/\text{cm}$	104%
Total hardness	0,438	0,004	0,431	0,043	mmol/l	98%
Alkalinity	0,88	0,01	0,900	0,090	mmol/l	102%
Hydrogen carbonate	50,5	0,2	54,9	5,5	mg/l	109%
Calcium	12,7	0,2	12,5	1,3	mg/l	98%
Magnesium	2,95	0,03	2,89	0,29	mg/l	98%
Sodium	15,1	0,1	16,0	1,6	mg/l	106%
Potassium	3,18	0,02	5,98	0,60	mg/l	188%
Nitrate	16,8	0,3	15,3	1,5	mg/l	91%
Nitrite	0,0403	0,0006	0,0120	0,0012	mg/l	30%
Ammonium	<0,01		0,00470	0,00047	mg/l	•
Chloride	10,9	0,2	10,1	1,0	mg/l	93%
Sulphate	8,81	0,11	7,84	0,78	mg/l	89%
Orthophosphate	0,086	0,001	0,0320	0,0032	mg/l	37%
Boron	0,0152	0,0010	14,8	1,5	mg/l	97368%
DOC	1,96	0,04	2,20	0,22	mg/l	112%
Total P (as PO <sub>4</sub> )	0,127	0,001	<0,5		mg/l	•
KMnO <sub>4</sub> -Index	1,48	0,14	9,70	0,97	mg/l	655%



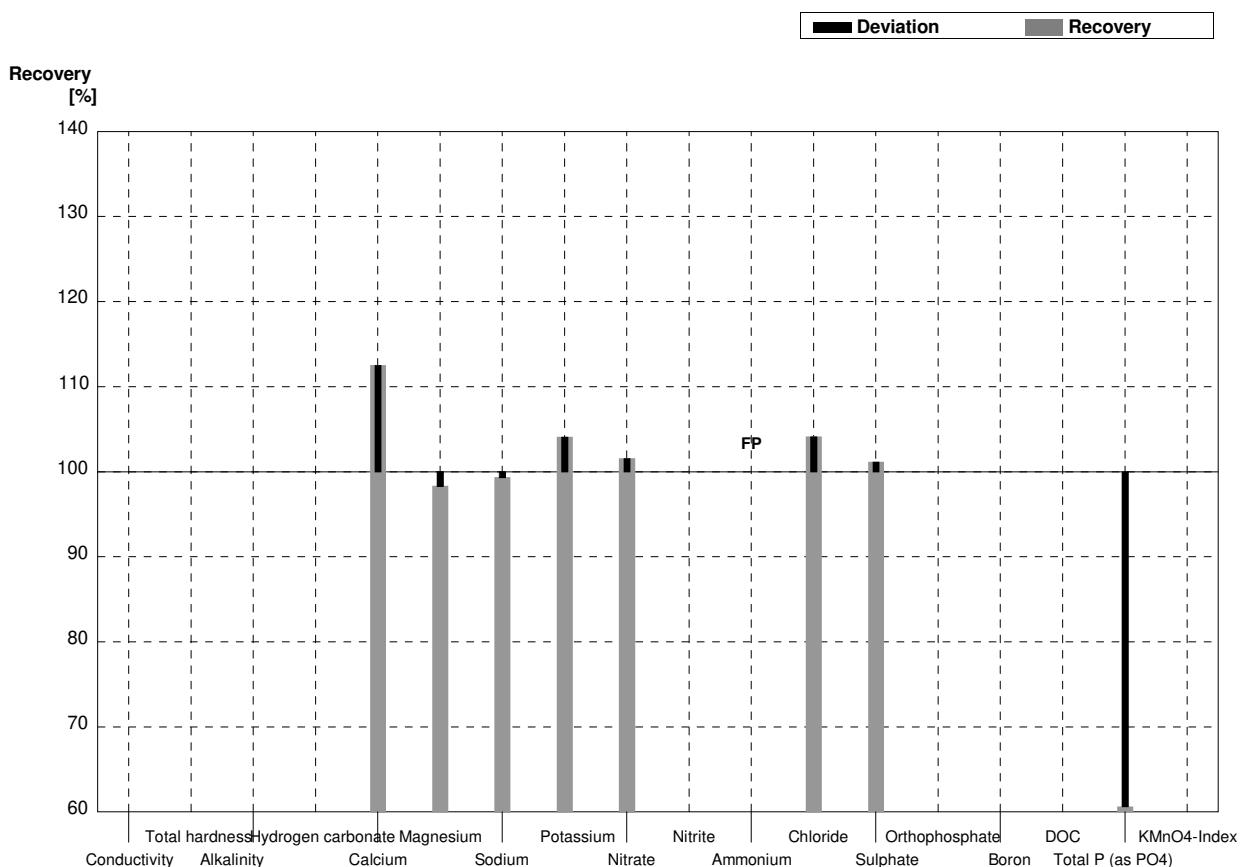
**Sample N154B**  
**Laboratory I**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	620	62	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	1,63	0,16	$\text{mmol/l}$	77%
Alkalinity	4,58	0,04	4,60	0,46	$\text{mmol/l}$	100%
Hydrogen carbonate	277	2	281	28	$\text{mg/l}$	101%
Calcium	63,6	0,8	44,4	4,4	$\text{mg/l}$	70%
Magnesium	12,8	0,1	12,6	1,3	$\text{mg/l}$	98%
Sodium	48,8	0,5	50,3	5,0	$\text{mg/l}$	103%
Potassium	8,11	0,06	7,84	0,78	$\text{mg/l}$	97%
Nitrate	25,4	0,4	22,7	2,3	$\text{mg/l}$	89%
Nitrite	0,0101	0,0005	0,00190	0,00019	$\text{mg/l}$	19%
Ammonium	0,0313	0,0050	0,0280	0,0028	$\text{mg/l}$	89%
Chloride	24,2	0,5	20,6	2,1	$\text{mg/l}$	85%
Sulphate	41,1	0,5	38,2	3,8	$\text{mg/l}$	93%
Orthophosphate	<0,009		0,00150	0,00015	$\text{mg/l}$	•
Boron	0,0406	0,0003	38,5	3,9	$\text{mg/l}$	94828%
DOC	7,28	0,05	7,42	0,74	$\text{mg/l}$	102%
Total P (as PO <sub>4</sub> )	<0,009		<0,5		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	22,0	2,2	$\text{mg/l}$	481%



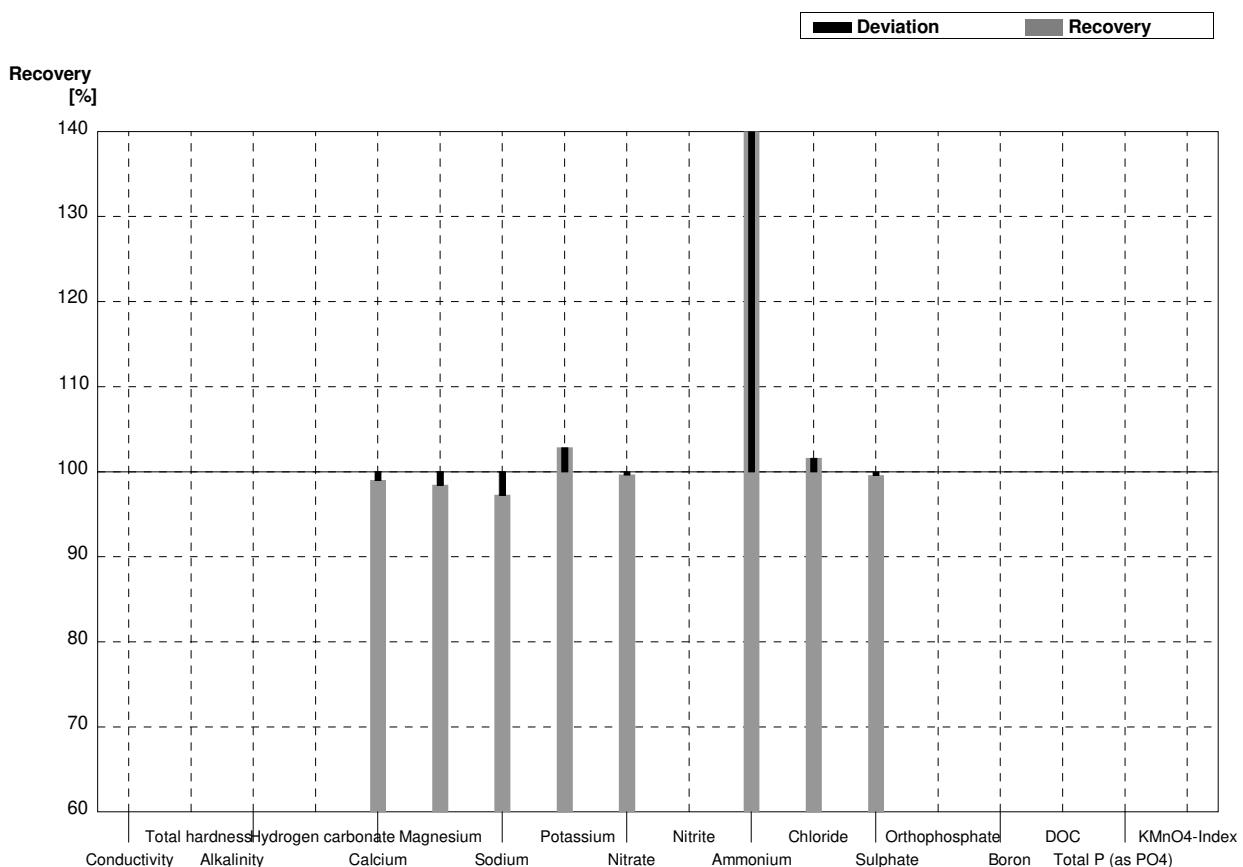
**Sample N154A**  
**Laboratory J**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1			$\mu\text{S}/\text{cm}$	
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01			$\text{mmol/l}$	
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2	14,29	1,29	$\text{mg/l}$	113%
Magnesium	2,95	0,03	2,90	0,26	$\text{mg/l}$	98%
Sodium	15,1	0,1	15,00	1,35	$\text{mg/l}$	99%
Potassium	3,18	0,02	3,31	0,23	$\text{mg/l}$	104%
Nitrate	16,8	0,3	17,06	3,07	$\text{mg/l}$	102%
Nitrite	0,0403	0,0006			$\text{mg/l}$	
Ammonium	<0,01		0,0424	0,0059	$\text{mg/l}$	FP
Chloride	10,9	0,2	11,35	1,48	$\text{mg/l}$	104%
Sulphate	8,81	0,11	8,91	1,60	$\text{mg/l}$	101%
Orthophosphate	0,086	0,001			$\text{mg/l}$	
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001	0,077	0,031	$\text{mg/l}$	61%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



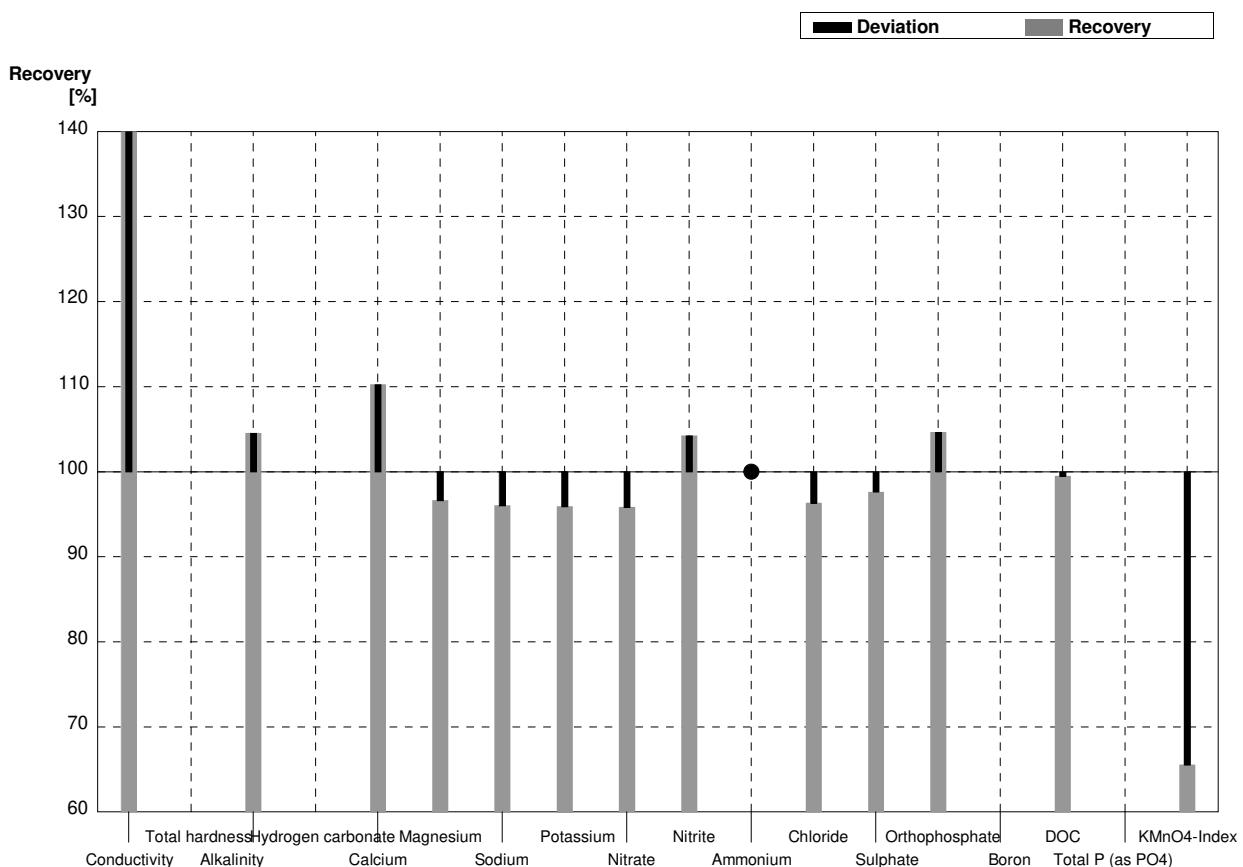
**Sample N154B**  
**Laboratory J**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2			$\mu\text{S}/\text{cm}$	
Total hardness	2,11	0,02			$\text{mmol/l}$	
Alkalinity	4,58	0,04			$\text{mmol/l}$	
Hydrogen carbonate	277	2			$\text{mg/l}$	
Calcium	63,6	0,8	62,96	5,67	$\text{mg/l}$	99%
Magnesium	12,8	0,1	12,60	1,13	$\text{mg/l}$	98%
Sodium	48,8	0,5	47,47	4,27	$\text{mg/l}$	97%
Potassium	8,11	0,06	8,34	0,58	$\text{mg/l}$	103%
Nitrate	25,4	0,4	25,31	4,56	$\text{mg/l}$	100%
Nitrite	0,0101	0,0005			$\text{mg/l}$	
Ammonium	0,0313	0,0050	0,0676	0,0095	$\text{mg/l}$	216%
Chloride	24,2	0,5	24,59	3,20	$\text{mg/l}$	102%
Sulphate	41,1	0,5	40,93	7,37	$\text{mg/l}$	100%
Orthophosphate	<0,009				$\text{mg/l}$	
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



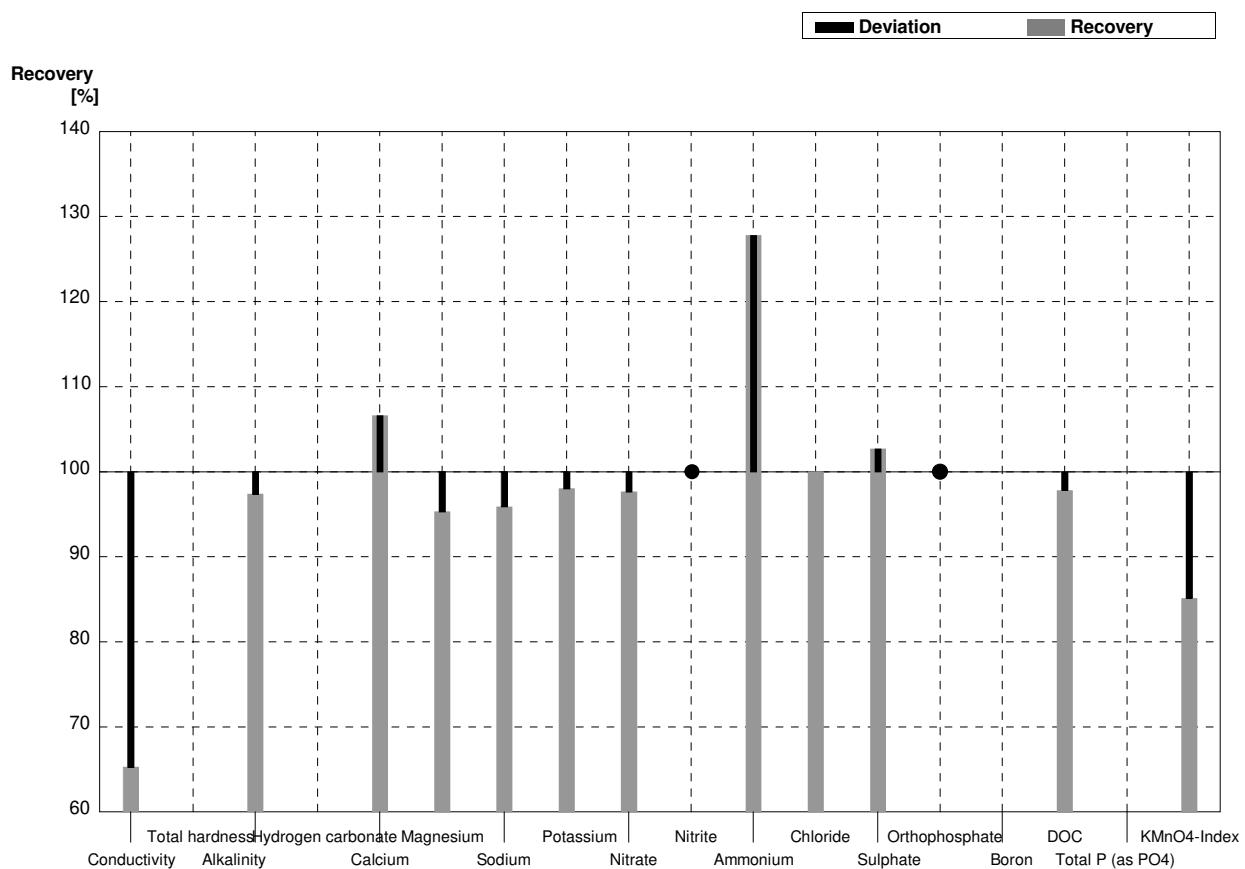
**Sample N154A**  
**Laboratory K**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	624		$\mu\text{S}/\text{cm}$	361%
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01	0,92		$\text{mmol/l}$	105%
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2	14,0		$\text{mg/l}$	110%
Magnesium	2,95	0,03	2,85		$\text{mg/l}$	97%
Sodium	15,1	0,1	14,5		$\text{mg/l}$	96%
Potassium	3,18	0,02	3,05		$\text{mg/l}$	96%
Nitrate	16,8	0,3	16,1		$\text{mg/l}$	96%
Nitrite	0,0403	0,0006	0,0420		$\text{mg/l}$	104%
Ammonium	<0,01		<0,01		$\text{mg/l}$	•
Chloride	10,9	0,2	10,5		$\text{mg/l}$	96%
Sulphate	8,81	0,11	8,6		$\text{mg/l}$	98%
Orthophosphate	0,086	0,001	0,09		$\text{mg/l}$	105%
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04	1,95		$\text{mg/l}$	99%
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14	0,97		$\text{mg/l}$	66%



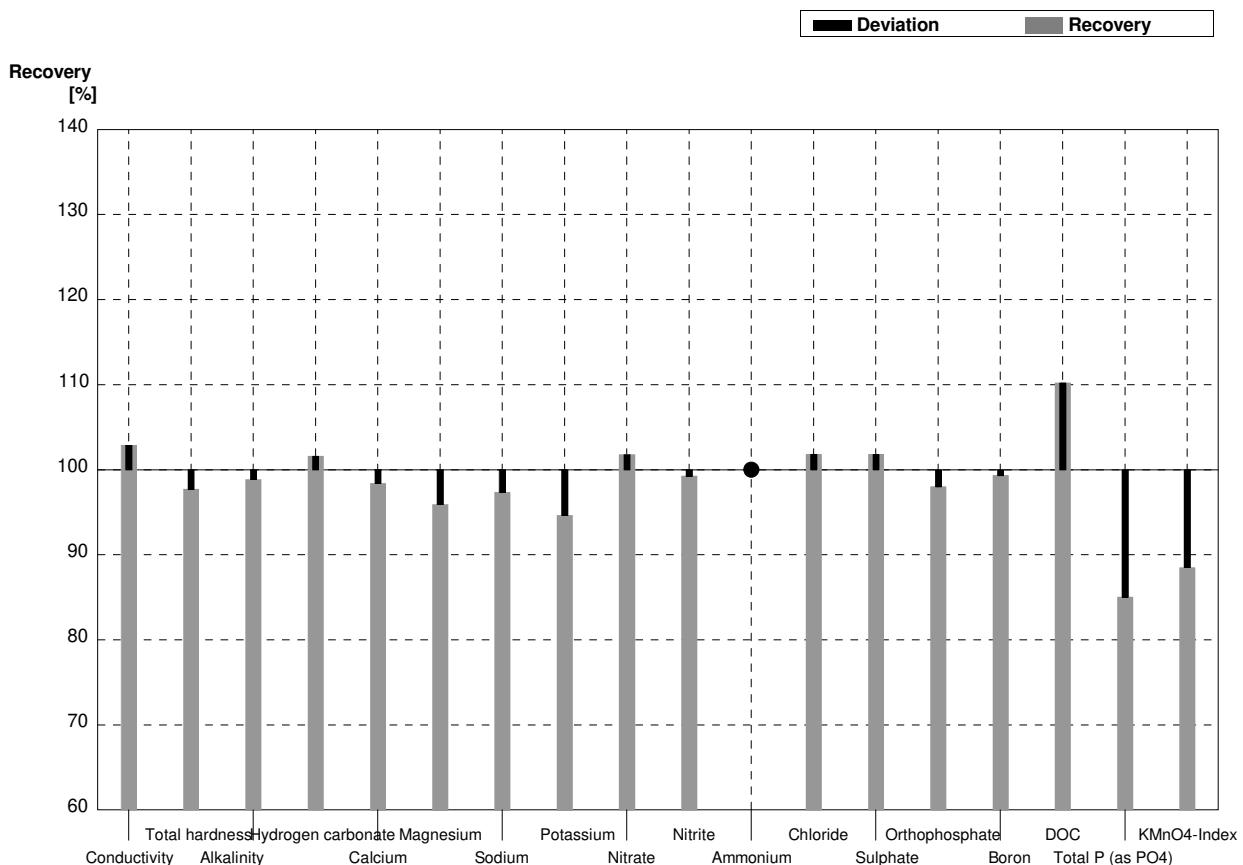
**Sample N154B**  
**Laboratory K**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	406		$\mu\text{S}/\text{cm}$	65%
Total hardness	2,11	0,02			$\text{mmol/l}$	
Alkalinity	4,58	0,04	4,46		$\text{mmol/l}$	97%
Hydrogen carbonate	277	2			$\text{mg/l}$	
Calcium	63,6	0,8	67,8		$\text{mg/l}$	107%
Magnesium	12,8	0,1	12,2		$\text{mg/l}$	95%
Sodium	48,8	0,5	46,8		$\text{mg/l}$	96%
Potassium	8,11	0,06	7,95		$\text{mg/l}$	98%
Nitrate	25,4	0,4	24,8		$\text{mg/l}$	98%
Nitrite	0,0101	0,0005	<0,01		$\text{mg/l}$	•
Ammonium	0,0313	0,0050	0,0400		$\text{mg/l}$	128%
Chloride	24,2	0,5	24,2		$\text{mg/l}$	100%
Sulphate	41,1	0,5	42,2		$\text{mg/l}$	103%
Orthophosphate	<0,009		<0,02		$\text{mg/l}$	•
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05	7,12		$\text{mg/l}$	98%
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13	3,89		$\text{mg/l}$	85%



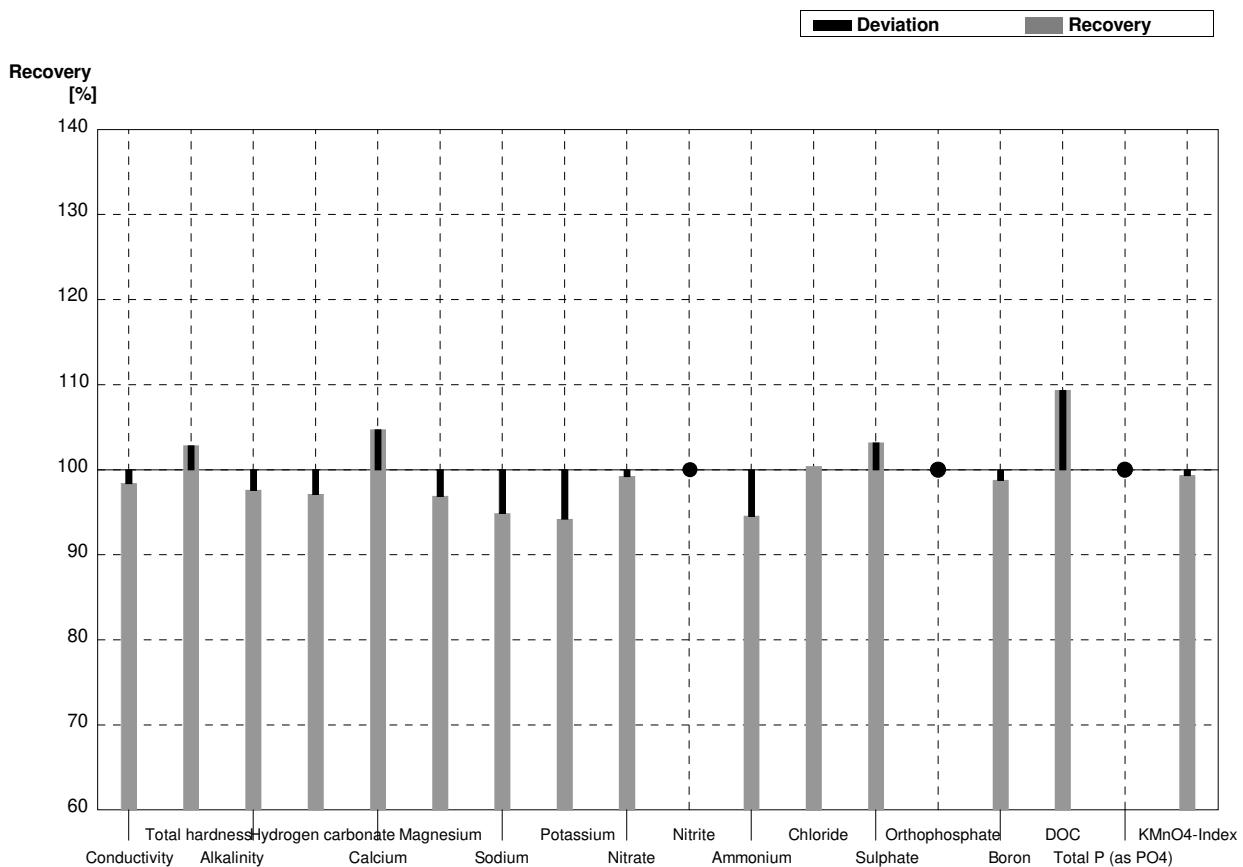
**Sample N154A**  
**Laboratory L**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	178	3,215	$\mu\text{S}/\text{cm}$	103%
Total hardness	0,438	0,004	0,428	0,003	$\text{mmol/l}$	98%
Alkalinity	0,88	0,01	0,870	0,001	$\text{mmol/l}$	99%
Hydrogen carbonate	50,5	0,2	51,3	0,071	$\text{mg/l}$	102%
Calcium	12,7	0,2	12,5	0,106	$\text{mg/l}$	98%
Magnesium	2,95	0,03	2,83	0,002	$\text{mg/l}$	96%
Sodium	15,1	0,1	14,7	0,067	$\text{mg/l}$	97%
Potassium	3,18	0,02	3,01	0,017	$\text{mg/l}$	95%
Nitrate	16,8	0,3	17,1	0,058	$\text{mg/l}$	102%
Nitrite	0,0403	0,0006	0,0400	0,0003	$\text{mg/l}$	99%
Ammonium	<0,01		<0,010		$\text{mg/l}$	•
Chloride	10,9	0,2	11,1	0,058	$\text{mg/l}$	102%
Sulphate	8,81	0,11	8,97	0,020	$\text{mg/l}$	102%
Orthophosphate	0,086	0,001	0,0843	0,0005	$\text{mg/l}$	98%
Boron	0,0152	0,0010	0,0151	0,001	$\text{mg/l}$	99%
DOC	1,96	0,04	2,16	0,021	$\text{mg/l}$	110%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,108	0,001	$\text{mg/l}$	85%
KMnO <sub>4</sub> -Index	1,48	0,14	1,31	0,007	$\text{mg/l}$	89%



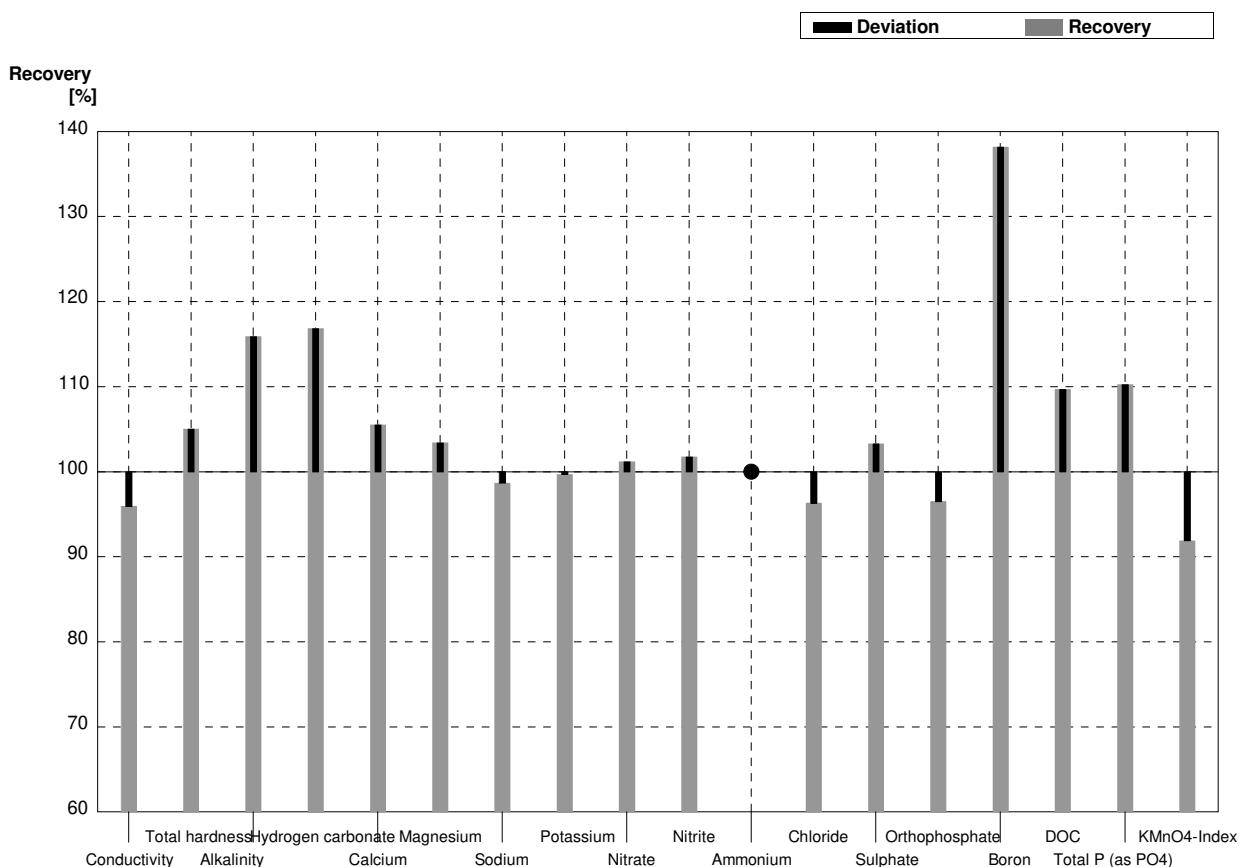
**Sample N154B**  
**Laboratory L**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	612	2,517	$\mu\text{S}/\text{cm}$	98%
Total hardness	2,11	0,02	2,17	0,038	$\text{mmol/l}$	103%
Alkalinity	4,58	0,04	4,47	0,006	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	269	0,577	$\text{mg/l}$	97%
Calcium	63,6	0,8	66,6	1,527	$\text{mg/l}$	105%
Magnesium	12,8	0,1	12,4	0,266	$\text{mg/l}$	97%
Sodium	48,8	0,5	46,3	0,936	$\text{mg/l}$	95%
Potassium	8,11	0,06	7,64	0,015	$\text{mg/l}$	94%
Nitrate	25,4	0,4	25,2	0,058	$\text{mg/l}$	99%
Nitrite	0,0101	0,0005	<0,010		$\text{mg/l}$	•
Ammonium	0,0313	0,0050	0,0296	0,0004	$\text{mg/l}$	95%
Chloride	24,2	0,5	24,3	0,115	$\text{mg/l}$	100%
Sulphate	41,1	0,5	42,4	0,404	$\text{mg/l}$	103%
Orthophosphate	<0,009		<0,015		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0401	0,001	$\text{mg/l}$	99%
DOC	7,28	0,05	7,96	0,040	$\text{mg/l}$	109%
Total P (as PO <sub>4</sub> )	<0,009		<0,015		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	4,54	0,010	$\text{mg/l}$	99%



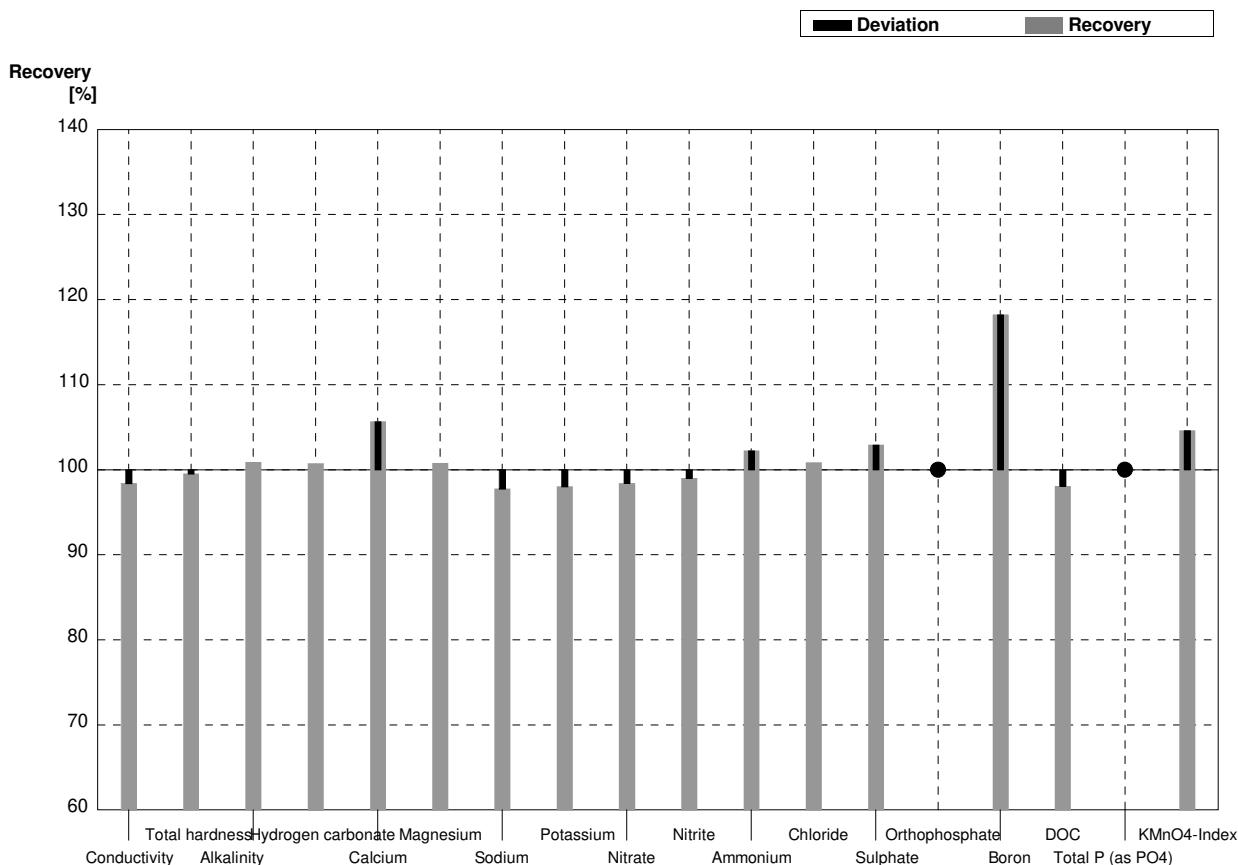
**Sample N154A**  
**Laboratory M**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	166	4,2	$\mu\text{S}/\text{cm}$	96%
Total hardness	0,438	0,004	0,460	0,046	$\text{mmol/l}$	105%
Alkalinity	0,88	0,01	1,02	0,026	$\text{mmol/l}$	116%
Hydrogen carbonate	50,5	0,2	59	1,48	$\text{mg/l}$	117%
Calcium	12,7	0,2	13,4	1,34	$\text{mg/l}$	106%
Magnesium	2,95	0,03	3,05	0,31	$\text{mg/l}$	103%
Sodium	15,1	0,1	14,9	0,15	$\text{mg/l}$	99%
Potassium	3,18	0,02	3,17	0,32	$\text{mg/l}$	100%
Nitrate	16,8	0,3	17,0	1,7	$\text{mg/l}$	101%
Nitrite	0,0403	0,0006	0,0410	0,0041	$\text{mg/l}$	102%
Ammonium	<0,01		<0,010		$\text{mg/l}$	•
Chloride	10,9	0,2	10,5	1,05	$\text{mg/l}$	96%
Sulphate	8,81	0,11	9,1	0,91	$\text{mg/l}$	103%
Orthophosphate	0,086	0,001	0,083	0,0083	$\text{mg/l}$	97%
Boron	0,0152	0,0010	0,0210	0,002	$\text{mg/l}$	138%
DOC	1,96	0,04	2,15	0,22	$\text{mg/l}$	110%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,140	0,014	$\text{mg/l}$	110%
KMnO <sub>4</sub> -Index	1,48	0,14	1,36	0,14	$\text{mg/l}$	92%



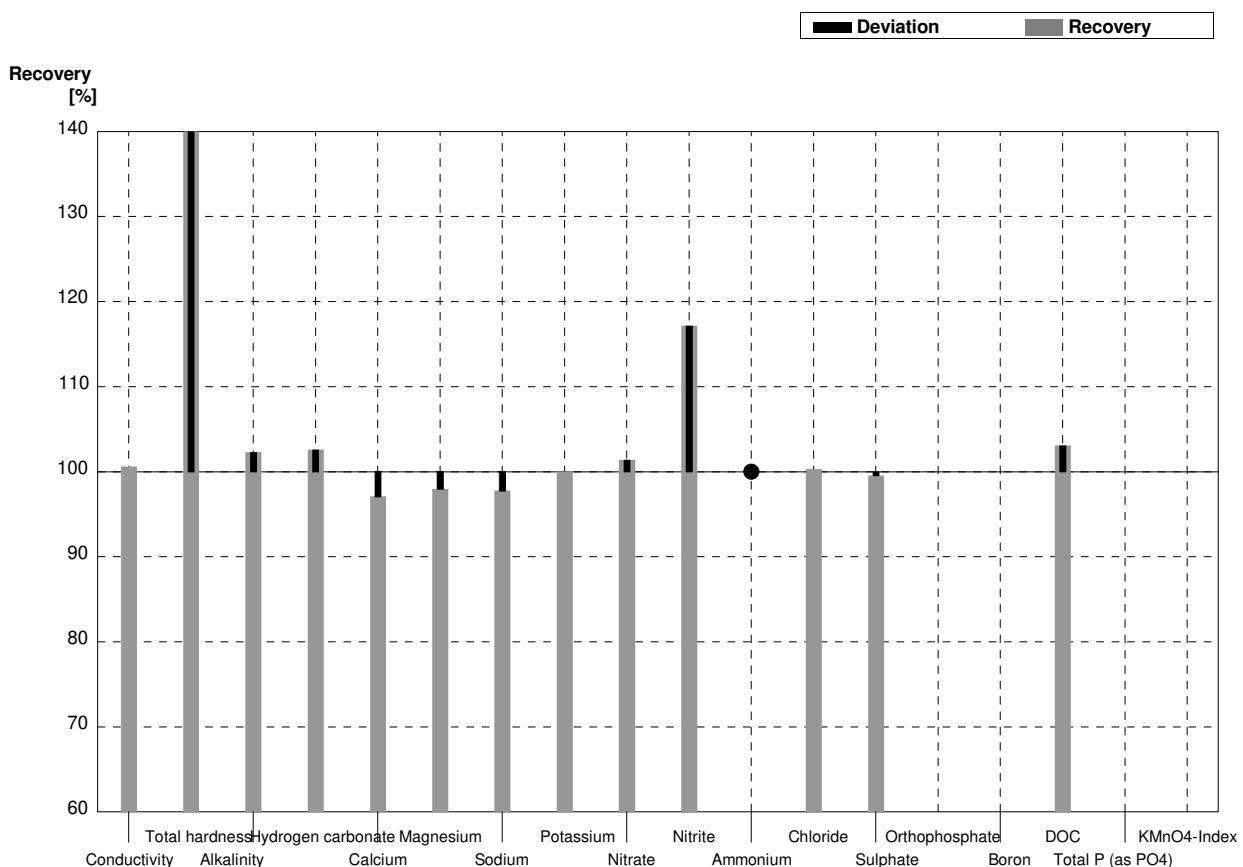
**Sample N154B**  
**Laboratory M**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	612	15,3	$\mu\text{S}/\text{cm}$	98%
Total hardness	2,11	0,02	2,100	0,210	$\text{mmol/l}$	100%
Alkalinity	4,58	0,04	4,62	0,116	$\text{mmol/l}$	101%
Hydrogen carbonate	277	2	279	6,98	$\text{mg/l}$	101%
Calcium	63,6	0,8	67,2	6,72	$\text{mg/l}$	106%
Magnesium	12,8	0,1	12,9	0,13	$\text{mg/l}$	101%
Sodium	48,8	0,5	47,7	4,77	$\text{mg/l}$	98%
Potassium	8,11	0,06	7,95	0,80	$\text{mg/l}$	98%
Nitrate	25,4	0,4	25,0	2,5	$\text{mg/l}$	98%
Nitrite	0,0101	0,0005	0,0100	0,0010	$\text{mg/l}$	99%
Ammonium	0,0313	0,0050	0,0320	0,003	$\text{mg/l}$	102%
Chloride	24,2	0,5	24,4	2,44	$\text{mg/l}$	101%
Sulphate	41,1	0,5	42,3	4,23	$\text{mg/l}$	103%
Orthophosphate	<0,009		<0,006		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0480	0,005	$\text{mg/l}$	118%
DOC	7,28	0,05	7,14	0,71	$\text{mg/l}$	98%
Total P (as PO <sub>4</sub> )	<0,009		<0,050		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	4,78	0,48	$\text{mg/l}$	105%



