

# IFA-Proficiency Testing Scheme for Water Analysis

Round N164  
Major Ions

Sample Dispatch: 14 November 2022

In accordance with the procedure: AVKPS.01



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151 pages

This report summarises the results of round N164 (major ions) within the IFA-Proficiency Testing Scheme for Water Analysis. The samples N164A and N164B were distributed to 46 participants on Monday, 14 November 2022. 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, 9 December 2022. All participants submitted results. To make the participants anonymous, each laboratory obtained a letter code by random.

## Samples

The samples consisted of artificial ground water. For sample preparation, ultrapure water was spiked with solutions of salts and standards in order to simulate the ionic composition of natural Austrian ground water. The following substances were added to the samples:  $\text{CaCO}_3$ ,  $\text{CaCl}_2$ ,  $\text{Ca}(\text{NO}_3)_2$ ,  $\text{MgSO}_4$ ,  $\text{NaCl}$ ,  $\text{NaHCO}_3$ ,  $\text{Na}_2\text{SO}_4$ ,  $\text{K}_2\text{SO}_4$ ,  $\text{KHCO}_3$ , diethyl ethylphosphonate ( $\text{C}_6\text{H}_{15}\text{PO}_3$ , for total-P), potassium hydrogen phthalate (for DOC), and certified standard solutions of  $\text{NaNO}_2$ ,  $\text{Na}_2\text{SiO}_3$ ,  $\text{NH}_4\text{Cl}$ ,  $\text{KH}_2\text{PO}_4$  and  $\text{H}_3\text{BO}_3$ . Both samples, N164A and N164B, contained free  $\text{CO}_2$ , which was used for dissolution of  $\text{CaCO}_3$  and neutralisation of  $\text{Na}_2\text{SiO}_3$ . No other substances (e.g. preservatives) were added. The samples were stabilised by sterile filtration and low temperature.

## Homogeneity, accuracy and stability tests at the IFA-Tulln

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

To verify stability, all parameters were determined in several samples four weeks after shipment. The results are listed in the result tables ("stability test") and the parameter oriented part of the report ("IFA result").

According to our experience, the samples remain stable up to 18 months for the parameters conductivity, total hardness, alkalinity,  $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{NO}_3^-$ ,  $\text{Cl}^-$ ,  $\text{SO}_4^{2-}$ , boron and  $\text{HCO}_3^-$  when stored at 4°C in the dark. For the parameters  $\text{NH}_4^+$ ,  $\text{NO}_2^-$ ,  $\text{o-PO}_4^{3-}$ , total-P and DOC the samples remain stable several weeks, whereas the first changes normally are observed for  $\text{NH}_4^+$ .

## 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 304  $\mu\text{S}/\text{cm}$  in sample N164A and 550  $\mu\text{S}/\text{cm}$  in sample N164B.

For the pH no target values can be assigned. The results can be compared on the tables. In this kind of samples containing  $\text{CO}_2$ , the pH tends to increase slowly over time.

Total phosphorus after digestion had to be determined according to DIN EN ISO 6878. Diethyl ethylphosphonate ( $\text{C}_6\text{H}_{15}\text{PO}_3$ ), which can be determined as phosphate only after oxidative digestion and potassium dihydrogen phosphate ( $\text{KH}_2\text{PO}_4$ ) were used for preparation. The target values of total-P were calculated from the weights of the two substances. The results were given in  $\text{mg}/\text{L}$   $\text{o-PO}_4^{3-}$ .

The concentrations of sodium salicylate, which was used as standard substance for the  $\text{KMnO}_4$ -Index, were 5.27 mg/L in sample N164A and 1.92 mg/L in sample N164B. Assuming complete oxidation to carbon dioxide, nitrate and water (considering nitrite), the theoretical values were 7.39 mg/L  $\text{O}_2$  (N164A) and 2.69 mg/L  $\text{O}_2$  (N164B). However, the laboratory mean values were taken as reference values in this report: 6.8 mg/L  $\text{O}_2$  for N164A and 2.72 mg/L  $\text{O}_2$  for N164B.

Ammonium and Nitrate were not added to sample N164A and no phosphorus substances were added to sample N164B in order to check the analytical blank values. The target concentrations were set to  $<0.01 \text{ mg/L NH}_4^+$ ,  $<0.2 \text{ mg/L NO}_3^-$ ,  $<0.009 \text{ mg/L o-PO}_4^{3-}$  and  $<0.009 \text{ mg/L total-P (as PO}_4^{3-})$ , 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.

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 %).

The recoveries of the target concentrations, calculated from outlier-corrected data mean values ranged between 97.6 % (boron in sample N164B) and 104.6 % (ammonium in sample N164B).

The between laboratory CVs covered the range between 0.9 % (conductivity in sample N164A and alkalinity in sample N164B) and 13.3 % (ammonium in sample N164B).

All confidence intervals of the outlier-corrected laboratory mean values encompass the corresponding target values with their uncertainties. Thus, statistically, no difference could be detected between theoretical target concentrations and outlier corrected laboratory means.

## **z-scores**

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

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

$z$	z-score
$x_i$	result of laboratory
$X$	target value or mean value („consensus value“)
$\sigma_{PT}$	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 2011 to 2021. 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 5.6 %, which is 0.34 mg/L DOC, when based on the target value.

$$z = \frac{x_i - X}{\sigma_{pt}} = \frac{7.00 \text{ mg/L} - 6.02 \text{ mg/L}}{0.34 \text{ mg/L}} \approx 2.9 \quad \text{or} \quad \frac{116 \% - 100 \%}{5.6 \%} \approx 2.9$$

$z$	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)
$\sigma_{pt}$	0.34 mg/L equivalent to 5.6 % (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.

Parameter	standard deviation for proficiency assessment	Lower limit
Alkalinity $K_{S4.3}$	2.0 %	0.2 mmol/L
Ammonium	12 %	0.01 mg/L
Boron	7.5 %	0.012 mg/L
Calcium	3.3 %	9 mg/L
Chloride	2.9 %	2 mg/L
el. Conductivity	1.2 %	50 $\mu$ S/cm
DOC	5.6 %	1 mg/L
Hydrogen carbonate	2.4 %	20 mg/L
KMnO <sub>4</sub> -Index	10 %	1 mg/L
Magnesium	3.7 %	1 mg/L
Nitrate	3.2 %	2 mg/L
Nitrite	5.6 %	0.01 mg/L
Orthophosphate	10 %	0.015 mg/L
Potassium	4.4 %	0.5 mg/L
Sodium	3.2 %	1 mg/L
Sulphate	3.1 %	3 mg/L
Total hardness	2.9 %	0.1 mmol/L
Total-P (as PO <sub>4</sub> <sup>3-</sup> )	10 %	0.015 mg/L

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

z-Score	Classification
$\leq 2$	satisfactory
$2 <  z  < 3$	questionable
$\geq 3$	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.

An overview table of all z-scores can be found after the result tables in the parameter-oriented part.

### 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 or the measured value was given as "0" when the substance was added.
- "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, 16 December 2022

**Sample M106A**  
**Parameter Copper**

Target value ± U (k=2) 4,79 µg/l ± 0,13 µg/l  
 IFA result ± U (k=2) 4,79 µg/l ± 0,38 µg/l  
 Stability test ± U (k=2) 4,69 µg/l ± 0,38 µg/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	±	Unit	Recovery	z-Score
A	5,16	0,4128	µg/l	108%	0,90
B	4,22	0,42	µg/l	88%	-1,38
C	4,45	0,13	µg/l	93%	-0,83
D			µg/l		
E			µg/l		
F	4,10	0,08	µg/l	86%	-1,68
G			µg/l		
H			µg/l		
I	4,75	0,74	µg/l	99%	-0,10
J	<5		µg/l	•	
K	4,76		µg/l	99%	-0,07
L	<10		µg/l	•	
M	4,8	0,5	µg/l	100%	0,02
N	3,7	0,4	µg/l	77%	-2,65
O	4,47	0,447	µg/l	93%	-0,78
P	6,0		µg/l	125%	2,94
Q	4,17	0,2	µg/l	87%	-1,51
R	4,6	0,8	µg/l	96%	-0,46
S	4,44	0,67	µg/l	93%	-0,85
T			µg/l		
U	4,675	0,935	µg/l	98%	-0,28
V	5,0	0,50	µg/l	104%	0,51
W	3,54	0,3	µg/l	74%	-3,03
X	7,108 *	0,749	µg/l	148%	5,63
Y	<10		µg/l	•	
Z			µg/l		
AA	<3,0		µg/l	FN	
AB	3,775	0,107	µg/l	79%	-2,46
AC	<10,0		µg/l	•	

Recovery of target value in percent

z-Score of the laboratory

An asterik indicates a result detected as outlier by Hampel test

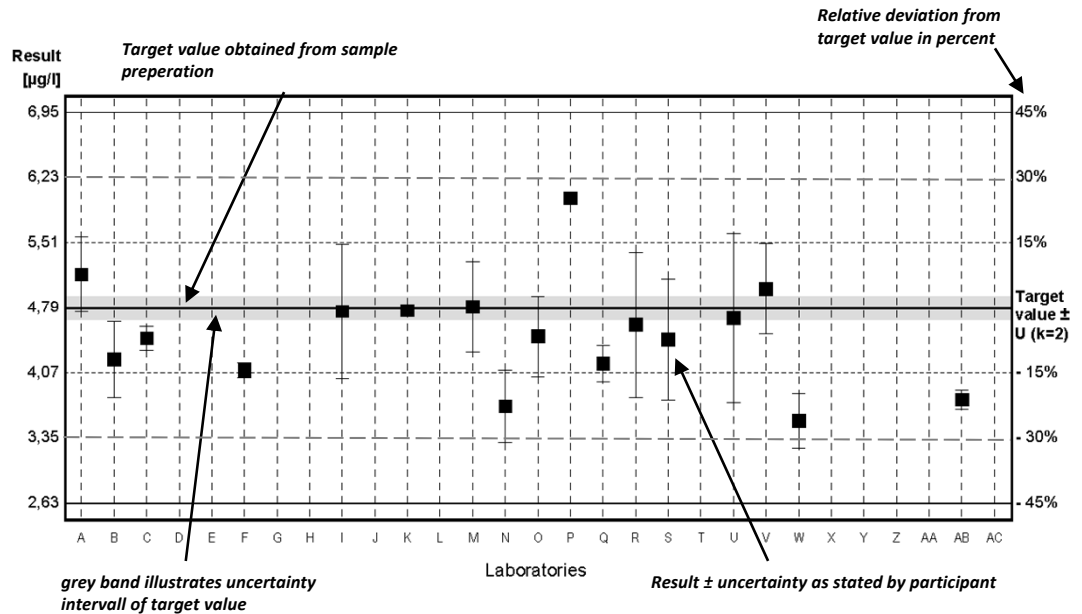
Interval expected to encompass target value as stated by participant

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

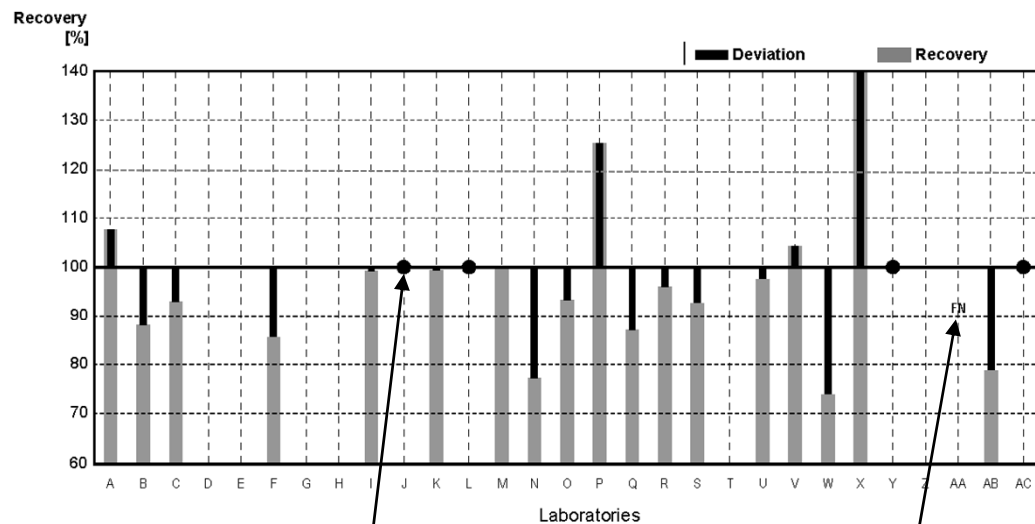
Between laboratory standard deviation

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

Number of results used for calculation of statistic parameters



**Diagram 1: Measurement results and their uncertainties**



**Diagram 2: Recoveries and deviations from target values**

**EXPLANATION**



# Illustration of Results Tables and Parameter Oriented Part

Round N164  
Major Ions

Sample Dispatch: 14 November 2022

## Results Sample N164A

	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		310	0.578	2.158	128.6	16.2	4.22	41.36	6.81	<0.2
IFA result	6.94	309	0.61	2.14	127	17.0	4.53	41.9	7.0	<0.2
Stability test	6.95	311	0.61	2.13	127	17.0	4.58	43.4	7.0	<0.2
A	6.9	311.9	0.60	2.16	263.5	15.8	4.27	41.02	6.82	<2.50
B										<1
C	6.92	336	0.563	2.12	126.3	15.8	4.11	39.2	6.6	<0.2
D	6.8	310	0.55	2.10	128	15.6	4.05	38.3	6.8	<1.0
E	7.0	310	0.64	2.11	125.7	18.2	4.45	41.7	6.94	<0.1
F	7.2	313		2.13						
G	6.85	309	0.58	2.33	142.2	15.91	4.15	40.18	6.70	<1.00
H	7.2	312	0.58	2.15	131.5	15.9	4.55	42.5	6.96	<1
I	7.47	310	0.601	2.23	133	16.49	4.61	42.99	6.99	0.140
J	6.80	309	0.59	2.15	128	16.6	4.20	41.0	6.64	<2
K										<1
L	6.78	321	2.95	2.10	128.1	21.0	<3			<1
M	6.75	313		2.09		15.61	4.07	40.84	6.77	<0.44
N	6.82	305	0.612	2.16		17.04	4.54	44.45	6.96	<0.14
O	6.6	308	0.61	2.10	128.4	15.4	5.26	41.4	6.89	0.492
P	7.13	307	0.561	2.14	128	15.6	4.15	42.2	7.02	[0.18]
Q	6.9	305	0.58	2.11	129	16.2	4.23	41.2	6.83	<0.062
R	6.76	308	0.581	2.21	132	16.0	4.41	42.5	6.71	<0.10
S						15.9	4.12	40.7	6.6	
T	6.82	314		2.14	128					<0.128
U	6.85	313	0.64	2.22	132.39	18.06	4.67	41.95	7.19	<0.058
V										
W	7.03	311	0.593	2.10	128	16.3	4.19	39.3	6.83	54.2
X	7.10	308	0.595	2.16	132	15.9	4.14	40.4	6.71	<0.4
Y	6.83	309.0	0.565	2.13	126.84	15.93	4.08	41.76	6.74	0.290
Z				2.19	133.47					
AA	6.94	315	6.1	2.17	132.1	16.2	4.72	41.42	6.87	<1.0
AB	6.90	309	0.573	2.24		16.1	4.18	40.8	6.65	<1.0
AC	6.9	310	0.57	2.234	133	15.58	4.376	41.25	6.96	<1
AD	6.95	309	0.544	2.18		14.6	4.36	37.8	6.49	1.07
AE	6.5	309	0.58	2.13	130	16.2	4.25	41.8	7.1	<1
AF	6.76	312								<0.797
AG	6.82	305	0.542	2.12	129	15.1	4.00	35.1	6.41	<0.2
AH	6.7	320	3.10	2.14	131	15.3	4.16	39.9	6.76	<1
AI	7.14	309.5	0.610	2.16	na	16.9	4.65	41.2	6.99	<1
AJ	6.78	303	0.574	2.13	127	16.3	4.30	41.5	6.85	<0.25
AK	7.00	279	0.617	2.075	126	17.0	4.33	41.0	7.18	<0.1
AL	6.8	310	0.585	2.141	128	16.2	4.43	41.4	7.0	<2.0
AM		311	0.560	2.13	129.93	16.1	4.00	40.5	9.60	<0.05
AN	6.74	308.7		2.12	129.0	16.75	4.40	42.22	6.82	<0.10
AO									7.23	
AP	6.85	314	0.553	2.38		15.7	4.41	40.6	6.73	0.0915
AQ	6.87	311	0.577	2.13	127	16.2	4.20	42.0	6.70	<0.5
AR	6.8	310	0.59	2.14	128	16.6	4.21	40.7	6.5	<0.20
AS	6.78	291	0.56	2.15	131	15.7	4.24	41.1	6.7	<0.50
AT		314	3.18	2.16	132	16.4	3.87	41.5	6.9	<0.50

### Measurement Uncertainties Sample N164A

	pH ±	Cond. ±	total- Hardn. ±	K <sub>S</sub> 4.3 ±	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		1	0.007	0.012	0.8	0.2	0.05	0.16	0.03	
IFA result	0.20	4	0.03	0.09	5	0.9	0.25	1.7	0.4	
Stability test	0.20	4	0.03	0.09	5	0.9	0.25	1.8	0.4	
A	0.45	24.3	0.17	0.23	27.9	1.99	0.74	4.94	0.46	
B										
C	0.15	13	0.033	0.16	9.7	0.8	0.30	2.0	0.3	
D	0.1	2	0.15	0.10	4	1	1	2	0.5	
E	0.1	14.0		0.15		2.8	0.5	3.6	0.6	
F										
G										
H	0.1	10	0.06	0.22	13.2	3.2	0.91	6.4	1.4	
I	0.09	7	0.025	0.07	4.3	0.9	0.3	2.2	0.4	0.06
J	0.08	9.3	0.04	0.10	6.4	1.33	0.25	4.10	0.40	0.06
K										
L										
M				0.06		0.94	0.24	2.57	0.34	
N	0.02	30	0.05	0.02		0.6	0.6	0.3	0.06	0.5
O	0.01	6	0.1	0.2	6.4	0.8	0.3	4.1	1.4	0.05
P	0.0713	0.214	0.0128	0.0918	2.55	0.505	0.0513	0.214	0.313	
Q	0.41	12.2		0.317	19.3	1.62	0.423	4.12	0.683	
R	0.006	0.33	0.002	0.010	7.5	0.058	0.035	0.208	0.035	
S						12.0	3.9	7.9	3.0	
T	0.0092	2.22		0.060	1.85					0.00
U	0.1	4.51		0.22		1.8	0.47	4.2	0.7	
V										
W	0.34	9.79	0.089	0.71	43.5	1.4	0.34	2.97	0.69	5.78
X	0.05	2	0.1	0.1	6	1.0	0.2	0.2	0.1	0.4
Y	0.27	6.8	0.02	0.04	2.66	0.62	0.19	2.00	0.43	0.02
Z										
AA										
AB	0.13	16		0.11						0.15
AC	0.2	17.24	0.06	0.1117	6.65	1.6	0.44	4.1	0.7	
AD	0.03	2	0.016	0.03		0.4	0.13	1.1	0.19	0.16
AE	0.2	6	0.04	0.11	10	1.5	0.3	2.5	0.78	
AF	0.68	16								
AG	0.034	9.2	0.044	0.10	6.2	0.69	0.33	2.5	0.46	
AH	0.04	1.12		0.069	4.23	1.40	0.304	3.31	0.77	0.045
AI	0.4	9.3	0.03	0.1		1.7	0.5	4.1	0.7	
AJ	0.3	13	0.02	0.1	6	1.4	0.6	7	1	
AK	0.7	28	0.12	0.208	13	3.4	0.87	8.2	1.44	
AL	0.2	8		0.143		1.1	0.4	3.9	0.7	
AM		3	0.016	0.041	2.50	0.483	0.120	1.29	0.384	
AN	0.17	30.9		0.212	12.90	2.51	0.66	6.33	1.02	0.03
AO									0.723	
AP	0.24	3.67	0.06	0.36		1.54	0.53	4.54	1.10	0.0129
AQ	0.30	10	0.047	0.09	5	0.9	0.26	1.7	0.54	
AR	0.2	5	0.2	0.2	6	3	1.5	2	0.8	
AS	0.07	6.3	0.05	0.10	5.9	0.81	0.24	3.1	0.23	
AT		4	0.07	0.15		0.51	0.32	2.0	0.5	0.049

## Results Sample N164A

	NO <sub>2</sub> <sup>-</sup>	NH <sub>4</sub> <sup>+</sup>	Cl <sup>-</sup>	SO <sub>4</sub> <sup>2-</sup>	o-PO <sub>4</sub> <sup>3-</sup>	Boron	DOC	total-P (as PO <sub>4</sub> <sup>3-</sup> )	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	0.0645	<0.01	13.8	25.1	0.071	0.0253	9.91	0.118	6.8
IFA result	0.065	<0.01	13.4	24.3	0.073	0.0241	10.12	0.129	7.6
Stability test	0.064	<0.01	13.4	24.8	0.073	0.0249	9.91	0.131	7.0
A	0.083	<0.05	12.99	23.46					
B			14.82		<0.05			<0.15	
C	0.068	<0.010	13.9	26.9	0.064	0.0241	9.28	0.111	
D	0.066	<0.02	13.1	25.2		0.0388	10.8	<0.20	7.4
E	0.066	<0.01	14.5	24.4	0.070	0.0269	10.5	0.111	7.5
F	0.066	<0.03			0.075		10.0	0.126	
G	0.057	<0.05	13.51	25.47		0.0262			
H	0.067	<0.010	13.7	24.7	0.0725	0.0241	10.33	0.1172	
I	0.0636	0.0170	14.54	24.83	0.07190	0.0112	9.71	0.07187	6.68
J	0.063		13.5	24.5	0.0380				6.92
K		<0.01			0.0537		>4	0.1088	
L	0.059	<0.05	14.0	26.1	0.051				
M	0.0654	<0.007	13.87	25.19	0.0727		9.94	0.1243	
N	0.0547	<0.03	14.00	25.76			11.10		
O	0.065	0.0154	14.5	25.79	0.134	0.0324		0.0424	
P	0.0603	<0.01	13.8	24.6	0.0722	0.0255	9.76	0.126	
Q	0.062	<0.005	13.8	26.4	0.074	0.0220	9.80	0.113	6.68
R	0.0649	<0.015	13.8	24.3	0.0742	0.0278	8.89	0.120	6.49
S						0.0221			
T	0.066	<0.005	14.2		0.070			0.115	
U	0.066	<0.009	13.44	24.65	0.067	0.0261	9.68	0.107	
V					0.70		10.51	1.09	
W	<0.05	0.069	49.3	65.5	0.0307	0.0252	6.04	0.0307	5.77
X	0.065	<0.006	13.3	24.6	0.072		10.0	0.116	
Y	0.061	nn	13.99	24.66			10.06		6.62
Z	0.0671				0.069			0.0365	
AA	0.070	<0.01	13.85	25.64	0.067		9.91	0.110	7.43
AB	0.062	<0.01	14.2	26.8	<0.015			0.0280	7.24
AC	0.064	<0.01	13.957	24.528	0.069	0.0256	9.78	0.117	5.88
AD	0.0623	<0.012	13.9	25.7	0.0172	0.0268			6.59
AE	0.066	<0.02	14.1	25.1	0.073	0.0263	6.0	0.111	7.0
AF	0.068	<0.012	13.7	25.1	0.070		10.4	0.113	
AG	0.0675	<0.01	13.9	24.7	0.0768	0.0232	9.35	0.117	6.41
AH	0.061	<0.01	13.2	24.6	0.064	0.0253	9.8	<0.15	7.6
AI	0.0668	<0.01	14.21	26.21	0.0774	0.0270	na	na	na
AJ	0.063	<0.013	14.2	25.7	0.071		10.6	0.119	
AK	0.067	0.0200	13.8	26.3	<0.1	0.0233	9.15	114	6.46
AL	0.056	<0.05	12.3	24.8		0.0270	10.35	0.116	
AM	0.068	0.0220	17.8	25.1	0.190	<0.010	6.11	0.239	
AN			13.20	24.40			9.43		
AO									
AP	0.054	<0.01	13.8	24.2	0.145	<0.012	10.00	0.0659	4.74
AQ	0.065	<0.008	13.7	24.0	0.071	0.0220	9.68	0.118	
AR	0.075	<0.05	13.9	24.5	0.058		10.1	0.103	
AS	0.059	<0.01	13.7	25.1	0.064		13.2	0.136	8.2
AT	0.065	<0.0100	13.7	24.5	<0.150	0.0225	10.3	<0.150	7.2

### Measurement Uncertainties Sample N164A

	NO <sub>2</sub> <sup>-</sup> ±	NH <sub>4</sub> <sup>+</sup> ±	Cl <sup>-</sup> ±	SO <sub>4</sub> <sup>2-</sup> ±	o-PO <sub>4</sub> <sup>3-</sup> ±	Boron ±	DOC ±	total-P (as PO <sub>4</sub> <sup>3-</sup> ) ±	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	0.0002		0.4	0.2	0.003	0.0010	0.06	0.002	0.4
IFA result	0.003		0.5	0.6	0.001	0.0019	0.09	0.019	1.1
Stability test	0.003		0.5	0.7	0.001	0.0019	0.09	0.020	1.0
A	0.00782		0.65	1.31					
B									
C	0.007		1.3	2.6	0.009	0.0030	1.63	0.018	
D	0.01		2	2		0.02	0.5		0.5
E	0.009		2.1	2	0.01	0.0018	1.25	0.001	0.7
F									
G									
H	0.0123		1.4	2.5	0.0151	0.0061	1.03	0.0244	
I	0.01	0.013	0.8	1.4	0.00078	0.00989	0.09	0.02234	0.17
J	0.003		0.54	0.73	0.0034				0.90
K					0.0043			0.0043	
L									
M	0.0041		0.54	1.16	0.0025		0.68	0.0121	
N	0.015	0.080	0.25	3.0			0.03		
O	0.01	0.002	1.5	2.6	0.01	0.003		0.004	
P	0.00209		0.680	0.477	0.00172	0.00322	0.0867	0.00240	
Q	0.005		0.690	1.32	0.0088	0.0026	0.78	0.0172	1.07
R	0.001		0.010	0.242	0.001	0.001	0.055	0.004	0.135
S						0.012			
T	0.0066	0.0000	0.144		0.00826			0.015	
U	0.007		1.3	2.5	0.007	0.004	0.9	0.011	
V					0.098		1.366	0.185	
W		0.01	2.80	6.00	0.006	0.0035	0.27	0.006	1.37
X	0.002	0.003	0.2	2	0.002		0.2	0.005	
Y	0.004		0.66	1.23			1.75		1.4
Z									
AA									
AB	0.005	0.002	1.07	2.36	0.002			0.0042	2.25
AC	0.006		1.39	2.45	0.007	0.003	1.7692	0.012	0.88
AD	0.0093		1.7	2.3	0.0017	0.0008			0.22
AE	0.008		1.10	1.50	0.007	0.004	0.72	0.010	0.5
AF	0.019		1.79	1.53	0.012		1.88	0.014	
AG	0.007		0.93	0.82	0.0053	0.0029	1.5	0.0081	0.96
AH	0.011	0.0018	0.610	1.39	0.012	0.00193	2.1	0.031	1.52
AI	0.007		0.7	2.6	0.008	0.005			
AJ	0.005		0.9	2	0.007		1.5	0.01	
AK	0.010	0.004	2.06	3.9		0.0047	2.7	23	0.65
AL	0.014		1.2	2.4		0.003	1.91	0.012	
AM	0.003	0.0030	0.427	0.708	0.015		0.23	0.020	
AN			3.30	6.10			2.360		
AO									
AP	0.0078	0.0011	2.06	3.89	0.0218	0.001	0.57	0.0092	0.711
AQ	0.005		0.7	1.5	0.004	0.0022	0.87	0.009	
AR	0.021		2	2	0.02		1.5	0.03	
AS	0.0087		1.1	1.5	0.0054		2.2	0.018	0.51
AT	0.0041	0.001	0.7	1.1	0.0096	0.0045	1.1	0.0096	1.2

## Results Sample N164B

	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		553	1.97	1.671	98.9	51.9	16.4	28.39	4.10	53.6
IFA result	6.51	552	2.07	1.65	98	54	17.4	28.8	4.22	52
Stability test	6.54	551	2.04	1.65	98	53	17.4	29.4	4.20	53
A	6.4	552.8	1.98	1.67	203.9	50.9	16.8	28.03	4.15	50.66
B										51.04
C	6.51	562	1.91	1.66	98.0	50.7	15.6	27.0	4.03	56.2
D	6.4	552	1.89	1.60	98	49.5	15.7	26.4	4.10	53
E	6.6	557	2.06	1.64	97	54.8	16.7	28.6	4.13	52.6
F	6.9	560		1.64						
G	6.38	544	1.97	1.85	112.9	50.56	16.12	28.06	4.19	53.90
H	6.7	554	1.96	1.66	98.2	50.3	17.1	4.27	4.27	54.7
I	7.54	551.5	1.98	1.71	101	52.55	16.24	29.32	4.21	54.82
J	6.40	548	1.98	1.66	98.4	52.6	16.3	28.5	4.00	51.9
K										>30
L	6.34	557	10.4	1.61	98.4	54.5	11.9			52.4
M	6.35	554	1.93	1.61		51.81	15.48	27.89	4.11	53.04
N	6.42	546	2.003	1.67		52.64	16.75	30.00	4.20	56.64
O	6.3	546	1.88	1.68	102.6	52.9	13.6	29.5	5.41	52.16
P	6.63	545	1.93	1.65	97.6	50.5	16.4	29.5	4.31	53.1
Q	6.5	555	1.97	1.66	101	51.9	16.4	28.1	4.10	53.0
R	6.36	550	1.95	1.73	104	50.2	16.9	28.5	3.96	54.2
S						50.6	16.6	28.6	3.98	
T	6.39	561		1.67	99					53.1
U	6.41	555	2.11	1.79	106.15	55.81	17.50	28.634	4.48	52.11
V										
W	6.51	553	1.99	1.61	98	52.7	16.4	27.2	4.17	<0.1
X	6.73	550	1.97	1.66	102	50.7	16.2	28.1	3.92	51.4
Y	6.51	552.0	1.920	1.65	97.57	50.33	16.15	28.03	4.03	53.37
Z				1.67	101.7					
AA	6.50	561	19.8	1.67	100.3	51.6	16.31	28.43	4.08	50.38
AB	6.47	558	1.93	1.83		50.9	16.09	27.9	3.89	55.1
AC	7.0	546	1.93	1.732	103	49.93	16.64	28.41	4.269	50.53
AD	7.33	551	1.90	1.62		47.7	17.1	26.5	4.05	52.6
AE	6.2	549	2.04	1.65	101	54	17.0	28.4	4.01	53
AF	6.31	556								52.6
AG	6.41	541	1.80	1.65	101	48.1	14.6	24.3	3.83	51.8
AH	6.3	560	10.7	1.66	101	50	16.0	26.9	4.10	52
AI	6.54	551.5	2.00	1.70	na	52.4	16.9	28.3	4.17	53.2
AJ	6.36	550	1.97	1.64	96.9	52.0	16.3	28.4	4.22	53.4
AK	6.65	397	2.01	1.575	96.0	51.1	16.5	28.3	4.10	48.5
AL	6.3	557	1.95	1.646	97.4	51.3	16.4	28.3	4.22	53.0
AM		555	1.927	1.66	101.26	51.0	15.9	28.2	3.90	51.0
AN	6.36	550.6		1.65	101.0	49.30	15.79	26.97	3.76	52.53
AO									4.53	
AP	6.68	561	1.98	1.73		51.3	17.4	28.8	4.10	49.6
AQ	6.42	554	1.92	1.65	97.5	50.3	16.2	28.2	3.98	52.3
AR	6.4	555	1.98	1.66	98.4	52.2	16.5	28.1	4.09	53.0
AS	6.29	537	1.95	1.65	101	51	16.4	28.2	4.06	53
AT		550	11.0	1.67	102	52	16.3	28.3	4.11	53

### Measurement Uncertainties Sample N164B

	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	0.014	0.9	0.7	0.2	0.19	0.04	1.3
IFA result	0.20	8	0.08	0.07	4	2	0.9	1.4	0.24	3
Stability test	0.20	8	0.08	0.07	4	2	0.9	1.4	0.24	3
A	0.41	43.1	0.57	0.18	21.6	6.40	2.90	3.37	0.28	1.83
B										
C	0.15	22	0.10	0.13	8.0	2.4	1.0	1.4	0.19	3.5
D	0.1	3	0.18	0.10	4	2	1	1	0.5	3
E	0.1	25.0		0.11		8.6	1.8	2.5	0.4	7.5
F										
G										
H	0.1	10	0.2	0.17	9.82	10.1	3.4	0.9	0.9	5.5
I	0.21	12	0.1	0.0513	3.129	3	0.9	1.5157	0.260	3
J	0.08	16.4	0.15	0.08	4.92	4.20	0.99	2.80	0.24	1.60
K										
L										
M			0.13	0.05		2.02	0.90	1.76	0.21	2.81
N	0.02	30	0.05	0.02		0.6	0.6	0.3	0.06	0.5
O	0.01	10.9	0.1	0.2	5.1	2.6	0.7	2.9	1.08	5.2
P	0.0663	0.211	0.0208	0.0820	1.95	0.580	0.364	0.196	0.327	0.961
Q	0.39	22.2		0.249	15.2	5.19	1.64	2.81	0.410	2.12
R	0.005	0.577	0.046	0.020	1.0	0.666	0.82	0.071	0.007	0.516
S						12.0	3.9	7.9	3.0	
T	0.0086	3.97		0.0470	1.43					3.639
U	0.1	4.51		0.18		5.5	1.8	2.8	0.45	5.2
V										
W	0.32	17.4	0.298	0.55	33.4	4.4	1.3	2.06	0.42	
X	0.05	2	0.1	0.1	6	1.0	0.2	0.2	0.1	0.4
Y	0.26	12.1	0.08	0.03	2.05	1.96	0.76	1.35	0.26	3.58
Z										
AA										
AB	0.12	28		0.09						8.38
AC	0.2	30.36	0.2	0.0866	5.15	5	1.66	2.84	0.43	5.05
AD	0.04	3	0.06	0.02		1.4	0.5	0.8	0.12	7.9
AE	0.2	11	0.14	0.09	8	4.3	1.36	1.7	0.44	4.2
AF	0.63	28								2.33
AG	0.032	16	0.15	0.079	4.8	2.2	1.20	1.7	0.28	1.71
AH	0.04	2.0		0.054	3.26	4.6	1.17	2.23	0.47	2.34
AI	0.3	16.5	0.1	0.09		5.2	1.7	2.8	0.4	2.7
AJ	0.3	22	0.1	0.1	4	5	2	5	0.6	4
AK	0.67	40	0.40	0.158	9.6	10	3.3	5.7	0.82	7.3
AL	0.2	15		0.110		3.5	1.5	2.7	0.4	5.5
AM		5	0.055	0.030	2.01	1.53	0.530	0.902	0.151	1.63
AN	0.16	55.1		0.165	10.10	7.40	2.37	4.10	0.60	13.13
AO									0.453	
AP	0.24	6.56	0.215	0.26		5.02	2.08	3.22	0.67	6.98
AQ	0.30	17	0.16	0.07	3.9	2.5	1.0	1.2	0.32	3.2
AR	0.1	8	0.31	0.21	5	4	2	2	0.8	4
AS	0.06	12	0.13	0.07	4.5	2.6	1.1	2.1	0.14	2.6
AT		7	0.2	0.12		1.6	1.3	1.4	0.3	4.7

**Results Sample N164B**

	NO <sub>2</sub> <sup>-</sup>	NH <sub>4</sub> <sup>+</sup>	Cl <sup>-</sup>	SO <sub>4</sub> <sup>2-</sup>	o-PO <sub>4</sub> <sup>3-</sup>	Boron	DOC	total-P (as PO <sub>4</sub> <sup>3-</sup> )	KMnO <sub>4</sub> - Index <sup>-</sup>
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Target value	0.0152	0.0478	48.9	64.9	<0.009	0.0505	6.23	<0.009	2.72
IFA result	0.0152	0.0481	47.3	63.1	<0.009	0.0480	6.25	<0.009	2.90
Stability test	0.0153	0.0479	47.0	64.6	<0.009	0.0498	6.20	<0.009	2.60
A	0.199	0.089	46.69	62.61					
B			45.95		<0.05			<0.15	
C	0.0155	0.0473	50.3	66.9	<0.010	0.04898	6.22	<0.010	
D	0.0160	0.050	48.1	63.9		0.0688	6.7	<0.20	2.46
E	0.0151	0.054	48.8	67.2	<0.01	0.0505	6.71	<0.03	2.48
F	0.0158	0.055			0.0175		6.3	0.0159	
G	0.0100	<0.05	48.95	63.68		0.0449			
H	0.0180	0.0493	49.4	66.0	<0.009	0.0477	6.772	<0.009	
I	0.0138	0.073	46.859	65.54	0.00186	0.0409	5.95	0.00100	2.61
J	0.0103		48.6	63.9	<0.015				2.85
K		0.0444			<0.019		>4	<0.02	
L	<0.05	0.064	51.0	75.9	<0.15				
M	0.0152	0.0523	49.66	65.62	<0.006		6.26	<0.015	
N	0.0183	0.0510	49.00	65.60			7.20		
O	0.0152	0.064	51.49	60.7	0.0325	0.0613		'0.0098	
P	0.0168	0.0512	48.9	64.0	[0.002]	0.0514	6.08	<0.0150	
Q	0.0160	0.0450	49.2	66.8	0.0090	0.050	6.20	<0.0153	2.64
R	0.0131	0.0424	49.7	64.4	<0.020	0.0513	5.62	<0.020	2.75
S						0.0428			
T	0.0163	0.055	49.6		<0.006			<0.006	
U	0.0160	0.052	47.87	61.98	<0.001	0.052	6.48	<0.001	
V					<0.0184		7.05	<0.0061	
W	<0.05	<0.05	14.7	25.9	0.066	0.0499	9.61	0.104	2.49
X	0.0152	0.0471	47.9	63.6	0.005		6.57	<0.009	
Y	0.0094	0.057	49.72	64.92			6.36		2.66
Z	0.0152				<0.05			0.0110	
AA	0.0180	0.0420	46.89	62.04	<0.009		6.37	<0.009	2.69
AB	0.0160	0.0460	50.4	68.7	<0.015			<0.015	3.00
AC	0.0136	0.050	48.099	65.395	<0.01	0.0469	6.156	<0.01	2.83
AD	0.0178	0.0336	49.1	65.6	0.00525	0.0612			2.63
AE	0.0150	0.053	50	62	<0.009	0.050	9.5	<0.009	2.70
AF	0.0199	0.059	47.6	64.1	<0.015		6.6	<0.015	
AG	0.0180	0.0474	48.4	62.2	<0.015	0.0490	5.99	<0.015	2.74
AH	0.0150	0.0480	50	63	<0.02	0.0502	6.0	<0.15	3.30
AI	0.0159	0.0356	48.940	65.125	<0.01	0.0518	na	na	na
AJ	0.0150	0.0480	49.6	66.2	<0.01		6.36	<0.013	
AK	0.0153	0.0600	48.5	61.0	<0.1	0.0455	5.90	<31	2.45
AL	0.0133	0.057	49.2	65.4		0.0550	6.12	<0.030	
AM	0.050	0.0480	52.0	63.2	<0.009	0.0410	10.1	<0.009	
AN			47.74	63.97			5.77		
AO									
AP	0.0133	0.0460	47.5	60.1	0.0278	<0.012	6.40	<0.015	<1
AQ	0.0152	0.050	48.9	63.2	<0.006	0.0450	6.11	<0.006	
AR	0.0183	0.052	48.4	64.8	<0.05		6.4	<0.05	
AS	0.0210	0.0450	49.2	64	<0.01		9.0	<0.01	4.74
AT	0.0160	0.0480	48.7	64	<0.150	0.0465	6.5	<0.150	3.00

### Measurement Uncertainties Sample N164B

	NO <sub>2</sub> <sup>-</sup> ±	NH <sub>4</sub> <sup>+</sup> ±	Cl <sup>-</sup> ±	SO <sub>4</sub> <sup>2-</sup> ±	o-PO <sub>4</sub> <sup>3-</sup> ±	Boron ±	DOC ±	total-P (as PO <sub>4</sub> <sup>3-</sup> ) ±	KMnO <sub>4</sub> - Index±
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Target value	0.0020	0.0053	0.9	0.8		0.0004	0.04		0.11
IFA result	0.0008	0.0021	1.8	1.5		0.0037	0.09		0.43
Stability test	0.0008	0.0021	1.8	1.9		0.0039	0.09		0.39
A	0.0187	0.0120	2.34	3.51					
B									
C	0.0031	0.0092	4.0	6.2		0.00529	1.15		
D	0.01	0.01	2	3		0.02	0.5		0.3
E	0.002	0.008	6.9	5.4		0.002	0.8		0.04
F									
G									
H	0.0033	0.008	4.9	6.6		0.012	0.68		
I	0.0009	0.0027	2.392	2.392	0.0008	0.00356	0.3	0.00100	0.17
J	0.0003		2.40	1.92	0.0013				0.37
K		0.0018							
L									
M	0.0010	0.0036	1.94	3.02			0.43		
N	0.015	0.080	0.25	3.0			0.03		
O	0.001	0.01	5.4	6.1	0.003	0.006		0.001	
P	0.00223	0.00135	0.719	0.933		0.00237	0.0856		
Q	0.0013	0.0045	2.46	3.34	0.0011	0.0060	0.50		0.422
R	0.001	0.002	0.461	0.679		0.001	0.252		0.061
S						0.012			
T	0.0016	0.0083	0.503		0.0000			0.000	
U	0.0016	0.005	4.8	6.2		0.008	0.65		
V							0.917		
W			0.84	2.37	0.014	0.0068	0.43	0.022	0.59
X	0.002	0.003	0.2	2	0.002		0.2	0.005	
Y	0.001	0.009	2.34	3.25			1.11		0.56
Z									
AA									
AB	0.001	0.008	3.82	6.05	0.002			0.0022	0.90
AC	0.001	0.005	4.81	6.54		0.005	1.11362		0.42
AD	0.0027	0.0044	5.9	5.9	0.00053	0.0018			0.09
AE	0.002	0.012	3.98	3.74		0.010	1.14		0.19
AF	0.006	0.013	6.22	3.91			1.19		
AG	0.0036	0.0033	3.2	2.1		0.0061	0.96		0.41
AH	0.003	0.011	2.31	3.55	0.004	0.00383	1.3	0.031	0.66
AI	0.002	0.004	2.5	6.5		0.01			
AJ	0.002	0.006	3	5			0.9		
AK	0.002	0.012	7.3	9.2		0.0091	1.8		0.25
AL	0.003	0.02	4.6	6.2		0.006	1.13		
AM	0.002	0.0050	1.50	1.90		0.0020	0.35		
AN			11.94	16.00			1.443		
AO									
AP	0.0019	0.0049	7.09	9.66	0.0042	0.001	0.365	0.0021	0.15
AQ	0.0025	0.005	2.5	3.8		0.0045	0.55		
AR	0.011	0.02	3	4			1		
AS	0.0031	0.0033	3.9	3.9			1.5		0.30
AT	0.001	0.005	2.3	2.9	0.0096	0.0093	0.7	0.0096	0.50

**z- Scores Sample N164A**

	Cond.	total-Hardn.	K <sub>S</sub> 4.3	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>
A	0.51	1.27	0.05	43.71	-0.75	0.32	-0.26	0.03	
B									
C	6.99	-0.87	-0.88	-0.75	-0.75	-0.70	-1.63	-0.70	
D	0.00	-1.61	-1.34	-0.19	-1.12	-1.09	-2.31	-0.03	
E	0.00	3.58	-1.11	-0.94	3.74	1.47	0.26	0.43	
F	0.81		-0.65						
G	-0.27	0.12	3.99	4.41	-0.54	-0.45	-0.89	-0.37	
H	0.54	0.12	-0.19	0.94	-0.56	2.11	0.86	0.50	
I	0.00	1.33	1.67	1.43	0.54	2.50	1.23	0.60	
J	-0.27	0.69	-0.19	-0.19	0.75	-0.13	-0.27	-0.57	
K									
L	2.96	136.79	-1.34	-0.16	8.98				
M	0.81		-1.58		-1.10	-0.96	-0.39	-0.13	
N	-1.34	1.96	0.05		1.57	2.05	2.33	0.50	
O	-0.54	1.85	-1.34	-0.06	-1.50	6.66	0.03	0.27	
P	-0.81	-0.98	-0.42	-0.19	-1.12	-0.45	0.63	0.70	
Q	-1.34	0.12	-1.11	0.13	0.00	0.06	-0.12	0.07	
R	-0.54	0.17	1.20	1.10	-0.37	1.22	0.86	-0.33	
S					-0.56	-0.64	-0.50	-0.70	
T	1.08		-0.42	-0.19					
U	0.81	3.58	1.44	1.23	3.48	2.88	0.45	1.27	
V									
W	0.27	0.87	-1.34	-0.19	0.19	-0.19	-1.56	0.07	
X	-0.54	0.98	0.05	1.10	-0.56	-0.51	-0.73	-0.33	
Y	-0.27	-0.75	-0.65	-0.57	-0.51	-0.90	0.30	-0.23	
Z			0.74	1.58					
AA	1.34	318.45	0.28	1.13	0.00	3.20	0.05	0.20	
AB	-0.27	-0.29	1.90		-0.19	-0.26	-0.42	-0.53	
AC	0.00	-0.46	1.76	1.43	-1.16	1.00	-0.08	0.50	
AD	-0.27	-1.96	0.51		-2.99	0.90	-2.69	-1.07	
AE	-0.27	0.12	-0.65	0.45	0.00	0.19	0.33	0.97	
AF	0.54								
AG	-1.34	-2.08	-0.88	0.13	-2.06	-1.41	-4.73	-1.33	
AH	2.69	145.44	-0.42	0.78	-1.68	-0.38	-1.10	-0.17	
AI	-0.13	1.85	0.05		1.31	2.75	-0.12	0.60	
AJ	-1.88	-0.23	-0.65	-0.52	0.19	0.51	0.11	0.13	
AK	-8.33	2.25	-1.92	-0.84	1.50	0.70	-0.27	1.23	
AL	0.00	0.40	-0.39	-0.19	0.00	1.34	0.03	0.63	
AM	0.27	-1.04	-0.65	0.43	-0.19	-1.41	-0.65	9.31	
AN	-0.35		-0.88	0.13	1.03	1.15	0.65	0.03	
AO								1.40	
AP	1.08	-1.44	5.14		-0.94	1.22	-0.57	-0.27	
AQ	0.27	-0.06	-0.65	-0.52	0.00	-0.13	0.48	-0.37	
AR	0.00	0.69	-0.42	-0.19	0.75	-0.06	-0.50	-1.03	
AS	-5.11	-1.04	-0.19	0.78	-0.94	0.13	-0.20	-0.37	
AT	1.08	150.06	0.05	1.10	0.37	-2.24	0.11	0.30	

### z-Scores Sample N164A

	NO <sub>2</sub> <sup>-</sup>	NH <sub>4</sub> <sup>+</sup>	Cl <sup>-</sup>	SO <sub>4</sub> <sup>2-</sup>	o-PO <sub>4</sub> <sup>3-</sup>	Boron	DOC	total-P (as PO <sub>4</sub> <sup>3-</sup> )	KMnO <sub>4</sub> - Index
A	5.12		-2.02	-2.11					
B			2.55						
C	0.97		0.25	2.31	-0.99	-0.63	-1.14	-0.59	
D	0.42		-1.75	0.13		7.11	1.60		0.88
E	0.42		1.75	-0.90	-0.14	0.84	1.06	-0.59	1.03
F	0.42				0.56		0.16	0.68	
G	-2.08		-0.72	0.48		0.47			
H	0.69		-0.25	-0.51	0.21	-0.63	0.76	-0.07	
I	-0.25		1.85	-0.35	0.13	-7.43	-0.36	-3.91	-0.18
J	-0.42		-0.75	-0.77	-4.65				0.18
K					-2.44			-0.78	
L	-1.52		0.50	1.29	-2.82				
M	0.25		0.17	0.12	0.24		0.05	0.53	
N	-2.71		0.50	0.85			2.14		
O	0.14		1.75	0.89	8.87	3.74		-6.41	
P	-1.16		0.00	-0.64	0.17	0.11	-0.27	0.68	
Q	-0.69		0.00	1.67	0.42	-1.74	-0.20	-0.42	-0.18
R	0.11		0.00	-1.03	0.45	1.32	-1.84	0.17	-0.46
S						-1.69			
T	0.42		1.00		-0.14			-0.25	
U	0.42		-0.90	-0.58	-0.56	0.42	-0.41	-0.93	
V					88.59		1.08	82.37	
W			88.71	51.92	-5.68	-0.05	-6.97	-7.40	-1.51
X	0.14		-1.25	-0.64	0.14		0.16	-0.17	
Y	-0.97		0.47	-0.57			0.27		-0.26
Z	0.72				-0.28			-6.91	
AA	1.52		0.12	0.69	-0.56		0.00	-0.68	0.93
AB	-0.69		1.00	2.18				-7.63	0.65
AC	-0.14		0.39	-0.74	-0.28	0.16	-0.23	-0.08	-1.35
AD	-0.61		0.25	0.77	-7.58	0.79			-0.31
AE	0.42		0.75	0.00	0.28	0.53	-7.05	-0.59	0.29
AF	0.97		-0.25	0.00	-0.14		0.88	-0.42	
AG	0.83		0.25	-0.51	0.82	-1.11	-1.01	-0.08	-0.57
AH	-0.97		-1.50	-0.64	-0.99	0.00	-0.20		1.18
AI	0.64		1.02	1.43	0.90	0.90			
AJ	-0.42		1.00	0.77	0.00		1.24	0.08	
AK	0.69		0.00	1.54		-1.05	-1.37	9651.02	-0.50
AL	-2.35		-3.75	-0.39		0.90	0.79	-0.17	
AM	0.97		10.00	0.00	16.76		-6.85	10.25	
AN			-1.50	-0.90			-0.86		
AO									
AP	-2.91		0.00	-1.16	10.42		0.16	-4.42	-3.03
AQ	0.14		-0.25	-1.41	0.00	-1.74	-0.41	0.00	
AR	2.91		0.25	-0.77	-1.83		0.34	-1.27	
AS	-1.52		-0.25	0.00	-0.99		5.93	1.53	2.06
AT	0.14		-0.25	-0.77		-1.48	0.70		0.59

### z-Scores Sample N164B

	Cond.	total-Hardn.	K <sub>S</sub> 4.3	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>
A	-0.03	0.17	-0.03	44.24	-0.58	0.66	-0.40	0.28	-1.71
B									-1.49
C	1.36	-1.02	-0.33	-0.38	-0.70	-1.32	-1.53	-0.39	1.52
D	-0.15	-1.35	-2.12	-0.38	-1.40	-1.15	-2.19	0.00	-0.35
E	0.60	1.52	-0.93	-0.80	1.69	0.49	0.23	0.17	-0.58
F	1.05		-0.93						
G	-1.36	0.00	5.36	5.90	-0.78	-0.46	-0.36	0.50	0.17
H	0.15	-0.17	-0.33	-0.29	-0.93	1.15	-26.55	0.94	0.64
I	-0.23	0.17	1.17	0.88	0.38	-0.26	1.02	0.61	0.71
J	-0.75	0.17	-0.33	-0.21	0.41	-0.16	0.12	-0.55	-0.99
K									
L	0.60	142.64	-1.83	-0.21	1.52	-7.42			-0.70
M	0.15	-0.68	-1.83		-0.05	-1.52	-0.55	0.06	-0.33
N	-1.05	0.56	-0.03		0.43	0.58	1.77	0.55	1.77
O	-1.05	-1.52	0.27	1.56	0.58	-4.61	1.22	7.26	-0.84
P	-1.21	-0.68	-0.63	-0.55	-0.82	0.00	1.22	1.16	-0.29
Q	0.30	0.00	-0.33	0.88	0.00	0.00	-0.32	0.00	-0.35
R	-0.45	-0.34	1.77	2.15	-0.99	0.82	0.12	-0.78	0.35
S					-0.76	0.33	0.23	-0.67	
T	1.21		-0.03	0.04					-0.29
U	0.30	2.37	3.56	3.05	2.28	1.81	0.27	2.11	-0.87
V									
W	0.00	0.34	-1.83	-0.38	0.47	0.00	-1.31	0.39	
X	-0.45	0.00	-0.33	1.31	-0.70	-0.33	-0.32	-1.00	-1.28
Y	-0.15	-0.85	-0.63	-0.56	-0.92	-0.41	-0.40	-0.39	-0.13
Z			-0.03	1.18					
AA	1.21	301.69	-0.03	0.59	-0.18	-0.15	0.04	-0.11	-1.88
AB	0.75	-0.68	4.76		-0.58	-0.51	-0.54	-1.16	0.87
AC	-1.05	-0.68	1.83	1.73	-1.15	0.40	0.02	0.94	-1.79
AD	-0.30	-1.18	-1.53		-2.45	1.15	-2.08	-0.28	-0.58
AE	-0.60	1.18	-0.63	0.88	1.23	0.99	0.01	-0.50	-0.35
AF	0.45								-0.58
AG	-1.81	-2.88	-0.63	0.88	-2.22	-2.97	-4.50	-1.50	-1.05
AH	1.05	147.72	-0.33	0.88	-1.11	-0.66	-1.64	0.00	-0.93
AI	-0.23	0.51	0.87		0.29	0.82	-0.10	0.39	-0.23
AJ	-0.45	0.00	-0.93	-0.84	0.06	-0.16	0.01	0.67	-0.12
AK	-23.51	0.68	-2.87	-1.22	-0.47	0.16	-0.10	0.00	-2.97
AL	0.60	-0.34	-0.75	-0.63	-0.35	0.00	-0.10	0.67	-0.35
AM	0.30	-0.73	-0.33	0.99	-0.53	-0.82	-0.21	-1.11	-1.52
AN	-0.36		-0.63	0.88	-1.52	-1.01	-1.56	-1.88	-0.62
AO								2.38	
AP	1.21	0.17	1.77		-0.35	1.65	0.45	0.00	-2.33
AQ	0.15	-0.85	-0.63	-0.59	-0.93	-0.33	-0.21	-0.67	-0.76
AR	0.30	0.17	-0.33	-0.21	0.18	0.16	-0.32	-0.06	-0.35
AS	-2.41	-0.34	-0.63	0.88	-0.53	0.00	-0.21	-0.22	-0.35
AT	-0.45	152.79	-0.03	1.31	0.06	-0.16	-0.10	0.06	-0.35

### z-Scores Sample N164B

	NO <sub>2</sub> <sup>-</sup>	NH <sub>4</sub> <sup>+</sup>	Cl <sup>-</sup>	SO <sub>4</sub> <sup>2-</sup>	o-PO <sub>4</sub> <sup>3-</sup>	Boron	DOC	total-P (as PO <sub>4</sub> <sup>3-</sup> )	KMnO <sub>4</sub> - Index <sup>-</sup>
A	215.93	7.18	-1.56	-1.14					
B			-2.08						
C	0.35	-0.09	0.99	0.99		-0.40	-0.03		
D	0.94	0.38	-0.56	-0.50		4.83	1.35		-0.96
E	-0.12	1.08	-0.07	1.14		0.00	1.38		-0.88
F	0.70	1.26					0.20		
G	-6.11		0.04	-0.61		-1.48			
H	3.29	0.26	0.35	0.55		-0.74	1.55		
I	-1.64	4.39	-1.44	0.32		-2.53	-0.80		-0.40
J	-5.76		-0.21	-0.50					0.48
K		-0.59							
L		2.82	1.48	5.47					
M	0.00	0.78	0.54	0.36			0.09		
N	3.64	0.56	0.07	0.35			2.78		
O	0.00	2.82	1.83	-2.09		2.85			
P	1.88	0.59	0.00	-0.45		0.24	-0.43		
Q	0.94	-0.49	0.21	0.94		-0.13	-0.09		-0.29
R	-2.47	-0.94	0.56	-0.25		0.21	-1.75		0.11
S						-2.03			
T	1.29	1.26	0.49						
U	0.94	0.73	-0.73	-1.45		0.40	0.72		
V							2.35		
W			-24.12	-19.38		-0.16	9.69		-0.85
X	0.00	-0.12	-0.71	-0.65			0.97		
Y	-6.81	1.60	0.58	0.01			0.37		-0.22
Z	0.00								
AA	3.29	-1.01	-1.42	-1.42			0.40		-0.11
AB	0.94	-0.31	1.06	1.89					1.03
AC	-1.88	0.38	-0.56	0.25		-0.95	-0.21		0.40
AD	3.05	-2.48	0.14	0.35		2.83			-0.33
AE	-0.23	0.91	0.78	-1.44		-0.13	9.37		-0.07
AF	5.52	1.95	-0.92	-0.40			1.06		
AG	3.29	-0.07	-0.35	-1.34		-0.40	-0.69		0.07
AH	-0.23	0.03	0.78	-0.94		-0.08	-0.66		2.13
AI	0.82	-2.13	0.03	0.11		0.34			
AJ	-0.23	0.03	0.49	0.65			0.37		
AK	0.12	2.13	-0.28	-1.94		-1.32	-0.95		-0.99
AL	-2.23	1.60	0.21	0.25		1.19	-0.32		
AM	40.88	0.03	2.19	-0.84		-2.51	11.09		
AN			-0.82	-0.46			-1.32		
AO									
AP	-2.23	-0.31	-0.99	-2.39			0.49		
AQ	0.00	0.38	0.00	-0.84		-1.45	-0.34		
AR	3.64	0.73	-0.35	-0.05			0.49		
AS	6.81	-0.49	0.21	-0.45			7.94		7.43
AT	0.94	0.03	-0.14	-0.45		-1.06	0.77		1.03

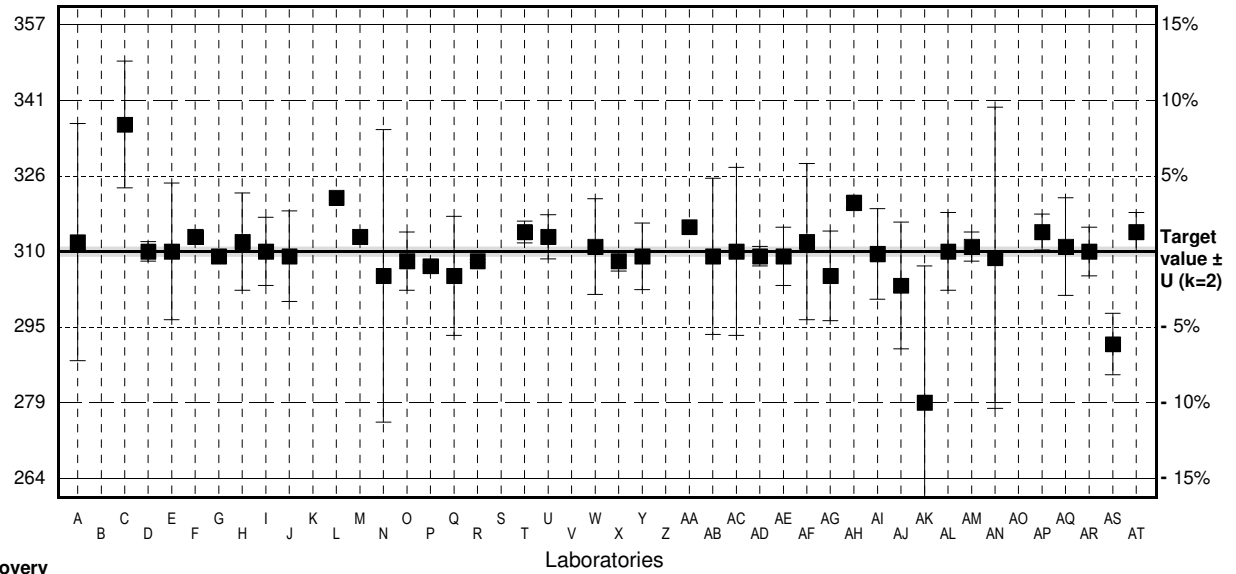
# Sample N164A

## Parameter Conductivity

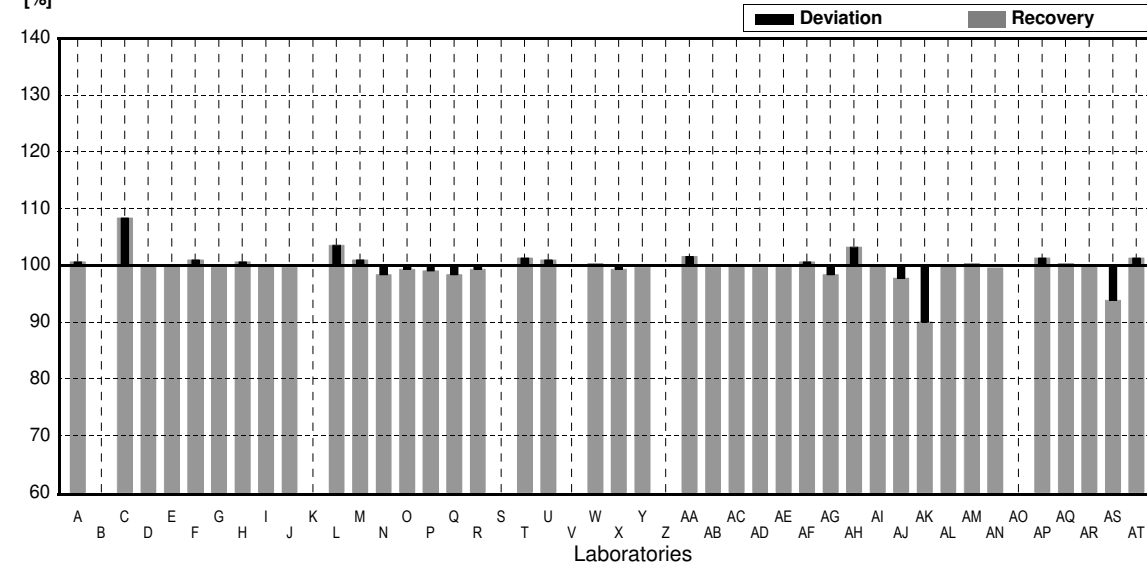
Target value ± U (k=2) 310 µS/cm ± 1 µS/cm  
 IFA result ± U (k=2) 309 µS/cm ± 4 µS/cm  
 Stability test ± U (k=2) 311 µS/cm ± 4 µS/cm

Lab Code	Result	±	Unit	Recovery	z-Score
A	311.9	24.3	µS/cm	101%	0.51
B			µS/cm		
C	336 *	13	µS/cm	108%	6.99
D	310	2	µS/cm	100%	0.00
E	310	14.0	µS/cm	100%	0.00
F	313		µS/cm	101%	0.81
G	309		µS/cm	100%	-0.27
H	312	10	µS/cm	101%	0.54
I	310	7	µS/cm	100%	0.00
J	309	9.3	µS/cm	100%	-0.27
K			µS/cm		
L	321 *		µS/cm	104%	2.96
M	313		µS/cm	101%	0.81
N	305	30	µS/cm	98%	-1.34
O	308	6	µS/cm	99%	-0.54
P	307	0.214	µS/cm	99%	-0.81
Q	305	12.2	µS/cm	98%	-1.34
R	308	0.33	µS/cm	99%	-0.54
S			µS/cm		
T	314	2.22	µS/cm	101%	1.08
U	313	4.51	µS/cm	101%	0.81
V			µS/cm		
W	311	9.79	µS/cm	100%	0.27
X	308	2	µS/cm	99%	-0.54
Y	309.0	6.8	µS/cm	100%	-0.27
Z			µS/cm		
AA	315		µS/cm	102%	1.34
AB	309	16	µS/cm	100%	-0.27
AC	310	17.24	µS/cm	100%	0.00
AD	309	2	µS/cm	100%	-0.27
AE	309	6	µS/cm	100%	-0.27
AF	312	16	µS/cm	101%	0.54
AG	305	9.2	µS/cm	98%	-1.34
AH	320 *	1.12	µS/cm	103%	2.69
AI	309.5	9.3	µS/cm	100%	-0.13
AJ	303	13	µS/cm	98%	-1.88
AK	279 *	28	µS/cm	90%	-8.33
AL	310	8	µS/cm	100%	0.00
AM	311	3	µS/cm	100%	0.27
AN	308.7	30.9	µS/cm	100%	-0.35
AO			µS/cm		
AP	314	3.67	µS/cm	101%	1.08
AQ	311	10	µS/cm	100%	0.27
AR	310	5	µS/cm	100%	0.00
AS	291 *	6.3	µS/cm	94%	-5.11
AT	314	4	µS/cm	101%	1.08

Result  
[µS/cm]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	310 ± 3	310 ± 1	µS/cm
Recov. ± CI(99%)	99,9 ± 1,1	100,0 ± 0,4	%
SD between labs	8	3	µS/cm
RSD between labs	2,6	0,9	%
n for calculation	40	35	

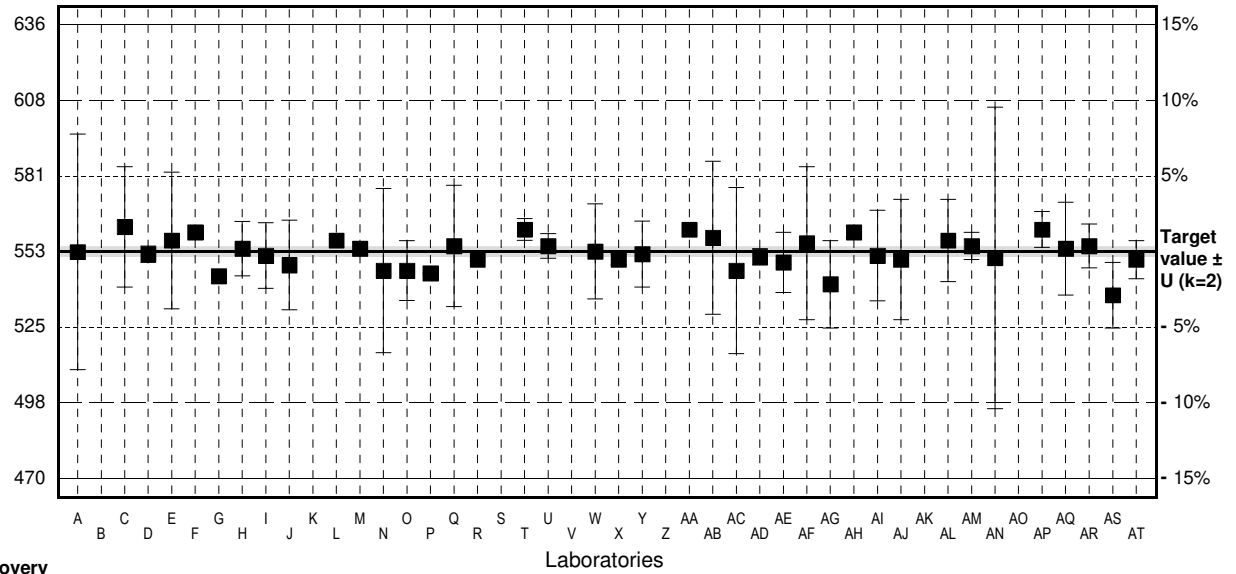
# Sample N164B

## Parameter Conductivity

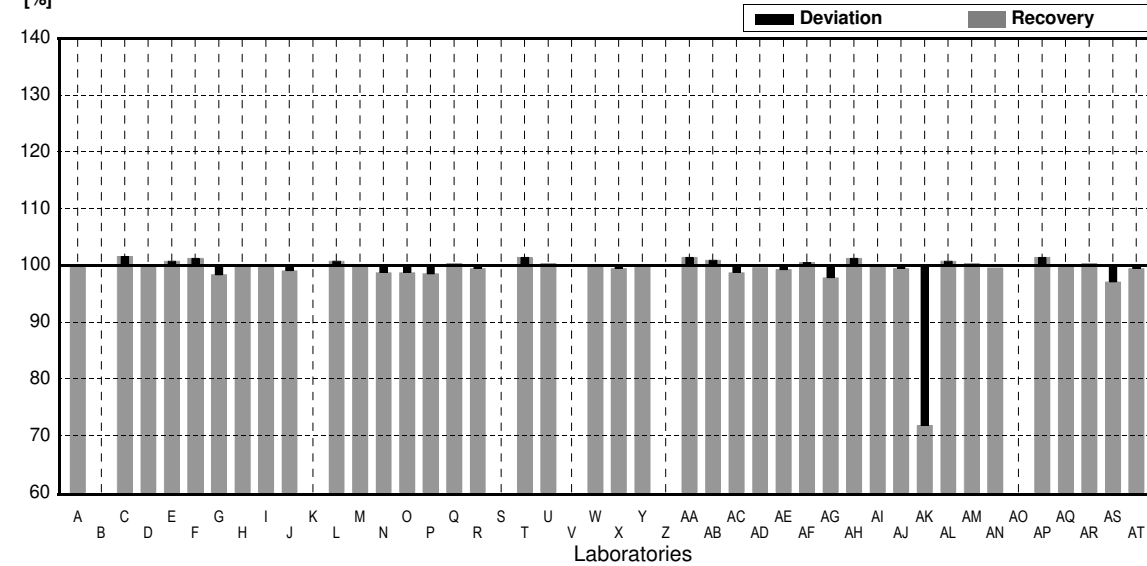
Target value ± U (k=2)    553 μS/cm ±    2 μS/cm  
 IFA result ± U (k=2)    552 μS/cm ±    8 μS/cm  
 Stability test ± U (k=2)    551 μS/cm ±    8 μS/cm