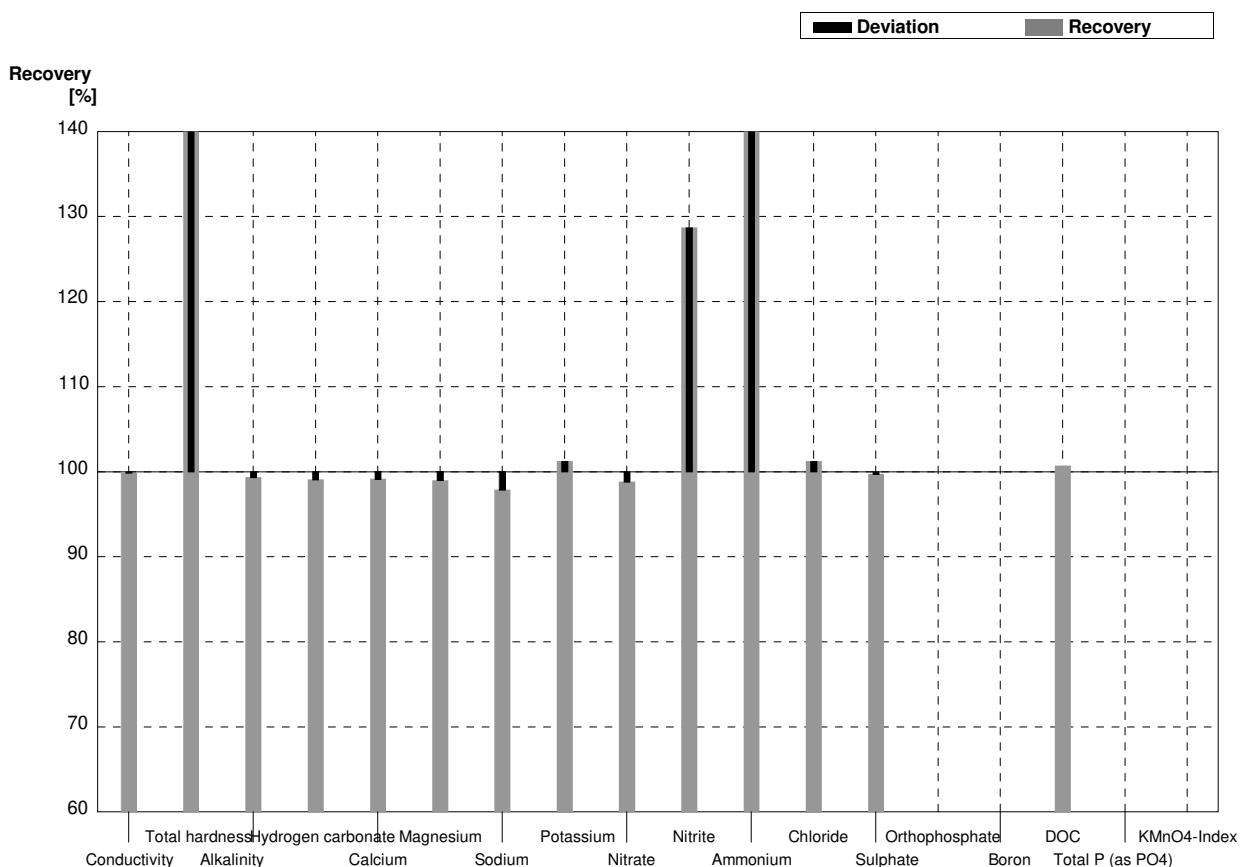
**Sample N154A**  
**Laboratory N**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	174	4	$\mu\text{S}/\text{cm}$	101%
Total hardness	0,438	0,004	2,39	0,10	$\text{mmol/l}$	546%
Alkalinity	0,88	0,01	0,90	0,02	$\text{mmol/l}$	102%
Hydrogen carbonate	50,5	0,2	51,8	1,1	$\text{mg/l}$	103%
Calcium	12,7	0,2	12,33	0,48	$\text{mg/l}$	97%
Magnesium	2,95	0,03	2,89	0,14	$\text{mg/l}$	98%
Sodium	15,1	0,1	14,76	0,71	$\text{mg/l}$	98%
Potassium	3,18	0,02	3,18	0,20	$\text{mg/l}$	100%
Nitrate	16,8	0,3	17,03	1,14	$\text{mg/l}$	101%
Nitrite	0,0403	0,0006	0,0472	0,003	$\text{mg/l}$	117%
Ammonium	<0,01		0,00100		$\text{mg/l}$	•
Chloride	10,9	0,2	10,93	0,51	$\text{mg/l}$	100%
Sulphate	8,81	0,11	8,77	0,44	$\text{mg/l}$	100%
Orthophosphate	0,086	0,001			$\text{mg/l}$	
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04	2,02	0,35	$\text{mg/l}$	103%
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



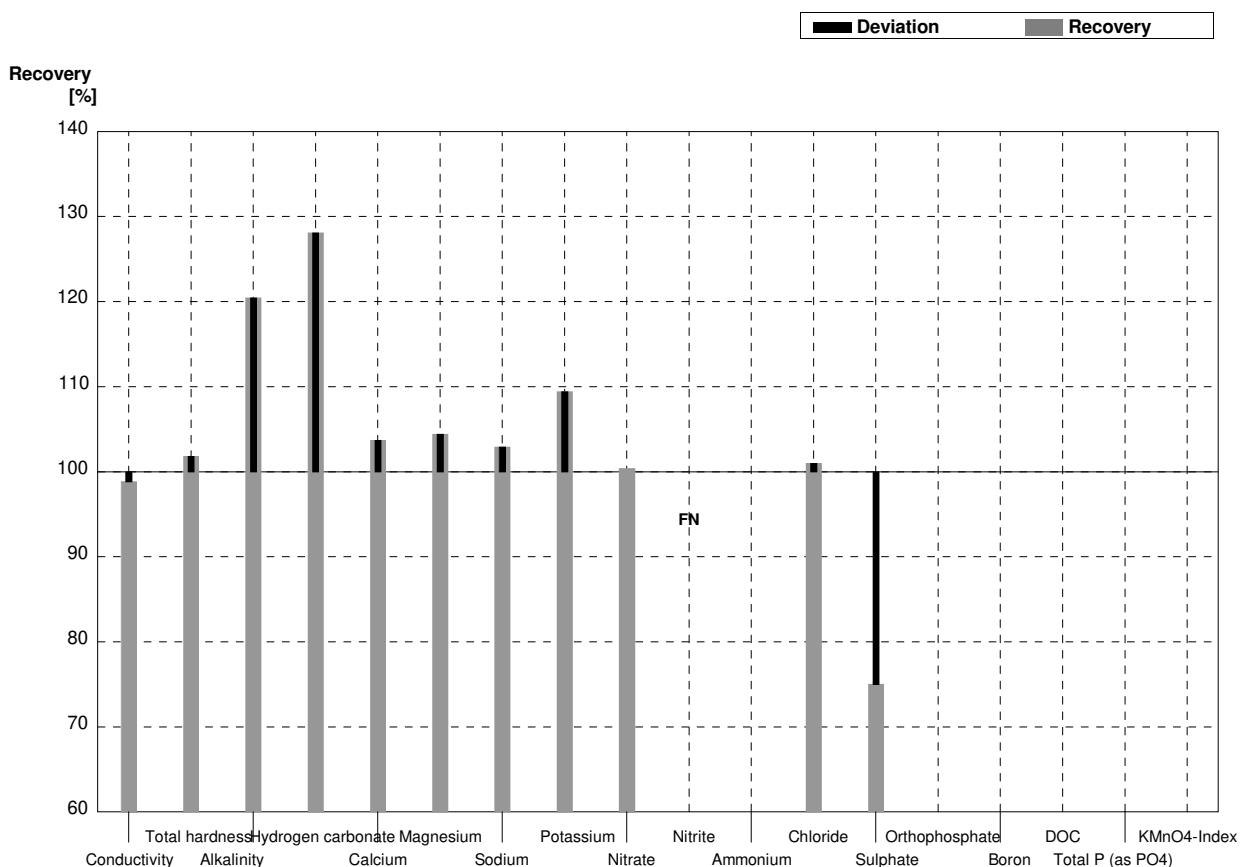
**Sample N154B**  
**Laboratory N**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	621	14	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	11,73	0,47	$\text{mmol/l}$	556%
Alkalinity	4,58	0,04	4,55	0,10	$\text{mmol/l}$	99%
Hydrogen carbonate	277	2	274,4	5,8	$\text{mg/l}$	99%
Calcium	63,6	0,8	63,05	2,46	$\text{mg/l}$	99%
Magnesium	12,8	0,1	12,67	0,60	$\text{mg/l}$	99%
Sodium	48,8	0,5	47,76	2,29	$\text{mg/l}$	98%
Potassium	8,11	0,06	8,21	0,53	$\text{mg/l}$	101%
Nitrate	25,4	0,4	25,10	1,68	$\text{mg/l}$	99%
Nitrite	0,0101	0,0005	0,0130	0,001	$\text{mg/l}$	129%
Ammonium	0,0313	0,0050	0,078	0,013	$\text{mg/l}$	249%
Chloride	24,2	0,5	24,50	1,15	$\text{mg/l}$	101%
Sulphate	41,1	0,5	40,98	2,05	$\text{mg/l}$	100%
Orthophosphate	<0,009				$\text{mg/l}$	
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05	7,33	1,28	$\text{mg/l}$	101%
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



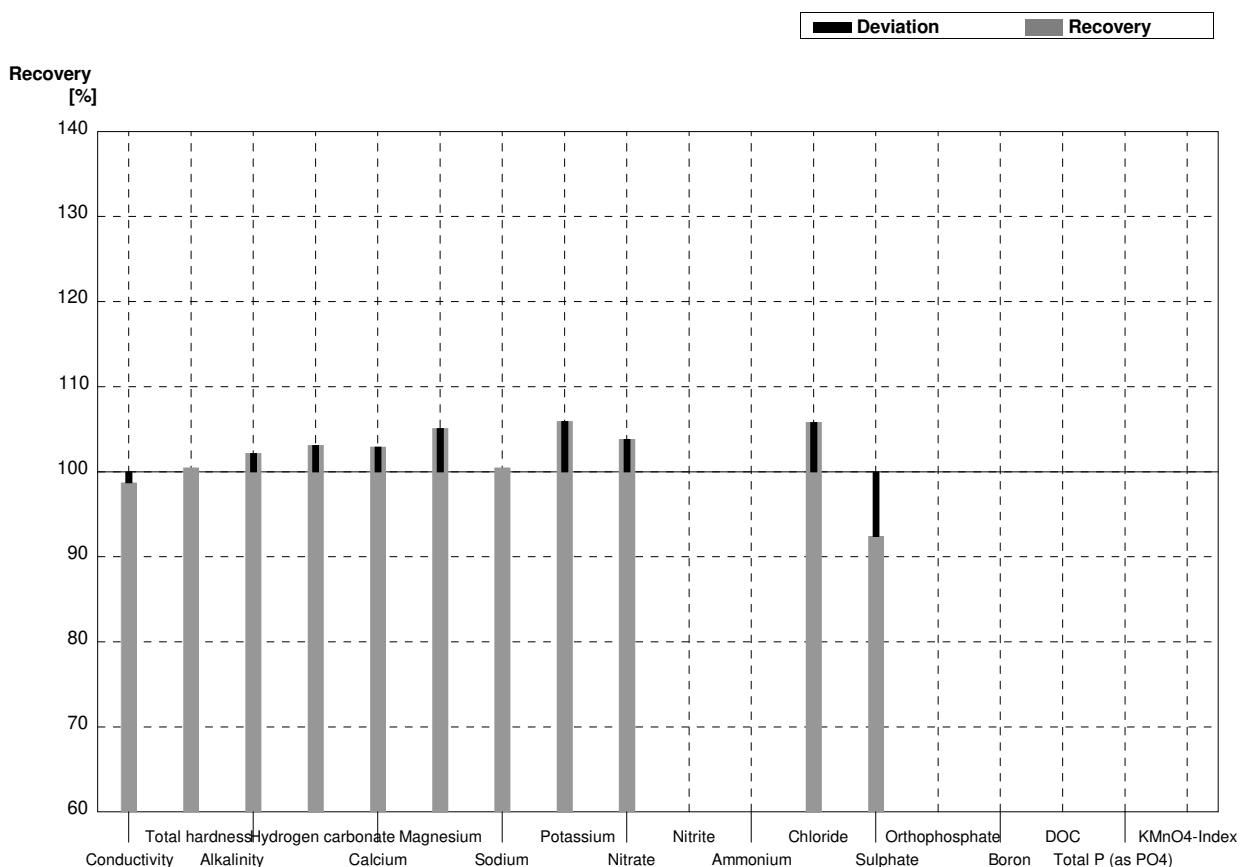
**Sample N154A**  
**Laboratory O**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	171		$\mu\text{S}/\text{cm}$	99%
Total hardness	0,438	0,004	0,446		$\text{mmol/l}$	102%
Alkalinity	0,88	0,01	1,06		$\text{mmol/l}$	120%
Hydrogen carbonate	50,5	0,2	64,68		$\text{mg/l}$	128%
Calcium	12,7	0,2	13,17		$\text{mg/l}$	104%
Magnesium	2,95	0,03	3,08		$\text{mg/l}$	104%
Sodium	15,1	0,1	15,54		$\text{mg/l}$	103%
Potassium	3,18	0,02	3,48		$\text{mg/l}$	109%
Nitrate	16,8	0,3	16,87		$\text{mg/l}$	100%
Nitrite	0,0403	0,0006	<0,01		$\text{mg/l}$	FN
Ammonium	<0,01				$\text{mg/l}$	
Chloride	10,9	0,2	11,01		$\text{mg/l}$	101%
Sulphate	8,81	0,11	6,61		$\text{mg/l}$	75%
Orthophosphate	0,086	0,001			$\text{mg/l}$	
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



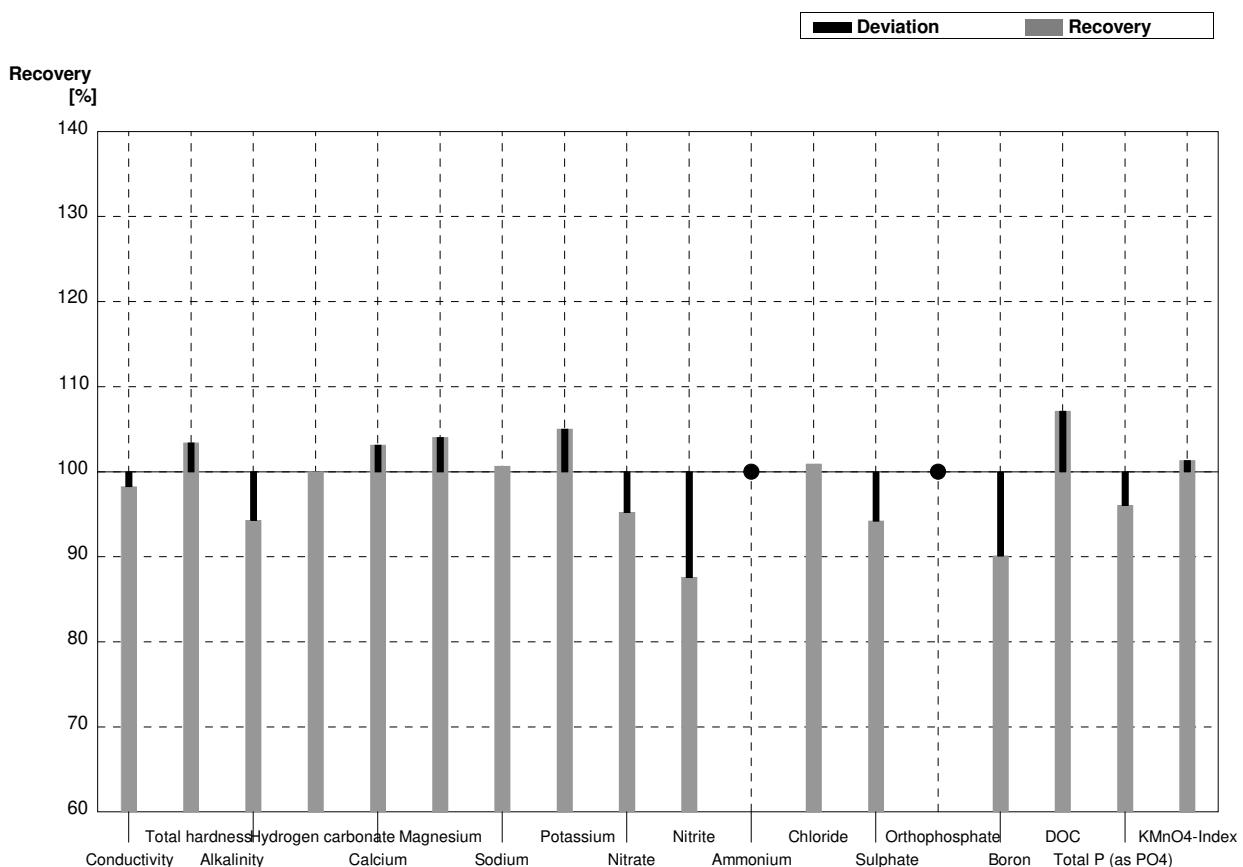
**Sample N154B**  
**Laboratory O**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	614		$\mu\text{S}/\text{cm}$	99%
Total hardness	2,11	0,02	2,12		$\text{mmol/l}$	100%
Alkalinity	4,58	0,04	4,68		$\text{mmol/l}$	102%
Hydrogen carbonate	277	2	285,6		$\text{mg/l}$	103%
Calcium	63,6	0,8	65,45		$\text{mg/l}$	103%
Magnesium	12,8	0,1	13,45		$\text{mg/l}$	105%
Sodium	48,8	0,5	49,04		$\text{mg/l}$	100%
Potassium	8,11	0,06	8,59		$\text{mg/l}$	106%
Nitrate	25,4	0,4	26,37		$\text{mg/l}$	104%
Nitrite	0,0101	0,0005			$\text{mg/l}$	
Ammonium	0,0313	0,0050			$\text{mg/l}$	
Chloride	24,2	0,5	25,61		$\text{mg/l}$	106%
Sulphate	41,1	0,5	37,99		$\text{mg/l}$	92%
Orthophosphate	<0,009				$\text{mg/l}$	
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



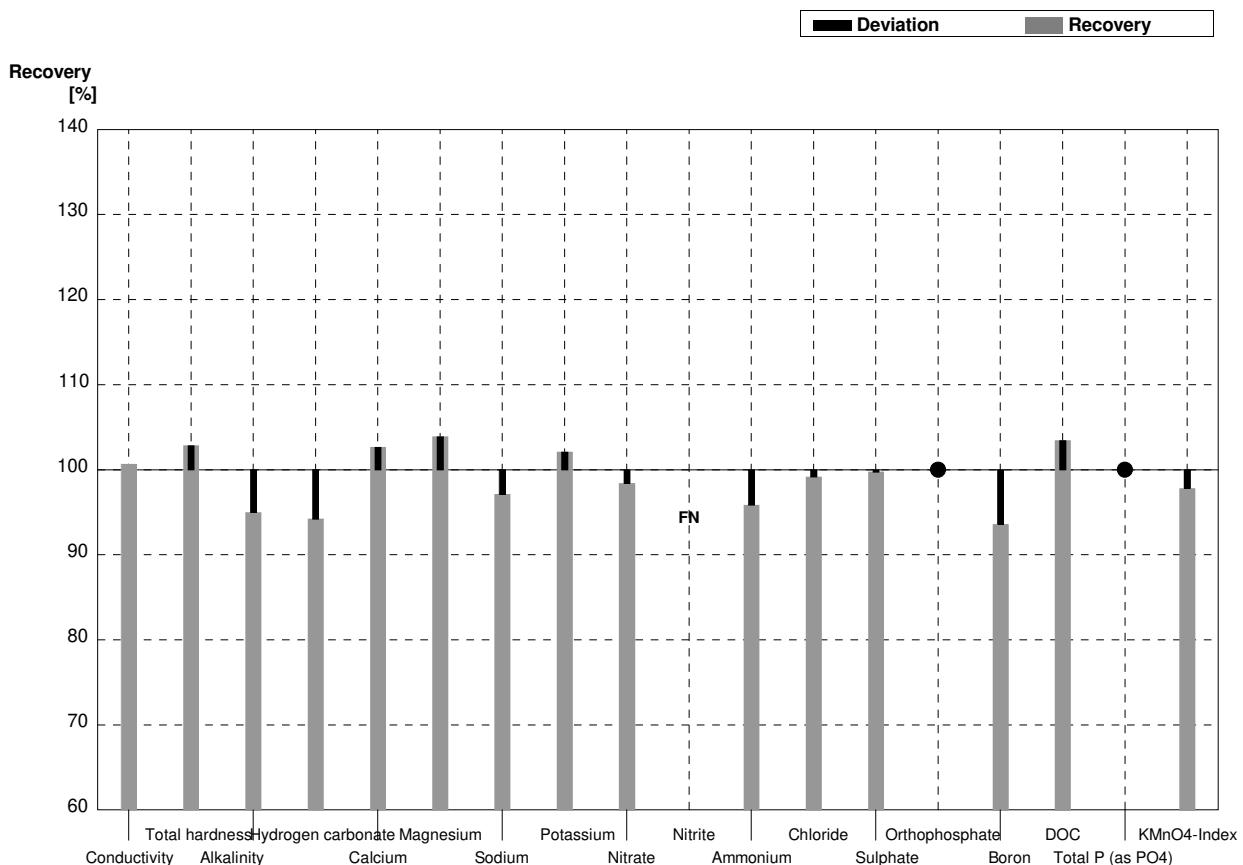
**Sample N154A**  
**Laboratory P**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	170	10	$\mu\text{S}/\text{cm}$	98%
Total hardness	0,438	0,004	0,453	0,05	$\text{mmol/l}$	103%
Alkalinity	0,88	0,01	0,83	0,05	$\text{mmol/l}$	94%
Hydrogen carbonate	50,5	0,2	50,5	2,5	$\text{mg/l}$	100%
Calcium	12,7	0,2	13,1	2	$\text{mg/l}$	103%
Magnesium	2,95	0,03	3,07	0,5	$\text{mg/l}$	104%
Sodium	15,1	0,1	15,2	2	$\text{mg/l}$	101%
Potassium	3,18	0,02	3,34	0,5	$\text{mg/l}$	105%
Nitrate	16,8	0,3	16,0	2	$\text{mg/l}$	95%
Nitrite	0,0403	0,0006	0,0353	0,007	$\text{mg/l}$	88%
Ammonium	<0,01		<0,01		$\text{mg/l}$	•
Chloride	10,9	0,2	11,0	1,1	$\text{mg/l}$	101%
Sulphate	8,81	0,11	8,30	0,9	$\text{mg/l}$	94%
Orthophosphate	0,086	0,001	<0,1		$\text{mg/l}$	•
Boron	0,0152	0,0010	0,0137	0,003	$\text{mg/l}$	90%
DOC	1,96	0,04	2,10	0,5	$\text{mg/l}$	107%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,122	0,02	$\text{mg/l}$	96%
KMnO <sub>4</sub> -Index	1,48	0,14	1,50	0,2	$\text{mg/l}$	101%



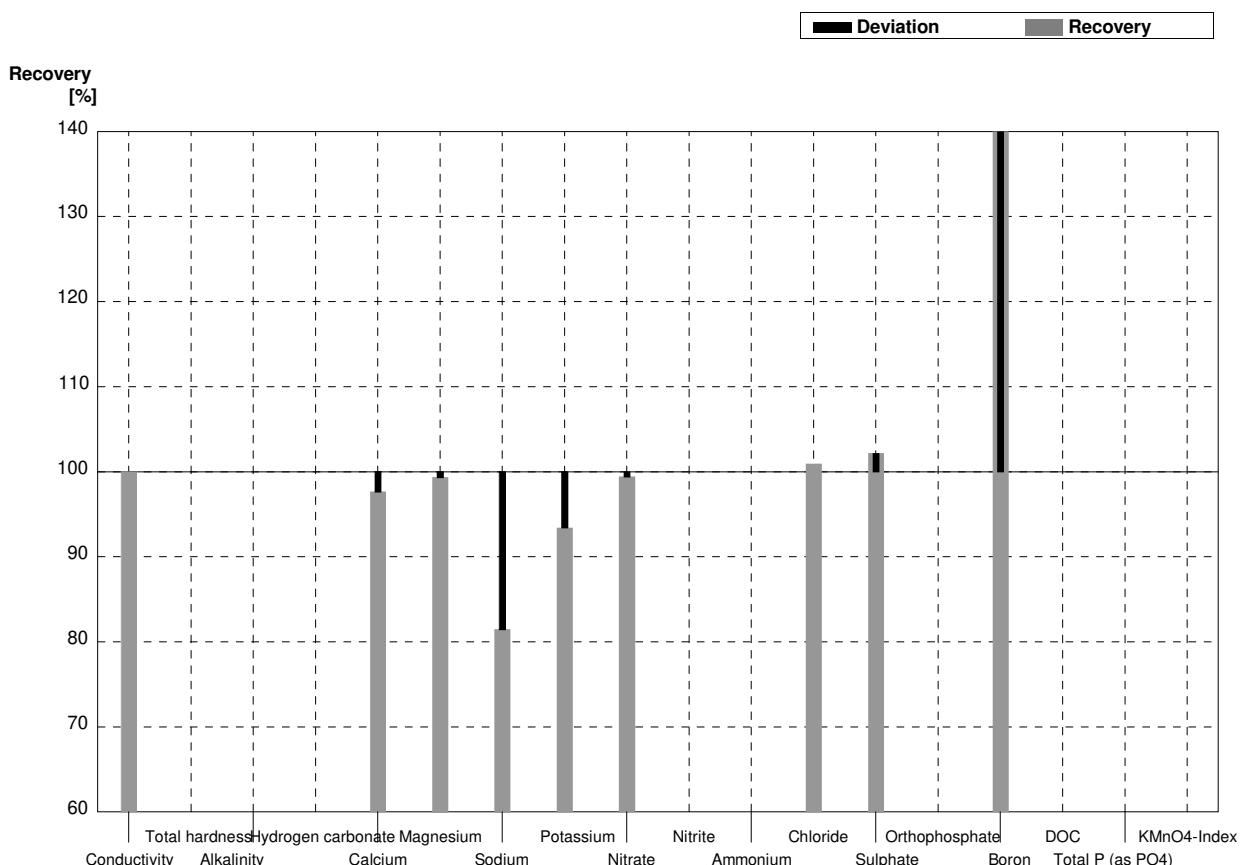
**Sample N154B**  
**Laboratory P**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	626	30	$\mu\text{S}/\text{cm}$	101%
Total hardness	2,11	0,02	2,17	0,3	$\text{mmol/l}$	103%
Alkalinity	4,58	0,04	4,35	0,5	$\text{mmol/l}$	95%
Hydrogen carbonate	277	2	261	13	$\text{mg/l}$	94%
Calcium	63,6	0,8	65,3	7	$\text{mg/l}$	103%
Magnesium	12,8	0,1	13,3	2	$\text{mg/l}$	104%
Sodium	48,8	0,5	47,4	5	$\text{mg/l}$	97%
Potassium	8,11	0,06	8,28	1	$\text{mg/l}$	102%
Nitrate	25,4	0,4	25,0	3	$\text{mg/l}$	98%
Nitrite	0,0101	0,0005	<0,005		$\text{mg/l}$	FN
Ammonium	0,0313	0,0050	0,0300	0,01	$\text{mg/l}$	96%
Chloride	24,2	0,5	24,0	3	$\text{mg/l}$	99%
Sulphate	41,1	0,5	41,0	4	$\text{mg/l}$	100%
Orthophosphate	<0,009		<0,1		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0380	0,008	$\text{mg/l}$	94%
DOC	7,28	0,05	7,53	0,8	$\text{mg/l}$	103%
Total P (as PO <sub>4</sub> )	<0,009		<0,031		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	4,47	0,5	$\text{mg/l}$	98%



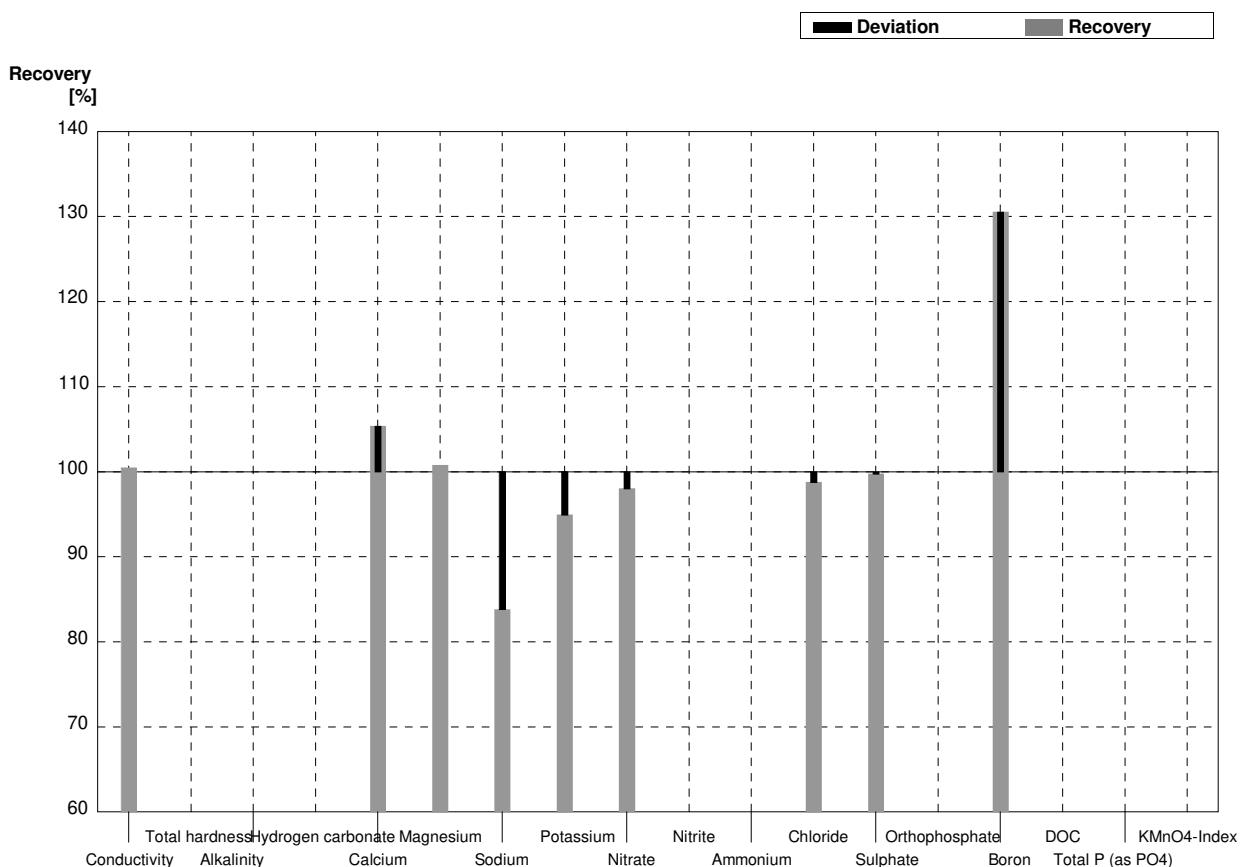
**Sample N154A**  
**Laboratory Q**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	173	4,15	$\mu\text{S}/\text{cm}$	100%
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01			$\text{mmol/l}$	
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2	12,4	1,40	$\text{mg/l}$	98%
Magnesium	2,95	0,03	2,93	0,415	$\text{mg/l}$	99%
Sodium	15,1	0,1	12,3	1,33	$\text{mg/l}$	81%
Potassium	3,18	0,02	2,97	0,475	$\text{mg/l}$	93%
Nitrate	16,8	0,3	16,7	0,436	$\text{mg/l}$	99%
Nitrite	0,0403	0,0006			$\text{mg/l}$	
Ammonium	<0,01				$\text{mg/l}$	
Chloride	10,9	0,2	11,0	2,31	$\text{mg/l}$	101%
Sulphate	8,81	0,11	9,0	1,64	$\text{mg/l}$	102%
Orthophosphate	0,086	0,001			$\text{mg/l}$	
Boron	0,0152	0,0010	0,0430	0,0174	$\text{mg/l}$	283%
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



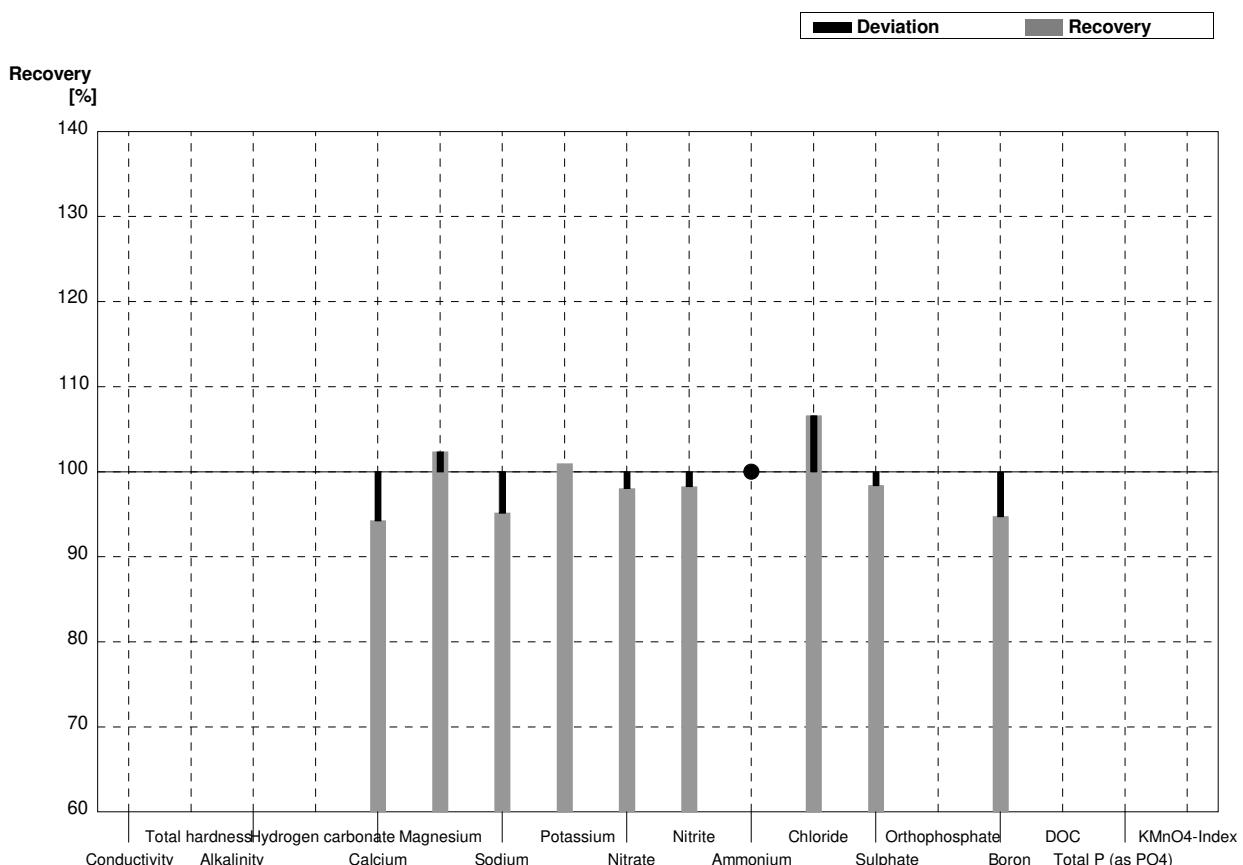
**Sample N154B**  
**Laboratory Q**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	625	15,3	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02			$\text{mmol/l}$	
Alkalinity	4,58	0,04			$\text{mmol/l}$	
Hydrogen carbonate	277	2			$\text{mg/l}$	
Calcium	63,6	0,8	67	6,9	$\text{mg/l}$	105%
Magnesium	12,8	0,1	12,9	1,78	$\text{mg/l}$	101%
Sodium	48,8	0,5	40,9	4,17	$\text{mg/l}$	84%
Potassium	8,11	0,06	7,7	1,18	$\text{mg/l}$	95%
Nitrate	25,4	0,4	24,9	2,37	$\text{mg/l}$	98%
Nitrite	0,0101	0,0005			$\text{mg/l}$	
Ammonium	0,0313	0,0050			$\text{mg/l}$	
Chloride	24,2	0,5	23,9	5,5	$\text{mg/l}$	99%
Sulphate	41,1	0,5	41,0	8,4	$\text{mg/l}$	100%
Orthophosphate	<0,009				$\text{mg/l}$	
Boron	0,0406	0,0003	0,053	0,0091	$\text{mg/l}$	131%
DOC	7,28	0,05			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



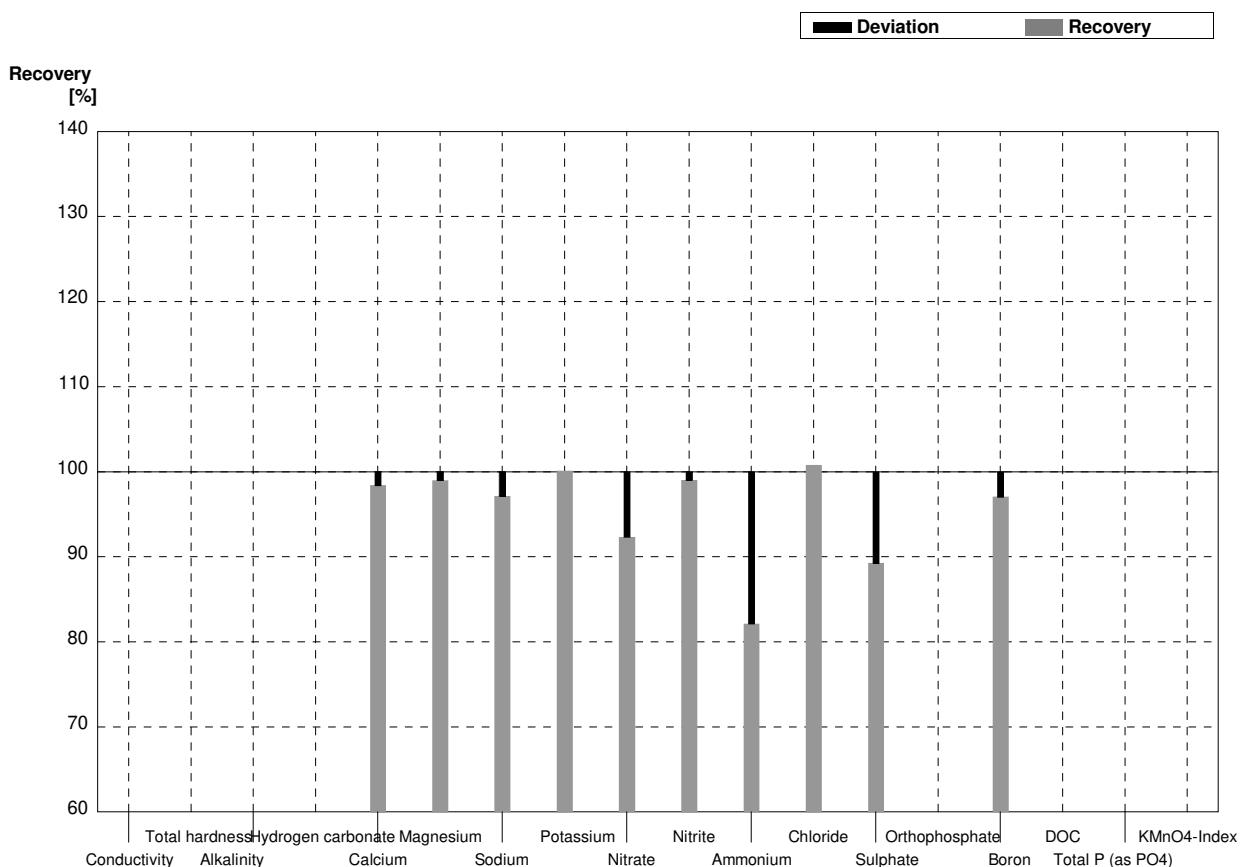
**Sample N154A**  
**Laboratory R**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1			$\mu\text{S}/\text{cm}$	
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01			$\text{mmol/l}$	
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2	11,97		$\text{mg/l}$	94%
Magnesium	2,95	0,03	3,02		$\text{mg/l}$	102%
Sodium	15,1	0,1	14,37		$\text{mg/l}$	95%
Potassium	3,18	0,02	3,21		$\text{mg/l}$	101%
Nitrate	16,8	0,3	16,47		$\text{mg/l}$	98%
Nitrite	0,0403	0,0006	0,0396		$\text{mg/l}$	98%
Ammonium	<0,01		<0,0100		$\text{mg/l}$	•
Chloride	10,9	0,2	11,62		$\text{mg/l}$	107%
Sulphate	8,81	0,11	8,67		$\text{mg/l}$	98%
Orthophosphate	0,086	0,001			$\text{mg/l}$	
Boron	0,0152	0,0010	0,0144		$\text{mg/l}$	95%
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



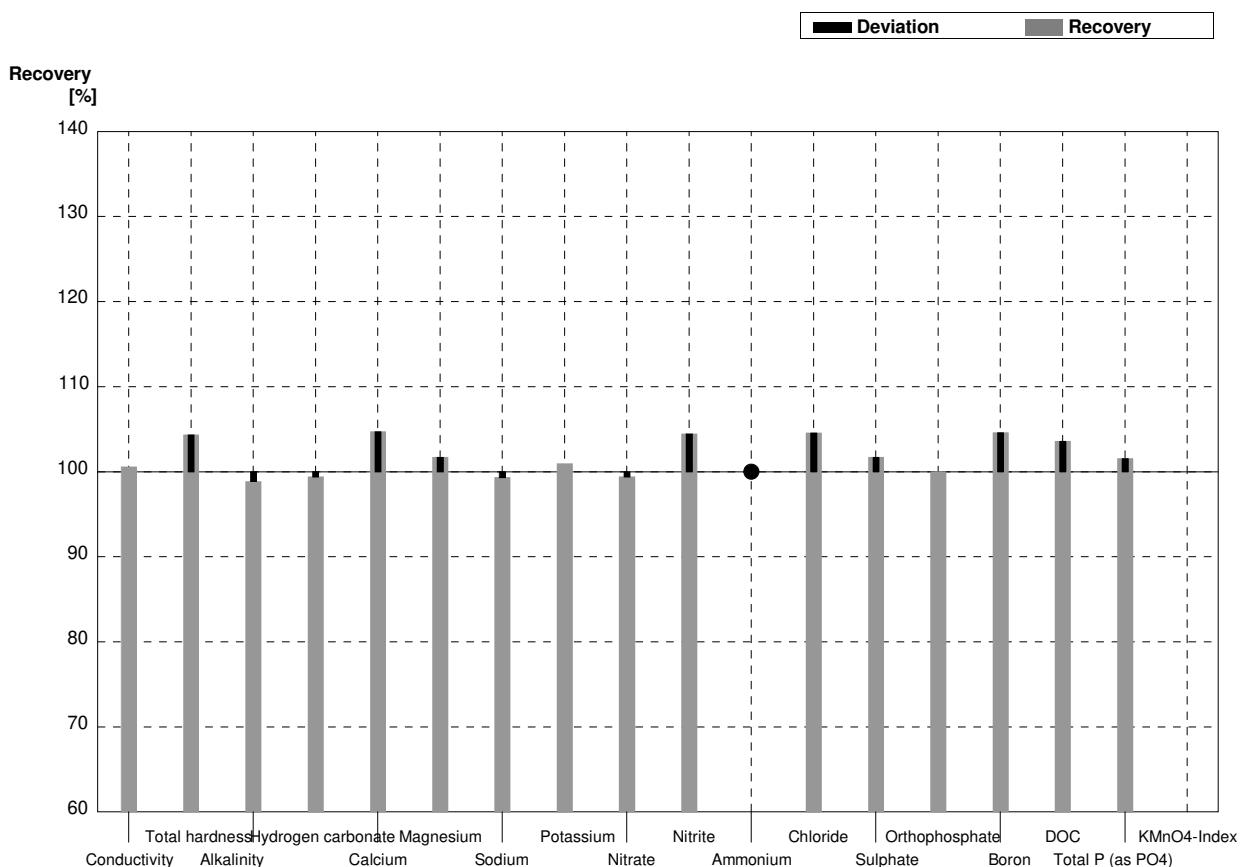
**Sample N154B**  
**Laboratory R**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2			$\mu\text{S}/\text{cm}$	
Total hardness	2,11	0,02			$\text{mmol/l}$	
Alkalinity	4,58	0,04			$\text{mmol/l}$	
Hydrogen carbonate	277	2			$\text{mg/l}$	
Calcium	63,6	0,8	62,57		$\text{mg/l}$	98%
Magnesium	12,8	0,1	12,67		$\text{mg/l}$	99%
Sodium	48,8	0,5	47,4		$\text{mg/l}$	97%
Potassium	8,11	0,06	8,117		$\text{mg/l}$	100%
Nitrate	25,4	0,4	23,45		$\text{mg/l}$	92%
Nitrite	0,0101	0,0005	0,0100		$\text{mg/l}$	99%
Ammonium	0,0313	0,0050	0,0257		$\text{mg/l}$	82%
Chloride	24,2	0,5	24,39		$\text{mg/l}$	101%
Sulphate	41,1	0,5	36,68		$\text{mg/l}$	89%
Orthophosphate	<0,009				$\text{mg/l}$	
Boron	0,0406	0,0003	0,0394		$\text{mg/l}$	97%
DOC	7,28	0,05			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



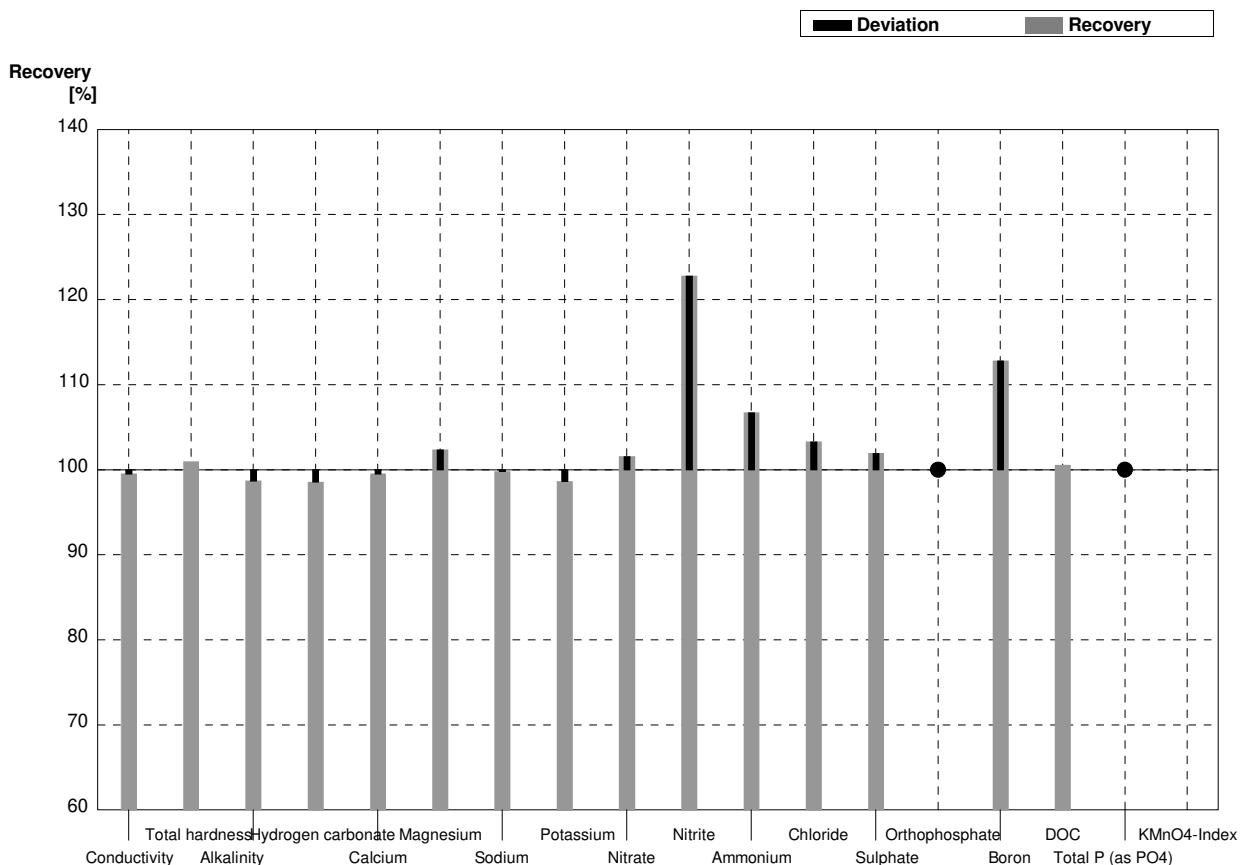
**Sample N154A**  
**Laboratory S**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	174	6	$\mu\text{S}/\text{cm}$	101%
Total hardness	0,438	0,004	0,457	0,05	$\text{mmol/l}$	104%
Alkalinity	0,88	0,01	0,87	0,05	$\text{mmol/l}$	99%
Hydrogen carbonate	50,5	0,2	50,2	2,6	$\text{mg/l}$	99%
Calcium	12,7	0,2	13,3	1,2	$\text{mg/l}$	105%
Magnesium	2,95	0,03	3,00	0,27	$\text{mg/l}$	102%
Sodium	15,1	0,1	15,0	1,2	$\text{mg/l}$	99%
Potassium	3,18	0,02	3,21	0,26	$\text{mg/l}$	101%
Nitrate	16,8	0,3	16,7	1,5	$\text{mg/l}$	99%
Nitrite	0,0403	0,0006	0,0421	0,0050	$\text{mg/l}$	104%
Ammonium	<0,01		<0,008		$\text{mg/l}$	•
Chloride	10,9	0,2	11,4	0,6	$\text{mg/l}$	105%
Sulphate	8,81	0,11	8,96	0,45	$\text{mg/l}$	102%
Orthophosphate	0,086	0,001	0,086	0,009	$\text{mg/l}$	100%
Boron	0,0152	0,0010	0,0159	0,0023	$\text{mg/l}$	105%
DOC	1,96	0,04	2,03	0,19	$\text{mg/l}$	104%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,129	0,013	$\text{mg/l}$	102%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



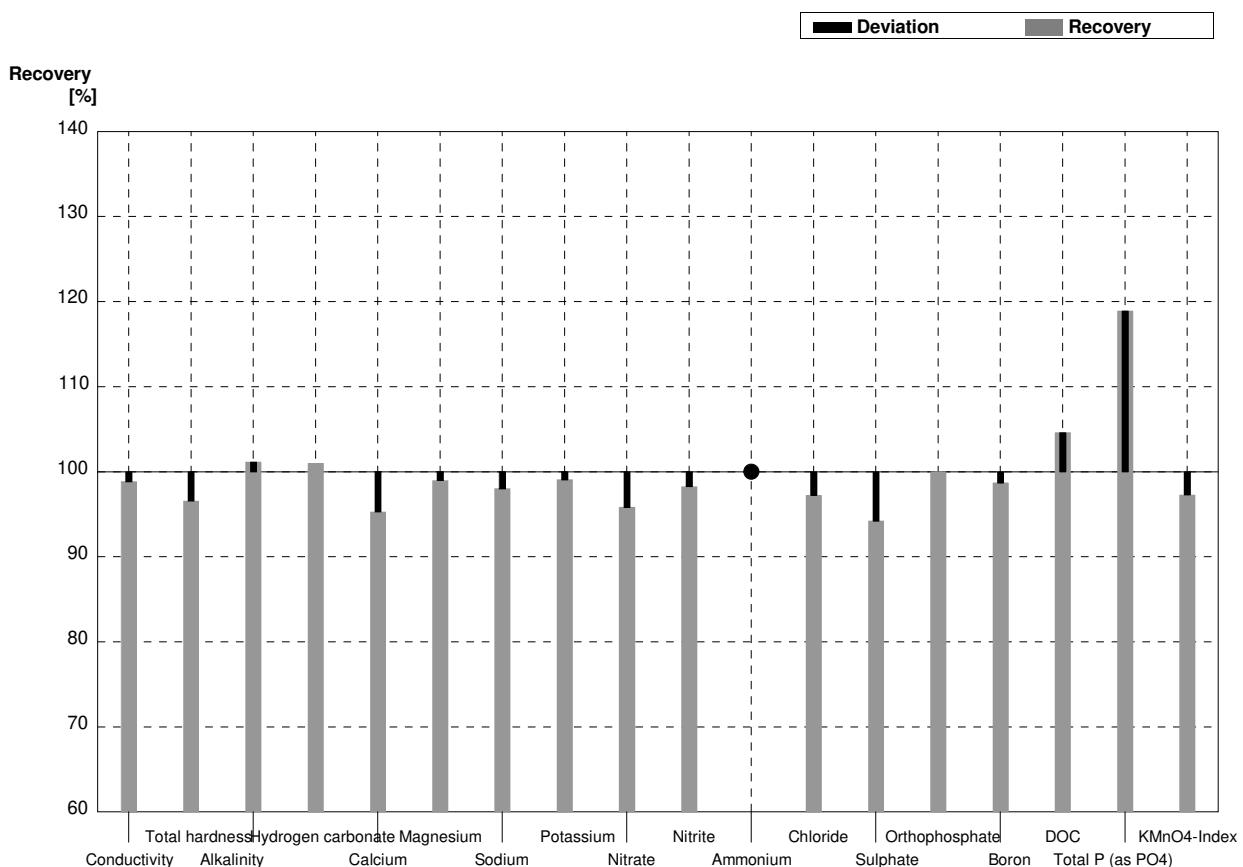
**Sample N154B**  
**Laboratory S**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	619	19	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,13	0,23	$\text{mmol/l}$	101%
Alkalinity	4,58	0,04	4,52	0,22	$\text{mmol/l}$	99%
Hydrogen carbonate	277	2	273	13	$\text{mg/l}$	99%
Calcium	63,6	0,8	63,3	5,7	$\text{mg/l}$	100%
Magnesium	12,8	0,1	13,1	1,2	$\text{mg/l}$	102%
Sodium	48,8	0,5	48,7	3,9	$\text{mg/l}$	100%
Potassium	8,11	0,06	8,00	0,64	$\text{mg/l}$	99%
Nitrate	25,4	0,4	25,8	2,3	$\text{mg/l}$	102%
Nitrite	0,0101	0,0005	0,0124	0,0024	$\text{mg/l}$	123%
Ammonium	0,0313	0,0050	0,0334	0,0050	$\text{mg/l}$	107%
Chloride	24,2	0,5	25,0	1,3	$\text{mg/l}$	103%
Sulphate	41,1	0,5	41,9	2,1	$\text{mg/l}$	102%
Orthophosphate	<0,009		<0,006		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0458	0,0068	$\text{mg/l}$	113%
DOC	7,28	0,05	7,32	0,66	$\text{mg/l}$	101%
Total P (as PO <sub>4</sub> )	<0,009		<0,006		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



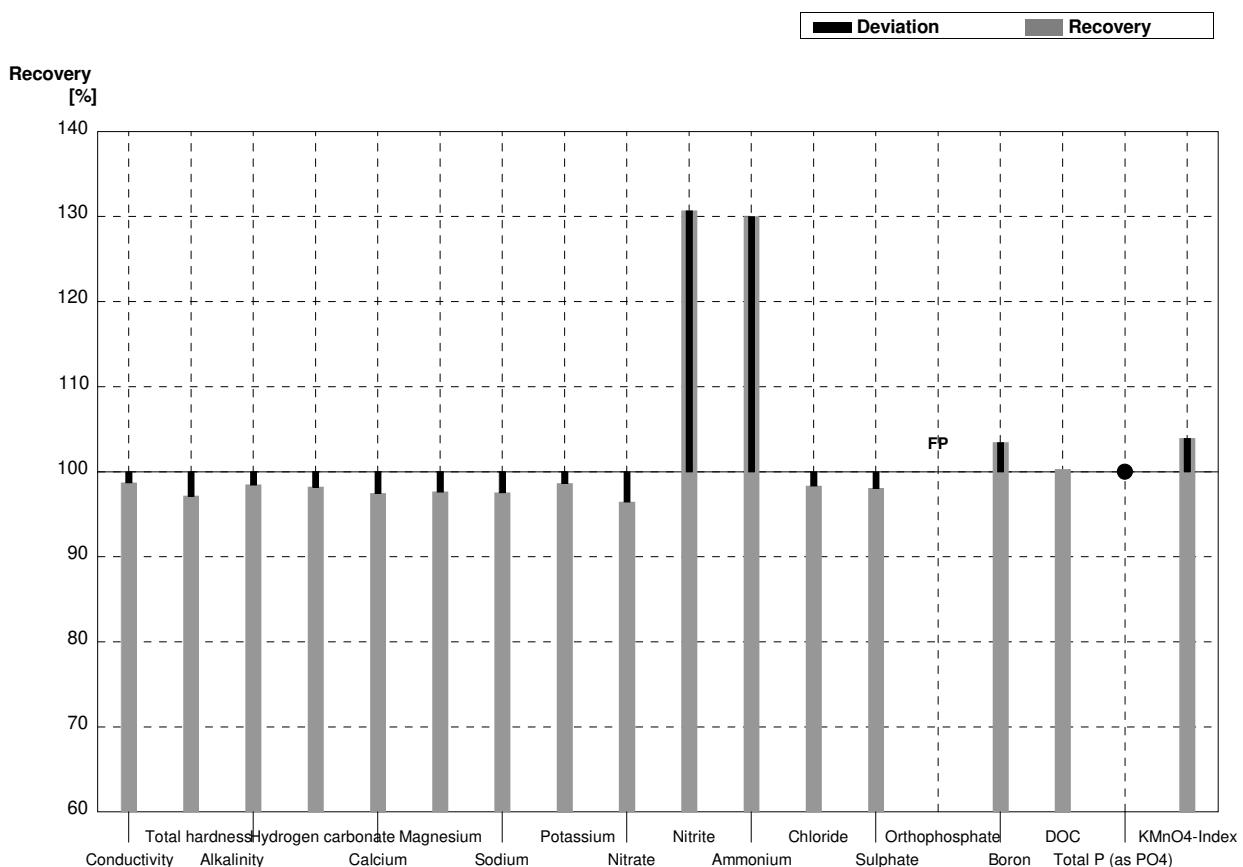
**Sample N154A**  
**Laboratory T**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	171	6,8	$\mu\text{S}/\text{cm}$	99%
Total hardness	0,438	0,004	0,423	0,04	$\text{mmol/l}$	97%
Alkalinity	0,88	0,01	0,89	0,04	$\text{mmol/l}$	101%
Hydrogen carbonate	50,5	0,2	51	2,0	$\text{mg/l}$	101%
Calcium	12,7	0,2	12,1	1,1	$\text{mg/l}$	95%
Magnesium	2,95	0,03	2,92	0,26	$\text{mg/l}$	99%
Sodium	15,1	0,1	14,8	1,3	$\text{mg/l}$	98%
Potassium	3,18	0,02	3,15	0,28	$\text{mg/l}$	99%
Nitrate	16,8	0,3	16,1	1,4	$\text{mg/l}$	96%
Nitrite	0,0403	0,0006	0,0396	0,004	$\text{mg/l}$	98%
Ammonium	<0,01		<0,010		$\text{mg/l}$	•
Chloride	10,9	0,2	10,6	0,95	$\text{mg/l}$	97%
Sulphate	8,81	0,11	8,3	0,75	$\text{mg/l}$	94%
Orthophosphate	0,086	0,001	0,086	0,01	$\text{mg/l}$	100%
Boron	0,0152	0,0010	0,0150	0,002	$\text{mg/l}$	99%
DOC	1,96	0,04	2,05	0,18	$\text{mg/l}$	105%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,151	0,01	$\text{mg/l}$	119%
KMnO <sub>4</sub> -Index	1,48	0,14	1,44	0,13	$\text{mg/l}$	97%



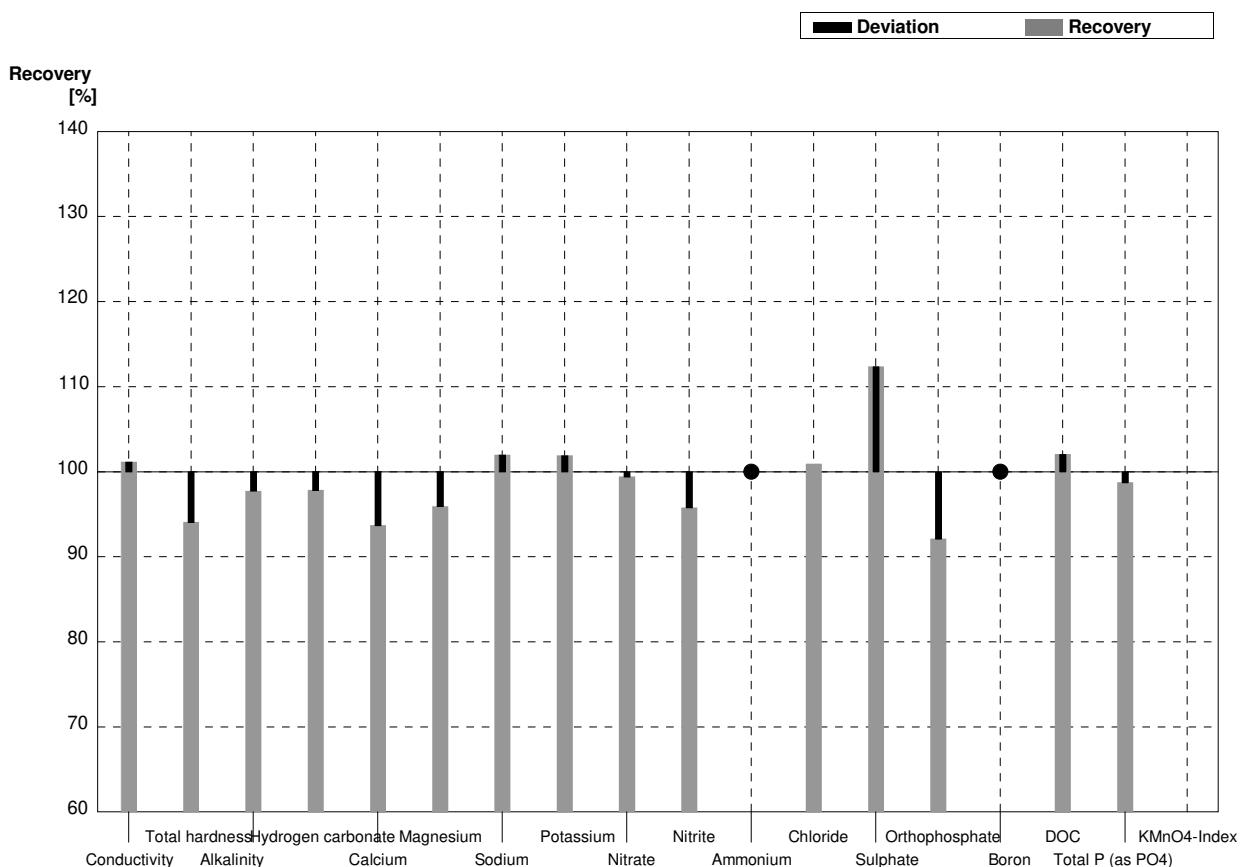
**Sample N154B**  
**Laboratory T**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	614	25	$\mu\text{S}/\text{cm}$	99%
Total hardness	2,11	0,02	2,05	0,18	$\text{mmol/l}$	97%
Alkalinity	4,58	0,04	4,51	0,18	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	272	11	$\text{mg/l}$	98%
Calcium	63,6	0,8	62	5,5	$\text{mg/l}$	97%
Magnesium	12,8	0,1	12,5	1,1	$\text{mg/l}$	98%
Sodium	48,8	0,5	47,6	4,3	$\text{mg/l}$	98%
Potassium	8,11	0,06	8,0	0,72	$\text{mg/l}$	99%
Nitrate	25,4	0,4	24,5	2,2	$\text{mg/l}$	96%
Nitrite	0,0101	0,0005	0,0132	0,001	$\text{mg/l}$	131%
Ammonium	0,0313	0,0050	0,0407	0,004	$\text{mg/l}$	130%
Chloride	24,2	0,5	23,8	2,1	$\text{mg/l}$	98%
Sulphate	41,1	0,5	40,3	3,6	$\text{mg/l}$	98%
Orthophosphate	<0,009		0,0101	0,001	$\text{mg/l}$	FP
Boron	0,0406	0,0003	0,0420	0,01	$\text{mg/l}$	103%
DOC	7,28	0,05	7,3	0,66	$\text{mg/l}$	100%
Total P (as PO <sub>4</sub> )	<0,009		<0,050		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	4,75	0,43	$\text{mg/l}$	104%



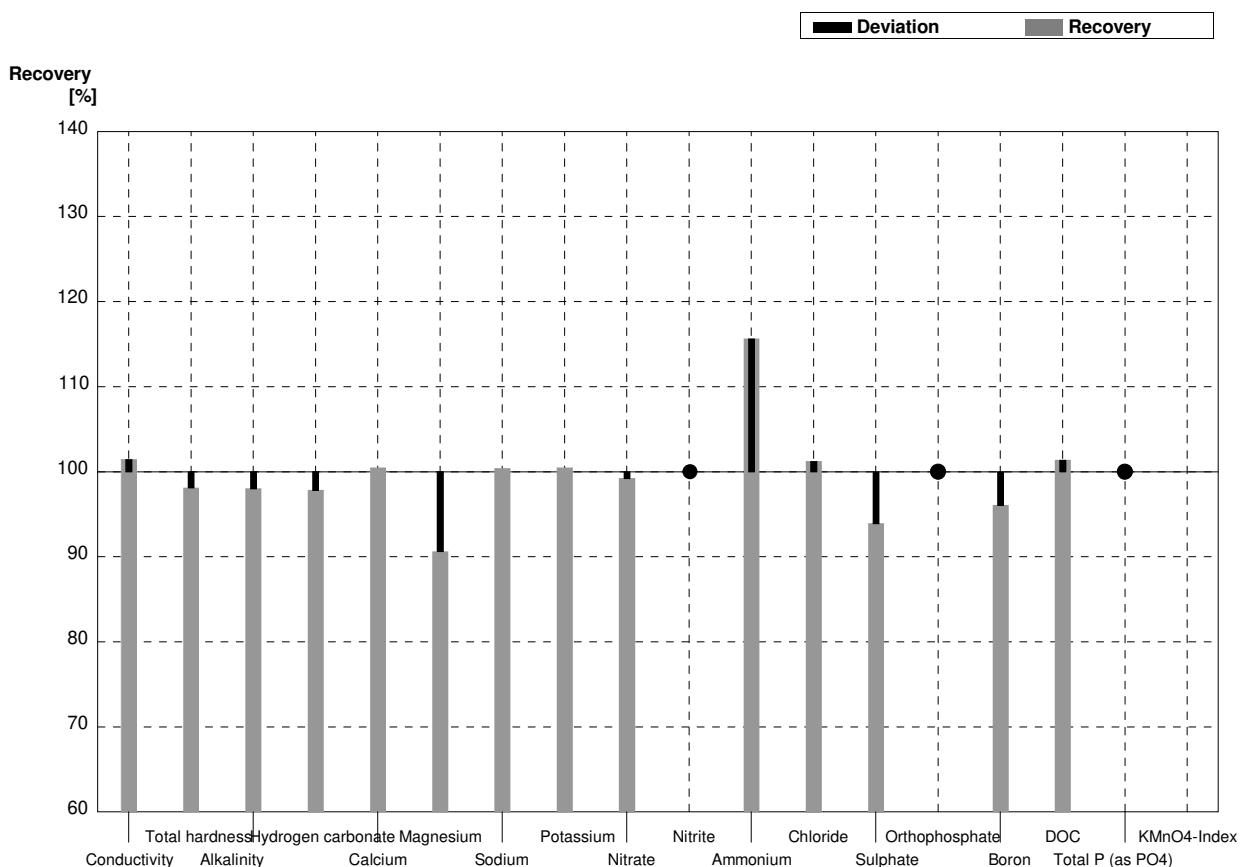
**Sample N154A**  
**Laboratory U**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	175	0,2	$\mu\text{S}/\text{cm}$	101%
Total hardness	0,438	0,004	0,412	0,043	$\text{mmol/l}$	94%
Alkalinity	0,88	0,01	0,86	0,07	$\text{mmol/l}$	98%
Hydrogen carbonate	50,5	0,2	49,4	0,99	$\text{mg/l}$	98%
Calcium	12,7	0,2	11,9	1,72	$\text{mg/l}$	94%
Magnesium	2,95	0,03	2,83	0,082	$\text{mg/l}$	96%
Sodium	15,1	0,1	15,4	0,44	$\text{mg/l}$	102%
Potassium	3,18	0,02	3,24	0,024	$\text{mg/l}$	102%
Nitrate	16,8	0,3	16,7	0,33	$\text{mg/l}$	99%
Nitrite	0,0403	0,0006	0,0386	0,0004	$\text{mg/l}$	96%
Ammonium	<0,01		<0,0100		$\text{mg/l}$	•
Chloride	10,9	0,2	11,0	0,44	$\text{mg/l}$	101%
Sulphate	8,81	0,11	9,90	0,06	$\text{mg/l}$	112%
Orthophosphate	0,086	0,001	0,0792	0,0018	$\text{mg/l}$	92%
Boron	0,0152	0,0010	<0,020		$\text{mg/l}$	•
DOC	1,96	0,04	2,00	0,08	$\text{mg/l}$	102%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,1254	0,0026	$\text{mg/l}$	99%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



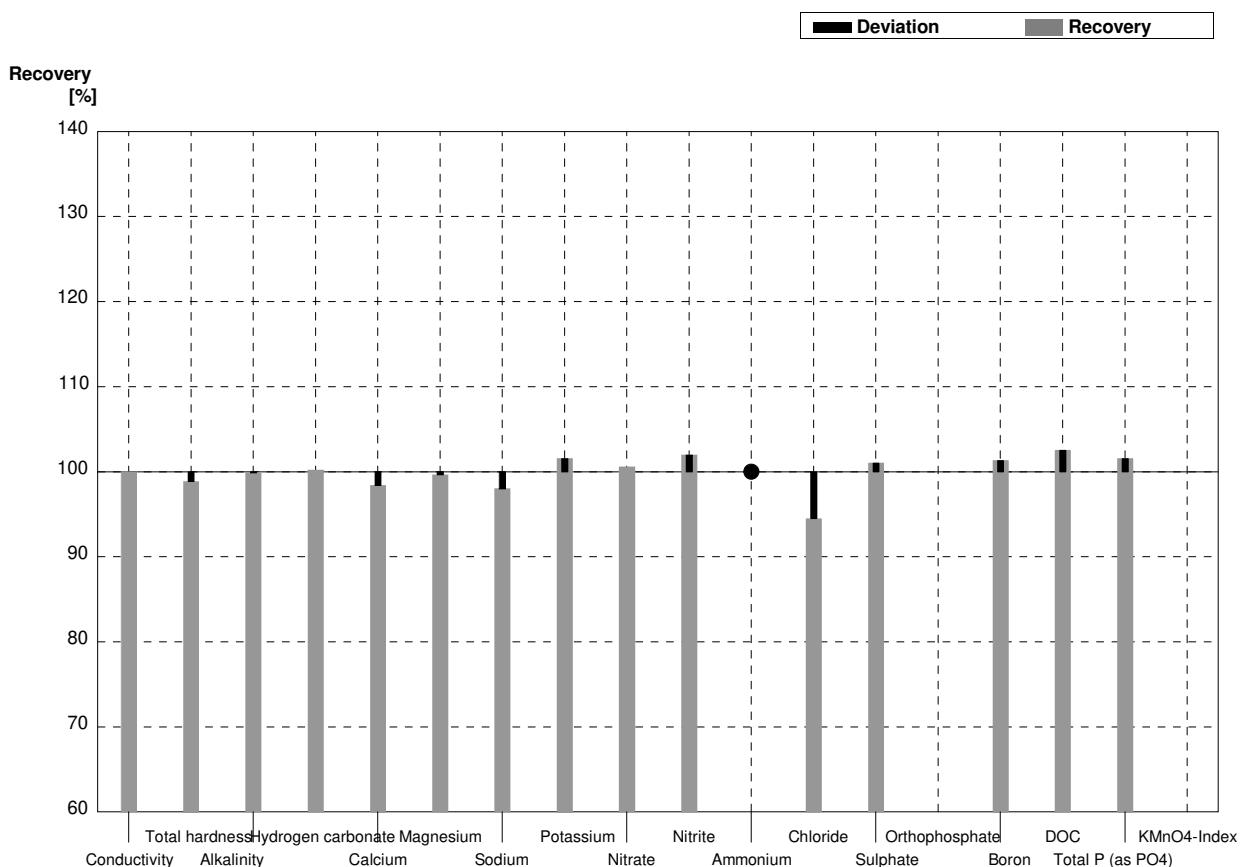
**Sample N154B**  
**Laboratory U**

Parameter	Target value	$\pm$ U ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	631	0,1	$\mu\text{S}/\text{cm}$	101%
Total hardness	2,11	0,02	2,07	0,063	$\text{mmol/l}$	98%
Alkalinity	4,58	0,04	4,49	0,14	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	271	5,4	$\text{mg/l}$	98%
Calcium	63,6	0,8	63,9	1,47	$\text{mg/l}$	100%
Magnesium	12,8	0,1	11,6	1,25	$\text{mg/l}$	91%
Sodium	48,8	0,5	49,0	0,49	$\text{mg/l}$	100%
Potassium	8,11	0,06	8,15	0,192	$\text{mg/l}$	100%
Nitrate	25,4	0,4	25,2	0,29	$\text{mg/l}$	99%
Nitrite	0,0101	0,0005	<0,0100		$\text{mg/l}$	•
Ammonium	0,0313	0,0050	0,0362	0,0023	$\text{mg/l}$	116%
Chloride	24,2	0,5	24,5	0,35	$\text{mg/l}$	101%
Sulphate	41,1	0,5	38,6	1,26	$\text{mg/l}$	94%
Orthophosphate	<0,009		[0,002]		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,039	0,001	$\text{mg/l}$	96%
DOC	7,28	0,05	7,38	0,09	$\text{mg/l}$	101%
Total P (as PO <sub>4</sub> )	<0,009		<0,0150		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



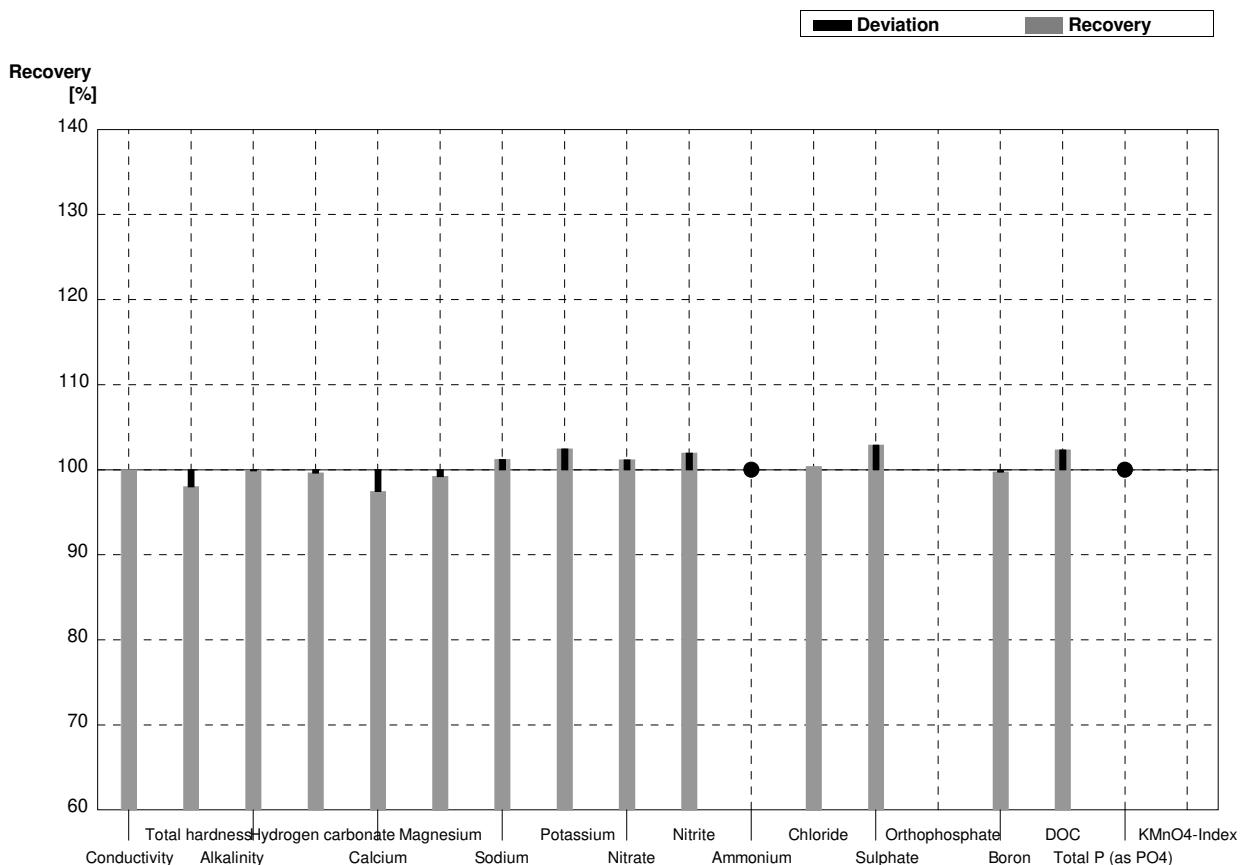
**Sample N154A**  
**Laboratory V**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	173	4,2	$\mu\text{S}/\text{cm}$	100%
Total hardness	0,438	0,004	0,433		$\text{mmol/l}$	99%
Alkalinity	0,88	0,01	0,879	0,059	$\text{mmol/l}$	100%
Hydrogen carbonate	50,5	0,2	50,6		$\text{mg/l}$	100%
Calcium	12,7	0,2	12,5	0,86	$\text{mg/l}$	98%
Magnesium	2,95	0,03	2,94	0,39	$\text{mg/l}$	100%
Sodium	15,1	0,1	14,8	1,41	$\text{mg/l}$	98%
Potassium	3,18	0,02	3,23	0,33	$\text{mg/l}$	102%
Nitrate	16,8	0,3	16,9	1,76	$\text{mg/l}$	101%
Nitrite	0,0403	0,0006	0,0411	0,0101	$\text{mg/l}$	102%
Ammonium	<0,01		<0,05		$\text{mg/l}$	•
Chloride	10,9	0,2	10,3	1,44	$\text{mg/l}$	94%
Sulphate	8,81	0,11	8,9	0,85	$\text{mg/l}$	101%
Orthophosphate	0,086	0,001			$\text{mg/l}$	
Boron	0,0152	0,0010	0,0154	0,0017	$\text{mg/l}$	101%
DOC	1,96	0,04	2,01	0,37	$\text{mg/l}$	103%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,129		$\text{mg/l}$	102%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



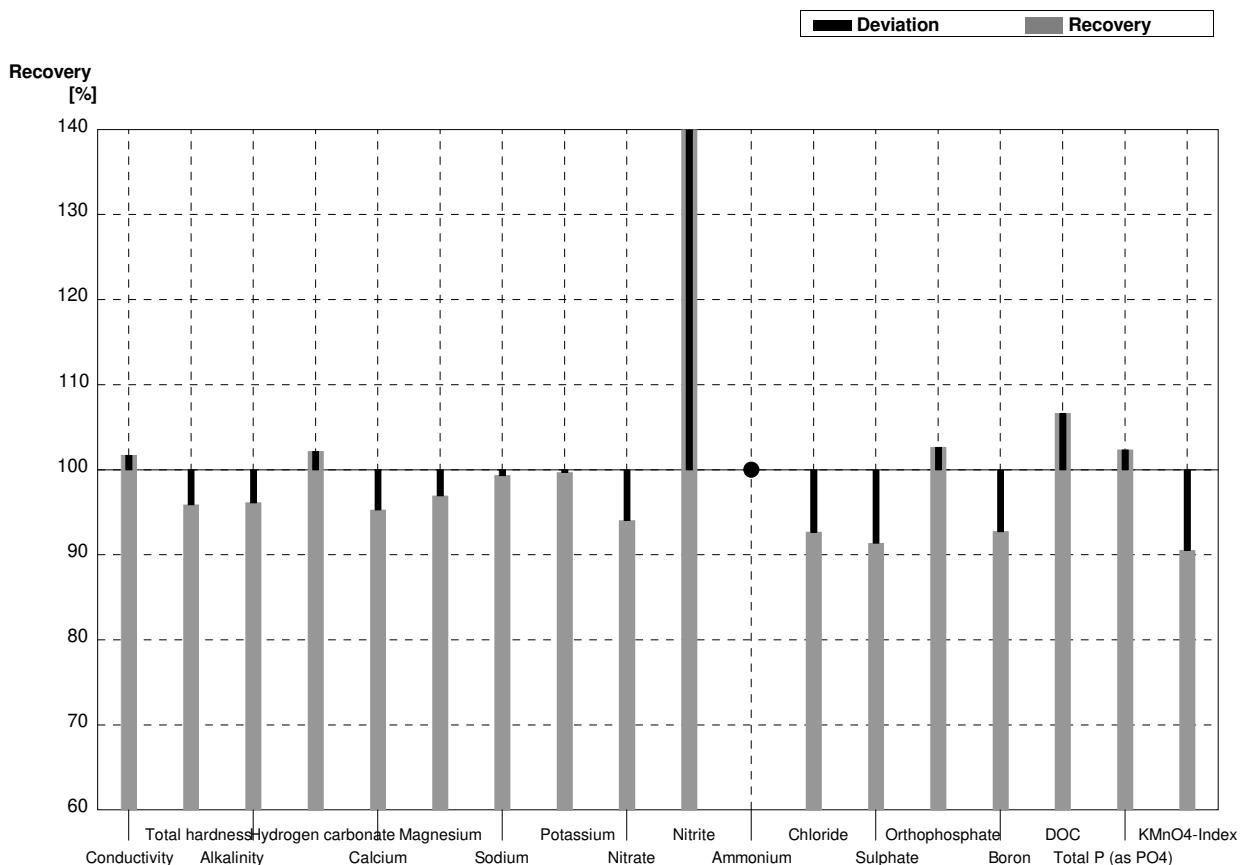
**Sample N154B**  
**Laboratory V**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	622	14,9	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,068		$\text{mmol/l}$	98%
Alkalinity	4,58	0,04	4,576	0,307	$\text{mmol/l}$	100%
Hydrogen carbonate	277	2	276		$\text{mg/l}$	100%
Calcium	63,6	0,8	62,0	4,28	$\text{mg/l}$	97%
Magnesium	12,8	0,1	12,7	1,66	$\text{mg/l}$	99%
Sodium	48,8	0,5	49,4	4,69	$\text{mg/l}$	101%
Potassium	8,11	0,06	8,31	0,85	$\text{mg/l}$	102%
Nitrate	25,4	0,4	25,7	2,67	$\text{mg/l}$	101%
Nitrite	0,0101	0,0005	0,0103	0,0025	$\text{mg/l}$	102%
Ammonium	0,0313	0,0050	<0,05		$\text{mg/l}$	•
Chloride	24,2	0,5	24,3	3,40	$\text{mg/l}$	100%
Sulphate	41,1	0,5	42,3	4,02	$\text{mg/l}$	103%
Orthophosphate	<0,009				$\text{mg/l}$	
Boron	0,0406	0,0003	0,0405	0,0045	$\text{mg/l}$	100%
DOC	7,28	0,05	7,45	1,38	$\text{mg/l}$	102%
Total P (as PO <sub>4</sub> )	<0,009		<0,030		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