Lab Code	Result	±	Unit	Recovery	z-Score
A	552.8	43.1	μS/cm	100%	-0.03
B			μS/cm		
C	562	22	μS/cm	102%	1.36
D	552	3	μS/cm	100%	-0.15
E	557	25.0	μS/cm	101%	0.60
F	560		μS/cm	101%	1.05
G	544		μS/cm	98%	-1.36
H	554	10	μS/cm	100%	0.15
I	551.5	12	μS/cm	100%	-0.23
J	548	16.4	μS/cm	99%	-0.75
K			μS/cm		
L	557		μS/cm	101%	0.60
M	554		μS/cm	100%	0.15
N	546	30	μS/cm	99%	-1.05
O	546	10.9	μS/cm	99%	-1.05
P	545	0.211	μS/cm	99%	-1.21
Q	555	22.2	μS/cm	100%	0.30
R	550	0.577	μS/cm	99%	-0.45
S			μS/cm		
T	561	3.97	μS/cm	101%	1.21
U	555	4.51	μS/cm	100%	0.30
V			μS/cm		
W	553	17.4	μS/cm	100%	0.00
X	550	2	μS/cm	99%	-0.45
Y	552.0	12.1	μS/cm	100%	-0.15
Z			μS/cm		
AA	561		μS/cm	101%	1.21
AB	558	28	μS/cm	101%	0.75
AC	546	30.36	μS/cm	99%	-1.05
AD	551	3	μS/cm	100%	-0.30
AE	549	11	μS/cm	99%	-0.60
AF	556	28	μS/cm	101%	0.45
AG	541	16	μS/cm	98%	-1.81
AH	560	2.0	μS/cm	101%	1.05
AI	551.5	16.5	μS/cm	100%	-0.23
AJ	550	22	μS/cm	99%	-0.45
AK	397	40	μS/cm	72%	-23.51
AL	557	15	μS/cm	101%	0.60
AM	555	5	μS/cm	100%	0.30
AN	550.6	55.1	μS/cm	100%	-0.36
AO			μS/cm		
AP	561	6.56	μS/cm	101%	1.21
AQ	554	17	μS/cm	100%	0.15
AR	555	8	μS/cm	100%	0.30
AS	537	12	μS/cm	97%	-2.41
AT	550	7	μS/cm	99%	-0.45

Result [μS/cm]



Recovery [%]



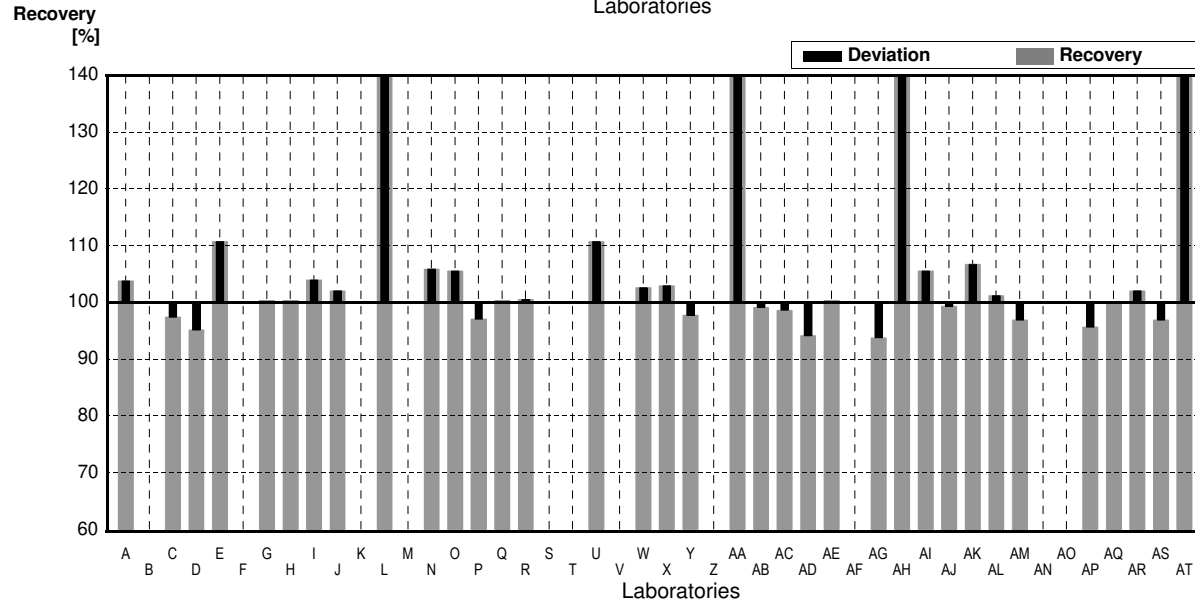
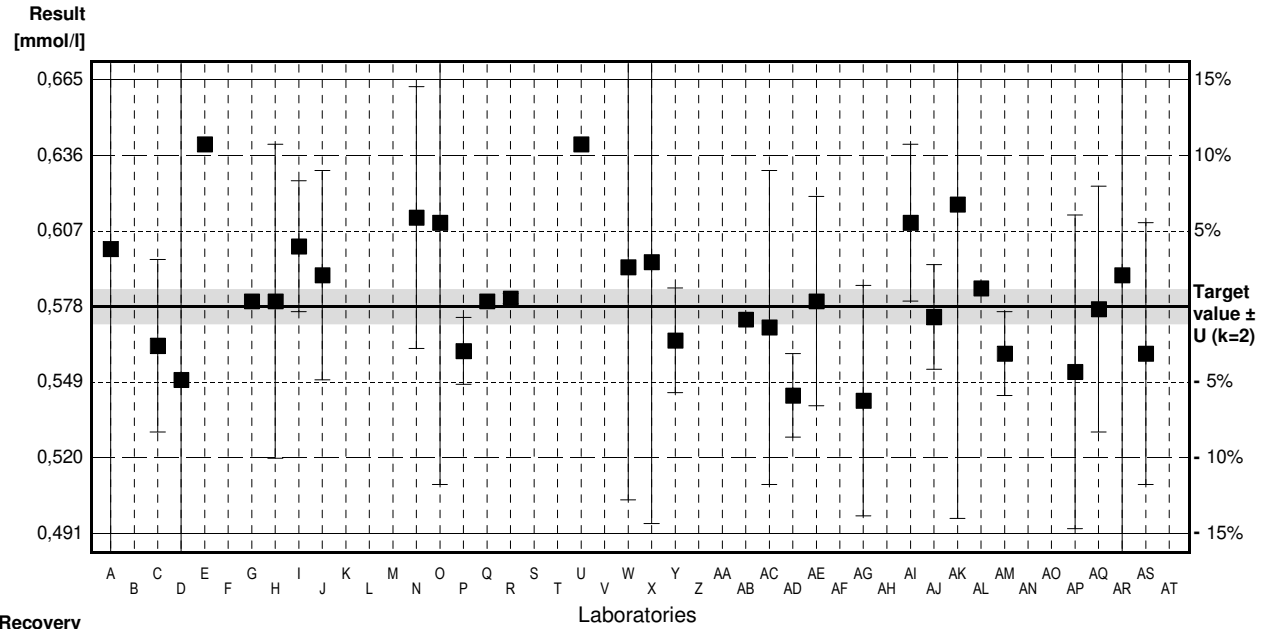
	All results	Outliers excl.	Unit
Mean ± CI(99%)	549 ± 11	553 ± 2	μS/cm
Recov. ± CI(99%)	99,2 ± 2,0	99,9 ± 0,4	%
SD between labs	25	6	μS/cm
RSD between labs	4,6	1,0	%
n for calculation	40	39	

# Sample N164A

## Parameter Total hardness

Target value ± U (k=2) 0,578 mmol/l ± 0,007 mmol/l  
 IFA result ± U (k=2) 0,61 mmol/l ± 0,03 mmol/l  
 Stability test ± U (k=2) 0,61 mmol/l ± 0,03 mmol/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0.60	0.17	mmol/l	104%	1.27
B			mmol/l		
C	0.563	0.033	mmol/l	97%	-0.87
D	0.55	0.15	mmol/l	95%	-1.61
E	0.64		mmol/l	111%	3.58
F			mmol/l		
G	0.58		mmol/l	100%	0.12
H	0.58	0.06	mmol/l	100%	0.12
I	0.601	0.025	mmol/l	104%	1.33
J	0.59	0.04	mmol/l	102%	0.69
K			mmol/l		
L	2.95 *		mmol/l	510%	136.79
M			mmol/l		
N	0.612	0.05	mmol/l	106%	1.96
O	0.61	0.1	mmol/l	106%	1.85
P	0.561	0.0128	mmol/l	97%	-0.98
Q	0.58		mmol/l	100%	0.12
R	0.581	0.002	mmol/l	101%	0.17
S			mmol/l		
T			mmol/l		
U	0.64		mmol/l	111%	3.58
V			mmol/l		
W	0.593	0.089	mmol/l	103%	0.87
X	0.595	0.1	mmol/l	103%	0.98
Y	0.565	0.02	mmol/l	98%	-0.75
Z			mmol/l		
AA	6.1 *		mmol/l	1055%	318.45
AB	0.573		mmol/l	99%	-0.29
AC	0.57	0.06	mmol/l	99%	-0.46
AD	0.544	0.016	mmol/l	94%	-1.96
AE	0.58	0.04	mmol/l	100%	0.12
AF			mmol/l		
AG	0.542	0.044	mmol/l	94%	-2.08
AH	3.10 *		mmol/l	536%	145.44
AI	0.610	0.03	mmol/l	106%	1.85
AJ	0.574	0.02	mmol/l	99%	-0.23
AK	0.617	0.12	mmol/l	107%	2.25
AL	0.585		mmol/l	101%	0.40
AM	0.560	0.016	mmol/l	97%	-1.04
AN			mmol/l		
AO			mmol/l		
AP	0.553	0.06	mmol/l	96%	-1.44
AQ	0.577	0.047	mmol/l	100%	-0.06
AR	0.59	0.2	mmol/l	102%	0.69
AS	0.56	0.05	mmol/l	97%	-1.04
AT	3.18 *	0.07	mmol/l	550%	150.06



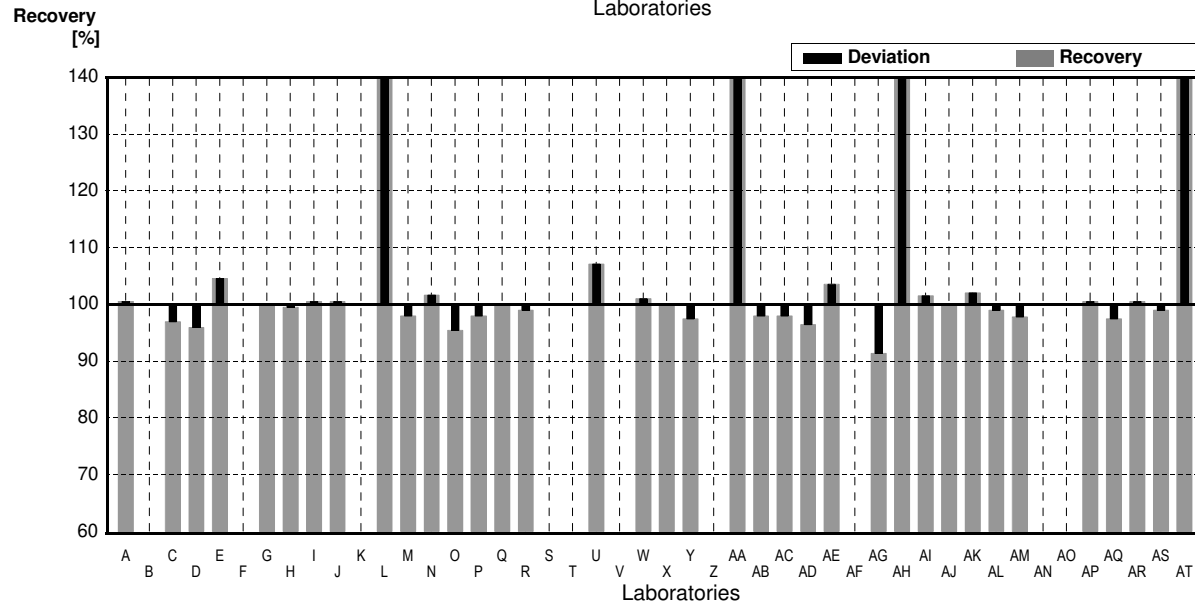
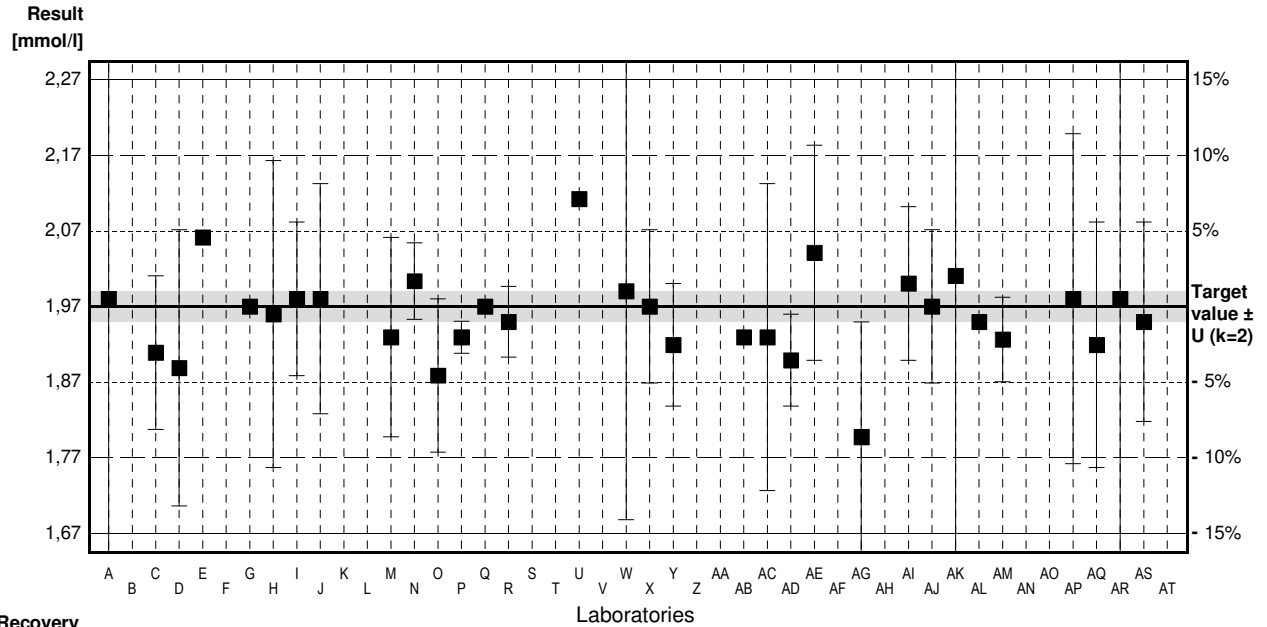
	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,954 ± 0,527	0,583 ± 0,012	mmol/l
Recov. ± CI(99%)	165,1 ± 91,1	100,9 ± 2,1	%
SD between labs	1,142	0,025	mmol/l
RSD between labs	119,6	4,3	%
n for calculation	35	31	

# Sample N164B

## Parameter Total hardness

Target value ± U (k=2) 1,97 mmol/l ± 0,02 mmol/l  
 IFA result ± U (k=2) 2,07 mmol/l ± 0,08 mmol/l  
 Stability test ± U (k=2) 2,04 mmol/l ± 0,08 mmol/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	1.98	0.57	mmol/l	101%	0.17
B			mmol/l		
C	1.91	0.10	mmol/l	97%	-1.02
D	1.89	0.18	mmol/l	96%	-1.35
E	2.06		mmol/l	105%	1.52
F			mmol/l		
G	1.97		mmol/l	100%	0.00
H	1.96	0.2	mmol/l	99%	-0.17
I	1.98	0.1	mmol/l	101%	0.17
J	1.98	0.15	mmol/l	101%	0.17
K			mmol/l		
L	10.4 *		mmol/l	528%	142.64
M	1.93	0.13	mmol/l	98%	-0.68
N	2.003	0.05	mmol/l	102%	0.56
O	1.88	0.1	mmol/l	95%	-1.52
P	1.93	0.0208	mmol/l	98%	-0.68
Q	1.97		mmol/l	100%	0.00
R	1.95	0.046	mmol/l	99%	-0.34
S			mmol/l		
T			mmol/l		
U	2.11		mmol/l	107%	2.37
V			mmol/l		
W	1.99	0.298	mmol/l	101%	0.34
X	1.97	0.1	mmol/l	100%	0.00
Y	1.920	0.08	mmol/l	97%	-0.85
Z			mmol/l		
AA	19.8 *		mmol/l	1005%	301.69
AB	1.93		mmol/l	98%	-0.68
AC	1.93	0.2	mmol/l	98%	-0.68
AD	1.90	0.06	mmol/l	96%	-1.18
AE	2.04	0.14	mmol/l	104%	1.18
AF			mmol/l		
AG	1.80	0.15	mmol/l	91%	-2.88
AH	10.7 *		mmol/l	543%	147.72
AI	2.00	0.1	mmol/l	102%	0.51
AJ	1.97	0.1	mmol/l	100%	0.00
AK	2.01	0.40	mmol/l	102%	0.68
AL	1.95		mmol/l	99%	-0.34
AM	1.927	0.055	mmol/l	98%	-0.73
AN			mmol/l		
AO			mmol/l		
AP	1.98	0.215	mmol/l	101%	0.17
AQ	1.92	0.16	mmol/l	97%	-0.85
AR	1.98	0.31	mmol/l	101%	0.17
AS	1.95	0.13	mmol/l	99%	-0.34
AT	11.0 *	0.2	mmol/l	558%	152.79



	All results	Outliers excl.	Unit
Mean ± CI(99%)	3,18 ± 1,71	1,96 ± 0,03	mmol/l
Recov. ± CI(99%)	161,5 ± 86,8	99,4 ± 1,4	%
SD between labs	3,76	0,06	mmol/l
RSD between labs	118,0	2,9	%
n for calculation	36	32	

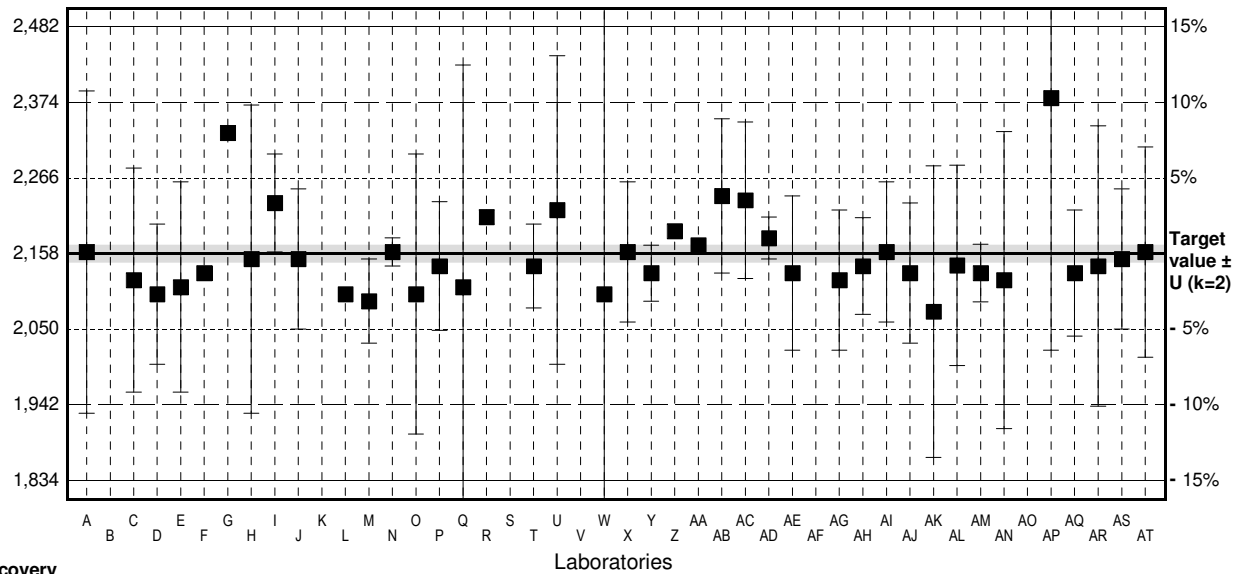
# Sample N164A

## Parameter Alkalinity

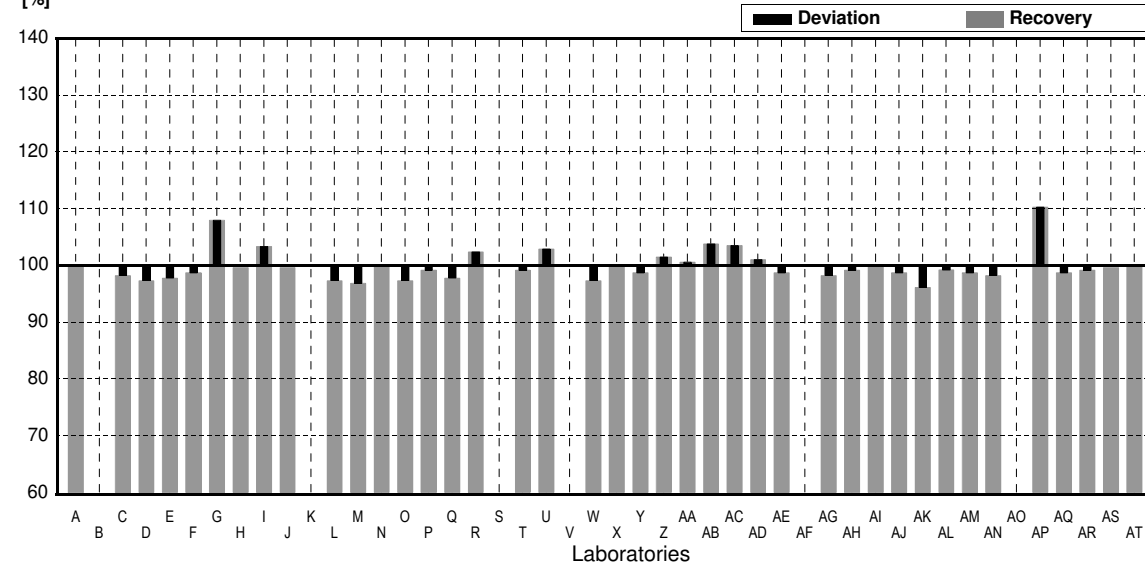
Target value ± U (k=2) 2,158 mmol/l ± 0,012 mmol/l  
 IFA result ± U (k=2) 2,14 mmol/l ± 0,09 mmol/l  
 Stability test ± U (k=2) 2,13 mmol/l ± 0,09 mmol/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	2.16	0.23	mmol/l	100%	0.05
B			mmol/l		
C	2.12	0.16	mmol/l	98%	-0.88
D	2.10	0.10	mmol/l	97%	-1.34
E	2.11	0.15	mmol/l	98%	-1.11
F	2.13		mmol/l	99%	-0.65
G	2.33	*	mmol/l	108%	3.99
H	2.15	0.22	mmol/l	100%	-0.19
I	2.23	0.07	mmol/l	103%	1.67
J	2.15	0.10	mmol/l	100%	-0.19
K			mmol/l		
L	2.10		mmol/l	97%	-1.34
M	2.09	0.06	mmol/l	97%	-1.58
N	2.16	0.02	mmol/l	100%	0.05
O	2.10	0.2	mmol/l	97%	-1.34
P	2.14	0,0918	mmol/l	99%	-0.42
Q	2.11	0.317	mmol/l	98%	-1.11
R	2.21	0.010	mmol/l	102%	1.20
S			mmol/l		
T	2.14	0.060	mmol/l	99%	-0.42
U	2.22	0.22	mmol/l	103%	1.44
V			mmol/l		
W	2.10	0.71	mmol/l	97%	-1.34
X	2.16	0.1	mmol/l	100%	0.05
Y	2.13	0.04	mmol/l	99%	-0.65
Z	2.19		mmol/l	101%	0.74
AA	2.17		mmol/l	101%	0.28
AB	2.24	*	mmol/l	104%	1.90
AC	2.234	*	mmol/l	104%	1.76
AD	2.18	0.03	mmol/l	101%	0.51
AE	2.13	0.11	mmol/l	99%	-0.65
AF			mmol/l		
AG	2.12	0.10	mmol/l	98%	-0.88
AH	2.14	0.069	mmol/l	99%	-0.42
AI	2.16	0.1	mmol/l	100%	0.05
AJ	2.13	0.1	mmol/l	99%	-0.65
AK	2.075	0.208	mmol/l	96%	-1.92
AL	2.141	0.143	mmol/l	99%	-0.39
AM	2.13	0.041	mmol/l	99%	-0.65
AN	2.12	0.212	mmol/l	98%	-0.88
AO			mmol/l		
AP	2.38	*	mmol/l	110%	5.14
AQ	2.13	0.09	mmol/l	99%	-0.65
AR	2.14	0.2	mmol/l	99%	-0.42
AS	2.15	0.10	mmol/l	100%	-0.19
AT	2.16	0.15	mmol/l	100%	0.05

Result [mmol/l]



Recovery [%]



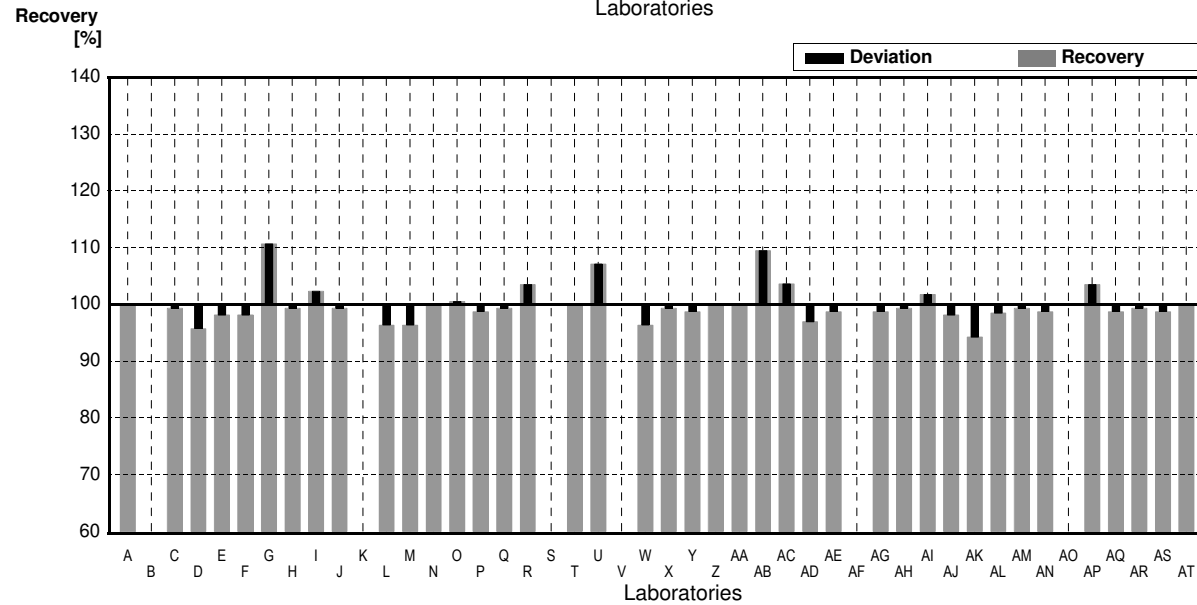
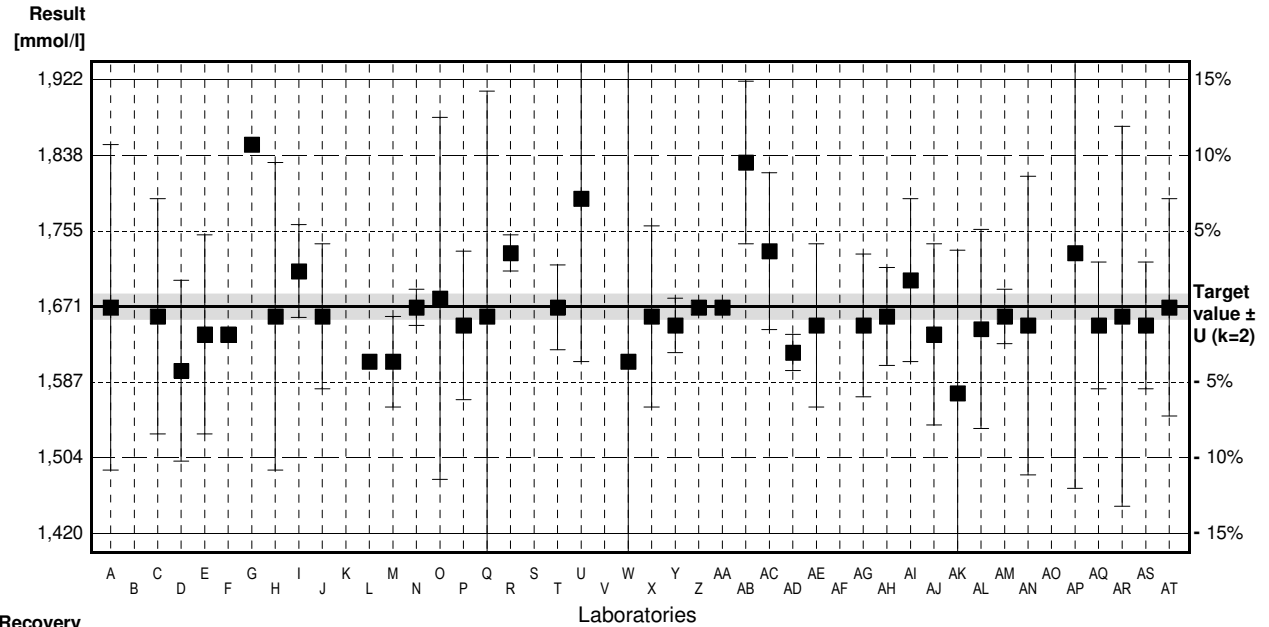
	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,157 ± 0,026	2,141 ± 0,016	mmol/l
Recov. ± CI(99%)	99,9 ± 1,2	99,2 ± 0,7	%
SD between labs	0,061	0,035	mmol/l
RSD between labs	2,8	1,6	%
n for calculation	40	36	

# Sample N164B

## Parameter Alkalinity

Target value ± U (k=2) 1,671 mmol/l ± 0,014 mmol/l  
 IFA result ± U (k=2) 1,65 mmol/l ± 0,07 mmol/l  
 Stability test ± U (k=2) 1,65 mmol/l ± 0,07 mmol/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	1.67	0.18	mmol/l	100%	-0.03
B			mmol/l		
C	1.66	0.13	mmol/l	99%	-0.33
D	1.60 *	0.10	mmol/l	96%	-2.12
E	1.64	0.11	mmol/l	98%	-0.93
F	1.64		mmol/l	98%	-0.93
G	1.85 *		mmol/l	111%	5.36
H	1.66	0.17	mmol/l	99%	-0.33
I	1.71 *	0.0513	mmol/l	102%	1.17
J	1.66	0.08	mmol/l	99%	-0.33
K			mmol/l		
L	1.61 *		mmol/l	96%	-1.83
M	1.61 *	0.05	mmol/l	96%	-1.83
N	1.67	0.02	mmol/l	100%	-0.03
O	1.68	0.2	mmol/l	101%	0.27
P	1.65	0.0820	mmol/l	99%	-0.63
Q	1.66	0.249	mmol/l	99%	-0.33
R	1.73 *	0.020	mmol/l	104%	1.77
S			mmol/l		
T	1.67	0.0470	mmol/l	100%	-0.03
U	1.79 *	0.18	mmol/l	107%	3.56
V			mmol/l		
W	1.61 *	0.55	mmol/l	96%	-1.83
X	1.66	0.1	mmol/l	99%	-0.33
Y	1.65	0.03	mmol/l	99%	-0.63
Z	1.67		mmol/l	100%	-0.03
AA	1.67		mmol/l	100%	-0.03
AB	1.83 *	0.09	mmol/l	110%	4.76
AC	1.732 *	0.0866	mmol/l	104%	1.83
AD	1.62	0.02	mmol/l	97%	-1.53
AE	1.65	0.09	mmol/l	99%	-0.63
AF			mmol/l		
AG	1.65	0.079	mmol/l	99%	-0.63
AH	1.66	0.054	mmol/l	99%	-0.33
AI	1.70	0.09	mmol/l	102%	0.87
AJ	1.64	0.1	mmol/l	98%	-0.93
AK	1.575 *	0.158	mmol/l	94%	-2.87
AL	1.646	0.110	mmol/l	99%	-0.75
AM	1.66	0.030	mmol/l	99%	-0.33
AN	1.65	0.165	mmol/l	99%	-0.63
AO			mmol/l		
AP	1.73 *	0.26	mmol/l	104%	1.77
AQ	1.65	0.07	mmol/l	99%	-0.63
AR	1.66	0.21	mmol/l	99%	-0.33
AS	1.65	0.07	mmol/l	99%	-0.63
AT	1.67	0.12	mmol/l	100%	-0.03



	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,670 ± 0,024	1,658 ± 0,008	mmol/l
Recov. ± CI(99%)	99,9 ± 1,4	99,2 ± 0,5	%
SD between labs	0,056	0,015	mmol/l
RSD between labs	3,3	0,9	%
n for calculation	40	28	

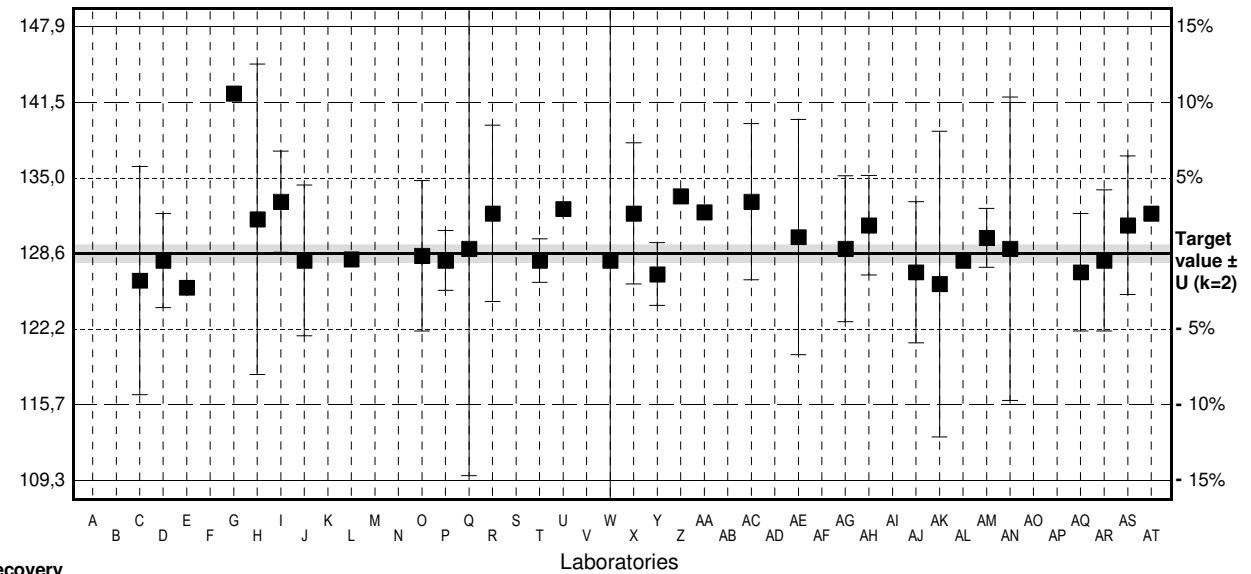
# Sample N164A

## Parameter Hydrogen carbonate

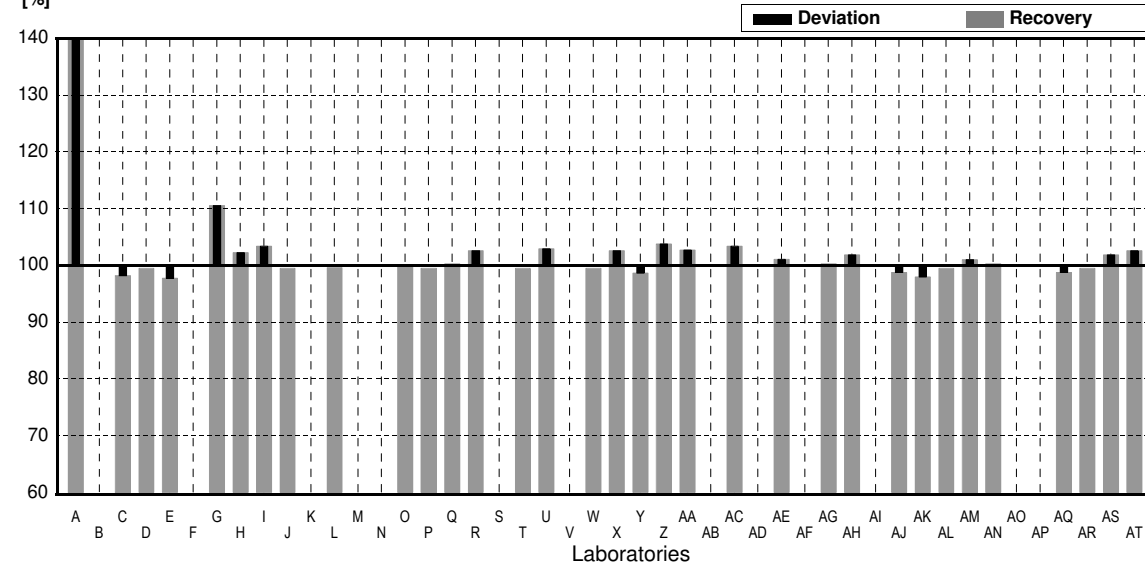
Target value ± U (k=2) 128,6 mg/l ± 0,8 mg/l  
 IFA result ± U (k=2) 127 mg/l ± 5 mg/l  
 Stability test ± U (k=2) 127 mg/l ± 5 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	263.5 *	27.9	mg/l	205%	43.71
B			mg/l		
C	126.3	9.7	mg/l	98%	-0.75
D	128	4	mg/l	100%	-0.19
E	125.7		mg/l	98%	-0.94
F			mg/l		
G	142.2 *		mg/l	111%	4.41
H	131.5	13.2	mg/l	102%	0.94
I	133	4.3	mg/l	103%	1.43
J	128	6.4	mg/l	100%	-0.19
K			mg/l		
L	128.1		mg/l	100%	-0.16
M			mg/l		
N			mg/l		
O	128.4	6.4	mg/l	100%	-0.06
P	128	2.55	mg/l	100%	-0.19
Q	129	19.3	mg/l	100%	0.13
R	132	7.5	mg/l	103%	1.10
S			mg/l		
T	128	1.85	mg/l	100%	-0.19
U	132.39		mg/l	103%	1.23
V			mg/l		
W	128	43.5	mg/l	100%	-0.19
X	132	6	mg/l	103%	1.10
Y	126.84	2.66	mg/l	99%	-0.57
Z	133.47		mg/l	104%	1.58
AA	132.1		mg/l	103%	1.13
AB			mg/l		
AC	133	6.65	mg/l	103%	1.43
AD			mg/l		
AE	130	10	mg/l	101%	0.45
AF			mg/l		
AG	129	6.2	mg/l	100%	0.13
AH	131	4.23	mg/l	102%	0.78
AI	na		mg/l		
AJ	127	6	mg/l	99%	-0.52
AK	126	13	mg/l	98%	-0.84
AL	128		mg/l	100%	-0.19
AM	129.93	2.50	mg/l	101%	0.43
AN	129.0	12.90	mg/l	100%	0.13
AO			mg/l		
AP			mg/l		
AQ	127	5	mg/l	99%	-0.52
AR	128	6	mg/l	100%	-0.19
AS	131	5.9	mg/l	102%	0.78
AT	132		mg/l	103%	1.10

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	133,9 ± 11,2	129,4 ± 1,1	mg/l
Recov. ± CI(99%)	104,1 ± 8,7	100,6 ± 0,9	%
SD between labs	23,5	2,3	mg/l
RSD between labs	17,5	1,8	%
n for calculation	33	31	

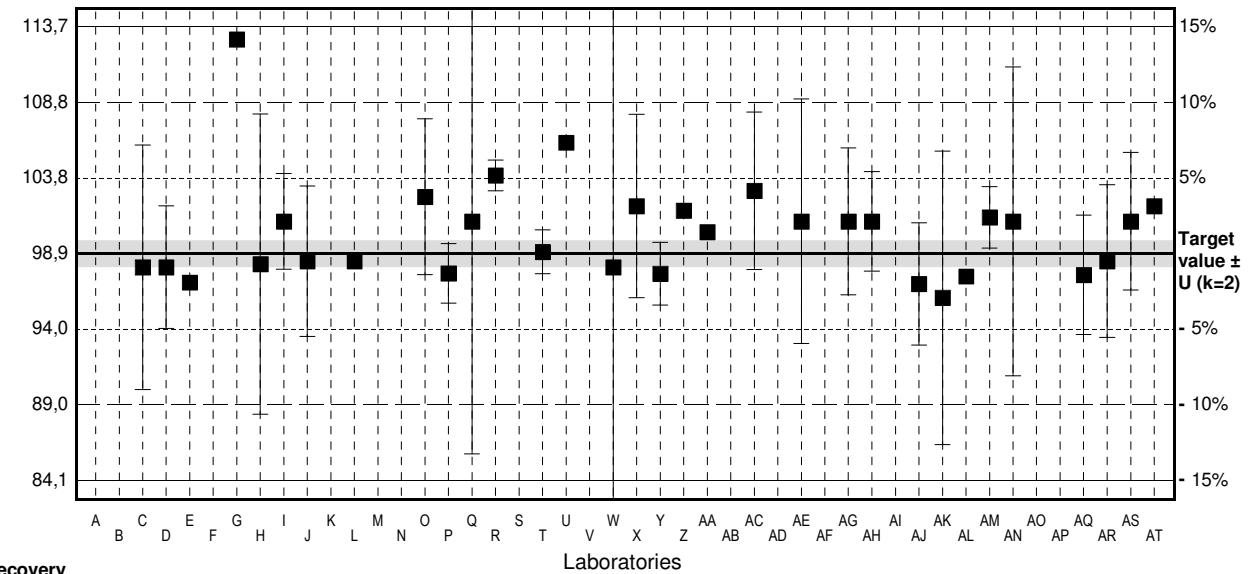
# Sample N164B

## Parameter Hydrogen carbonate

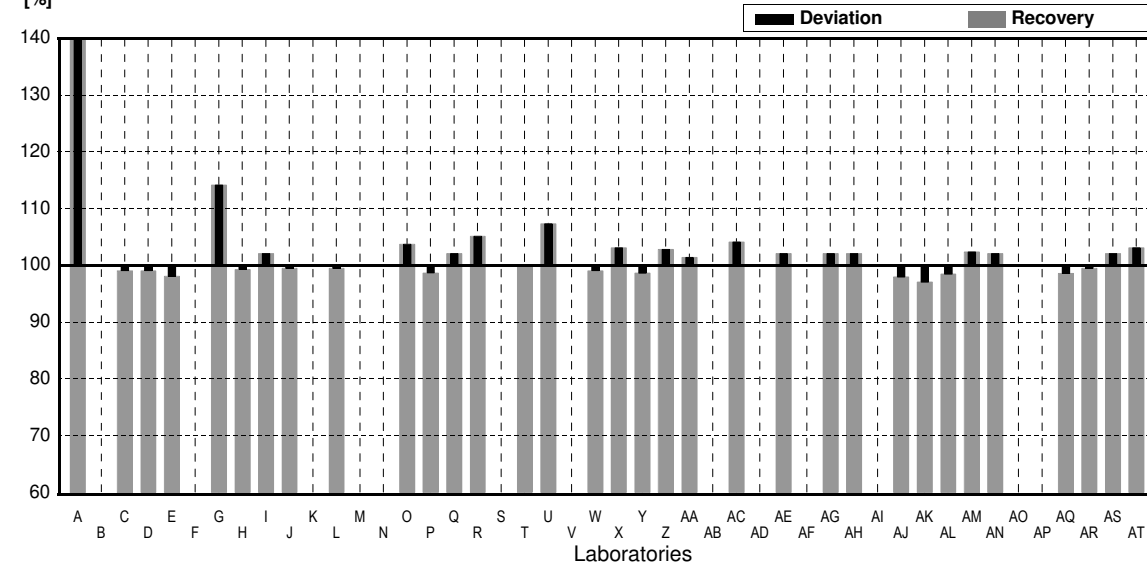
Target value ± U (k=2) 98,9 mg/l ± 0,9 mg/l  
 IFA result ± U (k=2) 98 mg/l ± 4 mg/l  
 Stability test ± U (k=2) 98 mg/l ± 4 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	203.9 *	21.6	ma/l	206%	44.24
B			ma/l		
C	98,0	8,0	ma/l	99%	-0.38
D	98	4	ma/l	99%	-0.38
E	97		ma/l	98%	-0.80
F			ma/l		
G	112.9		ma/l	114%	5.90
H	98,2	9,82	ma/l	99%	-0.29
I	101	3,129	ma/l	102%	0.88
J	98,4	4,92	ma/l	99%	-0.21
K			ma/l		
L	98,4		ma/l	99%	-0.21
M			ma/l		
N			ma/l		
O	102,6	5,1	ma/l	104%	1.56
P	97,6	1,95	ma/l	99%	-0.55
Q	101	15,2	ma/l	102%	0.88
R	104	1,0	ma/l	105%	2.15
S			ma/l		
T	99	1,43	ma/l	100%	0,04
U	106,15		ma/l	107%	3,05
V			ma/l		
W	98	33,4	ma/l	99%	-0.38
X	102	6	ma/l	103%	1,31
Y	97,57	2,05	ma/l	99%	-0.56
Z	101,7		ma/l	103%	1,18
AA	100,3		ma/l	101%	0,59
AB			ma/l		
AC	103	5,15	ma/l	104%	1,73
AD			ma/l		
AE	101	8	ma/l	102%	0,88
AF			ma/l		
AG	101	4,8	ma/l	102%	0,88
AH	101	3,26	ma/l	102%	0,88
AI	na		ma/l		
AJ	96,9	4	ma/l	98%	-0,84
AK	96,0	9,6	ma/l	97%	-1,22
AL	97,4		ma/l	98%	-0,63
AM	101,26	2,01	ma/l	102%	0,99
AN	101,0	10,10	ma/l	102%	0,88
AO			ma/l		
AP			ma/l		
AQ	97,5	3,9	ma/l	99%	-0,59
AR	98,4	5	ma/l	99%	-0,21
AS	101	4,5	ma/l	102%	0,88
AT	102		ma/l	103%	1,31

### Result [mg/l]



### Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	103,4 ± 8,7	100,3 ± 1,6	mg/l
Recov. ± CI(99%)	104,6 ± 8,8	101,4 ± 1,6	%
SD between labs	18,3	3,3	mg/l
RSD between labs	17,7	3,3	%
n for calculation	33	32	

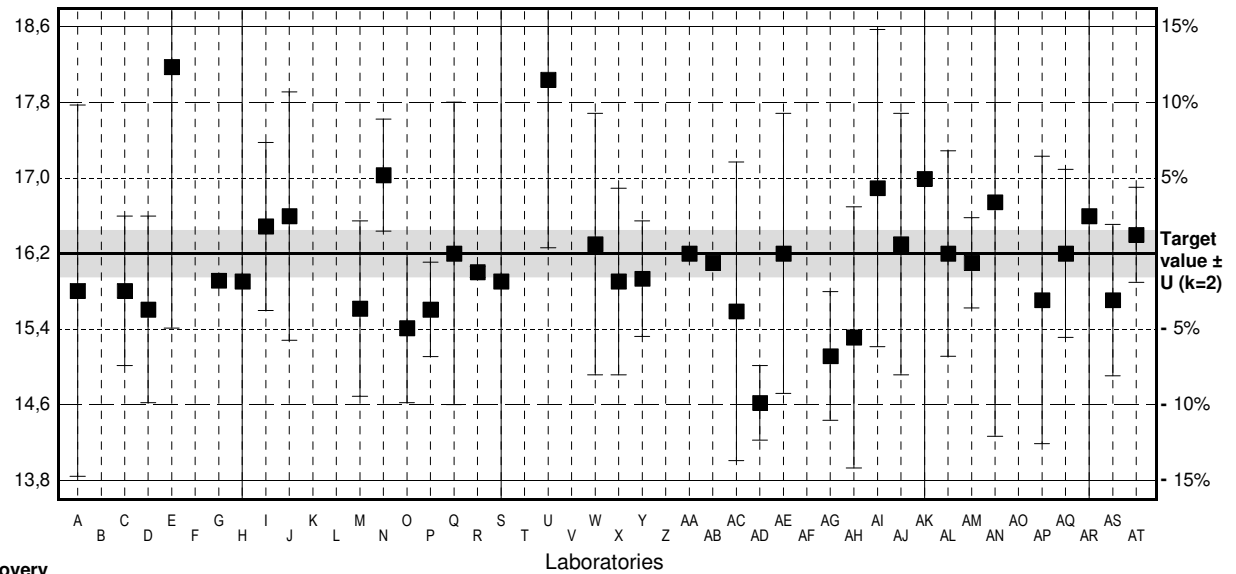
# Sample N164A

## Parameter Calcium

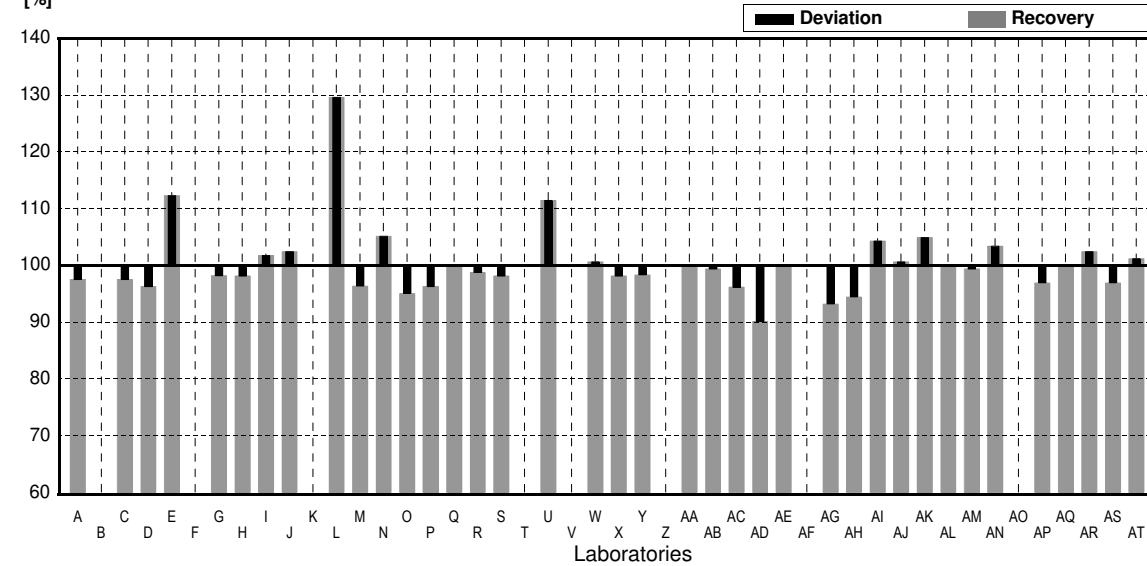
Target value ± U (k=2) 16,2 mg/l ± 0,2 mg/l  
 IFA result ± U (k=2) 17,0 mg/l ± 0,9 mg/l  
 Stability test ± U (k=2) 17,0 mg/l ± 0,9 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	15,8	1,99	ma/l	98%	-0,75
B			ma/l		
C	15,8	0,8	ma/l	98%	-0,75
D	15,6	1	ma/l	96%	-1,12
E	18,2 *	2,8	ma/l	112%	3,74
F			ma/l		
G	15,91		ma/l	98%	-0,54
H	15,9	3,2	ma/l	98%	-0,56
I	16,49	0,9	ma/l	102%	0,54
J	16,6	1,33	ma/l	102%	0,75
K			ma/l		
L	21,0 *		ma/l	130%	8,98
M	15,61	0,94	ma/l	96%	-1,10
N	17,04	0,6	ma/l	105%	1,57
O	15,4	0,8	ma/l	95%	-1,50
P	15,6	0,505	ma/l	96%	-1,12
Q	16,2	1,62	ma/l	100%	0,00
R	16,0	0,058	ma/l	99%	-0,37
S	15,9	12,0	ma/l	98%	-0,56
T			ma/l		
U	18,06 *	1,8	ma/l	111%	3,48
V			ma/l		
W	16,3	1,4	ma/l	101%	0,19
X	15,9	1,0	ma/l	98%	-0,56
Y	15,93	0,62	ma/l	98%	-0,51
Z			ma/l		
AA	16,2		ma/l	100%	0,00
AB	16,1		ma/l	99%	-0,19
AC	15,58	1,6	ma/l	96%	-1,16
AD	14,6	0,4	ma/l	90%	-2,99
AE	16,2	1,5	ma/l	100%	0,00
AF			ma/l		
AG	15,1	0,69	ma/l	93%	-2,06
AH	15,3	1,40	ma/l	94%	-1,68
AI	16,9	1,7	ma/l	104%	1,31
AJ	16,3	1,4	ma/l	101%	0,19
AK	17,0	3,4	ma/l	105%	1,50
AL	16,2	1,1	ma/l	100%	0,00
AM	16,1	0,483	ma/l	99%	-0,19
AN	16,75	2,51	ma/l	103%	1,03
AO			ma/l		
AP	15,7	1,54	ma/l	97%	-0,94
AQ	16,2	0,9	ma/l	100%	0,00
AR	16,6	3	ma/l	102%	0,75
AS	15,7	0,81	ma/l	97%	-0,94
AT	16,4	0,51	ma/l	101%	0,37

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	16,3 ± 0,5	16,0 ± 0,2	mg/l
Recov. ± CI(99%)	100,4 ± 2,9	98,9 ± 1,5	%
SD between labs	1,1	0,5	mg/l
RSD between labs	6,5	3,3	%
n for calculation	38	35	

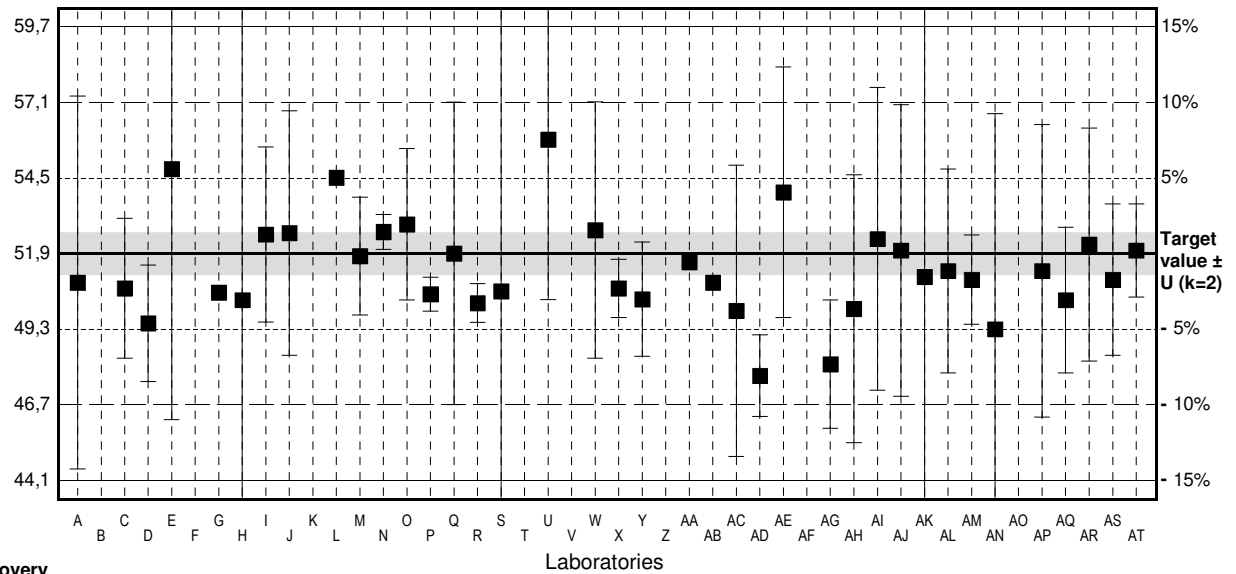
# Sample N164B

## Parameter Calcium

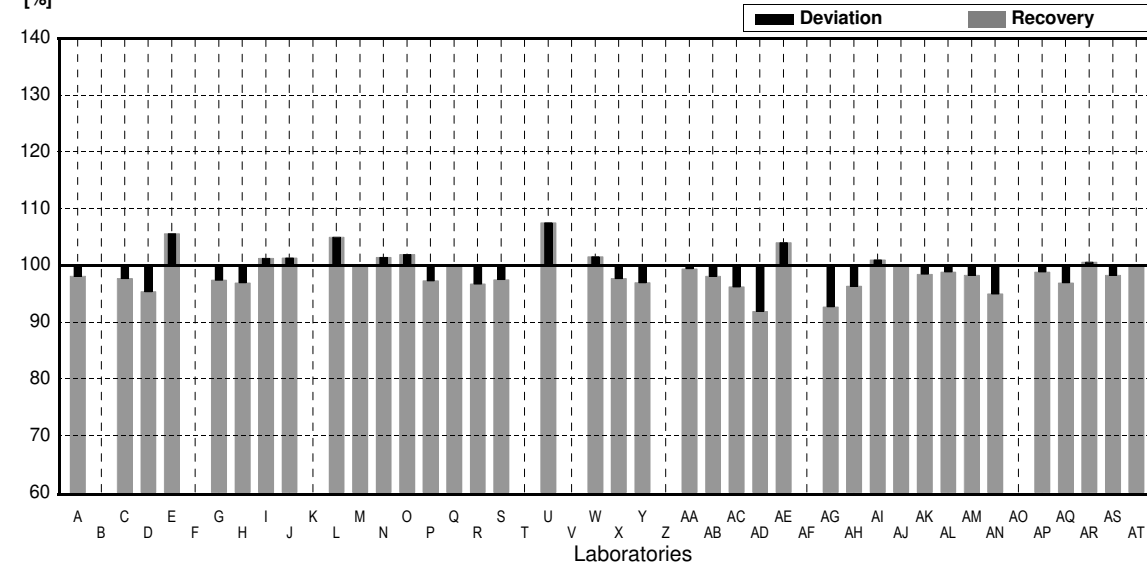
Target value ± U (k=2) 51,9 mg/l ± 0,7 mg/l  
 IFA result ± U (k=2) 54 mg/l ± 2 mg/l  
 Stability test ± U (k=2) 53 mg/l ± 2 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	50.9	6.40	ma/l	98%	-0.58
B			ma/l		
C	50.7	2.4	ma/l	98%	-0.70
D	49.5	2	ma/l	95%	-1.40
E	54.8	8.6	ma/l	106%	1.69
F			ma/l		
G	50.56		ma/l	97%	-0.78
H	50.3	10.1	ma/l	97%	-0.93
I	52.55	3	ma/l	101%	0.38
J	52.6	4.20	ma/l	101%	0.41
K			ma/l		
L	54.5		ma/l	105%	1.52
M	51.81	2.02	ma/l	100%	-0.05
N	52.64	0.6	ma/l	101%	0.43
O	52.9	2.6	ma/l	102%	0.58
P	50.5	0.580	ma/l	97%	-0.82
Q	51.9	5.19	ma/l	100%	0.00
R	50.2	0.666	ma/l	97%	-0.99
S	50.6	12.0	ma/l	97%	-0.76
T			ma/l		
U	55.81 *	5.5	ma/l	108%	2.28
V			ma/l		
W	52.7	4.4	ma/l	102%	0.47
X	50.7	1.0	ma/l	98%	-0.70
Y	50.33	1.96	ma/l	97%	-0.92
Z			ma/l		
AA	51.6		ma/l	99%	-0.18
AB	50.9		ma/l	98%	-0.58
AC	49.93	5	ma/l	96%	-1.15
AD	47.7	1.4	ma/l	92%	-2.45
AE	54	4.3	ma/l	104%	1.23
AF			ma/l		
AG	48.1	2.2	ma/l	93%	-2.22
AH	50	4.6	ma/l	96%	-1.11
AI	52.4	5.2	ma/l	101%	0.29
AJ	52.0	5	ma/l	100%	0.06
AK	51.1	10	ma/l	98%	-0.47
AL	51.3	3.5	ma/l	99%	-0.35
AM	51.0	1.53	ma/l	98%	-0.53
AN	49.30	7.40	ma/l	95%	-1.52
AO			ma/l		
AP	51.3	5.02	ma/l	99%	-0.35
AQ	50.3	2.5	ma/l	97%	-0.93
AR	52.2	4	ma/l	101%	0.18
AS	51	2.6	ma/l	98%	-0.53
AT	52	1.6	ma/l	100%	0.06

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	51,4 ± 0,7	51,3 ± 0,7	mg/l
Recov. ± CI(99%)	99,0 ± 1,4	98,8 ± 1,3	%
SD between labs	1,7	1,5	mg/l
RSD between labs	3,3	3,0	%
n for calculation	38	37	

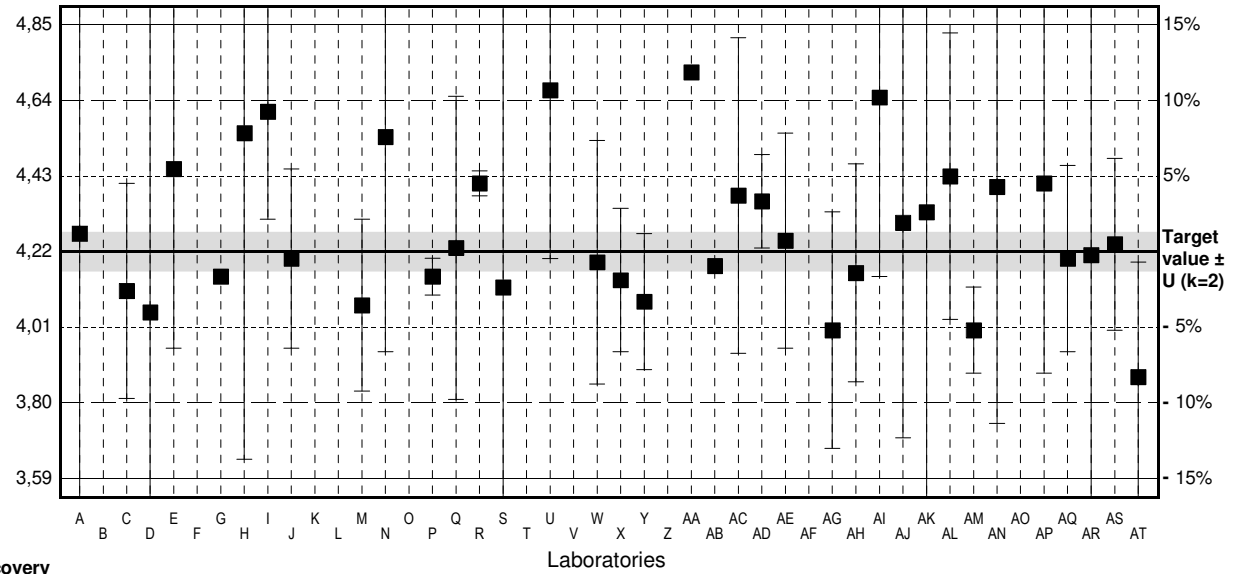
# Sample N164A

## Parameter Magnesium

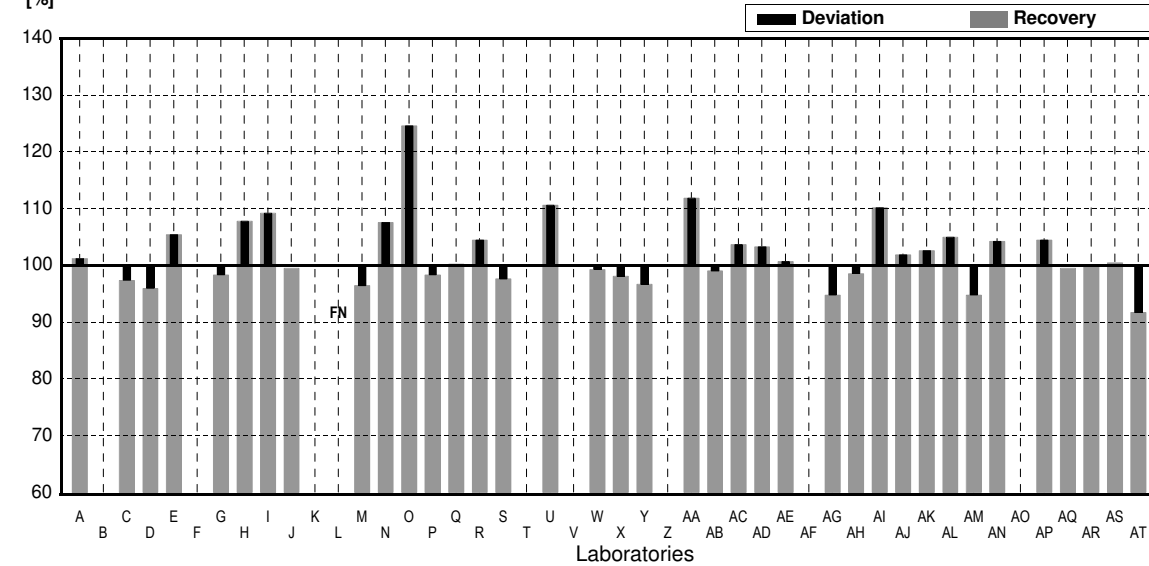
Target value ± U (k=2) 4,22 mg/l ± 0,05 mg/l  
 IFA result ± U (k=2) 4,53 mg/l ± 0,25 mg/l  
 Stability test ± U (k=2) 4,58 mg/l ± 0,25 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	4.27	0.74	mg/l	101%	0.32
B			mg/l		
C	4.11	0.30	mg/l	97%	-0.70
D	4.05	1	mg/l	96%	-1.09
E	4.45	0.5	mg/l	105%	1.47
F			mg/l		
G	4.15		mg/l	98%	-0.45
H	4.55	0.91	mg/l	108%	2.11
I	4.61	0.3	mg/l	109%	2.50
J	4.20	0.25	mg/l	100%	-0.13
K			mg/l		
L	<3		mg/l	FN	
M	4.07	0.24	mg/l	96%	-0.96
N	4.54	0.6	mg/l	108%	2.05
O	5.26	0.3	mg/l	125%	6.66
P	4.15	0.0513	mg/l	98%	-0.45
Q	4.23	0.423	mg/l	100%	0.06
R	4.41	0.035	mg/l	105%	1.22
S	4.12	3.9	mg/l	98%	-0.64
T			mg/l		
U	4.67	0.47	mg/l	111%	2.88
V			mg/l		
W	4.19	0.34	mg/l	99%	-0.19
X	4.14	0.2	mg/l	98%	-0.51
Y	4.08	0.19	mg/l	97%	-0.90
Z			mg/l		
AA	4.72		mg/l	112%	3.20
AB	4.18		mg/l	99%	-0.26
AC	4.376	0.44	mg/l	104%	1.00
AD	4.36	0.13	mg/l	103%	0.90
AE	4.25	0.3	mg/l	101%	0.19
AF			mg/l		
AG	4.00	0.33	mg/l	95%	-1.41
AH	4.16	0.304	mg/l	99%	-0.38
AI	4.65	0.5	mg/l	110%	2.75
AJ	4.30	0.6	mg/l	102%	0.51
AK	4.33	0.87	mg/l	103%	0.70
AL	4.43	0.4	mg/l	105%	1.34
AM	4.00	0.120	mg/l	95%	-1.41
AN	4.40	0.66	mg/l	104%	1.15
AO			mg/l		
AP	4.41	0.53	mg/l	105%	1.22
AQ	4.20	0.26	mg/l	100%	-0.13
AR	4.21	1.5	mg/l	100%	-0.06
AS	4.24	0.24	mg/l	100%	0.13
AT	3.87	0.32	mg/l	92%	-2.24