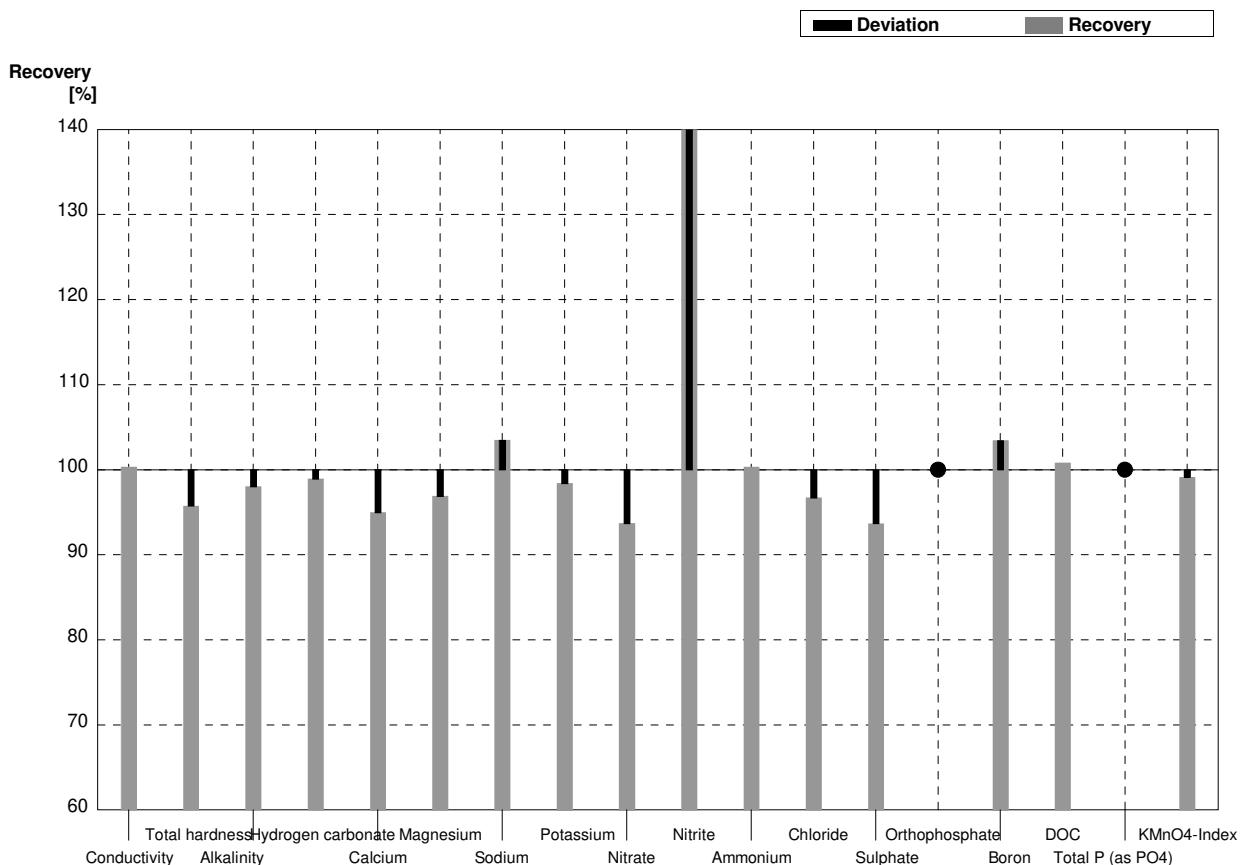
**Sample N154A**  
**Laboratory W**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	176	5,3	$\mu\text{S}/\text{cm}$	102%
Total hardness	0,438	0,004	0,420	0,034	$\text{mmol/l}$	96%
Alkalinity	0,88	0,01	0,846	0,041	$\text{mmol/l}$	96%
Hydrogen carbonate	50,5	0,2	51,6	2,5	$\text{mg/l}$	102%
Calcium	12,7	0,2	12,1	0,6	$\text{mg/l}$	95%
Magnesium	2,95	0,03	2,86	0,23	$\text{mg/l}$	97%
Sodium	15,1	0,1	15,0	1,1	$\text{mg/l}$	99%
Potassium	3,18	0,02	3,17	0,23	$\text{mg/l}$	100%
Nitrate	16,8	0,3	15,8	0,5	$\text{mg/l}$	94%
Nitrite	0,0403	0,0006	0,0743	0,01	$\text{mg/l}$	184%
Ammonium	<0,01		<0,01		$\text{mg/l}$	•
Chloride	10,9	0,2	10,1	0,7	$\text{mg/l}$	93%
Sulphate	8,81	0,11	8,05	0,27	$\text{mg/l}$	91%
Orthophosphate	0,086	0,001	0,0883	0,0061	$\text{mg/l}$	103%
Boron	0,0152	0,0010	0,0141	0,002	$\text{mg/l}$	93%
DOC	1,96	0,04	2,09	0,33	$\text{mg/l}$	107%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,130	0,009	$\text{mg/l}$	102%
KMnO <sub>4</sub> -Index	1,48	0,14	1,34	0,20	$\text{mg/l}$	91%



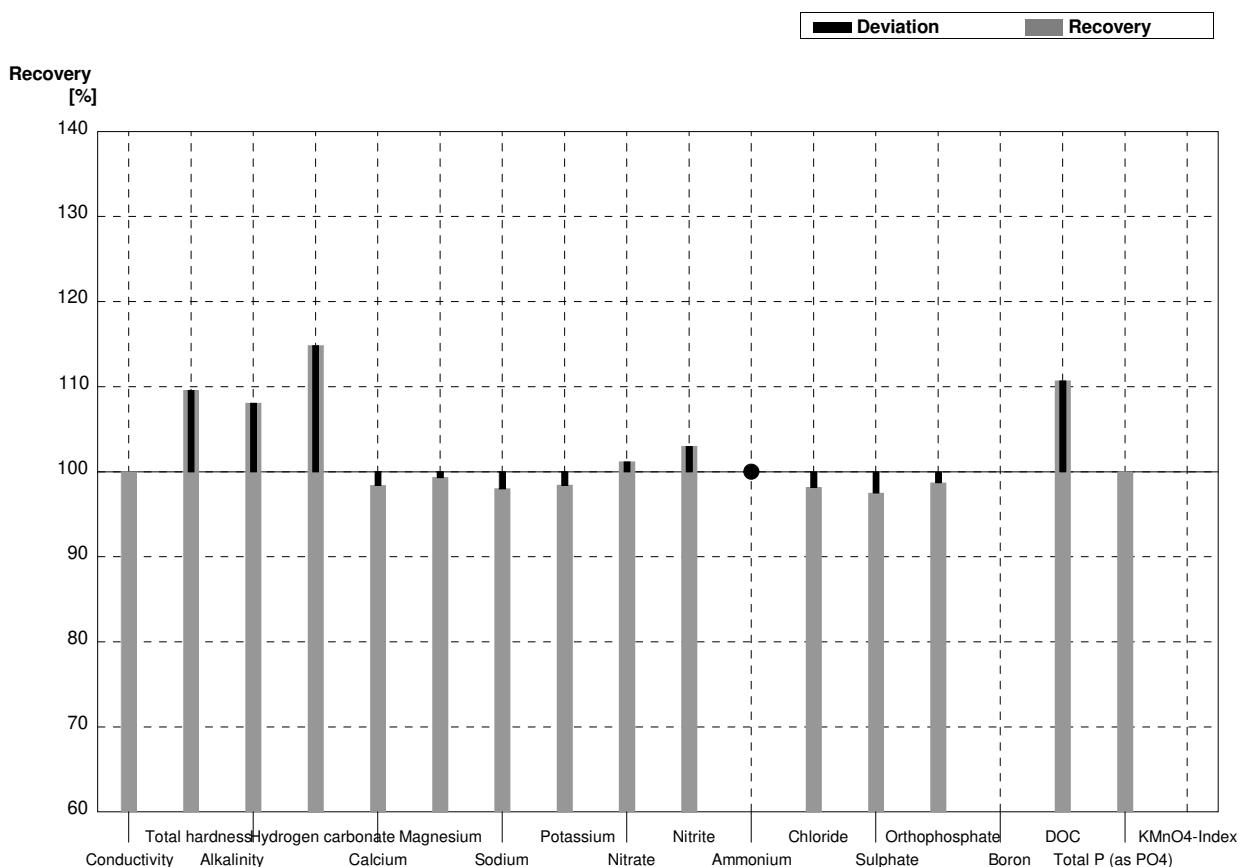
**Sample N154B**  
**Laboratory W**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	624	19	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,02	0,17	$\text{mmol/l}$	96%
Alkalinity	4,58	0,04	4,49	0,22	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	274	13,2	$\text{mg/l}$	99%
Calcium	63,6	0,8	60,4	2,8	$\text{mg/l}$	95%
Magnesium	12,8	0,1	12,4	1,0	$\text{mg/l}$	97%
Sodium	48,8	0,5	50,5	3,6	$\text{mg/l}$	103%
Potassium	8,11	0,06	7,98	0,57	$\text{mg/l}$	98%
Nitrate	25,4	0,4	23,8	0,8	$\text{mg/l}$	94%
Nitrite	0,0101	0,0005	0,0623	0,0063	$\text{mg/l}$	617%
Ammonium	0,0313	0,0050	0,0314	0,0022	$\text{mg/l}$	100%
Chloride	24,2	0,5	23,4	1,6	$\text{mg/l}$	97%
Sulphate	41,1	0,5	38,5	1,3	$\text{mg/l}$	94%
Orthophosphate	<0,009		<0,015		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0420	0,0052	$\text{mg/l}$	103%
DOC	7,28	0,05	7,34	1,17	$\text{mg/l}$	101%
Total P (as PO <sub>4</sub> )	<0,009		<0,015		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	4,53	0,68	$\text{mg/l}$	99%



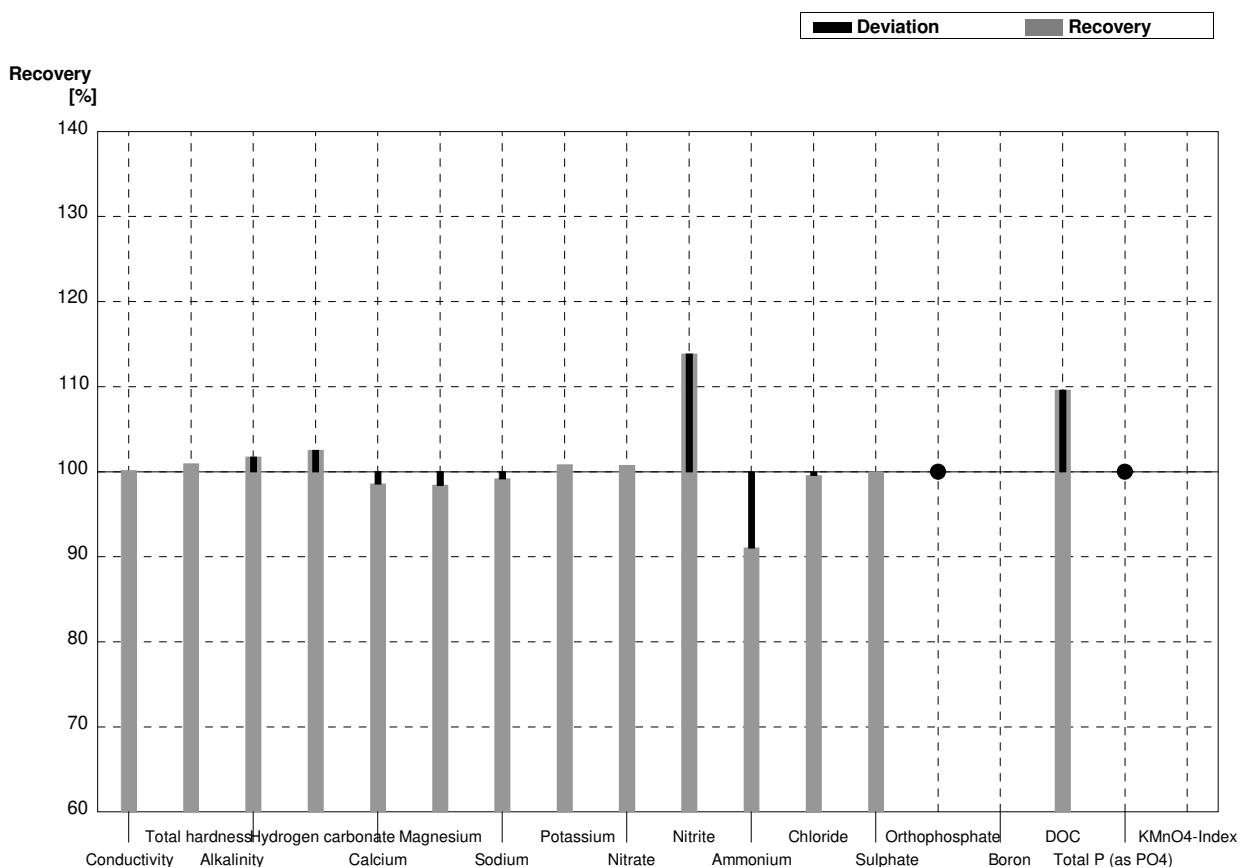
**Sample N154A**  
**Laboratory X**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	173	2	$\mu\text{S}/\text{cm}$	100%
Total hardness	0,438	0,004	0,480	0,1	$\text{mmol/l}$	110%
Alkalinity	0,88	0,01	0,951	0,1	$\text{mmol/l}$	108%
Hydrogen carbonate	50,5	0,2	58,0	6,1	$\text{mg/l}$	115%
Calcium	12,7	0,2	12,5	1,0	$\text{mg/l}$	98%
Magnesium	2,95	0,03	2,93	0,2	$\text{mg/l}$	99%
Sodium	15,1	0,1	14,8	0,1	$\text{mg/l}$	98%
Potassium	3,18	0,02	3,13	0,1	$\text{mg/l}$	98%
Nitrate	16,8	0,3	17,0	0,1	$\text{mg/l}$	101%
Nitrite	0,0403	0,0006	0,0415	0,0016	$\text{mg/l}$	103%
Ammonium	<0,01		<0,0064	0,0030	$\text{mg/l}$	•
Chloride	10,9	0,2	10,7	0,2	$\text{mg/l}$	98%
Sulphate	8,81	0,11	8,59	2	$\text{mg/l}$	98%
Orthophosphate	0,086	0,001	0,0849	0,0020	$\text{mg/l}$	99%
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04	2,17	0,2	$\text{mg/l}$	111%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,127	0,0050	$\text{mg/l}$	100%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



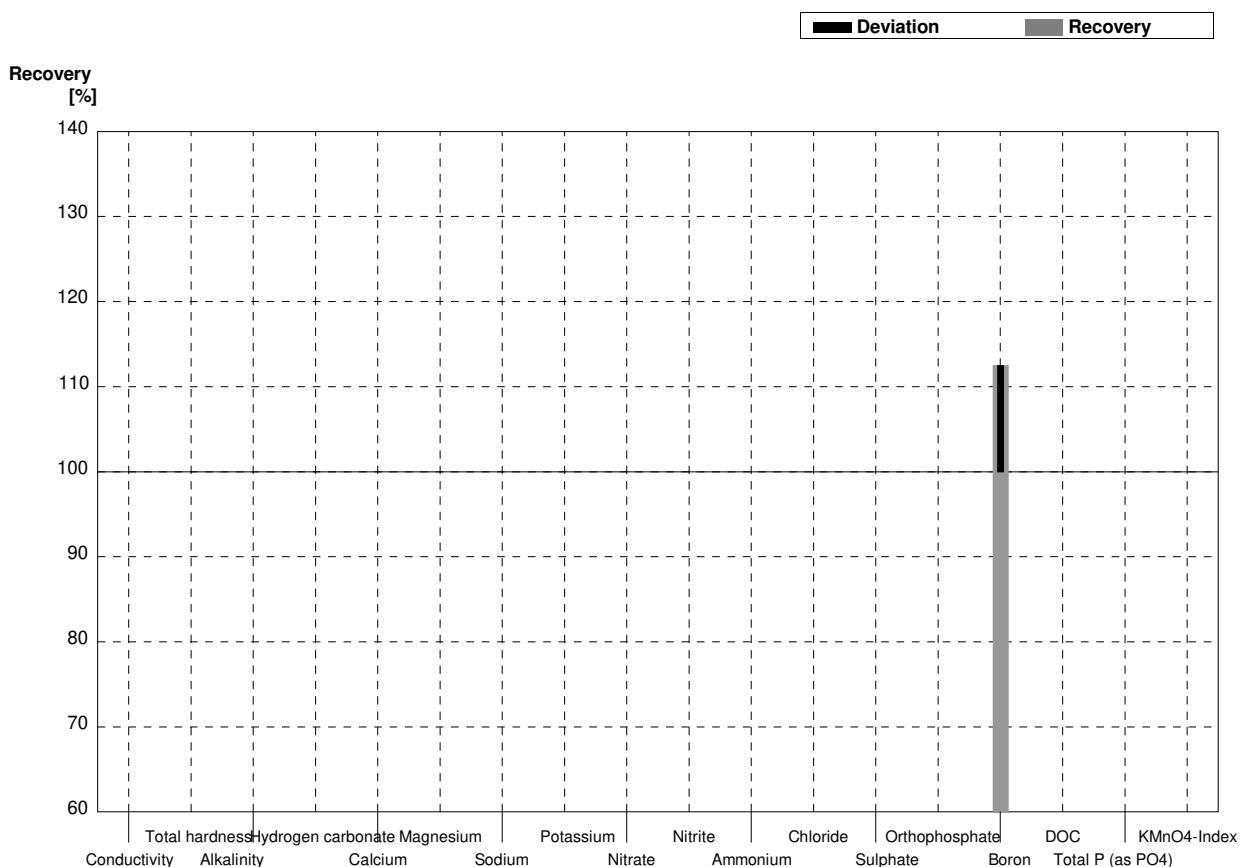
**Sample N154B**  
**Laboratory X**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	623	2	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,13	0,1	$\text{mmol/l}$	101%
Alkalinity	4,58	0,04	4,66	0,1	$\text{mmol/l}$	102%
Hydrogen carbonate	277	2	284	6,1	$\text{mg/l}$	103%
Calcium	63,6	0,8	62,7	1,0	$\text{mg/l}$	99%
Magnesium	12,8	0,1	12,6	0,2	$\text{mg/l}$	98%
Sodium	48,8	0,5	48,4	0,2	$\text{mg/l}$	99%
Potassium	8,11	0,06	8,18	0,1	$\text{mg/l}$	101%
Nitrate	25,4	0,4	25,6	0,1	$\text{mg/l}$	101%
Nitrite	0,0101	0,0005	0,0115	0,0016	$\text{mg/l}$	114%
Ammonium	0,0313	0,0050	0,0285	0,0030	$\text{mg/l}$	91%
Chloride	24,2	0,5	24,1	0,2	$\text{mg/l}$	100%
Sulphate	41,1	0,5	41,1	2	$\text{mg/l}$	100%
Orthophosphate	<0,009		0,0067	0,0020	$\text{mg/l}$	•
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05	7,98	0,2	$\text{mg/l}$	110%
Total P (as PO <sub>4</sub> )	<0,009		<0,0092	0,0050	$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



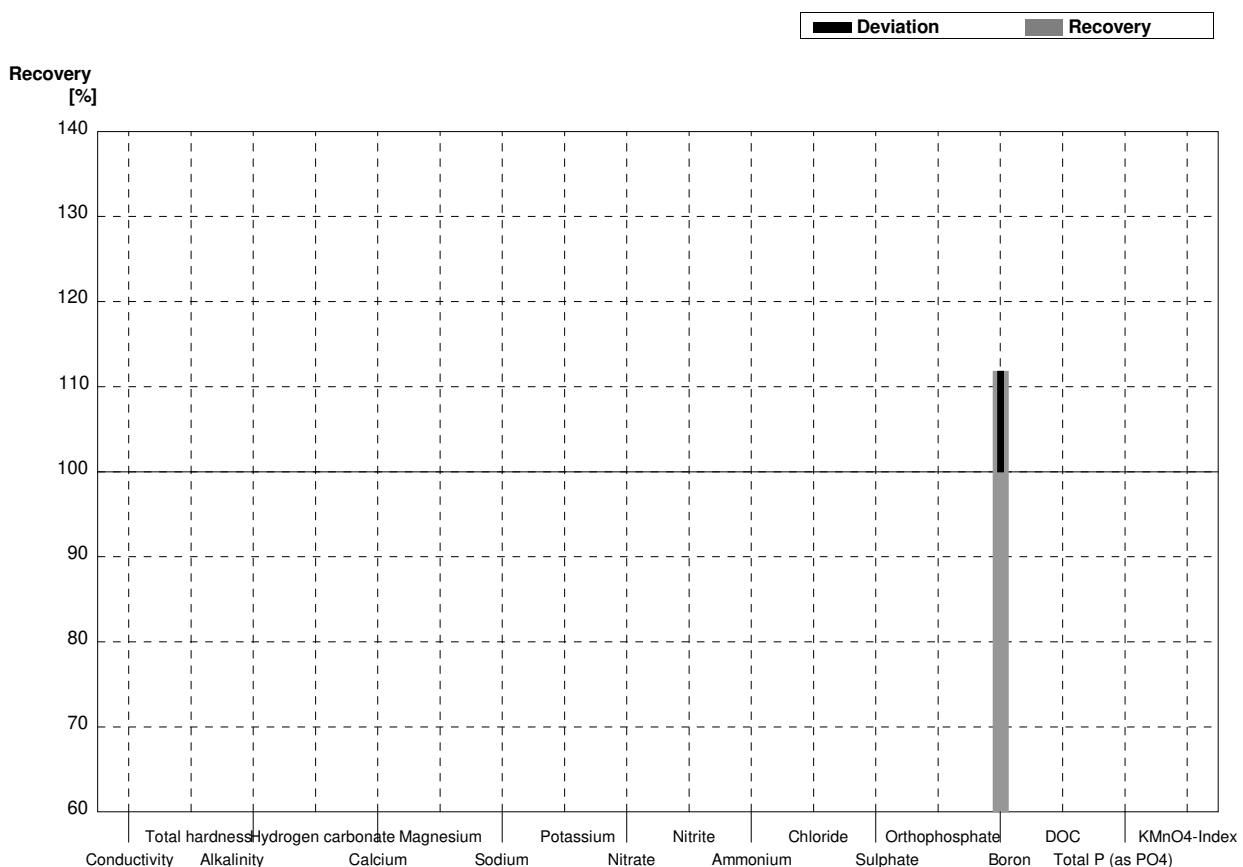
**Sample N154A**  
**Laboratory Y**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1			$\mu\text{S}/\text{cm}$	
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01			$\text{mmol/l}$	
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2			$\text{mg/l}$	
Magnesium	2,95	0,03			$\text{mg/l}$	
Sodium	15,1	0,1			$\text{mg/l}$	
Potassium	3,18	0,02			$\text{mg/l}$	
Nitrate	16,8	0,3			$\text{mg/l}$	
Nitrite	0,0403	0,0006			$\text{mg/l}$	
Ammonium	<0,01				$\text{mg/l}$	
Chloride	10,9	0,2			$\text{mg/l}$	
Sulphate	8,81	0,11			$\text{mg/l}$	
Orthophosphate	0,086	0,001			$\text{mg/l}$	
Boron	0,0152	0,0010	0,0171	0,0023	$\text{mg/l}$	113%
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



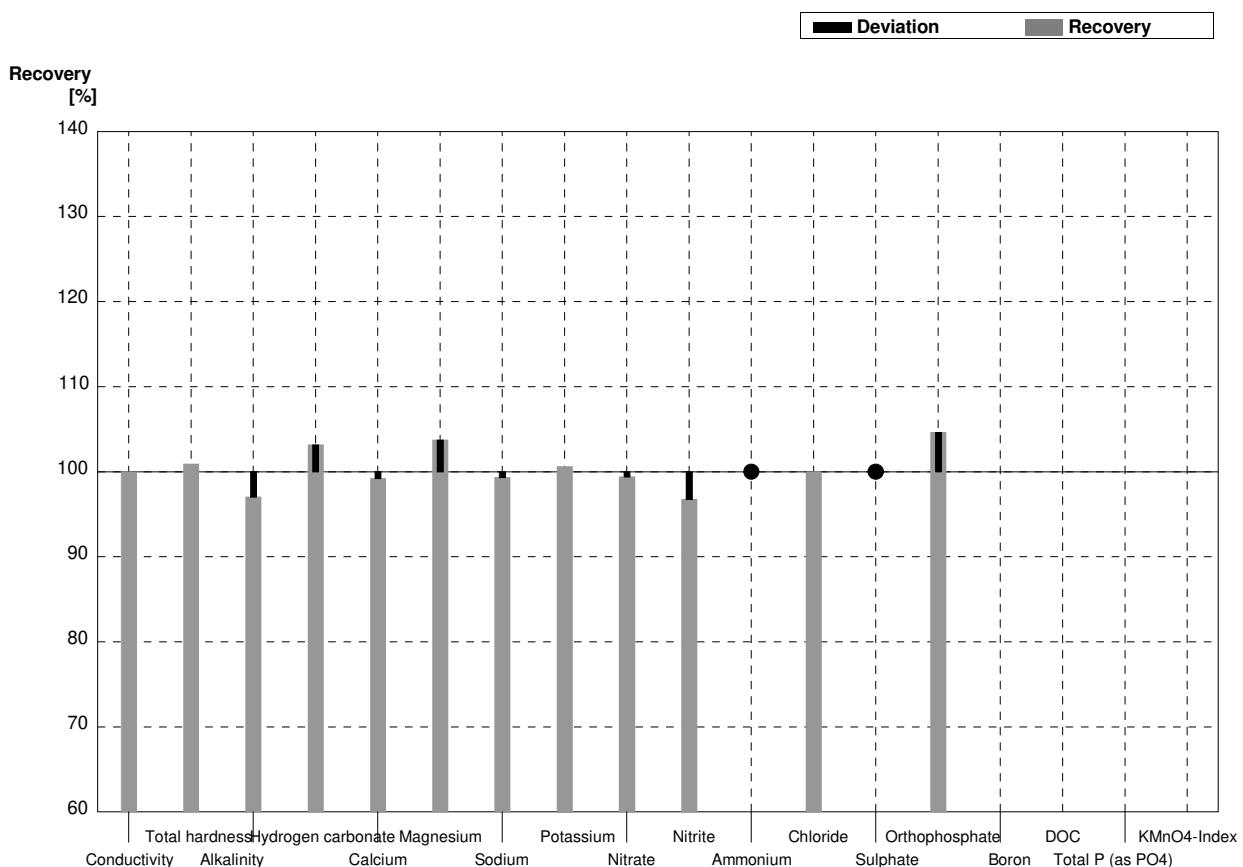
**Sample N154B**  
**Laboratory Y**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	622	2			µS/cm	
Total hardness	2,11	0,02			mmol/l	
Alkalinity	4,58	0,04			mmol/l	
Hydrogen carbonate	277	2			mg/l	
Calcium	63,6	0,8			mg/l	
Magnesium	12,8	0,1			mg/l	
Sodium	48,8	0,5			mg/l	
Potassium	8,11	0,06			mg/l	
Nitrate	25,4	0,4			mg/l	
Nitrite	0,0101	0,0005			mg/l	
Ammonium	0,0313	0,0050			mg/l	
Chloride	24,2	0,5			mg/l	
Sulphate	41,1	0,5			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,0406	0,0003	0,0454	0,0062	mg/l	112%
DOC	7,28	0,05			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	4,57	0,13			mg/l	



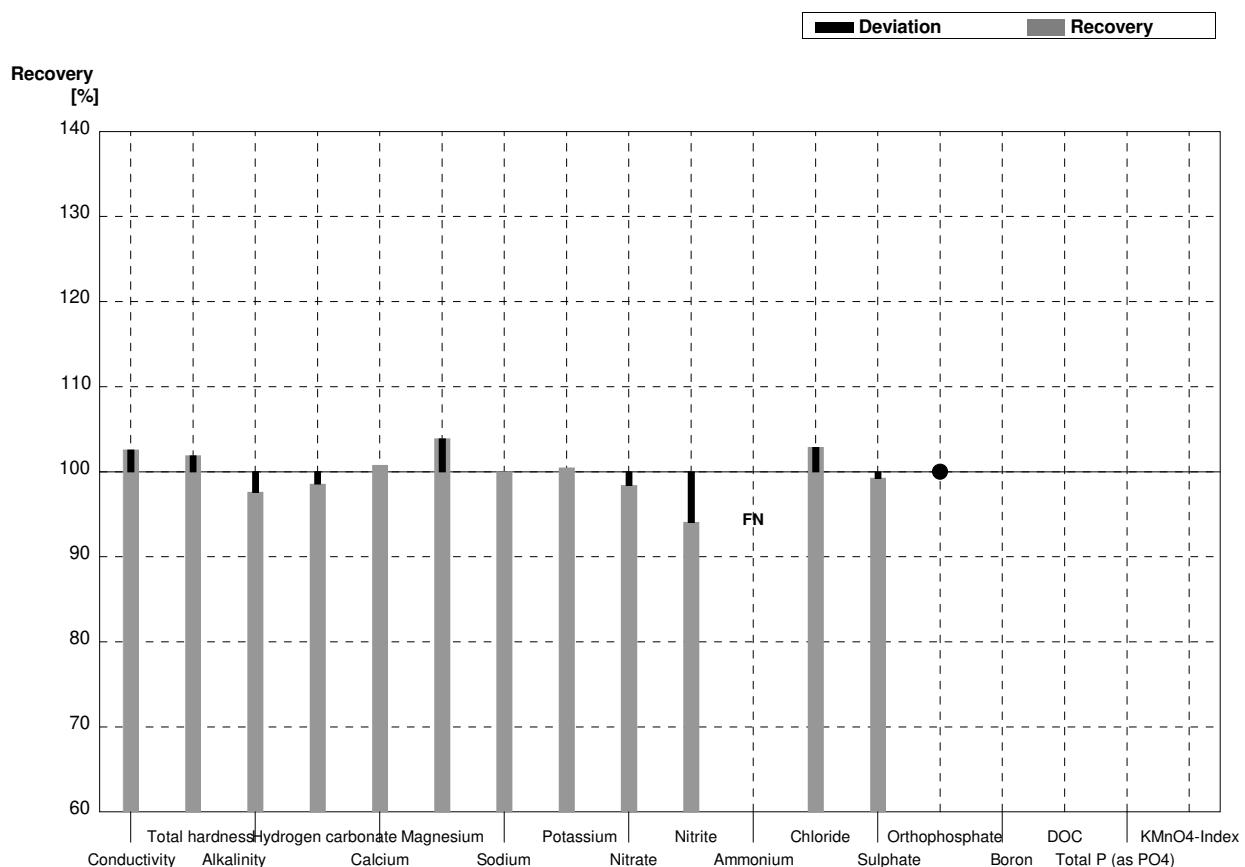
**Sample N154A**  
**Laboratory Z**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	173	3	$\mu\text{S}/\text{cm}$	100%
Total hardness	0,438	0,004	0,442	0,044	$\text{mmol/l}$	101%
Alkalinity	0,88	0,01	0,854	0,035	$\text{mmol/l}$	97%
Hydrogen carbonate	50,5	0,2	52,1	2,1	$\text{mg/l}$	103%
Calcium	12,7	0,2	12,6	1,2	$\text{mg/l}$	99%
Magnesium	2,95	0,03	3,06	0,33	$\text{mg/l}$	104%
Sodium	15,1	0,1	15,0	1,4	$\text{mg/l}$	99%
Potassium	3,18	0,02	3,20	0,3	$\text{mg/l}$	101%
Nitrate	16,8	0,3	16,7	0,8	$\text{mg/l}$	99%
Nitrite	0,0403	0,0006	0,0390	0,002	$\text{mg/l}$	97%
Ammonium	<0,01		<0,025		$\text{mg/l}$	•
Chloride	10,9	0,2	10,9	0,5	$\text{mg/l}$	100%
Sulphate	8,81	0,11	<10		$\text{mg/l}$	•
Orthophosphate	0,086	0,001	0,090	0,004	$\text{mg/l}$	105%
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



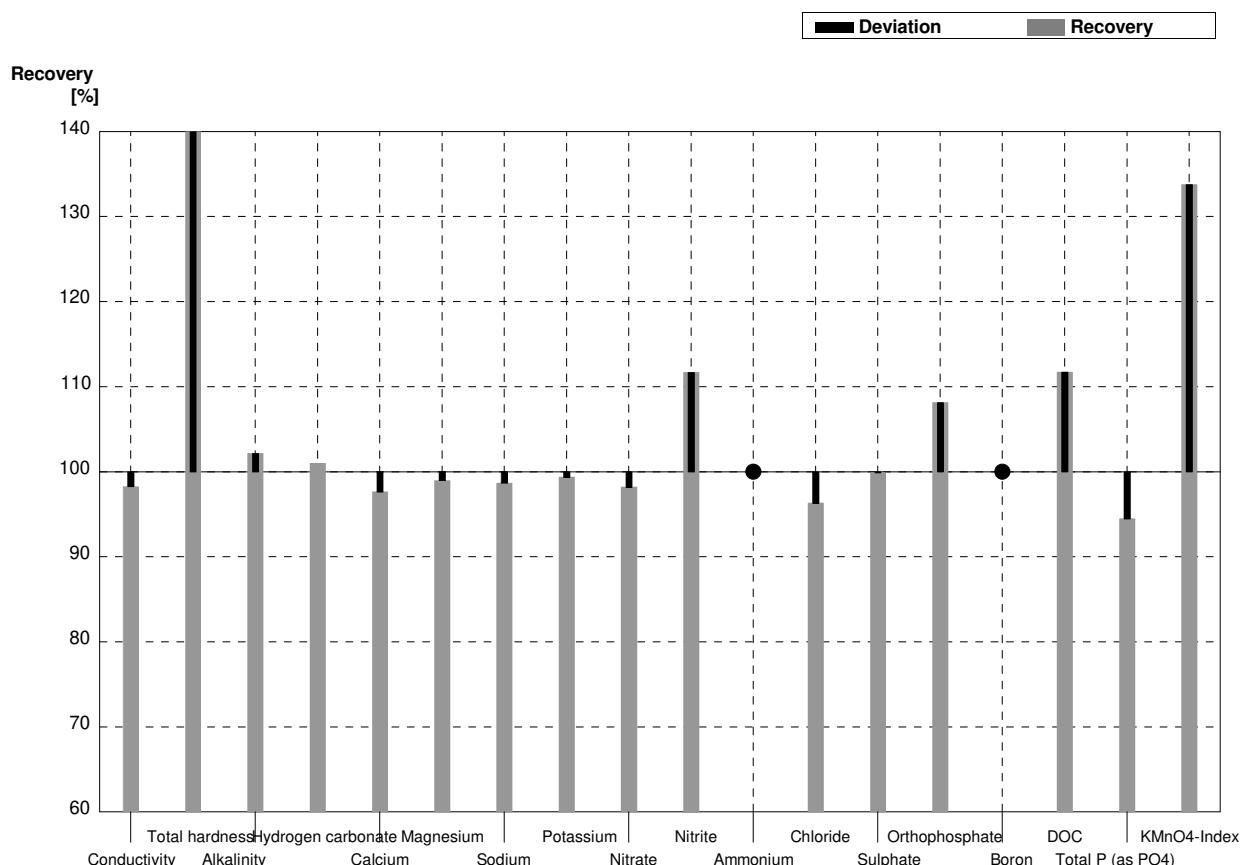
**Sample N154B**  
**Laboratory Z**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	638	5,7	$\mu\text{S}/\text{cm}$	103%
Total hardness	2,11	0,02	2,15	0,22	$\text{mmol/l}$	102%
Alkalinity	4,58	0,04	4,47	0,18	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	273	11	$\text{mg/l}$	99%
Calcium	63,6	0,8	64,1	6,3	$\text{mg/l}$	101%
Magnesium	12,8	0,1	13,3	1,5	$\text{mg/l}$	104%
Sodium	48,8	0,5	48,8	4,4	$\text{mg/l}$	100%
Potassium	8,11	0,06	8,15	0,76	$\text{mg/l}$	100%
Nitrate	25,4	0,4	25,0	1,2	$\text{mg/l}$	98%
Nitrite	0,0101	0,0005	0,0095	0,0005	$\text{mg/l}$	94%
Ammonium	0,0313	0,0050	<0,025		$\text{mg/l}$	FN
Chloride	24,2	0,5	24,9	1,2	$\text{mg/l}$	103%
Sulphate	41,1	0,5	40,8	1,8	$\text{mg/l}$	99%
Orthophosphate	<0,009		<0,03		$\text{mg/l}$	•
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



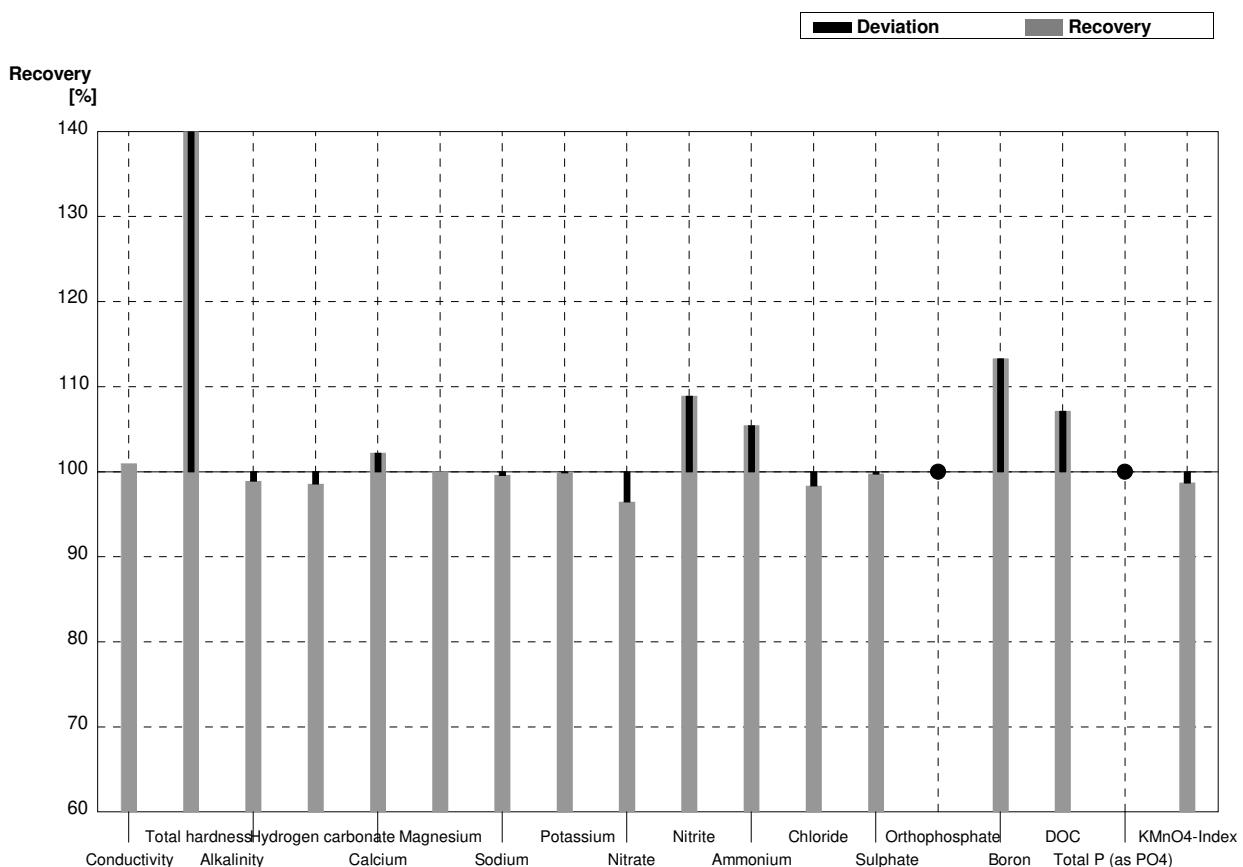
**Sample N154A**  
**Laboratory AA**

Parameter	Target value	$\pm U$ (k=2)	Result	$\pm$	Unit	Recovery
Conductivity	173	1	170	8,5	$\mu\text{S}/\text{cm}$	98%
Total hardness	0,438	0,004	2,42	0,24	mmol/l	553%
Alkalinity	0,88	0,01	0,899	0,225	mmol/l	102%
Hydrogen carbonate	50,5	0,2	51	12,8	mg/l	101%
Calcium	12,7	0,2	12,4	1,2	mg/l	98%
Magnesium	2,95	0,03	2,92	0,29	mg/l	99%
Sodium	15,1	0,1	14,9	1,5	mg/l	99%
Potassium	3,18	0,02	3,16	0,32	mg/l	99%
Nitrate	16,8	0,3	16,5	1,7	mg/l	98%
Nitrite	0,0403	0,0006	0,0450	0,0045	mg/l	112%
Ammonium	<0,01		<0,010		mg/l	•
Chloride	10,9	0,2	10,5	1,1	mg/l	96%
Sulphate	8,81	0,11	8,8	0,9	mg/l	100%
Orthophosphate	0,086	0,001	0,093	0,014	mg/l	108%
Boron	0,0152	0,0010	<0,02		mg/l	•
DOC	1,96	0,04	2,19	0,44	mg/l	112%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,120	0,018	mg/l	94%
KMnO <sub>4</sub> -Index	1,48	0,14	1,98	0,20	mg/l	134%