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	4,31 ± 0,12	4,28 ± 0,09	mg/l
Recov. ± CI(99%)	102,0 ± 2,7	101,4 ± 2,2	%
SD between labs	0,26	0,21	mg/l
RSD between labs	6,0	4,8	%
n for calculation	37	36	

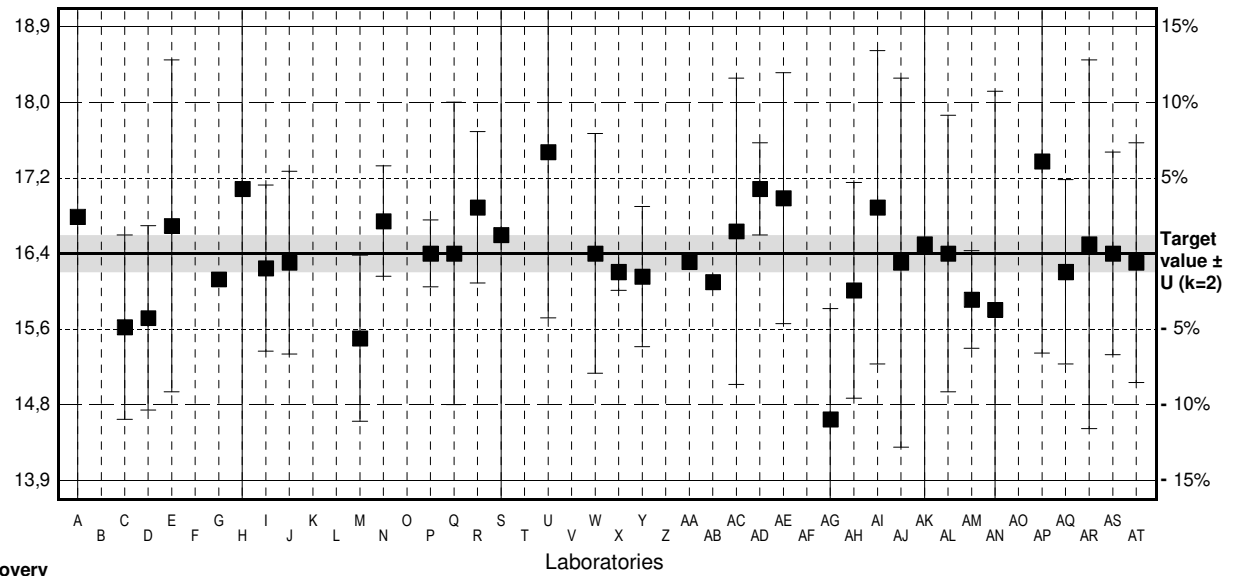
# Sample N164B

## Parameter Magnesium

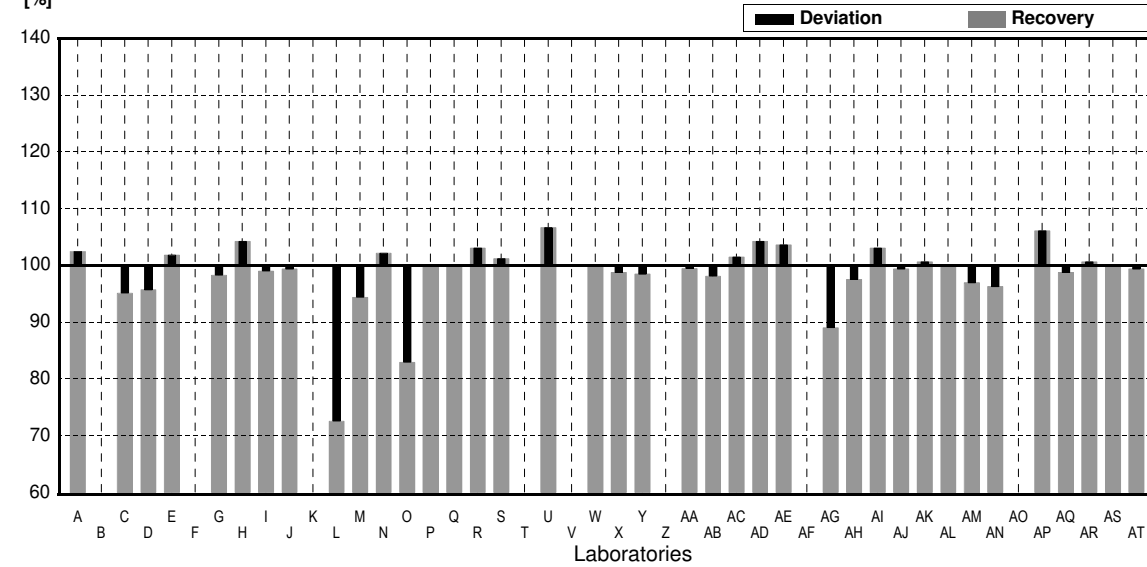
Target value ± U (k=2) 16,4 mg/l ± 0,2 mg/l  
 IFA result ± U (k=2) 17,4 mg/l ± 0,9 mg/l  
 Stability test ± U (k=2) 17,4 mg/l ± 0,9 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	16.8	2.90	mg/l	102%	0.66
B			mg/l		
C	15.6	1.0	mg/l	95%	-1.32
D	15.7	1	mg/l	96%	-1.15
E	16.7	1.8	mg/l	102%	0.49
F			mg/l		
G	16.12		mg/l	98%	-0.46
H	17.1	3.4	mg/l	104%	1.15
I	16.24	0.9	mg/l	99%	-0.26
J	16.3	0.99	mg/l	99%	-0.16
K			mg/l		
L	11.9 *		mg/l	73%	-7.42
M	15.48	0.90	mg/l	94%	-1.52
N	16.75	0.6	mg/l	102%	0.58
O	13.6 *	0.7	mg/l	83%	-4.61
P	16.4	0.364	mg/l	100%	0.00
Q	16.4	1.64	mg/l	100%	0.00
R	16.9	0.82	mg/l	103%	0.82
S	16.6	3.9	mg/l	101%	0.33
T			mg/l		
U	17.50	1.8	mg/l	107%	1.81
V			mg/l		
W	16.4	1.3	mg/l	100%	0.00
X	16.2	0.2	mg/l	99%	-0.33
Y	16.15	0.76	mg/l	98%	-0.41
Z			mg/l		
AA	16.31		mg/l	99%	-0.15
AB	16.09		mg/l	98%	-0.51
AC	16.64	1.66	mg/l	101%	0.40
AD	17.1	0.5	mg/l	104%	1.15
AE	17.0	1.36	mg/l	104%	0.99
AF			mg/l		
AG	14.6 *	1.20	mg/l	89%	-2.97
AH	16.0	1.17	mg/l	98%	-0.66
AI	16.9	1.7	mg/l	103%	0.82
AJ	16.3	2	mg/l	99%	-0.16
AK	16.5	3.3	mg/l	101%	0.16
AL	16.4	1.5	mg/l	100%	0.00
AM	15.9	0.530	mg/l	97%	-0.82
AN	15.79	2.37	mg/l	96%	-1.01
AO			mg/l		
AP	17.4	2.08	mg/l	106%	1.65
AQ	16.2	1.0	mg/l	99%	-0.33
AR	16.5	2	mg/l	101%	0.16
AS	16.4	1.1	mg/l	100%	0.00
AT	16.3	1.3	mg/l	99%	-0.16

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	16,2 ± 0,4	16,4 ± 0,2	mg/l
Recov. ± CI(99%)	98,7 ± 2,7	100,2 ± 1,3	%
SD between labs	1,0	0,5	mg/l
RSD between labs	6,2	2,9	%
n for calculation	38	35	

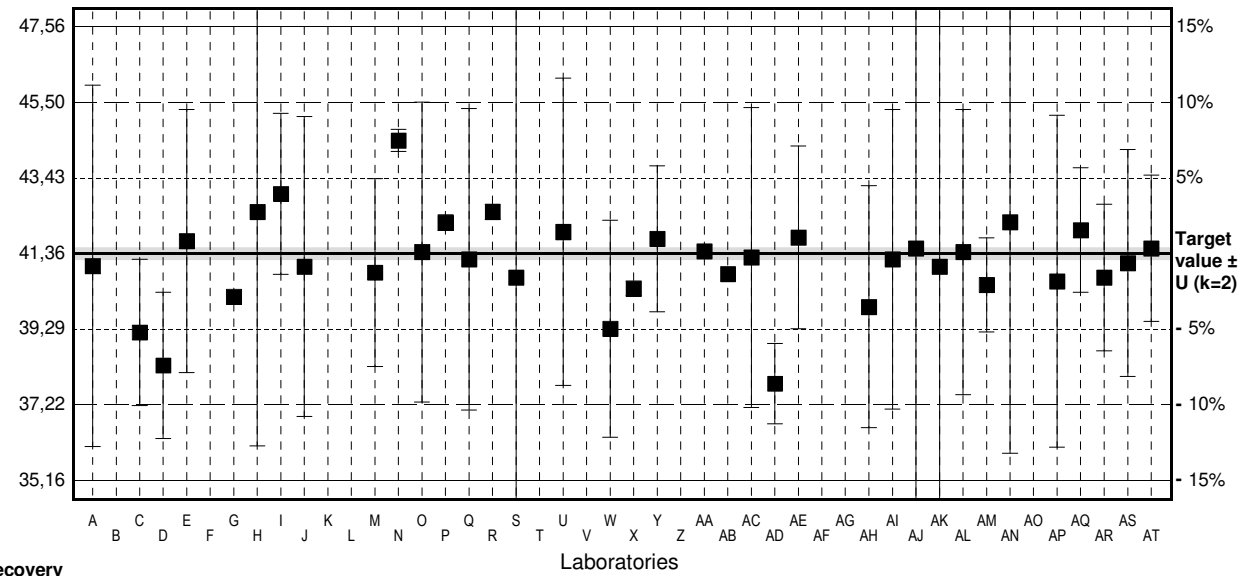
# Sample N164A

## Parameter Sodium

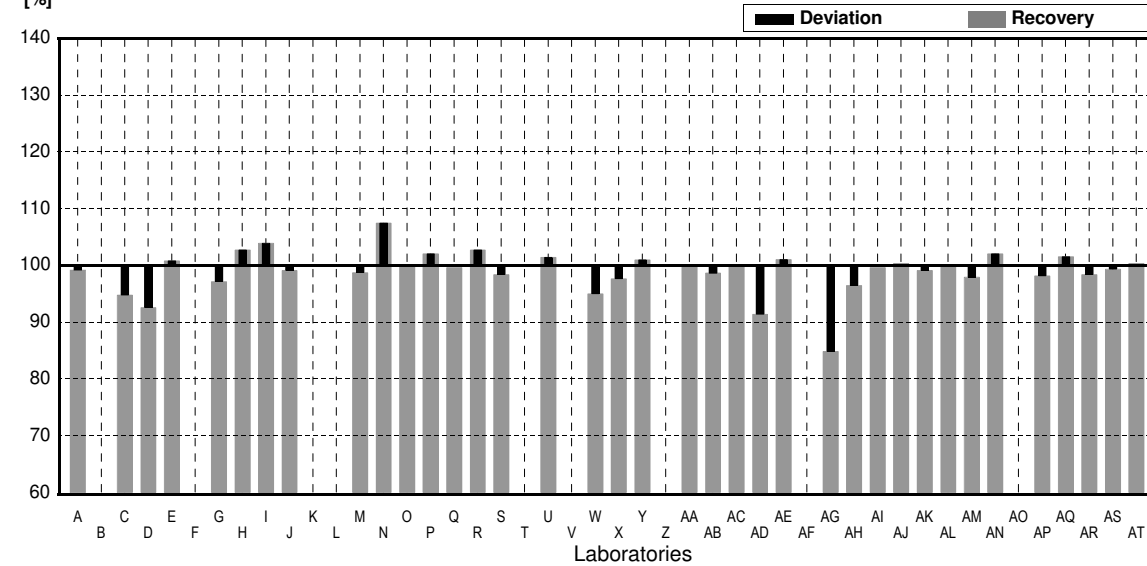
Target value  $\pm U$  (k=2) 41,36 mg/l  $\pm$  0,16 mg/l  
 IFA result  $\pm U$  (k=2) 41,9 mg/l  $\pm$  1,7 mg/l  
 Stability test  $\pm U$  (k=2) 43,4 mg/l  $\pm$  1,8 mg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	41.02	4.94	mg/l	99%	-0.26
B			mg/l		
C	39.2	2.0	mg/l	95%	-1.63
D	38.3 *	2	mg/l	93%	-2.31
E	41.7	3.6	mg/l	101%	0.26
F			mg/l		
G	40.18		mg/l	97%	-0.89
H	42.5	6.4	mg/l	103%	0.86
I	42.99	2.2	mg/l	104%	1.23
J	41.0	4.10	mg/l	99%	-0.27
K			mg/l		
L			mg/l		
M	40.84	2.57	mg/l	99%	-0.39
N	44.45 *	0.3	mg/l	107%	2.33
O	41.4	4.1	mg/l	100%	0.03
P	42.2	0.214	mg/l	102%	0.63
Q	41.2	4.12	mg/l	100%	-0.12
R	42.5	0.208	mg/l	103%	0.86
S	40.7	7.9	mg/l	98%	-0.50
T			mg/l		
U	41.95	4.2	mg/l	101%	0.45
V			mg/l		
W	39.3	2.97	mg/l	95%	-1.56
X	40.4	0.2	mg/l	98%	-0.73
Y	41.76	2.00	mg/l	101%	0.30
Z			mg/l		
AA	41.42		mg/l	100%	0.05
AB	40.8		mg/l	99%	-0.42
AC	41.25	4.1	mg/l	100%	-0.08
AD	37.8 *	1.1	mg/l	91%	-2.69
AE	41.8	2.5	mg/l	101%	0.33
AF			mg/l		
AG	35.1 *	2.5	mg/l	85%	-4.73
AH	39.9	3.31	mg/l	96%	-1.10
AI	41.2	4.1	mg/l	100%	-0.12
AJ	41.5	7	mg/l	100%	0.11
AK	41.0	8.2	mg/l	99%	-0.27
AL	41.4	3.9	mg/l	100%	0.03
AM	40.5	1.29	mg/l	98%	-0.65
AN	42.22	6.33	mg/l	102%	0.65
AO			mg/l		
AP	40.6	4.54	mg/l	98%	-0.57
AQ	42.0	1.7	mg/l	102%	0.48
AR	40.7	2	mg/l	98%	-0.50
AS	41.1	3.1	mg/l	99%	-0.20
AT	41.5	2.0	mg/l	100%	0.11

### Result [mg/l]



### Recovery [%]



	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	40,96 $\pm$ 0,70	41,20 $\pm$ 0,41	mg/l
Recov. $\pm$ CI(99%)	99,0 $\pm$ 1,7	99,6 $\pm$ 1,0	%
SD between labs	1,58	0,86	mg/l
RSD between labs	3,8	2,1	%
n for calculation	37	33	

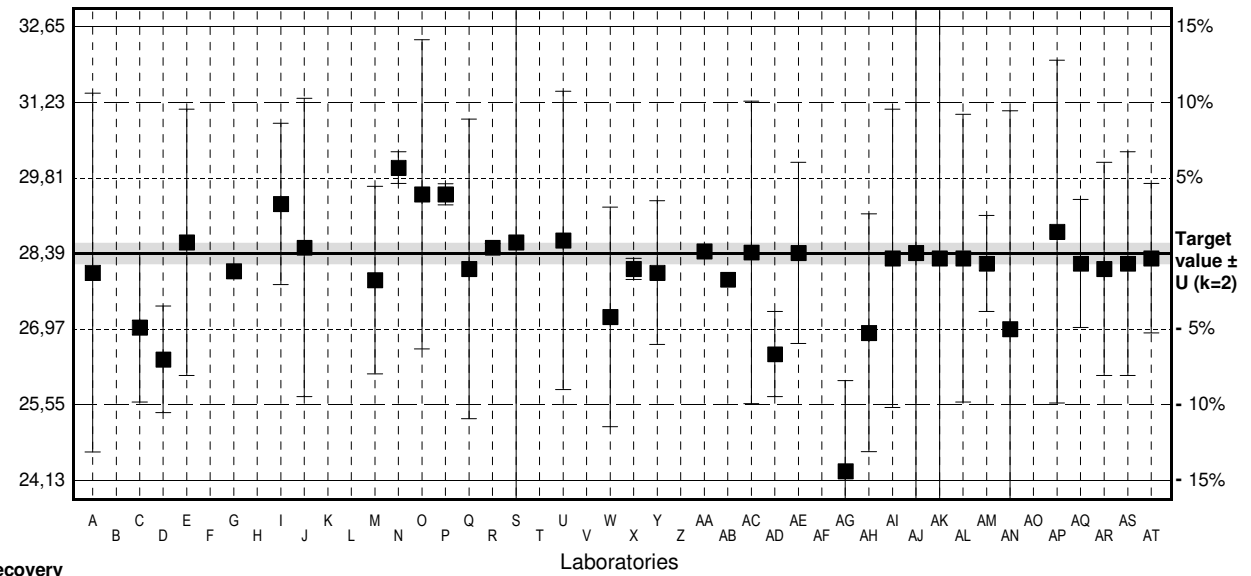
# Sample N164B

## Parameter Sodium

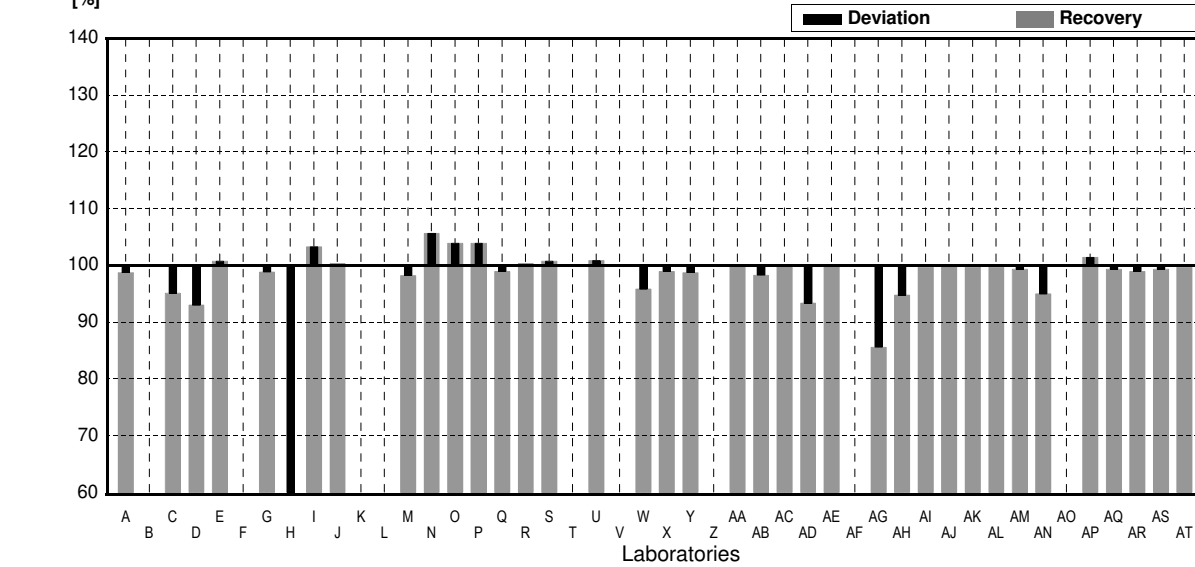
Target value ± U (k=2) 28,39 mg/l ± 0,19 mg/l  
 IFA result ± U (k=2) 28,8 mg/l ± 1,4 mg/l  
 Stability test ± U (k=2) 29,4 mg/l ± 1,4 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	28.03	3.37	mg/l	99%	-0.40
B			mg/l		
C	27.0	1.4	mg/l	95%	-1.53
D	26.4 *	1	mg/l	93%	-2.19
E	28.6	2.5	mg/l	101%	0.23
F			mg/l		
G	28.06		mg/l	99%	-0.36
H	4.27 *	0.9	mg/l	15%	-26.55
I	29.32	1.5157	mg/l	103%	1.02
J	28.5	2.80	mg/l	100%	0.12
K			mg/l		
L			mg/l		
M	27.89	1.76	mg/l	98%	-0.55
N	30.00 *	0.3	mg/l	106%	1.77
O	29.5	2.9	mg/l	104%	1.22
P	29.5	0.196	mg/l	104%	1.22
Q	28.1	2.81	mg/l	99%	-0.32
R	28.5	0.071	mg/l	100%	0.12
S	28.6	7.9	mg/l	101%	0.23
T			mg/l		
U	28.634	2.8	mg/l	101%	0.27
V			mg/l		
W	27.2	2.06	mg/l	96%	-1.31
X	28.1	0.2	mg/l	99%	-0.32
Y	28.03	1.35	mg/l	99%	-0.40
Z			mg/l		
AA	28.43		mg/l	100%	0.04
AB	27.9		mg/l	98%	-0.54
AC	28.41	2.84	mg/l	100%	0.02
AD	26.5 *	0.8	mg/l	93%	-2.08
AE	28.4	1.7	mg/l	100%	0.01
AF			mg/l		
AG	24.3 *	1.7	mg/l	86%	-4.50
AH	26.9	2.23	mg/l	95%	-1.64
AI	28.3	2.8	mg/l	100%	-0.10
AJ	28.4	5	mg/l	100%	0.01
AK	28.3	5.7	mg/l	100%	-0.10
AL	28.3	2.7	mg/l	100%	-0.10
AM	28.2	0.902	mg/l	99%	-0.21
AN	26.97	4.10	mg/l	95%	-1.56
AO			mg/l		
AP	28.8	3.22	mg/l	101%	0.45
AQ	28.2	1.2	mg/l	99%	-0.21
AR	28.1	2	mg/l	99%	-0.32
AS	28.2	2.1	mg/l	99%	-0.21
AT	28.3	1.4	mg/l	100%	-0.10

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	27,44 ± 1,81	28,24 ± 0,30	mg/l
Recov. ± CI(99%)	96,6 ± 6,4	99,5 ± 1,1	%
SD between labs	4,04	0,62	mg/l
RSD between labs	14,7	2,2	%
n for calculation	37	32	

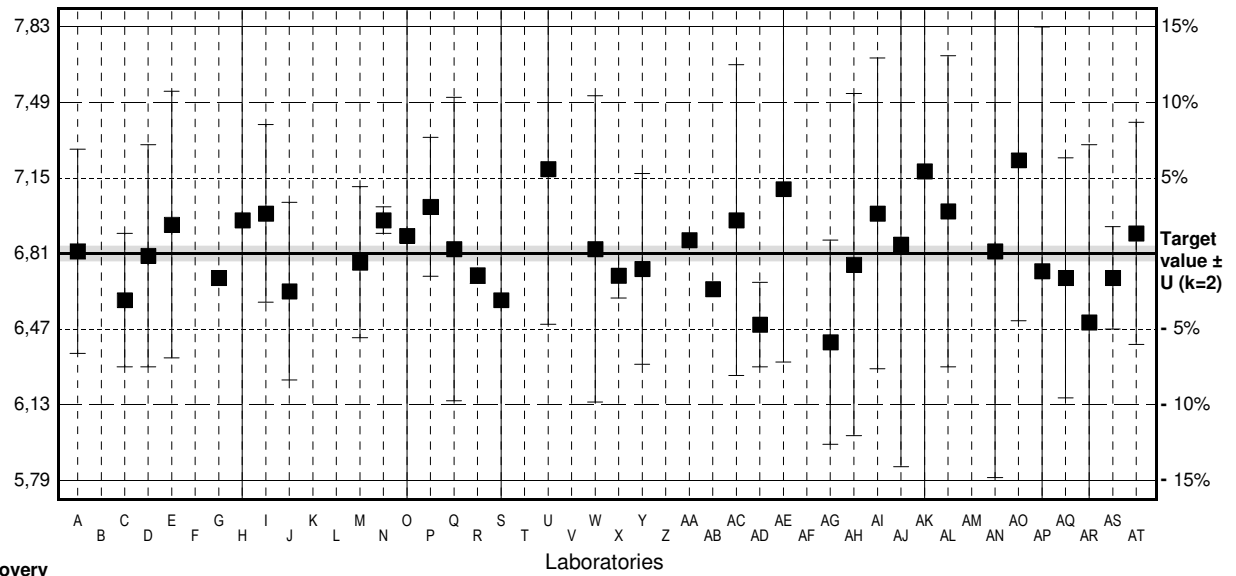
# Sample N164A

## Parameter Potassium

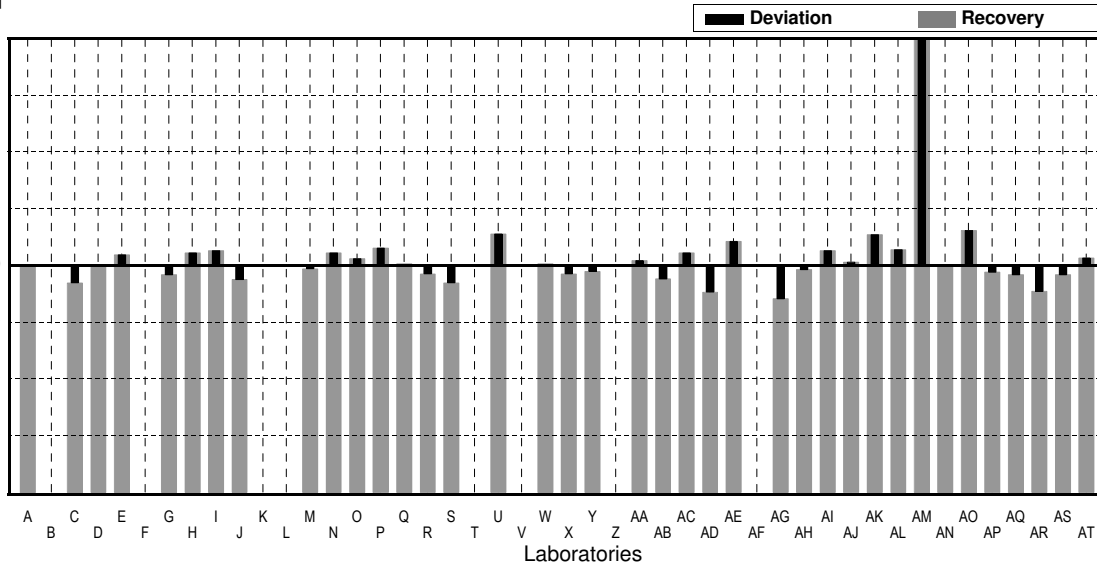
Target value ± U (k=2) 6,81 mg/l ± 0,03 mg/l  
 IFA result ± U (k=2) 7,0 mg/l ± 0,4 mg/l  
 Stability test ± U (k=2) 7,0 mg/l ± 0,4 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	6.82	0.46	ma/l	100%	0.03
B			ma/l		
C	6.6	0.3	ma/l	97%	-0.70
D	6.8	0.5	ma/l	100%	-0.03
E	6.94	0.6	ma/l	102%	0.43
F			ma/l		
G	6.70		ma/l	98%	-0.37
H	6.96	1.4	ma/l	102%	0.50
I	6.99	0.4	ma/l	103%	0.60
J	6.64	0.40	ma/l	98%	-0.57
K			ma/l		
L			ma/l		
M	6.77	0.34	ma/l	99%	-0.13
N	6.96	0.06	ma/l	102%	0.50
O	6.89	1.4	ma/l	101%	0.27
P	7.02	0.313	ma/l	103%	0.70
Q	6.83	0.683	ma/l	100%	0.07
R	6.71	0.035	ma/l	99%	-0.33
S	6.6	3.0	ma/l	97%	-0.70
T			ma/l		
U	7.19	0.7	ma/l	106%	1.27
V			ma/l		
W	6.83	0.69	ma/l	100%	0.07
X	6.71	0.1	ma/l	99%	-0.33
Y	6.74	0.43	ma/l	99%	-0.23
Z			ma/l		
AA	6.87		ma/l	101%	0.20
AB	6.65		ma/l	98%	-0.53
AC	6.96	0.7	ma/l	102%	0.50
AD	6.49	0.19	ma/l	95%	-1.07
AE	7.1	0.78	ma/l	104%	0.97
AF			ma/l		
AG	6.41	0.46	ma/l	94%	-1.33
AH	6.76	0.77	ma/l	99%	-0.17
AI	6.99	0.7	ma/l	103%	0.60
AJ	6.85	1	ma/l	101%	0.13
AK	7.18	1.44	ma/l	105%	1.23
AL	7.0	0.7	ma/l	103%	0.63
AM	9.60	0.384	ma/l	141%	9.31
AN	6.82	1.02	ma/l	100%	0.03
AO	7.23	0.723	ma/l	106%	1.40
AP	6.73	1.10	ma/l	99%	-0.27
AQ	6.70	0.54	ma/l	98%	-0.37
AR	6.5	0.8	ma/l	95%	-1.03
AS	6.7	0.23	ma/l	98%	-0.37
AT	6.9	0.5	ma/l	101%	0.30

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	6,90 ± 0,22	6,83 ± 0,09	mg/l
Recov. ± CI(99%)	101,3 ± 3,2	100,2 ± 1,3	%
SD between labs	0,49	0,19	mg/l
RSD between labs	7,1	2,8	%
n for calculation	38	37	

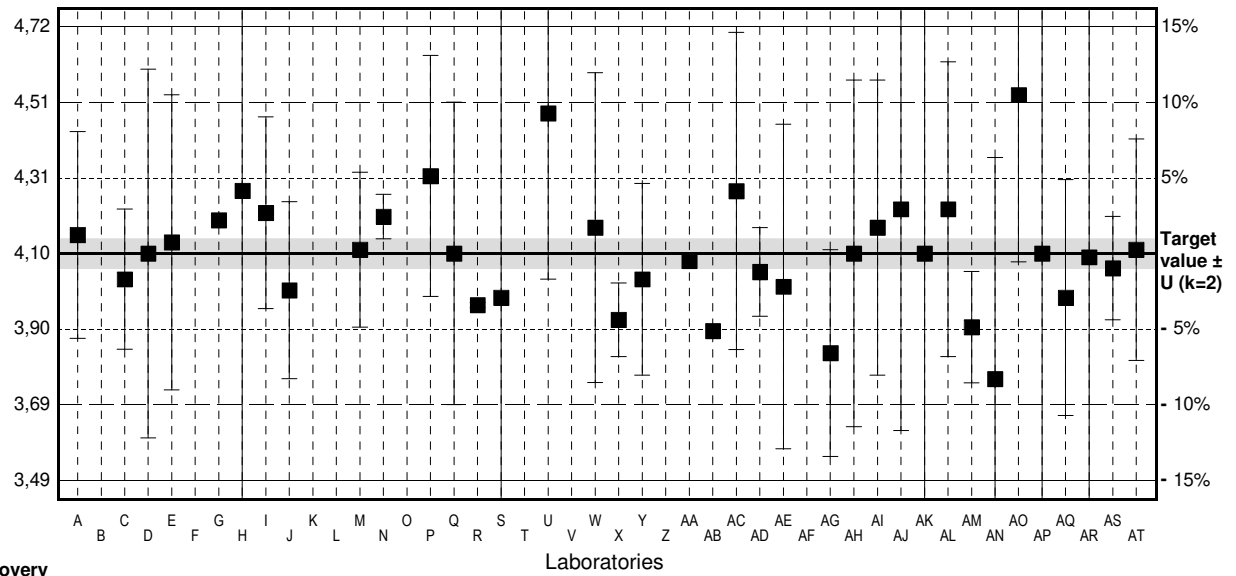
# Sample N164B

## Parameter Potassium

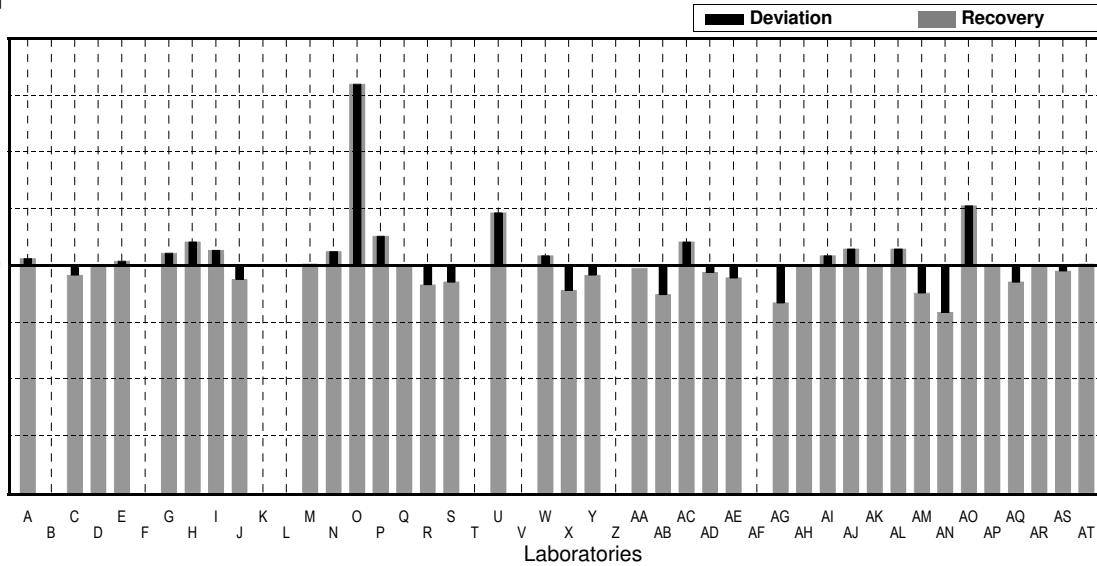
Target value ± U (k=2) 4,10 mg/l ± 0,04 mg/l  
 IFA result ± U (k=2) 4,22 mg/l ± 0,24 mg/l  
 Stability test ± U (k=2) 4,20 mg/l ± 0,24 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	4.15	0.28	mg/l	101%	0.28
B			mg/l		
C	4.03	0.19	mg/l	98%	-0.39
D	4.10	0.5	mg/l	100%	0.00
E	4.13	0.4	mg/l	101%	0.17
F			mg/l		
G	4.19		mg/l	102%	0.50
H	4.27	0.9	mg/l	104%	0.94
I	4.21	0.260	mg/l	103%	0.61
J	4.00	0.24	mg/l	98%	-0.55
K			mg/l		
L			mg/l		
M	4.11	0.21	mg/l	100%	0.06
N	4.20	0.06	mg/l	102%	0.55
O	5.41 *	1.08	mg/l	132%	7.26
P	4.31	0.327	mg/l	105%	1.16
Q	4.10	0.410	mg/l	100%	0.00
R	3.96	0.007	mg/l	97%	-0.78
S	3.98	3.0	mg/l	97%	-0.67
T			mg/l		
U	4.48	0.45	mg/l	109%	2.11
V			mg/l		
W	4.17	0.42	mg/l	102%	0.39
X	3.92	0.1	mg/l	96%	-1.00
Y	4.03	0.26	mg/l	98%	-0.39
Z			mg/l		
AA	4.08		mg/l	100%	-0.11
AB	3.89		mg/l	95%	-1.16
AC	4.269	0.43	mg/l	104%	0.94
AD	4.05	0.12	mg/l	99%	-0.28
AE	4.01	0.44	mg/l	98%	-0.50
AF			mg/l		
AG	3.83	0.28	mg/l	93%	-1.50
AH	4.10	0.47	mg/l	100%	0.00
AI	4.17	0.4	mg/l	102%	0.39
AJ	4.22	0.6	mg/l	103%	0.67
AK	4.10	0.82	mg/l	100%	0.00
AL	4.22	0.4	mg/l	103%	0.67
AM	3.90	0.151	mg/l	95%	-1.11
AN	3.76	0.60	mg/l	92%	-1.88
AO	4.53	0.453	mg/l	110%	2.38
AP	4.10	0.67	mg/l	100%	0.00
AQ	3.98	0.32	mg/l	97%	-0.67
AR	4.09	0.8	mg/l	100%	-0.06
AS	4.06	0.14	mg/l	99%	-0.22
AT	4.11	0.3	mg/l	100%	0.06

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	4,14 ± 0,12	4,10 ± 0,07	mg/l
Recov. ± CI(99%)	100,9 ± 2,8	100,1 ± 1,7	%
SD between labs	0,26	0,16	mg/l
RSD between labs	6,3	3,8	%
n for calculation	38	37	

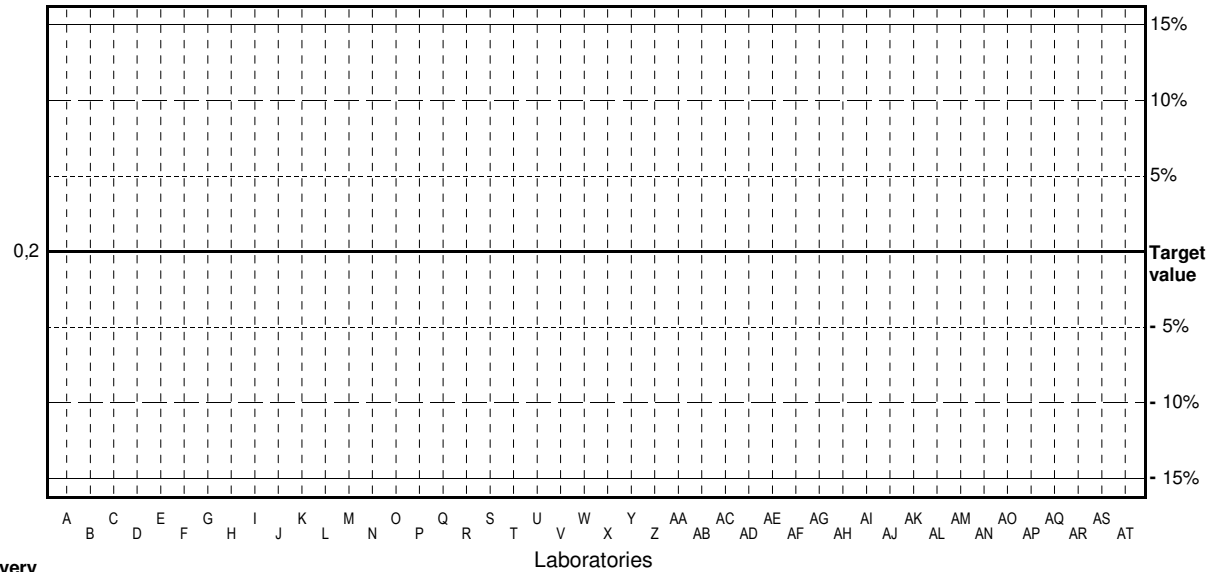
# Sample N164A

## Parameter Nitrate

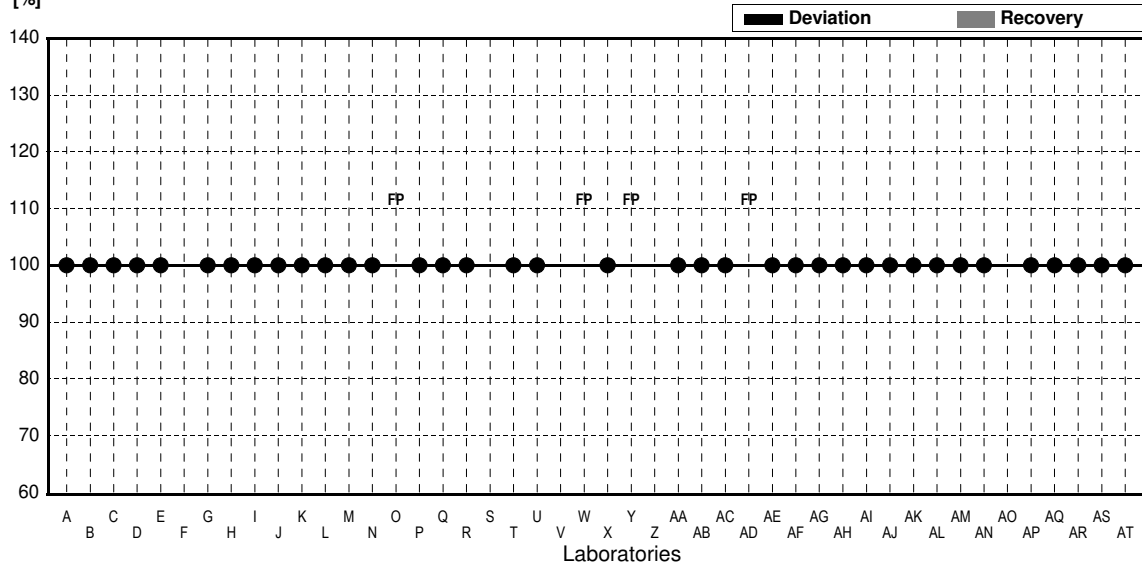
Target value <0,2 mg/l  
 IFA result <0,2 mg/l  
 Stability test <0,2 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<2,50		mg/l	•	
B	<1		mg/l	•	
C	<0,2		mg/l	•	
D	<1,0		mg/l	•	
E	<0,1		mg/l	•	
F			mg/l		
G	<1,00		mg/l	•	
H	<1		mg/l	•	
I	0,140	0,06	mg/l	•	
J	<2	0,06	mg/l	•	
K	<1		mg/l	•	
L	<1		mg/l	•	
M	<0,44		mg/l	•	
N	<0,14	0,5	mg/l	•	
O	0,492	0,05	mg/l	FP	
P	[0,18]		mg/l	•	
Q	<0,062		mg/l	•	
R	<0,10		mg/l	•	
S			mg/l		
T	<0,128	0,00	mg/l	•	
U	<0,058		mg/l	•	
V			mg/l		
W	54,2	5,78	mg/l	FP	
X	<0,4	0,4	mg/l	•	
Y	0,290	0,02	mg/l	FP	
Z			mg/l		
AA	<1,0		mg/l	•	
AB	<1,0	0,15	mg/l	•	
AC	<1		mg/l	•	
AD	1,07	0,16	mg/l	FP	
AE	<1		mg/l	•	
AF	<0,797		mg/l	•	
AG	<0,2		mg/l	•	
AH	<1	0,045	mg/l	•	
AI	<1		mg/l	•	
AJ	<0,25		mg/l	•	
AK	<0,1		mg/l	•	
AL	<2,0		mg/l	•	
AM	<0,05		mg/l	•	
AN	<0,10	0,03	mg/l	•	
AO			mg/l		
AP	0,0915	0,0129	mg/l	•	
AQ	<0,5		mg/l	•	
AR	<0,20		mg/l	•	
AS	<0,50		mg/l	•	
AT	<0,50	0,049	mg/l	•	

Result [mg/l]



Recovery [%]



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

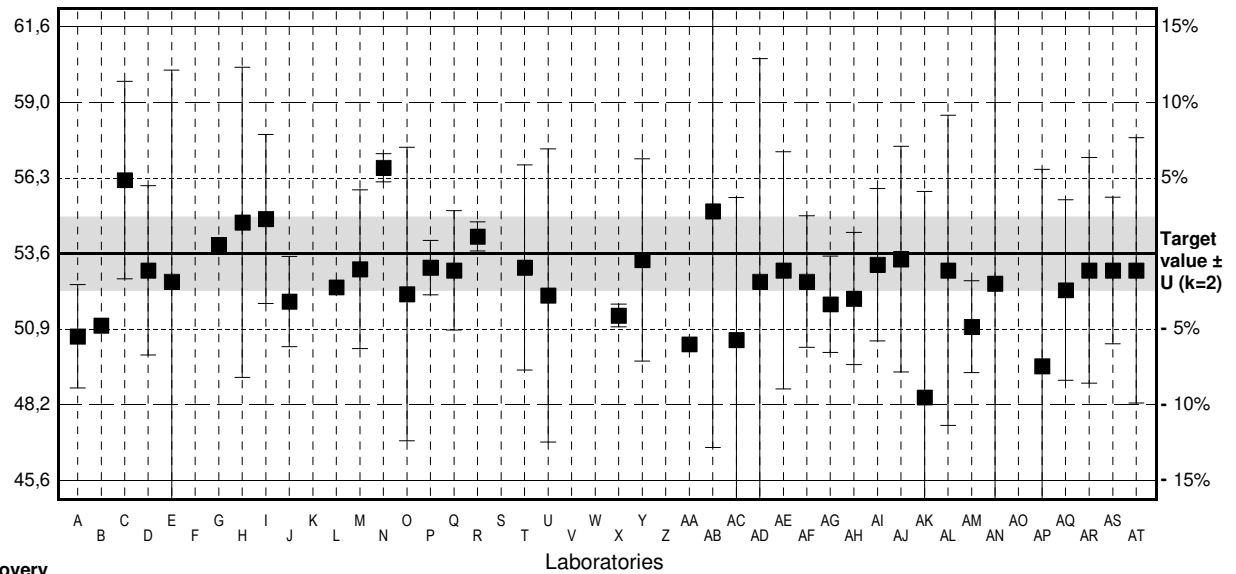
# Sample N164B

## Parameter Nitrate

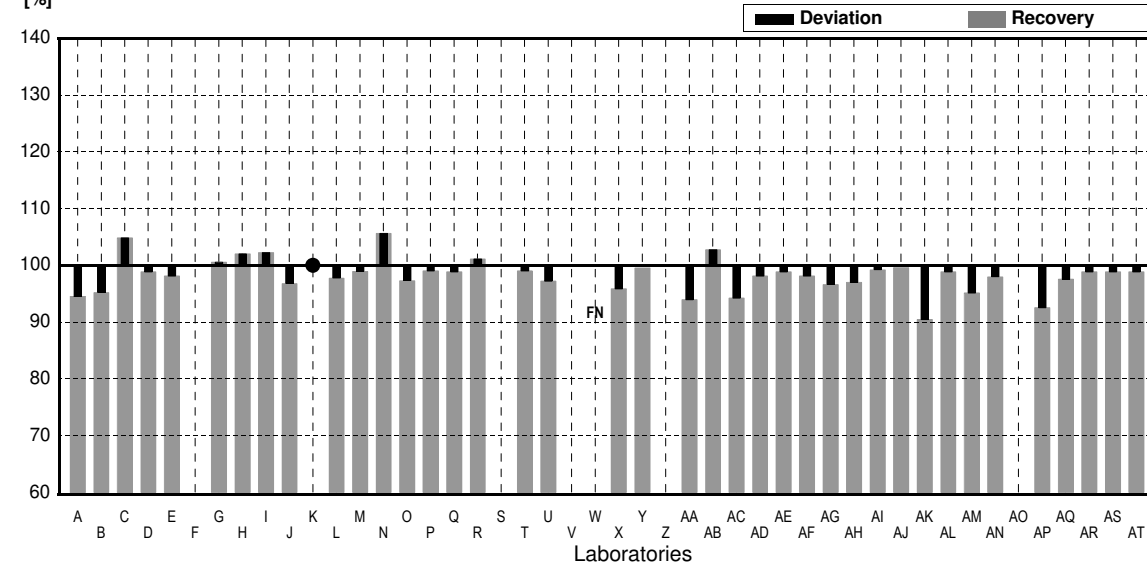
Target value ± U (k=2) 53,6 mg/l ± 1,3 mg/l  
 IFA result ± U (k=2) 52 mg/l ± 3 mg/l  
 Stability test ± U (k=2) 53 mg/l ± 3 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	50.66	1.83	mg/l	95%	-1.71
B	51.04		mg/l	95%	-1.49
C	56.2	3.5	mg/l	105%	1.52
D	53	3	mg/l	99%	-0.35
E	52.6	7.5	mg/l	98%	-0.58
F			mg/l		
G	53.90		mg/l	101%	0.17
H	54.7	5.5	mg/l	102%	0.64
I	54.82	3	mg/l	102%	0.71
J	51.9	1.60	mg/l	97%	-0.99
K	>30		mg/l	*	
L	52.4		mg/l	98%	-0.70
M	53.04	2.81	mg/l	99%	-0.33
N	56.64	0.5	mg/l	106%	1.77
O	52.16	5.2	mg/l	97%	-0.84
P	53.1	0.961	mg/l	99%	-0.29
Q	53.0	2.12	mg/l	99%	-0.35
R	54.2	0.516	mg/l	101%	0.35
S			mg/l		
T	53.1	3.639	mg/l	99%	-0.29
U	52.11	5.2	mg/l	97%	-0.87
V			mg/l		
W	<0.1		mg/l	FN	
X	51.4	0.4	mg/l	96%	-1.28
Y	53.37	3.58	mg/l	100%	-0.13
Z			mg/l		
AA	50.38		mg/l	94%	-1.88
AB	55.1	8.38	mg/l	103%	0.87
AC	50.53	5.05	mg/l	94%	-1.79
AD	52.6	7.9	mg/l	98%	-0.58
AE	53	4.2	mg/l	99%	-0.35
AF	52.6	2.33	mg/l	98%	-0.58
AG	51.8	1.71	mg/l	97%	-1.05
AH	52	2.34	mg/l	97%	-0.93
AI	53.2	2.7	mg/l	99%	-0.23
AJ	53.4	4	mg/l	100%	-0.12
AK	48.5	7.3	mg/l	90%	-2.97
AL	53.0	5.5	mg/l	99%	-0.35
AM	51.0	1.63	mg/l	95%	-1.52
AN	52.53	13.13	mg/l	98%	-0.62
AO			mg/l		
AP	49.6	6.98	mg/l	93%	-2.33
AQ	52.3	3.2	mg/l	98%	-0.76
AR	53.0	4	mg/l	99%	-0.35
AS	53	2.6	mg/l	99%	-0.35
AT	53	4.7	mg/l	99%	-0.35

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	52,7 ± 0,7	52,8 ± 0,7	mg/l
Recov. ± CI(99%)	98,3 ± 1,3	98,5 ± 1,2	%
SD between labs	1,6	1,5	mg/l
RSD between labs	3,1	2,8	%
n for calculation	39	38	

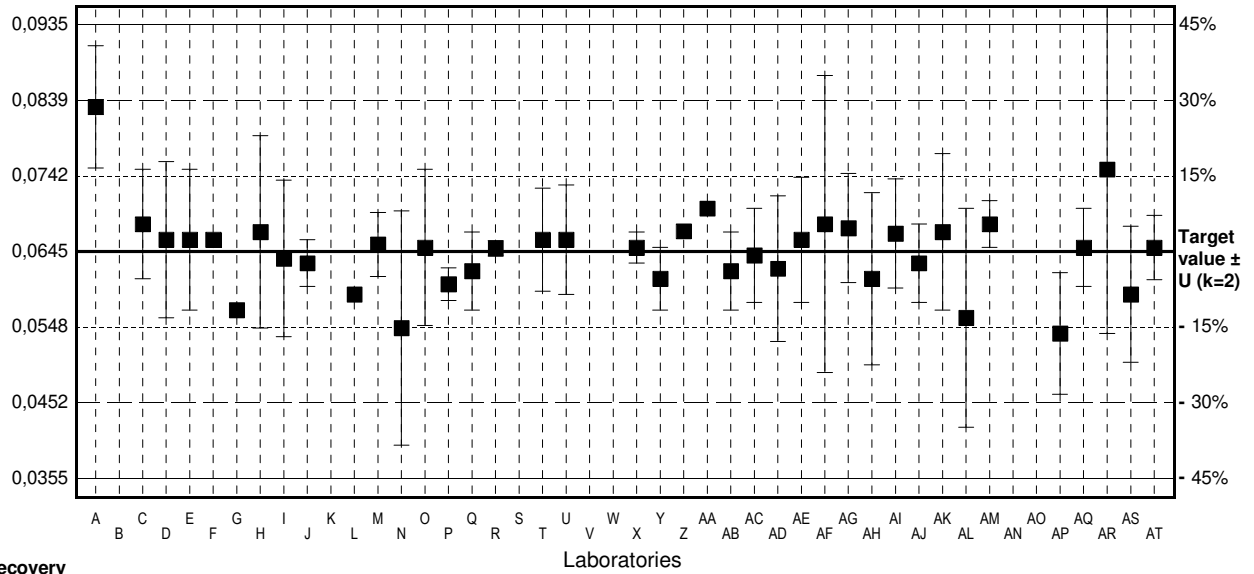
# Sample N164A

## Parameter Nitrite

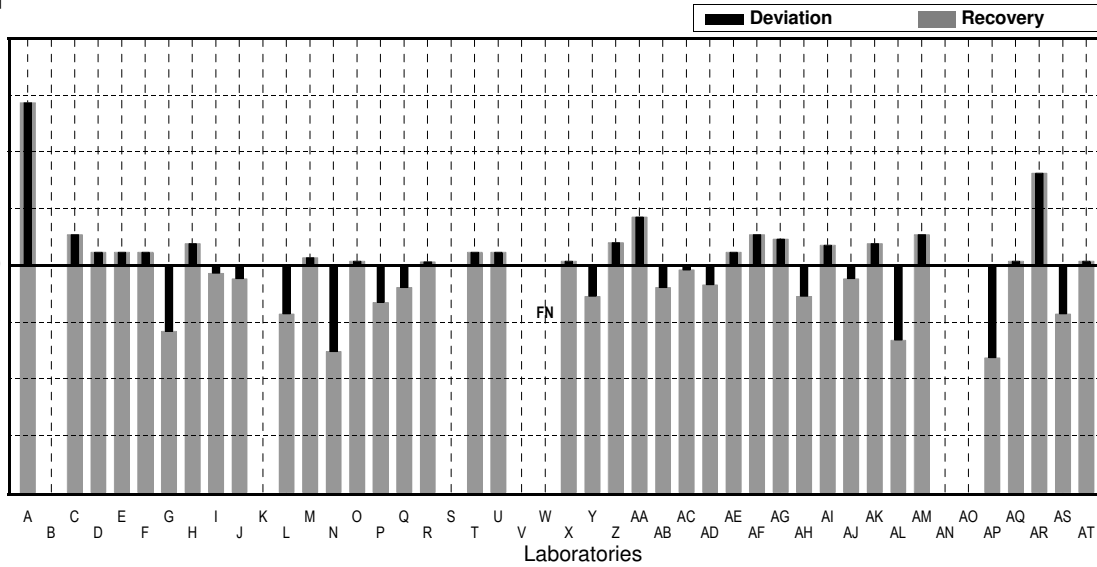
Target value ± U (k=2) 0,0645 mg/l ± 0,0002 mg/l  
 IFA result ± U (k=2) 0,065 mg/l ± 0,003 mg/l  
 Stability test ± U (k=2) 0,064 mg/l ± 0,003 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0.083 *	0.00782	ma/l	129%	5.12
B			ma/l		
C	0.068	0.007	ma/l	105%	0.97
D	0.066	0.01	ma/l	102%	0.42
E	0.066	0.009	ma/l	102%	0.42
F	0.066		ma/l	102%	0.42
G	0.057		ma/l	88%	-2.08
H	0.067	0.0123	ma/l	104%	0.69
I	0.0636	0.01	ma/l	99%	-0.25
J	0.063	0.003	ma/l	98%	-0.42
K			ma/l		
L	0.059		ma/l	91%	-1.52
M	0.0654	0.0041	ma/l	101%	0.25
N	0.0547 *	0.015	ma/l	85%	-2.71
O	0.065	0.01	ma/l	101%	0.14
P	0.0603	0.00209	ma/l	93%	-1.16
Q	0.062	0.005	ma/l	96%	-0.69
R	0.0649	0.001	ma/l	101%	0.11
S			ma/l		
T	0.066	0.0066	ma/l	102%	0.42
U	0.066	0.007	ma/l	102%	0.42
V			ma/l		
W	<0.05		ma/l	FN	
X	0.065	0.002	ma/l	101%	0.14
Y	0.061	0.004	ma/l	95%	-0.97
Z	0.0671		ma/l	104%	0.72
AA	0.070		ma/l	109%	1.52
AB	0.062	0.005	ma/l	96%	-0.69
AC	0.064	0.006	ma/l	99%	-0.14
AD	0.0623	0.0093	ma/l	97%	-0.61
AE	0.066	0.008	ma/l	102%	0.42
AF	0.068	0.019	ma/l	105%	0.97
AG	0.0675	0.007	ma/l	105%	0.83
AH	0.061	0.011	ma/l	95%	-0.97
AI	0.0668	0.007	ma/l	104%	0.64
AJ	0.063	0.005	ma/l	98%	-0.42
AK	0.067	0.010	ma/l	104%	0.69
AL	0.056	0.014	ma/l	87%	-2.35
AM	0.068	0.003	ma/l	105%	0.97
AN			ma/l		
AO			ma/l		
AP	0.054 *	0.0078	ma/l	84%	-2.91
AQ	0.065	0.005	ma/l	101%	0.14
AR	0.075 *	0.021	ma/l	116%	2.91
AS	0.059	0.0087	ma/l	91%	-1.52
AT	0.065	0.0041	ma/l	101%	0.14

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,0645 ± 0,0023	0,0643 ± 0,0015	mg/l
Recov. ± CI(99%)	100,0 ± 3,5	99,6 ± 2,4	%
SD between labs	0,0052	0,0033	mg/l
RSD between labs	8,1	5,1	%
n for calculation	39	35	

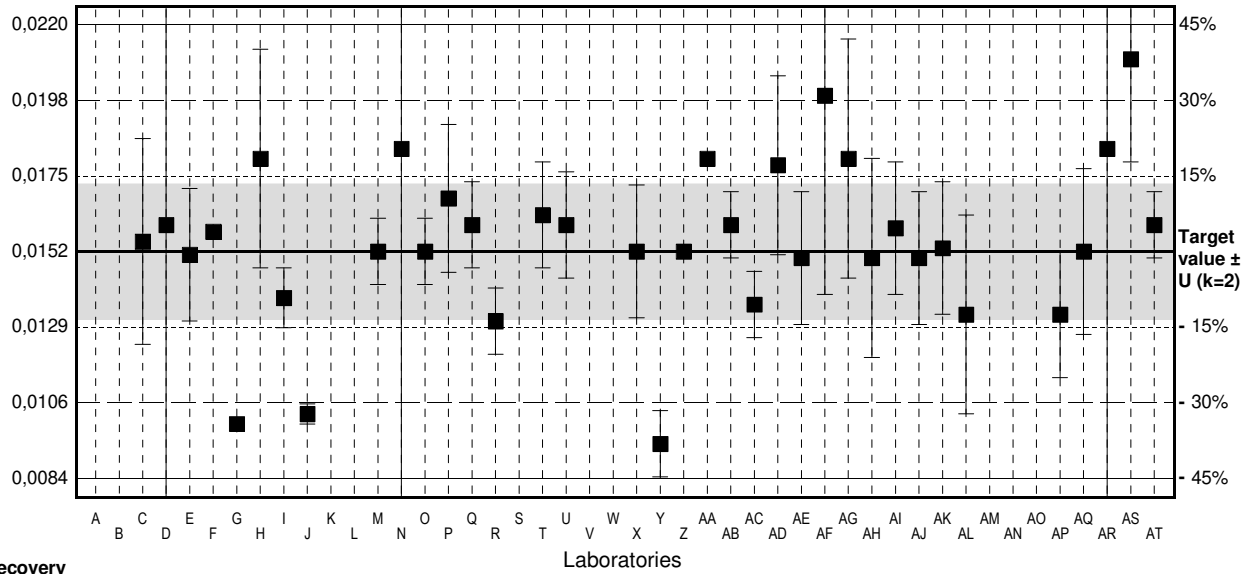
# Sample N164B

## Parameter Nitrite

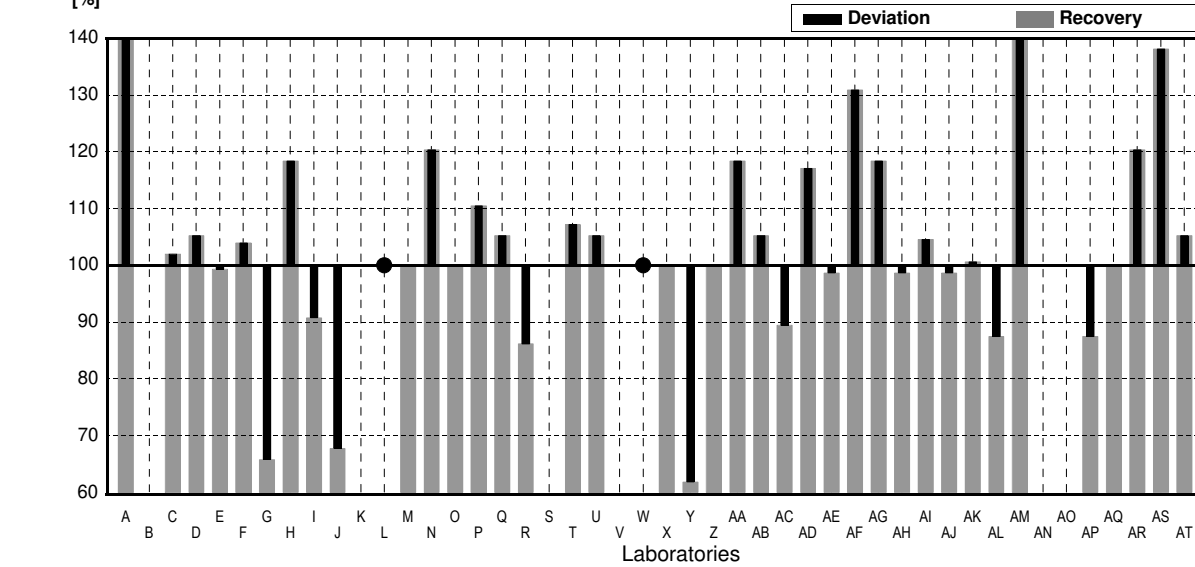
Target value ± U (k=2) 0,0152 mg/l ± 0,0020 mg/l  
 IFA result ± U (k=2) 0,0152 mg/l ± 0,0008 mg/l  
 Stability test ± U (k=2) 0,0153 mg/l ± 0,0008 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0.199 *	0.0187	mg/l	1309%	215.93
B			mg/l		
C	0.0155	0.0031	mg/l	102%	0.35
D	0.0160	0.01	mg/l	105%	0.94
E	0.0151	0.002	mg/l	99%	-0.12
F	0.0158		mg/l	104%	0.70
G	0.0100 *		mg/l	66%	-6.11
H	0.0180	0.0033	mg/l	118%	3.29
I	0.0138	0.0009	mg/l	91%	-1.64
J	0.0103 *	0.0003	mg/l	68%	-5.76
K			mg/l		
L	<0.05		mg/l	*	
M	0.0152	0.0010	mg/l	100%	0.00
N	0.0183	0.015	mg/l	120%	3.64
O	0.0152	0.001	mg/l	100%	0.00
P	0.0168	0.00223	mg/l	111%	1.88
Q	0.0160	0.0013	mg/l	105%	0.94
R	0.0131	0.001	mg/l	86%	-2.47
S			mg/l		
T	0.0163	0.0016	mg/l	107%	1.29
U	0.0160	0.0016	mg/l	105%	0.94
V			mg/l		
W	<0.05		mg/l	*	
X	0.0152	0.002	mg/l	100%	0.00
Y	0.0094 *	0.001	mg/l	62%	-6.81
Z	0.0152		mg/l	100%	0.00
AA	0.0180		mg/l	118%	3.29
AB	0.0160	0.001	mg/l	105%	0.94
AC	0.0136	0.001	mg/l	89%	-1.88
AD	0.0178	0.0027	mg/l	117%	3.05
AE	0.0150	0.002	mg/l	99%	-0.23
AF	0.0199 *	0.006	mg/l	131%	5.52
AG	0.0180	0.0036	mg/l	118%	3.29
AH	0.0150	0.003	mg/l	99%	-0.23
AI	0.0159	0.002	mg/l	105%	0.82
AJ	0.0150	0.002	mg/l	99%	-0.23
AK	0.0153	0.002	mg/l	101%	0.12
AL	0.0133	0.003	mg/l	88%	-2.23
AM	0.050 *	0.002	mg/l	329%	40.88
AN			mg/l		
AO			mg/l		
AP	0.0133	0.0019	mg/l	88%	-2.23
AQ	0.0152	0.0025	mg/l	100%	0.00
AR	0.0183	0.011	mg/l	120%	3.64
AS	0.0210 *	0.0031	mg/l	138%	6.81
AT	0.0160	0.001	mg/l	105%	0.94

### Result [mg/l]



### Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,0212 ± 0,0133	0,0157 ± 0,0007	mg/l
Recov. ± CI(99%)	139,7 ± 87,8	103,4 ± 4,8	%
SD between labs	0,0302	0,0015	mg/l
RSD between labs	142,4	9,4	%
n for calculation	38	31	

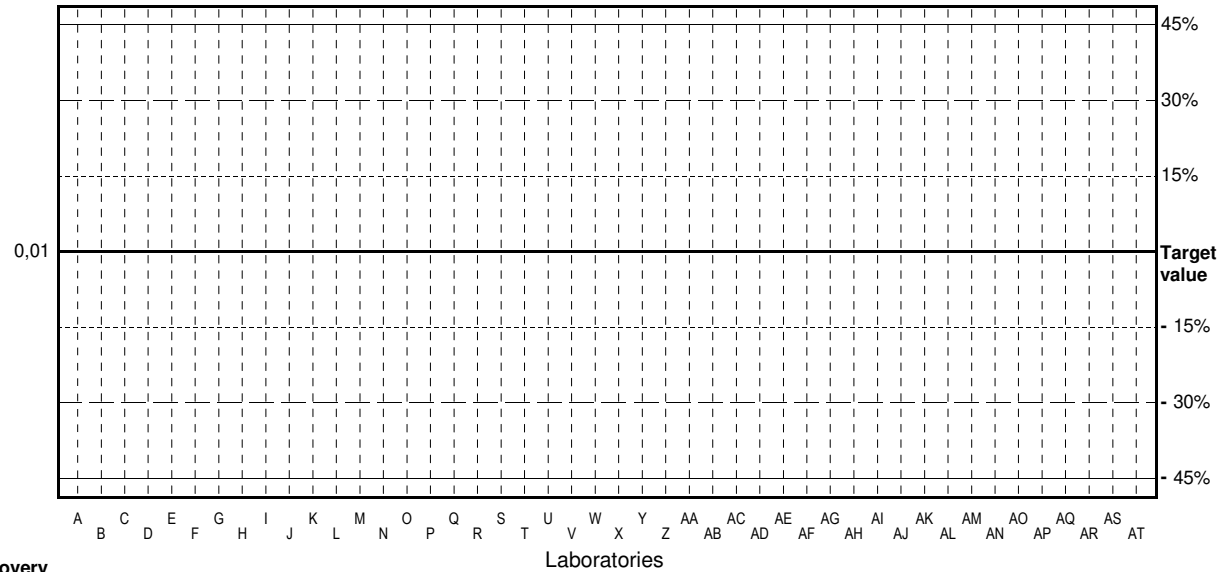
# Sample N164A

## Parameter Ammonium

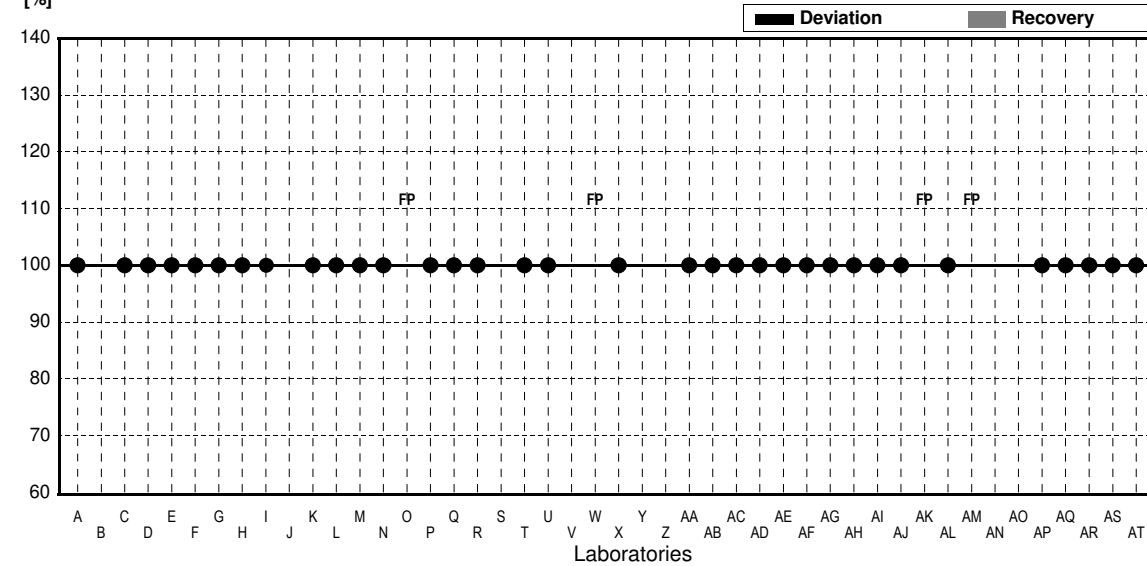
Target value <0,01 mg/l  
 IFA result <0,01 mg/l  
 Stability test <0,01 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<0,05		mg/l	•	
B			mg/l		
C	<0,010		mg/l	•	
D	<0,02		mg/l	•	
E	<0,01		mg/l	•	
F	<0,03		mg/l	•	
G	<0,05		mg/l	•	
H	<0,010		mg/l	•	
I	0,0170	0,013	mg/l	•	
J			mg/l		
K	<0,01		mg/l	•	
L	<0,05		mg/l	•	
M	<0,007		mg/l	•	
N	<0,03	0,080	mg/l	•	
O	0,0154	0,002	mg/l	FP	
P	<0,01		mg/l	•	
Q	<0,005		mg/l	•	
R	<0,015		mg/l	•	
S			mg/l		
T	<0,005	0,0000	mg/l	•	
U	<0,009		mg/l	•	
V			mg/l		
W	0,069	0,01	mg/l	FP	
X	<0,006	0,003	mg/l	•	
Y	nn		mg/l		
Z			mg/l		
AA	<0,01		mg/l	•	
AB	<0,01	0,002	mg/l	•	
AC	<0,01		mg/l	•	
AD	<0,012		mg/l	•	
AE	<0,02		mg/l	•	
AF	<0,012		mg/l	•	
AG	<0,01		mg/l	•	
AH	<0,01	0,0018	mg/l	•	
AI	<0,01		mg/l	•	
AJ	<0,013		mg/l	•	
AK	0,0200	0,004	mg/l	FP	
AL	<0,05		mg/l	•	
AM	0,0220	0,0030	mg/l	FP	
AN			mg/l		
AO			mg/l		
AP	<0,01	0,0011	mg/l	•	
AQ	<0,008		mg/l	•	
AR	<0,05		mg/l	•	
AS	<0,01		mg/l	•	
AT	<0,0100	0,001	mg/l	•	

Result [mg/l]



Recovery [%]



	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 N164B

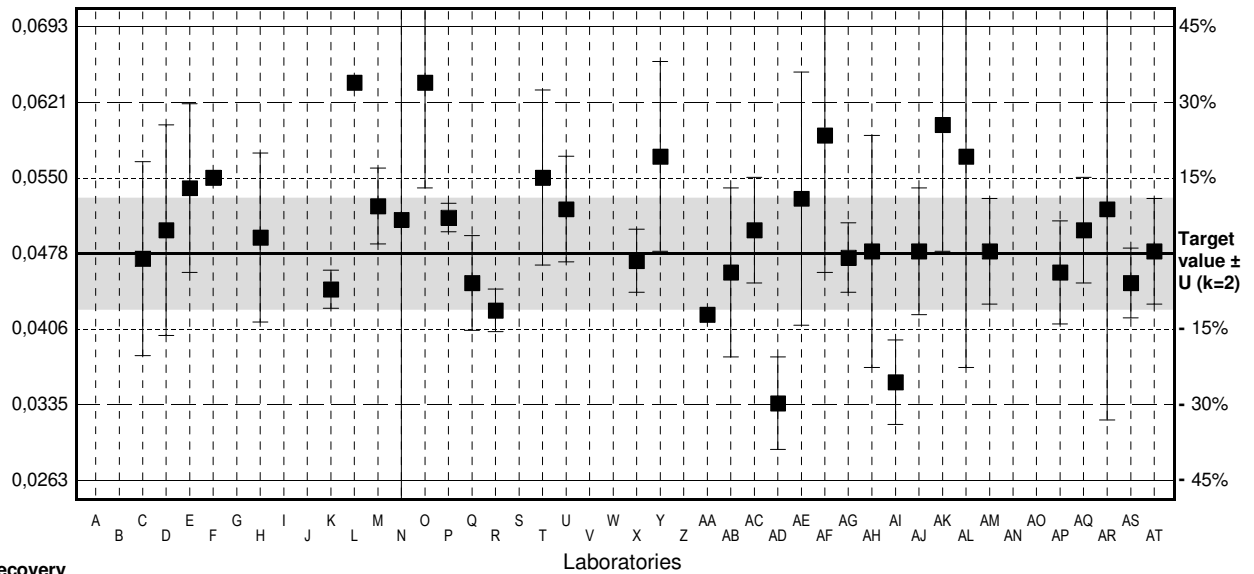
## Parameter Ammonium

Target value ± U (k=2) 0,0478 mg/l ± 0,0053 mg/l  
 IFA result ± U (k=2) 0,0481 mg/l ± 0,0021 mg/l  
 Stability test ± U (k=2) 0,0479 mg/l ± 0,0021 mg/l

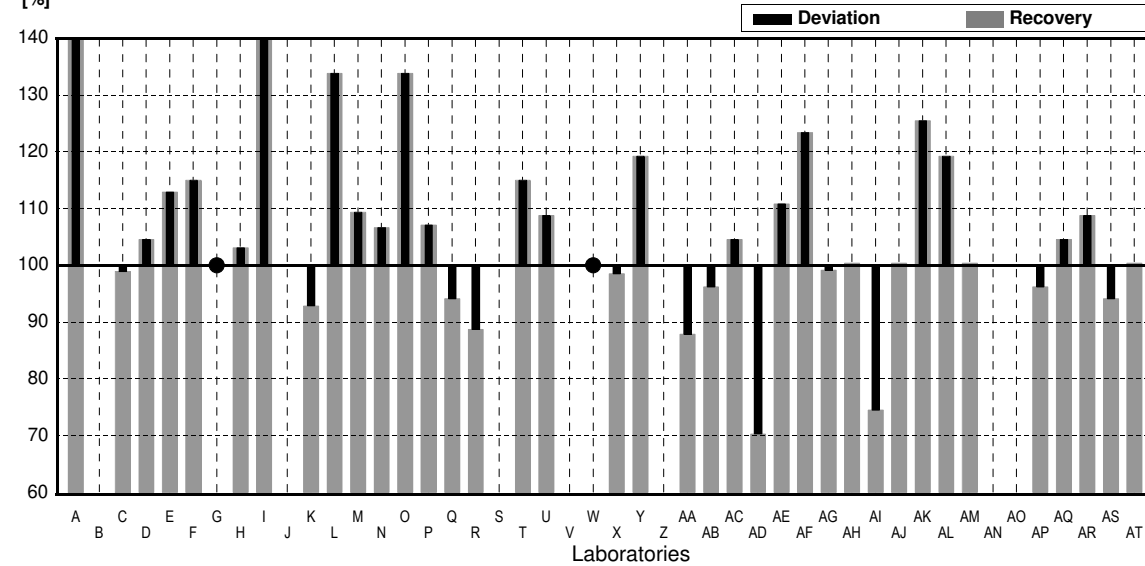
Lab Code	Result	±	Unit	Recovery	z-Score
A	0.089 *	0.0120	mg/l	186%	7.18
B			mg/l		
C	0.0473	0.0092	mg/l	99%	-0.09
D	0.050	0.01	mg/l	105%	0.38
E	0.054	0.008	mg/l	113%	1.08
F	0.055		mg/l	115%	1.26
G	<0.05		mg/l	*	
H	0.0493	0.008	mg/l	103%	0.26
I	0.073 *	0.0027	mg/l	153%	4.39
J			mg/l		
K	0.0444	0.0018	mg/l	93%	-0.59
L	0.064		mg/l	134%	2.82
M	0.0523	0.0036	mg/l	109%	0.78
N	0.0510	0.080	mg/l	107%	0.56
O	0.064	0.01	mg/l	134%	2.82
P	0.0512	0.00135	mg/l	107%	0.59
Q	0.0450	0.0045	mg/l	94%	-0.49
R	0.0424	0.002	mg/l	89%	-0.94
S			mg/l		
T	0.055	0.0083	mg/l	115%	1.26
U	0.052	0.005	mg/l	109%	0.73
V			mg/l		
W	<0.05		mg/l	*	
X	0.0471	0.003	mg/l	99%	-0.12
Y	0.057	0.009	mg/l	119%	1.60
Z			mg/l		
AA	0.0420		mg/l	88%	-1.01
AB	0.0460	0.008	mg/l	96%	-0.31
AC	0.050	0.005	mg/l	105%	0.38
AD	0.0336	0.0044	mg/l	70%	-2.48
AE	0.053	0.012	mg/l	111%	0.91
AF	0.059	0.013	mg/l	123%	1.95
AG	0.0474	0.0033	mg/l	99%	-0.07
AH	0.0480	0.011	mg/l	100%	0.03
AI	0.0356	0.004	mg/l	74%	-2.13
AJ	0.0480	0.006	mg/l	100%	0.03
AK	0.0600	0.012	mg/l	126%	2.13
AL	0.057	0.02	mg/l	119%	1.60
AM	0.0480	0.0050	mg/l	100%	0.03
AN			mg/l		
AO			mg/l		
AP	0.0460	0.0049	mg/l	96%	-0.31
AQ	0.050	0.005	mg/l	105%	0.38
AR	0.052	0.02	mg/l	109%	0.73
AS	0.0450	0.0033	mg/l	94%	-0.49
AT	0.0480	0.005	mg/l	100%	0.03

	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,0517 ± 0,0044	0,0500 ± 0,0031	mg/l
Recov. ± CI(99%)	108,1 ± 9,2	104,6 ± 6,4	%
SD between labs	0,0098	0,0067	mg/l
RSD between labs	19,0	13,3	%
n for calculation	37	35	

Result [mg/l]



Recovery [%]



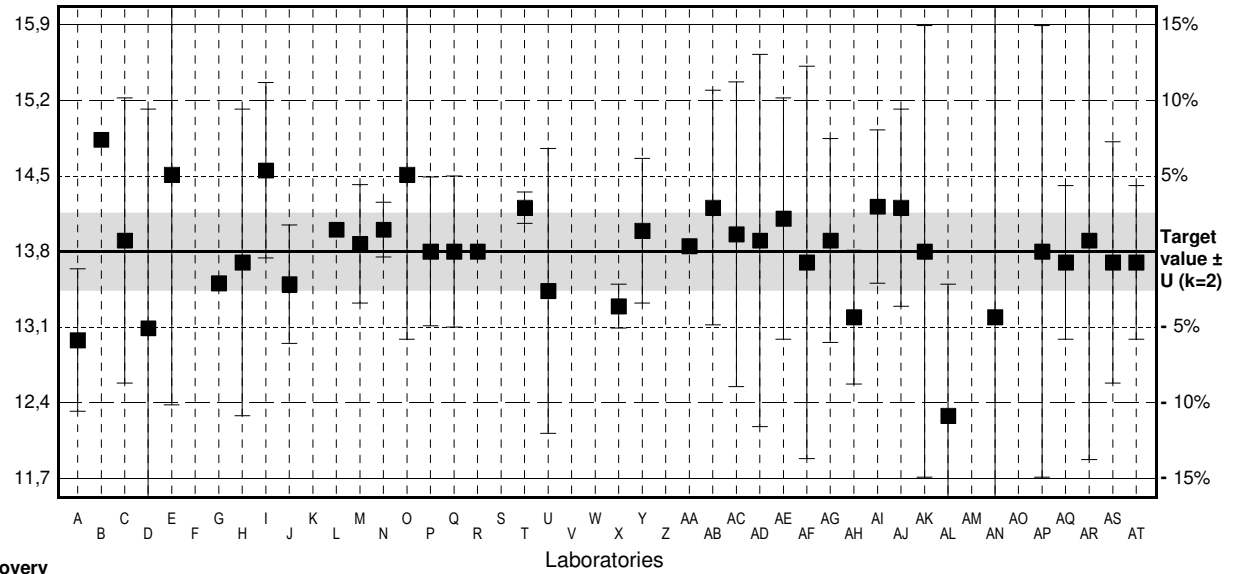
# Sample N164A

## Parameter Chloride

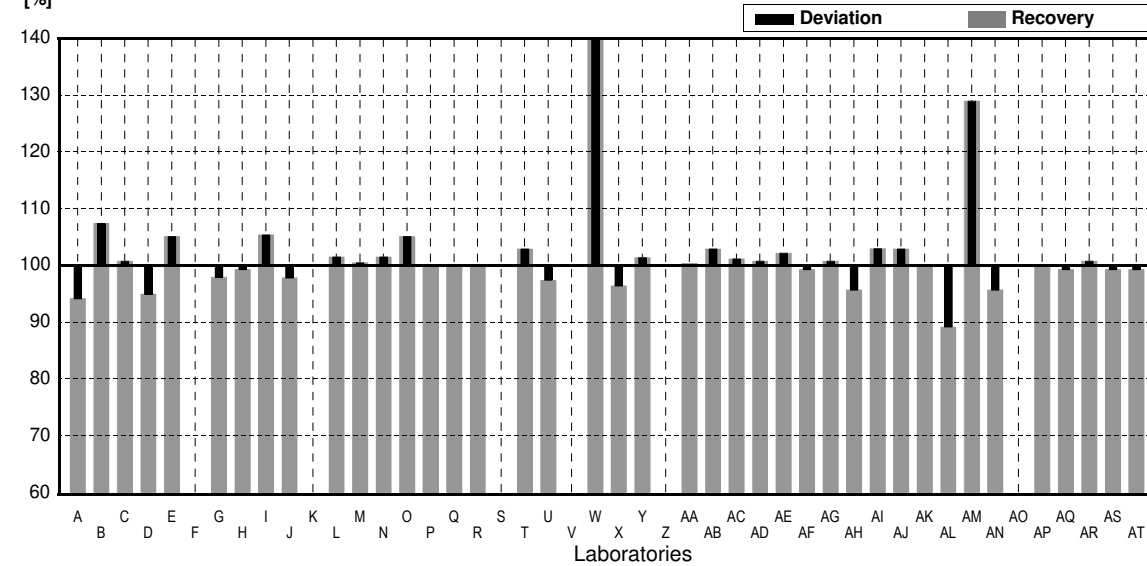
Target value ± U (k=2) 13,8 mg/l ± 0,4 mg/l  
 IFA result ± U (k=2) 13,4 mg/l ± 0,5 mg/l  
 Stability test ± U (k=2) 13,4 mg/l ± 0,5 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	12,99	0,65	mg/l	94%	-2,02
B	14,82 *		mg/l	107%	2,55
C	13,9	1,3	mg/l	101%	0,25
D	13,1	2	mg/l	95%	-1,75
E	14,5	2,1	mg/l	105%	1,75
F			mg/l		
G	13,51		mg/l	98%	-0,72
H	13,7	1,4	mg/l	99%	-0,25
I	14,54	0,8	mg/l	105%	1,85
J	13,5	0,54	mg/l	98%	-0,75
K			mg/l		
L	14,0		mg/l	101%	0,50
M	13,87	0,54	mg/l	101%	0,17
N	14,00	0,25	mg/l	101%	0,50
O	14,5	1,5	mg/l	105%	1,75
P	13,8	0,680	mg/l	100%	0,00
Q	13,8	0,690	mg/l	100%	0,00
R	13,8	0,010	mg/l	100%	0,00
S			mg/l		
T	14,2	0,144	mg/l	103%	1,00
U	13,44	1,3	mg/l	97%	-0,90
V			mg/l		
W	49,3 *	2,80	mg/l	357%	88,71
X	13,3	0,2	mg/l	96%	-1,25
Y	13,99	0,66	mg/l	101%	0,47
Z			mg/l		
AA	13,85		mg/l	100%	0,12
AB	14,2	1,07	mg/l	103%	1,00
AC	13,957	1,39	mg/l	101%	0,39
AD	13,9	1,7	mg/l	101%	0,25
AE	14,1	1,10	mg/l	102%	0,75
AF	13,7	1,79	mg/l	99%	-0,25
AG	13,9	0,93	mg/l	101%	0,25
AH	13,2	0,610	mg/l	96%	-1,50
AI	14,21	0,7	mg/l	103%	1,02
AJ	14,2	0,9	mg/l	103%	1,00
AK	13,8	2,06	mg/l	100%	0,00
AL	12,3 *	1,2	mg/l	89%	-3,75
AM	17,8 *	0,427	mg/l	129%	10,00
AN	13,20	3,30	mg/l	96%	-1,50
AO			mg/l		
AP	13,8	2,06	mg/l	100%	0,00
AQ	13,7	0,7	mg/l	99%	-0,25
AR	13,9	2	mg/l	101%	0,25
AS	13,7	1,1	mg/l	99%	-0,25
AT	13,7	0,7	mg/l	99%	-0,25

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	14,8 ± 2,4	13,8 ± 0,2	mg/l
Recov. ± CI(99%)	107,2 ± 17,5	100,1 ± 1,2	%
SD between labs	5,7	0,4	mg/l
RSD between labs	38,2	2,7	%
n for calculation	40	36	

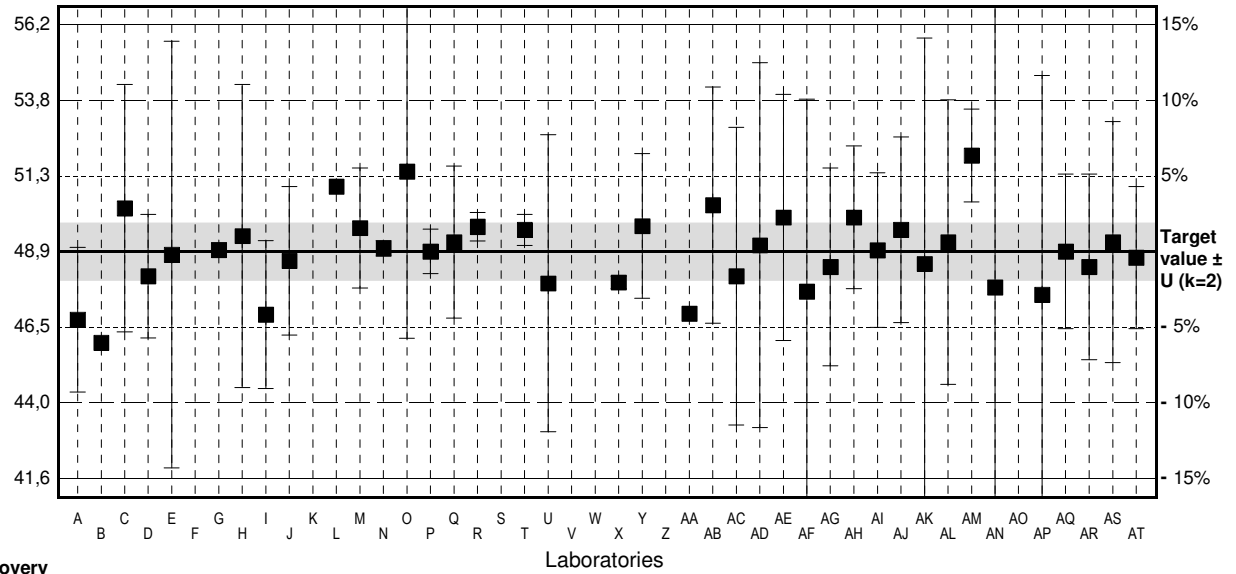
# Sample N164B

## Parameter Chloride

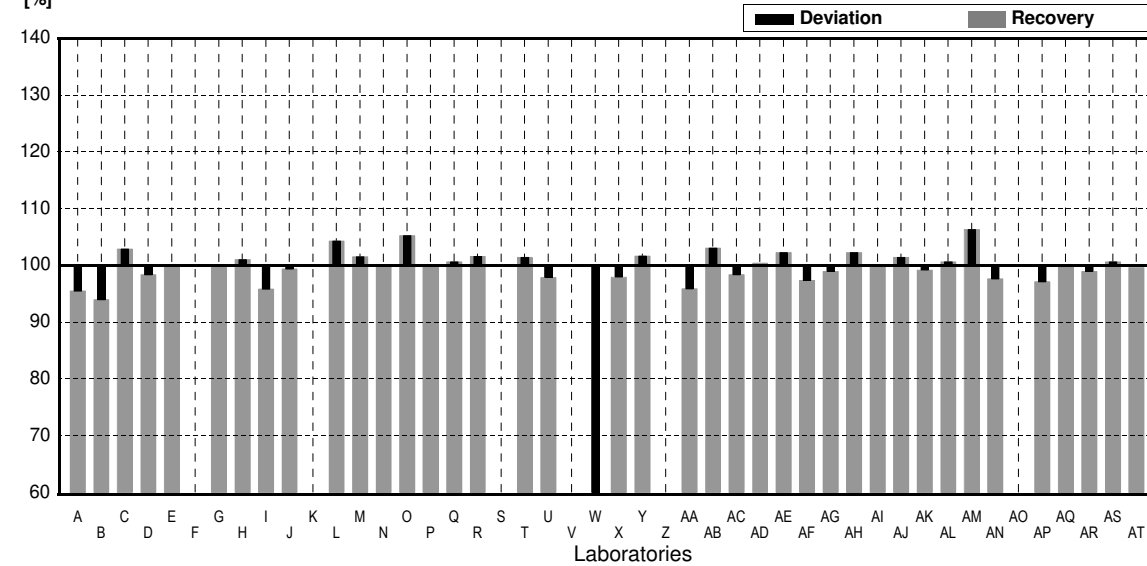
Target value ± U (k=2) 48,9 mg/l ± 0,9 mg/l  
 IFA result ± U (k=2) 47,3 mg/l ± 1,8 mg/l  
 Stability test ± U (k=2) 47,0 mg/l ± 1,8 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	46.69	2.34	mg/l	95%	-1.56
B	45.95		mg/l	94%	-2.08
C	50.3	4.0	mg/l	103%	0.99
D	48.1	2	mg/l	98%	-0.56
E	48.8	6.9	mg/l	100%	-0.07
F			mg/l		
G	48.95		mg/l	100%	0.04
H	49.4	4.9	mg/l	101%	0.35
I	46.859	2.392	mg/l	96%	-1.44
J	48.6	2.40	mg/l	99%	-0.21
K			mg/l		
L	51.0		mg/l	104%	1.48
M	49.66	1.94	mg/l	102%	0.54
N	49.00	0.25	mg/l	100%	0.07
O	51.49	5.4	mg/l	105%	1.83
P	48.9	0.719	mg/l	100%	0.00
Q	49.2	2.46	mg/l	101%	0.21
R	49.7	0.461	mg/l	102%	0.56
S			mg/l		
T	49.6	0.503	mg/l	101%	0.49
U	47.87	4.8	mg/l	98%	-0.73
V			mg/l		
W	14.7	0.84	mg/l	30%	-24.12
X	47.9	0.2	mg/l	98%	-0.71
Y	49.72	2.34	mg/l	102%	0.58
Z			mg/l		
AA	46.89		mg/l	96%	-1.42
AB	50.4	3.82	mg/l	103%	1.06
AC	48.099	4.81	mg/l	98%	-0.56
AD	49.1	5.9	mg/l	100%	0.14
AE	50	3.98	mg/l	102%	0.78
AF	47.6	6.22	mg/l	97%	-0.92
AG	48.4	3.2	mg/l	99%	-0.35
AH	50	2.31	mg/l	102%	0.78
AI	48.940	2.5	mg/l	100%	0.03
AJ	49.6	3	mg/l	101%	0.49
AK	48.5	7.3	mg/l	99%	-0.28
AL	49.2	4.6	mg/l	101%	0.21
AM	52.0	1.50	mg/l	106%	2.19
AN	47.74	11.94	mg/l	98%	-0.82
AO			mg/l		
AP	47.5	7.09	mg/l	97%	-0.99
AQ	48.9	2.5	mg/l	100%	0.00
AR	48.4	3	mg/l	99%	-0.35
AS	49.2	3.9	mg/l	101%	0.21
AT	48.7	2.3	mg/l	100%	-0.14

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	48,0 ± 2,4	48,9 ± 0,6	mg/l
Recov. ± CI(99%)	98,2 ± 4,9	100,0 ± 1,1	%
SD between labs	5,6	1,3	mg/l
RSD between labs	11,6	2,6	%
n for calculation	40	39	

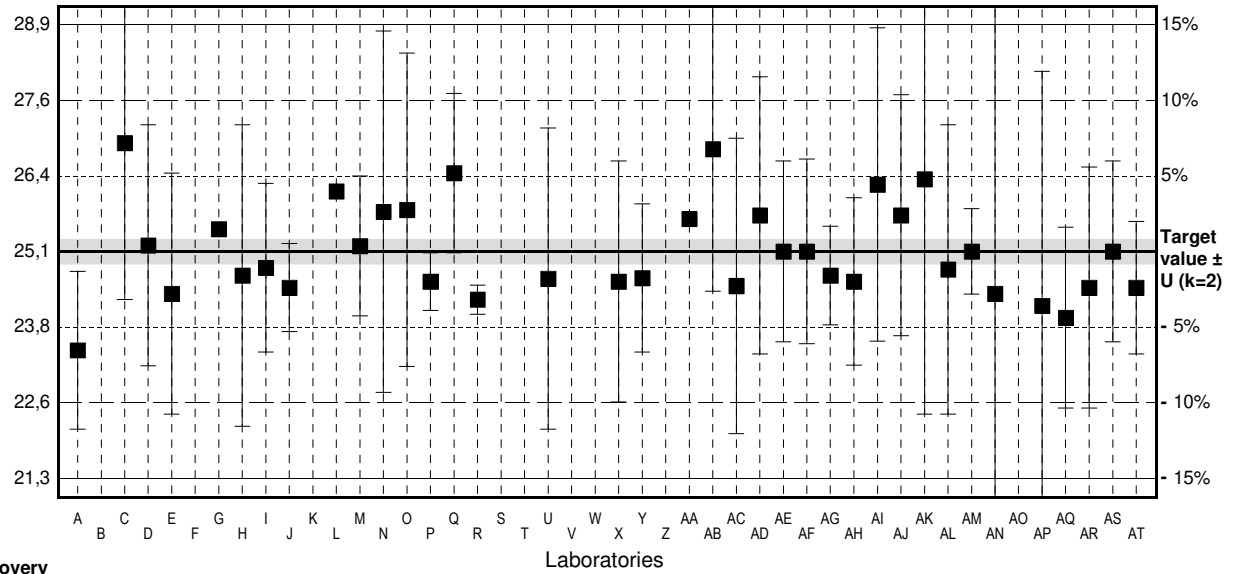
# Sample N164A

## Parameter Sulphate

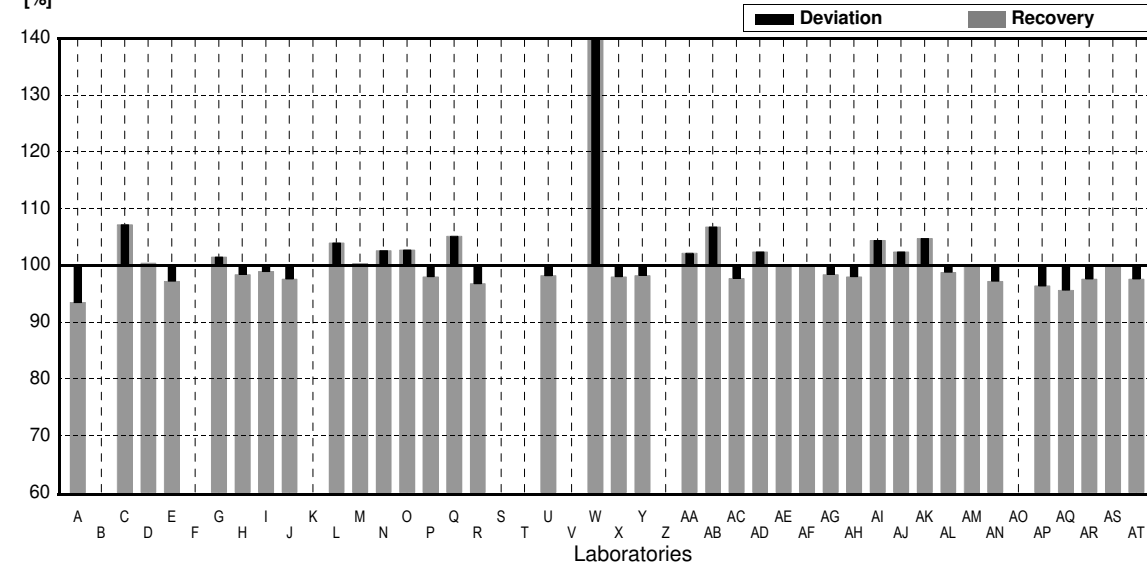
Target value ± U (k=2) 25,1 mg/l ± 0,2 mg/l  
 IFA result ± U (k=2) 24,3 mg/l ± 0,6 mg/l  
 Stability test ± U (k=2) 24,8 mg/l ± 0,7 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	23,46	1,31	mg/l	93%	-2,11
B			mg/l		
C	26,9	2,6	mg/l	107%	2,31
D	25,2	2	mg/l	100%	0,13
E	24,4	2	mg/l	97%	-0,90
F			mg/l		
G	25,47		mg/l	101%	0,48
H	24,7	2,5	mg/l	98%	-0,51
I	24,83	1,4	mg/l	99%	-0,35
J	24,5	0,73	mg/l	98%	-0,77
K			mg/l		
L	26,1		mg/l	104%	1,29
M	25,19	1,16	mg/l	100%	0,12
N	25,76	3,0	mg/l	103%	0,85
O	25,79	2,6	mg/l	103%	0,89
P	24,6	0,477	mg/l	98%	-0,64
Q	26,4	1,32	mg/l	105%	1,67
R	24,3	0,242	mg/l	97%	-1,03
S			mg/l		
T			mg/l		
U	24,65	2,5	mg/l	98%	-0,58
V			mg/l		
W	65,5 *	6,00	mg/l	261%	51,92
X	24,6	2	mg/l	98%	-0,64
Y	24,66	1,23	mg/l	98%	-0,57
Z			mg/l		
AA	25,64		mg/l	102%	0,69
AB	26,8	2,36	mg/l	107%	2,18
AC	24,528	2,45	mg/l	98%	-0,74
AD	25,7	2,3	mg/l	102%	0,77
AE	25,1	1,50	mg/l	100%	0,00
AF	25,1	1,53	mg/l	100%	0,00
AG	24,7	0,82	mg/l	98%	-0,51
AH	24,6	1,39	mg/l	98%	-0,64
AI	26,21	2,6	mg/l	104%	1,43
AJ	25,7	2	mg/l	102%	0,77
AK	26,3	3,9	mg/l	105%	1,54
AL	24,8	2,4	mg/l	99%	-0,39
AM	25,1	0,708	mg/l	100%	0,00
AN	24,40	6,10	mg/l	97%	-0,90
AO			mg/l		
AP	24,2	3,89	mg/l	96%	-1,16
AQ	24,0	1,5	mg/l	96%	-1,41
AR	24,5	2	mg/l	98%	-0,77
AS	25,1	1,5	mg/l	100%	0,00
AT	24,5	1,1	mg/l	98%	-0,77

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	26,2 ± 2,9	25,1 ± 0,4	mg/l
Recov. ± CI(99%)	104,2 ± 11,6	100,0 ± 1,4	%
SD between labs	6,6	0,8	mg/l
RSD between labs	25,2	3,2	%
n for calculation	38	37	

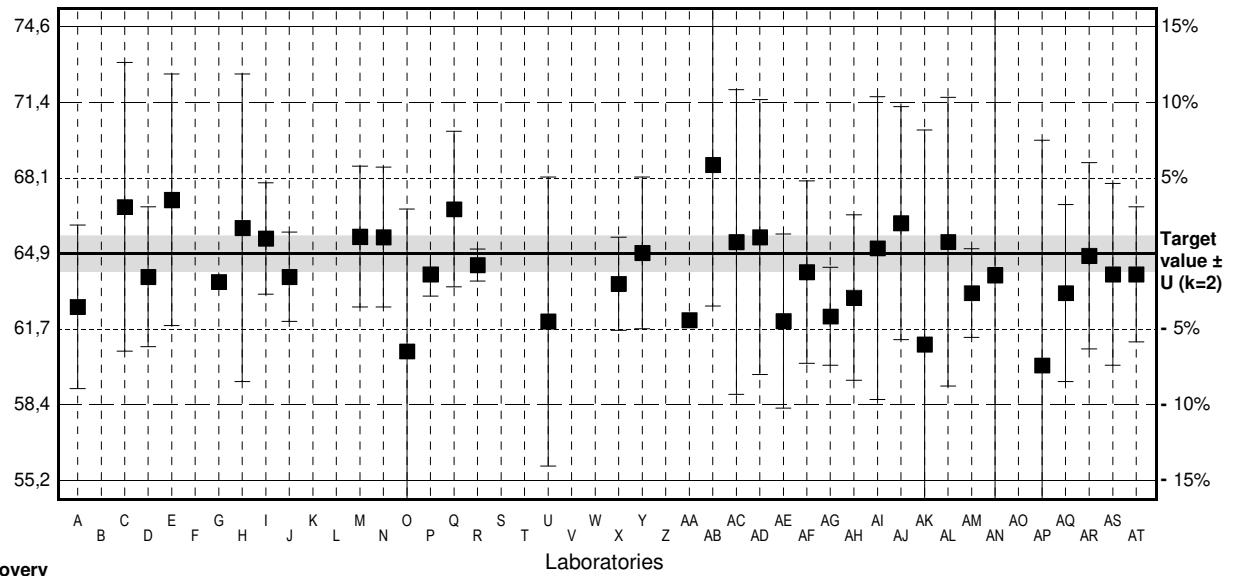
# Sample N164B

## Parameter Sulphate

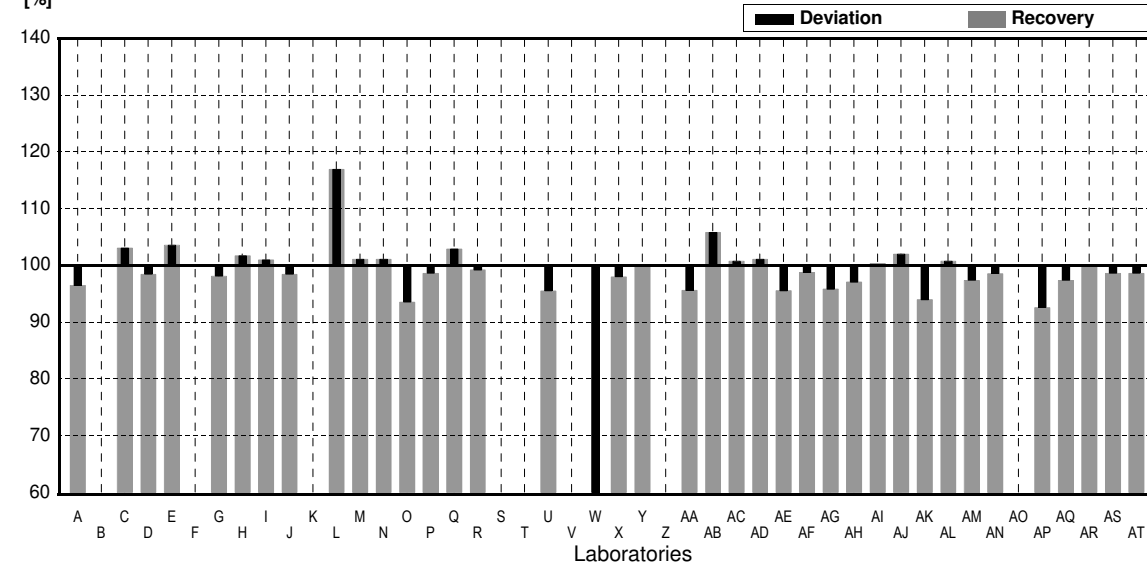
Target value ± U (k=2) 64,9 mg/l ± 0,8 mg/l  
 IFA result ± U (k=2) 63,1 mg/l ± 1,5 mg/l  
 Stability test ± U (k=2) 64,6 mg/l ± 1,9 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	62,61	3,51	mg/l	96%	-1,14
B			mg/l		
C	66,9	6,2	mg/l	103%	0,99
D	63,9	3	mg/l	98%	-0,50
E	67,2	5,4	mg/l	104%	1,14
F			mg/l		
G	63,68		mg/l	98%	-0,61
H	66,0	6,6	mg/l	102%	0,55
I	65,54	2,392	mg/l	101%	0,32
J	63,9	1,92	mg/l	98%	-0,50
K			mg/l		
L	75,9 *		mg/l	117%	5,47
M	65,62	3,02	mg/l	101%	0,36
N	65,60	3,0	mg/l	101%	0,35
O	60,7	6,1	mg/l	94%	-2,09
P	64,0	0,933	mg/l	99%	-0,45
Q	66,8	3,34	mg/l	103%	0,94
R	64,4	0,679	mg/l	99%	-0,25
S			mg/l		
T			mg/l		
U	61,98	6,2	mg/l	96%	-1,45
V			mg/l		
W	25,9 *	2,37	mg/l	40%	-19,38
X	63,6	2	mg/l	98%	-0,65
Y	64,92	3,25	mg/l	100%	0,01
Z			mg/l		
AA	62,04		mg/l	96%	-1,42
AB	68,7	6,05	mg/l	106%	1,89
AC	65,395	6,54	mg/l	101%	0,25
AD	65,6	5,9	mg/l	101%	0,35
AE	62	3,74	mg/l	96%	-1,44
AF	64,1	3,91	mg/l	99%	-0,40
AG	62,2	2,1	mg/l	96%	-1,34
AH	63	3,55	mg/l	97%	-0,94
AI	65,125	6,5	mg/l	100%	0,11
AJ	66,2	5	mg/l	102%	0,65
AK	61,0	9,2	mg/l	94%	-1,94
AL	65,4	6,2	mg/l	101%	0,25
AM	63,2	1,90	mg/l	97%	-0,84
AN	63,97	16,00	mg/l	99%	-0,46
AO			mg/l		
AP	60,1	9,66	mg/l	93%	-2,39
AQ	63,2	3,8	mg/l	97%	-0,84
AR	64,8	4	mg/l	100%	-0,05
AS	64	3,9	mg/l	99%	-0,45
AT	64	2,9	mg/l	99%	-0,45

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	63,5 ± 3,0	64,2 ± 0,9	mg/l
Recov. ± CI(99%)	97,9 ± 4,6	98,9 ± 1,3	%
SD between labs	6,8	1,9	mg/l
RSD between labs	10,7	3,0	%
n for calculation	38	36	

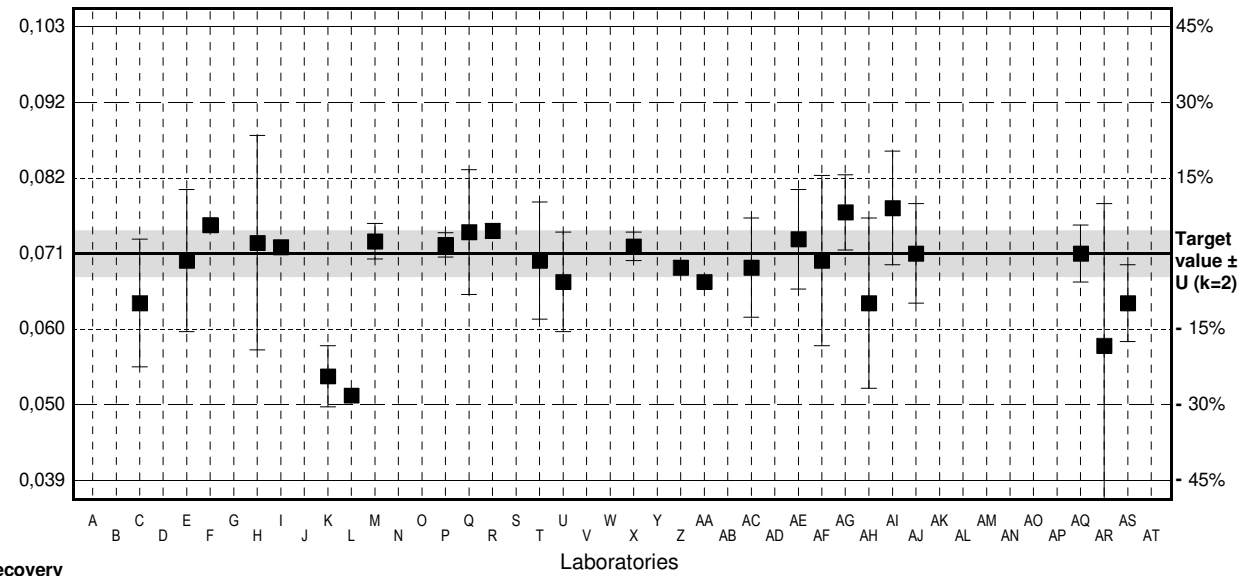
# Sample N164A

## Parameter Orthophosphate

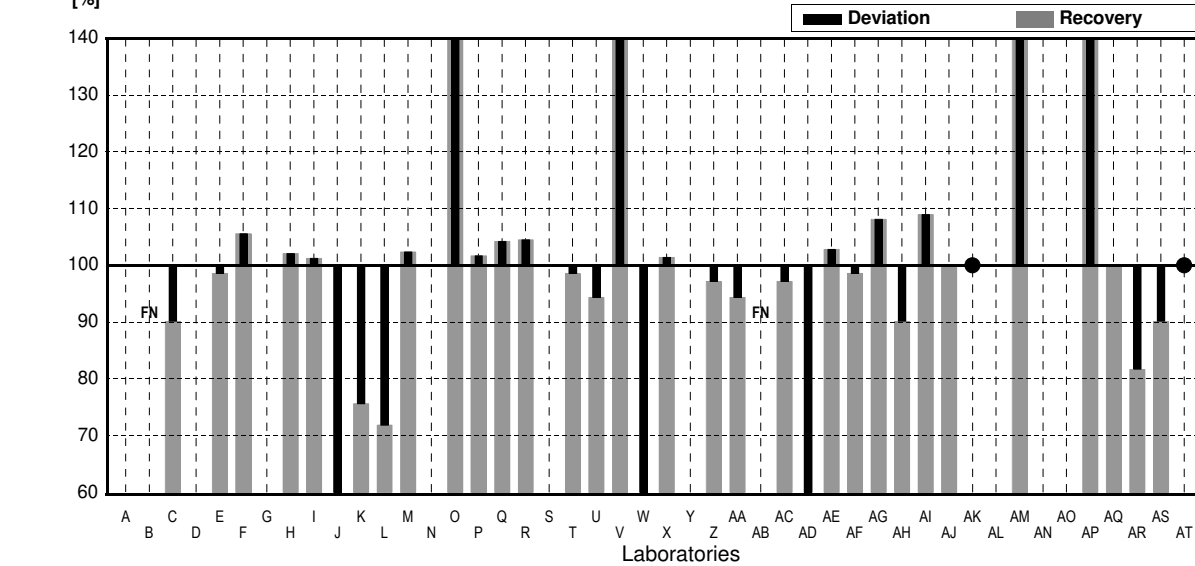
Target value ± U (k=2) 0,071 mg/l ± 0,003 mg/l  
 IFA result ± U (k=2) 0,073 mg/l ± 0,001 mg/l  
 Stability test ± U (k=2) 0,073 mg/l ± 0,001 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			mg/l		
B	<0.05		mg/l	FN	
C	0.064	0.009	mg/l	90%	-0.99
D			mg/l		
E	0.070	0.01	mg/l	99%	-0.14
F	0.075		mg/l	106%	0.56
G			mg/l		
H	0.0725	0.0151	mg/l	102%	0.21
I	0.07190	0.00078	mg/l	101%	0.13
J	0.0380	0.0034	mg/l	54%	-4.65
K	0.0537	0.0043	mg/l	76%	-2.44
L	0.051	*	mg/l	72%	-2.82
M	0.0727	0.0025	mg/l	102%	0.24
N			mg/l		
O	0.134	0.01	mg/l	189%	8.87
P	0.0722	0.00172	mg/l	102%	0.17
Q	0.074	0.0088	mg/l	104%	0.42
R	0.0742	0.001	mg/l	105%	0.45
S			mg/l		
T	0.070	0.00826	mg/l	99%	-0.14
U	0.067	0.007	mg/l	94%	-0.56
V	0.70	0.098	mg/l	986%	88.59
W	0.0307	0.006	mg/l	43%	-5.68
X	0.072	0.002	mg/l	101%	0.14
Y			mg/l		
Z	0.069		mg/l	97%	-0.28
AA	0.067		mg/l	94%	-0.56
AB	<0.015	0.002	mg/l	FN	
AC	0.069	0.007	mg/l	97%	-0.28
AD	0.0172	0.0017	mg/l	24%	-7.58
AE	0.073	0.007	mg/l	103%	0.28
AF	0.070	0.012	mg/l	99%	-0.14
AG	0.0768	0.0053	mg/l	108%	0.82
AH	0.064	0.012	mg/l	90%	-0.99
AI	0.0774	0.008	mg/l	109%	0.90
AJ	0.071	0.007	mg/l	100%	0.00
AK	<0.1		mg/l	*	
AL			mg/l		
AM	0.190	0.015	mg/l	268%	16.76
AN			mg/l		
AO			mg/l		
AP	0.145	0.0218	mg/l	204%	10.42
AQ	0.071	0.004	mg/l	100%	0.00
AR	0.058	0.02	mg/l	82%	-1.83
AS	0.064	0.0054	mg/l	90%	-0.99
AT	<0.150	0.0096	mg/l	*	

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,092 ± 0,054	0,070 ± 0,003	mg/l
Recov. ± CI(99%)	130,0 ± 76,1	98,0 ± 4,3	%
SD between labs	0,113	0,006	mg/l
RSD between labs	122,8	7,9	%
n for calculation	33	25	

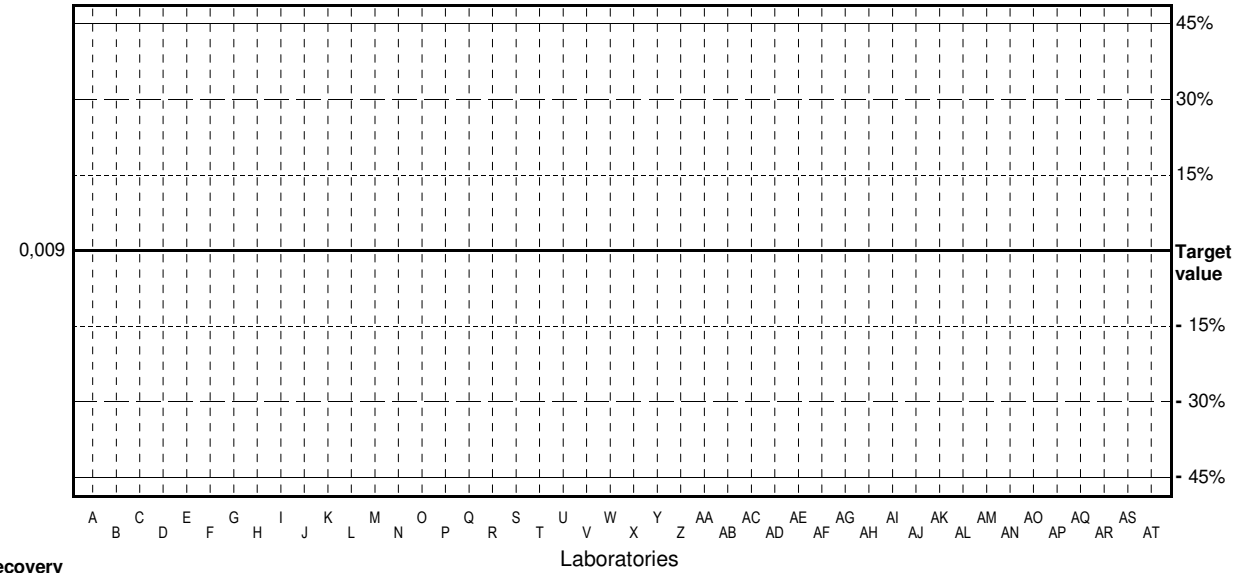
# Sample N164B

## Parameter Orthophosphate

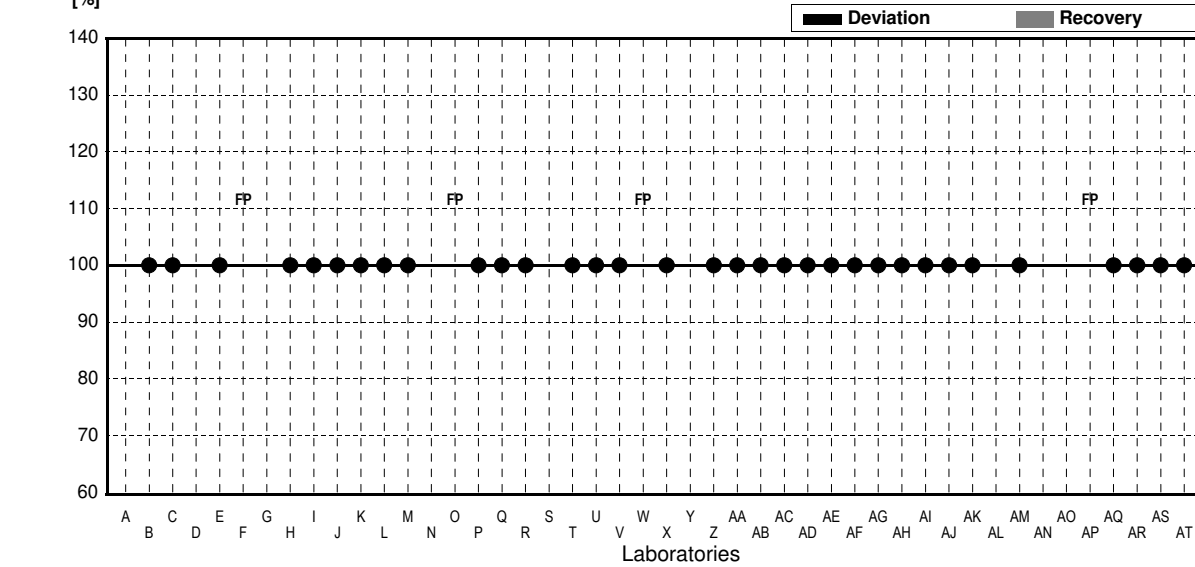
Target value <0,009 mg/l  
 IFA result <0,009 mg/l  
 Stability test <0,009 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			mg/l		
B	<0.05		mg/l	•	
C	<0.010		mg/l	•	
D			mg/l		
E	<0.01		mg/l	•	
F	0.0175		mg/l	FP	
G			mg/l		
H	<0.009		mg/l	•	
I	0.00186	0.0008	mg/l	•	
J	<0.015	0.0013	mg/l	•	
K	<0.019		mg/l	•	
L	<0.15		mg/l	•	
M	<0.006		mg/l	•	
N			mg/l		
O	0.0325	0.003	mg/l	FP	
P	[0.002]		mg/l	•	
Q	0.0090	0.0011	mg/l	•	
R	<0.020		mg/l	•	
S			mg/l		
T	<0.006	0.0000	mg/l	•	
U	<0.001		mg/l	•	
V	<0.0184		mg/l	•	
W	0.066	0.014	mg/l	FP	
X	0.005	0.002	mg/l	•	
Y			mg/l		
Z	<0.05		mg/l	•	
AA	<0.009		mg/l	•	
AB	<0.015	0.002	mg/l	•	
AC	<0.01		mg/l	•	
AD	0.00525	0.00053	mg/l	•	
AE	<0.009		mg/l	•	
AF	<0.015		mg/l	•	
AG	<0.015		mg/l	•	
AH	<0.02	0.004	mg/l	•	
AI	<0.01		mg/l	•	
AJ	<0.01		mg/l	•	
AK	<0.1		mg/l	•	
AL			mg/l		
AM	<0.009		mg/l	•	
AN			mg/l		
AO			mg/l		
AP	0.0278	0.0042	mg/l	FP	
AQ	<0.006		mg/l	•	
AR	<0.05		mg/l	•	
AS	<0.01		mg/l	•	
AT	<0.150	0.0096	mg/l	•	

Result [mg/l]



Recovery [%]



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

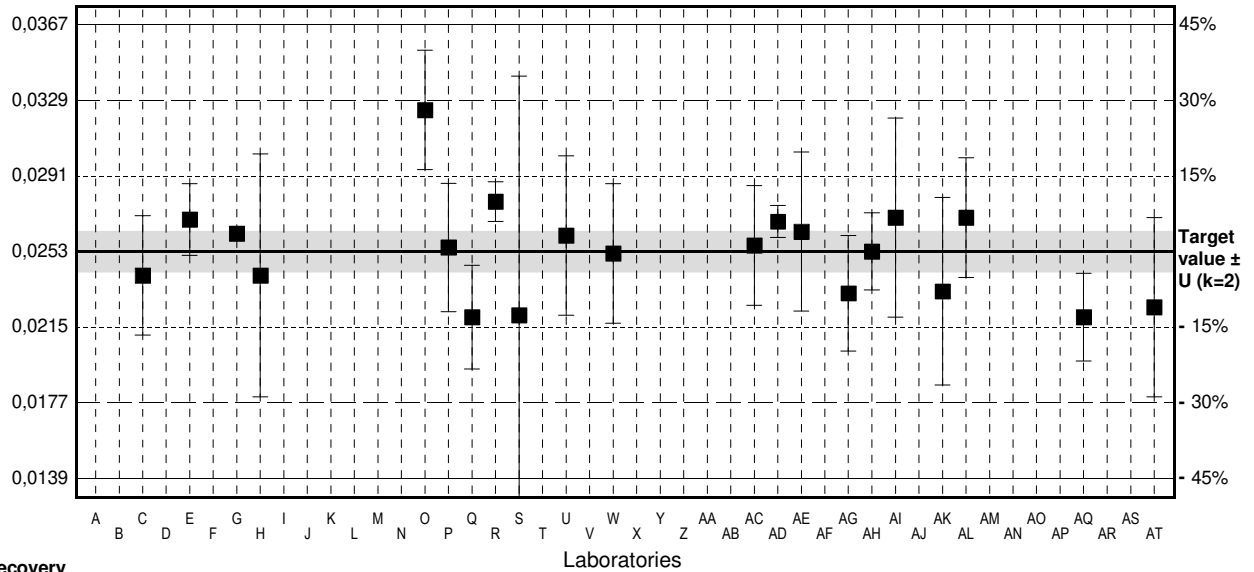
# Sample N164A

## Parameter Boron

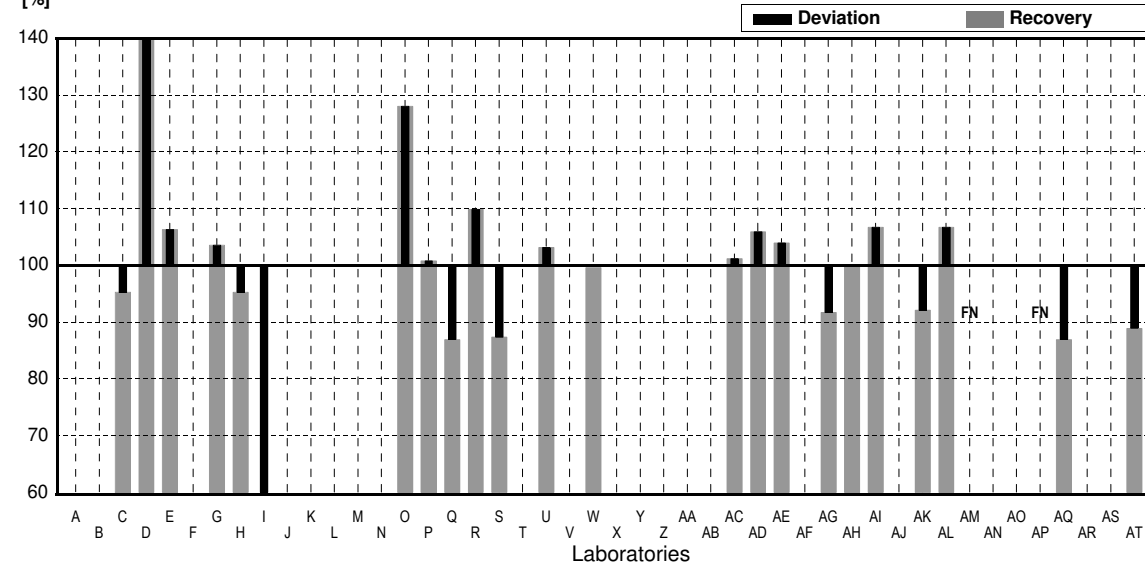
Target value ± U (k=2) 0,0253 mg/l ± 0,0010 mg/l  
 IFA result ± U (k=2) 0,0241 mg/l ± 0,0019 mg/l  
 Stability test ± U (k=2) 0,0249 mg/l ± 0,0019 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			mg/l		
B			mg/l		
C	0,0241	0,0030	mg/l	95%	-0.63
D	0,0388 *	0,02	mg/l	153%	7.11
E	0,0269	0,0018	mg/l	106%	0.84
F			mg/l		
G	0,0262		mg/l	104%	0.47
H	0,0241	0,0061	mg/l	95%	-0.63
I	0,0112 *	0,00989	mg/l	44%	-7.43
J			mg/l		
K			mg/l		
L			mg/l		
M			mg/l		
N			mg/l		
O	0,0324	0,003	mg/l	128%	3.74
P	0,0255	0,00322	mg/l	101%	0.11
Q	0,0220	0,0026	mg/l	87%	-1.74
R	0,0278	0,001	mg/l	110%	1.32
S	0,0221	0,012	mg/l	87%	-1.69
T			mg/l		
U	0,0261	0,004	mg/l	103%	0.42
V			mg/l		
W	0,0252	0,0035	mg/l	100%	-0.05
X			mg/l		
Y			mg/l		
Z			mg/l		
AA			mg/l		
AB			mg/l		
AC	0,0256	0,003	mg/l	101%	0.16
AD	0,0268	0,0008	mg/l	106%	0.79
AE	0,0263	0,004	mg/l	104%	0.53
AF			mg/l		
AG	0,0232	0,0029	mg/l	92%	-1.11
AH	0,0253	0,00193	mg/l	100%	0.00
AI	0,0270	0,005	mg/l	107%	0.90
AJ			mg/l		
AK	0,0233	0,0047	mg/l	92%	-1.05
AL	0,0270	0,003	mg/l	107%	0.90
AM	<0.010		mg/l	FN	
AN			mg/l		
AO			mg/l		
AP	<0.012	0,001	mg/l	FN	
AQ	0,0220	0,0022	mg/l	87%	-1.74
AR			mg/l		
AS			mg/l		
AT	0,0225	0,0045	mg/l	89%	-1.48

### Result [mg/l]



### Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,0253 ± 0,0028	0,0253 ± 0,0015	mg/l
Recov. ± CI(99%)	99,9 ± 11,1	100,0 ± 6,0	%
SD between labs	0,0048	0,0025	mg/l
RSD between labs	18,9	9,7	%
n for calculation	23	21	

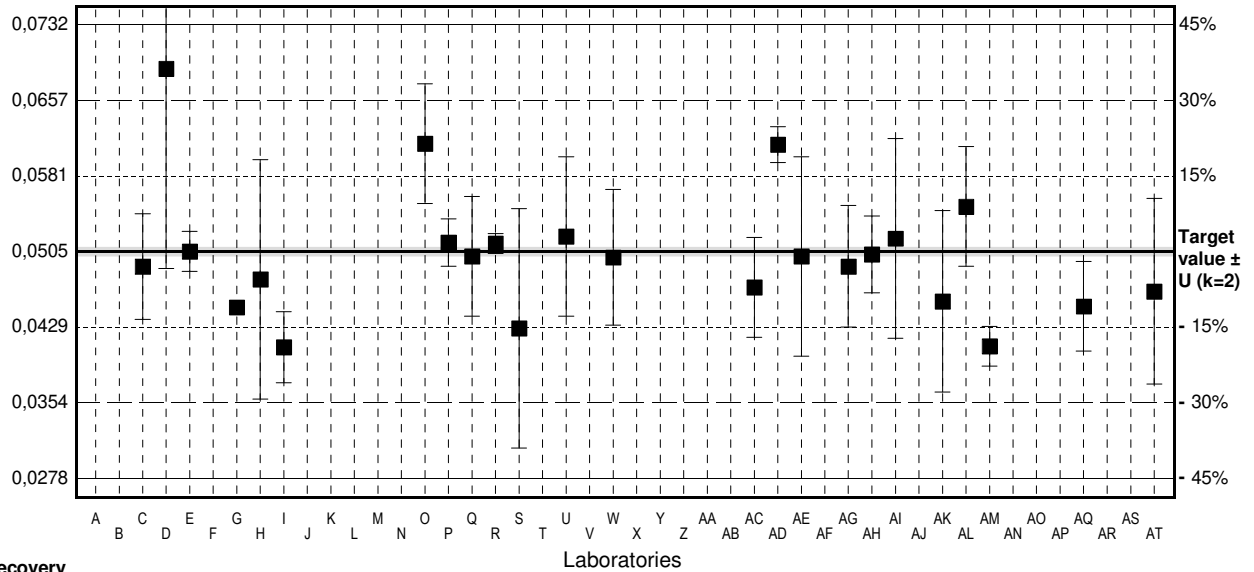
# Sample N164B

## Parameter Boron

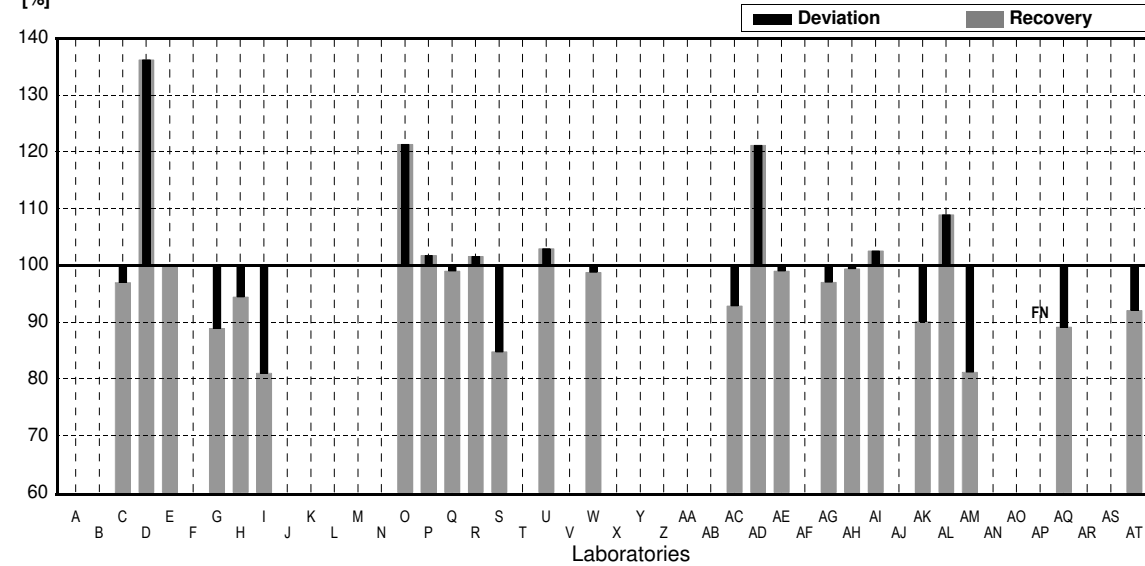
Target value ± U (k=2) 0,0505 mg/l ± 0,0004 mg/l  
 IFA result ± U (k=2) 0,0480 mg/l ± 0,0037 mg/l  
 Stability test ± U (k=2) 0,0498 mg/l ± 0,0039 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			mg/l		
B			mg/l		
C	0,04898	0,00529	mg/l	97%	-0.40
D	0,0688 *	0,02	mg/l	136%	4.83
E	0,0505	0,002	mg/l	100%	0.00
F			mg/l		
G	0,0449		mg/l	89%	-1.48
H	0,0477	0,012	mg/l	94%	-0.74
I	0,0409	0,00356	mg/l	81%	-2.53
J			mg/l		
K			mg/l		
L			mg/l		
M			mg/l		
N			mg/l		
O	0,0613	0,006	mg/l	121%	2.85
P	0,0514	0,00237	mg/l	102%	0.24
Q	0,050	0,0060	mg/l	99%	-0.13
R	0,0513	0,001	mg/l	102%	0.21
S	0,0428	0,012	mg/l	85%	-2.03
T			mg/l		
U	0,052	0,008	mg/l	103%	0.40
V			mg/l		
W	0,0499	0,0068	mg/l	99%	-0.16
X			mg/l		
Y			mg/l		
Z			mg/l		
AA			mg/l		
AB			mg/l		
AC	0,0469	0,005	mg/l	93%	-0.95
AD	0,0612	0,0018	mg/l	121%	2.83
AE	0,050	0,010	mg/l	99%	-0.13
AF			mg/l		
AG	0,0490	0,0061	mg/l	97%	-0.40
AH	0,0502	0,00383	mg/l	99%	-0.08
AI	0,0518	0,01	mg/l	103%	0.34
AJ			mg/l		
AK	0,0455	0,0091	mg/l	90%	-1.32
AL	0,0550	0,006	mg/l	109%	1.19
AM	0,0410	0,0020	mg/l	81%	-2.51
AN			mg/l		
AO			mg/l		
AP	<0.012	0,001	mg/l	FN	
AQ	0,0450	0,0045	mg/l	89%	-1.45
AR			mg/l		
AS			mg/l		
AT	0,0465	0,0093	mg/l	92%	-1.06

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,0501 ± 0,0037	0,0493 ± 0,0031	mg/l
Recov. ± CI(99%)	99,2 ± 7,3	97,6 ± 6,1	%
SD between labs	0,0065	0,0052	mg/l
RSD between labs	12,9	10,5	%
n for calculation	24	23	

# Sample N164A

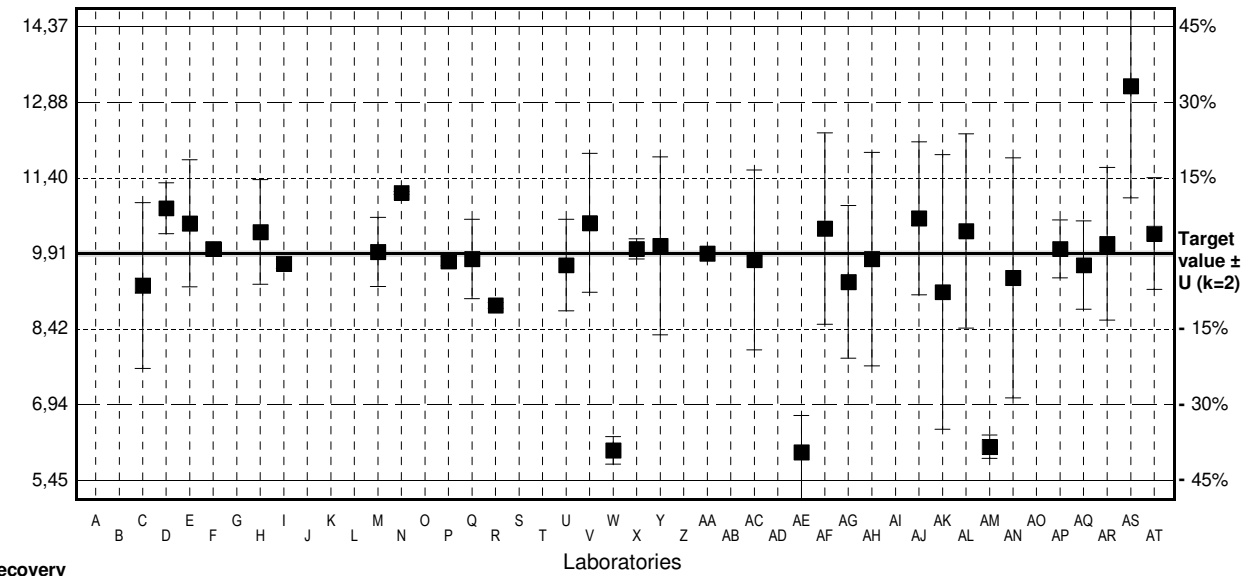
## Parameter DOC

Target value ± U (k=2) 9,91 mg/l ± 0,06 mg/l  
 IFA result ± U (k=2) 10,12 mg/l ± 0,09 mg/l  
 Stability test ± U (k=2) 9,91 mg/l ± 0,09 mg/l