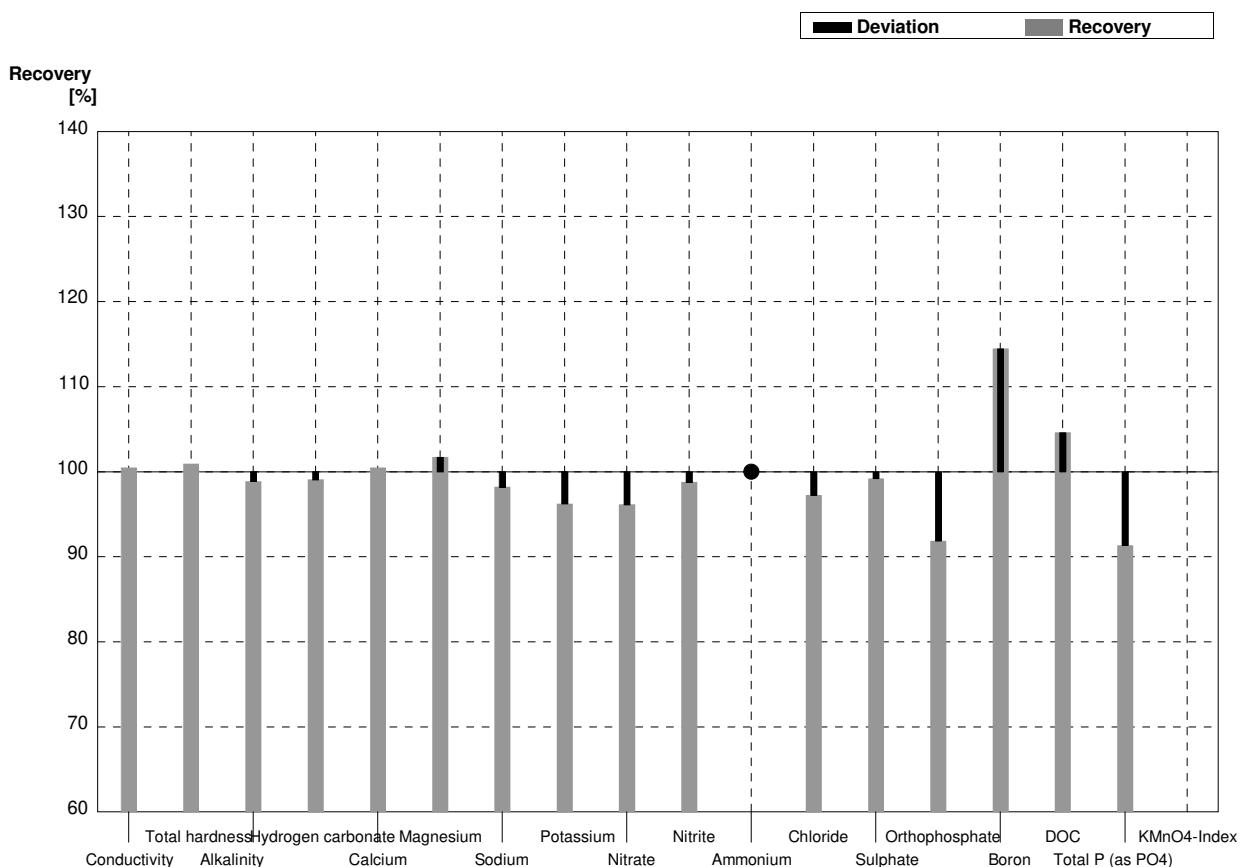
**Sample N154B**  
**Laboratory AA**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	628	31,4	$\mu\text{S}/\text{cm}$	101%
Total hardness	2,11	0,02	12,1	1,2	$\text{mmol/l}$	573%
Alkalinity	4,58	0,04	4,53	1,13	$\text{mmol/l}$	99%
Hydrogen carbonate	277	2	273	68	$\text{mg/l}$	99%
Calcium	63,6	0,8	65	6,5	$\text{mg/l}$	102%
Magnesium	12,8	0,1	12,8	1,3	$\text{mg/l}$	100%
Sodium	48,8	0,5	48,6	4,9	$\text{mg/l}$	100%
Potassium	8,11	0,06	8,1	0,8	$\text{mg/l}$	100%
Nitrate	25,4	0,4	24,5	2,5	$\text{mg/l}$	96%
Nitrite	0,0101	0,0005	0,0110	0,0011	$\text{mg/l}$	109%
Ammonium	0,0313	0,0050	0,0330	0,0083	$\text{mg/l}$	105%
Chloride	24,2	0,5	23,8	2,4	$\text{mg/l}$	98%
Sulphate	41,1	0,5	41,0	4,1	$\text{mg/l}$	100%
Orthophosphate	<0,009		<0,020		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0460	0,0046	$\text{mg/l}$	113%
DOC	7,28	0,05	7,8	1,6	$\text{mg/l}$	107%
Total P (as PO <sub>4</sub> )	<0,009		<0,015		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	4,51	0,45	$\text{mg/l}$	99%



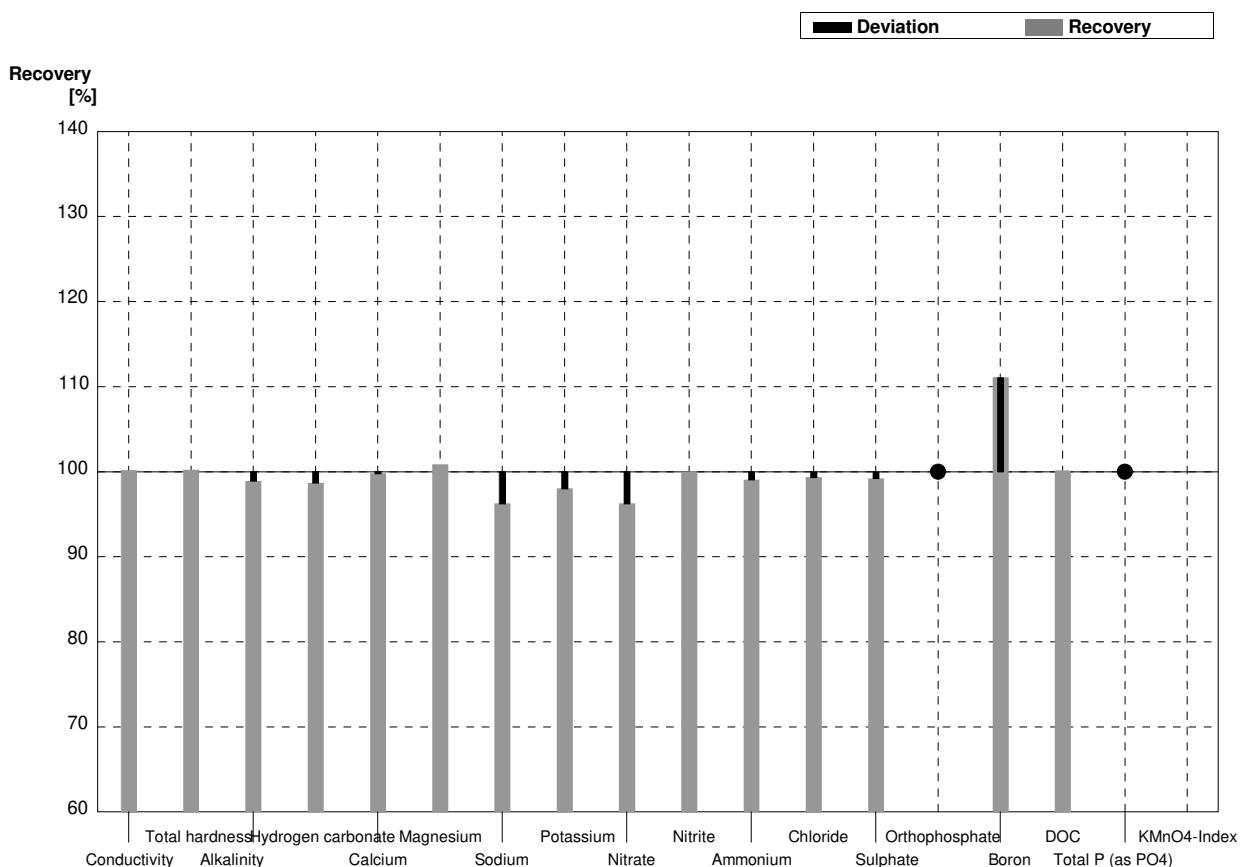
**Sample N154A**  
**Laboratory AB**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	173,8	4,51	$\mu\text{S}/\text{cm}$	100%
Total hardness	0,438	0,004	0,442		$\text{mmol/l}$	101%
Alkalinity	0,88	0,01	0,87	0,09	$\text{mmol/l}$	99%
Hydrogen carbonate	50,5	0,2	50,03		$\text{mg/l}$	99%
Calcium	12,7	0,2	12,76	1,2	$\text{mg/l}$	100%
Magnesium	2,95	0,03	3,00	0,3	$\text{mg/l}$	102%
Sodium	15,1	0,1	14,83	1,5	$\text{mg/l}$	98%
Potassium	3,18	0,02	3,06	0,31	$\text{mg/l}$	96%
Nitrate	16,8	0,3	16,15	1,6	$\text{mg/l}$	96%
Nitrite	0,0403	0,0006	0,0398	0,004	$\text{mg/l}$	99%
Ammonium	<0,01		<0,026		$\text{mg/l}$	•
Chloride	10,9	0,2	10,60	1,01	$\text{mg/l}$	97%
Sulphate	8,81	0,11	8,74	0,87	$\text{mg/l}$	99%
Orthophosphate	0,086	0,001	0,079	0,008	$\text{mg/l}$	92%
Boron	0,0152	0,0010	0,0174	0,002	$\text{mg/l}$	114%
DOC	1,96	0,04	2,05	0,21	$\text{mg/l}$	105%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,116	0,011	$\text{mg/l}$	91%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



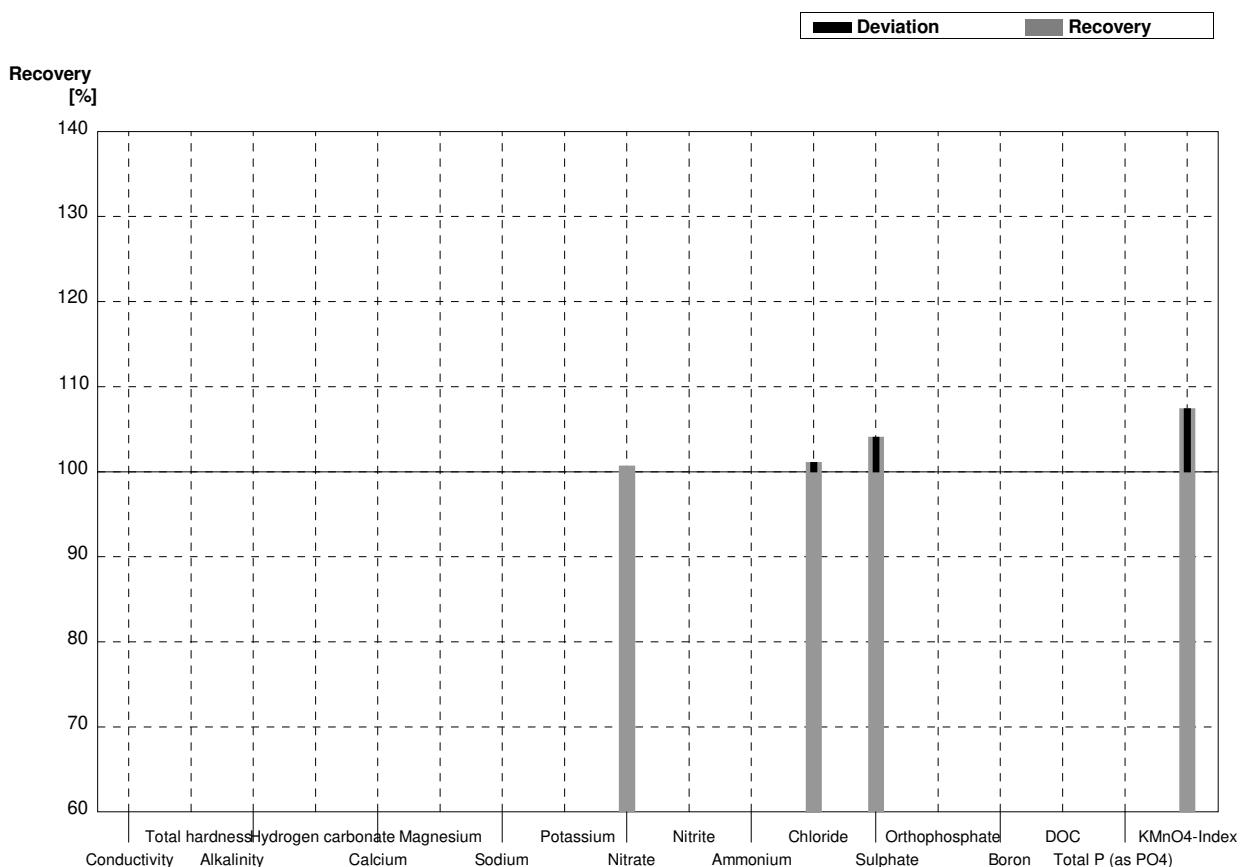
**Sample N154B**  
**Laboratory AB**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	623	4,51	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,114		$\text{mmol/l}$	100%
Alkalinity	4,58	0,04	4,53	0,45	$\text{mmol/l}$	99%
Hydrogen carbonate	277	2	273,32		$\text{mg/l}$	99%
Calcium	63,6	0,8	63,46	6,3	$\text{mg/l}$	100%
Magnesium	12,8	0,1	12,91	1,2	$\text{mg/l}$	101%
Sodium	48,8	0,5	46,97	4,7	$\text{mg/l}$	96%
Potassium	8,11	0,06	7,95	0,8	$\text{mg/l}$	98%
Nitrate	25,4	0,4	24,45	2,5	$\text{mg/l}$	96%
Nitrite	0,0101	0,0005	0,0101	0,001	$\text{mg/l}$	100%
Ammonium	0,0313	0,0050	0,0310	0,003	$\text{mg/l}$	99%
Chloride	24,2	0,5	24,04	2,40	$\text{mg/l}$	99%
Sulphate	41,1	0,5	40,77	4,07	$\text{mg/l}$	99%
Orthophosphate	<0,009		<0,0055		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0451	0,005	$\text{mg/l}$	111%
DOC	7,28	0,05	7,29	0,73	$\text{mg/l}$	100%
Total P (as PO <sub>4</sub> )	<0,009		<0,0010		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



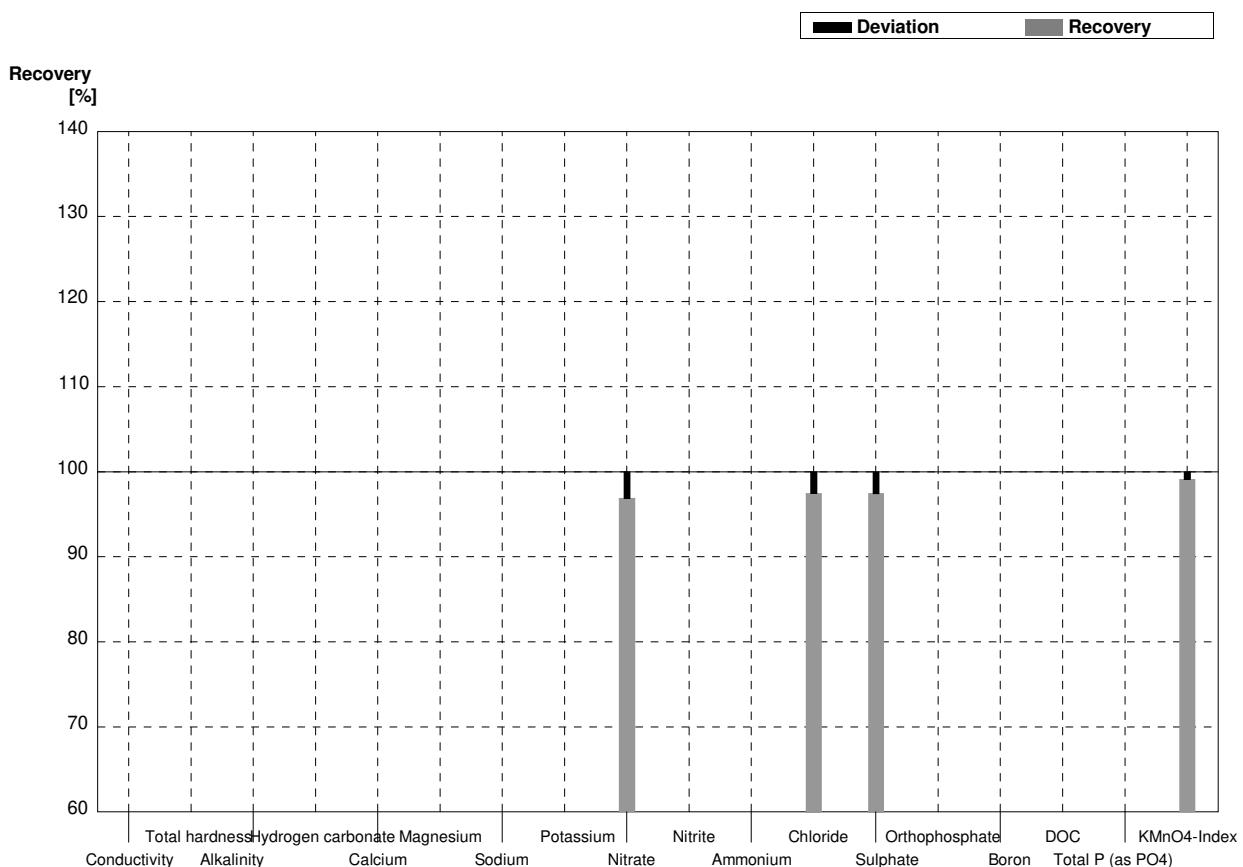
**Sample N154A**  
**Laboratory AC**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1			$\mu\text{S}/\text{cm}$	
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01			$\text{mmol/l}$	
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2			$\text{mg/l}$	
Magnesium	2,95	0,03			$\text{mg/l}$	
Sodium	15,1	0,1			$\text{mg/l}$	
Potassium	3,18	0,02			$\text{mg/l}$	
Nitrate	16,8	0,3	16,92	1,02	$\text{mg/l}$	101%
Nitrite	0,0403	0,0006			$\text{mg/l}$	
Ammonium	<0,01				$\text{mg/l}$	
Chloride	10,9	0,2	11,02	0,80	$\text{mg/l}$	101%
Sulphate	8,81	0,11	9,17	0,78	$\text{mg/l}$	104%
Orthophosphate	0,086	0,001			$\text{mg/l}$	
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14	1,59	0,38	$\text{mg/l}$	107%



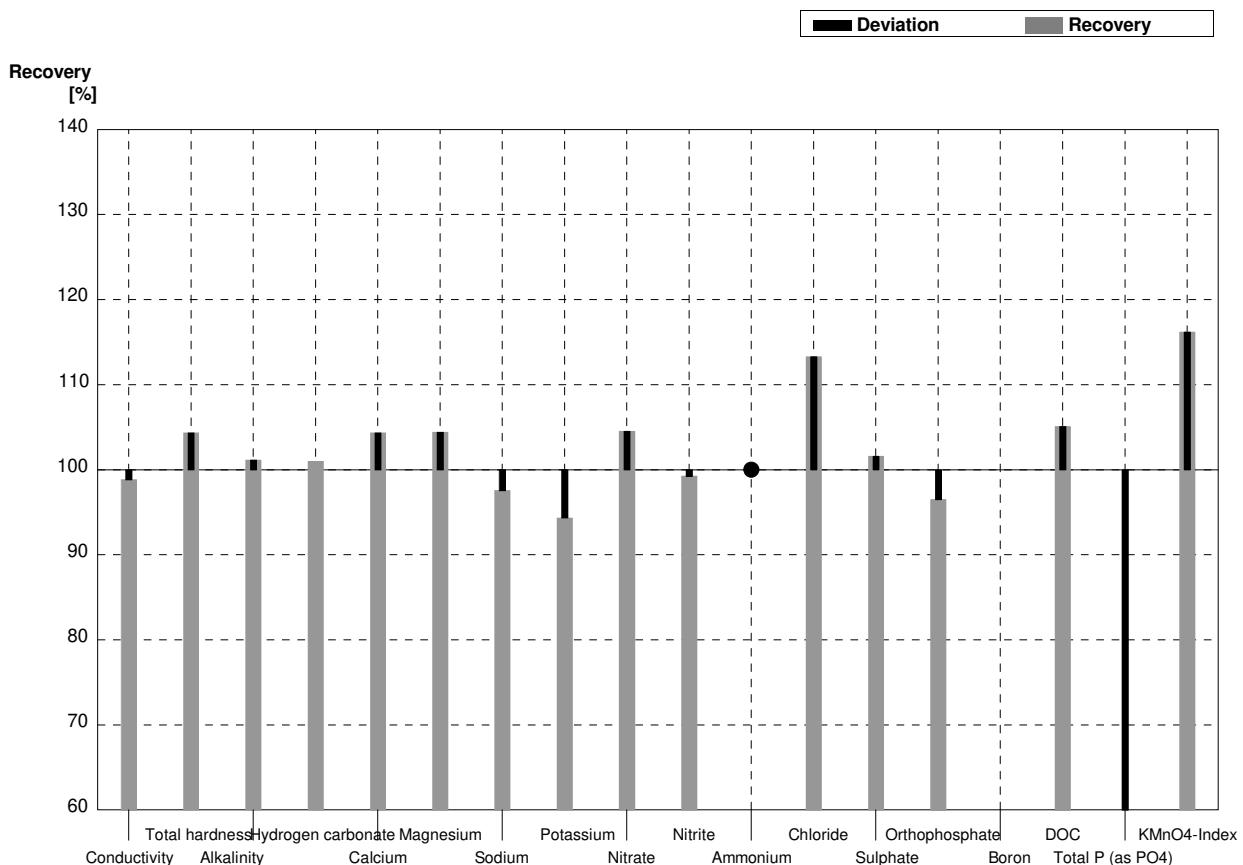
**Sample N154B**  
**Laboratory AC**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2			$\mu\text{S}/\text{cm}$	
Total hardness	2,11	0,02			$\text{mmol/l}$	
Alkalinity	4,58	0,04			$\text{mmol/l}$	
Hydrogen carbonate	277	2			$\text{mg/l}$	
Calcium	63,6	0,8			$\text{mg/l}$	
Magnesium	12,8	0,1			$\text{mg/l}$	
Sodium	48,8	0,5			$\text{mg/l}$	
Potassium	8,11	0,06			$\text{mg/l}$	
Nitrate	25,4	0,4	24,61	1,48	$\text{mg/l}$	97%
Nitrite	0,0101	0,0005			$\text{mg/l}$	
Ammonium	0,0313	0,0050			$\text{mg/l}$	
Chloride	24,2	0,5	23,59	1,72	$\text{mg/l}$	97%
Sulphate	41,1	0,5	40,06	3,41	$\text{mg/l}$	97%
Orthophosphate	<0,009				$\text{mg/l}$	
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13	4,53	1,09	$\text{mg/l}$	99%



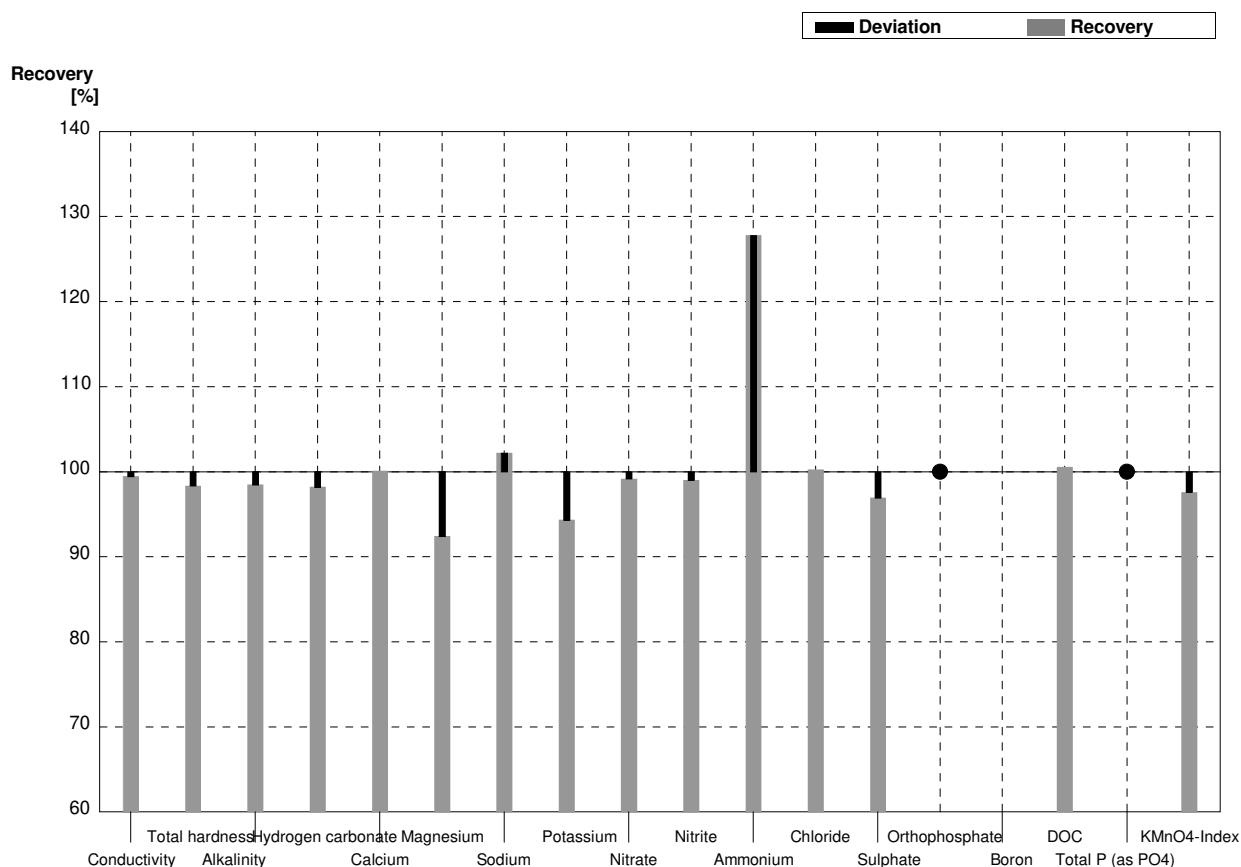
**Sample N154A**  
**Laboratory AD**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	171,00	5	$\mu\text{S}/\text{cm}$	99%
Total hardness	0,438	0,004	0,457	0,05	$\text{mmol/l}$	104%
Alkalinity	0,88	0,01	0,89	0,05	$\text{mmol/l}$	101%
Hydrogen carbonate	50,5	0,2	51,00	3	$\text{mg/l}$	101%
Calcium	12,7	0,2	13,25	0,7	$\text{mg/l}$	104%
Magnesium	2,95	0,03	3,08	0,2	$\text{mg/l}$	104%
Sodium	15,1	0,1	14,73	0,8	$\text{mg/l}$	98%
Potassium	3,18	0,02	3,00	0,20	$\text{mg/l}$	94%
Nitrate	16,8	0,3	17,56	0,9	$\text{mg/l}$	105%
Nitrite	0,0403	0,0006	0,04	0,004	$\text{mg/l}$	99%
Ammonium	<0,01		<0,04		$\text{mg/l}$	•
Chloride	10,9	0,2	12,35	0,7	$\text{mg/l}$	113%
Sulphate	8,81	0,11	8,95	0,6	$\text{mg/l}$	102%
Orthophosphate	0,086	0,001	0,083	0,005	$\text{mg/l}$	97%
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04	2,06	0,07	$\text{mg/l}$	105%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,03	0,003	$\text{mg/l}$	24%
KMnO <sub>4</sub> -Index	1,48	0,14	1,72	0,17	$\text{mg/l}$	116%



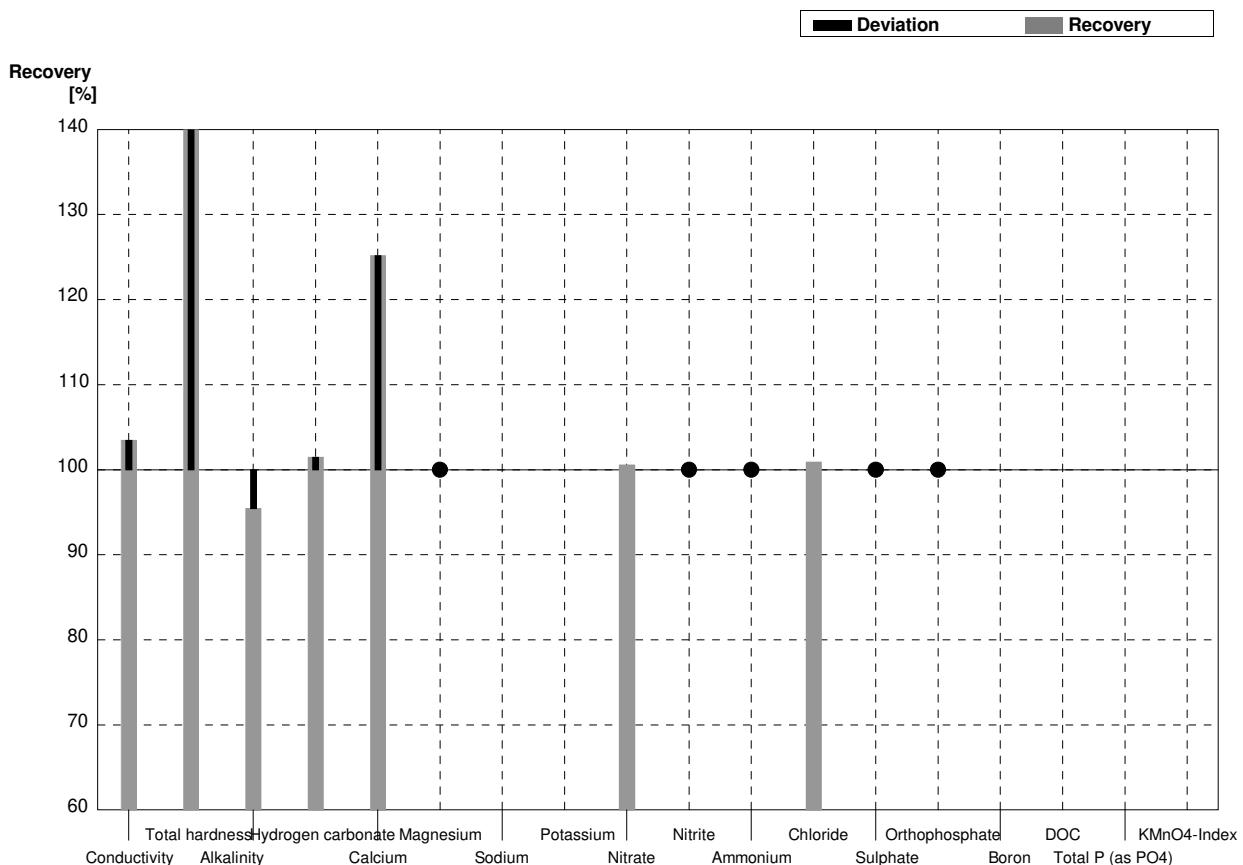
**Sample N154B**  
**Laboratory AD**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	618,50	15	$\mu\text{S}/\text{cm}$	99%
Total hardness	2,11	0,02	2,075	0,11	$\text{mmol/l}$	98%
Alkalinity	4,58	0,04	4,51	0,04	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	272,00	3	$\text{mg/l}$	98%
Calcium	63,6	0,8	63,65	3	$\text{mg/l}$	100%
Magnesium	12,8	0,1	11,83	0,6	$\text{mg/l}$	92%
Sodium	48,8	0,5	49,87	3	$\text{mg/l}$	102%
Potassium	8,11	0,06	7,65	0,4	$\text{mg/l}$	94%
Nitrate	25,4	0,4	25,19	1,3	$\text{mg/l}$	99%
Nitrite	0,0101	0,0005	0,01	0,004	$\text{mg/l}$	99%
Ammonium	0,0313	0,0050	0,04	0,001	$\text{mg/l}$	128%
Chloride	24,2	0,5	24,26	1,3	$\text{mg/l}$	100%
Sulphate	41,1	0,5	39,84	2	$\text{mg/l}$	97%
Orthophosphate	<0,009		<0,01		$\text{mg/l}$	•
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05	7,32	0,06	$\text{mg/l}$	101%
Total P (as PO <sub>4</sub> )	<0,009		<0,01		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	4,46	0,17	$\text{mg/l}$	98%



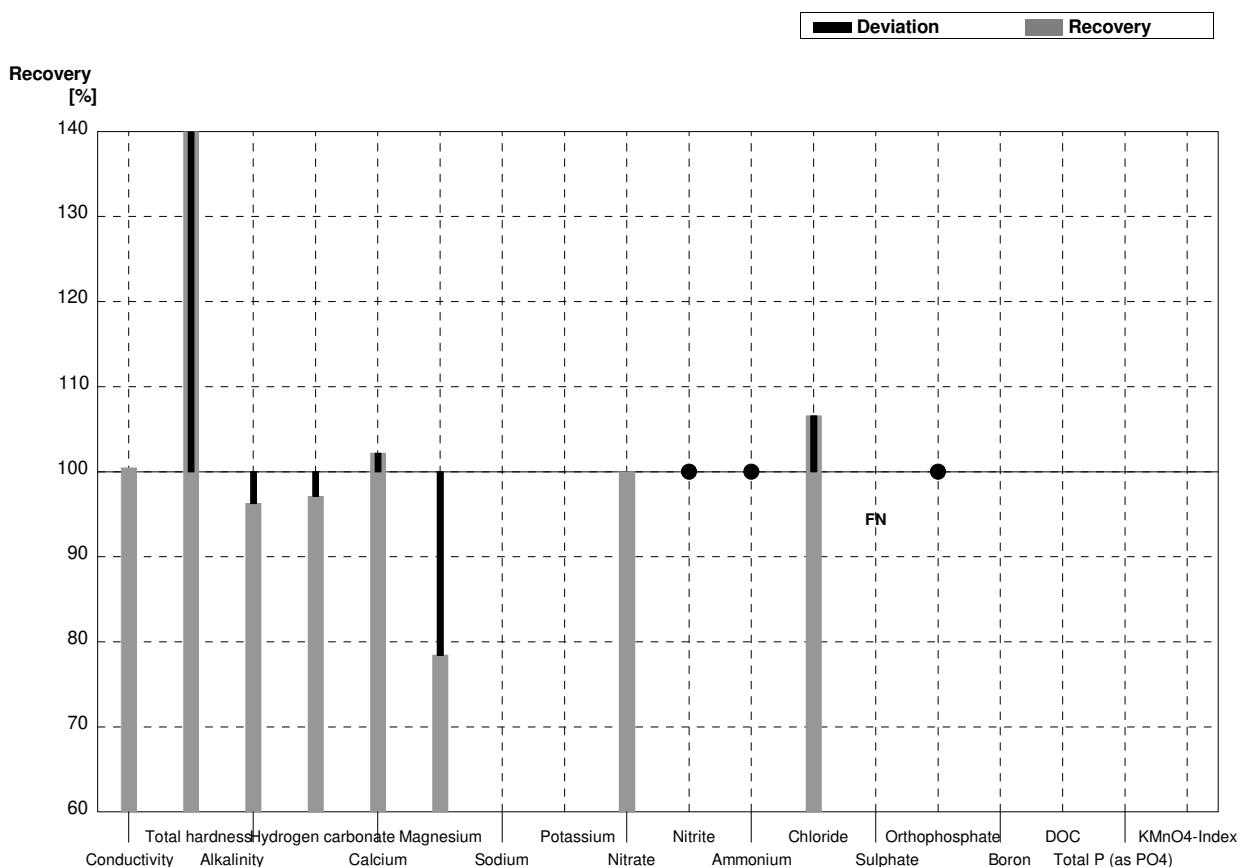
**Sample N154A**  
**Laboratory AE**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	179		$\mu\text{S}/\text{cm}$	103%
Total hardness	0,438	0,004	2,22		$\text{mmol/l}$	507%
Alkalinity	0,88	0,01	0,84		$\text{mmol/l}$	95%
Hydrogen carbonate	50,5	0,2	51,25		$\text{mg/l}$	101%
Calcium	12,7	0,2	15,9		$\text{mg/l}$	125%
Magnesium	2,95	0,03	<3,0		$\text{mg/l}$	•
Sodium	15,1	0,1			$\text{mg/l}$	
Potassium	3,18	0,02			$\text{mg/l}$	
Nitrate	16,8	0,3	16,9		$\text{mg/l}$	101%
Nitrite	0,0403	0,0006	<0,05		$\text{mg/l}$	•
Ammonium	<0,01		<0,05		$\text{mg/l}$	•
Chloride	10,9	0,2	11,0		$\text{mg/l}$	101%
Sulphate	8,81	0,11	<40		$\text{mg/l}$	•
Orthophosphate	0,086	0,001	<0,15		$\text{mg/l}$	•
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



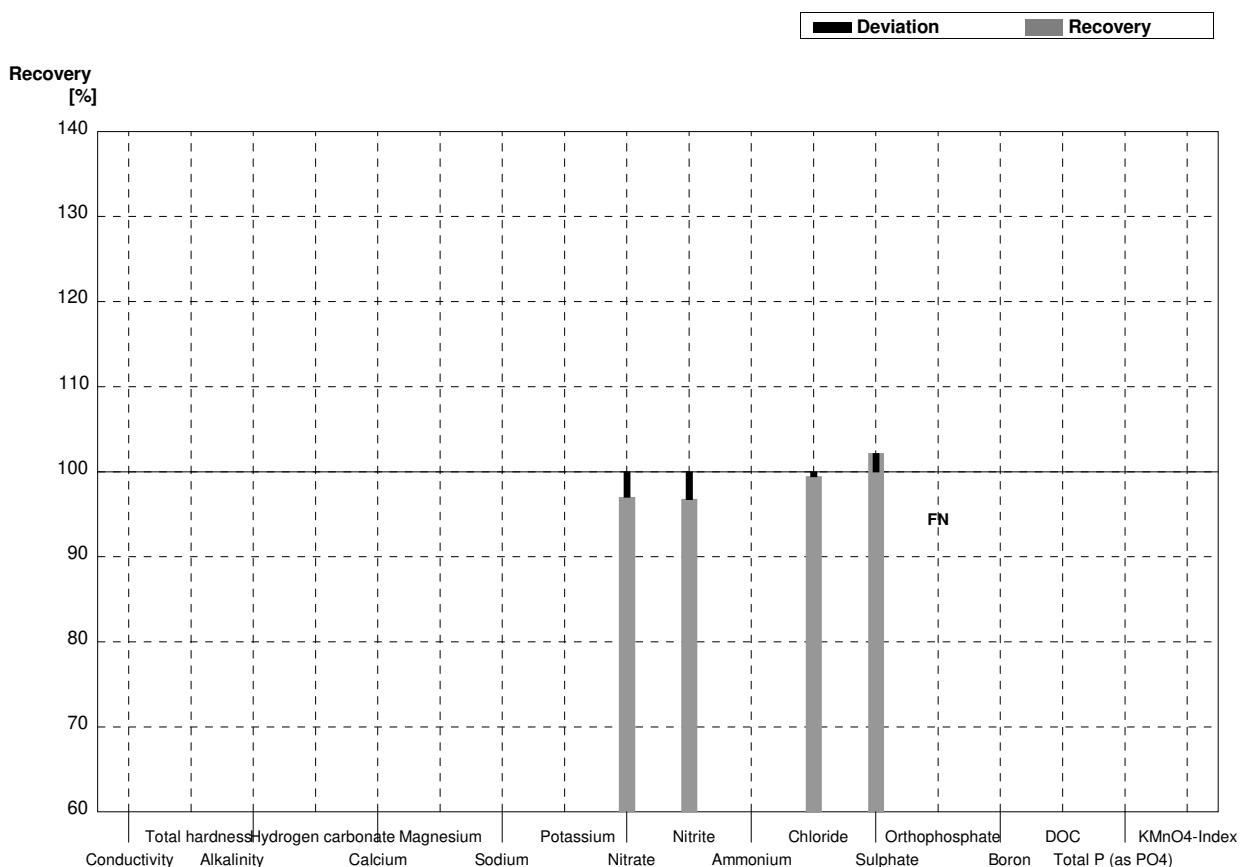
**Sample N154B**  
**Laboratory AE**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	625		$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	11,5		$\text{mmol/l}$	545%
Alkalinity	4,58	0,04	4,41		$\text{mmol/l}$	96%
Hydrogen carbonate	277	2	269,08		$\text{mg/l}$	97%
Calcium	63,6	0,8	65,0		$\text{mg/l}$	102%
Magnesium	12,8	0,1	10,04		$\text{mg/l}$	78%
Sodium	48,8	0,5			$\text{mg/l}$	
Potassium	8,11	0,06			$\text{mg/l}$	
Nitrate	25,4	0,4	25,4		$\text{mg/l}$	100%
Nitrite	0,0101	0,0005	<0,05		$\text{mg/l}$	•
Ammonium	0,0313	0,0050	<0,05		$\text{mg/l}$	•
Chloride	24,2	0,5	25,8		$\text{mg/l}$	107%
Sulphate	41,1	0,5	<40		$\text{mg/l}$	FN
Orthophosphate	<0,009		<0,15		$\text{mg/l}$	•
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



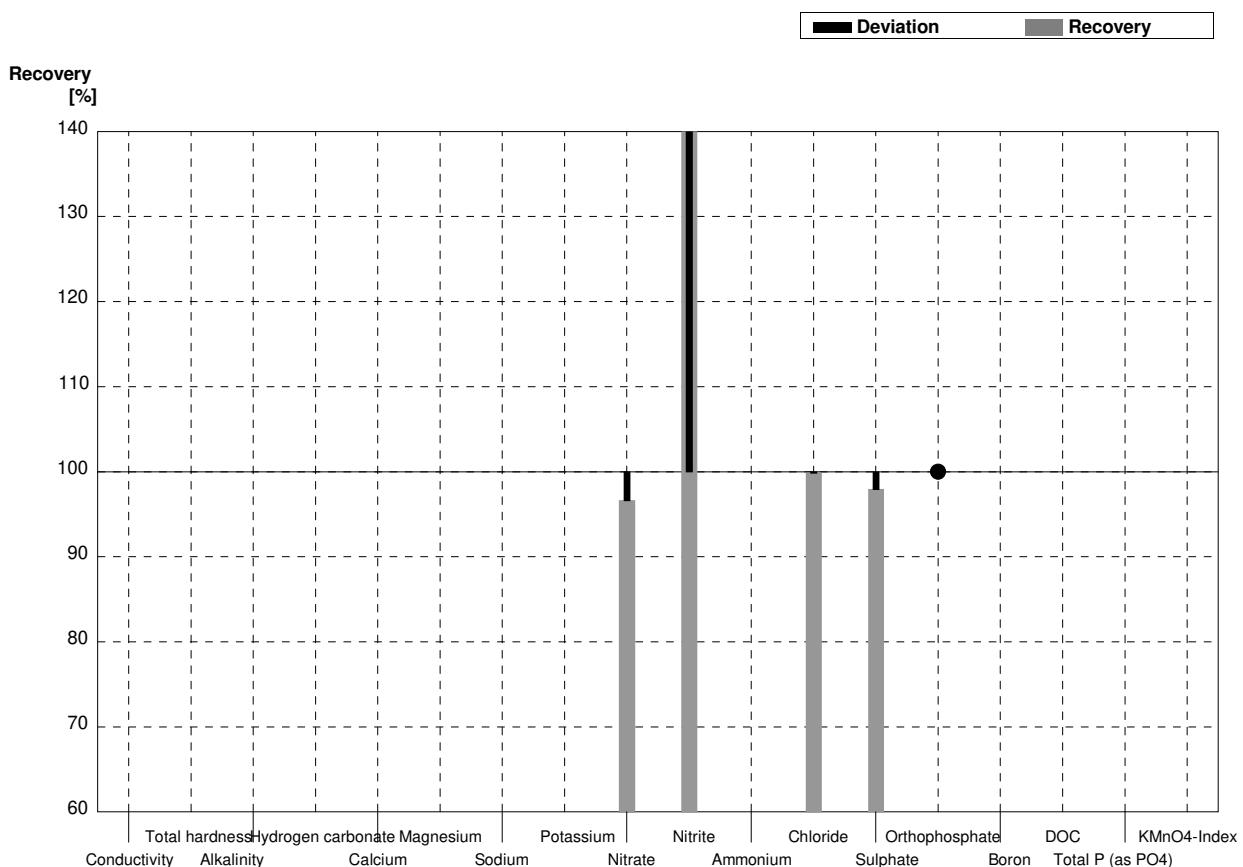
**Sample N154A**  
**Laboratory AF**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1			$\mu\text{S}/\text{cm}$	
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01			$\text{mmol/l}$	
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2			$\text{mg/l}$	
Magnesium	2,95	0,03			$\text{mg/l}$	
Sodium	15,1	0,1			$\text{mg/l}$	
Potassium	3,18	0,02			$\text{mg/l}$	
Nitrate	16,8	0,3	16,301	0,1	$\text{mg/l}$	97%
Nitrite	0,0403	0,0006	0,0390	0,002	$\text{mg/l}$	97%
Ammonium	<0,01				$\text{mg/l}$	
Chloride	10,9	0,2	10,840	0,2	$\text{mg/l}$	99%
Sulphate	8,81	0,11	9,000	0,2	$\text{mg/l}$	102%
Orthophosphate	0,086	0,001	<0,010	0,002	$\text{mg/l}$	FN
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



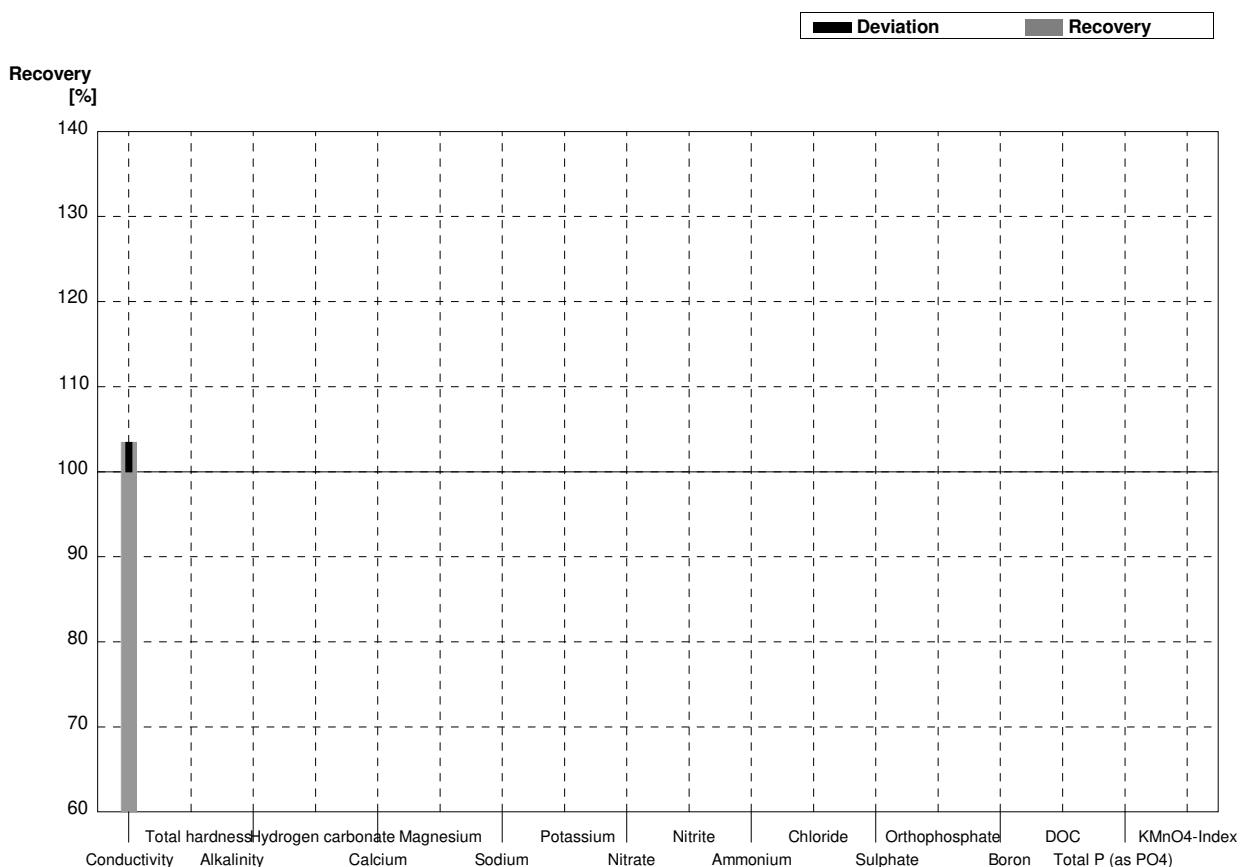
**Sample N154B**  
**Laboratory AF**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	622	2			µS/cm	
Total hardness	2,11	0,02			mmol/l	
Alkalinity	4,58	0,04			mmol/l	
Hydrogen carbonate	277	2			mg/l	
Calcium	63,6	0,8			mg/l	
Magnesium	12,8	0,1			mg/l	
Sodium	48,8	0,5			mg/l	
Potassium	8,11	0,06			mg/l	
Nitrate	25,4	0,4	24,540	0,1	mg/l	97%
Nitrite	0,0101	0,0005	0,0200	0,002	mg/l	198%
Ammonium	0,0313	0,0050			mg/l	
Chloride	24,2	0,5	24,165	0,4	mg/l	100%
Sulphate	41,1	0,5	40,260	0,3	mg/l	98%
Orthophosphate	<0,009		<0,010	0,002	mg/l	•
Boron	0,0406	0,0003			mg/l	
DOC	7,28	0,05			mg/l	
Total P (as PO <sub>4</sub> )	<0,009				mg/l	
KMnO <sub>4</sub> -Index	4,57	0,13			mg/l	



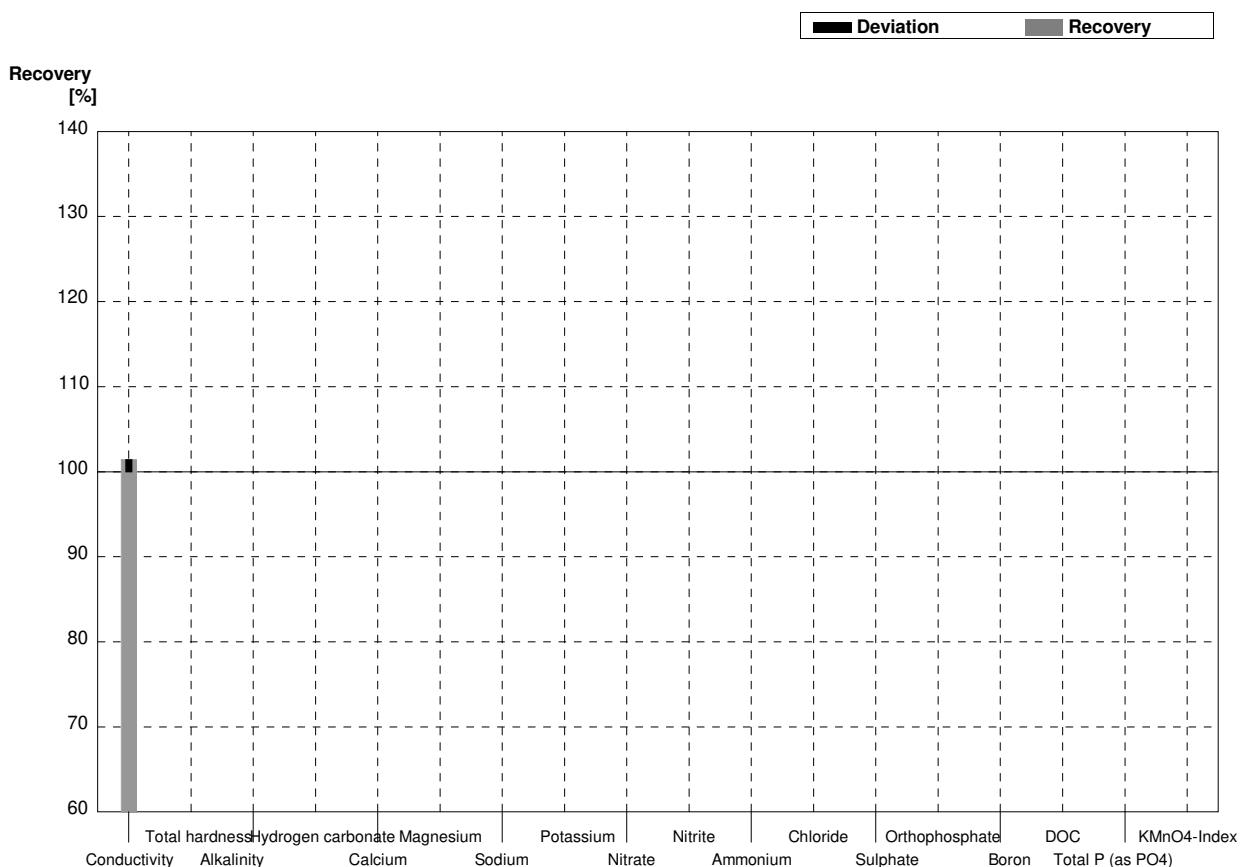
**Sample N154A**  
**Laboratory AG**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	173	1	179,0		µS/cm	103%
Total hardness	0,438	0,004			mmol/l	
Alkalinity	0,88	0,01			mmol/l	
Hydrogen carbonate	50,5	0,2			mg/l	
Calcium	12,7	0,2			mg/l	
Magnesium	2,95	0,03			mg/l	
Sodium	15,1	0,1			mg/l	
Potassium	3,18	0,02			mg/l	
Nitrate	16,8	0,3			mg/l	
Nitrite	0,0403	0,0006			mg/l	
Ammonium	<0,01				mg/l	
Chloride	10,9	0,2			mg/l	
Sulphate	8,81	0,11			mg/l	
Orthophosphate	0,086	0,001			mg/l	
Boron	0,0152	0,0010			mg/l	
DOC	1,96	0,04			mg/l	
Total P (as PO <sub>4</sub> )	0,127	0,001			mg/l	
KMnO <sub>4</sub> -Index	1,48	0,14			mg/l	



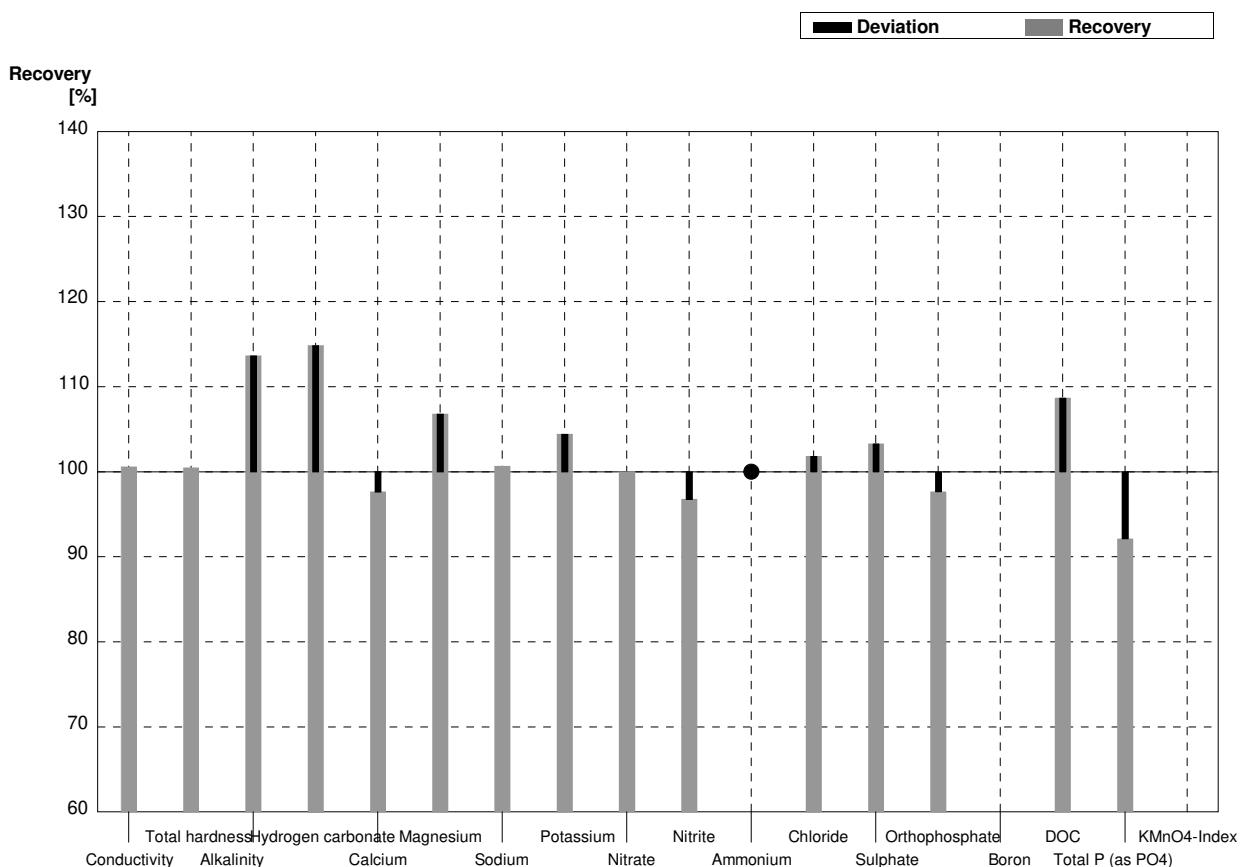
**Sample N154B**  
**Laboratory AG**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	622	2	631		µS/cm	101%
Total hardness	2,11	0,02			mmol/l	
Alkalinity	4,58	0,04			mmol/l	
Hydrogen carbonate	277	2			mg/l	
Calcium	63,6	0,8			mg/l	
Magnesium	12,8	0,1			mg/l	
Sodium	48,8	0,5			mg/l	
Potassium	8,11	0,06			mg/l	
Nitrate	25,4	0,4			mg/l	
Nitrite	0,0101	0,0005			mg/l	
Ammonium	0,0313	0,0050			mg/l	
Chloride	24,2	0,5			mg/l	
Sulphate	41,1	0,5			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,0406	0,0003			mg/l	
DOC	7,28	0,05			mg/l	
Total P (as PO <sub>4</sub> )	<0,009				mg/l	
KMnO <sub>4</sub> -Index	4,57	0,13			mg/l	



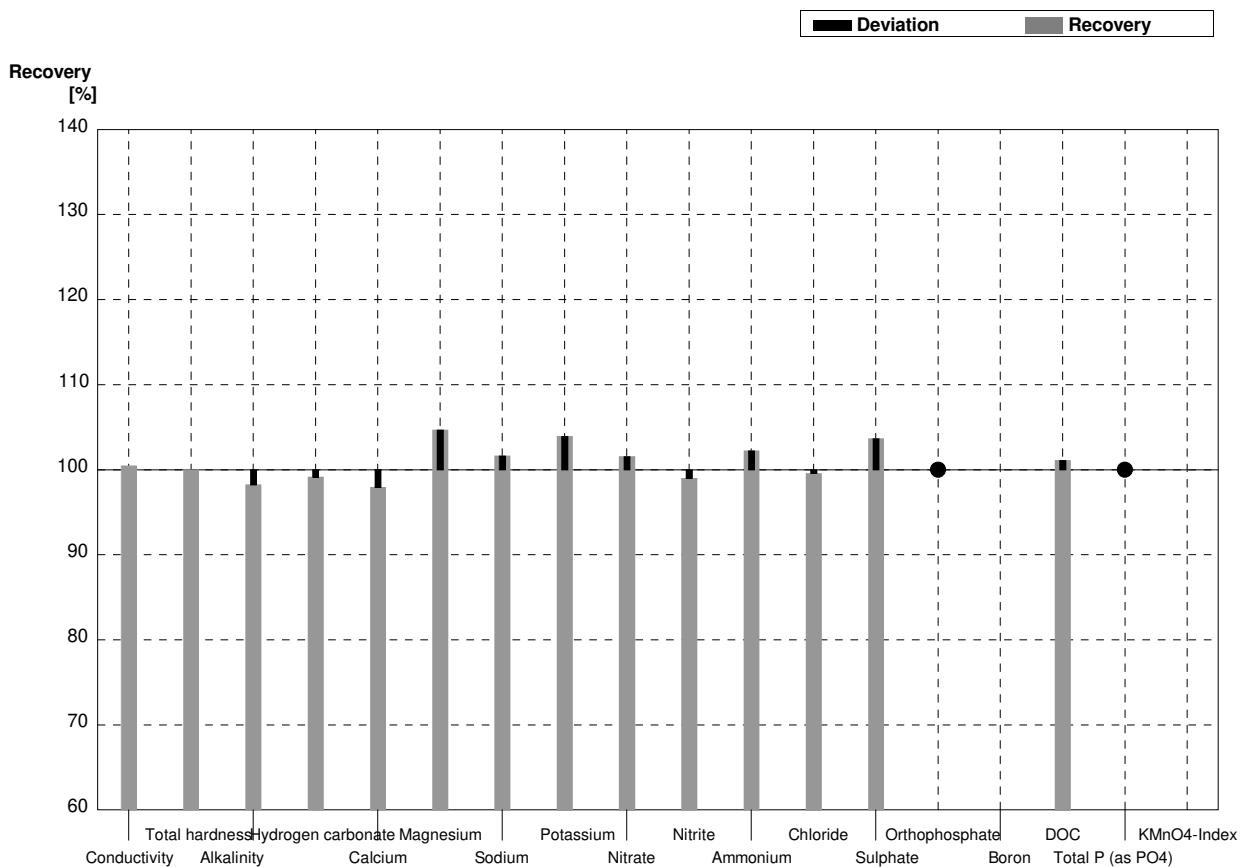
**Sample N154A**  
**Laboratory AH**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	174	10	$\mu\text{S}/\text{cm}$	101%
Total hardness	0,438	0,004	0,440	0,04	$\text{mmol/l}$	100%
Alkalinity	0,88	0,01	1,00	0,1	$\text{mmol/l}$	114%
Hydrogen carbonate	50,5	0,2	58,0	6	$\text{mg/l}$	115%
Calcium	12,7	0,2	12,4	1,3	$\text{mg/l}$	98%
Magnesium	2,95	0,03	3,15	0,32	$\text{mg/l}$	107%
Sodium	15,1	0,1	15,2	1,6	$\text{mg/l}$	101%
Potassium	3,18	0,02	3,32	0,34	$\text{mg/l}$	104%
Nitrate	16,8	0,3	16,8	1,7	$\text{mg/l}$	100%
Nitrite	0,0403	0,0006	0,0390	0,004	$\text{mg/l}$	97%
Ammonium	<0,01		<0,005		$\text{mg/l}$	•
Chloride	10,9	0,2	11,1	1,1	$\text{mg/l}$	102%
Sulphate	8,81	0,11	9,1	1,0	$\text{mg/l}$	103%
Orthophosphate	0,086	0,001	0,084	0,008	$\text{mg/l}$	98%
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04	2,13	0,21	$\text{mg/l}$	109%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,117	0,012	$\text{mg/l}$	92%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



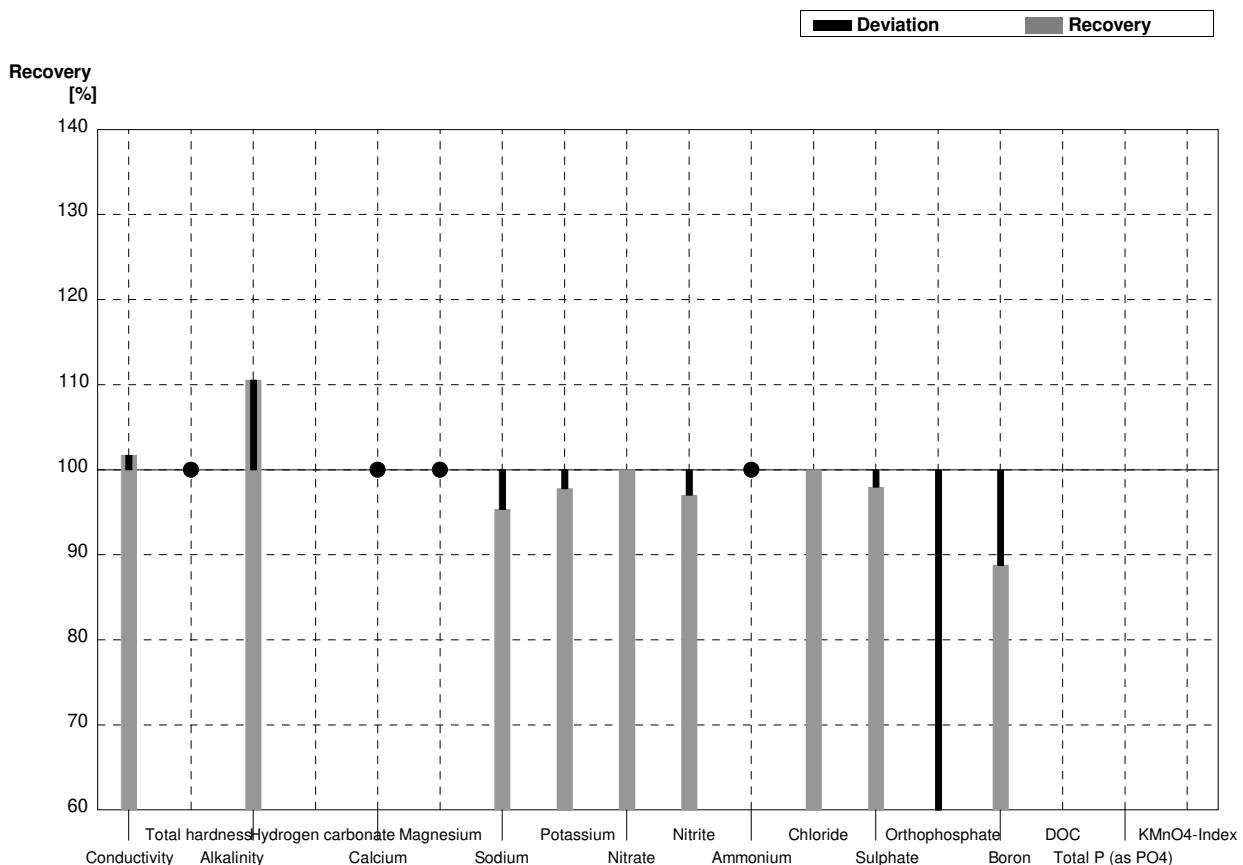
**Sample N154B**  
**Laboratory AH**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	625	10	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,11	0,2	$\text{mmol/l}$	100%
Alkalinity	4,58	0,04	4,50	0,45	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	274,6	27	$\text{mg/l}$	99%
Calcium	63,6	0,8	62,3	6,3	$\text{mg/l}$	98%
Magnesium	12,8	0,1	13,4	1,4	$\text{mg/l}$	105%
Sodium	48,8	0,5	49,6	5,0	$\text{mg/l}$	102%
Potassium	8,11	0,06	8,43	0,85	$\text{mg/l}$	104%
Nitrate	25,4	0,4	25,8	2,6	$\text{mg/l}$	102%
Nitrite	0,0101	0,0005	0,0100	0,001	$\text{mg/l}$	99%
Ammonium	0,0313	0,0050	0,0320	0,003	$\text{mg/l}$	102%
Chloride	24,2	0,5	24,1	2,5	$\text{mg/l}$	100%
Sulphate	41,1	0,5	42,6	4,5	$\text{mg/l}$	104%
Orthophosphate	<0,009		<0,005		$\text{mg/l}$	•
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05	7,36	0,74	$\text{mg/l}$	101%
Total P (as PO <sub>4</sub> )	<0,009		0,005		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



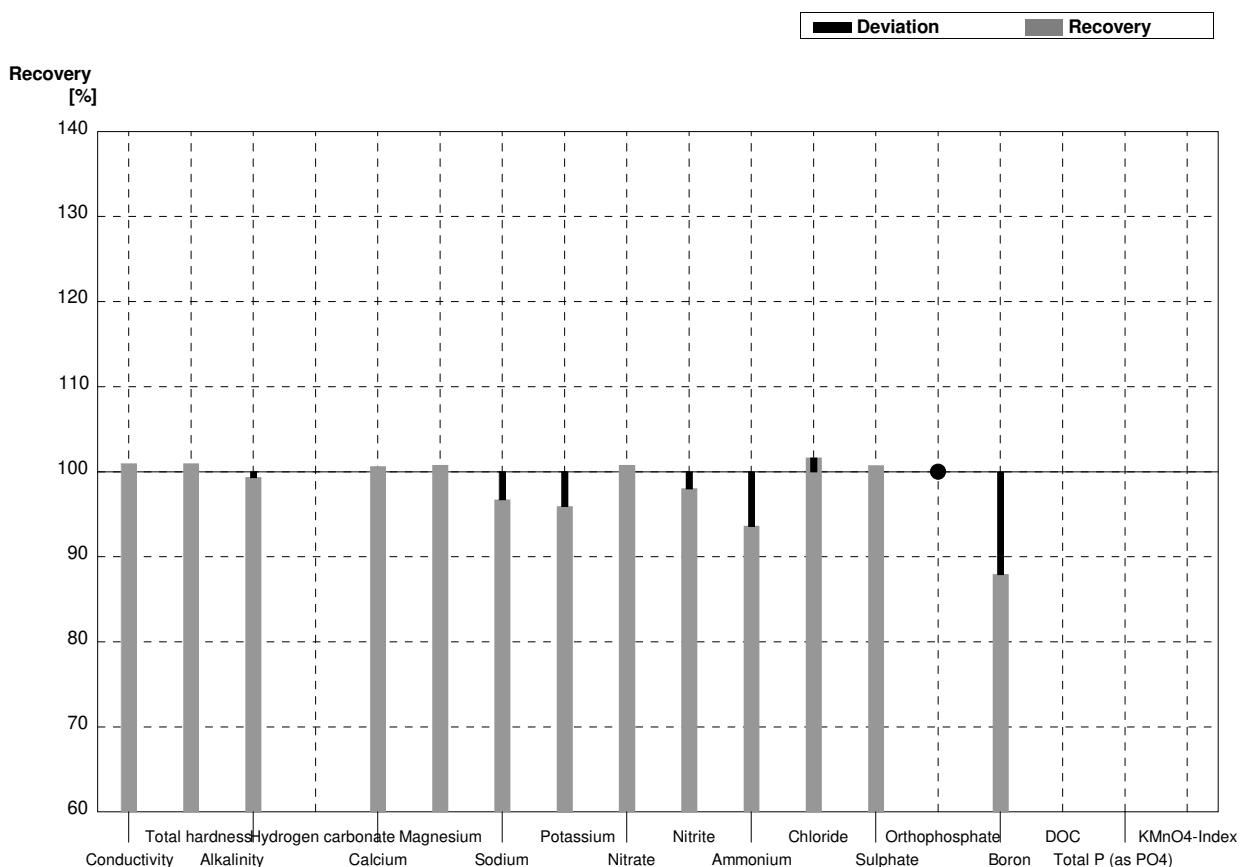
**Sample N154A**  
**Laboratory AI**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	176	5	$\mu\text{S}/\text{cm}$	102%
Total hardness	0,438	0,004	<1,2	0,06	$\text{mmol/l}$	•
Alkalinity	0,88	0,01	0,973	0,049	$\text{mmol/l}$	111%
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2	<40		$\text{mg/l}$	•
Magnesium	2,95	0,03	<4		$\text{mg/l}$	•
Sodium	15,1	0,1	14,4	0,7	$\text{mg/l}$	95%
Potassium	3,18	0,02	3,11	0,31	$\text{mg/l}$	98%
Nitrate	16,8	0,3	16,8	0,84	$\text{mg/l}$	100%
Nitrite	0,0403	0,0006	0,0391	0,0039	$\text{mg/l}$	97%
Ammonium	<0,01		<0,01		$\text{mg/l}$	•
Chloride	10,9	0,2	10,9	0,5	$\text{mg/l}$	100%
Sulphate	8,81	0,11	8,63	0,86	$\text{mg/l}$	98%
Orthophosphate	0,086	0,001	0,0296	0,0015	$\text{mg/l}$	34%
Boron	0,0152	0,0010	0,0135	0,0027	$\text{mg/l}$	89%
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



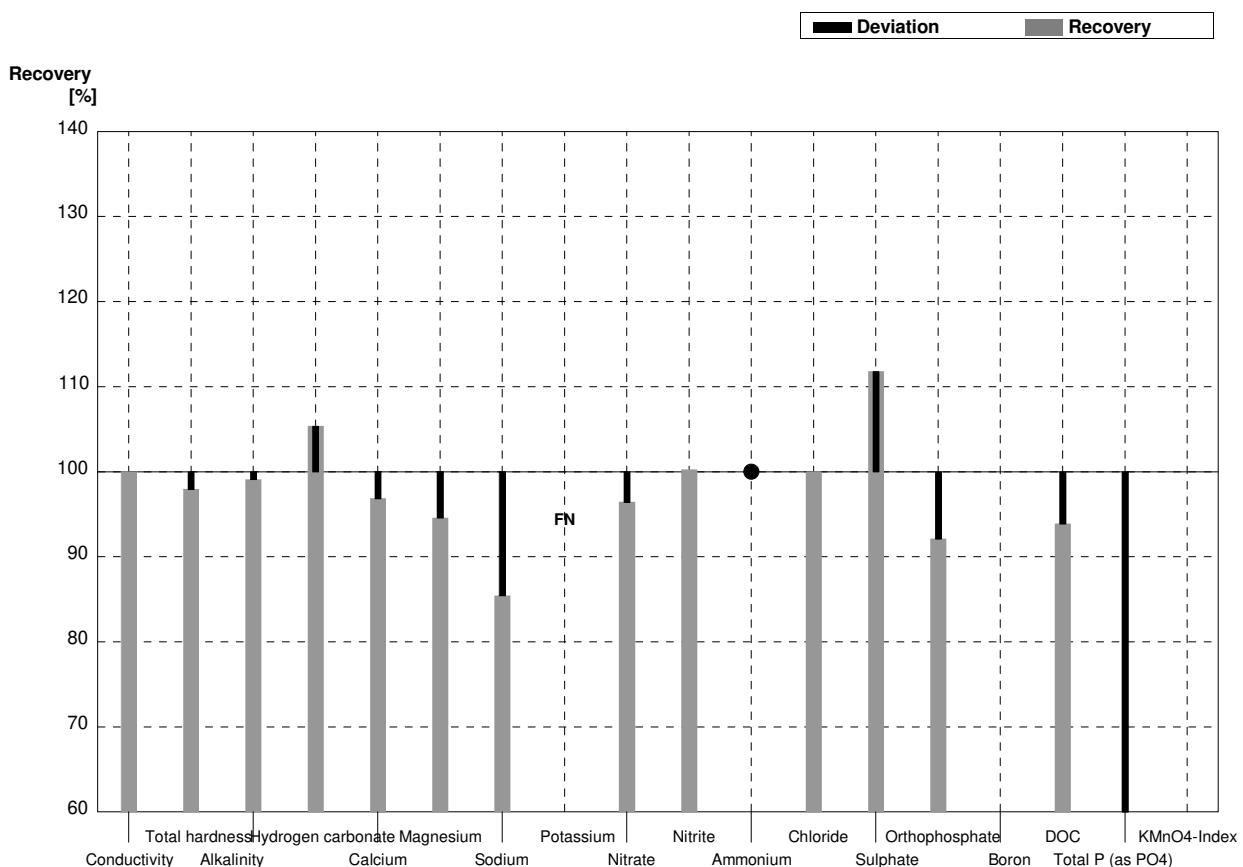
**Sample N154B**  
**Laboratory AI**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	628	19	$\mu\text{S}/\text{cm}$	101%
Total hardness	2,11	0,02	2,13	0,11	$\text{mmol/l}$	101%
Alkalinity	4,58	0,04	4,55	0,23	$\text{mmol/l}$	99%
Hydrogen carbonate	277	2			$\text{mg/l}$	
Calcium	63,6	0,8	64,0	6,4	$\text{mg/l}$	101%
Magnesium	12,8	0,1	12,9	1,3	$\text{mg/l}$	101%
Sodium	48,8	0,5	47,2	2,4	$\text{mg/l}$	97%
Potassium	8,11	0,06	7,78	0,78	$\text{mg/l}$	96%
Nitrate	25,4	0,4	25,6	1,3	$\text{mg/l}$	101%
Nitrite	0,0101	0,0005	0,0099	0,0001	$\text{mg/l}$	98%
Ammonium	0,0313	0,0050	0,0293	0,0035	$\text{mg/l}$	94%
Chloride	24,2	0,5	24,6	1,2	$\text{mg/l}$	102%
Sulphate	41,1	0,5	41,4	4,1	$\text{mg/l}$	101%
Orthophosphate	<0,009		<0,01		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0357	0,0071	$\text{mg/l}$	88%
DOC	7,28	0,05			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



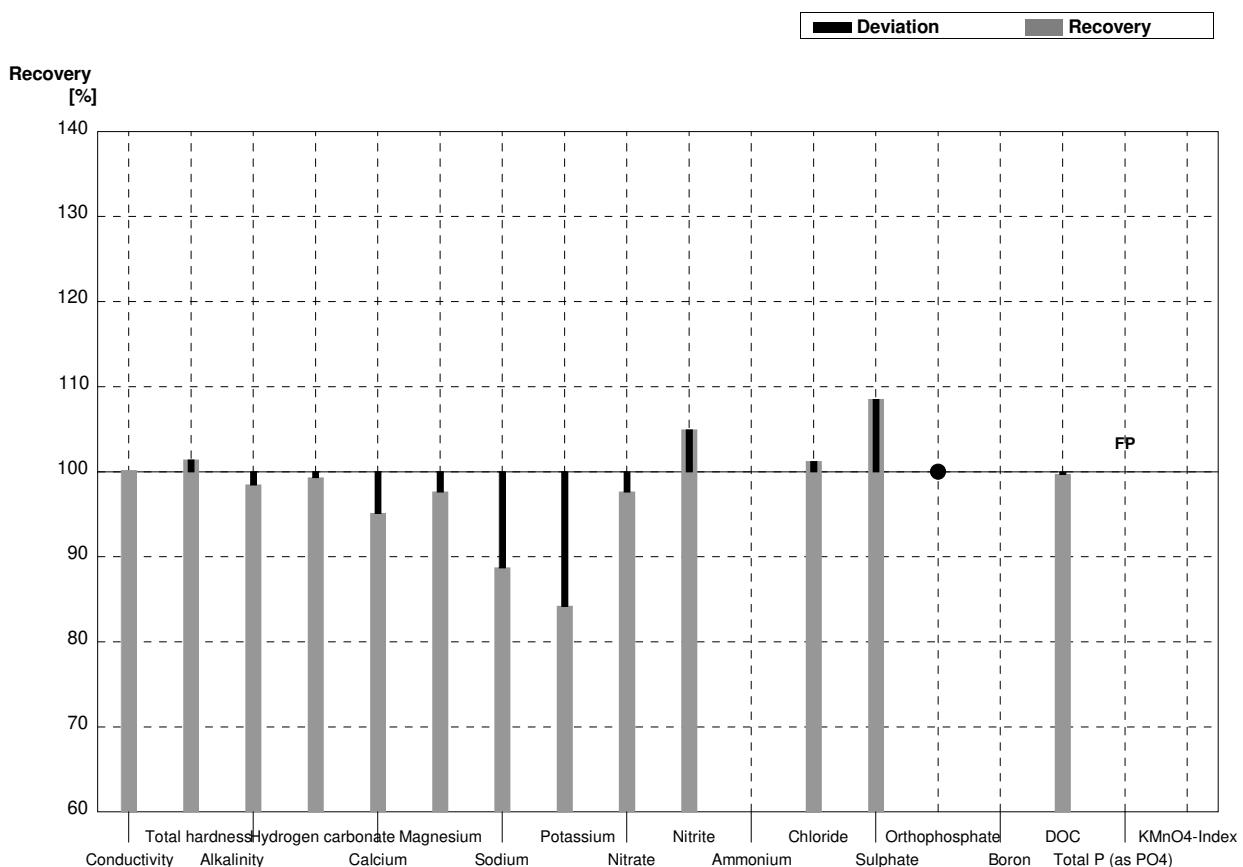
**Sample N154A**  
**Laboratory AJ**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	173	2	$\mu\text{S}/\text{cm}$	100%
Total hardness	0,438	0,004	0,429	0,039	$\text{mmol/l}$	98%
Alkalinity	0,88	0,01	0,872	0,078	$\text{mmol/l}$	99%
Hydrogen carbonate	50,5	0,2	53,2	4,79	$\text{mg/l}$	105%
Calcium	12,7	0,2	12,3	1,23	$\text{mg/l}$	97%
Magnesium	2,95	0,03	2,79	0,28	$\text{mg/l}$	95%
Sodium	15,1	0,1	12,9	1,29	$\text{mg/l}$	85%
Potassium	3,18	0,02	<2,9		$\text{mg/l}$	FN
Nitrate	16,8	0,3	16,2	1,62	$\text{mg/l}$	96%
Nitrite	0,0403	0,0006	0,0404	0,0061	$\text{mg/l}$	100%
Ammonium	<0,01		<0,030		$\text{mg/l}$	•
Chloride	10,9	0,2	10,9	1,09	$\text{mg/l}$	100%
Sulphate	8,81	0,11	9,85	1,48	$\text{mg/l}$	112%
Orthophosphate	0,086	0,001	0,0792	0,04	$\text{mg/l}$	92%
Boron	0,0152	0,0010	n,n		$\text{mg/l}$	
DOC	1,96	0,04	1,84	0,37	$\text{mg/l}$	94%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,0087	0,0017	$\text{mg/l}$	7%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



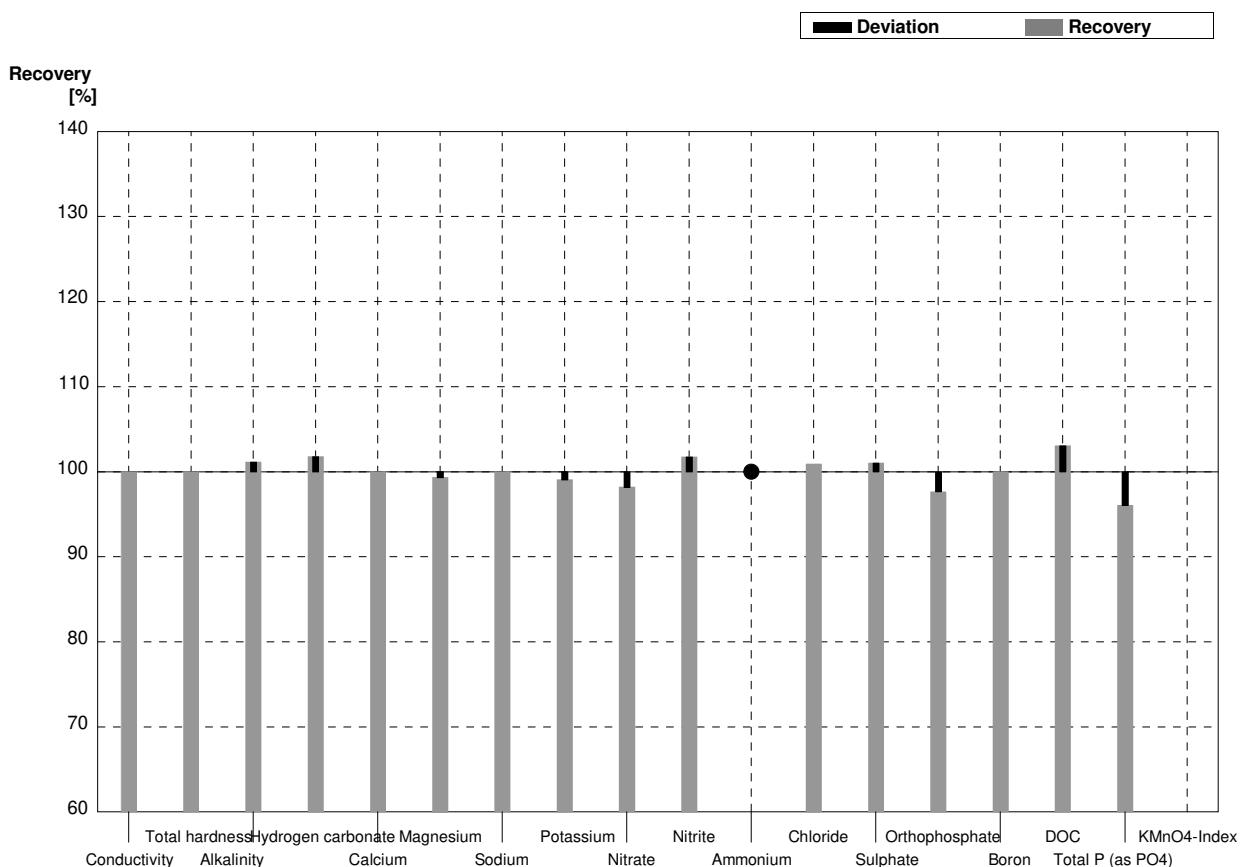
**Sample N154B**  
**Laboratory AJ**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	623	6	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,14	0,19	$\text{mmol/l}$	101%
Alkalinity	4,58	0,04	4,51	0,405	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	275,1	24,8	$\text{mg/l}$	99%
Calcium	63,6	0,8	60,5	6,05	$\text{mg/l}$	95%
Magnesium	12,8	0,1	12,5	1,25	$\text{mg/l}$	98%
Sodium	48,8	0,5	43,3	4,33	$\text{mg/l}$	89%
Potassium	8,11	0,06	6,83	0,68	$\text{mg/l}$	84%
Nitrate	25,4	0,4	24,8	2,48	$\text{mg/l}$	98%
Nitrite	0,0101	0,0005	0,0106	0,0016	$\text{mg/l}$	105%
Ammonium	0,0313	0,0050	n,a		$\text{mg/l}$	
Chloride	24,2	0,5	24,5	2,45	$\text{mg/l}$	101%
Sulphate	41,1	0,5	44,6	8,92	$\text{mg/l}$	109%
Orthophosphate	<0,009		<0,020	0,04	$\text{mg/l}$	•
Boron	0,0406	0,0003	n,n		$\text{mg/l}$	
DOC	7,28	0,05	7,26	1,45	$\text{mg/l}$	100%
Total P (as PO <sub>4</sub> )	<0,009		0,129	0,026	$\text{mg/l}$	FP
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