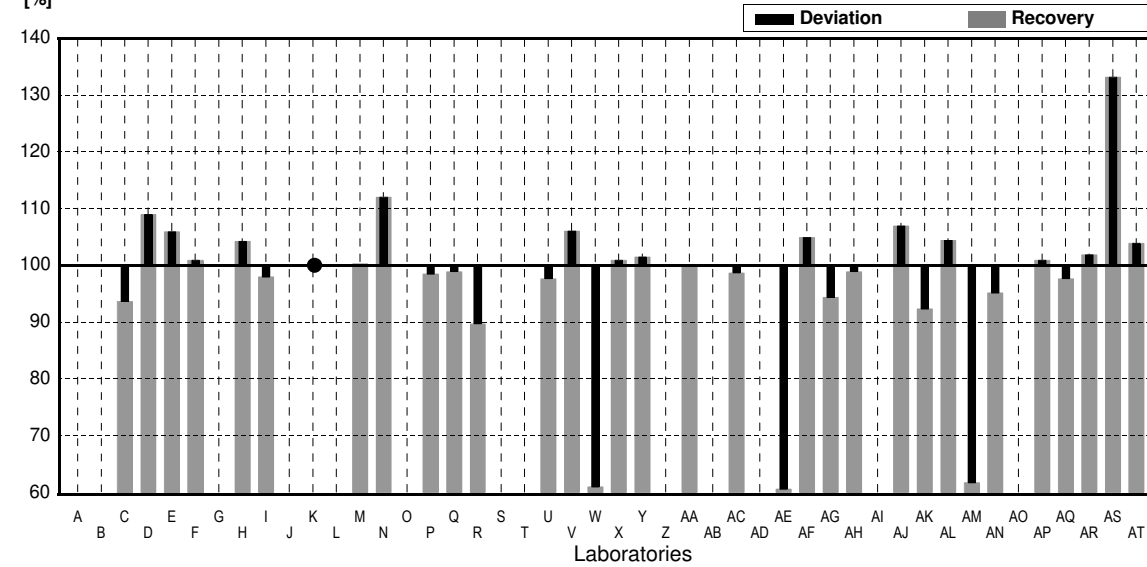
Lab Code	Result	±	Unit	Recovery	z-Score
A			mg/l		
B			mg/l		
C	9.28	1.63	mg/l	94%	-1.14
D	10.8	0.5	mg/l	109%	1.60
E	10.5	1.25	mg/l	106%	1.06
F	10.0		mg/l	101%	0.16
G			mg/l		
H	10.33	1.03	mg/l	104%	0.76
I	9.71	0.09	mg/l	98%	-0.36
J			mg/l		
K	>4		mg/l	*	
L			mg/l		
M	9.94	0.68	mg/l	100%	0.05
N	11.10	0.03	mg/l	112%	2.14
O			mg/l		
P	9.76	0,0867	mg/l	98%	-0.27
Q	9.80	0.78	mg/l	99%	-0.20
R	8.89	0.055	mg/l	90%	-1.84
S			mg/l		
T			mg/l		
U	9.68	0.9	mg/l	98%	-0.41
V	10.51	1.366	mg/l	106%	1.08
W	6.04 *	0.27	mg/l	61%	-6.97
X	10.0	0.2	mg/l	101%	0.16
Y	10.06	1.75	mg/l	102%	0.27
Z			mg/l		
AA	9.91		mg/l	100%	0.00
AB			mg/l		
AC	9.78	1.7692	mg/l	99%	-0.23
AD			mg/l		
AE	6.0 *	0.72	mg/l	61%	-7.05
AF	10.4	1.88	mg/l	105%	0.88
AG	9.35	1.5	mg/l	94%	-1.01
AH	9.8	2.1	mg/l	99%	-0.20
AI	na		mg/l		
AJ	10.6	1.5	mg/l	107%	1.24
AK	9.15	2.7	mg/l	92%	-1.37
AL	10.35	1.91	mg/l	104%	0.79
AM	6.11 *	0.23	mg/l	62%	-6.85
AN	9.43	2.360	mg/l	95%	-0.86
AO			mg/l		
AP	10.00	0.57	mg/l	101%	0.16
AQ	9.68	0.87	mg/l	98%	-0.41
AR	10.1	1.5	mg/l	102%	0.34
AS	13.2 *	2.2	mg/l	133%	5.93
AT	10.3	1.1	mg/l	104%	0.70

	All results	Outliers excl.	Unit
Mean ± CI(99%)	9,71 ± 0,68	9,97 ± 0,26	mg/l
Recov. ± CI(99%)	97,9 ± 6,9	100,6 ± 2,7	%
SD between labs	1,40	0,51	mg/l
RSD between labs	14,5	5,1	%
n for calculation	32	28	

### Result [mg/l]



### Recovery [%]



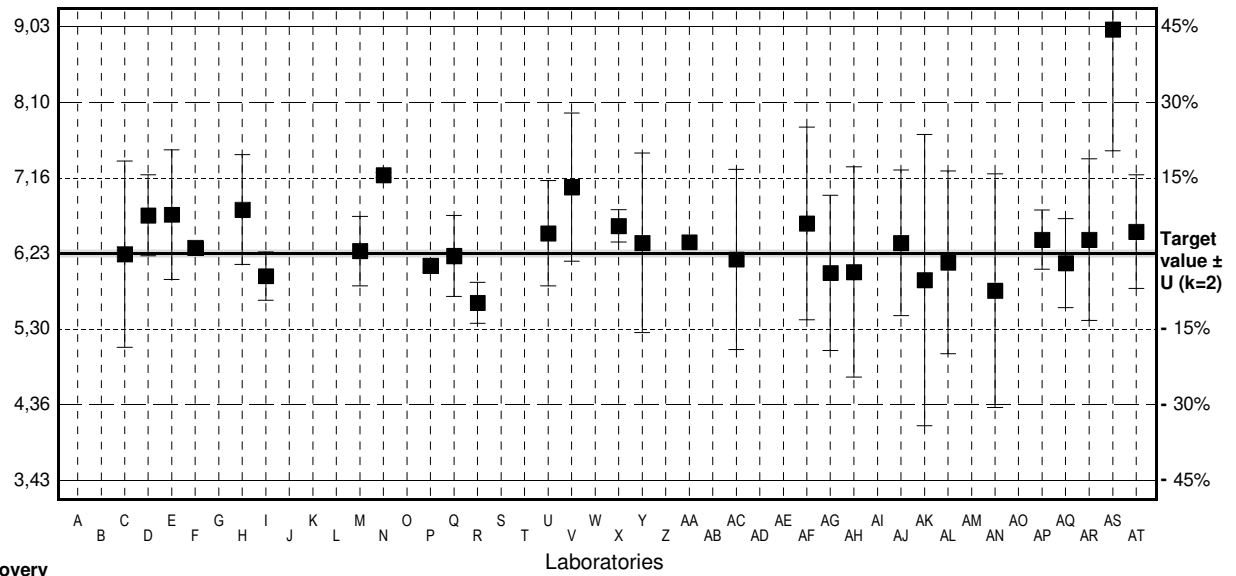
# Sample N164B

## Parameter DOC

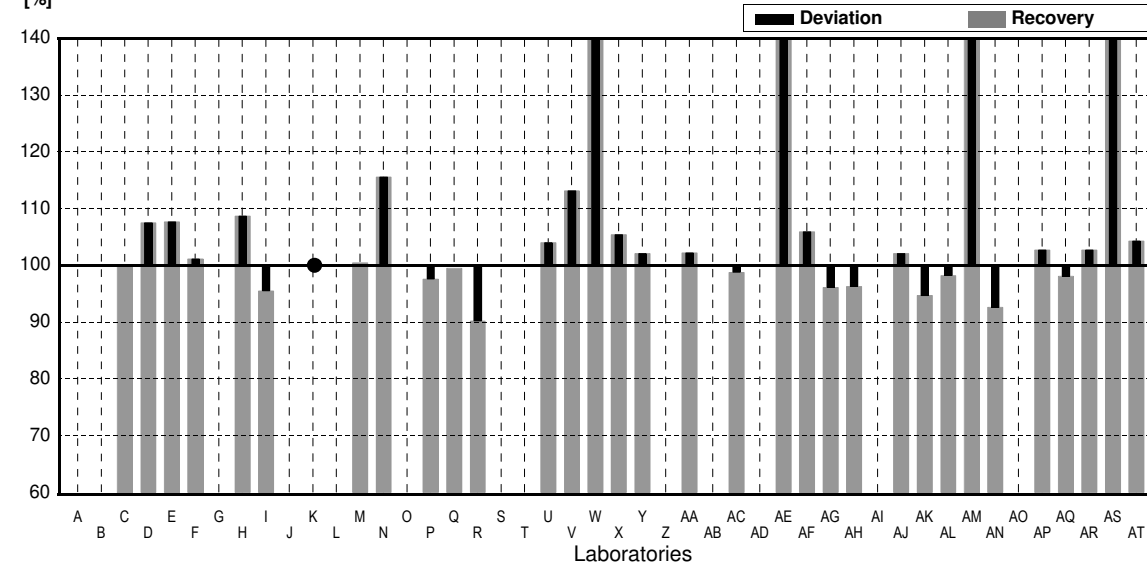
Target value ± U (k=2) 6,23 mg/l ± 0,04 mg/l  
 IFA result ± U (k=2) 6,25 mg/l ± 0,09 mg/l  
 Stability test ± U (k=2) 6,20 mg/l ± 0,09 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			mg/l		
B			mg/l		
C	6,22	1,15	mg/l	100%	-0,03
D	6,7	0,5	mg/l	108%	1,35
E	6,71	0,8	mg/l	108%	1,38
F	6,3		mg/l	101%	0,20
G			mg/l		
H	6,772	0,68	mg/l	109%	1,55
I	5,95	0,3	mg/l	96%	-0,80
J			mg/l		
K	>4		mg/l	*	
L			mg/l		
M	6,26	0,43	mg/l	100%	0,09
N	7,20	0,03	mg/l	116%	2,78
O			mg/l		
P	6,08	0,0856	mg/l	98%	-0,43
Q	6,20	0,50	mg/l	100%	-0,09
R	5,62	0,252	mg/l	90%	-1,75
S			mg/l		
T			mg/l		
U	6,48	0,65	mg/l	104%	0,72
V	7,05	0,917	mg/l	113%	2,35
W	9,61 *	0,43	mg/l	154%	9,69
X	6,57	0,2	mg/l	105%	0,97
Y	6,36	1,11	mg/l	102%	0,37
Z			mg/l		
AA	6,37		mg/l	102%	0,40
AB			mg/l		
AC	6,156	1,11362	mg/l	99%	-0,21
AD			mg/l		
AE	9,5 *	1,14	mg/l	152%	9,37
AF	6,6	1,19	mg/l	106%	1,06
AG	5,99	0,96	mg/l	96%	-0,69
AH	6,0	1,3	mg/l	96%	-0,66
AI	na		mg/l		
AJ	6,36	0,9	mg/l	102%	0,37
AK	5,90	1,8	mg/l	95%	-0,95
AL	6,12	1,13	mg/l	98%	-0,32
AM	10,1 *	0,35	mg/l	162%	11,09
AN	5,77	1,443	mg/l	93%	-1,32
AO			mg/l		
AP	6,40	0,365	mg/l	103%	0,49
AQ	6,11	0,55	mg/l	98%	-0,34
AR	6,4	1	mg/l	103%	0,49
AS	9,0 *	1,5	mg/l	144%	7,94
AT	6,5	0,7	mg/l	104%	0,77

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	6,73 ± 0,56	6,33 ± 0,19	mg/l
Recov. ± CI(99%)	108,0 ± 8,9	101,6 ± 3,0	%
SD between labs	1,14	0,36	mg/l
RSD between labs	17,0	5,7	%
n for calculation	32	28	

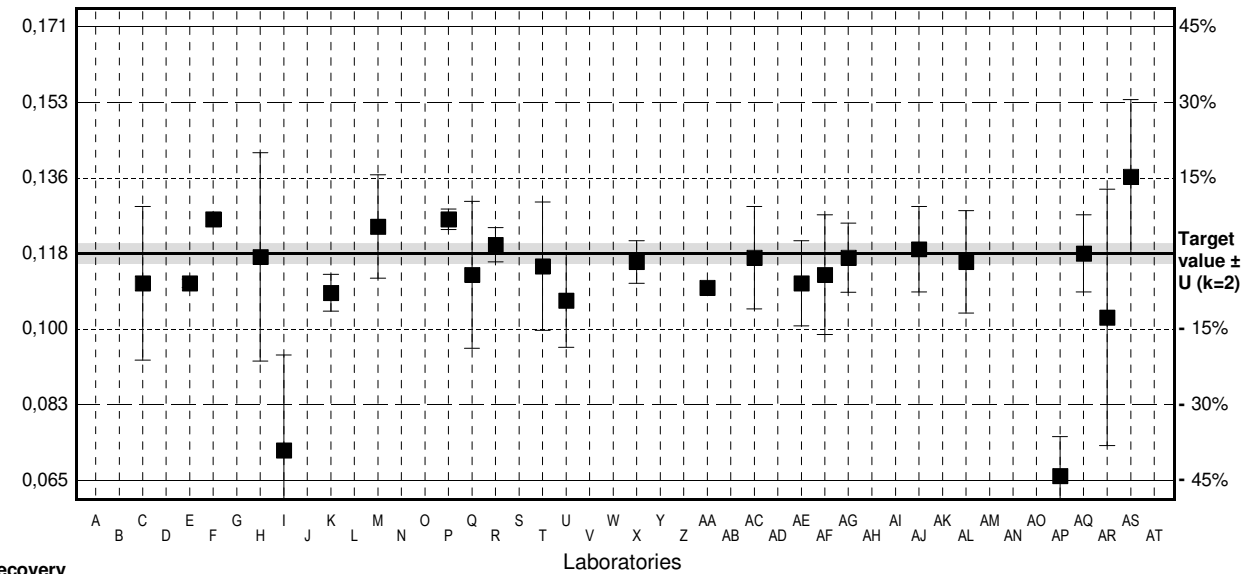
# Sample N164A

## Parameter Total P (as PO4)

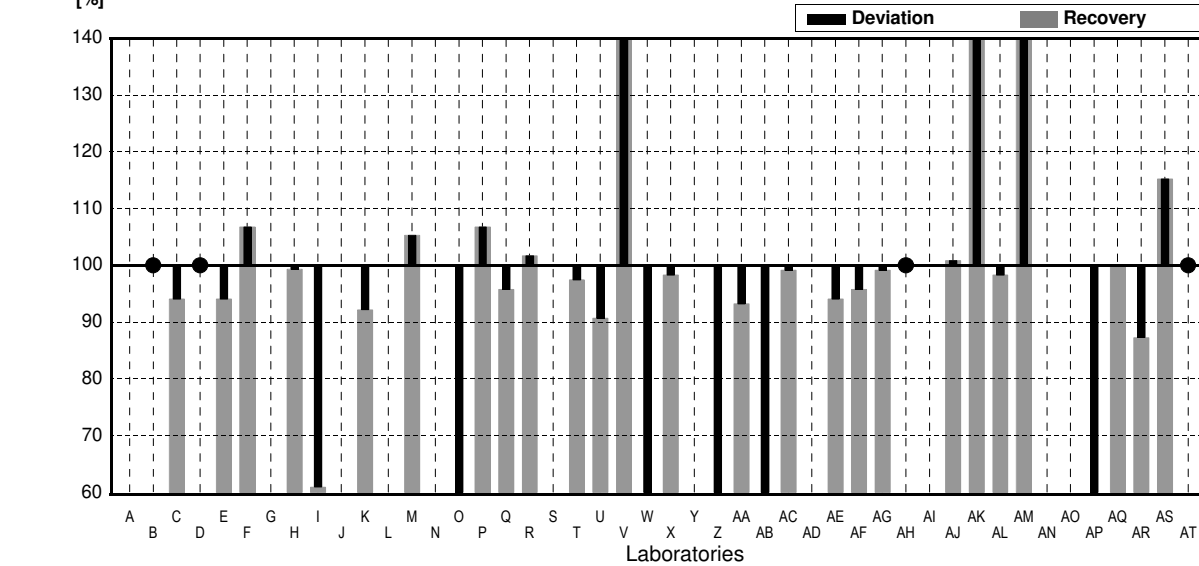
Target value ± U (k=2) 0,118 mg/l ± 0,002 mg/l  
 IFA result ± U (k=2) 0,129 mg/l ± 0,019 mg/l  
 Stability test ± U (k=2) 0,131 mg/l ± 0,020 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			mg/l		
B	<0.15		mg/l	*	
C	0.111	0.018	mg/l	94%	-0.59
D	<0.20		mg/l	*	
E	0.111	0.001	mg/l	94%	-0.59
F	0.126		mg/l	107%	0.68
G			mg/l		
H	0.1172	0.0244	mg/l	99%	-0.07
I	0.07187 *	0.02234	mg/l	61%	-3.91
J			mg/l		
K	0.1088	0.0043	mg/l	92%	-0.78
L			mg/l		
M	0.1243	0.0121	mg/l	105%	0.53
N			mg/l		
O	0.0424 *	0.004	mg/l	36%	-6.41
P	0.126	0.00240	mg/l	107%	0.68
Q	0.113	0.0172	mg/l	96%	-0.42
R	0.120	0.004	mg/l	102%	0.17
S			mg/l		
T	0.115	0.015	mg/l	97%	-0.25
U	0.107	0.011	mg/l	91%	-0.93
V	1.09 *	0.185	mg/l	924%	82.37
W	0.0307 *	0.006	mg/l	26%	-7.40
X	0.116	0.005	mg/l	98%	-0.17
Y			mg/l		
Z	0.0365 *		mg/l	31%	-6.91
AA	0.110		mg/l	93%	-0.68
AB	0.0280 *	0.0042	mg/l	24%	-7.63
AC	0.117	0.012	mg/l	99%	-0.08
AD			mg/l		
AE	0.111	0.010	mg/l	94%	-0.59
AF	0.113	0.014	mg/l	96%	-0.42
AG	0.117	0.0081	mg/l	99%	-0.08
AH	<0.15	0.031	mg/l	*	
AI	na		mg/l		
AJ	0.119	0.01	mg/l	101%	0.08
AK	114 *	23	mg/l	96610%	9651.02
AL	0.116	0.012	mg/l	98%	-0.17
AM	0.239 *	0.020	mg/l	203%	10.25
AN			mg/l		
AO			mg/l		
AP	0.0659 *	0.0092	mg/l	56%	-4.42
AQ	0.118	0.009	mg/l	100%	0.00
AR	0.103	0.03	mg/l	87%	-1.27
AS	0.136	0.018	mg/l	115%	1.53
AT	<0.150	0.0096	mg/l	*	

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	3,812 ± 10,101	0,116 ± 0,004	mg/l
Recov. ± CI(99%)	3230,2 ± 8560,2	98,4 ± 3,8	%
SD between labs	20,451	0,007	mg/l
RSD between labs	536,5	6,3	%
n for calculation	31	22	

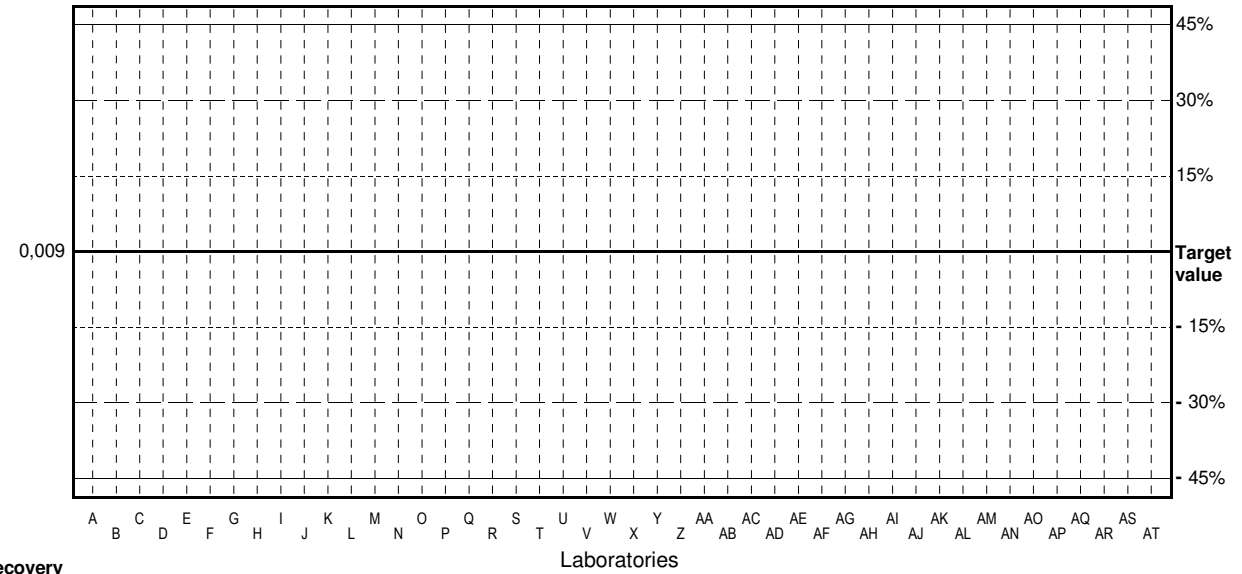
# Sample N164B

## Parameter Total P (as PO4)

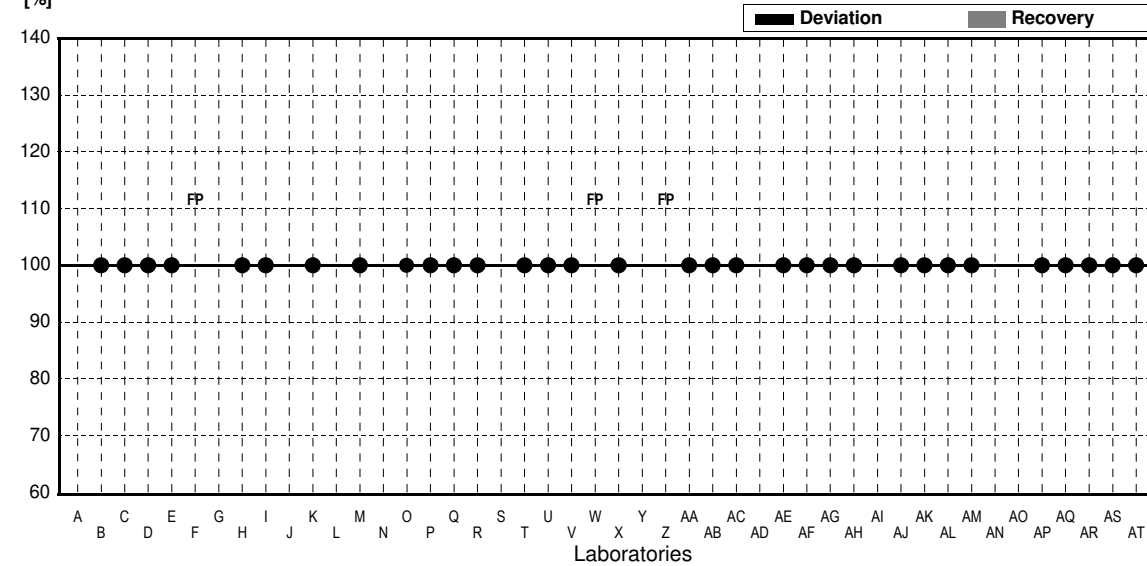
Target value <0,009 mg/l  
 IFA result <0,009 mg/l  
 Stability test <0,009 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			mg/l		
B	<0.15		mg/l	•	
C	<0.010		mg/l	•	
D	<0.20		mg/l	•	
E	<0.03		mg/l	•	
F	0.0159		mg/l	FP	
G			mg/l		
H	<0.009		mg/l	•	
I	0.00100	0.00100	mg/l	•	
J			mg/l		
K	<0.02		mg/l	•	
L			mg/l		
M	<0.015		mg/l	•	
N			mg/l		
O	0.0098	0.001	mg/l	•	
P	<0.0150		mg/l	•	
Q	<0.0153		mg/l	•	
R	<0.020		mg/l	•	
S			mg/l		
T	<0.006	0.000	mg/l	•	
U	<0.001		mg/l	•	
V	<0.0061		mg/l	•	
W	0.104	0.022	mg/l	FP	
X	<0.009	0.005	mg/l	•	
Y			mg/l		
Z	0.0110		mg/l	FP	
AA	<0.009		mg/l	•	
AB	<0.015	0.0022	mg/l	•	
AC	<0.01		mg/l	•	
AD			mg/l		
AE	<0.009		mg/l	•	
AF	<0.015		mg/l	•	
AG	<0.015		mg/l	•	
AH	<0.15	0.031	mg/l	•	
AI	na		mg/l		
AJ	<0.013		mg/l	•	
AK	<31		mg/l	•	
AL	<0.030		mg/l	•	
AM	<0.009		mg/l	•	
AN			mg/l		
AO			mg/l		
AP	<0.015	0.0021	mg/l	•	
AQ	<0.006		mg/l	•	
AR	<0.05		mg/l	•	
AS	<0.1		mg/l	•	
AT	<0.150	0.0096	mg/l	•	

Result [mg/l]



Recovery [%]



	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 N164A

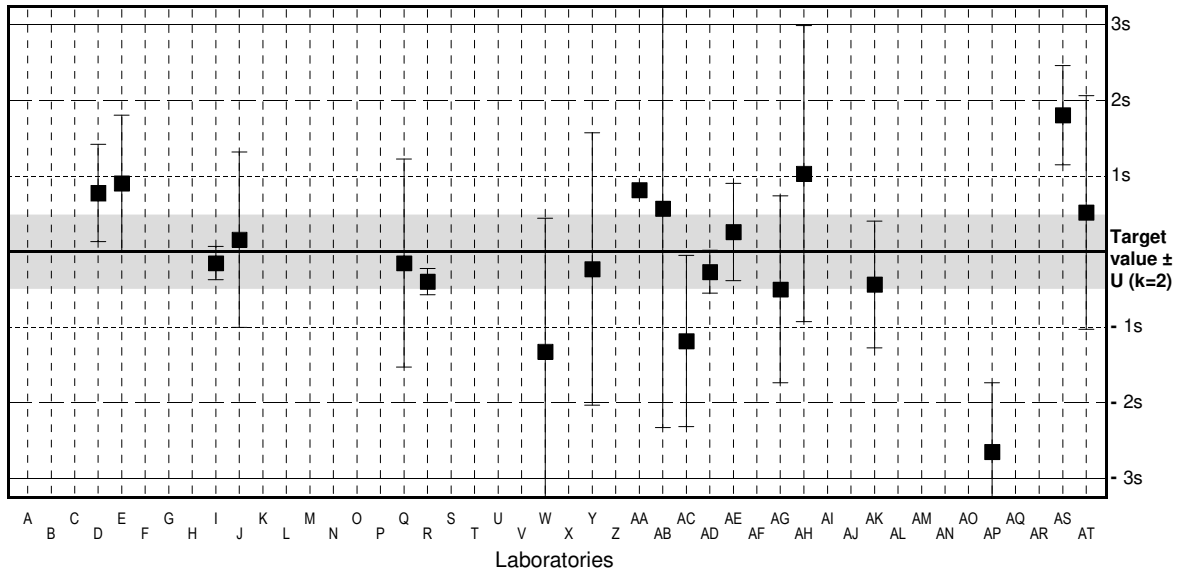
## Parameter KMnO4-Index

Target value ± U (k=2) 6,8 mg/l ± 0,4 mg/l  
 IFA result ± U (k=2) 7,6 mg/l ± 1,1 mg/l  
 Stability test ± U (k=2) 7,0 mg/l ± 1,0 mg/l

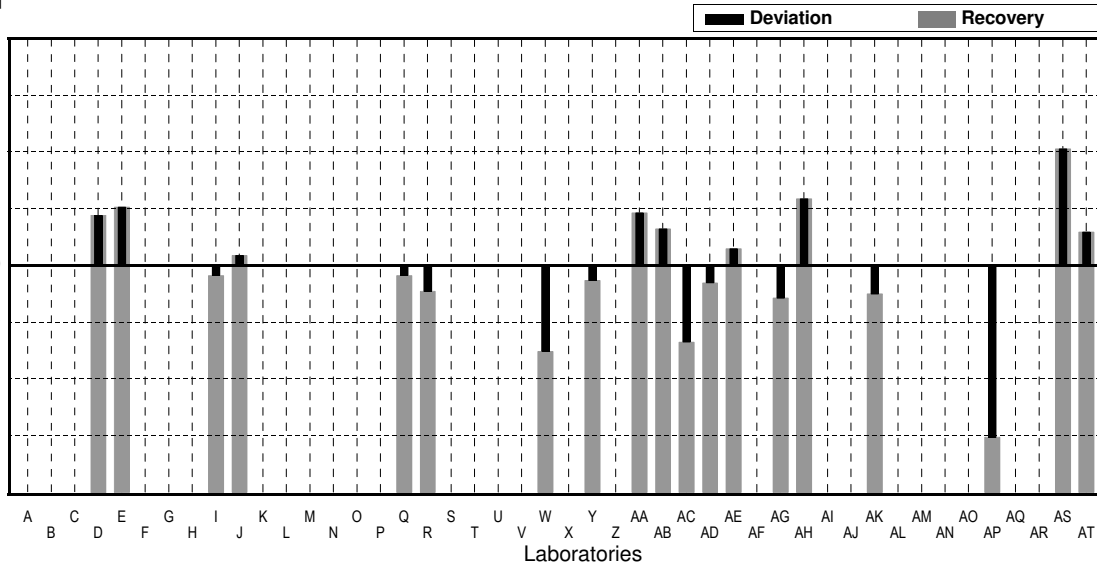
Lab Code	Result	±	Unit	Recovery	z-Score
A			mg/l		
B			mg/l		
C			mg/l		
D	7.4	0.5	mg/l	109%	0.88
E	7.5	0.7	mg/l	110%	1.03
F			mg/l		
G			mg/l		
H			mg/l		
I	6.68	0.17	mg/l	98%	-0.18
J	6.92	0.90	mg/l	102%	0.18
K			mg/l		
L			mg/l		
M			mg/l		
N			mg/l		
O			mg/l		
P			mg/l		
Q	6.68	1.07	mg/l	98%	-0.18
R	6.49	0.135	mg/l	95%	-0.46
S			mg/l		
T			mg/l		
U			mg/l		
V			mg/l		
W	5.77	1.37	mg/l	85%	-1.51
X			mg/l		
Y	6.62	1.4	mg/l	97%	-0.26
Z			mg/l		
AA	7.43		mg/l	109%	0.93
AB	7.24	2.25	mg/l	106%	0.65
AC	5.88	0.88	mg/l	86%	-1.35
AD	6.59	0.22	mg/l	97%	-0.31
AE	7.0	0.5	mg/l	103%	0.29
AF			mg/l		
AG	6.41	0.96	mg/l	94%	-0.57
AH	7.6	1.52	mg/l	112%	1.18
AI	na		mg/l		
AJ			mg/l		
AK	6.46	0.65	mg/l	95%	-0.50
AL			mg/l		
AM			mg/l		
AN			mg/l		
AO			mg/l		
AP	4.74	0.711	mg/l	70%	-3.03
AQ			mg/l		
AR			mg/l		
AS	8.2	0.51	mg/l	121%	2.06
AT	7.2	1.2	mg/l	106%	0.59

	All results	Outliers excl.	Unit
Mean ± CI(99%)	6,8 ± 0,5	6,8 ± 0,5	mg/l
Recov. ± CI(99%)	99,7 ± 7,5	99,7 ± 7,5	%
SD between labs	0,8	0,8	mg/l
RSD between labs	11,5	11,5	%
n for calculation	19	19	

Result [mg/l]



Recovery [%]



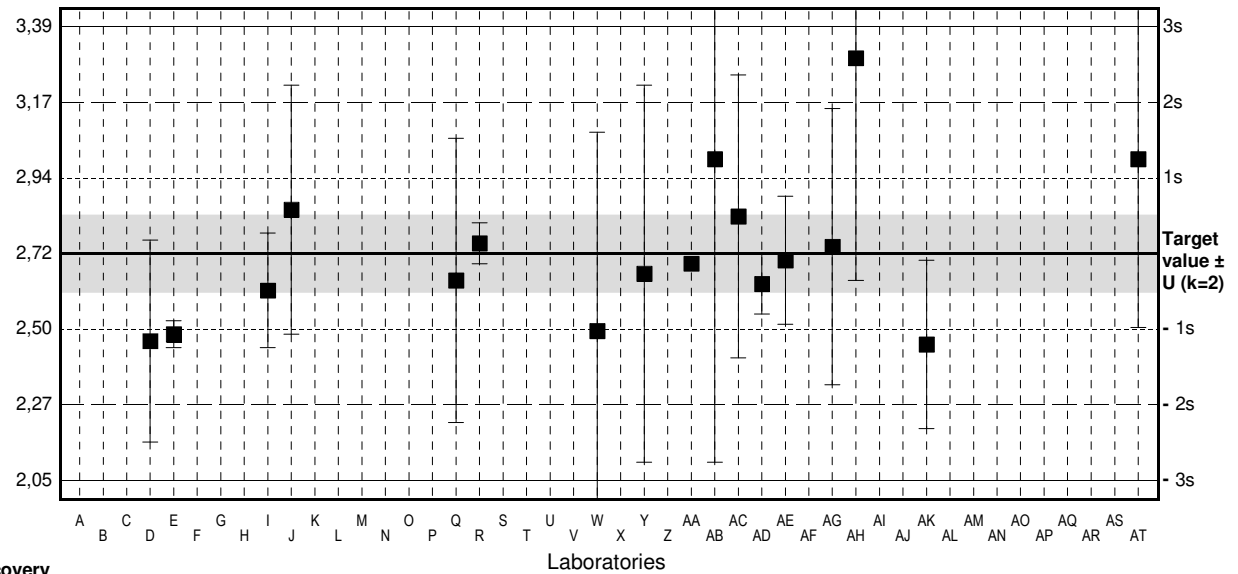
# Sample N164B

## Parameter KMnO4-Index

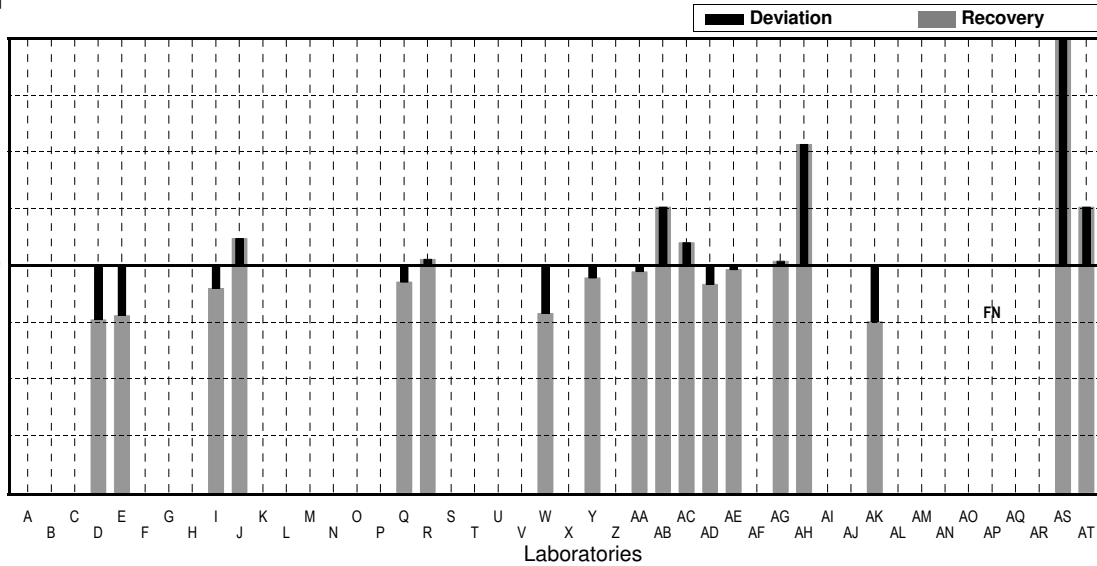
Target value ± U (k=2) 2,72 mg/l ± 0,11 mg/l  
 IFA result ± U (k=2) 2,90 mg/l ± 0,43 mg/l  
 Stability test ± U (k=2) 2,60 mg/l ± 0,39 mg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			mg/l		
B			mg/l		
C			mg/l		
D	2.46	0.3	mg/l	90%	-0.96
E	2.48	0.04	mg/l	91%	-0.88
F			mg/l		
G			mg/l		
H			mg/l		
I	2.61	0.17	mg/l	96%	-0.40
J	2.85	0.37	mg/l	105%	0.48
K			mg/l		
L			mg/l		
M			mg/l		
N			mg/l		
O			mg/l		
P			mg/l		
Q	2.64	0.422	mg/l	97%	-0.29
R	2.75	0.061	mg/l	101%	0.11
S			mg/l		
T			mg/l		
U			mg/l		
V			mg/l		
W	2.49	0.59	mg/l	92%	-0.85
X			mg/l		
Y	2.66	0.56	mg/l	98%	-0.22
Z			mg/l		
AA	2.69		mg/l	99%	-0.11
AB	3.00	0.90	mg/l	110%	1.03
AC	2.83	0.42	mg/l	104%	0.40
AD	2.63	0.09	mg/l	97%	-0.33
AE	2.70	0.19	mg/l	99%	-0.07
AF			mg/l		
AG	2.74	0.41	mg/l	101%	0.07
AH	3.30	0.66	mg/l	121%	2.13
AI	na		mg/l		
AJ			mg/l		
AK	2.45	0.25	mg/l	90%	-0.99
AL			mg/l		
AM			mg/l		
AN			mg/l		
AO			mg/l		
AP	<1	0.15	mg/l	FN	
AQ			mg/l		
AR			mg/l		
AS	4.74 *	0.30	mg/l	174%	7.43
AT	3.00	0.50	mg/l	110%	1.03

Result [mg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,83 ± 0,36	2,72 ± 0,16	mg/l
Recov. ± CI(99%)	104,2 ± 13,1	100,1 ± 5,8	%
SD between labs	0,52	0,22	mg/l
RSD between labs	18,5	8,2	%
n for calculation	18	17	



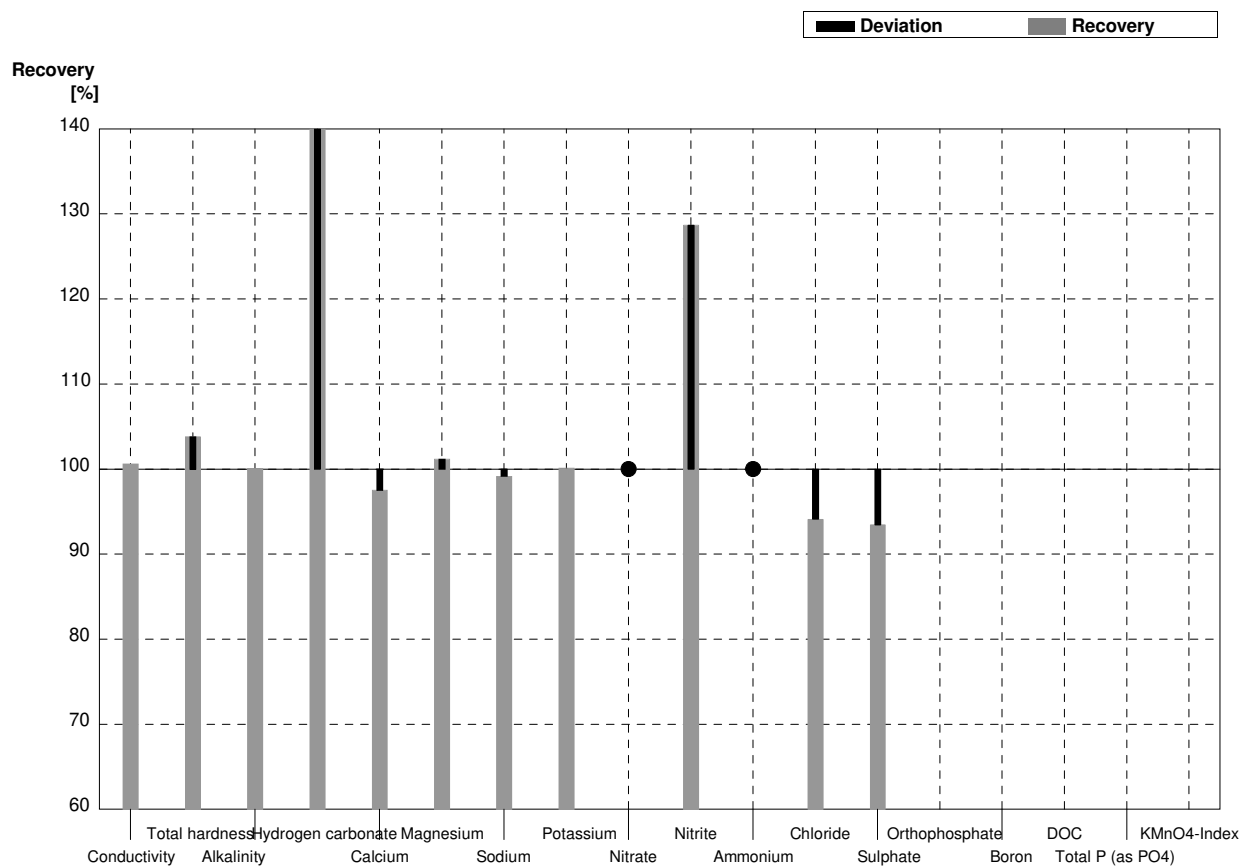
# Illustration of Results Laboratory Oriented Part

Round N164  
Major Ions

Sample Dispatch: 14 November 2022

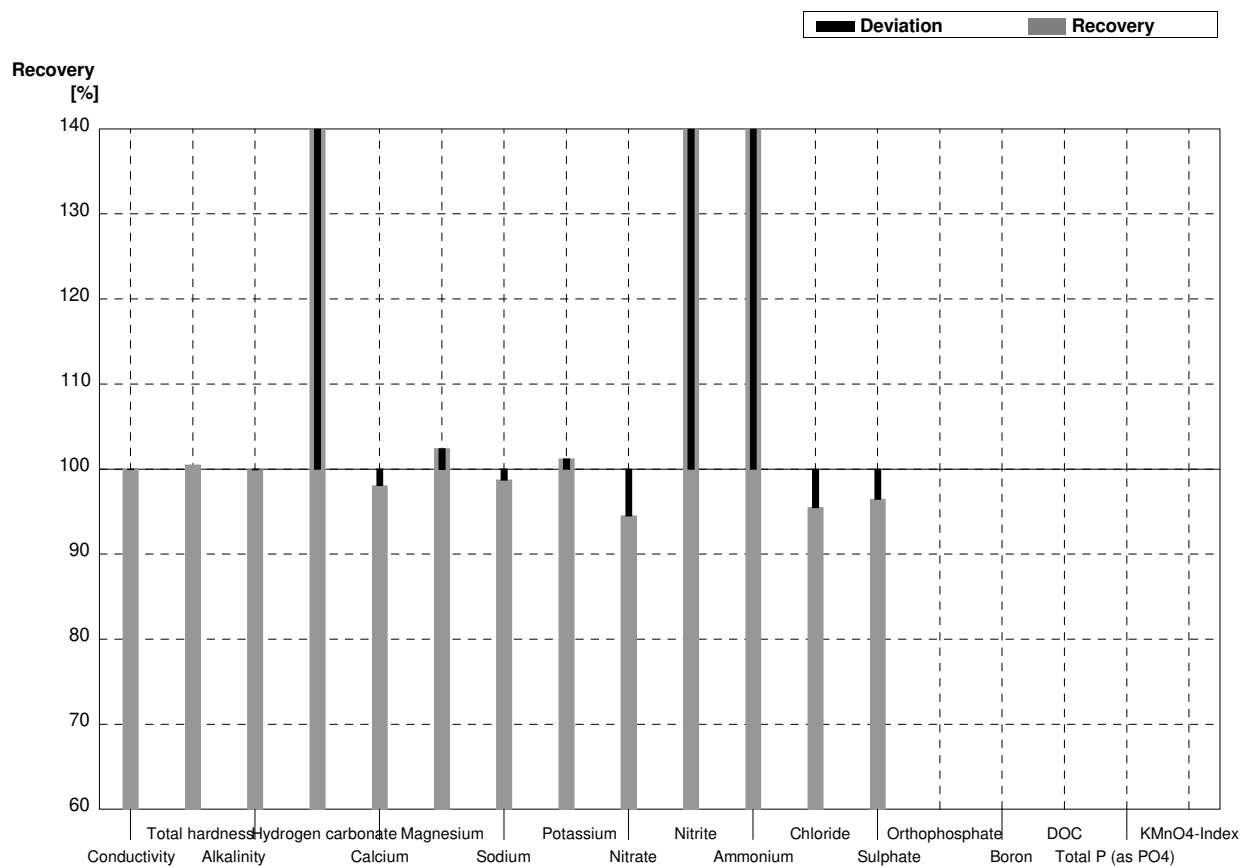
**Sample N164A**  
**Laboratory A**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	311,9	24,3	µS/cm	101%
Total hardness	0,578	0,007	0,60	0,17	mmol/l	104%
Alkalinity	2,158	0,012	2,16	0,23	mmol/l	100%
Hydrogen carbonate	128,6	0,8	263,5	27,9	mg/l	205%
Calcium	16,2	0,2	15,8	1,99	mg/l	98%
Magnesium	4,22	0,05	4,27	0,74	mg/l	101%
Sodium	41,36	0,16	41,02	4,94	mg/l	99%
Potassium	6,81	0,03	6,82	0,46	mg/l	100%
Nitrate	<0,2		<2,50		mg/l	•
Nitrite	0,0645	0,0002	0,083	0,00782	mg/l	129%
Ammonium	<0,01		<0,05		mg/l	•
Chloride	13,8	0,4	12,99	0,65	mg/l	94%
Sulphate	25,1	0,2	23,46	1,31	mg/l	93%
Orthophosphate	0,071	0,003			mg/l	
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06			mg/l	
Total P (as PO4)	0,118	0,002			mg/l	
KMnO4-Index	6,8	0,4			mg/l	



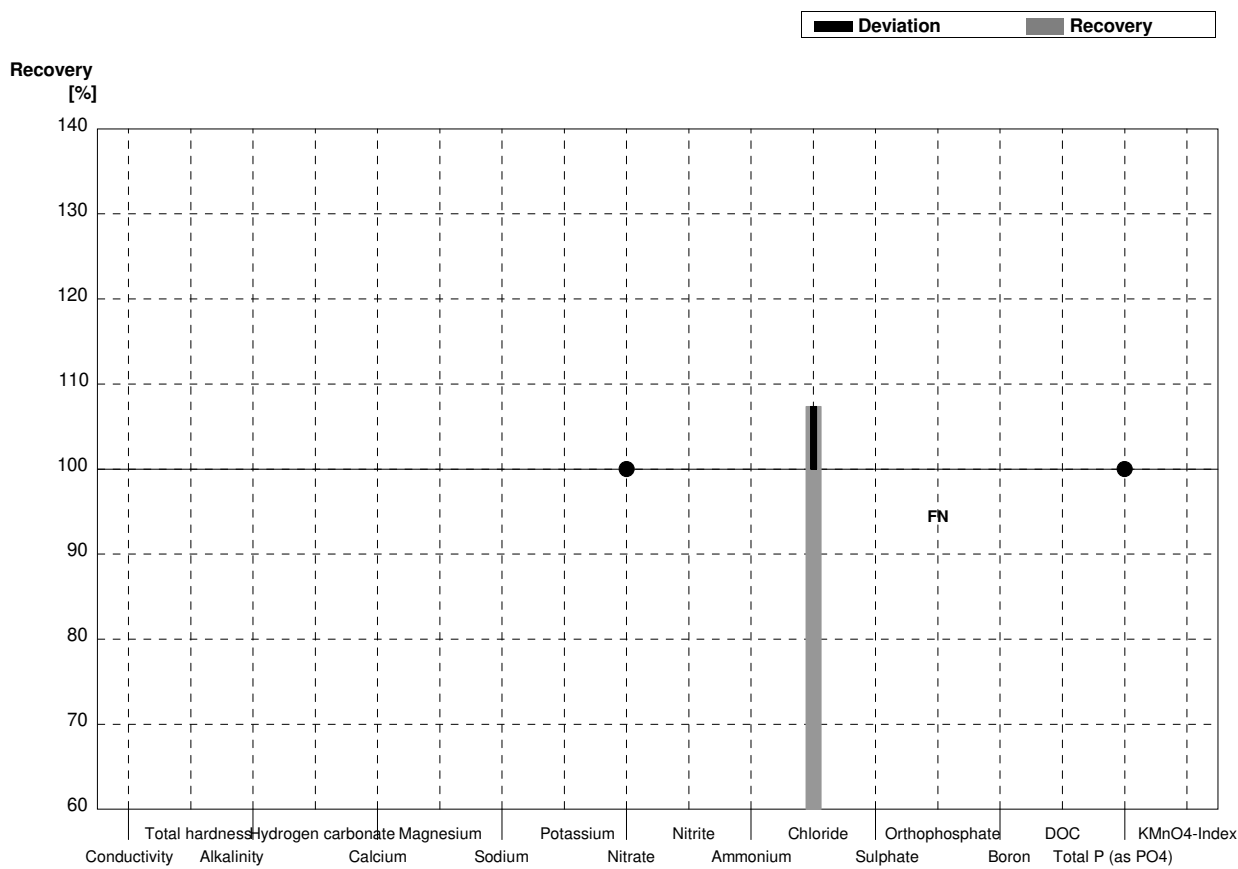
**Sample N164B**  
**Laboratory A**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	552,8	43,1	µS/cm	100%
Total hardness	1,97	0,02	1,98	0,57	mmol/l	101%
Alkalinity	1,671	0,014	1,67	0,18	mmol/l	100%
Hydrogen carbonate	98,9	0,9	203,9	21,6	mg/l	206%
Calcium	51,9	0,7	50,9	6,40	mg/l	98%
Magnesium	16,4	0,2	16,8	2,90	mg/l	102%
Sodium	28,39	0,19	28,03	3,37	mg/l	99%
Potassium	4,10	0,04	4,15	0,28	mg/l	101%
Nitrate	53,6	1,3	50,66	1,83	mg/l	95%
Nitrite	0,0152	0,0020	0,199	0,0187	mg/l	1309%
Ammonium	0,0478	0,0053	0,089	0,0120	mg/l	186%
Chloride	48,9	0,9	46,69	2,34	mg/l	95%
Sulphate	64,9	0,8	62,61	3,51	mg/l	96%
Orthophosphate	<0,009				mg/l	
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	2,72	0,11			mg/l	



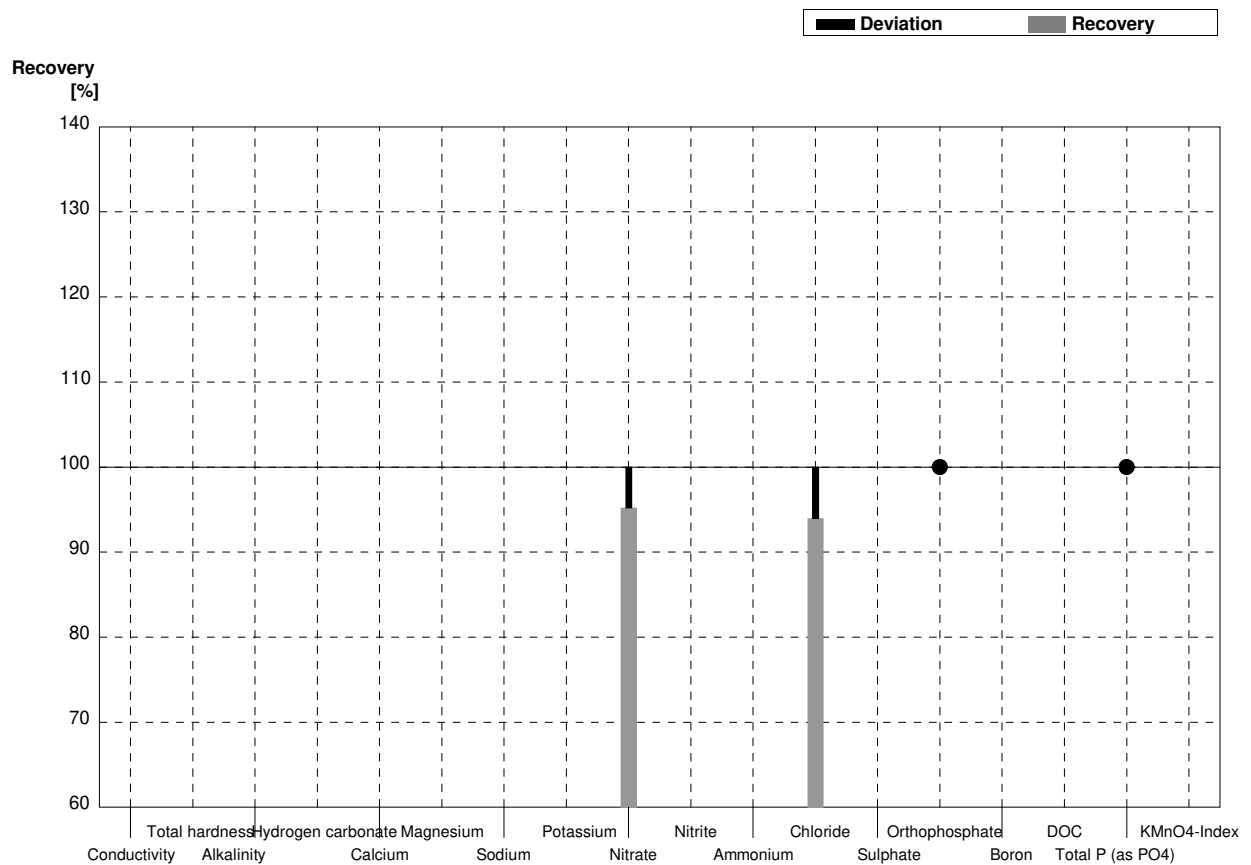
**Sample N164A**  
**Laboratory B**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1			µS/cm	
Total hardness	0,578	0,007			mmol/l	
Alkalinity	2,158	0,012			mmol/l	
Hydrogen carbonate	128,6	0,8			mg/l	
Calcium	16,2	0,2			mg/l	
Magnesium	4,22	0,05			mg/l	
Sodium	41,36	0,16			mg/l	
Potassium	6,81	0,03			mg/l	
Nitrate	<0,2		<1		mg/l	•
Nitrite	0,0645	0,0002			mg/l	
Ammonium	<0,01				mg/l	
Chloride	13,8	0,4	14,82		mg/l	107%
Sulphate	25,1	0,2			mg/l	
Orthophosphate	0,071	0,003	<0,05		mg/l	FN
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06			mg/l	
Total P (as PO4)	0,118	0,002	<0,15		mg/l	•
KMnO4-Index	6,8	0,4			mg/l	



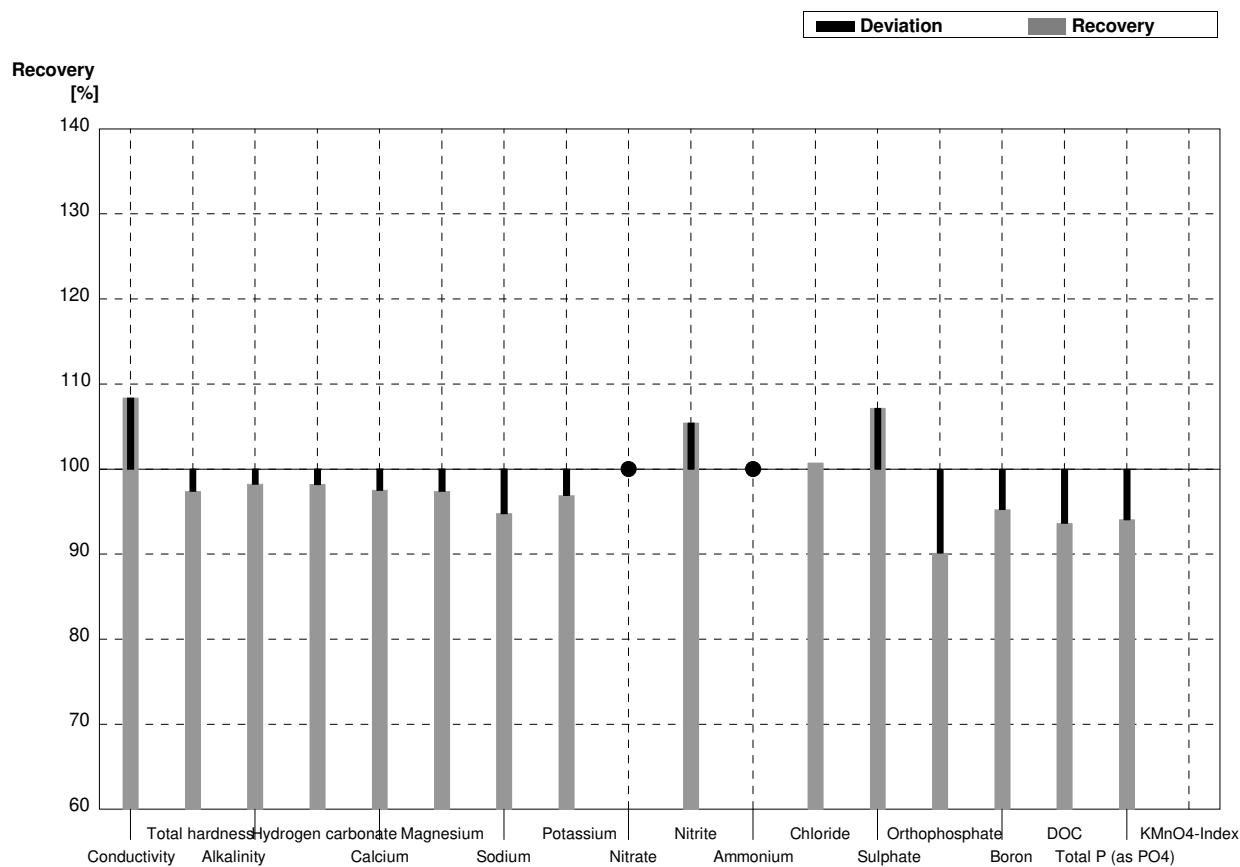
**Sample N164B**  
**Laboratory B**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2			µS/cm	
Total hardness	1,97	0,02			mmol/l	
Alkalinity	1,671	0,014			mmol/l	
Hydrogen carbonate	98,9	0,9			mg/l	
Calcium	51,9	0,7			mg/l	
Magnesium	16,4	0,2			mg/l	
Sodium	28,39	0,19			mg/l	
Potassium	4,10	0,04			mg/l	
Nitrate	53,6	1,3	51,04		mg/l	95%
Nitrite	0,0152	0,0020			mg/l	
Ammonium	0,0478	0,0053			mg/l	
Chloride	48,9	0,9	45,95		mg/l	94%
Sulphate	64,9	0,8			mg/l	
Orthophosphate	<0,009		<0,05		mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04			mg/l	
Total P (as PO4)	<0,009		<0,15		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



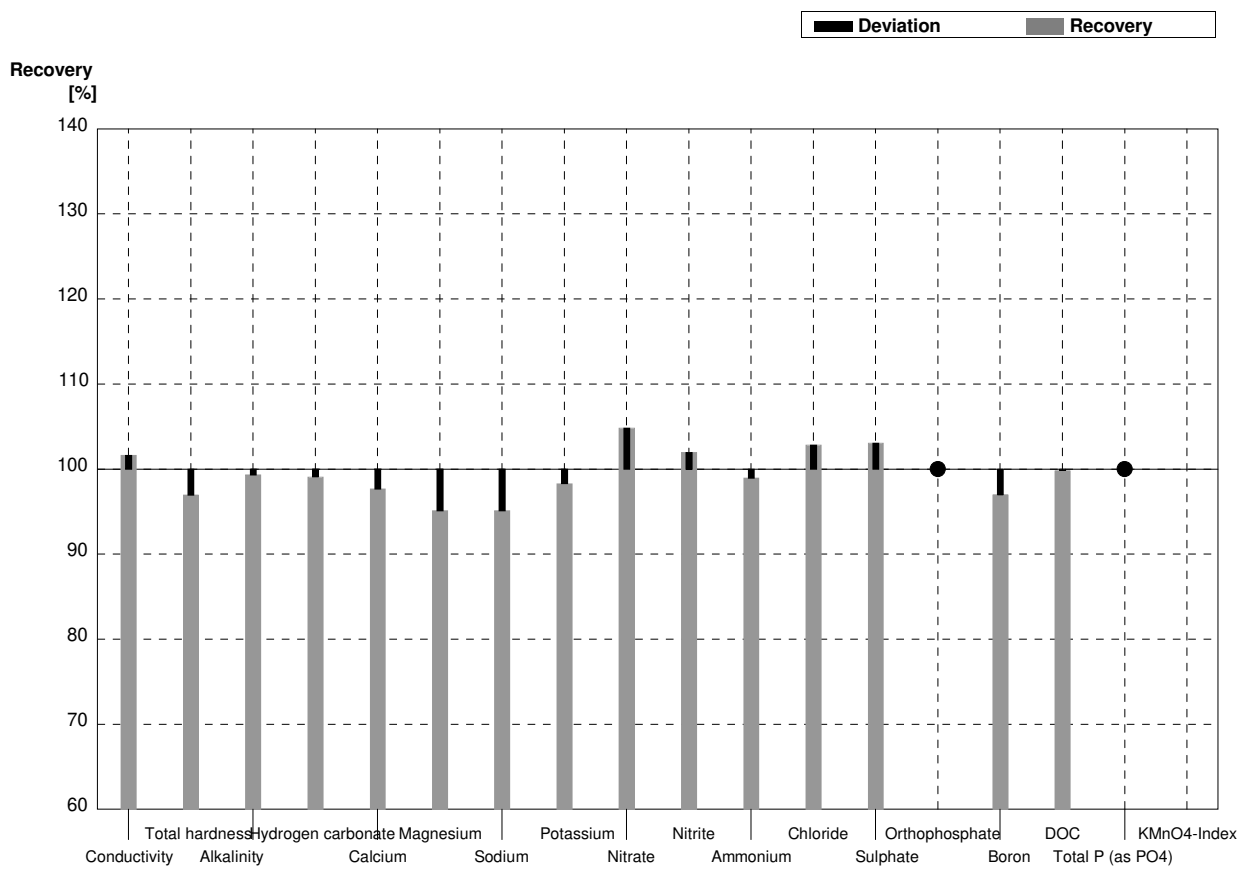
**Sample N164A**  
**Laboratory C**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	336	13	µS/cm	108%
Total hardness	0,578	0,007	0,563	0,033	mmol/l	97%
Alkalinity	2,158	0,012	2,12	0,16	mmol/l	98%
Hydrogen carbonate	128,6	0,8	126,3	9,7	mg/l	98%
Calcium	16,2	0,2	15,8	0,8	mg/l	98%
Magnesium	4,22	0,05	4,11	0,30	mg/l	97%
Sodium	41,36	0,16	39,2	2,0	mg/l	95%
Potassium	6,81	0,03	6,6	0,3	mg/l	97%
Nitrate	<0,2		<0,2		mg/l	•
Nitrite	0,0645	0,0002	0,068	0,007	mg/l	105%
Ammonium	<0,01		<0,010		mg/l	•
Chloride	13,8	0,4	13,9	1,3	mg/l	101%
Sulphate	25,1	0,2	26,9	2,6	mg/l	107%
Orthophosphate	0,071	0,003	0,064	0,009	mg/l	90%
Boron	0,0253	0,0010	0,0241	0,0030	mg/l	95%
DOC	9,91	0,06	9,28	1,63	mg/l	94%
Total P (as PO4)	0,118	0,002	0,111	0,018	mg/l	94%
KMnO4-Index	6,8	0,4			mg/l	



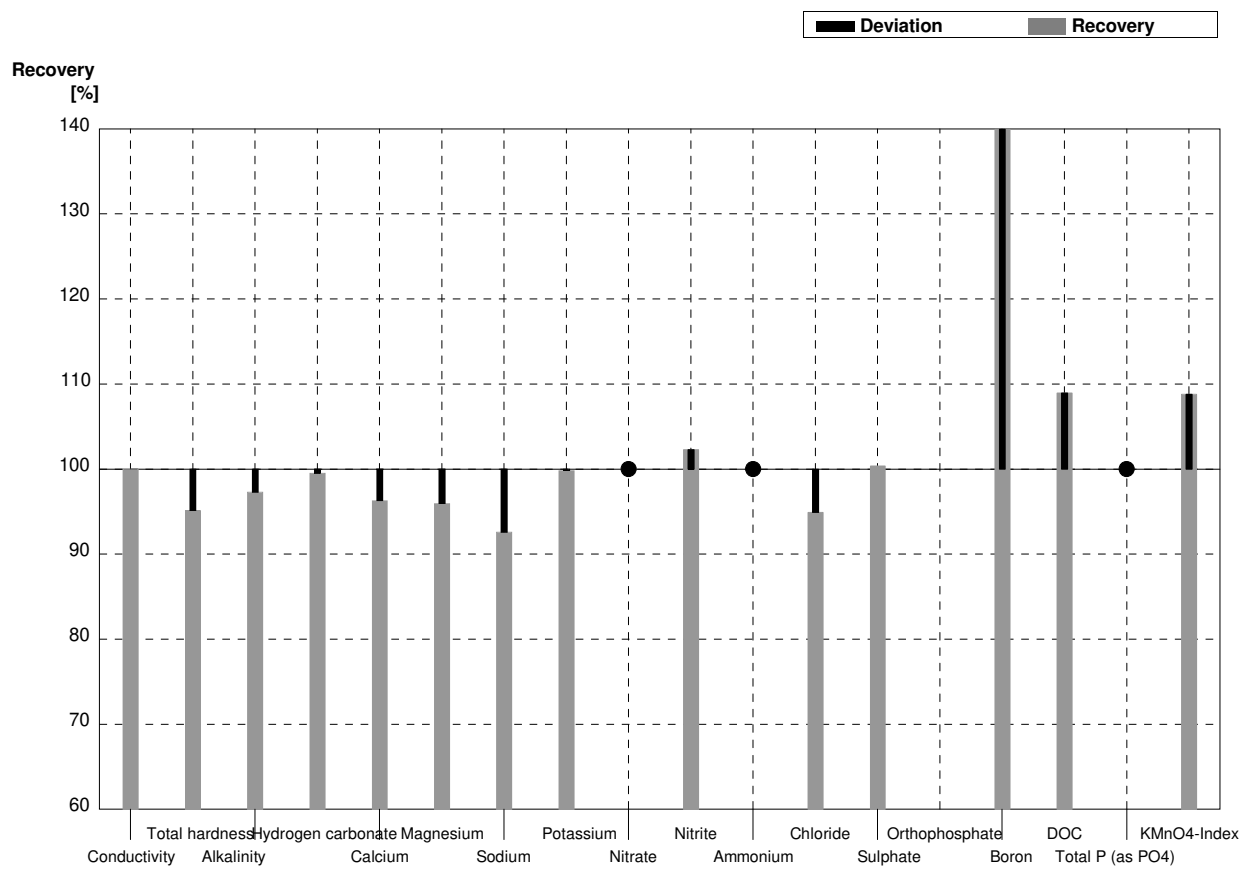
**Sample N164B**  
**Laboratory C**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	562	22	µS/cm	102%
Total hardness	1,97	0,02	1,91	0,10	mmol/l	97%
Alkalinity	1,671	0,014	1,66	0,13	mmol/l	99%
Hydrogen carbonate	98,9	0,9	98,0	8,0	mg/l	99%
Calcium	51,9	0,7	50,7	2,4	mg/l	98%
Magnesium	16,4	0,2	15,6	1,0	mg/l	95%
Sodium	28,39	0,19	27,0	1,4	mg/l	95%
Potassium	4,10	0,04	4,03	0,19	mg/l	98%
Nitrate	53,6	1,3	56,2	3,5	mg/l	105%
Nitrite	0,0152	0,0020	0,0155	0,0031	mg/l	102%
Ammonium	0,0478	0,0053	0,0473	0,0092	mg/l	99%
Chloride	48,9	0,9	50,3	4,0	mg/l	103%
Sulphate	64,9	0,8	66,9	6,2	mg/l	103%
Orthophosphate	<0,009		<0,010		mg/l	•
Boron	0,0505	0,0004	0,04898	0,00529	mg/l	97%
DOC	6,23	0,04	6,22	1,15	mg/l	100%
Total P (as PO4)	<0,009		<0,010		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