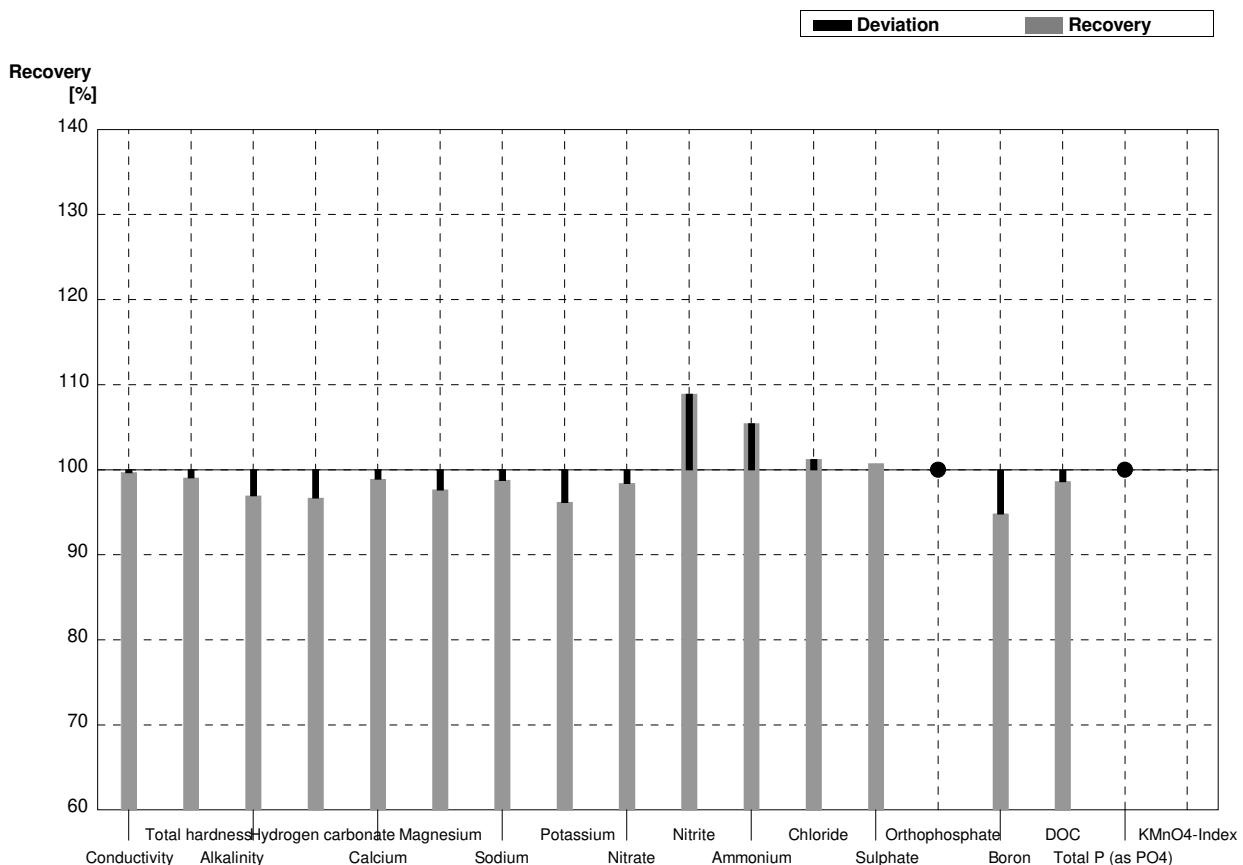
**Sample N154A**  
**Laboratory AK**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	173	7	$\mu\text{S}/\text{cm}$	100%
Total hardness	0,438	0,004	0,438	0,026	$\text{mmol/l}$	100%
Alkalinity	0,88	0,01	0,89	0,08	$\text{mmol/l}$	101%
Hydrogen carbonate	50,5	0,2	51,4	5,0	$\text{mg/l}$	102%
Calcium	12,7	0,2	12,7	0,7	$\text{mg/l}$	100%
Magnesium	2,95	0,03	2,93	0,23	$\text{mg/l}$	99%
Sodium	15,1	0,1	15,1	0,8	$\text{mg/l}$	100%
Potassium	3,18	0,02	3,15	0,16	$\text{mg/l}$	99%
Nitrate	16,8	0,3	16,5	1,0	$\text{mg/l}$	98%
Nitrite	0,0403	0,0006	0,0410	0,005	$\text{mg/l}$	102%
Ammonium	<0,01		<0,010		$\text{mg/l}$	•
Chloride	10,9	0,2	11,0	1,1	$\text{mg/l}$	101%
Sulphate	8,81	0,11	8,9	1,0	$\text{mg/l}$	101%
Orthophosphate	0,086	0,001	0,084	0,011	$\text{mg/l}$	98%
Boron	0,0152	0,0010	0,0152	0,0029	$\text{mg/l}$	100%
DOC	1,96	0,04	2,02	0,47	$\text{mg/l}$	103%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,122	0,020	$\text{mg/l}$	96%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



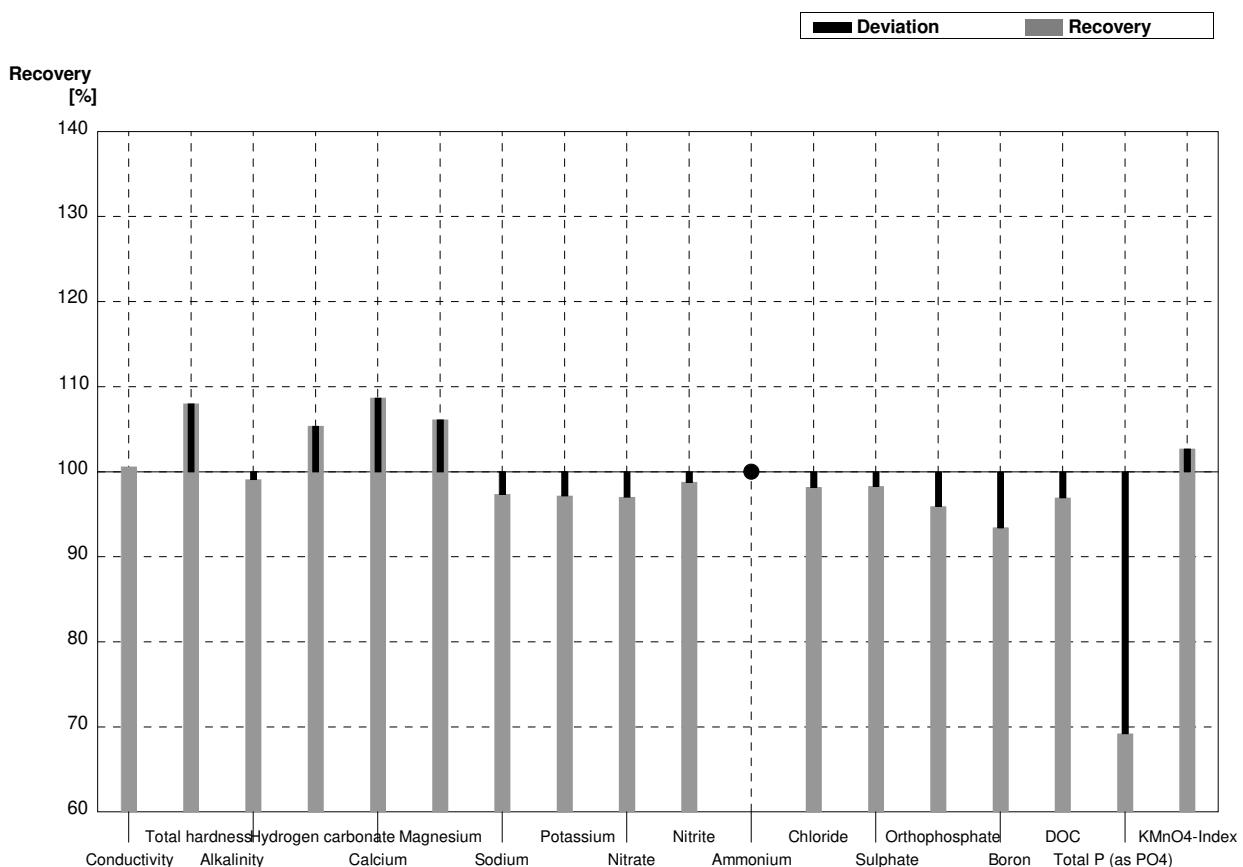
**Sample N154B**  
**Laboratory AK**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	620	25	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,09	0,11	$\text{mmol/l}$	99%
Alkalinity	4,58	0,04	4,44	0,30	$\text{mmol/l}$	97%
Hydrogen carbonate	277	2	267,8	18,6	$\text{mg/l}$	97%
Calcium	63,6	0,8	62,9	3,0	$\text{mg/l}$	99%
Magnesium	12,8	0,1	12,5	0,8	$\text{mg/l}$	98%
Sodium	48,8	0,5	48,2	2,6	$\text{mg/l}$	99%
Potassium	8,11	0,06	7,8	0,3	$\text{mg/l}$	96%
Nitrate	25,4	0,4	25,0	1,6	$\text{mg/l}$	98%
Nitrite	0,0101	0,0005	0,0110	0,003	$\text{mg/l}$	109%
Ammonium	0,0313	0,0050	0,0330	0,0074	$\text{mg/l}$	105%
Chloride	24,2	0,5	24,5	2,1	$\text{mg/l}$	101%
Sulphate	41,1	0,5	41,4	3,9	$\text{mg/l}$	101%
Orthophosphate	<0,009		<0,010		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0385	0,0056	$\text{mg/l}$	95%
DOC	7,28	0,05	7,18	1,30	$\text{mg/l}$	99%
Total P (as PO <sub>4</sub> )	<0,009		<0,010		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



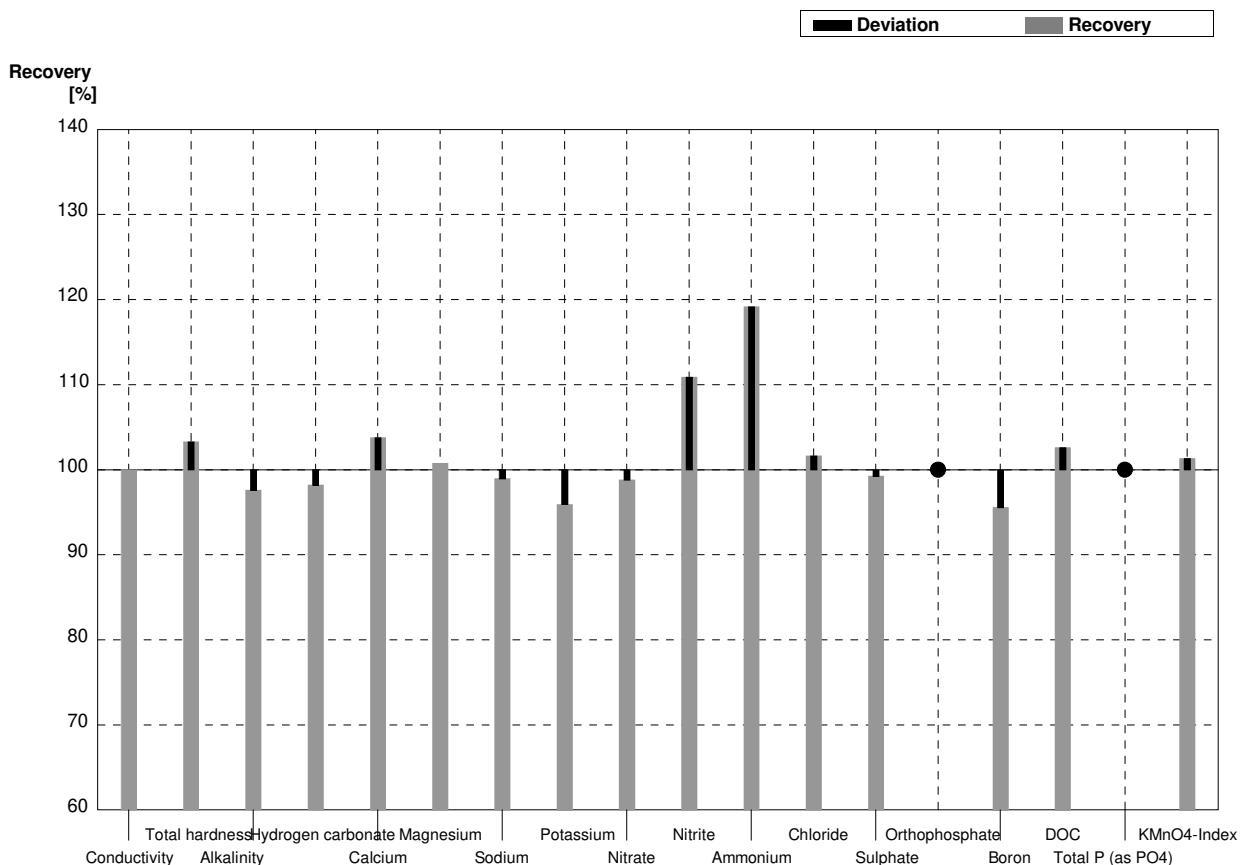
**Sample N154A**  
**Laboratory AL**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	174	17	$\mu\text{S}/\text{cm}$	101%
Total hardness	0,438	0,004	0,473	0,047	mmol/l	108%
Alkalinity	0,88	0,01	0,872	0,087	mmol/l	99%
Hydrogen carbonate	50,5	0,2	53,2	5,3	mg/l	105%
Calcium	12,7	0,2	13,8	1,4	mg/l	109%
Magnesium	2,95	0,03	3,13	0,31	mg/l	106%
Sodium	15,1	0,1	14,7	1,5	mg/l	97%
Potassium	3,18	0,02	3,09	0,31	mg/l	97%
Nitrate	16,8	0,3	16,3	1,6	mg/l	97%
Nitrite	0,0403	0,0006	0,0398	0,0040	mg/l	99%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	10,9	0,2	10,7	1,1	mg/l	98%
Sulphate	8,81	0,11	8,66	0,87	mg/l	98%
Orthophosphate	0,086	0,001	0,0825	0,0083	mg/l	96%
Boron	0,0152	0,0010	0,0142	0,0014	mg/l	93%
DOC	1,96	0,04	1,90	0,19	mg/l	97%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,0879	0,018	mg/l	69%
KMnO <sub>4</sub> -Index	1,48	0,14	1,52	0,30	mg/l	103%



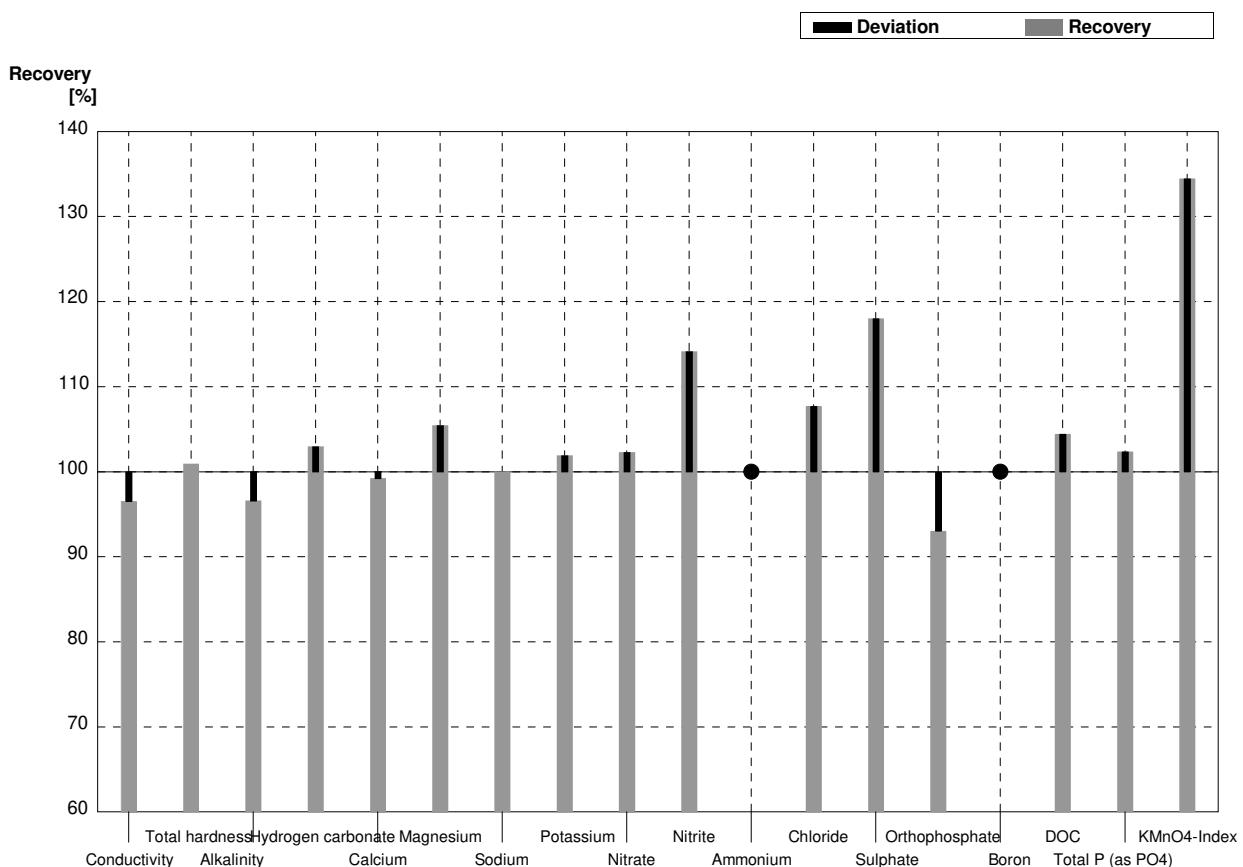
**Sample N154B**  
**Laboratory AL**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	622	62	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,18	0,22	$\text{mmol/l}$	103%
Alkalinity	4,58	0,04	4,47	0,45	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	272	27	$\text{mg/l}$	98%
Calcium	63,6	0,8	66,0	6,6	$\text{mg/l}$	104%
Magnesium	12,8	0,1	12,9	1,29	$\text{mg/l}$	101%
Sodium	48,8	0,5	48,3	4,83	$\text{mg/l}$	99%
Potassium	8,11	0,06	7,78	0,78	$\text{mg/l}$	96%
Nitrate	25,4	0,4	25,1	2,5	$\text{mg/l}$	99%
Nitrite	0,0101	0,0005	0,0112	0,0011	$\text{mg/l}$	111%
Ammonium	0,0313	0,0050	0,0373	0,0037	$\text{mg/l}$	119%
Chloride	24,2	0,5	24,6	2,5	$\text{mg/l}$	102%
Sulphate	41,1	0,5	40,8	4,1	$\text{mg/l}$	99%
Orthophosphate	<0,009		<0,008		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0388	0,0039	$\text{mg/l}$	96%
DOC	7,28	0,05	7,47	0,75	$\text{mg/l}$	103%
Total P (as PO <sub>4</sub> )	<0,009		<0,015		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	4,63	0,93	$\text{mg/l}$	101%



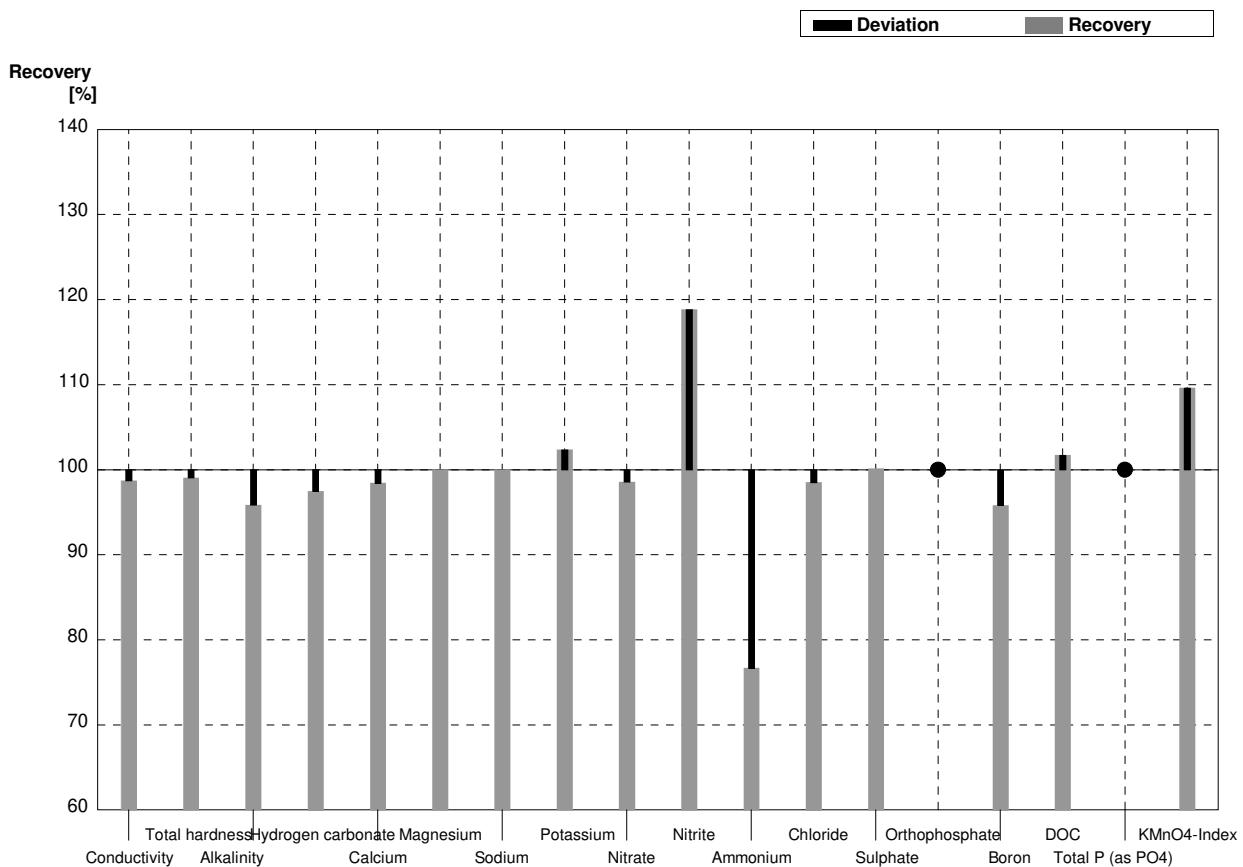
**Sample N154A**  
**Laboratory AM**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	167	14,2	$\mu\text{S}/\text{cm}$	97%
Total hardness	0,438	0,004	0,442	0,05	$\text{mmol/l}$	101%
Alkalinity	0,88	0,01	0,85	0,04	$\text{mmol/l}$	97%
Hydrogen carbonate	50,5	0,2	52	2,3	$\text{mg/l}$	103%
Calcium	12,7	0,2	12,6	1,3	$\text{mg/l}$	99%
Magnesium	2,95	0,03	3,11	0,31	$\text{mg/l}$	105%
Sodium	15,1	0,1	15,1	1,5	$\text{mg/l}$	100%
Potassium	3,18	0,02	3,24	0,33	$\text{mg/l}$	102%
Nitrate	16,8	0,3	17,182	1,76	$\text{mg/l}$	102%
Nitrite	0,0403	0,0006	0,0460	0,0046	$\text{mg/l}$	114%
Ammonium	<0,01		<0,010		$\text{mg/l}$	•
Chloride	10,9	0,2	11,739	1,55	$\text{mg/l}$	108%
Sulphate	8,81	0,11	10,396	0,559	$\text{mg/l}$	118%
Orthophosphate	0,086	0,001	0,080	0,01	$\text{mg/l}$	93%
Boron	0,0152	0,0010	<0,02	0,002	$\text{mg/l}$	•
DOC	1,96	0,04	2,047	0,37	$\text{mg/l}$	104%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,1300	0,016	$\text{mg/l}$	102%
KMnO <sub>4</sub> -Index	1,48	0,14	1,99	0,2	$\text{mg/l}$	134%



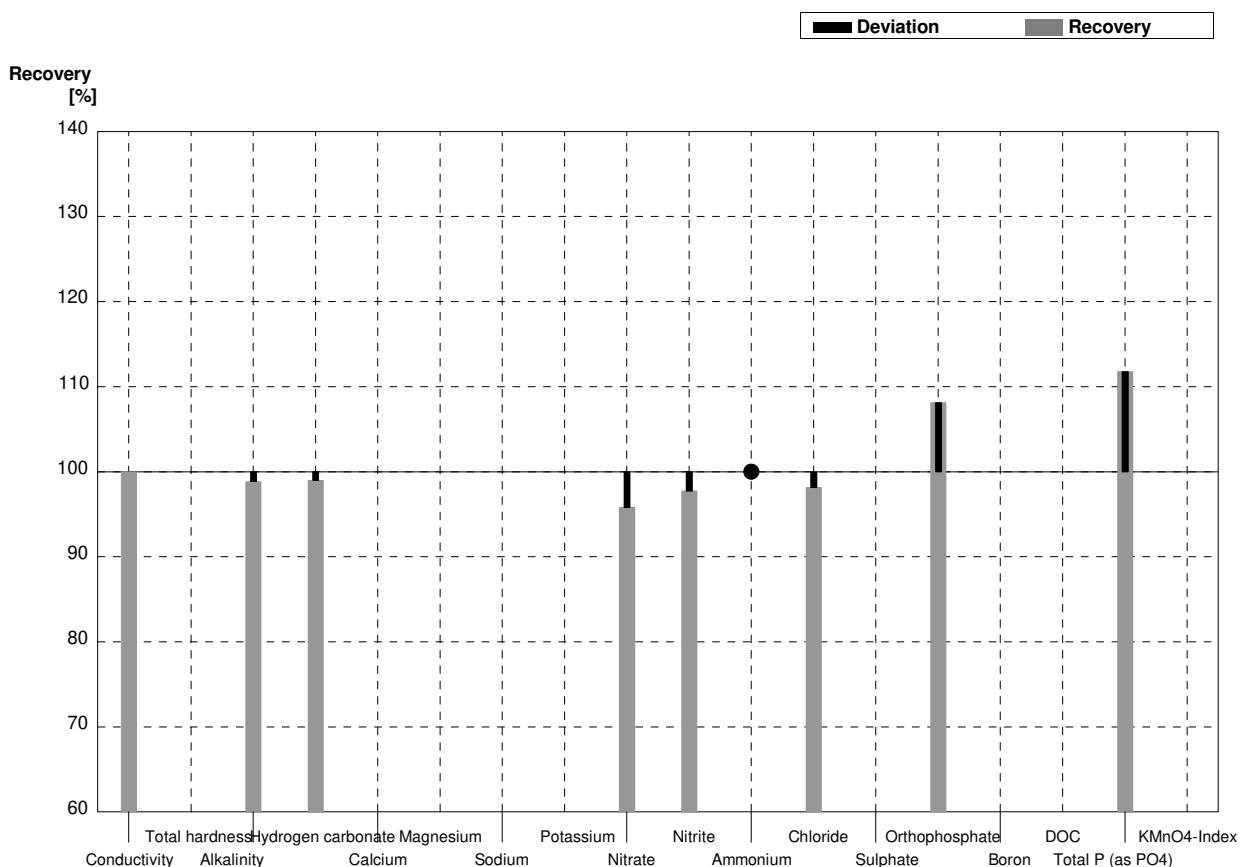
**Sample N154B**  
**Laboratory AM**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	614	52,2	$\mu\text{S}/\text{cm}$	99%
Total hardness	2,11	0,02	2,09	0,25	$\text{mmol/l}$	99%
Alkalinity	4,58	0,04	4,39	0,19	$\text{mmol/l}$	96%
Hydrogen carbonate	277	2	270	12	$\text{mg/l}$	97%
Calcium	63,6	0,8	62,6	6,2	$\text{mg/l}$	98%
Magnesium	12,8	0,1	12,8	1,3	$\text{mg/l}$	100%
Sodium	48,8	0,5	48,8	4,8	$\text{mg/l}$	100%
Potassium	8,11	0,06	8,3	0,83	$\text{mg/l}$	102%
Nitrate	25,4	0,4	25,034	2,579	$\text{mg/l}$	99%
Nitrite	0,0101	0,0005	0,0120	0,0012	$\text{mg/l}$	119%
Ammonium	0,0313	0,0050	0,0240	0,0028	$\text{mg/l}$	77%
Chloride	24,2	0,5	23,836	3,15	$\text{mg/l}$	98%
Sulphate	41,1	0,5	41,150	2,058	$\text{mg/l}$	100%
Orthophosphate	<0,009		<0,015		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0389	0,004	$\text{mg/l}$	96%
DOC	7,28	0,05	7,405	1,34	$\text{mg/l}$	102%
Total P (as PO <sub>4</sub> )	<0,009		<0,015		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	5,01	0,5	$\text{mg/l}$	110%



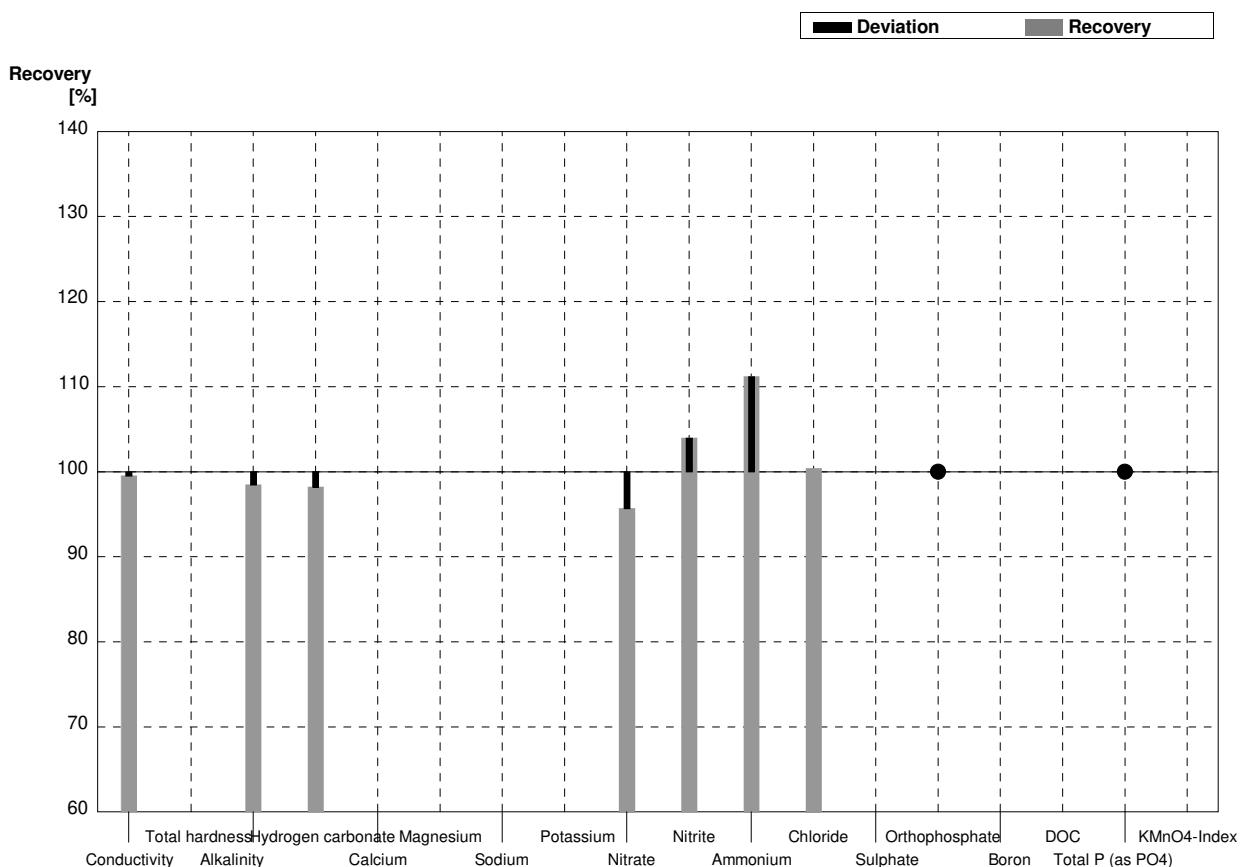
**Sample N154A**  
**Laboratory AN**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	173	1,23	$\mu\text{S}/\text{cm}$	100%
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01	0,87	0,02	$\text{mmol/l}$	99%
Hydrogen carbonate	50,5	0,2	50,0	0,72	$\text{mg/l}$	99%
Calcium	12,7	0,2			$\text{mg/l}$	
Magnesium	2,95	0,03			$\text{mg/l}$	
Sodium	15,1	0,1			$\text{mg/l}$	
Potassium	3,18	0,02			$\text{mg/l}$	
Nitrate	16,8	0,3	16,1	1,10	$\text{mg/l}$	96%
Nitrite	0,0403	0,0006	0,0394	0,0039	$\text{mg/l}$	98%
Ammonium	<0,01		0,0077	0,0012	$\text{mg/l}$	•
Chloride	10,9	0,2	10,7	0,11	$\text{mg/l}$	98%
Sulphate	8,81	0,11			$\text{mg/l}$	
Orthophosphate	0,086	0,001	0,093	0,011	$\text{mg/l}$	108%
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001	0,142	0,019	$\text{mg/l}$	112%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



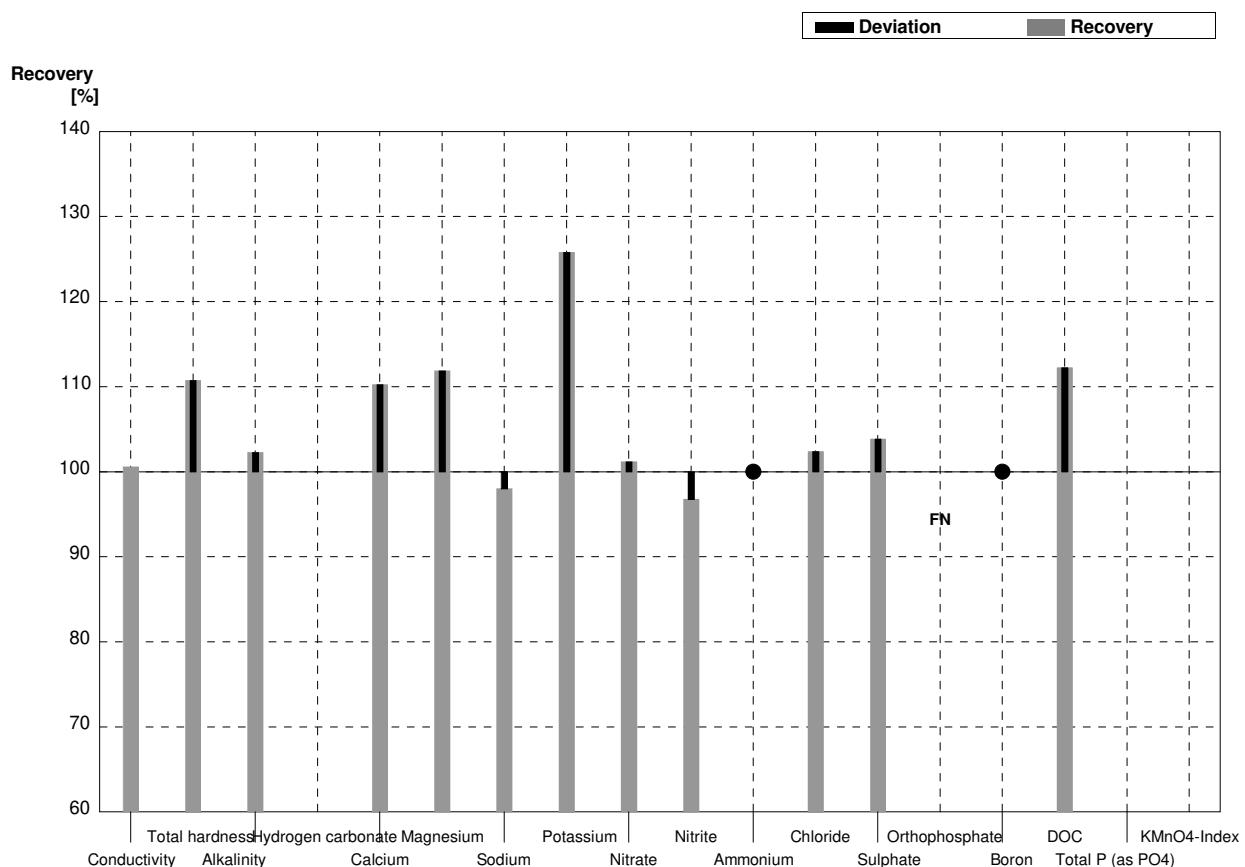
**Sample N154B**  
**Laboratory AN**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	619	4,38	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02			$\text{mmol/l}$	
Alkalinity	4,58	0,04	4,51	0,13	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	272	3,93	$\text{mg/l}$	98%
Calcium	63,6	0,8			$\text{mg/l}$	
Magnesium	12,8	0,1			$\text{mg/l}$	
Sodium	48,8	0,5			$\text{mg/l}$	
Potassium	8,11	0,06			$\text{mg/l}$	
Nitrate	25,4	0,4	24,3	1,66	$\text{mg/l}$	96%
Nitrite	0,0101	0,0005	0,0105	0,0010	$\text{mg/l}$	104%
Ammonium	0,0313	0,0050	0,0348	0,0053	$\text{mg/l}$	111%
Chloride	24,2	0,5	24,3	0,25	$\text{mg/l}$	100%
Sulphate	41,1	0,5			$\text{mg/l}$	
Orthophosphate	<0,009		<0,006	0	$\text{mg/l}$	•
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	<0,009		<0,006	0	$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



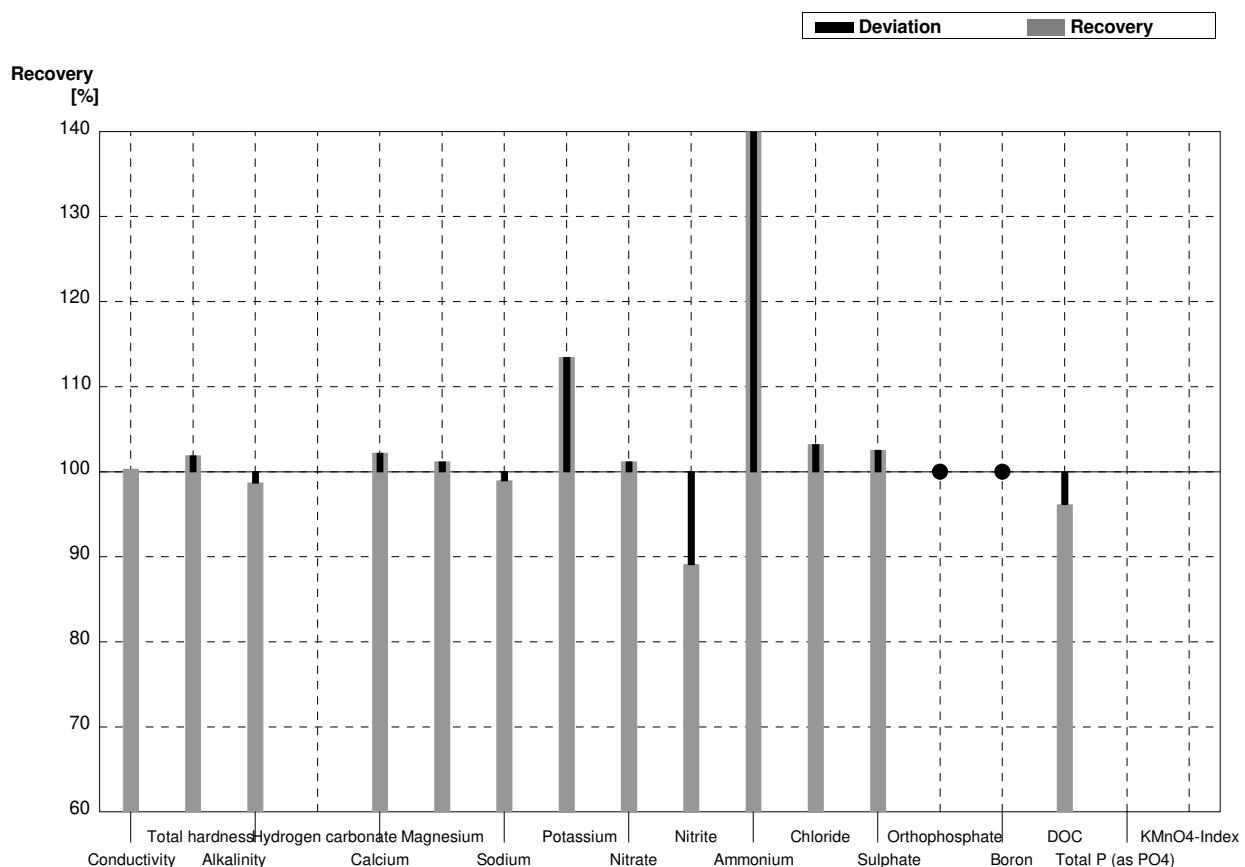
**Sample N154A**  
**Laboratory AO**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	174	30	$\mu\text{S}/\text{cm}$	101%
Total hardness	0,438	0,004	0,485	0,05	$\text{mmol/l}$	111%
Alkalinity	0,88	0,01	0,900	0,02	$\text{mmol/l}$	102%
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2	14,0	0,6	$\text{mg/l}$	110%
Magnesium	2,95	0,03	3,30	0,6	$\text{mg/l}$	112%
Sodium	15,1	0,1	14,8	0,3	$\text{mg/l}$	98%
Potassium	3,18	0,02	4,00	0,06	$\text{mg/l}$	126%
Nitrate	16,8	0,3	17,0	0,5	$\text{mg/l}$	101%
Nitrite	0,0403	0,0006	0,0390	0,015	$\text{mg/l}$	97%
Ammonium	<0,01		<0,030	0,080	$\text{mg/l}$	•
Chloride	10,9	0,2	11,16	0,25	$\text{mg/l}$	102%
Sulphate	8,81	0,11	9,15	3,0	$\text{mg/l}$	104%
Orthophosphate	0,086	0,001	<0,050	0,07	$\text{mg/l}$	FN
Boron	0,0152	0,0010	<0,050	0,07	$\text{mg/l}$	•
DOC	1,96	0,04	2,20	0,03	$\text{mg/l}$	112%
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



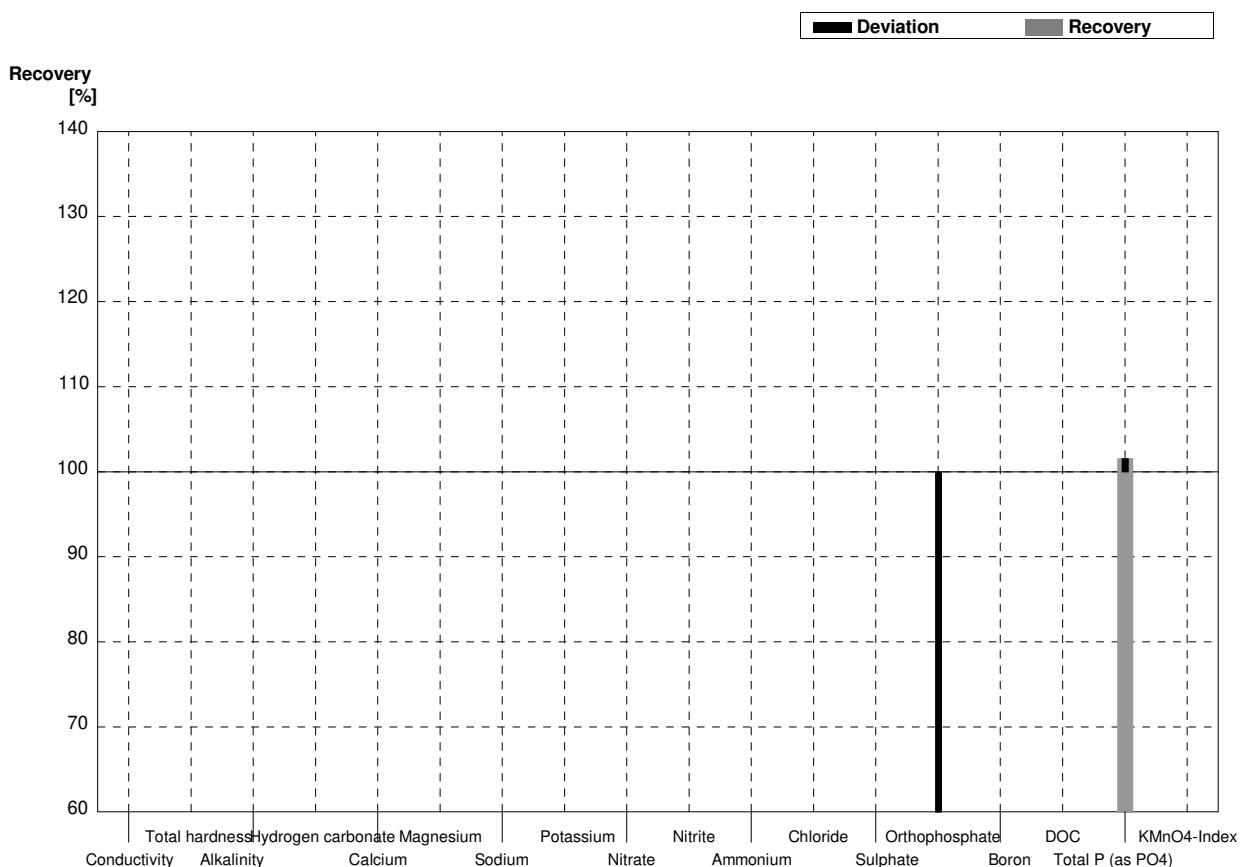
**Sample N154B**  
**Laboratory AO**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	624	30	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,15	0,05	$\text{mmol/l}$	102%
Alkalinity	4,58	0,04	4,52	0,02	$\text{mmol/l}$	99%
Hydrogen carbonate	277	2			$\text{mg/l}$	
Calcium	63,6	0,8	65,0	0,6	$\text{mg/l}$	102%
Magnesium	12,8	0,1	12,95	0,6	$\text{mg/l}$	101%
Sodium	48,8	0,5	48,3	0,3	$\text{mg/l}$	99%
Potassium	8,11	0,06	9,20	0,06	$\text{mg/l}$	113%
Nitrate	25,4	0,4	25,7	0,5	$\text{mg/l}$	101%
Nitrite	0,0101	0,0005	0,0090	0,015	$\text{mg/l}$	89%
Ammonium	0,0313	0,0050	0,050	0,080	$\text{mg/l}$	160%
Chloride	24,2	0,5	24,98	0,25	$\text{mg/l}$	103%
Sulphate	41,1	0,5	42,14	3,0	$\text{mg/l}$	103%
Orthophosphate	<0,009		<0,050	0,07	$\text{mg/l}$	•
Boron	0,0406	0,0003	<0,050	0,07	$\text{mg/l}$	•
DOC	7,28	0,05	7,00	0,03	$\text{mg/l}$	96%
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



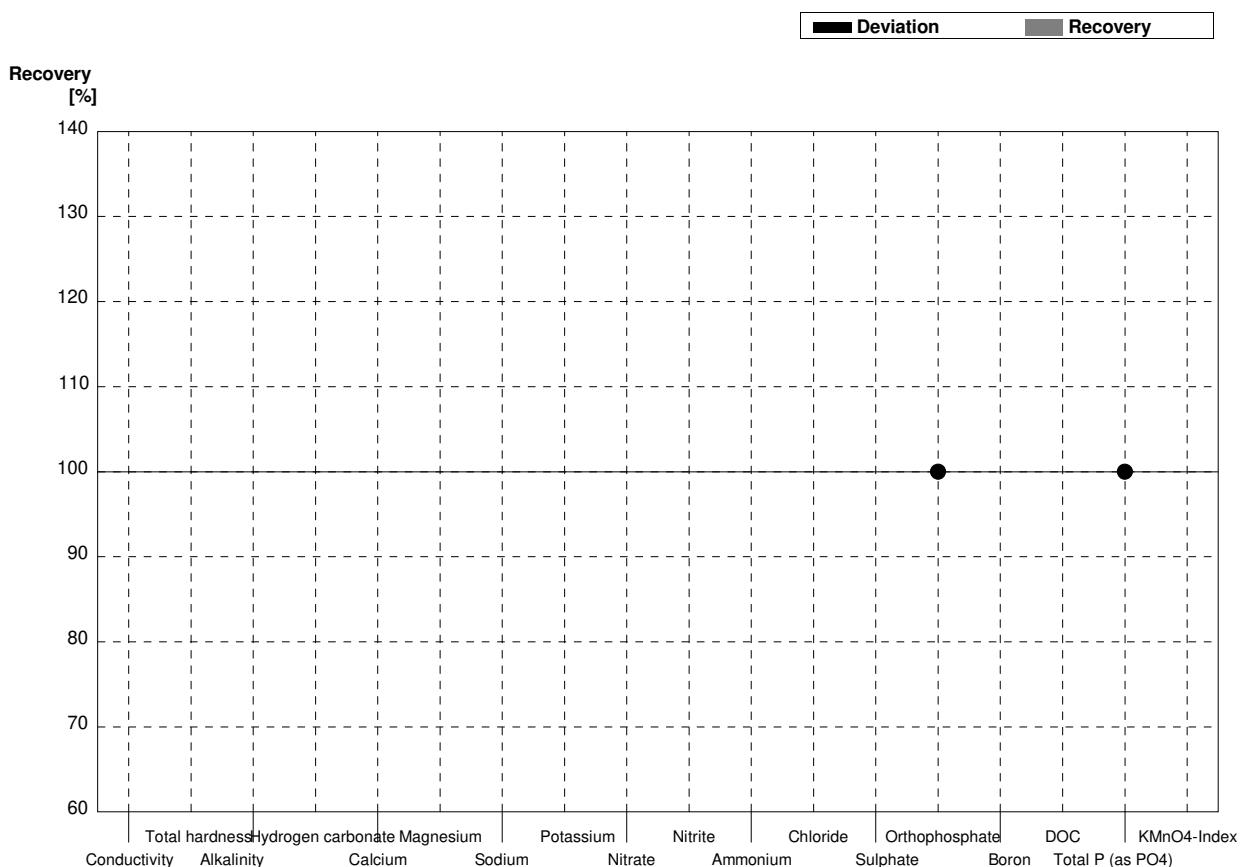
**Sample N154A**  
**Laboratory AP**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1			$\mu\text{S}/\text{cm}$	
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01			$\text{mmol/l}$	
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2			$\text{mg/l}$	
Magnesium	2,95	0,03			$\text{mg/l}$	
Sodium	15,1	0,1			$\text{mg/l}$	
Potassium	3,18	0,02			$\text{mg/l}$	
Nitrate	16,8	0,3			$\text{mg/l}$	
Nitrite	0,0403	0,0006			$\text{mg/l}$	
Ammonium	<0,01				$\text{mg/l}$	
Chloride	10,9	0,2			$\text{mg/l}$	
Sulphate	8,81	0,11			$\text{mg/l}$	
Orthophosphate	0,086	0,001	0,0307	0,002	$\text{mg/l}$	36%
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001	0,129	0,002	$\text{mg/l}$	102%
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



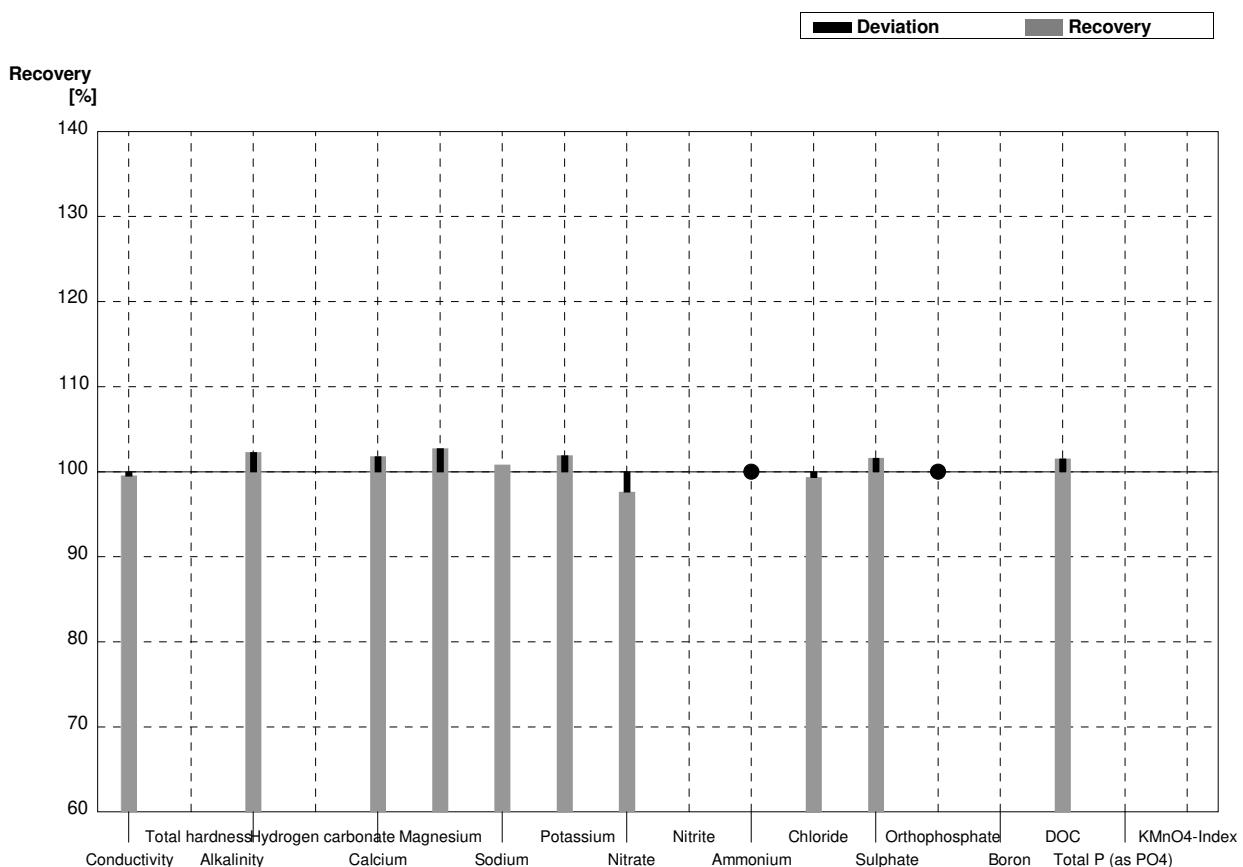
**Sample N154B**  
**Laboratory AP**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	622	2			µS/cm	
Total hardness	2,11	0,02			mmol/l	
Alkalinity	4,58	0,04			mmol/l	
Hydrogen carbonate	277	2			mg/l	
Calcium	63,6	0,8			mg/l	
Magnesium	12,8	0,1			mg/l	
Sodium	48,8	0,5			mg/l	
Potassium	8,11	0,06			mg/l	
Nitrate	25,4	0,4			mg/l	
Nitrite	0,0101	0,0005			mg/l	
Ammonium	0,0313	0,0050			mg/l	
Chloride	24,2	0,5			mg/l	
Sulphate	41,1	0,5			mg/l	
Orthophosphate	<0,009		<0,01	0,002	mg/l	•
Boron	0,0406	0,0003			mg/l	
DOC	7,28	0,05			mg/l	
Total P (as PO <sub>4</sub> )	<0,009		<0,01	0,002	mg/l	•
KMnO <sub>4</sub> -Index	4,57	0,13			mg/l	



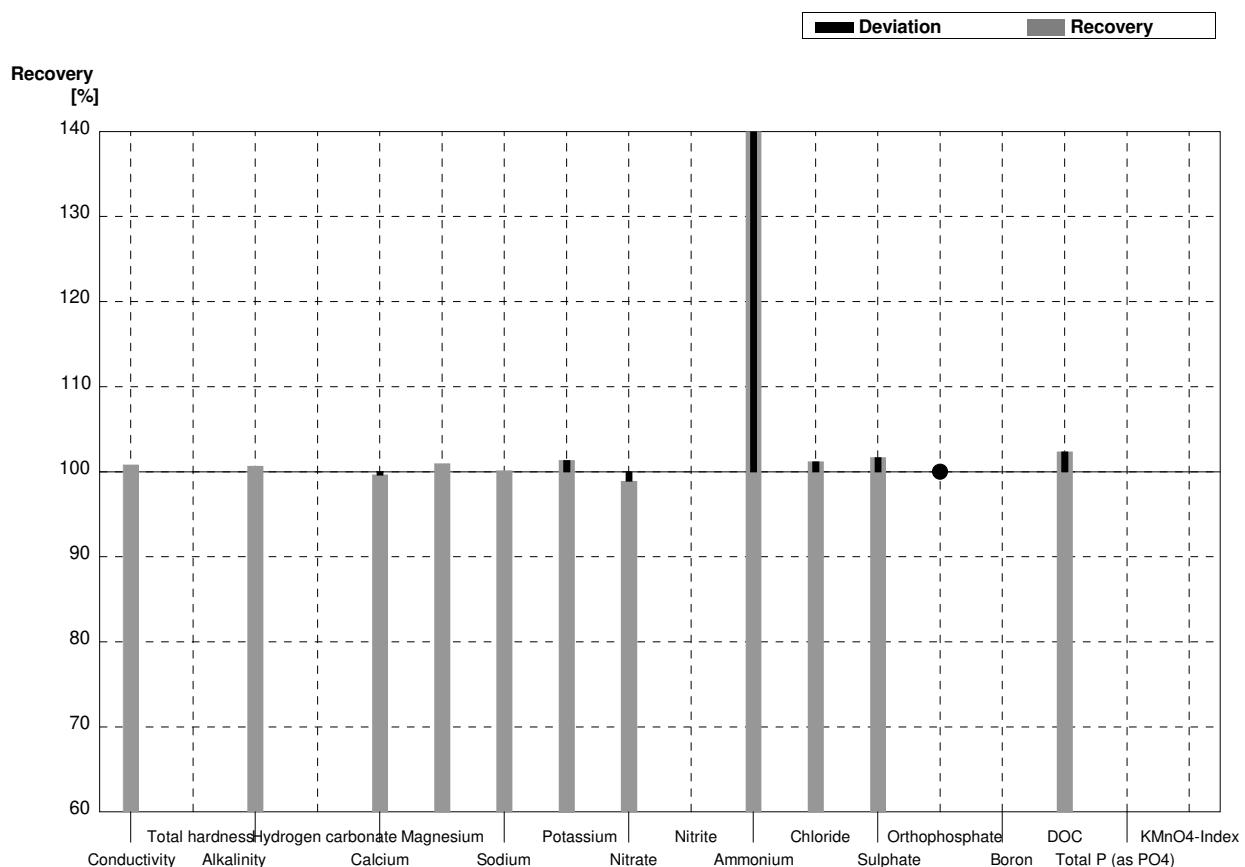
**Sample N154A**  
**Laboratory AQ**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	172,2	16,0	$\mu\text{S}/\text{cm}$	100%
Total hardness	0,438	0,004			$\text{mmol/l}$	
Alkalinity	0,88	0,01	0,90	0,09	$\text{mmol/l}$	102%
Hydrogen carbonate	50,5	0,2			$\text{mg/l}$	
Calcium	12,7	0,2	12,93	1,29	$\text{mg/l}$	102%
Magnesium	2,95	0,03	3,03	0,30	$\text{mg/l}$	103%
Sodium	15,1	0,1	15,22	1,83	$\text{mg/l}$	101%
Potassium	3,18	0,02	3,24	0,49	$\text{mg/l}$	102%
Nitrate	16,8	0,3	16,40	1,62	$\text{mg/l}$	98%
Nitrite	0,0403	0,0006			$\text{mg/l}$	
Ammonium	<0,01		<0,04		$\text{mg/l}$	•
Chloride	10,9	0,2	10,83	1,57	$\text{mg/l}$	99%
Sulphate	8,81	0,11	8,95	1,39	$\text{mg/l}$	102%
Orthophosphate	0,086	0,001	<0,13		$\text{mg/l}$	•
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04	1,99	0,26	$\text{mg/l}$	102%
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



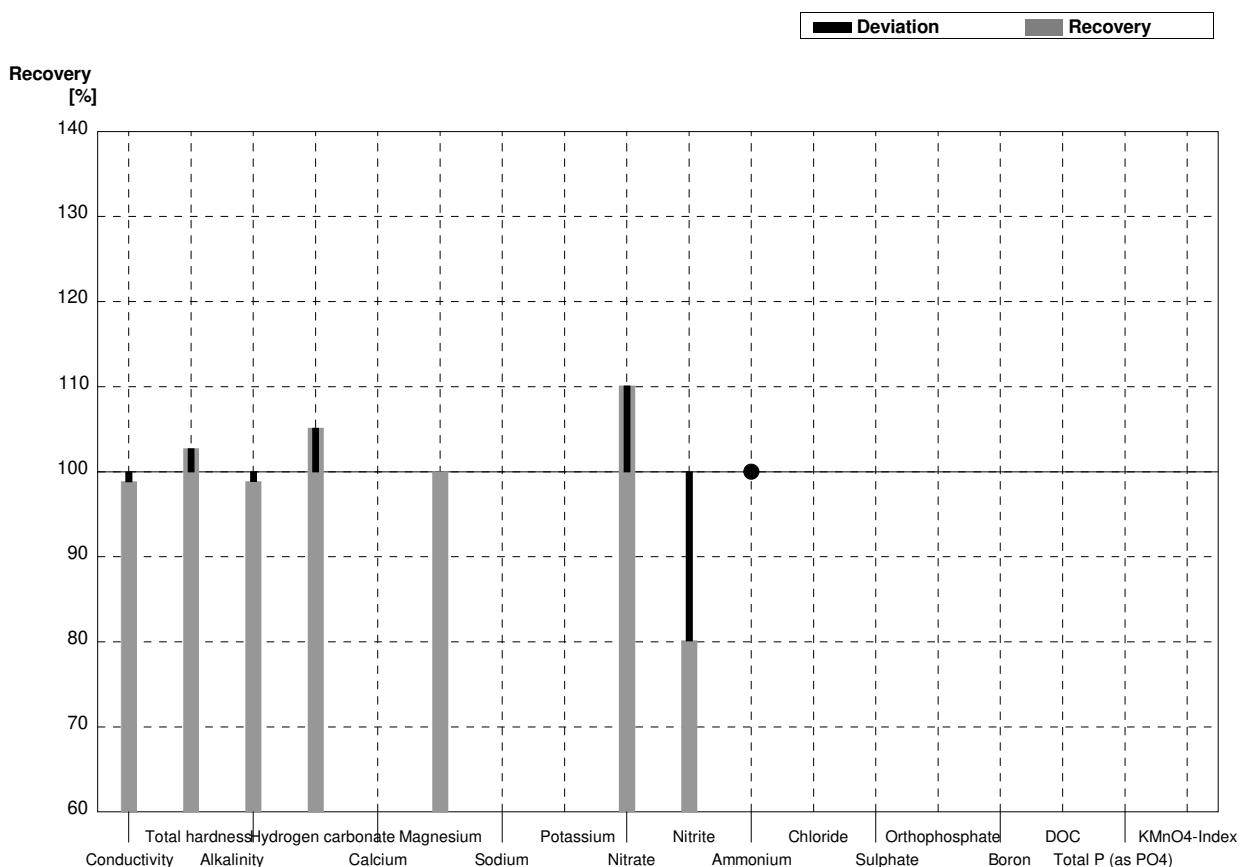
**Sample N154B**  
**Laboratory AQ**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	627	58	$\mu\text{S}/\text{cm}$	101%
Total hardness	2,11	0,02			$\text{mmol/l}$	
Alkalinity	4,58	0,04	4,61	0,47	$\text{mmol/l}$	101%
Hydrogen carbonate	277	2			$\text{mg/l}$	
Calcium	63,6	0,8	63,36	6,34	$\text{mg/l}$	100%
Magnesium	12,8	0,1	12,92	1,29	$\text{mg/l}$	101%
Sodium	48,8	0,5	48,86	5,86	$\text{mg/l}$	100%
Potassium	8,11	0,06	8,22	1,23	$\text{mg/l}$	101%
Nitrate	25,4	0,4	25,12	5,49	$\text{mg/l}$	99%
Nitrite	0,0101	0,0005			$\text{mg/l}$	
Ammonium	0,0313	0,0050	0,0517	0,0068	$\text{mg/l}$	165%
Chloride	24,2	0,5	24,49	3,55	$\text{mg/l}$	101%
Sulphate	41,1	0,5	41,79	6,48	$\text{mg/l}$	102%
Orthophosphate	<0,009		<0,13		$\text{mg/l}$	•
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05	7,45	0,96	$\text{mg/l}$	102%
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



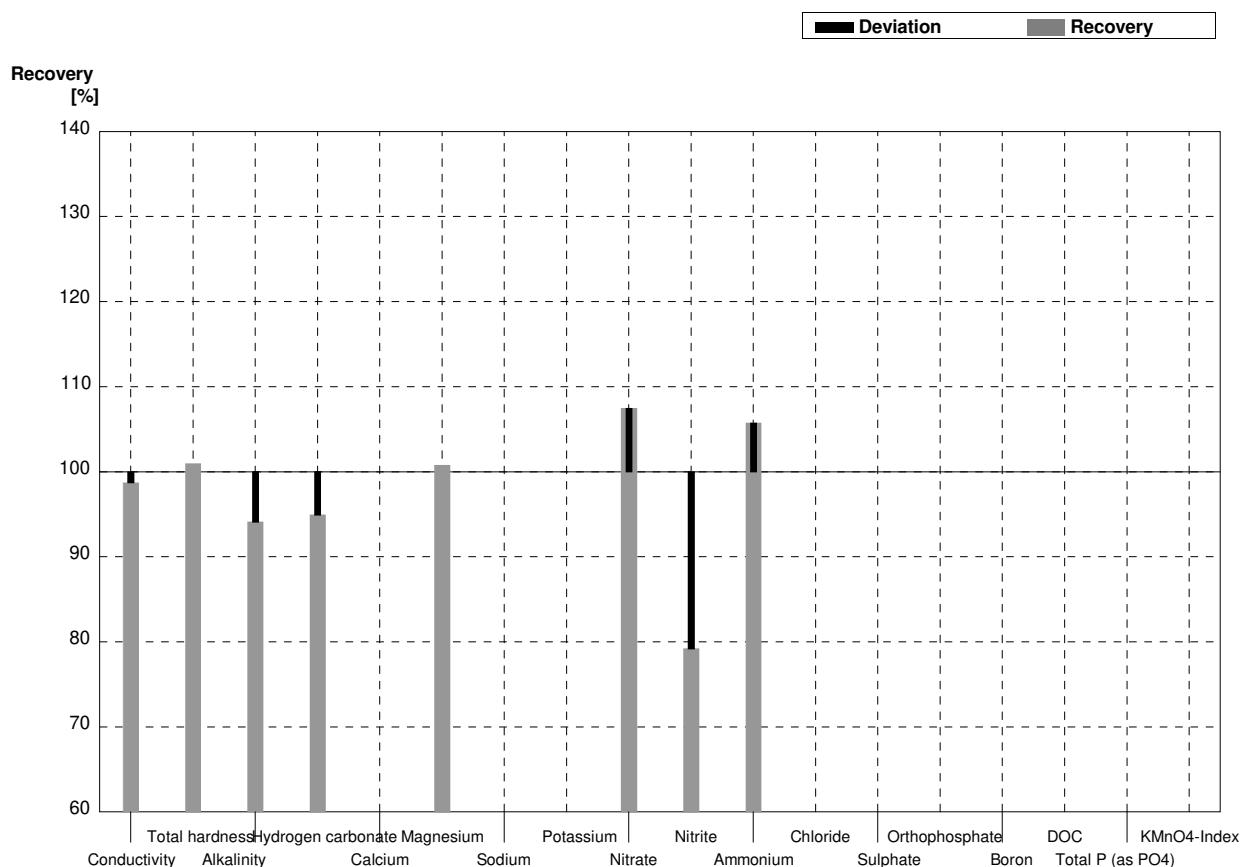
**Sample N154A**  
**Laboratory AR**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	171	10	$\mu\text{S}/\text{cm}$	99%
Total hardness	0,438	0,004	0,450	0,05	$\text{mmol/l}$	103%
Alkalinity	0,88	0,01	0,87	0,07	$\text{mmol/l}$	99%
Hydrogen carbonate	50,5	0,2	53,1	5,0	$\text{mg/l}$	105%
Calcium	12,7	0,2			$\text{mg/l}$	
Magnesium	2,95	0,03	2,95	0,3	$\text{mg/l}$	100%
Sodium	15,1	0,1			$\text{mg/l}$	
Potassium	3,18	0,02			$\text{mg/l}$	
Nitrate	16,8	0,3	18,5	1,8	$\text{mg/l}$	110%
Nitrite	0,0403	0,0006	0,0323	0,003	$\text{mg/l}$	80%
Ammonium	<0,01		<0,01		$\text{mg/l}$	•
Chloride	10,9	0,2			$\text{mg/l}$	
Sulphate	8,81	0,11			$\text{mg/l}$	
Orthophosphate	0,086	0,001			$\text{mg/l}$	
Boron	0,0152	0,0010			$\text{mg/l}$	
DOC	1,96	0,04			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	0,127	0,001			$\text{mg/l}$	
KMnO <sub>4</sub> -Index	1,48	0,14			$\text{mg/l}$	



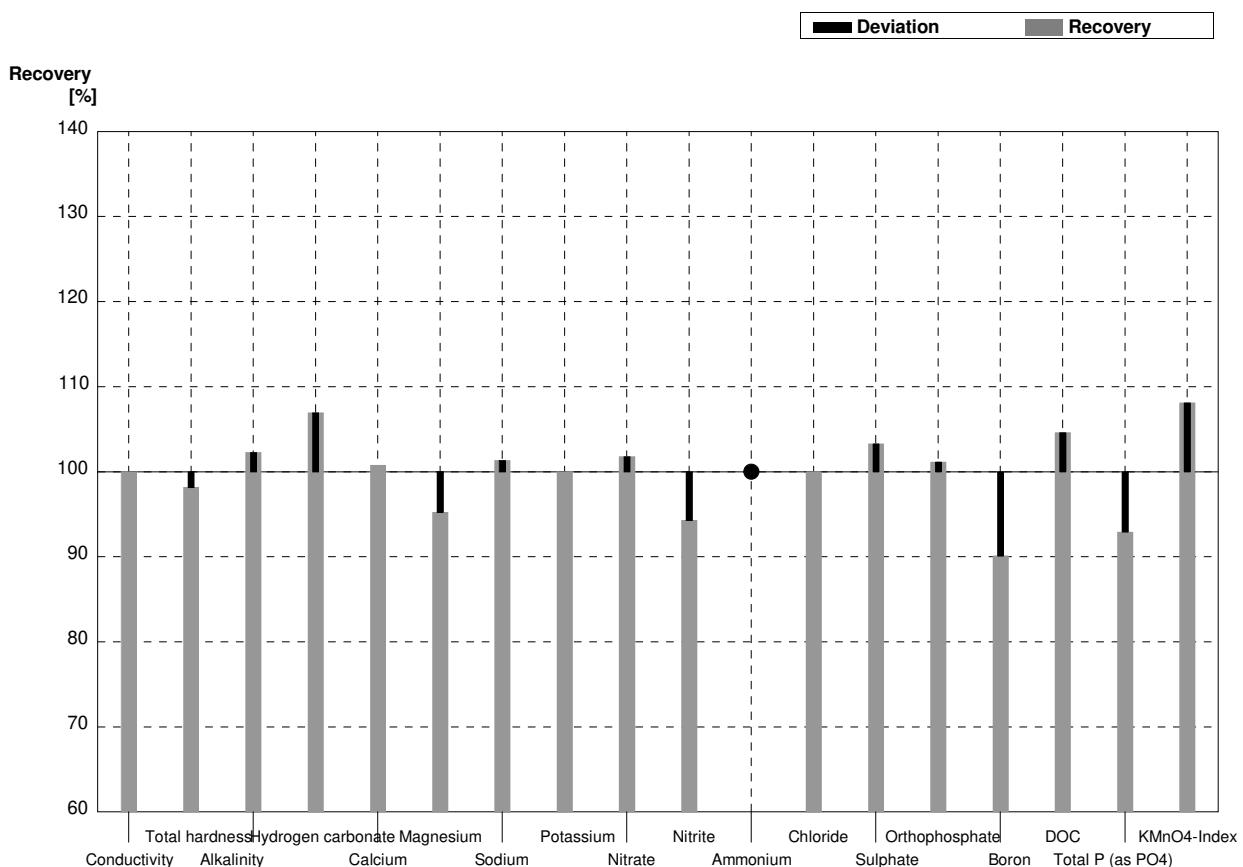
**Sample N154B**  
**Laboratory AR**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	614	50	$\mu\text{S}/\text{cm}$	99%
Total hardness	2,11	0,02	2,13	0,2	$\text{mmol/l}$	101%
Alkalinity	4,58	0,04	4,31	0,4	$\text{mmol/l}$	94%
Hydrogen carbonate	277	2	263	20	$\text{mg/l}$	95%
Calcium	63,6	0,8			$\text{mg/l}$	
Magnesium	12,8	0,1	12,9	1,3	$\text{mg/l}$	101%
Sodium	48,8	0,5			$\text{mg/l}$	
Potassium	8,11	0,06			$\text{mg/l}$	
Nitrate	25,4	0,4	27,3	2,5	$\text{mg/l}$	107%
Nitrite	0,0101	0,0005	0,0080	0,001	$\text{mg/l}$	79%
Ammonium	0,0313	0,0050	0,0331	0,003	$\text{mg/l}$	106%
Chloride	24,2	0,5			$\text{mg/l}$	
Sulphate	41,1	0,5			$\text{mg/l}$	
Orthophosphate	<0,009				$\text{mg/l}$	
Boron	0,0406	0,0003			$\text{mg/l}$	
DOC	7,28	0,05			$\text{mg/l}$	
Total P (as PO <sub>4</sub> )	<0,009				$\text{mg/l}$	
KMnO <sub>4</sub> -Index	4,57	0,13			$\text{mg/l}$	



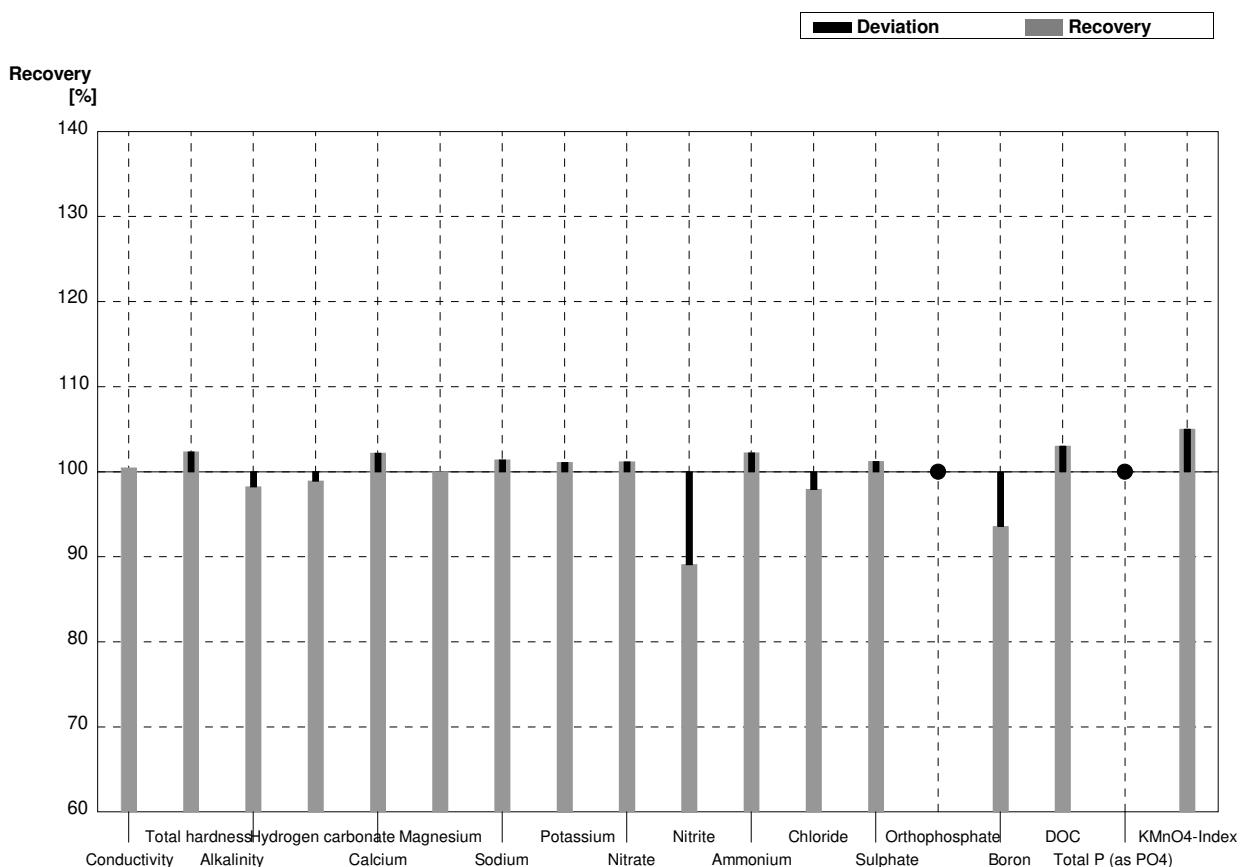
**Sample N154A**  
**Laboratory AS**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	173	1	173	3	$\mu\text{S}/\text{cm}$	100%
Total hardness	0,438	0,004	0,430	0,043	$\text{mmol/l}$	98%
Alkalinity	0,88	0,01	0,90	0,1	$\text{mmol/l}$	102%
Hydrogen carbonate	50,5	0,2	54	4	$\text{mg/l}$	107%
Calcium	12,7	0,2	12,8	1,0	$\text{mg/l}$	101%
Magnesium	2,95	0,03	2,81	0,17	$\text{mg/l}$	95%
Sodium	15,1	0,1	15,3	0,5	$\text{mg/l}$	101%
Potassium	3,18	0,02	3,18	0,25	$\text{mg/l}$	100%
Nitrate	16,8	0,3	17,1	1,2	$\text{mg/l}$	102%
Nitrite	0,0403	0,0006	0,0380	0,004	$\text{mg/l}$	94%
Ammonium	<0,01		<0,02		$\text{mg/l}$	•
Chloride	10,9	0,2	10,9	0,8	$\text{mg/l}$	100%
Sulphate	8,81	0,11	9,1	0,6	$\text{mg/l}$	103%
Orthophosphate	0,086	0,001	0,087	0,013	$\text{mg/l}$	101%
Boron	0,0152	0,0010	0,0137	0,0010	$\text{mg/l}$	90%
DOC	1,96	0,04	2,05	0,29	$\text{mg/l}$	105%
Total P (as PO <sub>4</sub> )	0,127	0,001	0,118	0,021	$\text{mg/l}$	93%
KMnO <sub>4</sub> -Index	1,48	0,14	1,60	0,2	$\text{mg/l}$	108%



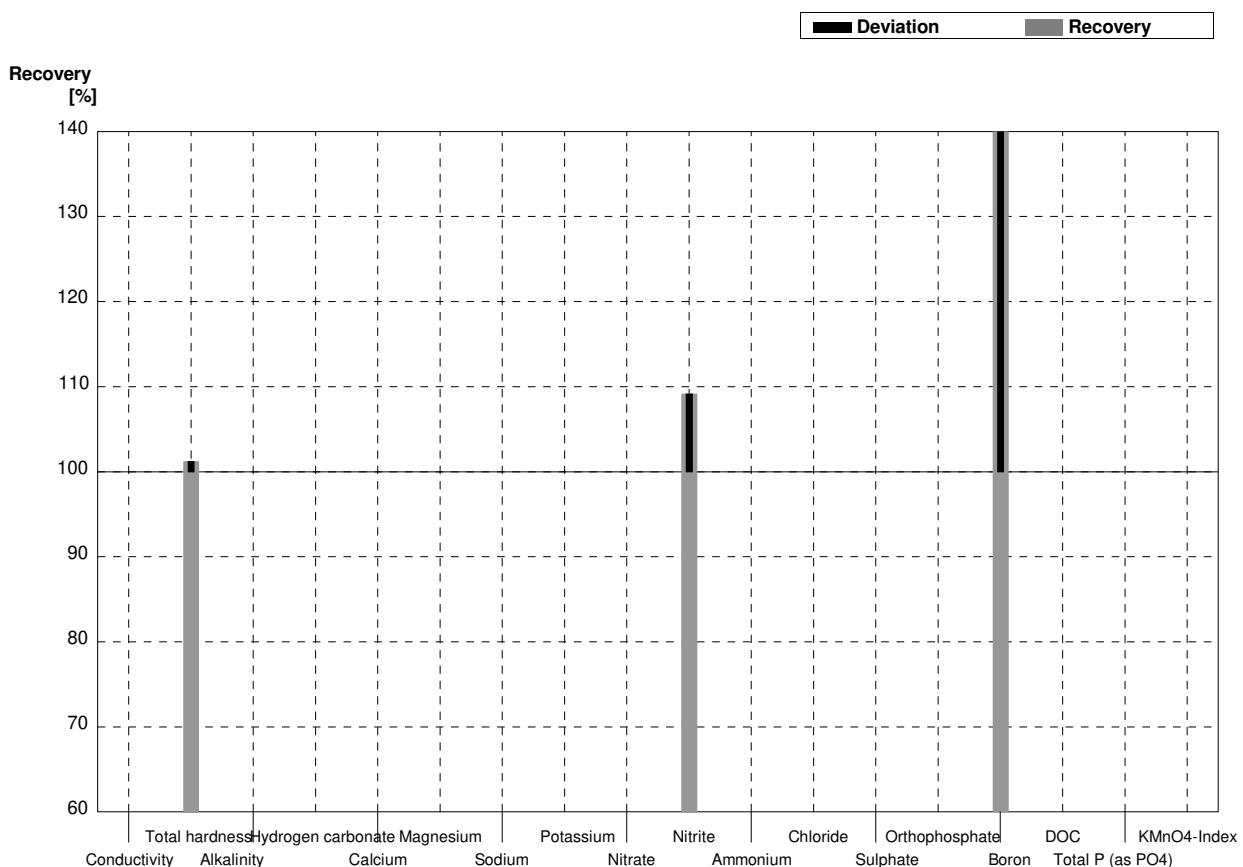
**Sample N154B**  
**Laboratory AS**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Conductivity	622	2	625	13	$\mu\text{S}/\text{cm}$	100%
Total hardness	2,11	0,02	2,16	0,22	$\text{mmol/l}$	102%
Alkalinity	4,58	0,04	4,50	0,3	$\text{mmol/l}$	98%
Hydrogen carbonate	277	2	274	22	$\text{mg/l}$	99%
Calcium	63,6	0,8	65	3	$\text{mg/l}$	102%
Magnesium	12,8	0,1	12,8	0,8	$\text{mg/l}$	100%
Sodium	48,8	0,5	49,5	2,0	$\text{mg/l}$	101%
Potassium	8,11	0,06	8,2	0,7	$\text{mg/l}$	101%
Nitrate	25,4	0,4	25,7	1,8	$\text{mg/l}$	101%
Nitrite	0,0101	0,0005	0,0090	0,001	$\text{mg/l}$	89%
Ammonium	0,0313	0,0050	0,0320	0,0100	$\text{mg/l}$	102%
Chloride	24,2	0,5	23,7	1,9	$\text{mg/l}$	98%
Sulphate	41,1	0,5	41,6	2,5	$\text{mg/l}$	101%
Orthophosphate	<0,009		<0,009		$\text{mg/l}$	•
Boron	0,0406	0,0003	0,0380	0,0027	$\text{mg/l}$	94%
DOC	7,28	0,05	7,5	1,1	$\text{mg/l}$	103%
Total P (as PO <sub>4</sub> )	<0,009		<0,009		$\text{mg/l}$	•
KMnO <sub>4</sub> -Index	4,57	0,13	4,80	0,5	$\text{mg/l}$	105%



**Sample N154A**  
**Laboratory AT**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	173	1			µS/cm	
Total hardness	0,438	0,004	0,4433		mmol/l	101%
Alkalinity	0,88	0,01			mmol/l	
Hydrogen carbonate	50,5	0,2			mg/l	
Calcium	12,7	0,2			mg/l	
Magnesium	2,95	0,03			mg/l	
Sodium	15,1	0,1			mg/l	
Potassium	3,18	0,02			mg/l	
Nitrate	16,8	0,3			mg/l	
Nitrite	0,0403	0,0006	0,0440		mg/l	109%
Ammonium	<0,01				mg/l	
Chloride	10,9	0,2			mg/l	
Sulphate	8,81	0,11			mg/l	
Orthophosphate	0,086	0,001			mg/l	
Boron	0,0152	0,0010	0,0404		mg/l	266%
DOC	1,96	0,04			mg/l	
Total P (as PO <sub>4</sub> )	0,127	0,001			mg/l	
KMnO <sub>4</sub> -Index	1,48	0,14			mg/l	



**Sample N154B**  
**Laboratory AT**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	622	2			µS/cm	
Total hardness	2,11	0,02	2,100		mmol/l	100%
Alkalinity	4,58	0,04			mmol/l	
Hydrogen carbonate	277	2			mg/l	
Calcium	63,6	0,8			mg/l	
Magnesium	12,8	0,1			mg/l	
Sodium	48,8	0,5			mg/l	
Potassium	8,11	0,06			mg/l	
Nitrate	25,4	0,4			mg/l	
Nitrite	0,0101	0,0005	0,0163		mg/l	161%
Ammonium	0,0313	0,0050			mg/l	
Chloride	24,2	0,5			mg/l	
Sulphate	41,1	0,5			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,0406	0,0003	0,0500		mg/l	123%
DOC	7,28	0,05			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	4,57	0,13			mg/l	