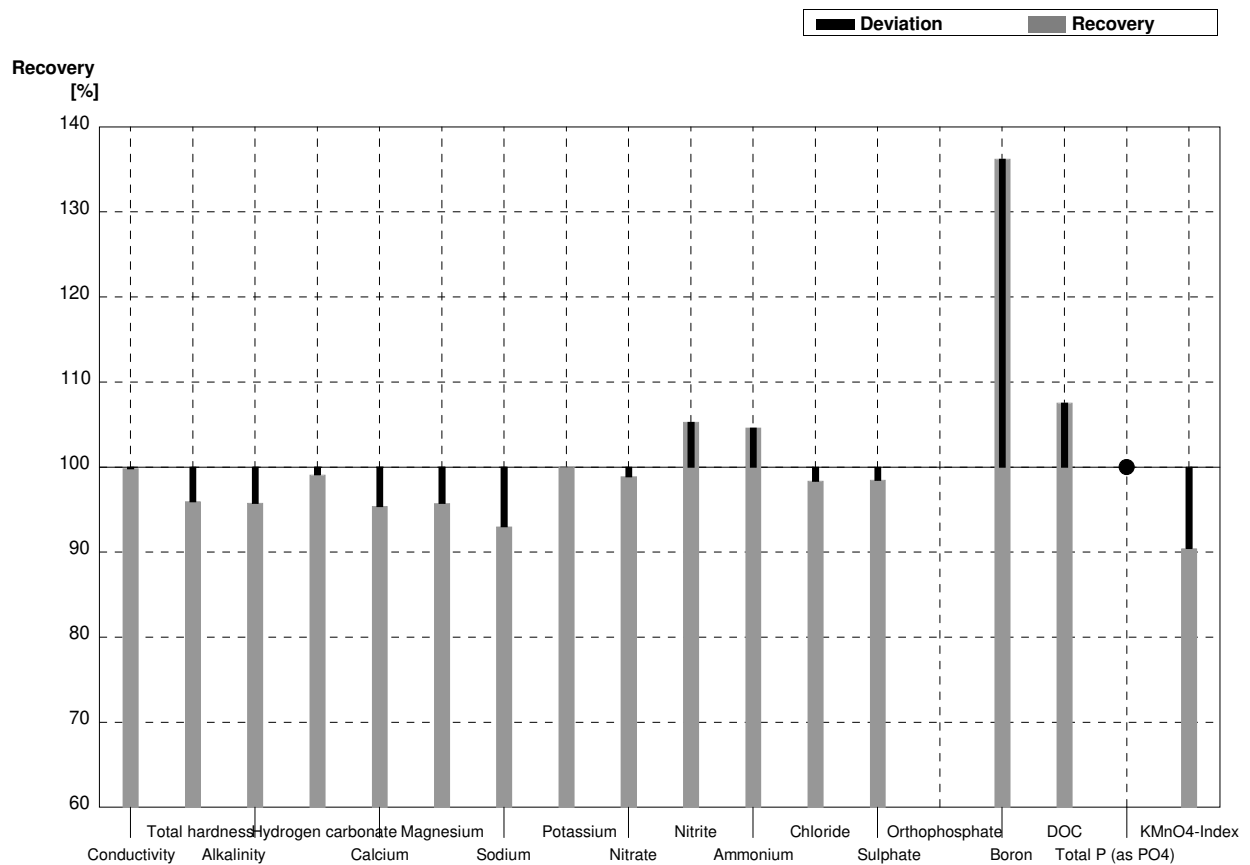
**Sample N164A**  
**Laboratory D**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	310	2	µS/cm	100%
Total hardness	0,578	0,007	0,55	0,15	mmol/l	95%
Alkalinity	2,158	0,012	2,10	0,10	mmol/l	97%
Hydrogen carbonate	128,6	0,8	128	4	mg/l	100%
Calcium	16,2	0,2	15,6	1	mg/l	96%
Magnesium	4,22	0,05	4,05	1	mg/l	96%
Sodium	41,36	0,16	38,3	2	mg/l	93%
Potassium	6,81	0,03	6,8	0,5	mg/l	100%
Nitrate	<0,2		<1,0		mg/l	•
Nitrite	0,0645	0,0002	0,066	0,01	mg/l	102%
Ammonium	<0,01		<0,02		mg/l	•
Chloride	13,8	0,4	13,1	2	mg/l	95%
Sulphate	25,1	0,2	25,2	2	mg/l	100%
Orthophosphate	0,071	0,003			mg/l	
Boron	0,0253	0,0010	0,0388	0,02	mg/l	153%
DOC	9,91	0,06	10,8	0,5	mg/l	109%
Total P (as PO4)	0,118	0,002	<0,20		mg/l	•
KMnO4-Index	6,8	0,4	7,4	0,5	mg/l	109%



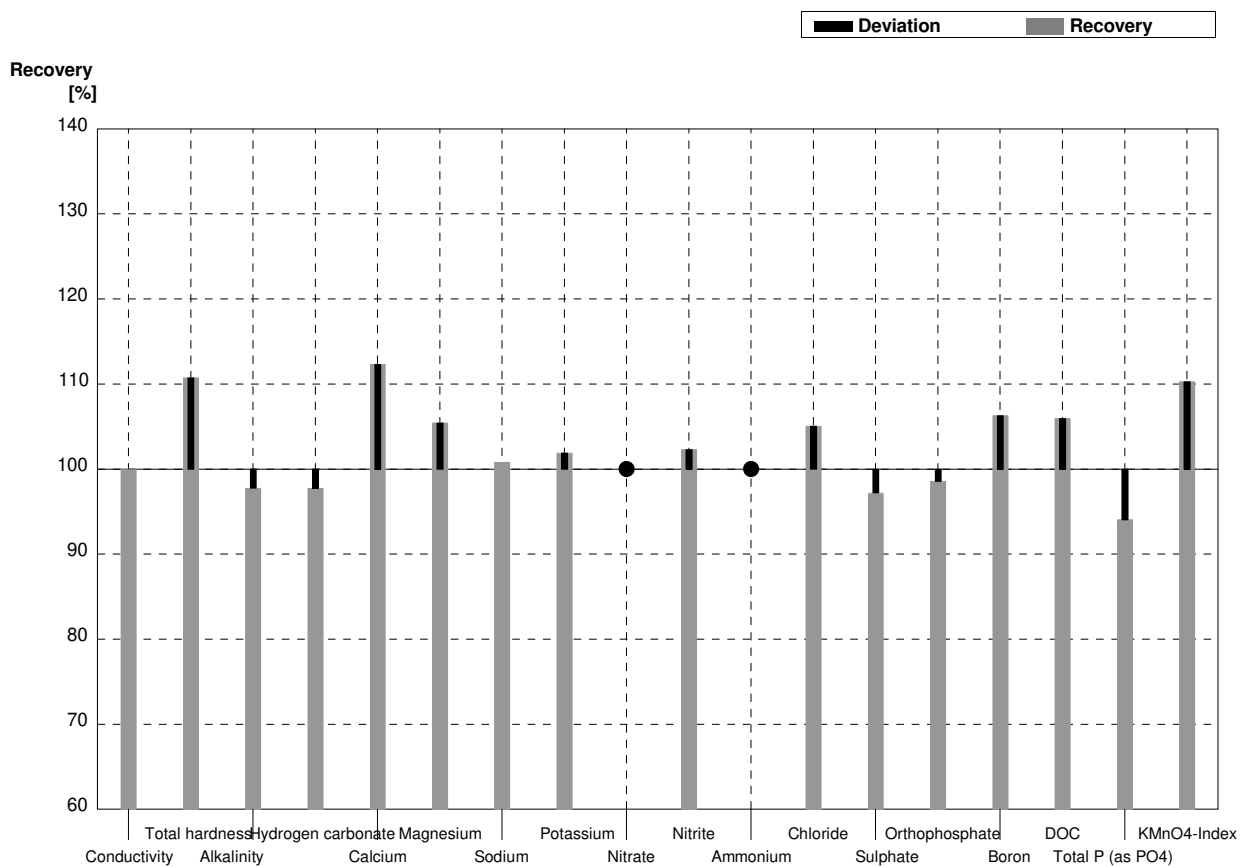
**Sample N164B**  
**Laboratory D**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	552	3	µS/cm	100%
Total hardness	1,97	0,02	1,89	0,18	mmol/l	96%
Alkalinity	1,671	0,014	1,60	0,10	mmol/l	96%
Hydrogen carbonate	98,9	0,9	98	4	mg/l	99%
Calcium	51,9	0,7	49,5	2	mg/l	95%
Magnesium	16,4	0,2	15,7	1	mg/l	96%
Sodium	28,39	0,19	26,4	1	mg/l	93%
Potassium	4,10	0,04	4,10	0,5	mg/l	100%
Nitrate	53,6	1,3	53	3	mg/l	99%
Nitrite	0,0152	0,0020	0,0160	0,01	mg/l	105%
Ammonium	0,0478	0,0053	0,050	0,01	mg/l	105%
Chloride	48,9	0,9	48,1	2	mg/l	98%
Sulphate	64,9	0,8	63,9	3	mg/l	98%
Orthophosphate	<0,009				mg/l	
Boron	0,0505	0,0004	0,0688	0,02	mg/l	136%
DOC	6,23	0,04	6,7	0,5	mg/l	108%
Total P (as PO4)	<0,009		<0,20		mg/l	•
KMnO4-Index	2,72	0,11	2,46	0,3	mg/l	90%



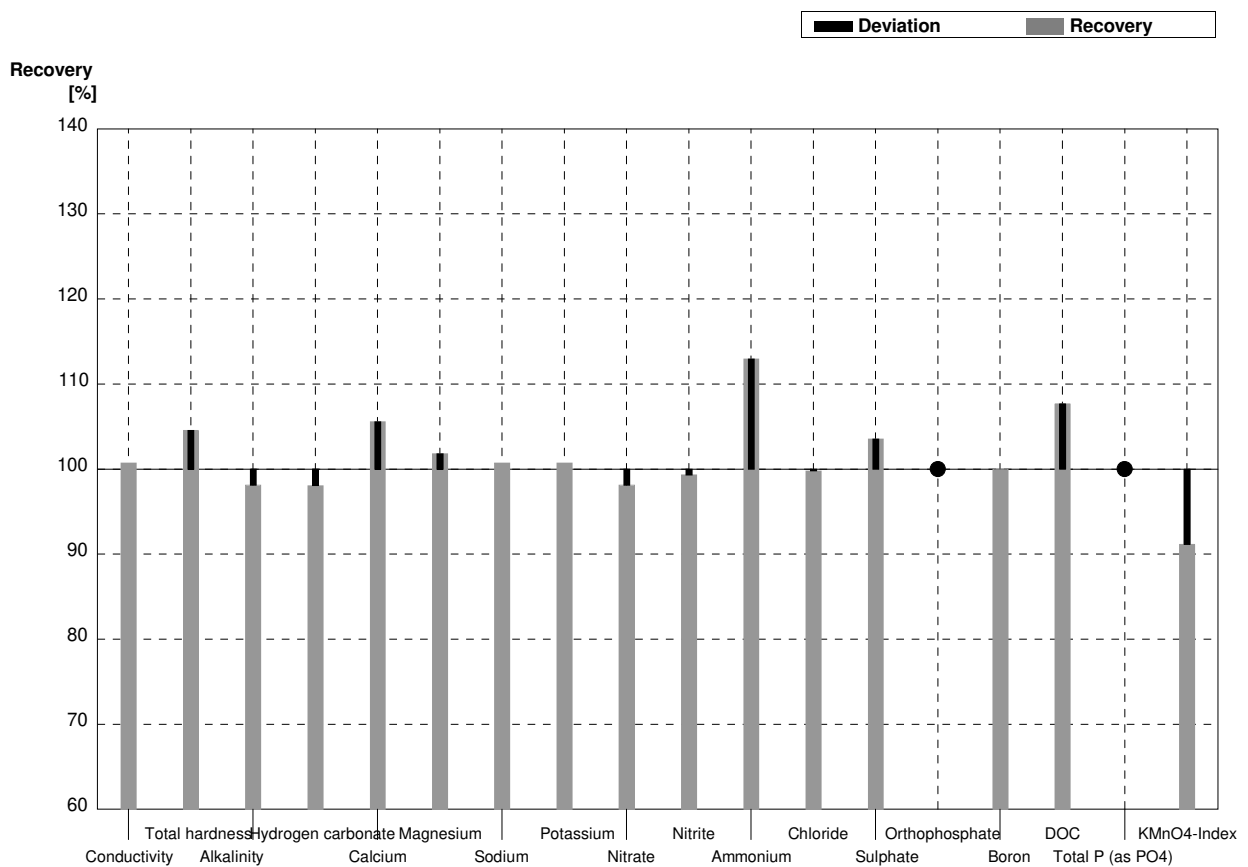
**Sample N164A**  
**Laboratory E**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	310	14,0	µS/cm	100%
Total hardness	0,578	0,007	0,64		mmol/l	111%
Alkalinity	2,158	0,012	2,11	0,15	mmol/l	98%
Hydrogen carbonate	128,6	0,8	125,7		mg/l	98%
Calcium	16,2	0,2	18,2	2,8	mg/l	112%
Magnesium	4,22	0,05	4,45	0,5	mg/l	105%
Sodium	41,36	0,16	41,7	3,6	mg/l	101%
Potassium	6,81	0,03	6,94	0,6	mg/l	102%
Nitrate	<0,2		<0,1		mg/l	•
Nitrite	0,0645	0,0002	0,066	0,009	mg/l	102%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	13,8	0,4	14,5	2,1	mg/l	105%
Sulphate	25,1	0,2	24,4	2	mg/l	97%
Orthophosphate	0,071	0,003	0,070	0,01	mg/l	99%
Boron	0,0253	0,0010	0,0269	0,0018	mg/l	106%
DOC	9,91	0,06	10,5	1,25	mg/l	106%
Total P (as PO4)	0,118	0,002	0,111	0,001	mg/l	94%
KMnO4-Index	6,8	0,4	7,5	0,7	mg/l	110%



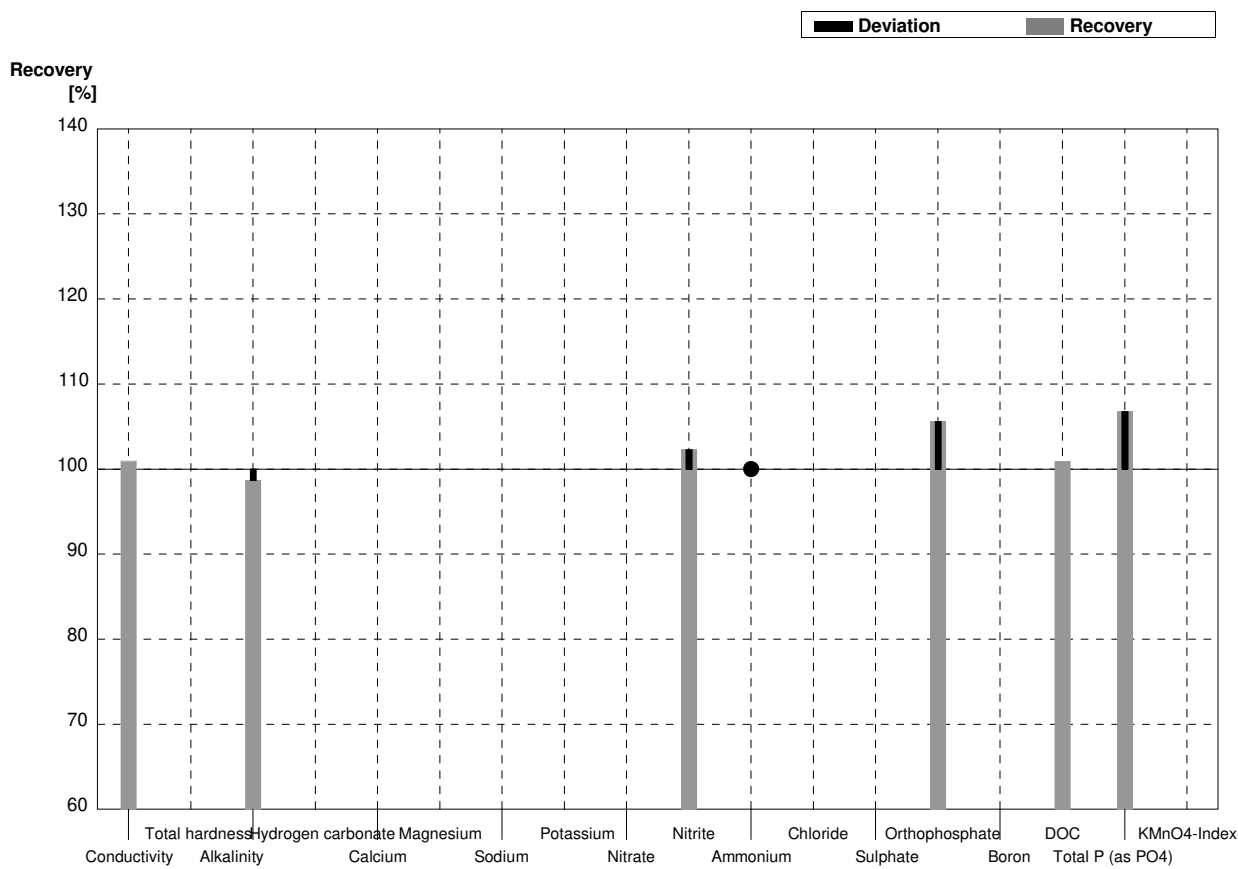
**Sample N164B**  
**Laboratory E**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	557	25,0	µS/cm	101%
Total hardness	1,97	0,02	2,06		mmol/l	105%
Alkalinity	1,671	0,014	1,64	0,11	mmol/l	98%
Hydrogen carbonate	98,9	0,9	97		mg/l	98%
Calcium	51,9	0,7	54,8	8,6	mg/l	106%
Magnesium	16,4	0,2	16,7	1,8	mg/l	102%
Sodium	28,39	0,19	28,6	2,5	mg/l	101%
Potassium	4,10	0,04	4,13	0,4	mg/l	101%
Nitrate	53,6	1,3	52,6	7,5	mg/l	98%
Nitrite	0,0152	0,0020	0,0151	0,002	mg/l	99%
Ammonium	0,0478	0,0053	0,054	0,008	mg/l	113%
Chloride	48,9	0,9	48,8	6,9	mg/l	100%
Sulphate	64,9	0,8	67,2	5,4	mg/l	104%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,0505	0,0004	0,0505	0,002	mg/l	100%
DOC	6,23	0,04	6,71	0,8	mg/l	108%
Total P (as PO4)	<0,009		<0,03		mg/l	•
KMnO4-Index	2,72	0,11	2,48	0,04	mg/l	91%



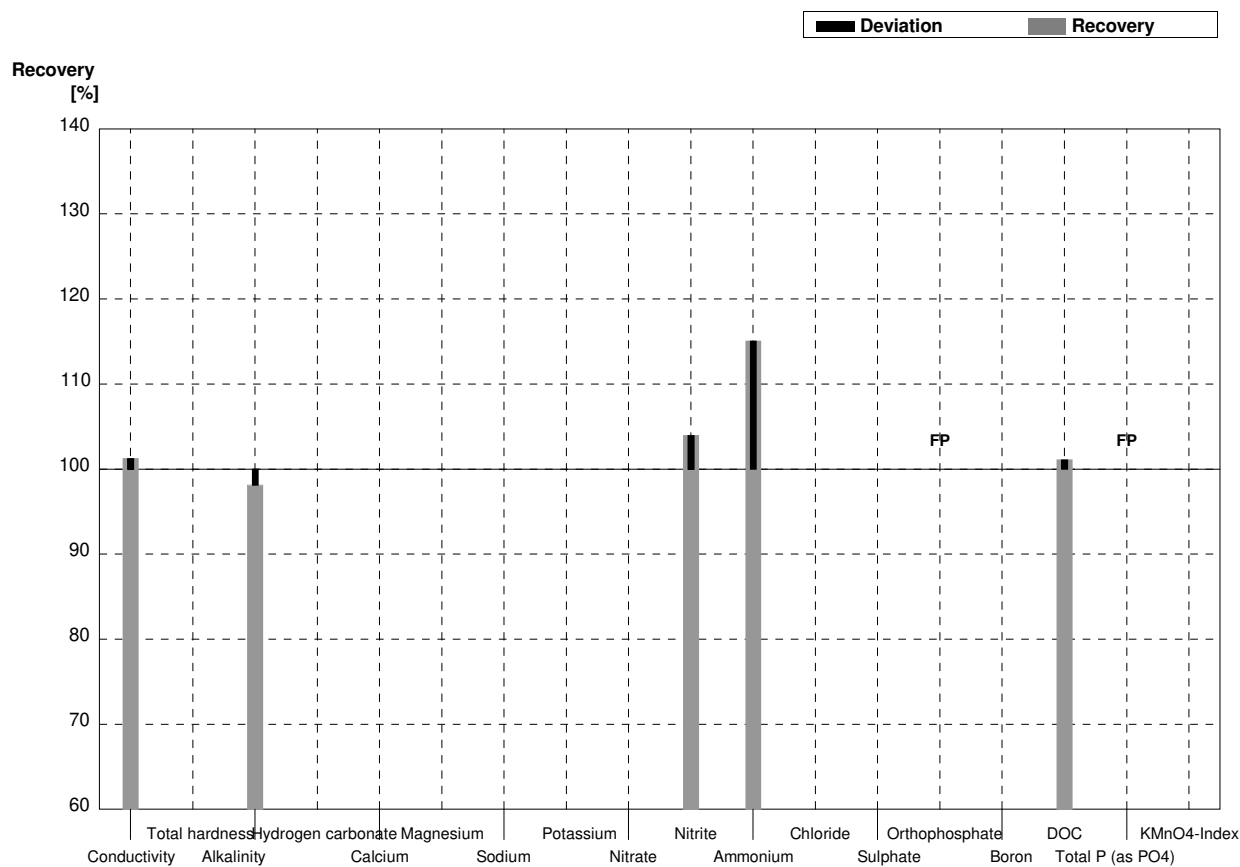
**Sample N164A**  
**Laboratory F**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	313		µS/cm	101%
Total hardness	0,578	0,007			mmol/l	
Alkalinity	2,158	0,012	2,13		mmol/l	99%
Hydrogen carbonate	128,6	0,8			mg/l	
Calcium	16,2	0,2			mg/l	
Magnesium	4,22	0,05			mg/l	
Sodium	41,36	0,16			mg/l	
Potassium	6,81	0,03			mg/l	
Nitrate	<0,2				mg/l	
Nitrite	0,0645	0,0002	0,066		mg/l	102%
Ammonium	<0,01		<0,03		mg/l	•
Chloride	13,8	0,4			mg/l	
Sulphate	25,1	0,2			mg/l	
Orthophosphate	0,071	0,003	0,075		mg/l	106%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	10,0		mg/l	101%
Total P (as PO4)	0,118	0,002	0,126		mg/l	107%
KMnO4-Index	6,8	0,4			mg/l	



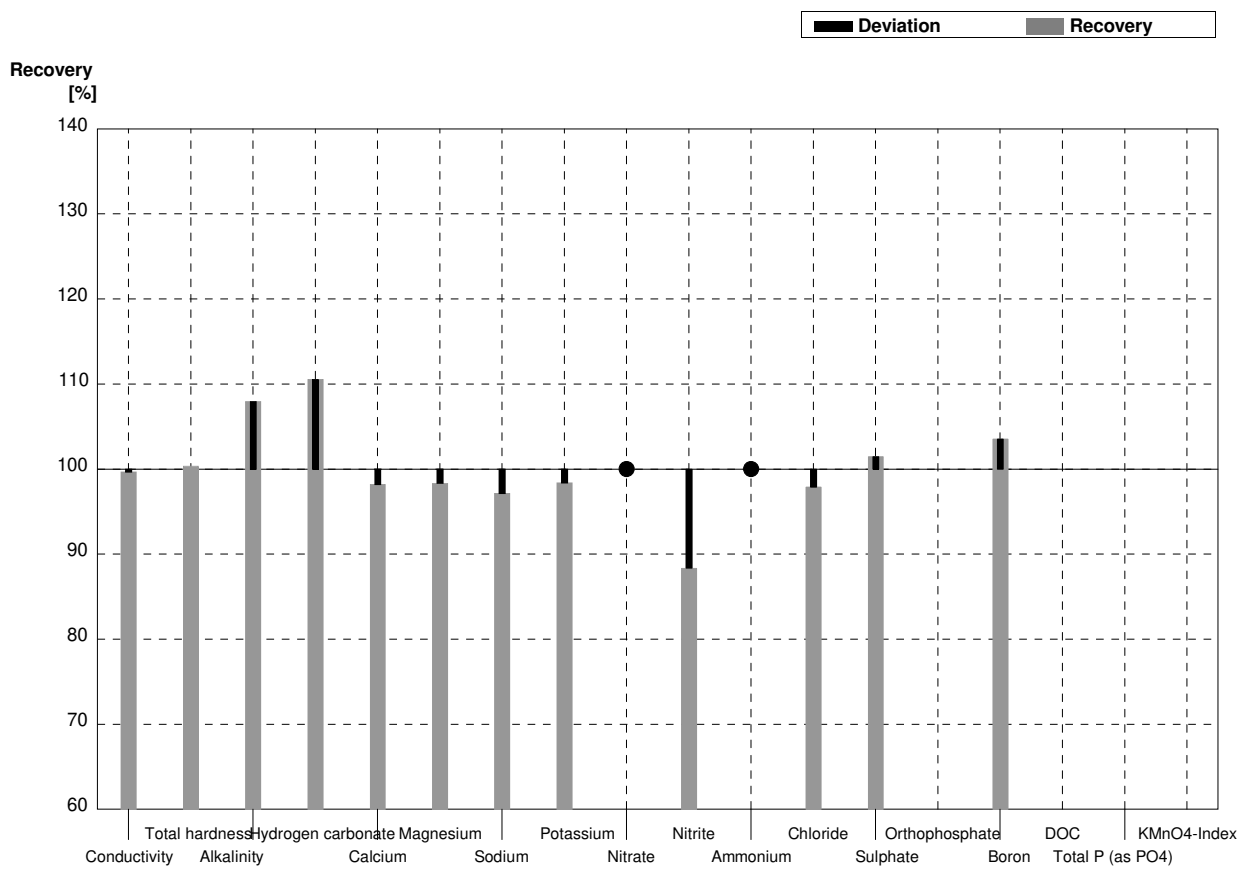
**Sample N164B**  
**Laboratory F**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	560		µS/cm	101%
Total hardness	1,97	0,02			mmol/l	
Alkalinity	1,671	0,014	1,64		mmol/l	98%
Hydrogen carbonate	98,9	0,9			mg/l	
Calcium	51,9	0,7			mg/l	
Magnesium	16,4	0,2			mg/l	
Sodium	28,39	0,19			mg/l	
Potassium	4,10	0,04			mg/l	
Nitrate	53,6	1,3			mg/l	
Nitrite	0,0152	0,0020	0,0158		mg/l	104%
Ammonium	0,0478	0,0053	0,055		mg/l	115%
Chloride	48,9	0,9			mg/l	
Sulphate	64,9	0,8			mg/l	
Orthophosphate	<0,009		0,0175		mg/l	FP
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	6,3		mg/l	101%
Total P (as PO4)	<0,009		0,0159		mg/l	FP
KMnO4-Index	2,72	0,11			mg/l	



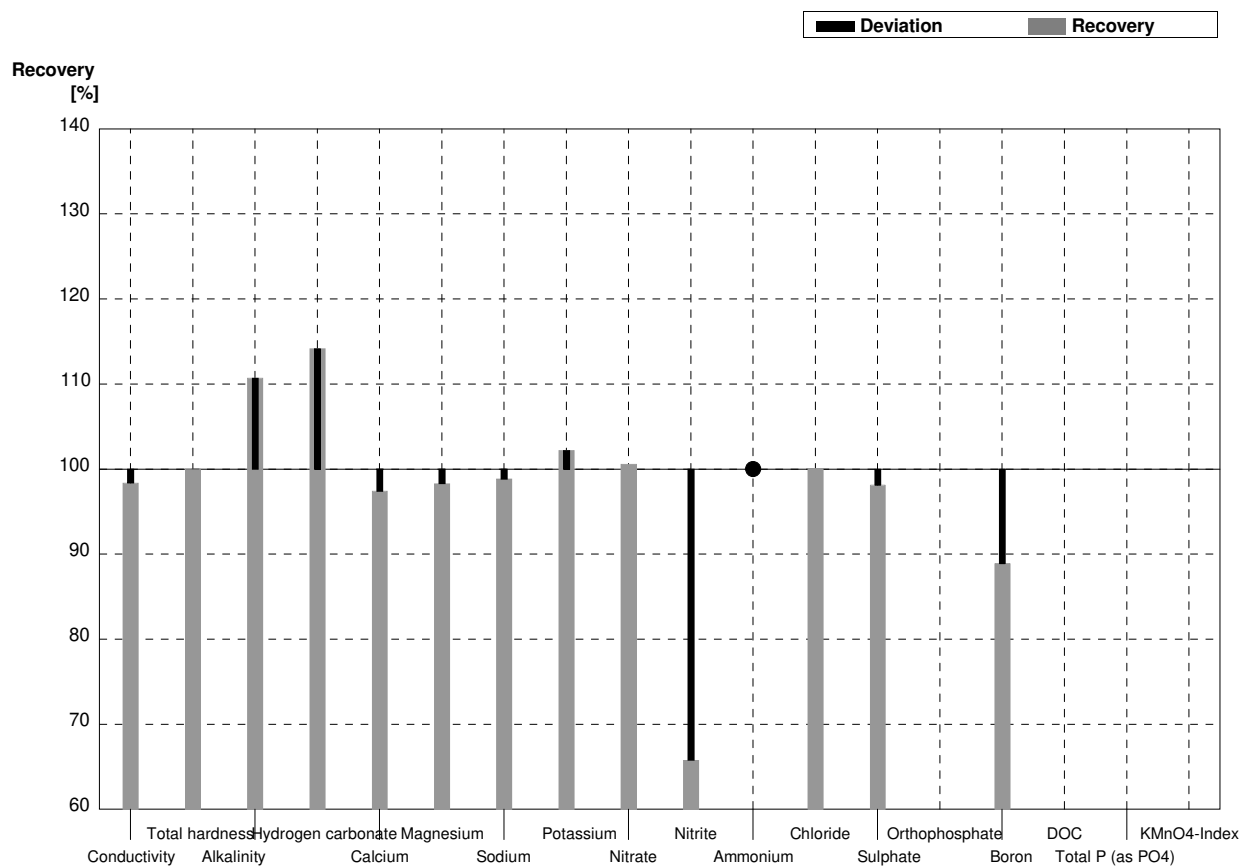
**Sample N164A**  
**Laboratory G**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	309		µS/cm	100%
Total hardness	0,578	0,007	0,58		mmol/l	100%
Alkalinity	2,158	0,012	2,33		mmol/l	108%
Hydrogen carbonate	128,6	0,8	142,2		mg/l	111%
Calcium	16,2	0,2	15,91		mg/l	98%
Magnesium	4,22	0,05	4,15		mg/l	98%
Sodium	41,36	0,16	40,18		mg/l	97%
Potassium	6,81	0,03	6,70		mg/l	98%
Nitrate	<0,2		<1,00		mg/l	•
Nitrite	0,0645	0,0002	0,057		mg/l	88%
Ammonium	<0,01		<0,05		mg/l	•
Chloride	13,8	0,4	13,51		mg/l	98%
Sulphate	25,1	0,2	25,47		mg/l	101%
Orthophosphate	0,071	0,003			mg/l	
Boron	0,0253	0,0010	0,0262		mg/l	104%
DOC	9,91	0,06			mg/l	
Total P (as PO4)	0,118	0,002			mg/l	
KMnO4-Index	6,8	0,4			mg/l	



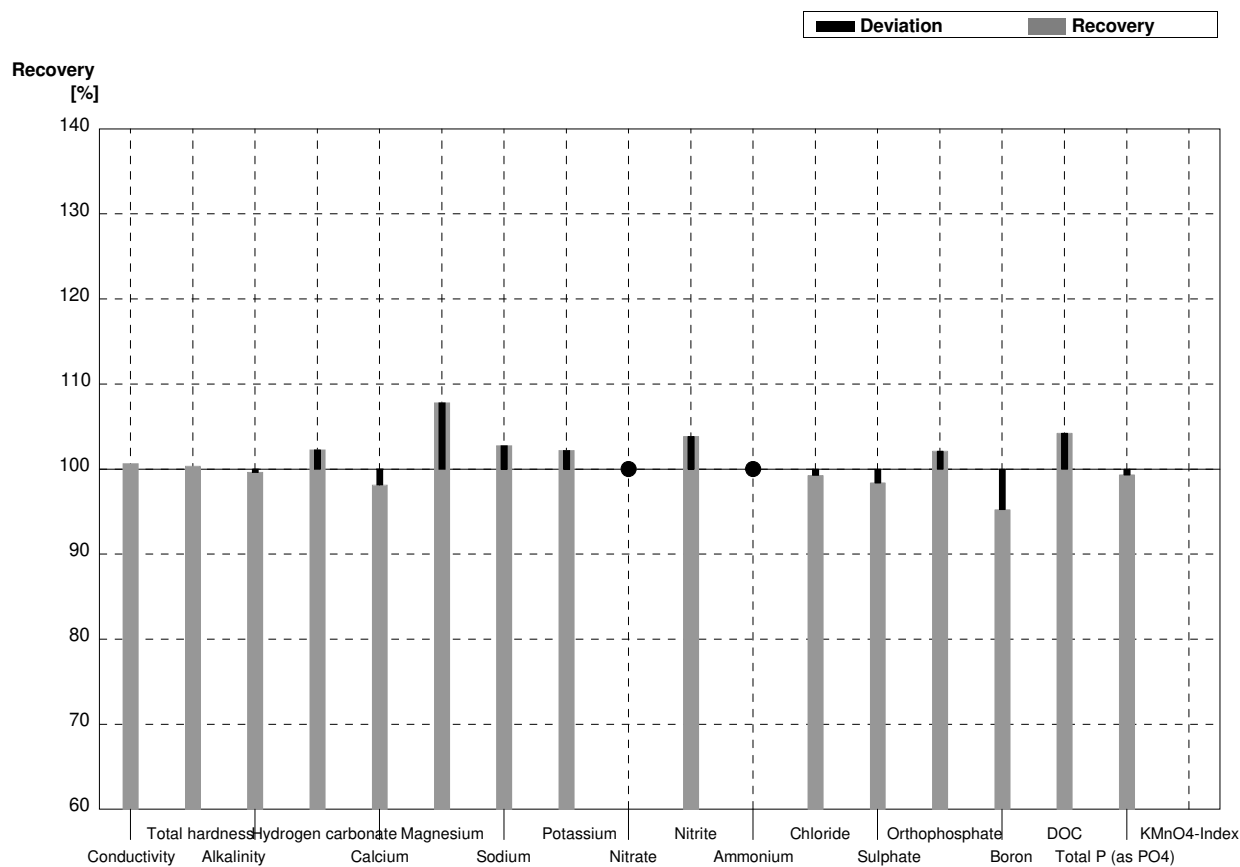
**Sample N164B**  
**Laboratory G**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	544		µS/cm	98%
Total hardness	1,97	0,02	1,97		mmol/l	100%
Alkalinity	1,671	0,014	1,85		mmol/l	111%
Hydrogen carbonate	98,9	0,9	112,9		mg/l	114%
Calcium	51,9	0,7	50,56		mg/l	97%
Magnesium	16,4	0,2	16,12		mg/l	98%
Sodium	28,39	0,19	28,06		mg/l	99%
Potassium	4,10	0,04	4,19		mg/l	102%
Nitrate	53,6	1,3	53,90		mg/l	101%
Nitrite	0,0152	0,0020	0,0100		mg/l	66%
Ammonium	0,0478	0,0053	<0,05		mg/l	•
Chloride	48,9	0,9	48,95		mg/l	100%
Sulphate	64,9	0,8	63,68		mg/l	98%
Orthophosphate	<0,009				mg/l	
Boron	0,0505	0,0004	0,0449		mg/l	89%
DOC	6,23	0,04			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	2,72	0,11			mg/l	



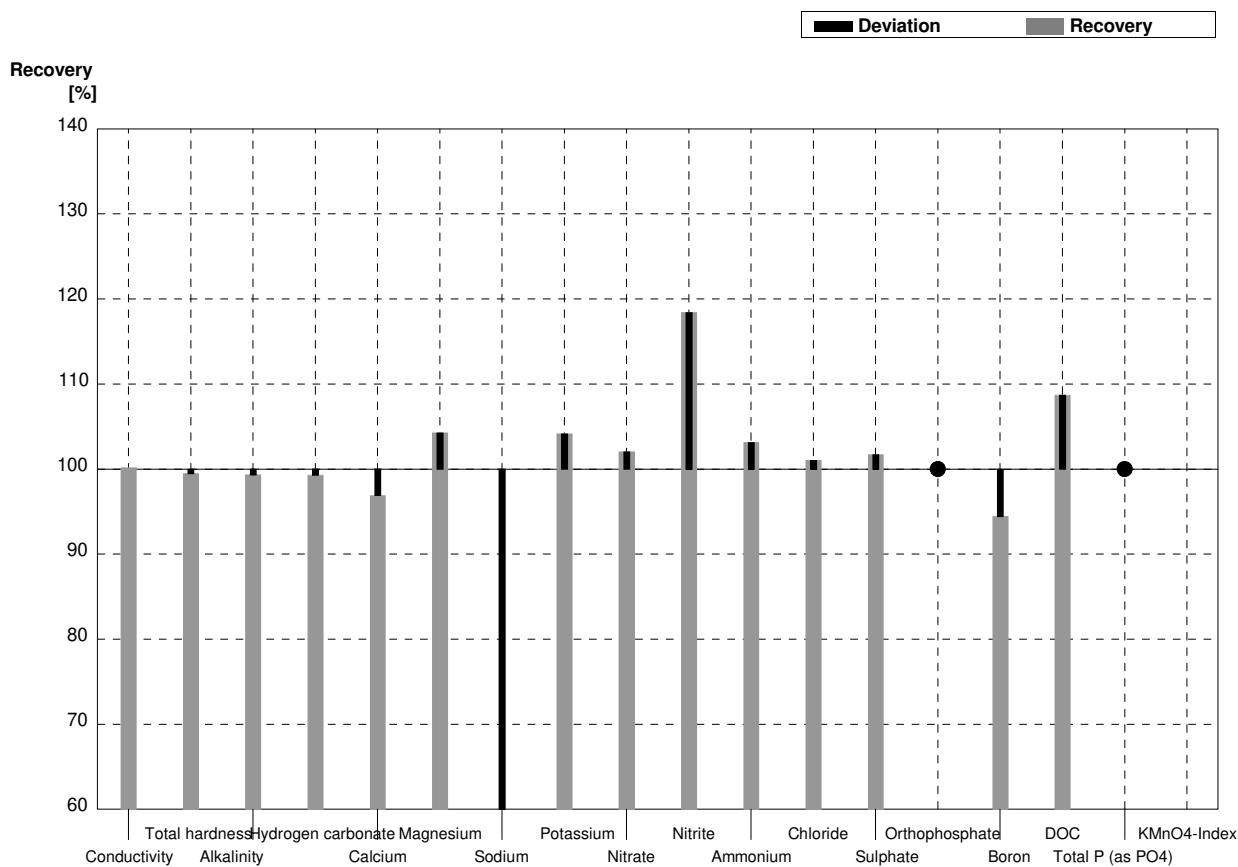
**Sample N164A**  
**Laboratory H**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	312	10	µS/cm	101%
Total hardness	0,578	0,007	0,58	0,06	mmol/l	100%
Alkalinity	2,158	0,012	2,15	0,22	mmol/l	100%
Hydrogen carbonate	128,6	0,8	131,5	13,2	mg/l	102%
Calcium	16,2	0,2	15,9	3,2	mg/l	98%
Magnesium	4,22	0,05	4,55	0,91	mg/l	108%
Sodium	41,36	0,16	42,5	6,4	mg/l	103%
Potassium	6,81	0,03	6,96	1,4	mg/l	102%
Nitrate	<0,2		<1		mg/l	•
Nitrite	0,0645	0,0002	0,067	0,0123	mg/l	104%
Ammonium	<0,01		<0,010		mg/l	•
Chloride	13,8	0,4	13,7	1,4	mg/l	99%
Sulphate	25,1	0,2	24,7	2,5	mg/l	98%
Orthophosphate	0,071	0,003	0,0725	0,0151	mg/l	102%
Boron	0,0253	0,0010	0,0241	0,0061	mg/l	95%
DOC	9,91	0,06	10,33	1,03	mg/l	104%
Total P (as PO4)	0,118	0,002	0,1172	0,0244	mg/l	99%
KMnO4-Index	6,8	0,4			mg/l	



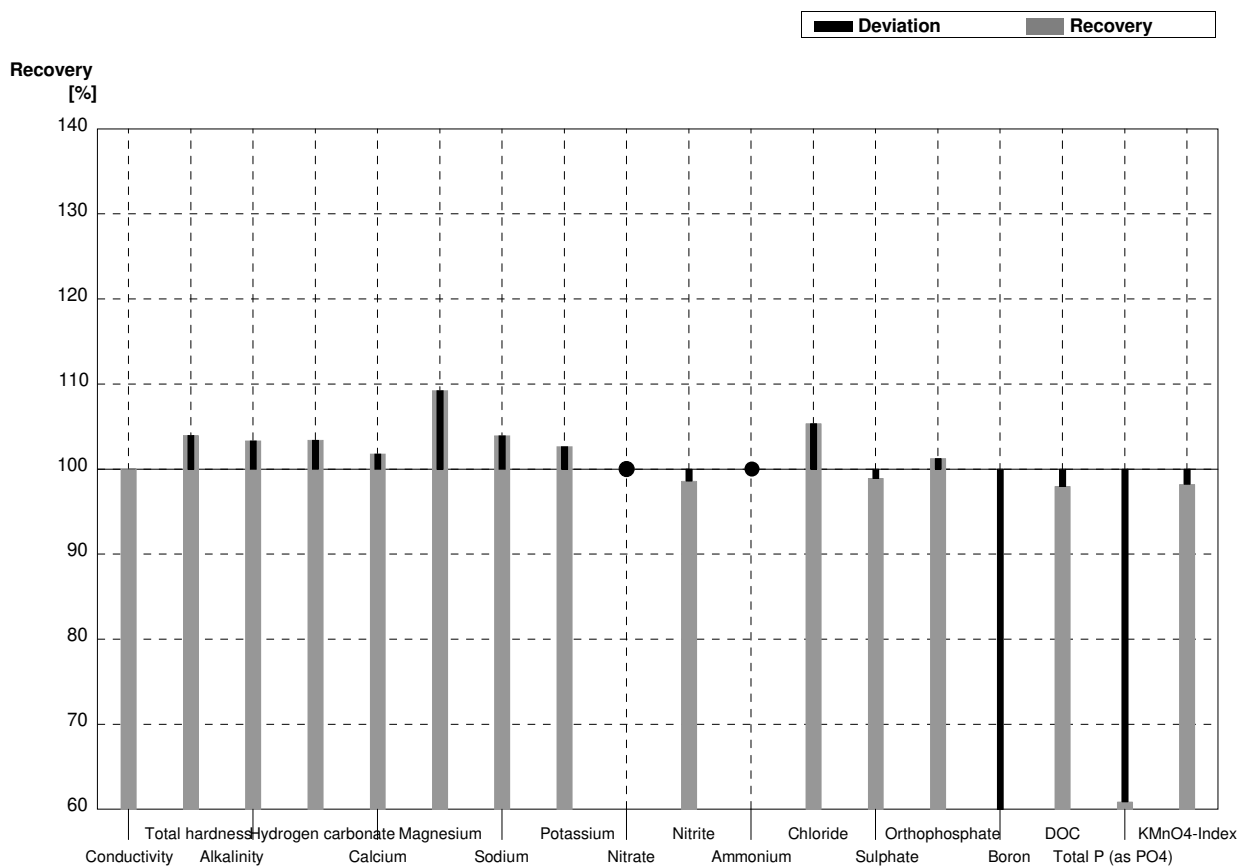
**Sample N164B**  
**Laboratory H**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	554	10	µS/cm	100%
Total hardness	1,97	0,02	1,96	0,2	mmol/l	99%
Alkalinity	1,671	0,014	1,66	0,17	mmol/l	99%
Hydrogen carbonate	98,9	0,9	98,2	9,82	mg/l	99%
Calcium	51,9	0,7	50,3	10,1	mg/l	97%
Magnesium	16,4	0,2	17,1	3,4	mg/l	104%
Sodium	28,39	0,19	4,27	0,9	mg/l	15%
Potassium	4,10	0,04	4,27	0,9	mg/l	104%
Nitrate	53,6	1,3	54,7	5,5	mg/l	102%
Nitrite	0,0152	0,0020	0,0180	0,0033	mg/l	118%
Ammonium	0,0478	0,0053	0,0493	0,008	mg/l	103%
Chloride	48,9	0,9	49,4	4,9	mg/l	101%
Sulphate	64,9	0,8	66,0	6,6	mg/l	102%
Orthophosphate	<0,009		<0,009		mg/l	•
Boron	0,0505	0,0004	0,0477	0,012	mg/l	94%
DOC	6,23	0,04	6,772	0,68	mg/l	109%
Total P (as PO4)	<0,009		<0,009		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



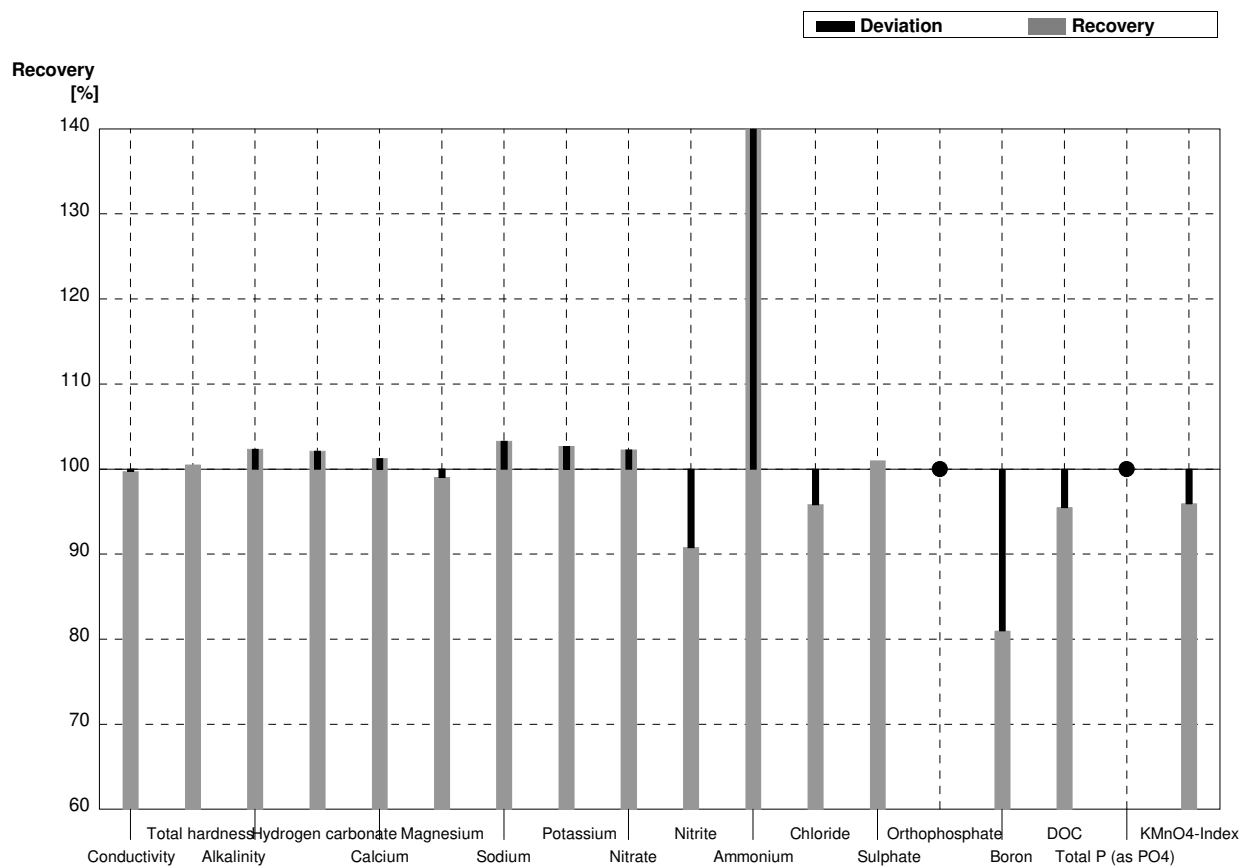
**Sample N164A**  
**Laboratory I**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	310	7	µS/cm	100%
Total hardness	0,578	0,007	0,601	0,025	mmol/l	104%
Alkalinity	2,158	0,012	2,23	0,07	mmol/l	103%
Hydrogen carbonate	128,6	0,8	133	4,3	mg/l	103%
Calcium	16,2	0,2	16,49	0,9	mg/l	102%
Magnesium	4,22	0,05	4,61	0,3	mg/l	109%
Sodium	41,36	0,16	42,99	2,2	mg/l	104%
Potassium	6,81	0,03	6,99	0,4	mg/l	103%
Nitrate	<0,2		0,140	0,06	mg/l	•
Nitrite	0,0645	0,0002	0,0636	0,01	mg/l	99%
Ammonium	<0,01		0,0170	0,013	mg/l	•
Chloride	13,8	0,4	14,54	0,8	mg/l	105%
Sulphate	25,1	0,2	24,83	1,4	mg/l	99%
Orthophosphate	0,071	0,003	0,07190	0,00078	mg/l	101%
Boron	0,0253	0,0010	0,0112	0,00989	mg/l	44%
DOC	9,91	0,06	9,71	0,09	mg/l	98%
Total P (as PO4)	0,118	0,002	0,07187	0,02234	mg/l	61%
KMnO4-Index	6,8	0,4	6,68	0,17	mg/l	98%



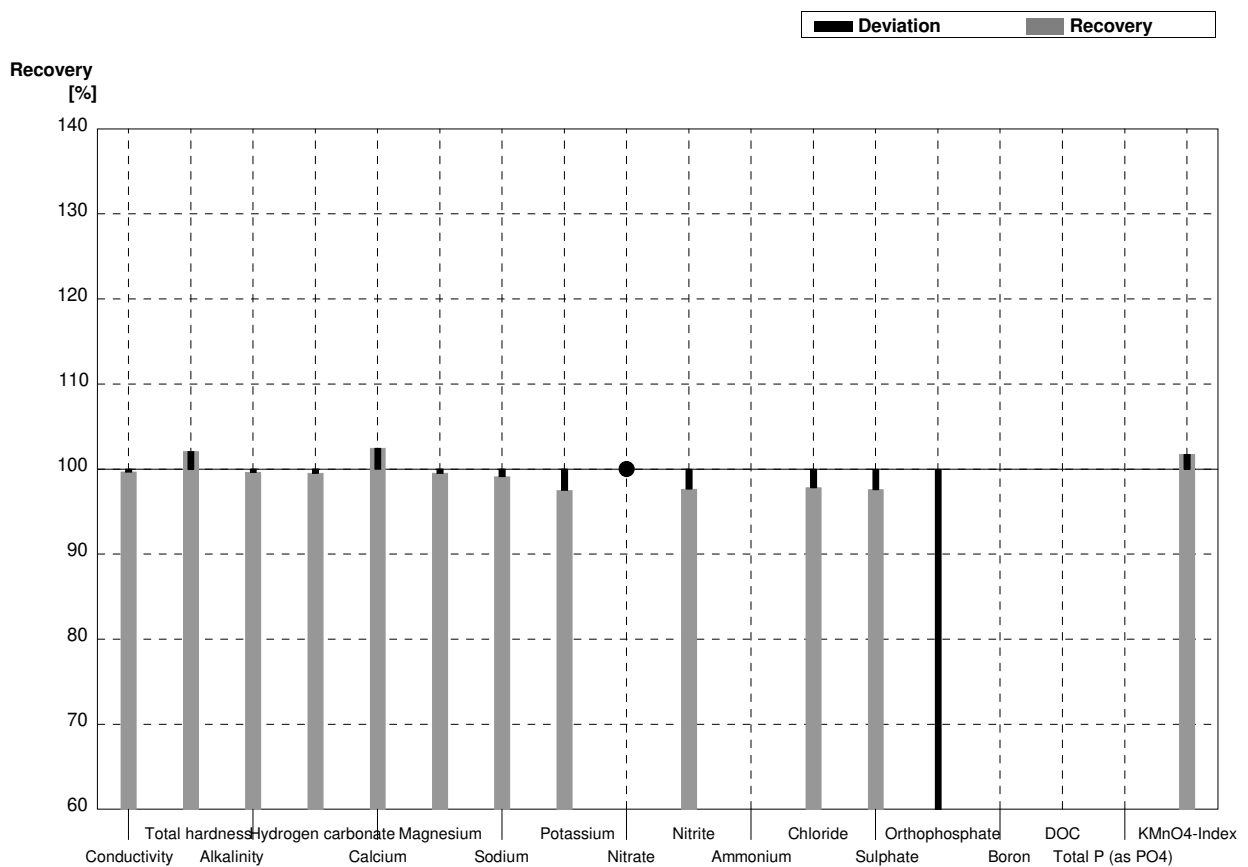
**Sample N164B**  
**Laboratory I**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	551,5	12	µS/cm	100%
Total hardness	1,97	0,02	1,98	0,1	mmol/l	101%
Alkalinity	1,671	0,014	1,71	0,0513	mmol/l	102%
Hydrogen carbonate	98,9	0,9	101	3,129	mg/l	102%
Calcium	51,9	0,7	52,55	3	mg/l	101%
Magnesium	16,4	0,2	16,24	0,9	mg/l	99%
Sodium	28,39	0,19	29,32	1,5157	mg/l	103%
Potassium	4,10	0,04	4,21	0,260	mg/l	103%
Nitrate	53,6	1,3	54,82	3	mg/l	102%
Nitrite	0,0152	0,0020	0,0138	0,0009	mg/l	91%
Ammonium	0,0478	0,0053	0,073	0,0027	mg/l	153%
Chloride	48,9	0,9	46,859	2,392	mg/l	96%
Sulphate	64,9	0,8	65,54	2,392	mg/l	101%
Orthophosphate	<0,009		0,00186	0,0008	mg/l	•
Boron	0,0505	0,0004	0,0409	0,00356	mg/l	81%
DOC	6,23	0,04	5,95	0,3	mg/l	96%
Total P (as PO4)	<0,009		0,00100	0,00100	mg/l	•
KMnO4-Index	2,72	0,11	2,61	0,17	mg/l	96%



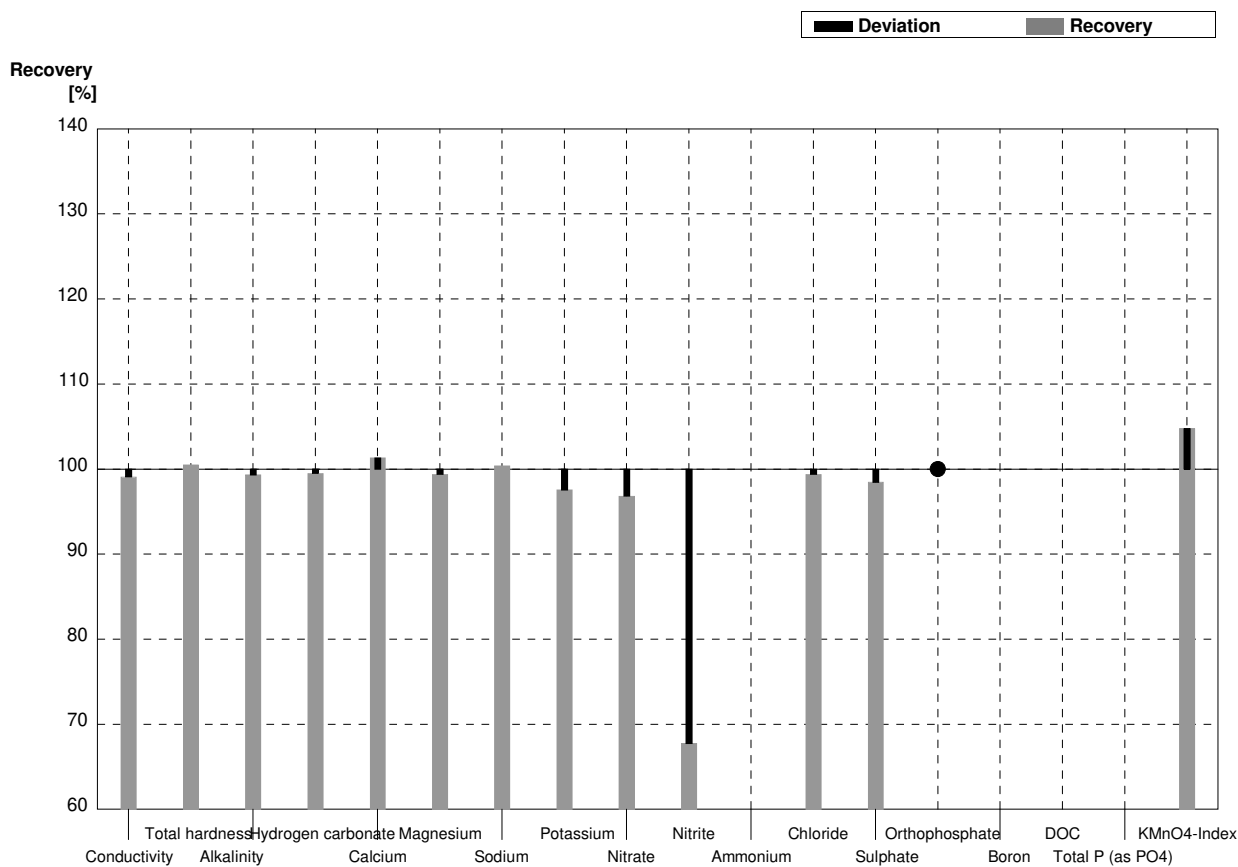
**Sample N164A**  
**Laboratory J**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	309	9,3	µS/cm	100%
Total hardness	0,578	0,007	0,59	0,04	mmol/l	102%
Alkalinity	2,158	0,012	2,15	0,10	mmol/l	100%
Hydrogen carbonate	128,6	0,8	128	6,4	mg/l	100%
Calcium	16,2	0,2	16,6	1,33	mg/l	102%
Magnesium	4,22	0,05	4,20	0,25	mg/l	100%
Sodium	41,36	0,16	41,0	4,10	mg/l	99%
Potassium	6,81	0,03	6,64	0,40	mg/l	98%
Nitrate	<0,2		<2	0,06	mg/l	•
Nitrite	0,0645	0,0002	0,063	0,003	mg/l	98%
Ammonium	<0,01				mg/l	
Chloride	13,8	0,4	13,5	0,54	mg/l	98%
Sulphate	25,1	0,2	24,5	0,73	mg/l	98%
Orthophosphate	0,071	0,003	0,0380	0,0034	mg/l	54%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06			mg/l	
Total P (as PO4)	0,118	0,002			mg/l	
KMnO4-Index	6,8	0,4	6,92	0,90	mg/l	102%



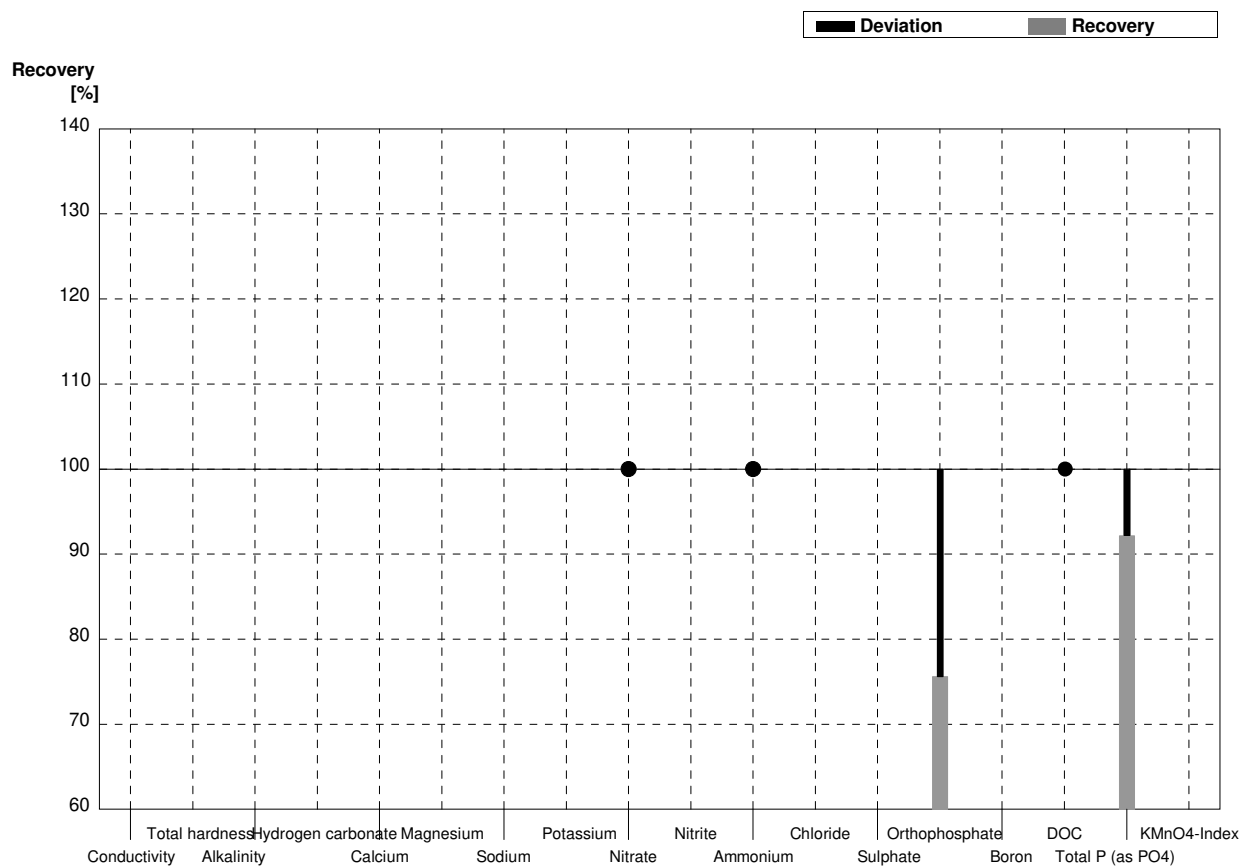
**Sample N164B**  
**Laboratory J**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	548	16,4	µS/cm	99%
Total hardness	1,97	0,02	1,98	0,15	mmol/l	101%
Alkalinity	1,671	0,014	1,66	0,08	mmol/l	99%
Hydrogen carbonate	98,9	0,9	98,4	4,92	mg/l	99%
Calcium	51,9	0,7	52,6	4,20	mg/l	101%
Magnesium	16,4	0,2	16,3	0,99	mg/l	99%
Sodium	28,39	0,19	28,5	2,80	mg/l	100%
Potassium	4,10	0,04	4,00	0,24	mg/l	98%
Nitrate	53,6	1,3	51,9	1,60	mg/l	97%
Nitrite	0,0152	0,0020	0,0103	0,0003	mg/l	68%
Ammonium	0,0478	0,0053			mg/l	
Chloride	48,9	0,9	48,6	2,40	mg/l	99%
Sulphate	64,9	0,8	63,9	1,92	mg/l	98%
Orthophosphate	<0,009		<0,015	0,0013	mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	2,72	0,11	2,85	0,37	mg/l	105%



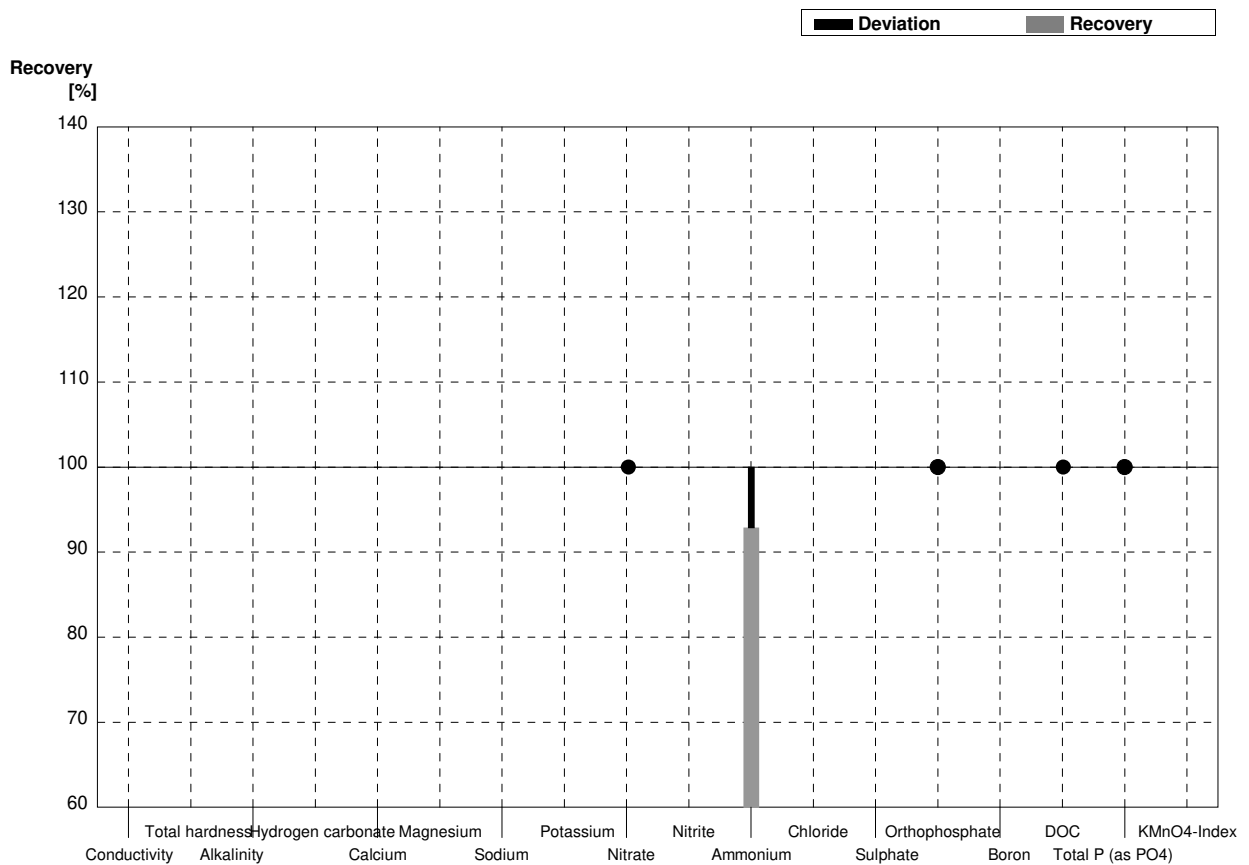
**Sample N164A**  
**Laboratory K**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1			µS/cm	
Total hardness	0,578	0,007			mmol/l	
Alkalinity	2,158	0,012			mmol/l	
Hydrogen carbonate	128,6	0,8			mg/l	
Calcium	16,2	0,2			mg/l	
Magnesium	4,22	0,05			mg/l	
Sodium	41,36	0,16			mg/l	
Potassium	6,81	0,03			mg/l	
Nitrate	<0,2		<1		mg/l	•
Nitrite	0,0645	0,0002			mg/l	
Ammonium	<0,01		<0,01		mg/l	•
Chloride	13,8	0,4			mg/l	
Sulphate	25,1	0,2			mg/l	
Orthophosphate	0,071	0,003	0,0537	0,0043	mg/l	76%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	>4		mg/l	•
Total P (as PO4)	0,118	0,002	0,1088	0,0043	mg/l	92%
KMnO4-Index	6,8	0,4			mg/l	



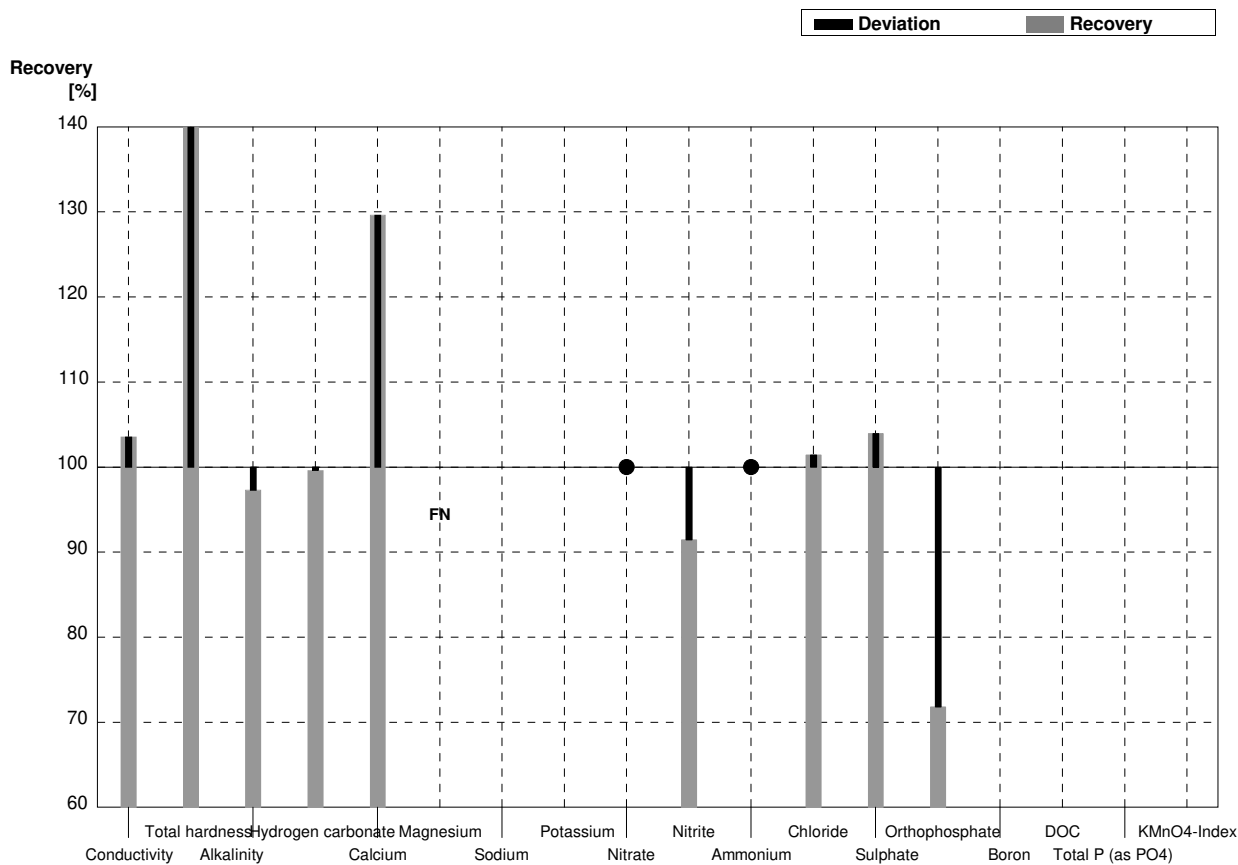
**Sample N164B**  
**Laboratory K**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2			µS/cm	
Total hardness	1,97	0,02			mmol/l	
Alkalinity	1,671	0,014			mmol/l	
Hydrogen carbonate	98,9	0,9			mg/l	
Calcium	51,9	0,7			mg/l	
Magnesium	16,4	0,2			mg/l	
Sodium	28,39	0,19			mg/l	
Potassium	4,10	0,04			mg/l	
Nitrate	53,6	1,3	>30		mg/l	•
Nitrite	0,0152	0,0020			mg/l	
Ammonium	0,0478	0,0053	0,0444	0,0018	mg/l	93%
Chloride	48,9	0,9			mg/l	
Sulphate	64,9	0,8			mg/l	
Orthophosphate	<0,009		<0,019		mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	>4		mg/l	•
Total P (as PO4)	<0,009		<0,02		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



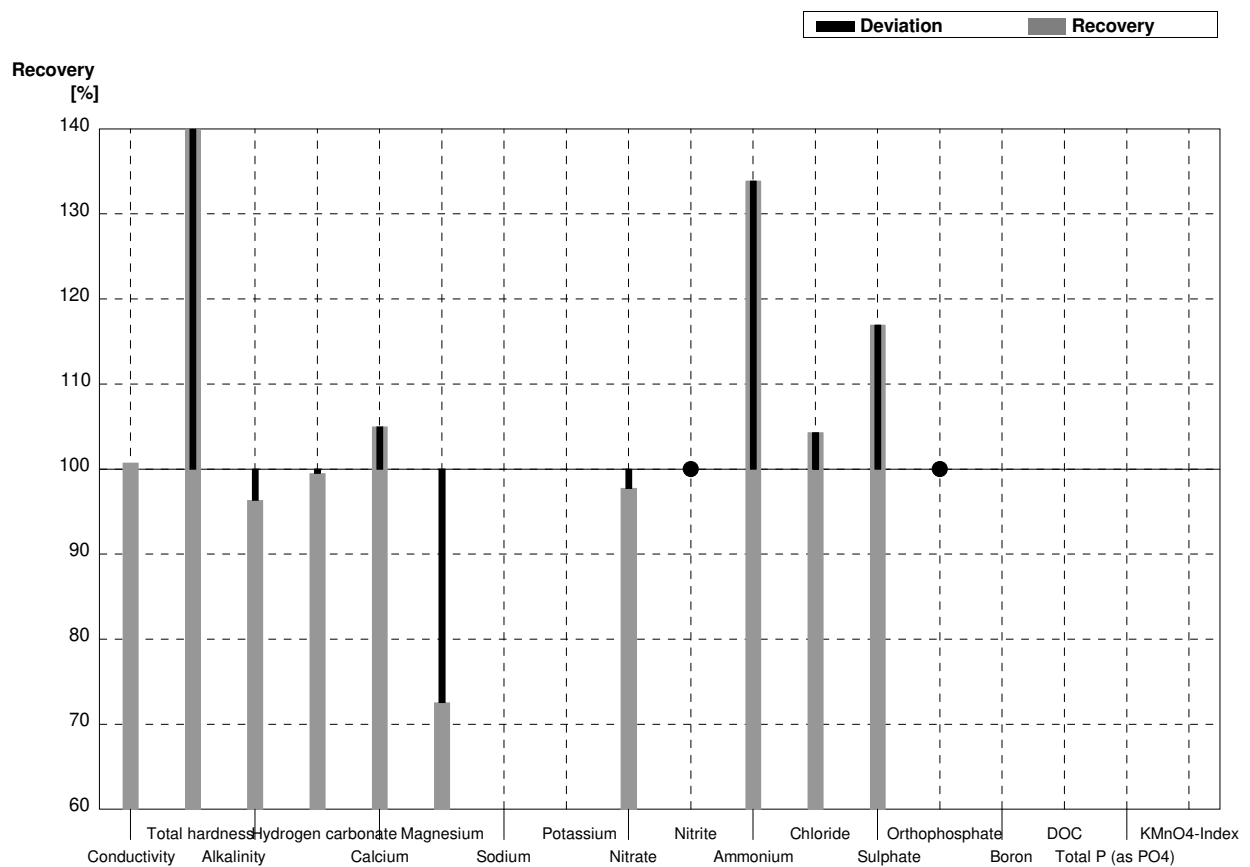
**Sample N164A**  
**Laboratory L**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	321		µS/cm	104%
Total hardness	0,578	0,007	2,95		mmol/l	510%
Alkalinity	2,158	0,012	2,10		mmol/l	97%
Hydrogen carbonate	128,6	0,8	128,1		mg/l	100%
Calcium	16,2	0,2	21,0		mg/l	130%
Magnesium	4,22	0,05	<3		mg/l	FN
Sodium	41,36	0,16			mg/l	
Potassium	6,81	0,03			mg/l	
Nitrate	<0,2		<1		mg/l	•
Nitrite	0,0645	0,0002	0,059		mg/l	91%
Ammonium	<0,01		<0,05		mg/l	•
Chloride	13,8	0,4	14,0		mg/l	101%
Sulphate	25,1	0,2	26,1		mg/l	104%
Orthophosphate	0,071	0,003	0,051		mg/l	72%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06			mg/l	
Total P (as PO4)	0,118	0,002			mg/l	
KMnO4-Index	6,8	0,4			mg/l	



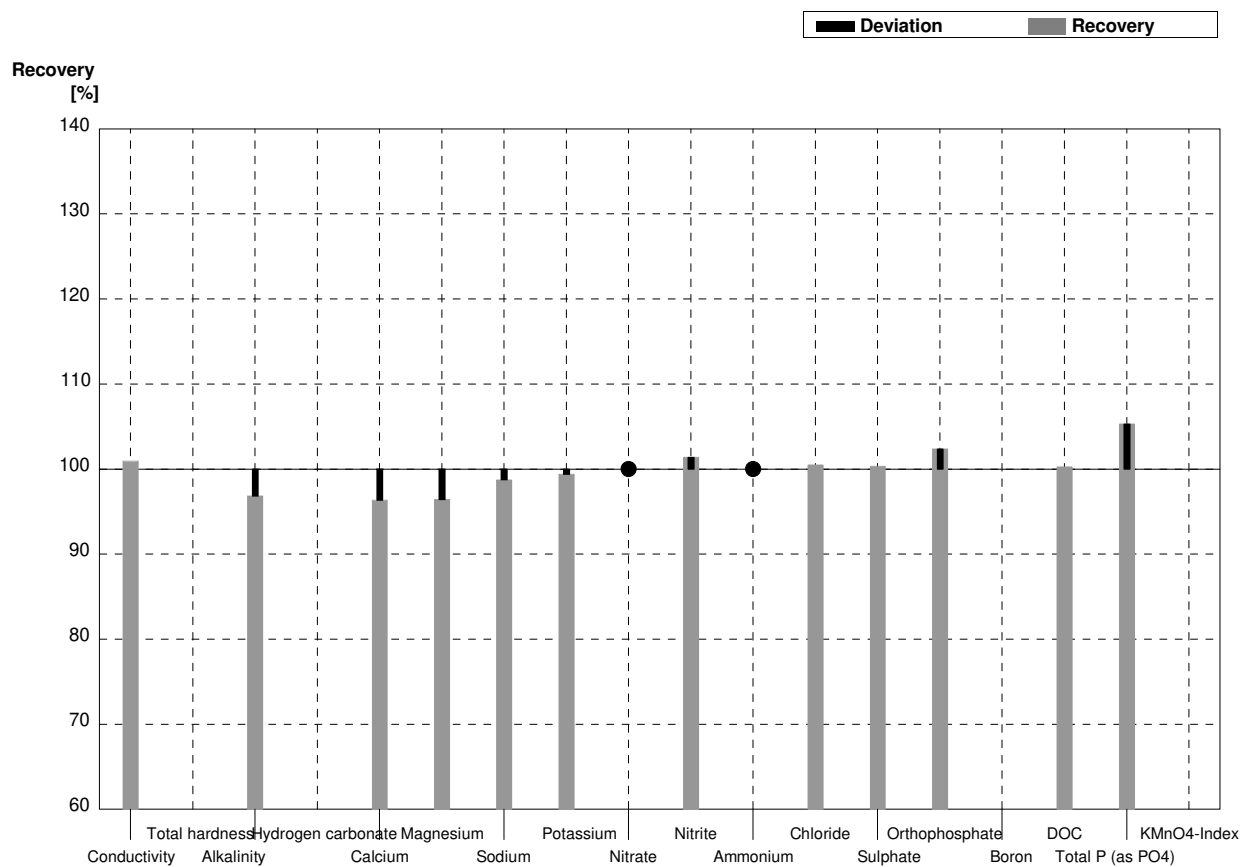
**Sample N164B**  
**Laboratory L**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	557		µS/cm	101%
Total hardness	1,97	0,02	10,4		mmol/l	528%
Alkalinity	1,671	0,014	1,61		mmol/l	96%
Hydrogen carbonate	98,9	0,9	98,4		mg/l	99%
Calcium	51,9	0,7	54,5		mg/l	105%
Magnesium	16,4	0,2	11,9		mg/l	73%
Sodium	28,39	0,19			mg/l	
Potassium	4,10	0,04			mg/l	
Nitrate	53,6	1,3	52,4		mg/l	98%
Nitrite	0,0152	0,0020	<0,05		mg/l	•
Ammonium	0,0478	0,0053	0,064		mg/l	134%
Chloride	48,9	0,9	51,0		mg/l	104%
Sulphate	64,9	0,8	75,9		mg/l	117%
Orthophosphate	<0,009		<0,15		mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	2,72	0,11			mg/l	



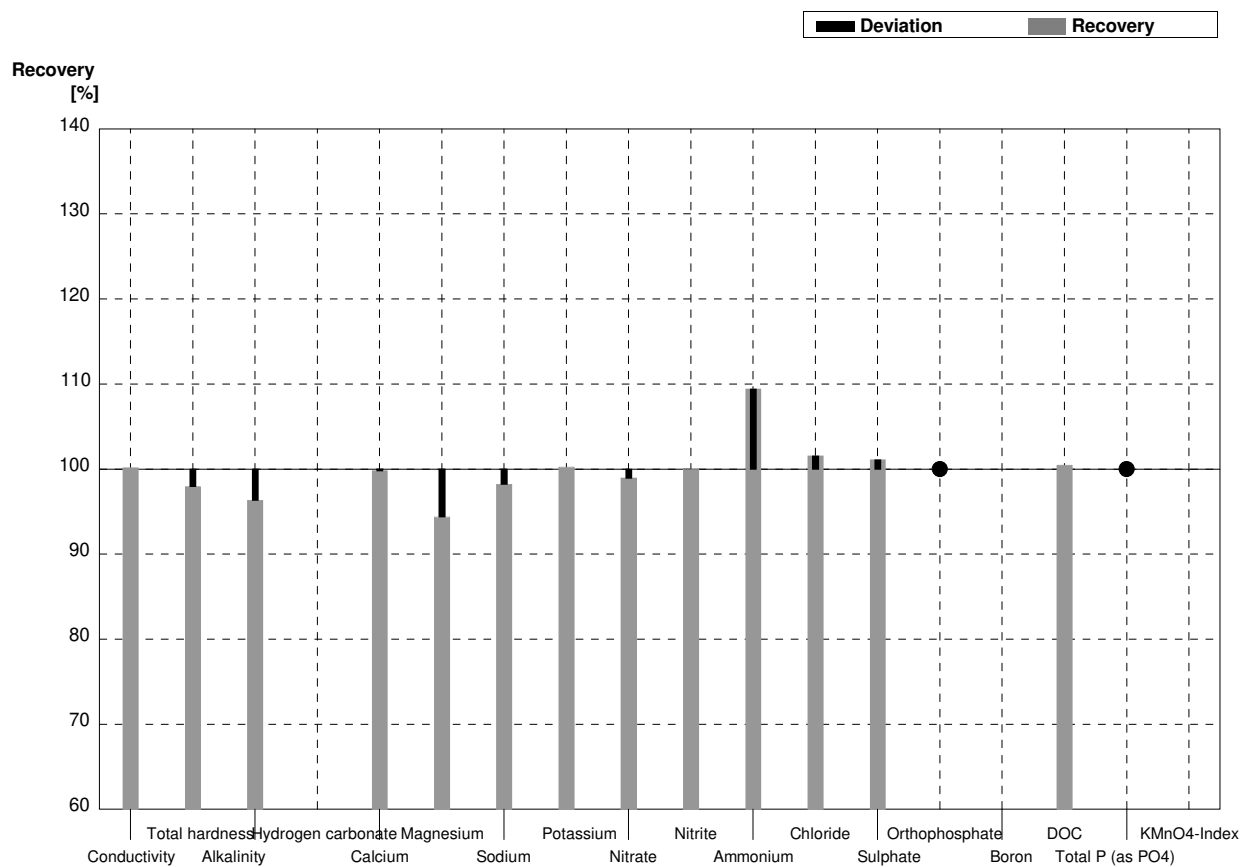
**Sample N164A**  
**Laboratory M**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	313		µS/cm	101%
Total hardness	0,578	0,007			mmol/l	
Alkalinity	2,158	0,012	2,09	0,06	mmol/l	97%
Hydrogen carbonate	128,6	0,8			mg/l	
Calcium	16,2	0,2	15,61	0,94	mg/l	96%
Magnesium	4,22	0,05	4,07	0,24	mg/l	96%
Sodium	41,36	0,16	40,84	2,57	mg/l	99%
Potassium	6,81	0,03	6,77	0,34	mg/l	99%
Nitrate	<0,2		<0,44		mg/l	•
Nitrite	0,0645	0,0002	0,0654	0,0041	mg/l	101%
Ammonium	<0,01		<0,007		mg/l	•
Chloride	13,8	0,4	13,87	0,54	mg/l	101%
Sulphate	25,1	0,2	25,19	1,16	mg/l	100%
Orthophosphate	0,071	0,003	0,0727	0,0025	mg/l	102%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	9,94	0,68	mg/l	100%
Total P (as PO4)	0,118	0,002	0,1243	0,0121	mg/l	105%
KMnO4-Index	6,8	0,4			mg/l	



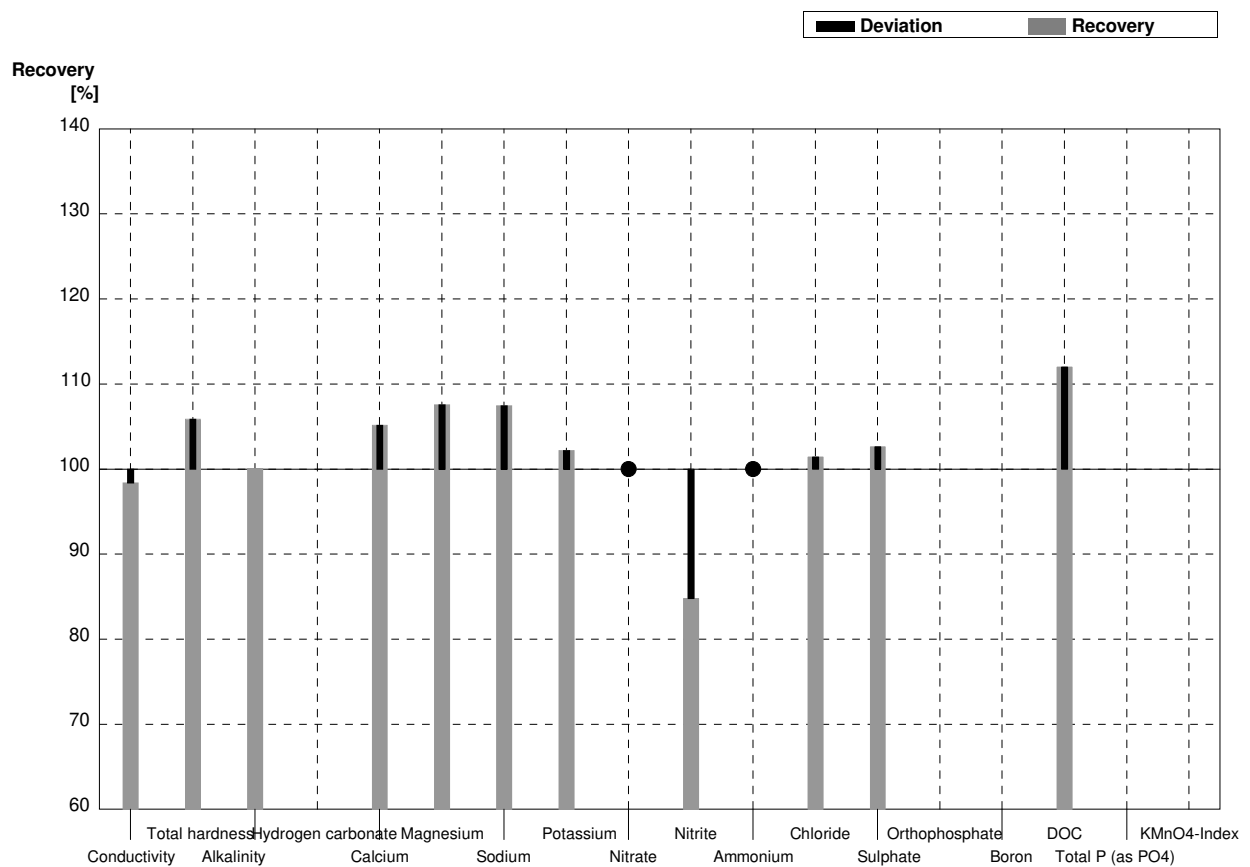
**Sample N164B**  
**Laboratory M**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	554		µS/cm	100%
Total hardness	1,97	0,02	1,93	0,13	mmol/l	98%
Alkalinity	1,671	0,014	1,61	0,05	mmol/l	96%
Hydrogen carbonate	98,9	0,9			mg/l	
Calcium	51,9	0,7	51,81	2,02	mg/l	100%
Magnesium	16,4	0,2	15,48	0,90	mg/l	94%
Sodium	28,39	0,19	27,89	1,76	mg/l	98%
Potassium	4,10	0,04	4,11	0,21	mg/l	100%
Nitrate	53,6	1,3	53,04	2,81	mg/l	99%
Nitrite	0,0152	0,0020	0,0152	0,0010	mg/l	100%
Ammonium	0,0478	0,0053	0,0523	0,0036	mg/l	109%
Chloride	48,9	0,9	49,66	1,94	mg/l	102%
Sulphate	64,9	0,8	65,62	3,02	mg/l	101%
Orthophosphate	<0,009		<0,006		mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	6,26	0,43	mg/l	100%
Total P (as PO4)	<0,009		<0,015		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



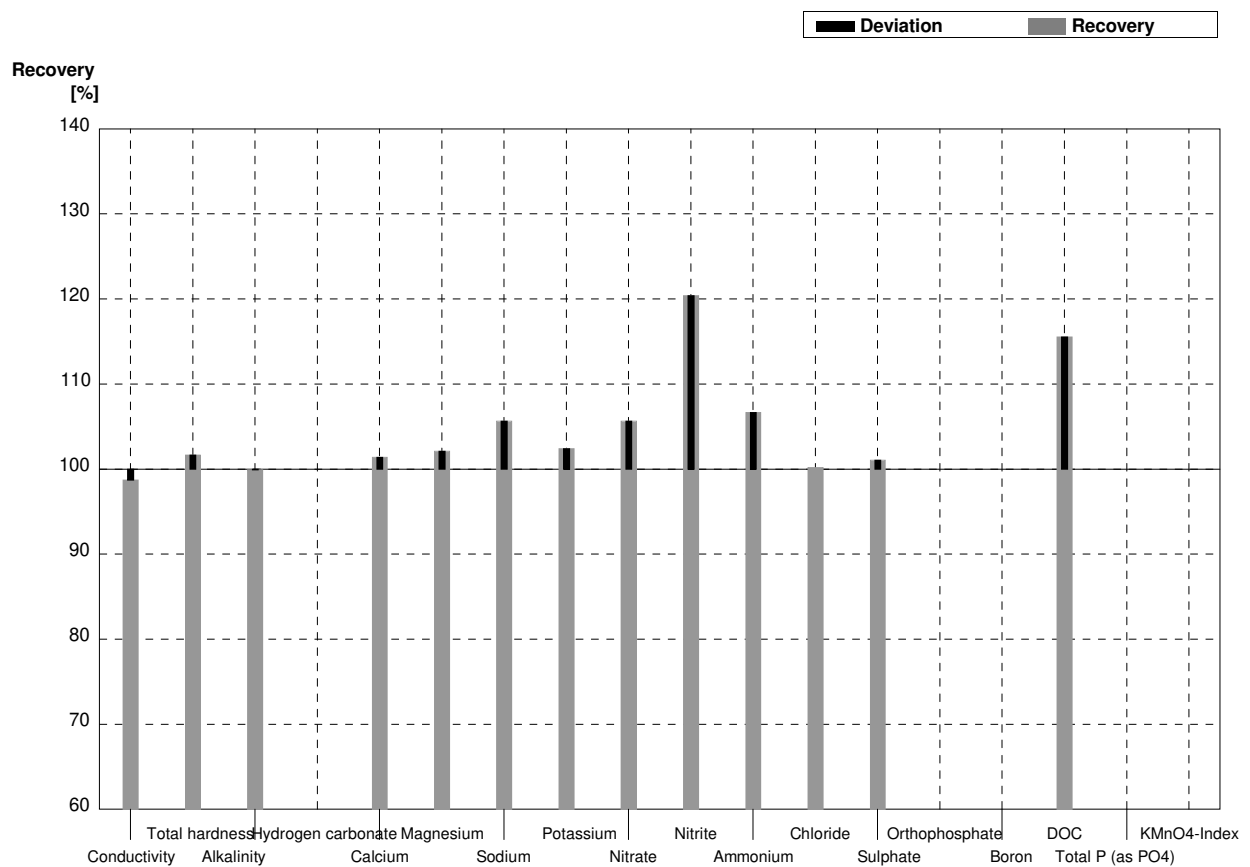
**Sample N164A**  
**Laboratory N**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	305	30	µS/cm	98%
Total hardness	0,578	0,007	0,612	0,05	mmol/l	106%
Alkalinity	2,158	0,012	2,16	0,02	mmol/l	100%
Hydrogen carbonate	128,6	0,8			mg/l	
Calcium	16,2	0,2	17,04	0,6	mg/l	105%
Magnesium	4,22	0,05	4,54	0,6	mg/l	108%
Sodium	41,36	0,16	44,45	0,3	mg/l	107%
Potassium	6,81	0,03	6,96	0,06	mg/l	102%
Nitrate	<0,2		<0,14	0,5	mg/l	•
Nitrite	0,0645	0,0002	0,0547	0,015	mg/l	85%
Ammonium	<0,01		<0,03	0,080	mg/l	•
Chloride	13,8	0,4	14,00	0,25	mg/l	101%
Sulphate	25,1	0,2	25,76	3,0	mg/l	103%
Orthophosphate	0,071	0,003			mg/l	
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	11,10	0,03	mg/l	112%
Total P (as PO4)	0,118	0,002			mg/l	
KMnO4-Index	6,8	0,4			mg/l	



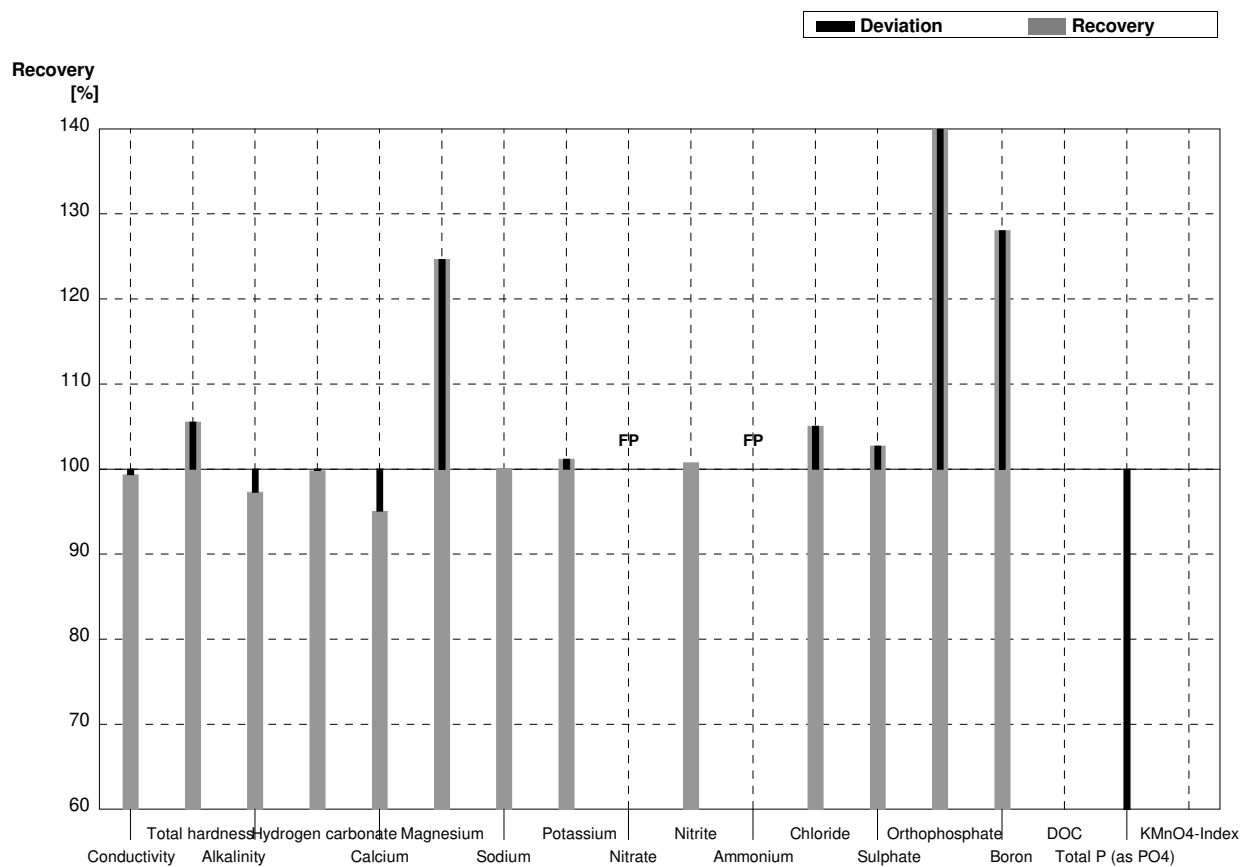
**Sample N164B**  
**Laboratory N**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	546	30	µS/cm	99%
Total hardness	1,97	0,02	2,003	0,05	mmol/l	102%
Alkalinity	1,671	0,014	1,67	0,02	mmol/l	100%
Hydrogen carbonate	98,9	0,9			mg/l	
Calcium	51,9	0,7	52,64	0,6	mg/l	101%
Magnesium	16,4	0,2	16,75	0,6	mg/l	102%
Sodium	28,39	0,19	30,00	0,3	mg/l	106%
Potassium	4,10	0,04	4,20	0,06	mg/l	102%
Nitrate	53,6	1,3	56,64	0,5	mg/l	106%
Nitrite	0,0152	0,0020	0,0183	0,015	mg/l	120%
Ammonium	0,0478	0,0053	0,0510	0,080	mg/l	107%
Chloride	48,9	0,9	49,00	0,25	mg/l	100%
Sulphate	64,9	0,8	65,60	3,0	mg/l	101%
Orthophosphate	<0,009				mg/l	
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	7,20	0,03	mg/l	116%
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	2,72	0,11			mg/l	



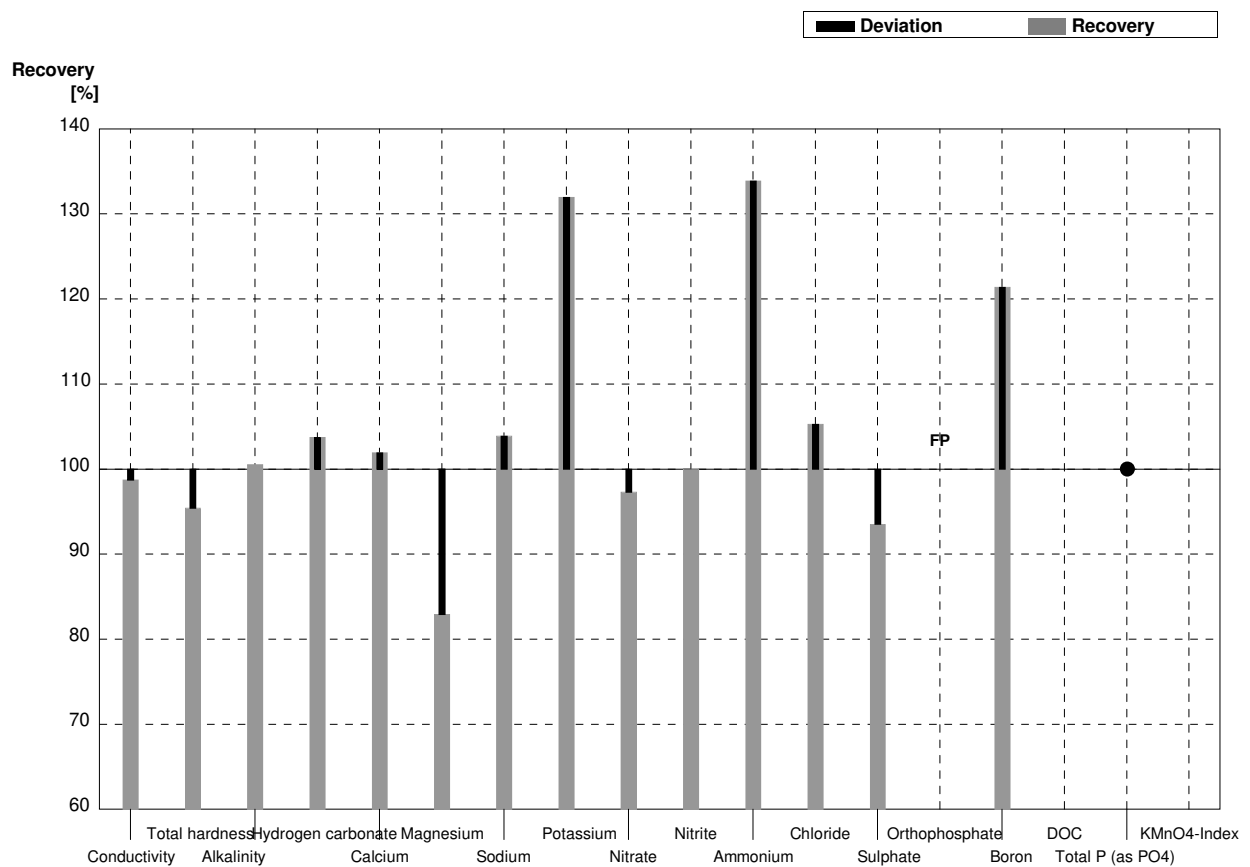
**Sample N164A**  
**Laboratory O**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	308	6	µS/cm	99%
Total hardness	0,578	0,007	0,61	0,1	mmol/l	106%
Alkalinity	2,158	0,012	2,10	0,2	mmol/l	97%
Hydrogen carbonate	128,6	0,8	128,4	6,4	mg/l	100%
Calcium	16,2	0,2	15,4	0,8	mg/l	95%
Magnesium	4,22	0,05	5,26	0,3	mg/l	125%
Sodium	41,36	0,16	41,4	4,1	mg/l	100%
Potassium	6,81	0,03	6,89	1,4	mg/l	101%
Nitrate	<0,2		0,492	0,05	mg/l	FP
Nitrite	0,0645	0,0002	0,065	0,01	mg/l	101%
Ammonium	<0,01		0,0154	0,002	mg/l	FP
Chloride	13,8	0,4	14,5	1,5	mg/l	105%
Sulphate	25,1	0,2	25,79	2,6	mg/l	103%
Orthophosphate	0,071	0,003	0,134	0,01	mg/l	189%
Boron	0,0253	0,0010	0,0324	0,003	mg/l	128%
DOC	9,91	0,06			mg/l	
Total P (as PO4)	0,118	0,002	0,0424	0,004	mg/l	36%
KMnO4-Index	6,8	0,4			mg/l	



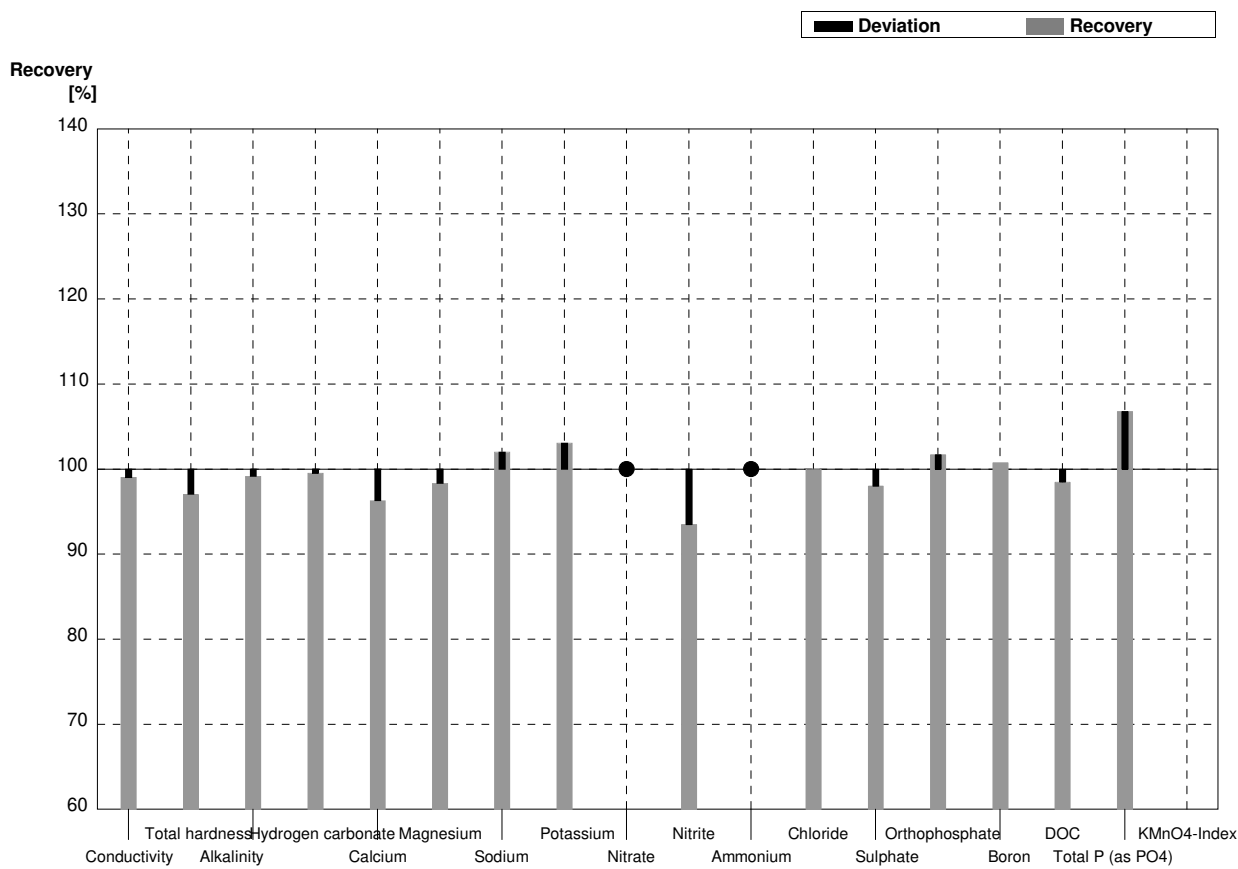
**Sample N164B**  
**Laboratory O**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	546	10,9	µS/cm	99%
Total hardness	1,97	0,02	1,88	0,1	mmol/l	95%
Alkalinity	1,671	0,014	1,68	0,2	mmol/l	101%
Hydrogen carbonate	98,9	0,9	102,6	5,1	mg/l	104%
Calcium	51,9	0,7	52,9	2,6	mg/l	102%
Magnesium	16,4	0,2	13,6	0,7	mg/l	83%
Sodium	28,39	0,19	29,5	2,9	mg/l	104%
Potassium	4,10	0,04	5,41	1,08	mg/l	132%
Nitrate	53,6	1,3	52,16	5,2	mg/l	97%
Nitrite	0,0152	0,0020	0,0152	0,001	mg/l	100%
Ammonium	0,0478	0,0053	0,064	0,01	mg/l	134%
Chloride	48,9	0,9	51,49	5,4	mg/l	105%
Sulphate	64,9	0,8	60,7	6,1	mg/l	94%
Orthophosphate	<0,009		0,0325	0,003	mg/l	FP
Boron	0,0505	0,0004	0,0613	0,006	mg/l	121%
DOC	6,23	0,04			mg/l	
Total P (as PO4)	<0,009		0,0098	0,001	mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



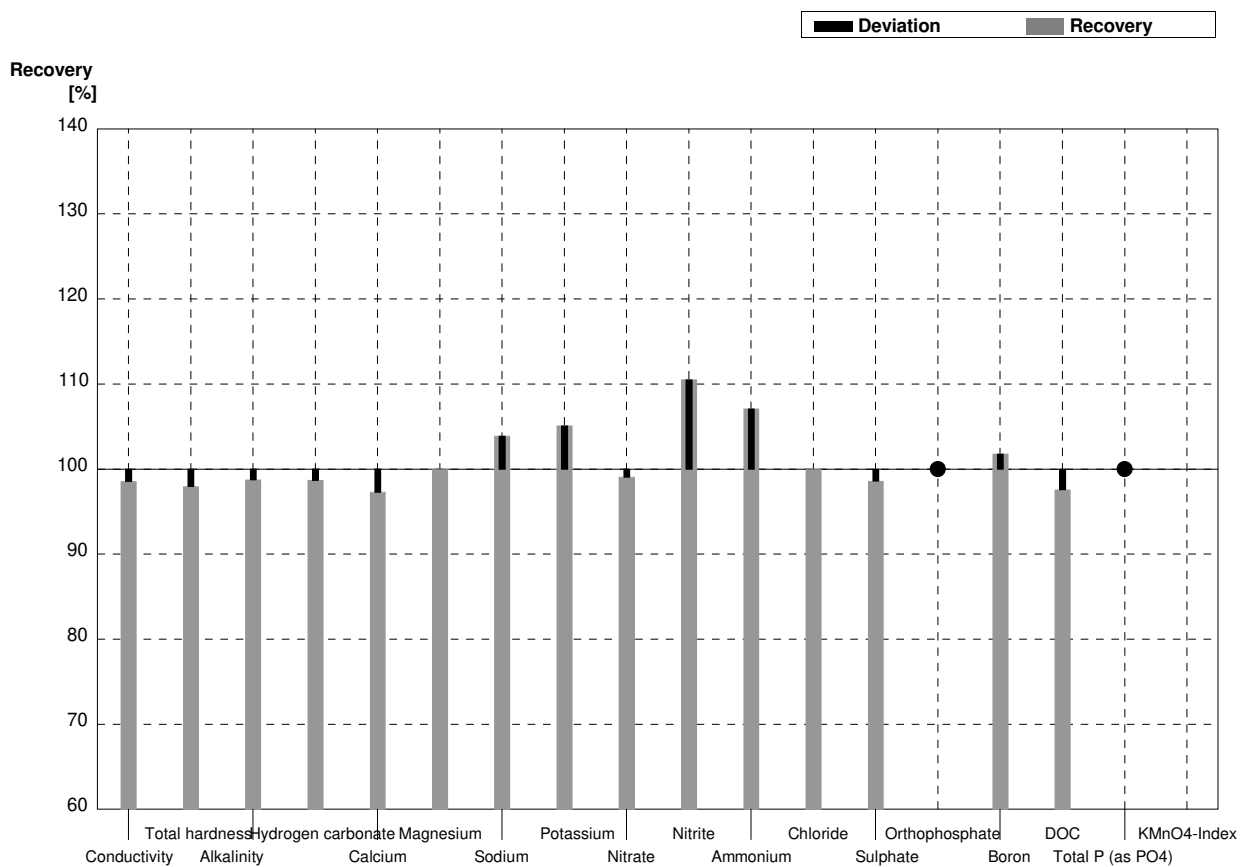
**Sample N164A**  
**Laboratory P**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	307	0,214	µS/cm	99%
Total hardness	0,578	0,007	0,561	0,0128	mmol/l	97%
Alkalinity	2,158	0,012	2,14	0,0918	mmol/l	99%
Hydrogen carbonate	128,6	0,8	128	2,55	mg/l	100%
Calcium	16,2	0,2	15,6	0,505	mg/l	96%
Magnesium	4,22	0,05	4,15	0,0513	mg/l	98%
Sodium	41,36	0,16	42,2	0,214	mg/l	102%
Potassium	6,81	0,03	7,02	0,313	mg/l	103%
Nitrate	<0,2		[0,18]		mg/l	•
Nitrite	0,0645	0,0002	0,0603	0,00209	mg/l	93%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	13,8	0,4	13,8	0,680	mg/l	100%
Sulphate	25,1	0,2	24,6	0,477	mg/l	98%
Orthophosphate	0,071	0,003	0,0722	0,00172	mg/l	102%
Boron	0,0253	0,0010	0,0255	0,00322	mg/l	101%
DOC	9,91	0,06	9,76	0,0867	mg/l	98%
Total P (as PO4)	0,118	0,002	0,126	0,00240	mg/l	107%
KMnO4-Index	6,8	0,4			mg/l	



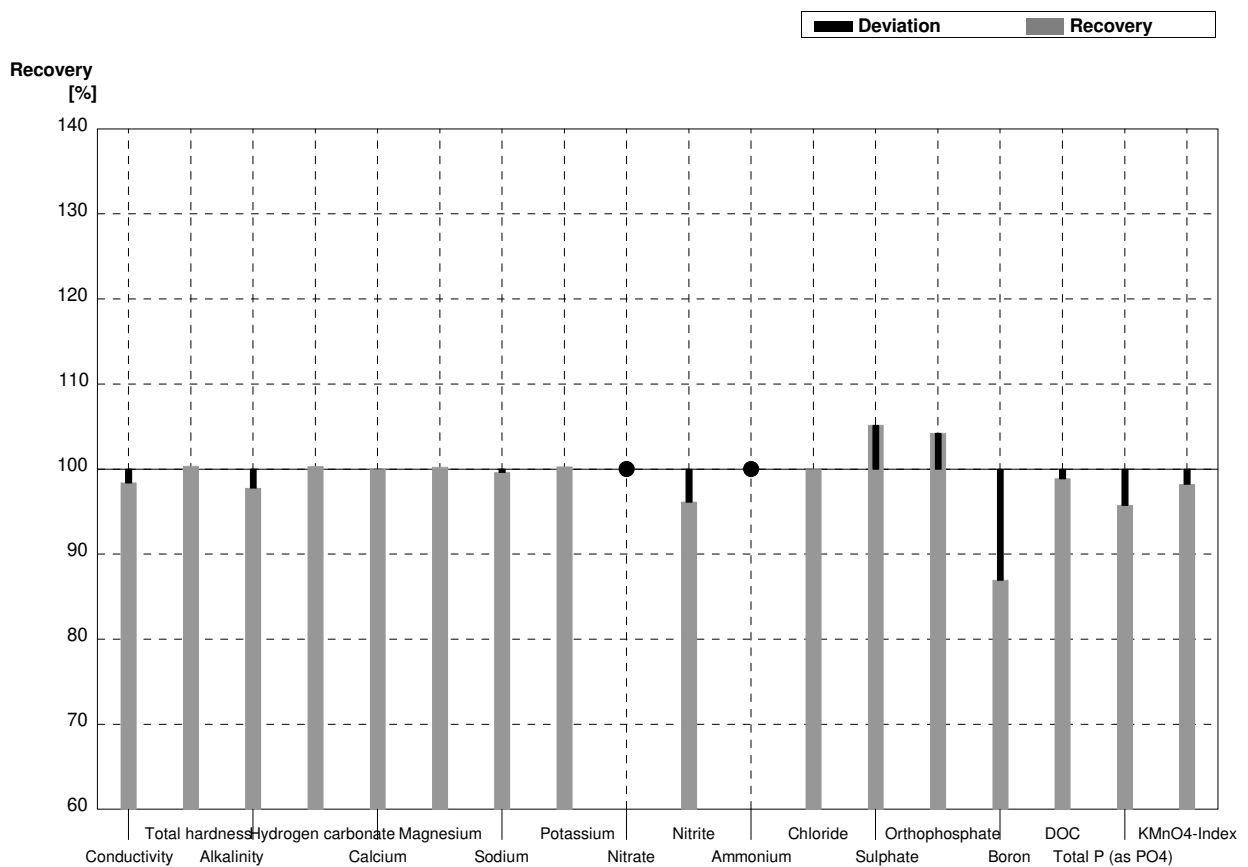
**Sample N164B**  
**Laboratory P**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	545	0,211	µS/cm	99%
Total hardness	1,97	0,02	1,93	0,0208	mmol/l	98%
Alkalinity	1,671	0,014	1,65	0,0820	mmol/l	99%
Hydrogen carbonate	98,9	0,9	97,6	1,95	mg/l	99%
Calcium	51,9	0,7	50,5	0,580	mg/l	97%
Magnesium	16,4	0,2	16,4	0,364	mg/l	100%
Sodium	28,39	0,19	29,5	0,196	mg/l	104%
Potassium	4,10	0,04	4,31	0,327	mg/l	105%
Nitrate	53,6	1,3	53,1	0,961	mg/l	99%
Nitrite	0,0152	0,0020	0,0168	0,00223	mg/l	111%
Ammonium	0,0478	0,0053	0,0512	0,00135	mg/l	107%
Chloride	48,9	0,9	48,9	0,719	mg/l	100%
Sulphate	64,9	0,8	64,0	0,933	mg/l	99%
Orthophosphate	<0,009		[0,002]		mg/l	•
Boron	0,0505	0,0004	0,0514	0,00237	mg/l	102%
DOC	6,23	0,04	6,08	0,0856	mg/l	98%
Total P (as PO4)	<0,009		<0,0150		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



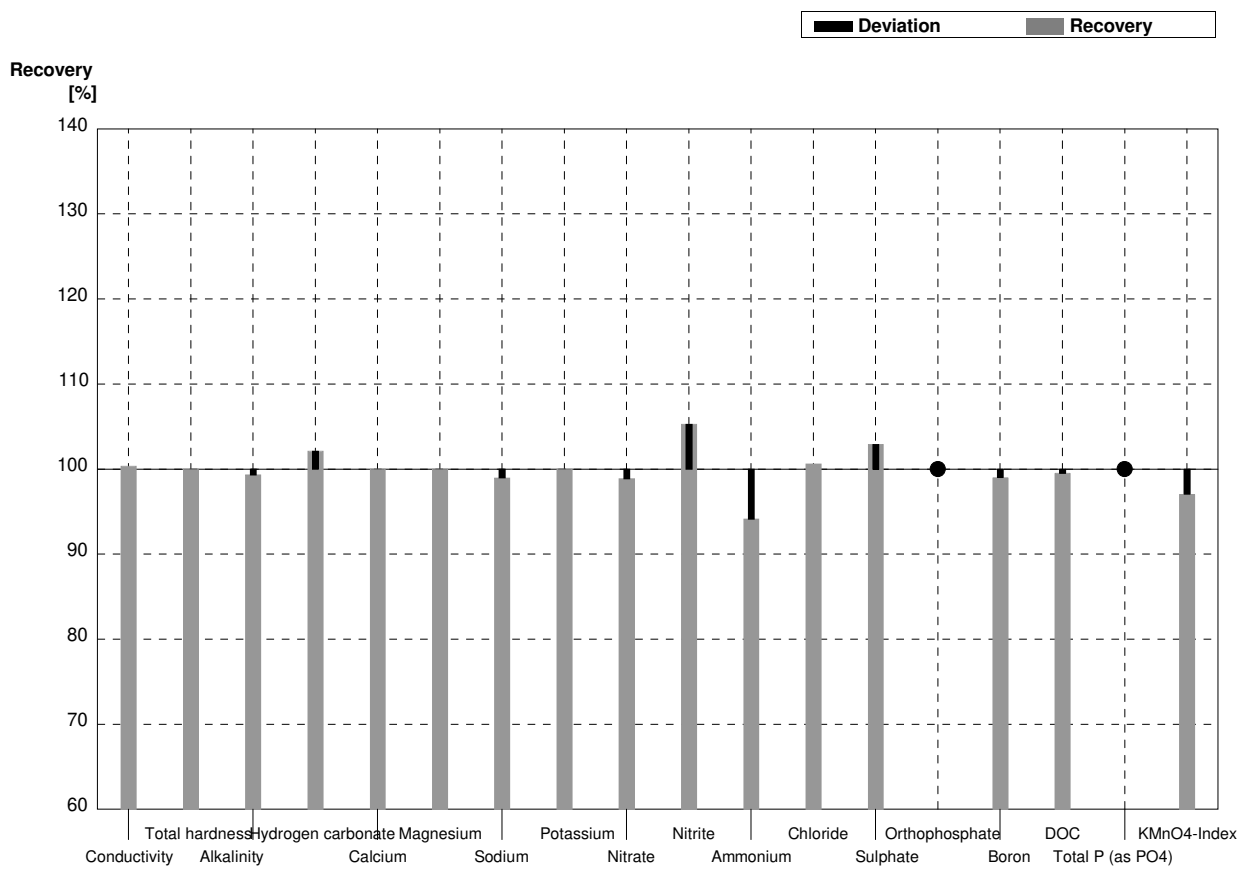
**Sample N164A**  
**Laboratory Q**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	305	12,2	µS/cm	98%
Total hardness	0,578	0,007	0,58		mmol/l	100%
Alkalinity	2,158	0,012	2,11	0,317	mmol/l	98%
Hydrogen carbonate	128,6	0,8	129	19,3	mg/l	100%
Calcium	16,2	0,2	16,2	1,62	mg/l	100%
Magnesium	4,22	0,05	4,23	0,423	mg/l	100%
Sodium	41,36	0,16	41,2	4,12	mg/l	100%
Potassium	6,81	0,03	6,83	0,683	mg/l	100%
Nitrate	<0,2		<0,062		mg/l	•
Nitrite	0,0645	0,0002	0,062	0,005	mg/l	96%
Ammonium	<0,01		<0,005		mg/l	•
Chloride	13,8	0,4	13,8	0,690	mg/l	100%
Sulphate	25,1	0,2	26,4	1,32	mg/l	105%
Orthophosphate	0,071	0,003	0,074	0,0088	mg/l	104%
Boron	0,0253	0,0010	0,0220	0,0026	mg/l	87%
DOC	9,91	0,06	9,80	0,78	mg/l	99%
Total P (as PO4)	0,118	0,002	0,113	0,0172	mg/l	96%
KMnO4-Index	6,8	0,4	6,68	1,07	mg/l	98%



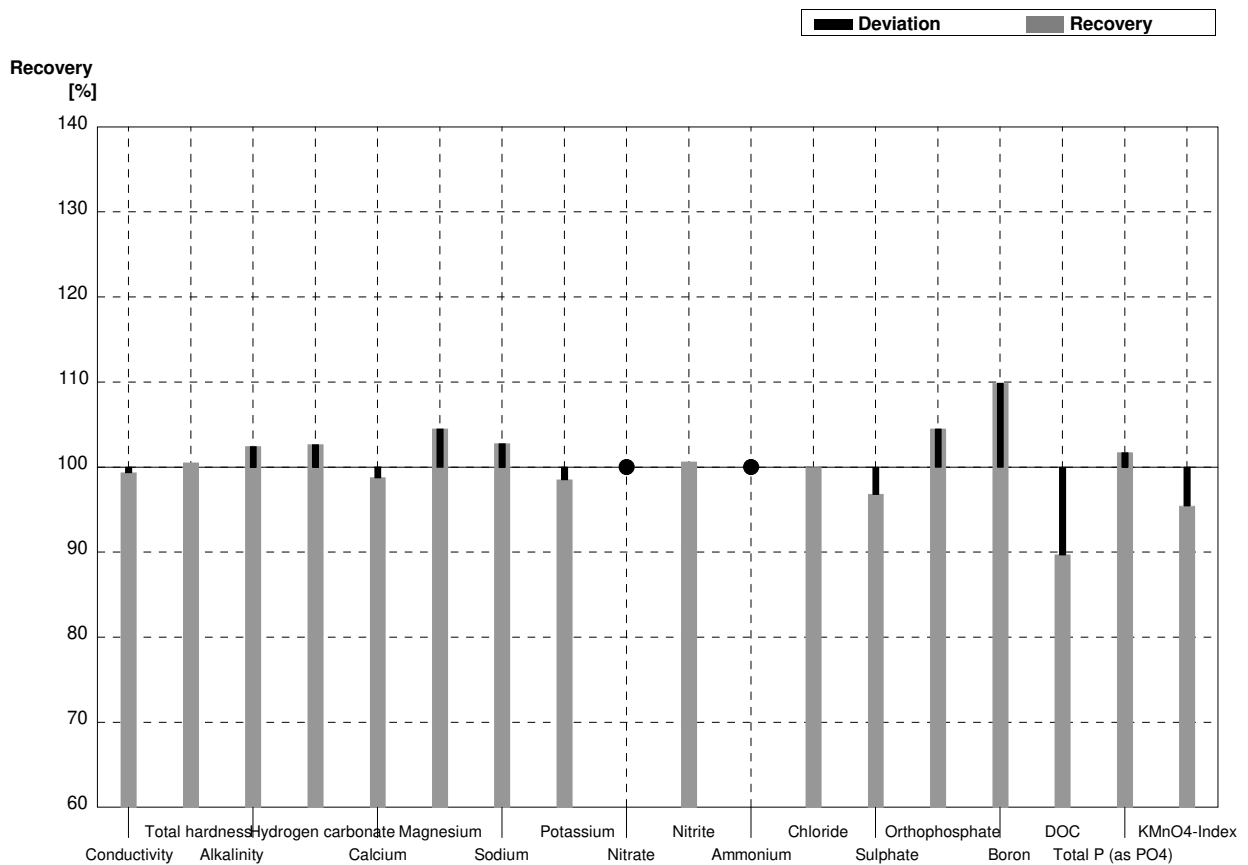
**Sample N164B**  
**Laboratory Q**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	555	22,2	µS/cm	100%
Total hardness	1,97	0,02	1,97		mmol/l	100%
Alkalinity	1,671	0,014	1,66	0,249	mmol/l	99%
Hydrogen carbonate	98,9	0,9	101	15,2	mg/l	102%
Calcium	51,9	0,7	51,9	5,19	mg/l	100%
Magnesium	16,4	0,2	16,4	1,64	mg/l	100%
Sodium	28,39	0,19	28,1	2,81	mg/l	99%
Potassium	4,10	0,04	4,10	0,410	mg/l	100%
Nitrate	53,6	1,3	53,0	2,12	mg/l	99%
Nitrite	0,0152	0,0020	0,0160	0,0013	mg/l	105%
Ammonium	0,0478	0,0053	0,0450	0,0045	mg/l	94%
Chloride	48,9	0,9	49,2	2,46	mg/l	101%
Sulphate	64,9	0,8	66,8	3,34	mg/l	103%
Orthophosphate	<0,009		0,0090	0,0011	mg/l	•
Boron	0,0505	0,0004	0,050	0,0060	mg/l	99%
DOC	6,23	0,04	6,20	0,50	mg/l	100%
Total P (as PO4)	<0,009		<0,0153		mg/l	•
KMnO4-Index	2,72	0,11	2,64	0,422	mg/l	97%



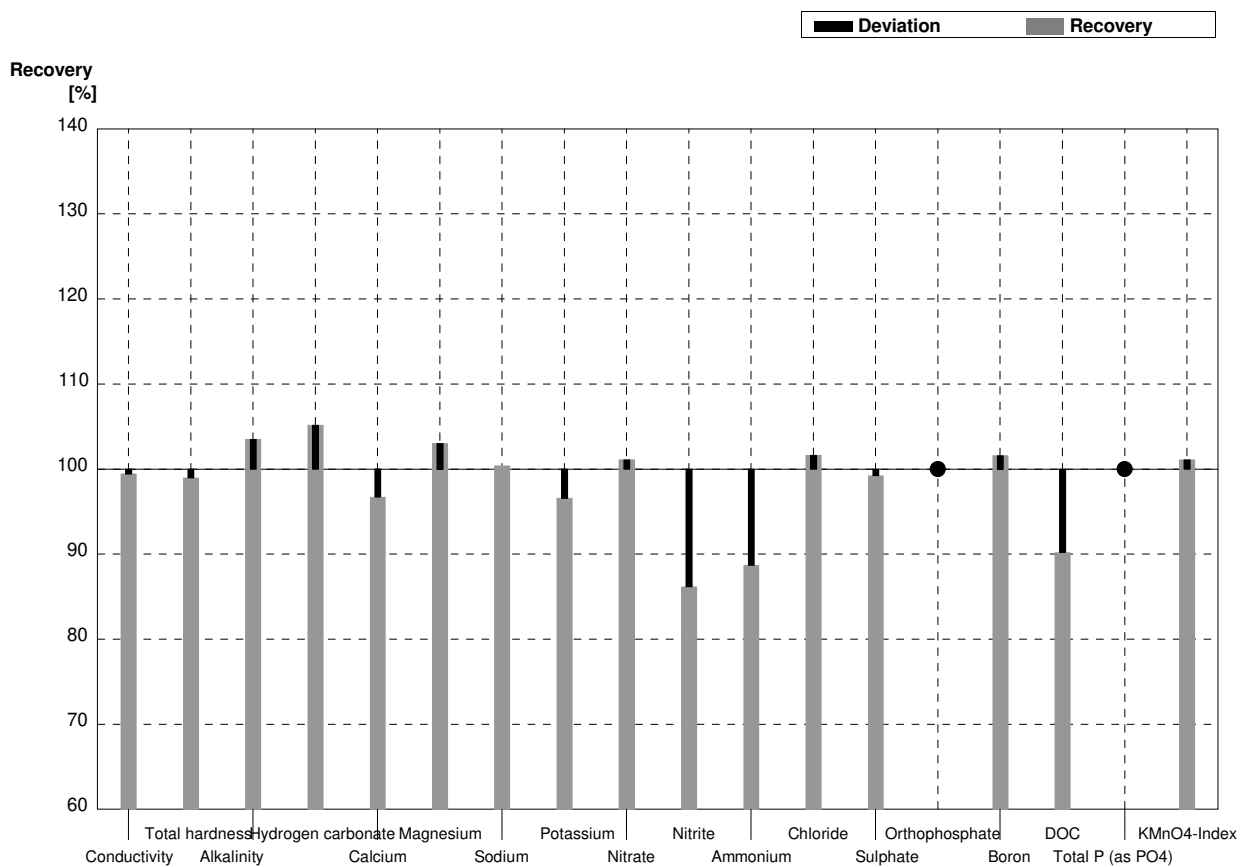
**Sample N164A**  
**Laboratory R**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	308	0,33	µS/cm	99%
Total hardness	0,578	0,007	0,581	0,002	mmol/l	101%
Alkalinity	2,158	0,012	2,21	0,010	mmol/l	102%
Hydrogen carbonate	128,6	0,8	132	7,5	mg/l	103%
Calcium	16,2	0,2	16,0	0,058	mg/l	99%
Magnesium	4,22	0,05	4,41	0,035	mg/l	105%
Sodium	41,36	0,16	42,5	0,208	mg/l	103%
Potassium	6,81	0,03	6,71	0,035	mg/l	99%
Nitrate	<0,2		<0,10		mg/l	•
Nitrite	0,0645	0,0002	0,0649	0,001	mg/l	101%
Ammonium	<0,01		<0,015		mg/l	•
Chloride	13,8	0,4	13,8	0,010	mg/l	100%
Sulphate	25,1	0,2	24,3	0,242	mg/l	97%
Orthophosphate	0,071	0,003	0,0742	0,001	mg/l	105%
Boron	0,0253	0,0010	0,0278	0,001	mg/l	110%
DOC	9,91	0,06	8,89	0,055	mg/l	90%
Total P (as PO4)	0,118	0,002	0,120	0,004	mg/l	102%
KMnO4-Index	6,8	0,4	6,49	0,135	mg/l	95%



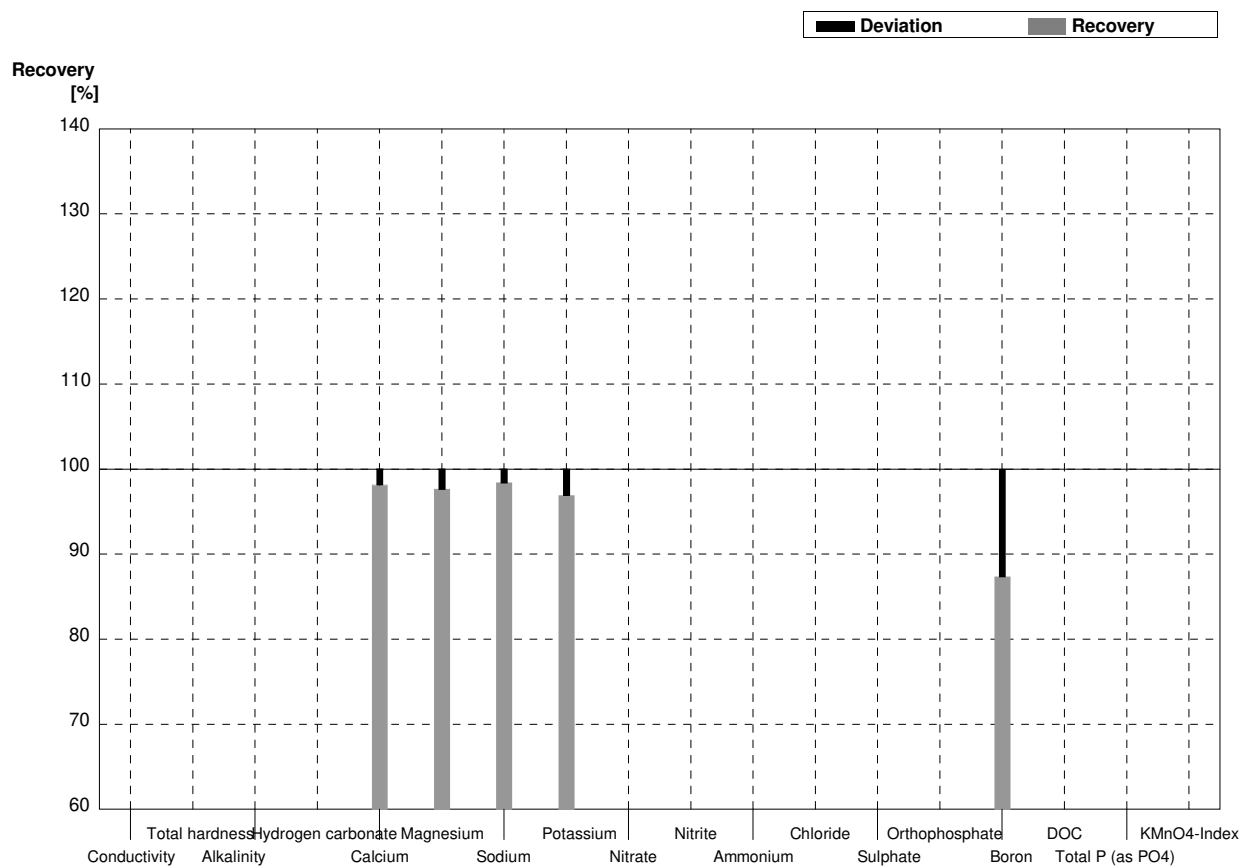
**Sample N164B**  
**Laboratory R**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	550	0,577	µS/cm	99%
Total hardness	1,97	0,02	1,95	0,046	mmol/l	99%
Alkalinity	1,671	0,014	1,73	0,020	mmol/l	104%
Hydrogen carbonate	98,9	0,9	104	1,0	mg/l	105%
Calcium	51,9	0,7	50,2	0,666	mg/l	97%
Magnesium	16,4	0,2	16,9	0,82	mg/l	103%
Sodium	28,39	0,19	28,5	0,071	mg/l	100%
Potassium	4,10	0,04	3,96	0,007	mg/l	97%
Nitrate	53,6	1,3	54,2	0,516	mg/l	101%
Nitrite	0,0152	0,0020	0,0131	0,001	mg/l	86%
Ammonium	0,0478	0,0053	0,0424	0,002	mg/l	89%
Chloride	48,9	0,9	49,7	0,461	mg/l	102%
Sulphate	64,9	0,8	64,4	0,679	mg/l	99%
Orthophosphate	<0,009		<0,020		mg/l	•
Boron	0,0505	0,0004	0,0513	0,001	mg/l	102%
DOC	6,23	0,04	5,62	0,252	mg/l	90%
Total P (as PO4)	<0,009		<0,020		mg/l	•
KMnO4-Index	2,72	0,11	2,75	0,061	mg/l	101%



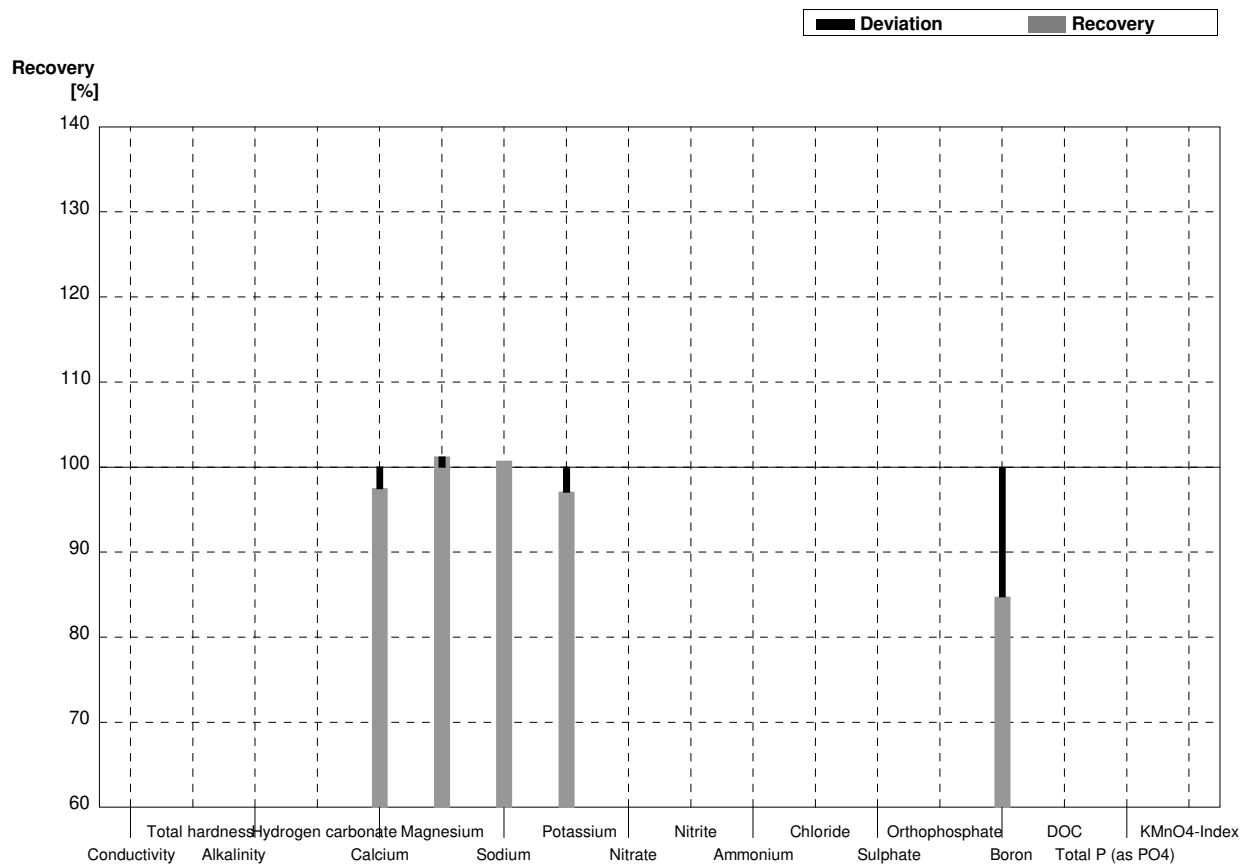
**Sample N164A**  
**Laboratory S**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1			µS/cm	
Total hardness	0,578	0,007			mmol/l	
Alkalinity	2,158	0,012			mmol/l	
Hydrogen carbonate	128,6	0,8			mg/l	
Calcium	16,2	0,2	15,9	12,0	mg/l	98%
Magnesium	4,22	0,05	4,12	3,9	mg/l	98%
Sodium	41,36	0,16	40,7	7,9	mg/l	98%
Potassium	6,81	0,03	6,6	3,0	mg/l	97%
Nitrate	<0,2				mg/l	
Nitrite	0,0645	0,0002			mg/l	
Ammonium	<0,01				mg/l	
Chloride	13,8	0,4			mg/l	
Sulphate	25,1	0,2			mg/l	
Orthophosphate	0,071	0,003			mg/l	
Boron	0,0253	0,0010	0,0221	0,012	mg/l	87%
DOC	9,91	0,06			mg/l	
Total P (as PO4)	0,118	0,002			mg/l	
KMnO4-Index	6,8	0,4			mg/l	



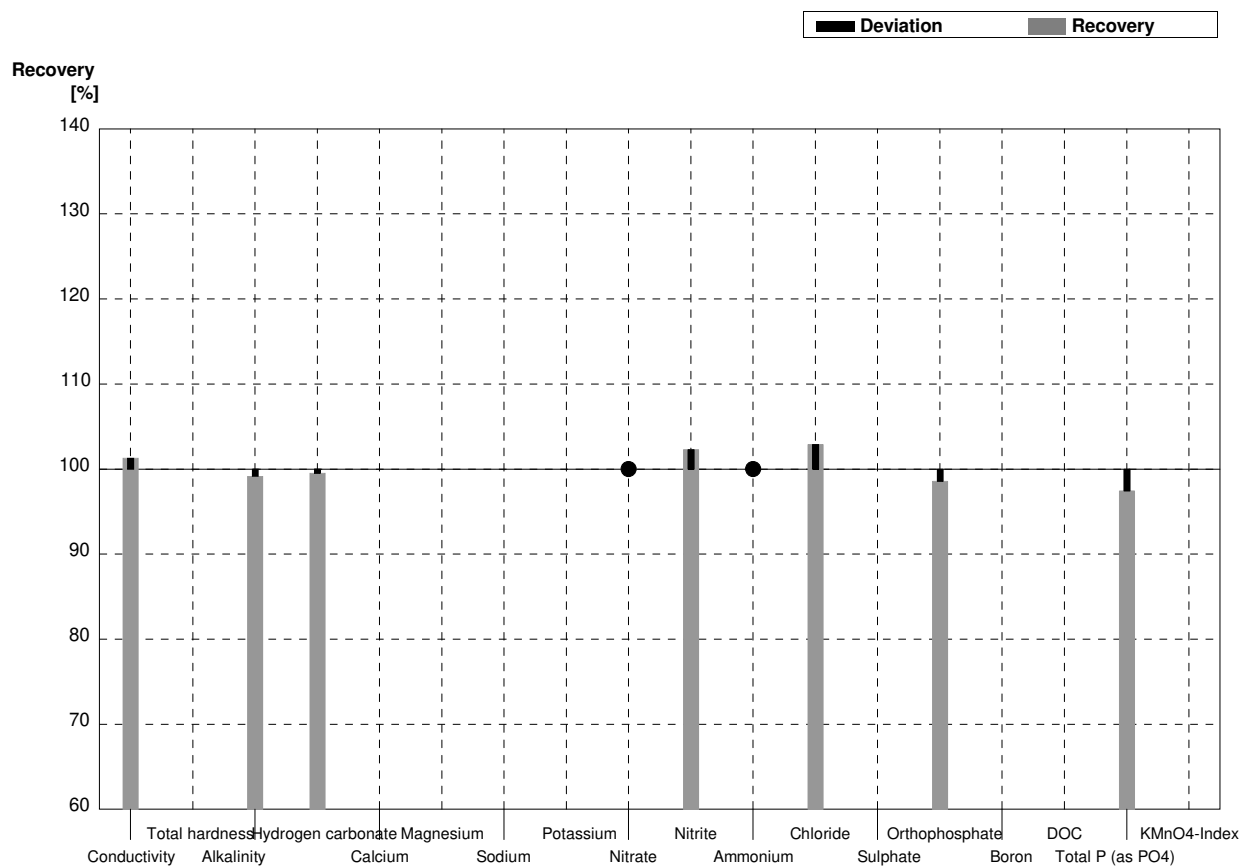
**Sample N164B**  
**Laboratory S**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2			µS/cm	
Total hardness	1,97	0,02			mmol/l	
Alkalinity	1,671	0,014			mmol/l	
Hydrogen carbonate	98,9	0,9			mg/l	
Calcium	51,9	0,7	50,6	12,0	mg/l	97%
Magnesium	16,4	0,2	16,6	3,9	mg/l	101%
Sodium	28,39	0,19	28,6	7,9	mg/l	101%
Potassium	4,10	0,04	3,98	3,0	mg/l	97%
Nitrate	53,6	1,3			mg/l	
Nitrite	0,0152	0,0020			mg/l	
Ammonium	0,0478	0,0053			mg/l	
Chloride	48,9	0,9			mg/l	
Sulphate	64,9	0,8			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,0505	0,0004	0,0428	0,012	mg/l	85%
DOC	6,23	0,04			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	2,72	0,11			mg/l	



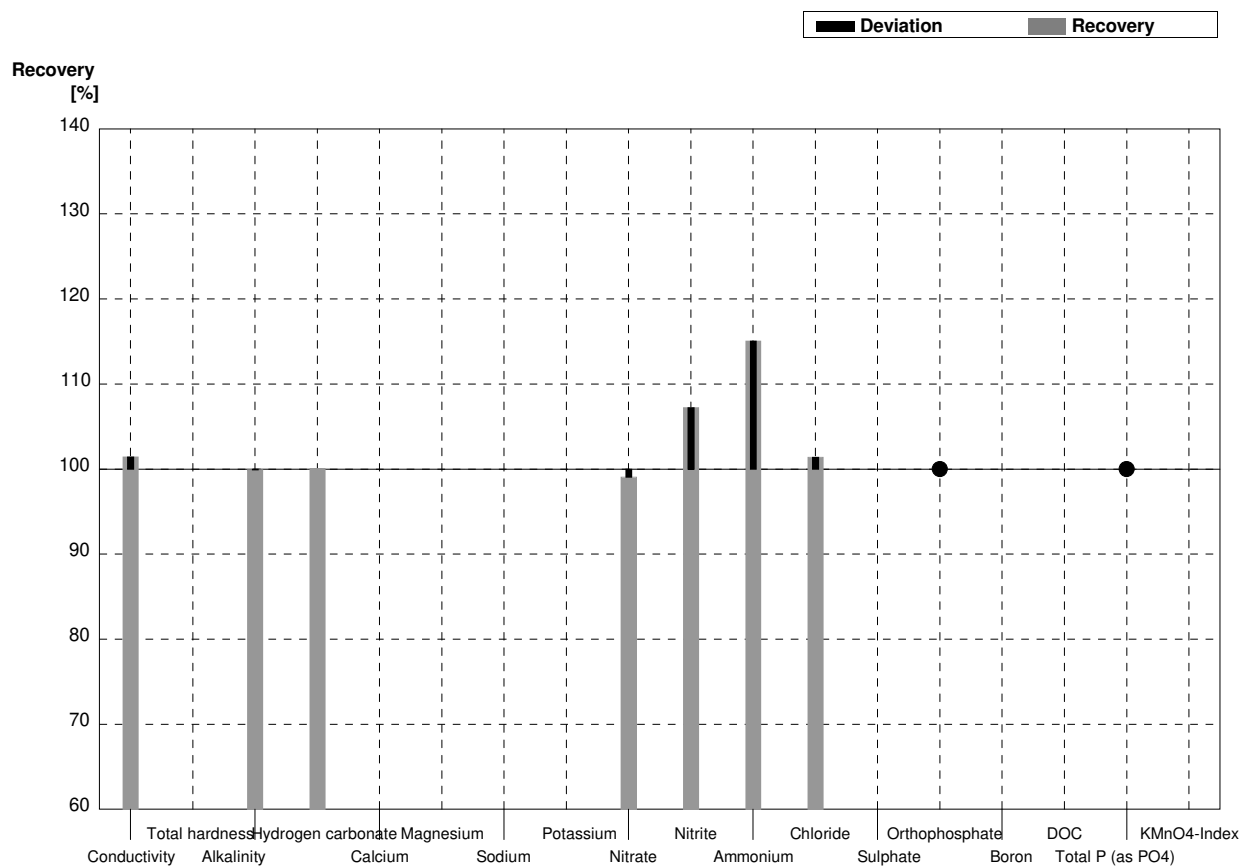
**Sample N164A**  
**Laboratory T**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	314	2,22	µS/cm	101%
Total hardness	0,578	0,007			mmol/l	
Alkalinity	2,158	0,012	2,14	0,060	mmol/l	99%
Hydrogen carbonate	128,6	0,8	128	1,85	mg/l	100%
Calcium	16,2	0,2			mg/l	
Magnesium	4,22	0,05			mg/l	
Sodium	41,36	0,16			mg/l	
Potassium	6,81	0,03			mg/l	
Nitrate	<0,2		<0,128	0,00	mg/l	•
Nitrite	0,0645	0,0002	0,066	0,0066	mg/l	102%
Ammonium	<0,01		<0,005	0,0000	mg/l	•
Chloride	13,8	0,4	14,2	0,144	mg/l	103%
Sulphate	25,1	0,2			mg/l	
Orthophosphate	0,071	0,003	0,070	0,00826	mg/l	99%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06			mg/l	
Total P (as PO4)	0,118	0,002	0,115	0,015	mg/l	97%
KMnO4-Index	6,8	0,4			mg/l	



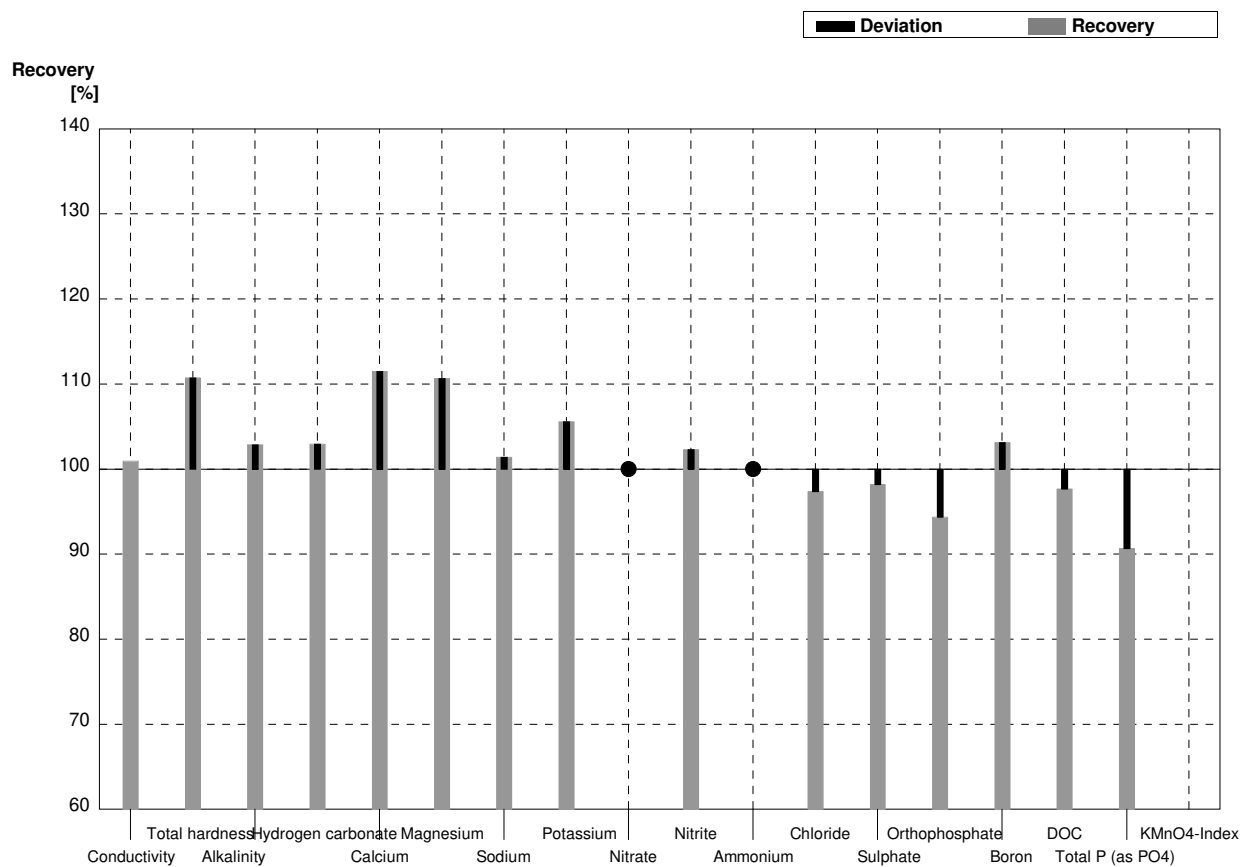
**Sample N164B**  
**Laboratory T**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	561	3,97	µS/cm	101%
Total hardness	1,97	0,02			mmol/l	
Alkalinity	1,671	0,014	1,67	0,0470	mmol/l	100%
Hydrogen carbonate	98,9	0,9	99	1,43	mg/l	100%
Calcium	51,9	0,7			mg/l	
Magnesium	16,4	0,2			mg/l	
Sodium	28,39	0,19			mg/l	
Potassium	4,10	0,04			mg/l	
Nitrate	53,6	1,3	53,1	3,639	mg/l	99%
Nitrite	0,0152	0,0020	0,0163	0,0016	mg/l	107%
Ammonium	0,0478	0,0053	0,055	0,0083	mg/l	115%
Chloride	48,9	0,9	49,6	0,503	mg/l	101%
Sulphate	64,9	0,8			mg/l	
Orthophosphate	<0,009		<0,006	0,0000	mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04			mg/l	
Total P (as PO4)	<0,009		<0,006	0,000	mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



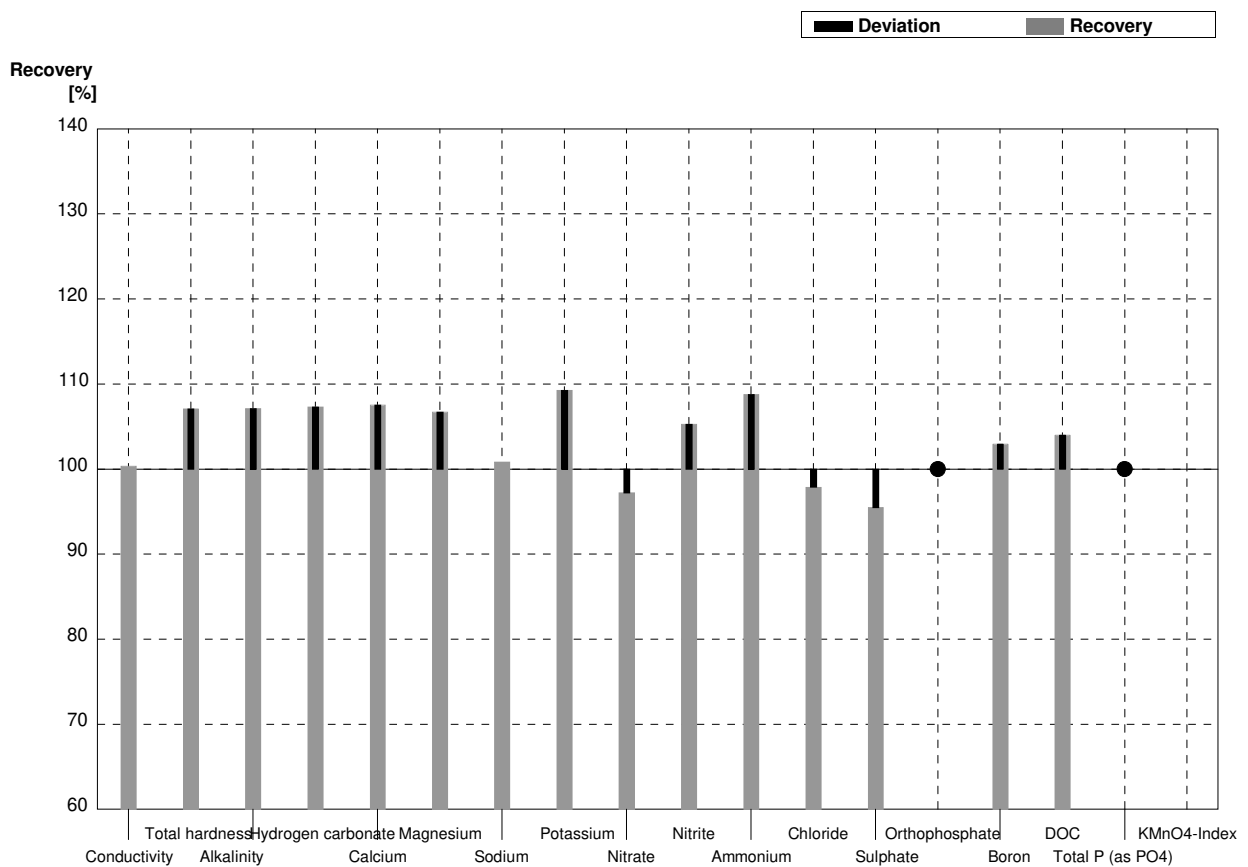
**Sample N164A**  
**Laboratory U**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	313	4,51	µS/cm	101%
Total hardness	0,578	0,007	0,64		mmol/l	111%
Alkalinity	2,158	0,012	2,22	0,22	mmol/l	103%
Hydrogen carbonate	128,6	0,8	132,39		mg/l	103%
Calcium	16,2	0,2	18,06	1,8	mg/l	111%
Magnesium	4,22	0,05	4,67	0,47	mg/l	111%
Sodium	41,36	0,16	41,95	4,2	mg/l	101%
Potassium	6,81	0,03	7,19	0,7	mg/l	106%
Nitrate	<0,2		<0,058		mg/l	•
Nitrite	0,0645	0,0002	0,066	0,007	mg/l	102%
Ammonium	<0,01		<0,009		mg/l	•
Chloride	13,8	0,4	13,44	1,3	mg/l	97%
Sulphate	25,1	0,2	24,65	2,5	mg/l	98%
Orthophosphate	0,071	0,003	0,067	0,007	mg/l	94%
Boron	0,0253	0,0010	0,0261	0,004	mg/l	103%
DOC	9,91	0,06	9,68	0,9	mg/l	98%
Total P (as PO4)	0,118	0,002	0,107	0,011	mg/l	91%
KMnO4-Index	6,8	0,4			mg/l	



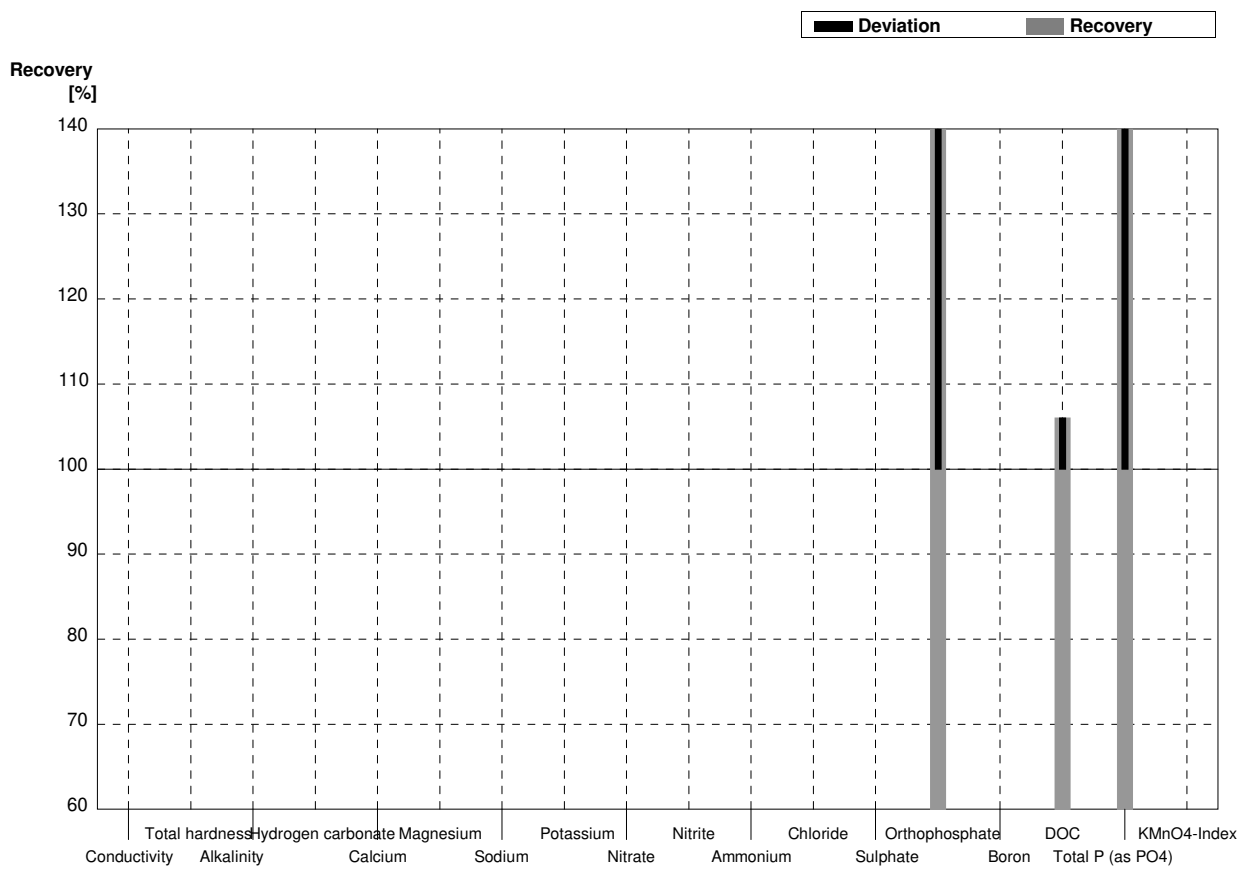
**Sample N164B**  
**Laboratory U**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	555	4,51	µS/cm	100%
Total hardness	1,97	0,02	2,11		mmol/l	107%
Alkalinity	1,671	0,014	1,79	0,18	mmol/l	107%
Hydrogen carbonate	98,9	0,9	106,15		mg/l	107%
Calcium	51,9	0,7	55,81	5,5	mg/l	108%
Magnesium	16,4	0,2	17,50	1,8	mg/l	107%
Sodium	28,39	0,19	28,634	2,8	mg/l	101%
Potassium	4,10	0,04	4,48	0,45	mg/l	109%
Nitrate	53,6	1,3	52,11	5,2	mg/l	97%
Nitrite	0,0152	0,0020	0,0160	0,0016	mg/l	105%
Ammonium	0,0478	0,0053	0,052	0,005	mg/l	109%
Chloride	48,9	0,9	47,87	4,8	mg/l	98%
Sulphate	64,9	0,8	61,98	6,2	mg/l	96%
Orthophosphate	<0,009		<0,001		mg/l	•
Boron	0,0505	0,0004	0,052	0,008	mg/l	103%
DOC	6,23	0,04	6,48	0,65	mg/l	104%
Total P (as PO4)	<0,009		<0,001		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



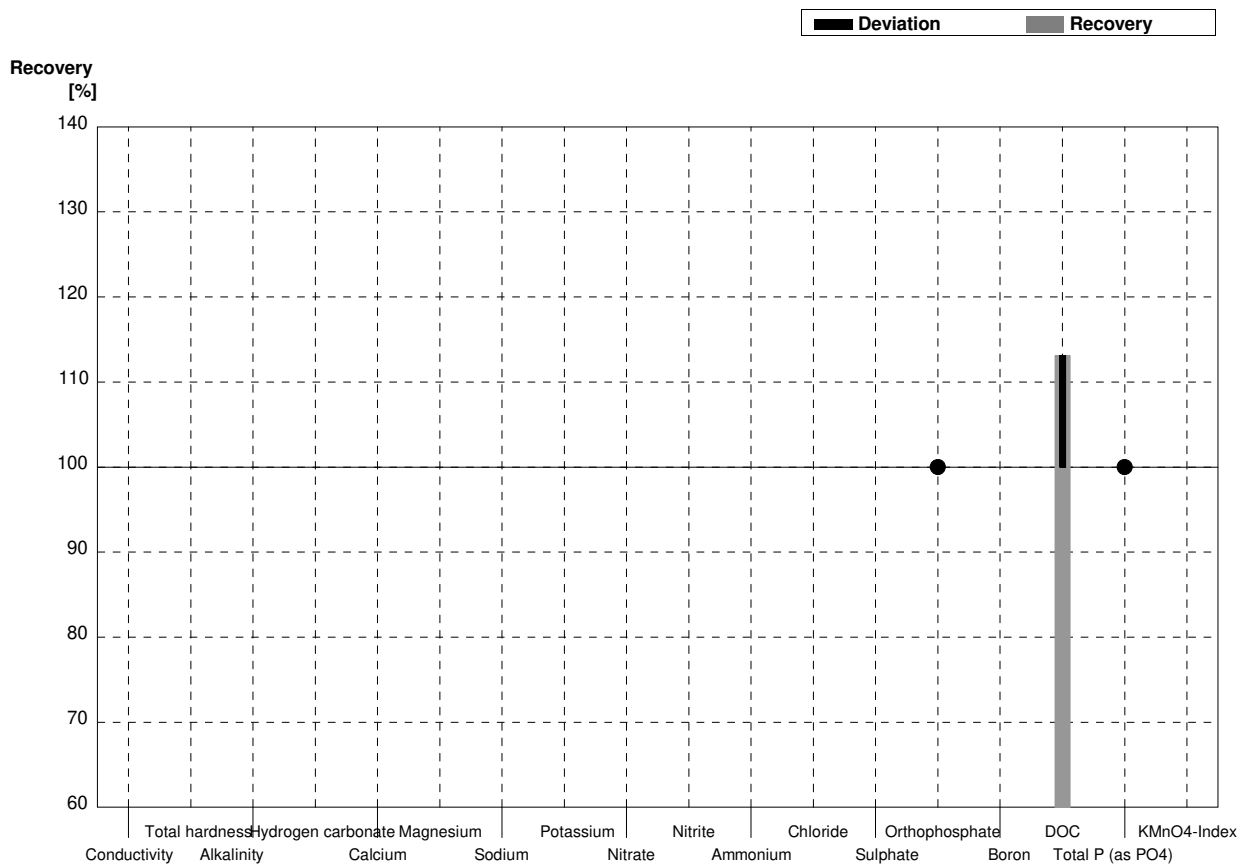
**Sample N164A**  
**Laboratory V**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1			µS/cm	
Total hardness	0,578	0,007			mmol/l	
Alkalinity	2,158	0,012			mmol/l	
Hydrogen carbonate	128,6	0,8			mg/l	
Calcium	16,2	0,2			mg/l	
Magnesium	4,22	0,05			mg/l	
Sodium	41,36	0,16			mg/l	
Potassium	6,81	0,03			mg/l	
Nitrate	<0,2				mg/l	
Nitrite	0,0645	0,0002			mg/l	
Ammonium	<0,01				mg/l	
Chloride	13,8	0,4			mg/l	
Sulphate	25,1	0,2			mg/l	
Orthophosphate	0,071	0,003	0,70	0,098	mg/l	986%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	10,51	1,366	mg/l	106%
Total P (as PO4)	0,118	0,002	1,09	0,185	mg/l	924%
KMnO4-Index	6,8	0,4			mg/l	



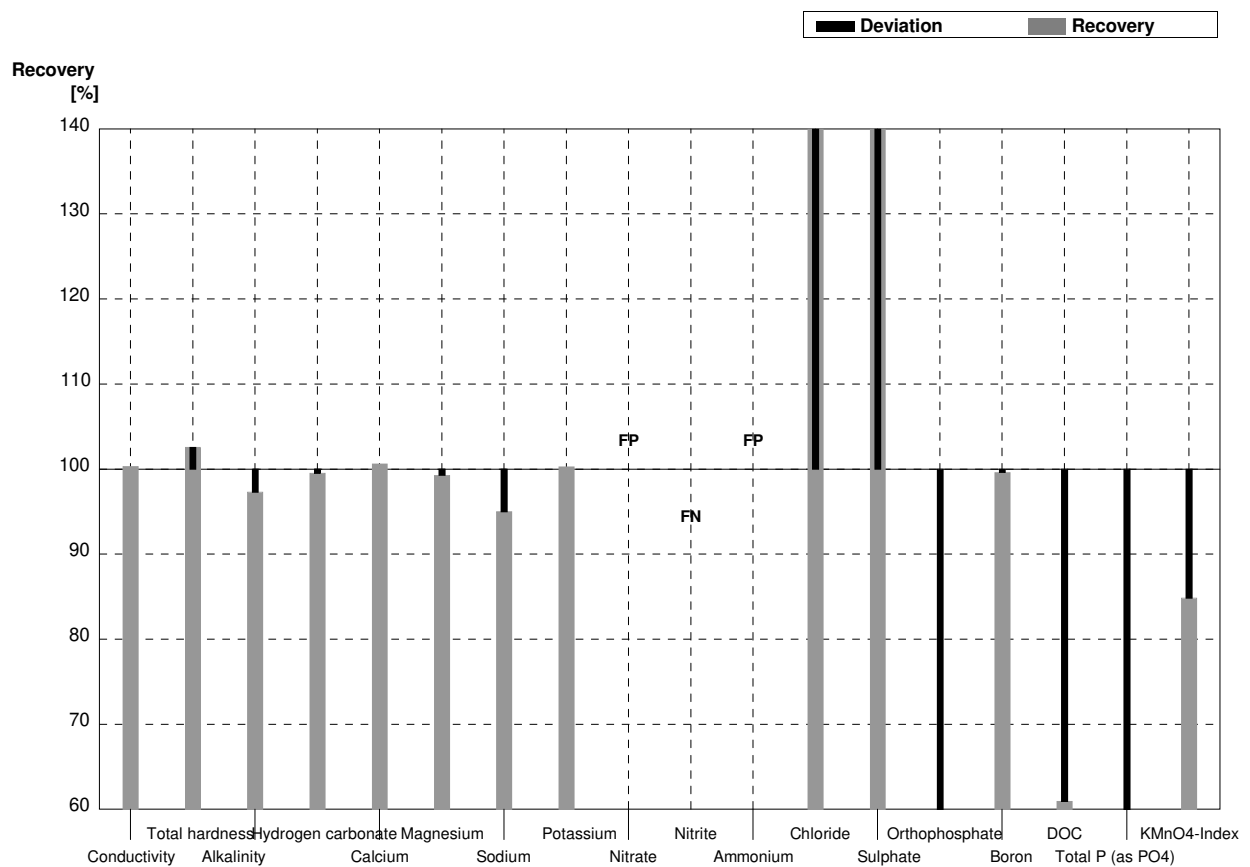
**Sample N164B**  
**Laboratory V**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2			µS/cm	
Total hardness	1,97	0,02			mmol/l	
Alkalinity	1,671	0,014			mmol/l	
Hydrogen carbonate	98,9	0,9			mg/l	
Calcium	51,9	0,7			mg/l	
Magnesium	16,4	0,2			mg/l	
Sodium	28,39	0,19			mg/l	
Potassium	4,10	0,04			mg/l	
Nitrate	53,6	1,3			mg/l	
Nitrite	0,0152	0,0020			mg/l	
Ammonium	0,0478	0,0053			mg/l	
Chloride	48,9	0,9			mg/l	
Sulphate	64,9	0,8			mg/l	
Orthophosphate	<0,009		<0,0184		mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	7,05	0,917	mg/l	113%
Total P (as PO4)	<0,009		<0,0061		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



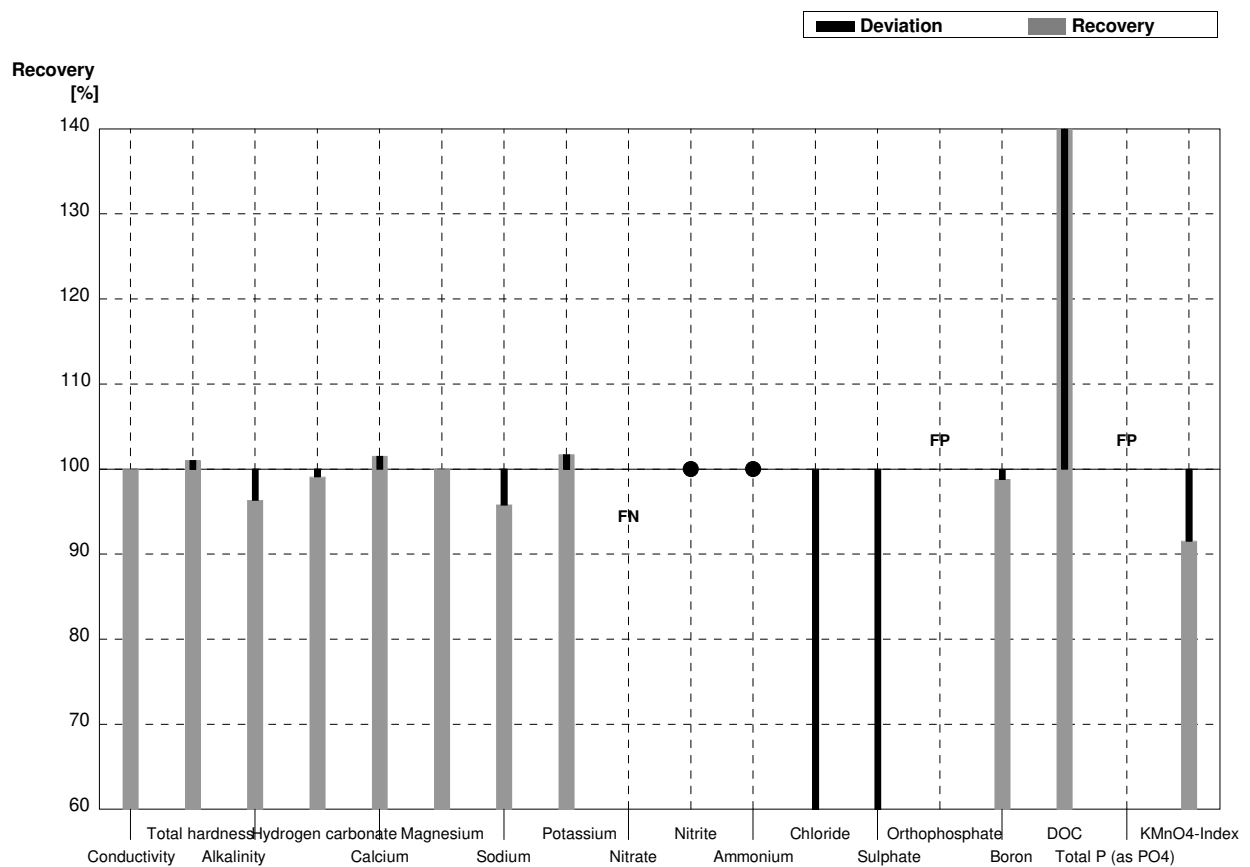
**Sample N164A**  
**Laboratory W**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	311	9,79	µS/cm	100%
Total hardness	0,578	0,007	0,593	0,089	mmol/l	103%
Alkalinity	2,158	0,012	2,10	0,71	mmol/l	97%
Hydrogen carbonate	128,6	0,8	128	43,5	mg/l	100%
Calcium	16,2	0,2	16,3	1,4	mg/l	101%
Magnesium	4,22	0,05	4,19	0,34	mg/l	99%
Sodium	41,36	0,16	39,3	2,97	mg/l	95%
Potassium	6,81	0,03	6,83	0,69	mg/l	100%
Nitrate	<0,2		54,2	5,78	mg/l	FP
Nitrite	0,0645	0,0002	<0,05		mg/l	FN
Ammonium	<0,01		0,069	0,01	mg/l	FP
Chloride	13,8	0,4	49,3	2,80	mg/l	357%
Sulphate	25,1	0,2	65,5	6,00	mg/l	261%
Orthophosphate	0,071	0,003	0,0307	0,006	mg/l	43%
Boron	0,0253	0,0010	0,0252	0,0035	mg/l	100%
DOC	9,91	0,06	6,04	0,27	mg/l	61%
Total P (as PO4)	0,118	0,002	0,0307	0,006	mg/l	26%
KMnO4-Index	6,8	0,4	5,77	1,37	mg/l	85%



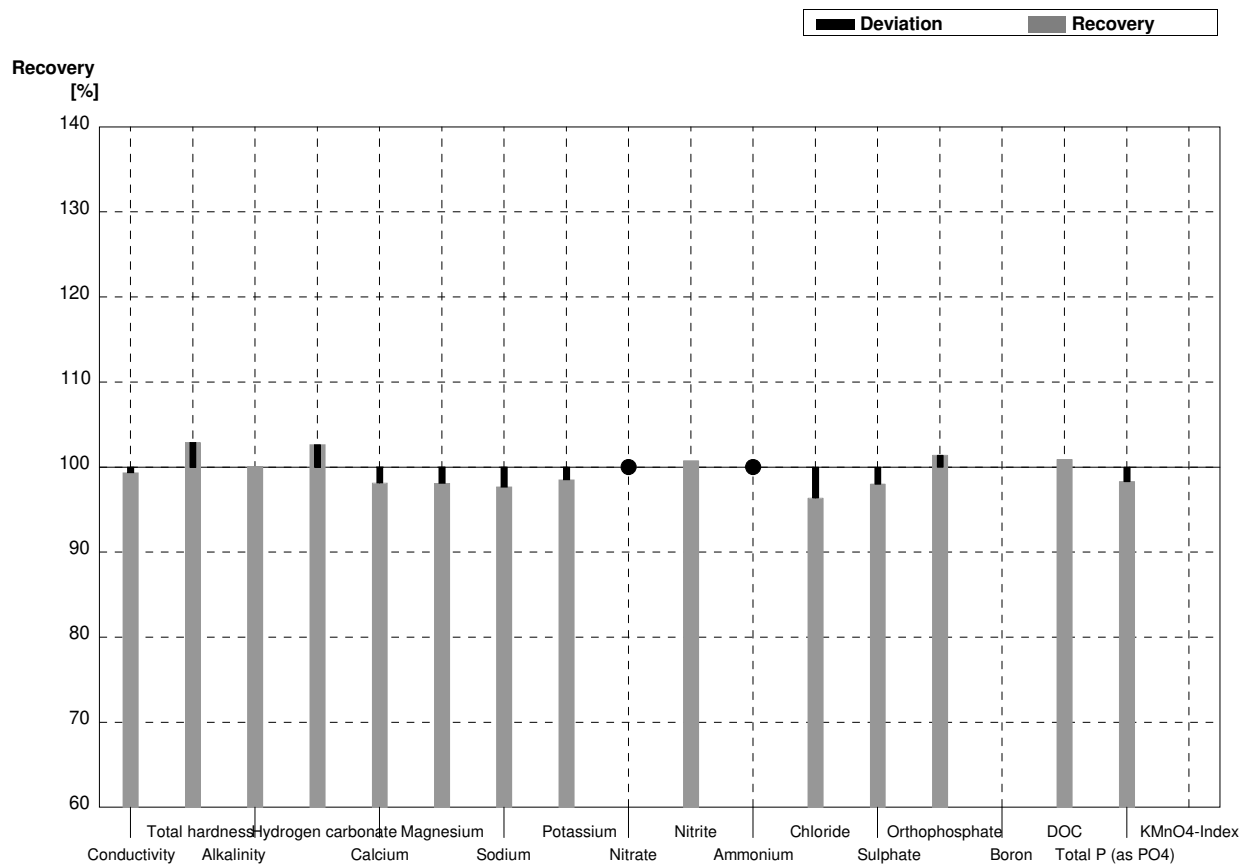
**Sample N164B**  
**Laboratory W**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	553	17,4	µS/cm	100%
Total hardness	1,97	0,02	1,99	0,298	mmol/l	101%
Alkalinity	1,671	0,014	1,61	0,55	mmol/l	96%
Hydrogen carbonate	98,9	0,9	98	33,4	mg/l	99%
Calcium	51,9	0,7	52,7	4,4	mg/l	102%
Magnesium	16,4	0,2	16,4	1,3	mg/l	100%
Sodium	28,39	0,19	27,2	2,06	mg/l	96%
Potassium	4,10	0,04	4,17	0,42	mg/l	102%
Nitrate	53,6	1,3	<0,1		mg/l	FN
Nitrite	0,0152	0,0020	<0,05		mg/l	•
Ammonium	0,0478	0,0053	<0,05		mg/l	•
Chloride	48,9	0,9	14,7	0,84	mg/l	30%
Sulphate	64,9	0,8	25,9	2,37	mg/l	40%
Orthophosphate	<0,009		0,066	0,014	mg/l	FP
Boron	0,0505	0,0004	0,0499	0,0068	mg/l	99%
DOC	6,23	0,04	9,61	0,43	mg/l	154%
Total P (as PO4)	<0,009		0,104	0,022	mg/l	FP
KMnO4-Index	2,72	0,11	2,49	0,59	mg/l	92%



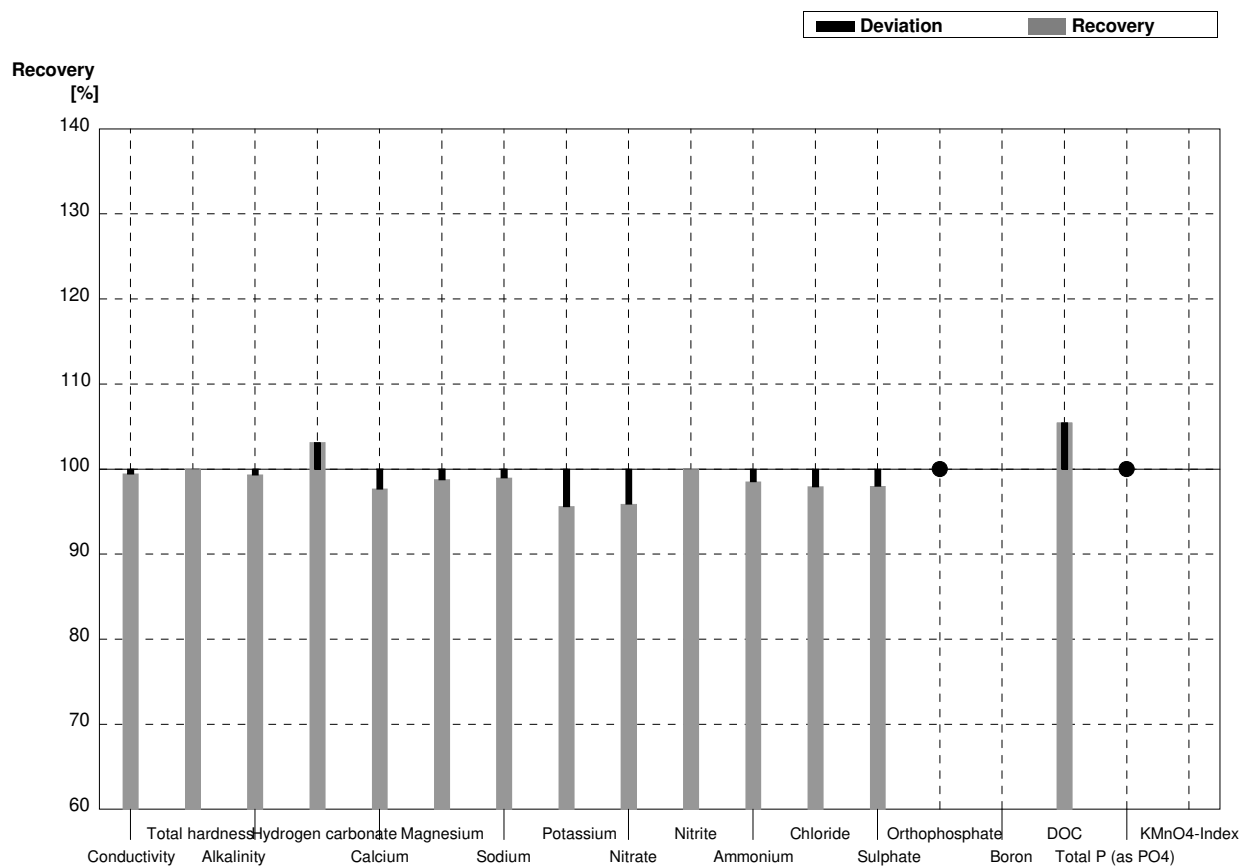
**Sample N164A**  
**Laboratory X**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	308	2	µS/cm	99%
Total hardness	0,578	0,007	0,595	0,1	mmol/l	103%
Alkalinity	2,158	0,012	2,16	0,1	mmol/l	100%
Hydrogen carbonate	128,6	0,8	132	6	mg/l	103%
Calcium	16,2	0,2	15,9	1,0	mg/l	98%
Magnesium	4,22	0,05	4,14	0,2	mg/l	98%
Sodium	41,36	0,16	40,4	0,2	mg/l	98%
Potassium	6,81	0,03	6,71	0,1	mg/l	99%
Nitrate	<0,2		<0,4	0,4	mg/l	•
Nitrite	0,0645	0,0002	0,065	0,002	mg/l	101%
Ammonium	<0,01		<0,006	0,003	mg/l	•
Chloride	13,8	0,4	13,3	0,2	mg/l	96%
Sulphate	25,1	0,2	24,6	2	mg/l	98%
Orthophosphate	0,071	0,003	0,072	0,002	mg/l	101%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	10,0	0,2	mg/l	101%
Total P (as PO4)	0,118	0,002	0,116	0,005	mg/l	98%
KMnO4-Index	6,8	0,4			mg/l	



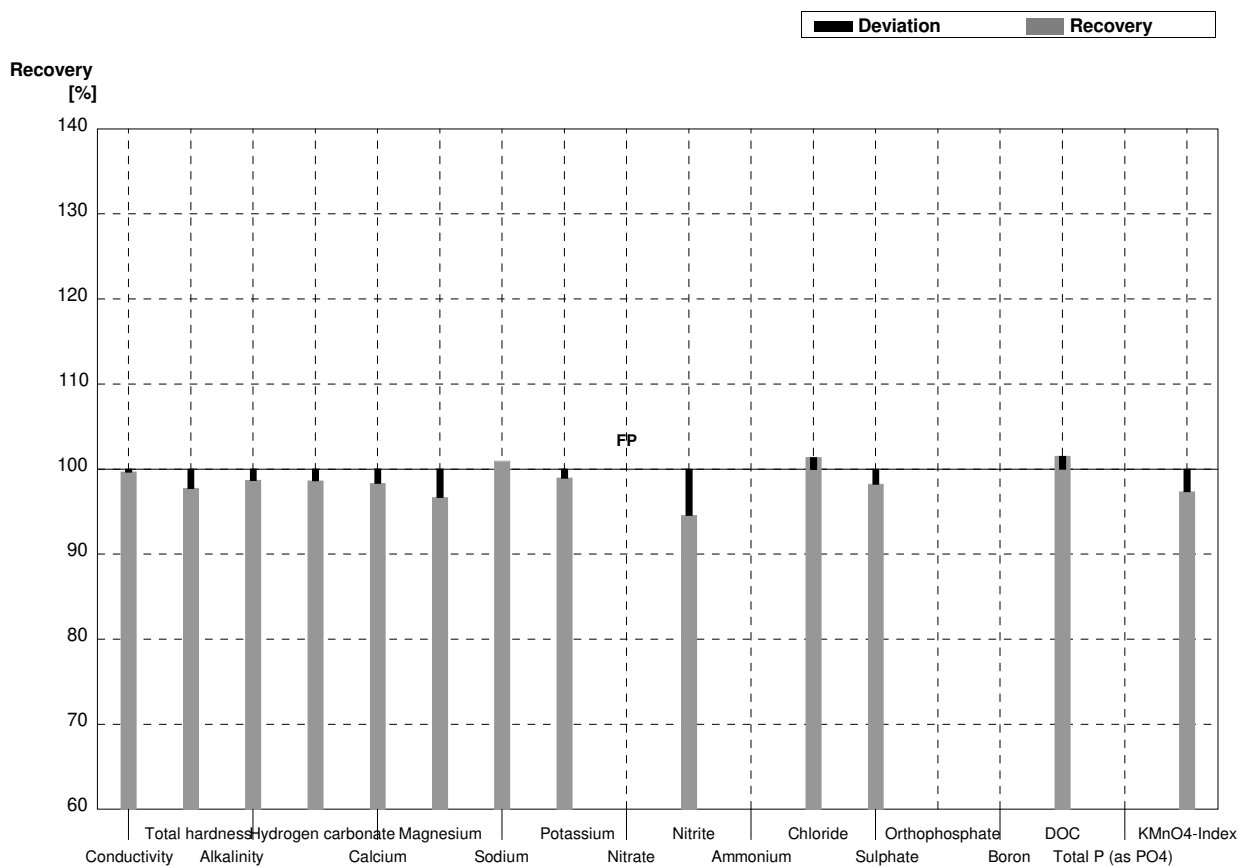
**Sample N164B**  
**Laboratory X**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	550	2	µS/cm	99%
Total hardness	1,97	0,02	1,97	0,1	mmol/l	100%
Alkalinity	1,671	0,014	1,66	0,1	mmol/l	99%
Hydrogen carbonate	98,9	0,9	102	6	mg/l	103%
Calcium	51,9	0,7	50,7	1,0	mg/l	98%
Magnesium	16,4	0,2	16,2	0,2	mg/l	99%
Sodium	28,39	0,19	28,1	0,2	mg/l	99%
Potassium	4,10	0,04	3,92	0,1	mg/l	96%
Nitrate	53,6	1,3	51,4	0,4	mg/l	96%
Nitrite	0,0152	0,0020	0,0152	0,002	mg/l	100%
Ammonium	0,0478	0,0053	0,0471	0,003	mg/l	99%
Chloride	48,9	0,9	47,9	0,2	mg/l	98%
Sulphate	64,9	0,8	63,6	2	mg/l	98%
Orthophosphate	<0,009		0,005	0,002	mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	6,57	0,2	mg/l	105%
Total P (as PO4)	<0,009		<0,009	0,005	mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



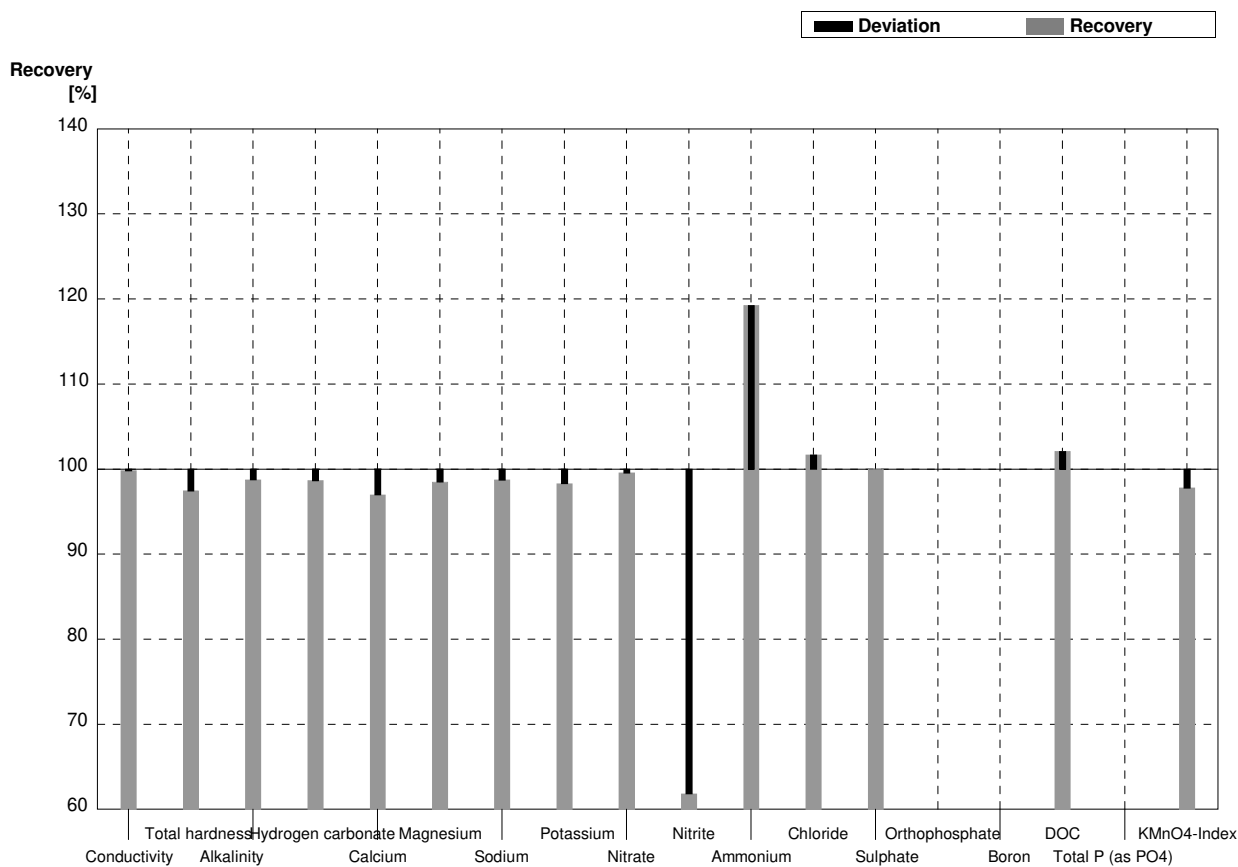
**Sample N164A**  
**Laboratory Y**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	309,0	6,8	µS/cm	100%
Total hardness	0,578	0,007	0,565	0,02	mmol/l	98%
Alkalinity	2,158	0,012	2,13	0,04	mmol/l	99%
Hydrogen carbonate	128,6	0,8	126,84	2,66	mg/l	99%
Calcium	16,2	0,2	15,93	0,62	mg/l	98%
Magnesium	4,22	0,05	4,08	0,19	mg/l	97%
Sodium	41,36	0,16	41,76	2,00	mg/l	101%
Potassium	6,81	0,03	6,74	0,43	mg/l	99%
Nitrate	<0,2		0,290	0,02	mg/l	FP
Nitrite	0,0645	0,0002	0,061	0,004	mg/l	95%
Ammonium	<0,01		nn		mg/l	
Chloride	13,8	0,4	13,99	0,66	mg/l	101%
Sulphate	25,1	0,2	24,66	1,23	mg/l	98%
Orthophosphate	0,071	0,003			mg/l	
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	10,06	1,75	mg/l	102%
Total P (as PO4)	0,118	0,002			mg/l	
KMnO4-Index	6,8	0,4	6,62	1,4	mg/l	97%



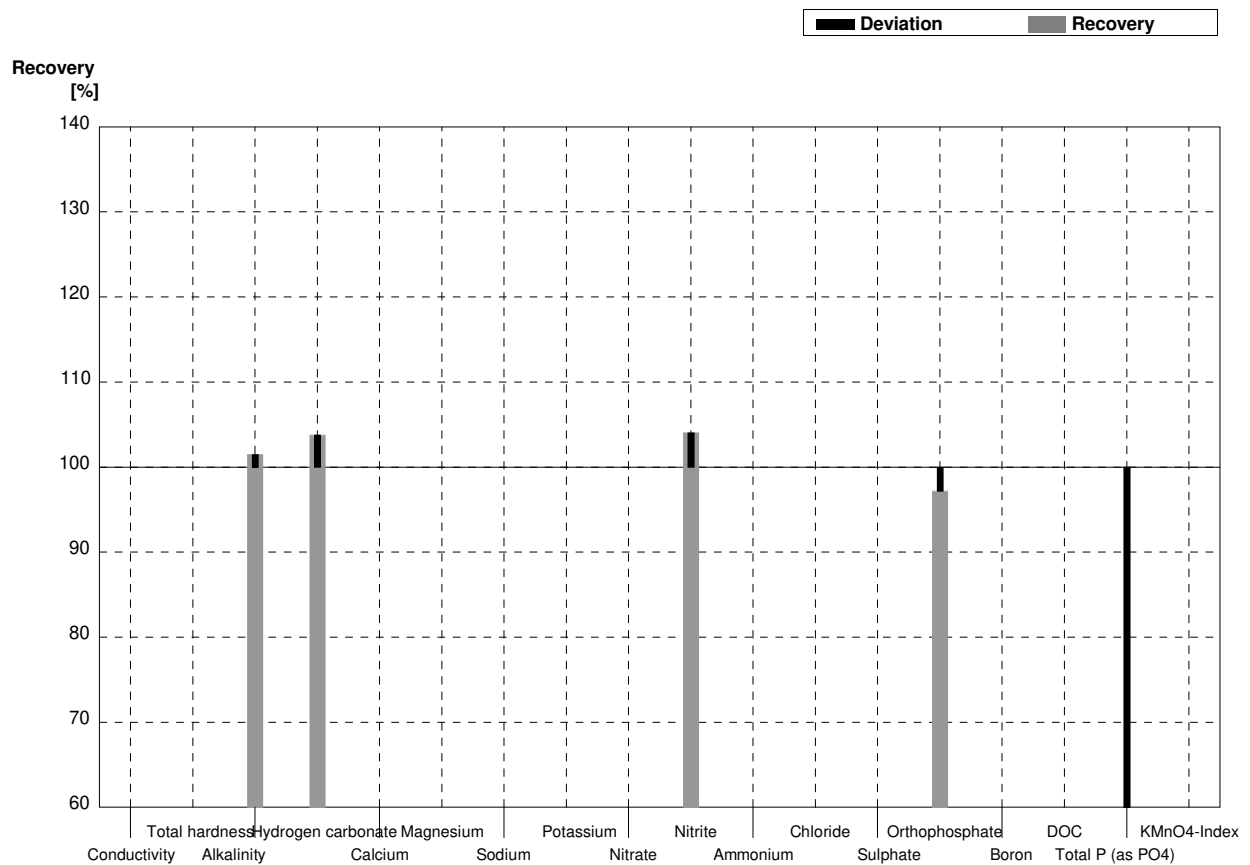
**Sample N164B**  
**Laboratory Y**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	552,0	12,1	µS/cm	100%
Total hardness	1,97	0,02	1,920	0,08	mmol/l	97%
Alkalinity	1,671	0,014	1,65	0,03	mmol/l	99%
Hydrogen carbonate	98,9	0,9	97,57	2,05	mg/l	99%
Calcium	51,9	0,7	50,33	1,96	mg/l	97%
Magnesium	16,4	0,2	16,15	0,76	mg/l	98%
Sodium	28,39	0,19	28,03	1,35	mg/l	99%
Potassium	4,10	0,04	4,03	0,26	mg/l	98%
Nitrate	53,6	1,3	53,37	3,58	mg/l	100%
Nitrite	0,0152	0,0020	0,0094	0,001	mg/l	62%
Ammonium	0,0478	0,0053	0,057	0,009	mg/l	119%
Chloride	48,9	0,9	49,72	2,34	mg/l	102%
Sulphate	64,9	0,8	64,92	3,25	mg/l	100%
Orthophosphate	<0,009				mg/l	
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	6,36	1,11	mg/l	102%
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	2,72	0,11	2,66	0,56	mg/l	98%



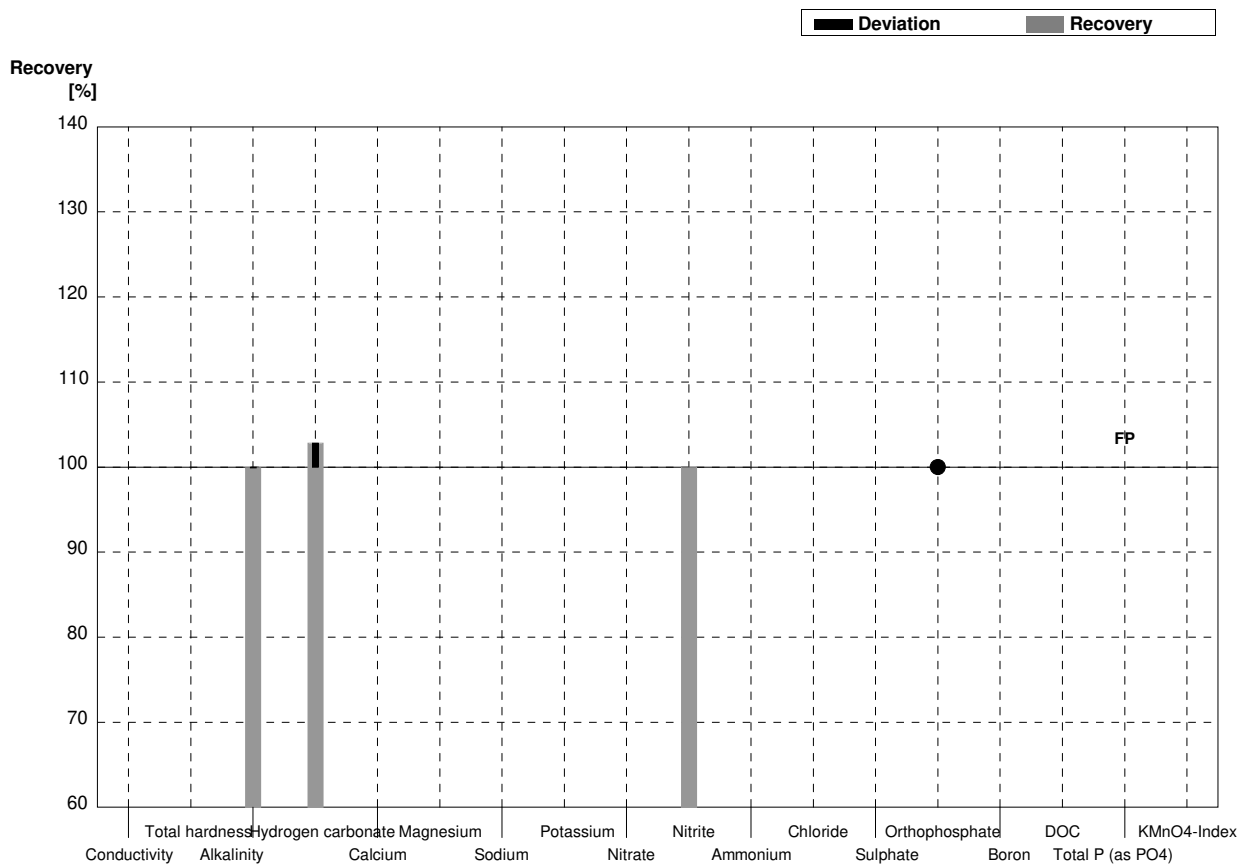
**Sample N164A**  
**Laboratory Z**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1			µS/cm	
Total hardness	0,578	0,007			mmol/l	
Alkalinity	2,158	0,012	2,19		mmol/l	101%
Hydrogen carbonate	128,6	0,8	133,47		mg/l	104%
Calcium	16,2	0,2			mg/l	
Magnesium	4,22	0,05			mg/l	
Sodium	41,36	0,16			mg/l	
Potassium	6,81	0,03			mg/l	
Nitrate	<0,2				mg/l	
Nitrite	0,0645	0,0002	0,0671		mg/l	104%
Ammonium	<0,01				mg/l	
Chloride	13,8	0,4			mg/l	
Sulphate	25,1	0,2			mg/l	
Orthophosphate	0,071	0,003	0,069		mg/l	97%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06			mg/l	
Total P (as PO4)	0,118	0,002	0,0365		mg/l	31%
KMnO4-Index	6,8	0,4			mg/l	



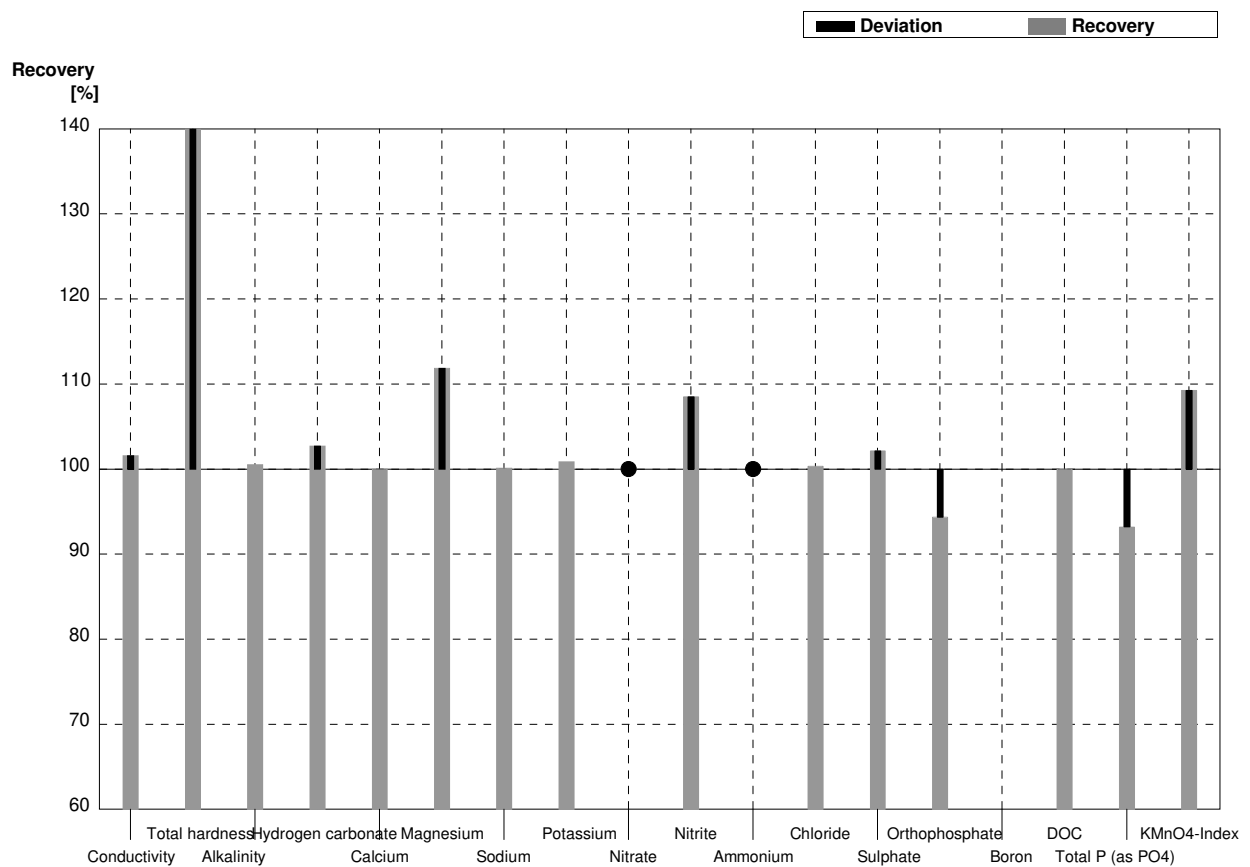
**Sample N164B**  
**Laboratory Z**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2			µS/cm	
Total hardness	1,97	0,02			mmol/l	
Alkalinity	1,671	0,014	1,67		mmol/l	100%
Hydrogen carbonate	98,9	0,9	101,7		mg/l	103%
Calcium	51,9	0,7			mg/l	
Magnesium	16,4	0,2			mg/l	
Sodium	28,39	0,19			mg/l	
Potassium	4,10	0,04			mg/l	
Nitrate	53,6	1,3			mg/l	
Nitrite	0,0152	0,0020	0,0152		mg/l	100%
Ammonium	0,0478	0,0053			mg/l	
Chloride	48,9	0,9			mg/l	
Sulphate	64,9	0,8			mg/l	
Orthophosphate	<0,009		<0,05		mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04			mg/l	
Total P (as PO4)	<0,009		0,0110		mg/l	FP
KMnO4-Index	2,72	0,11			mg/l	



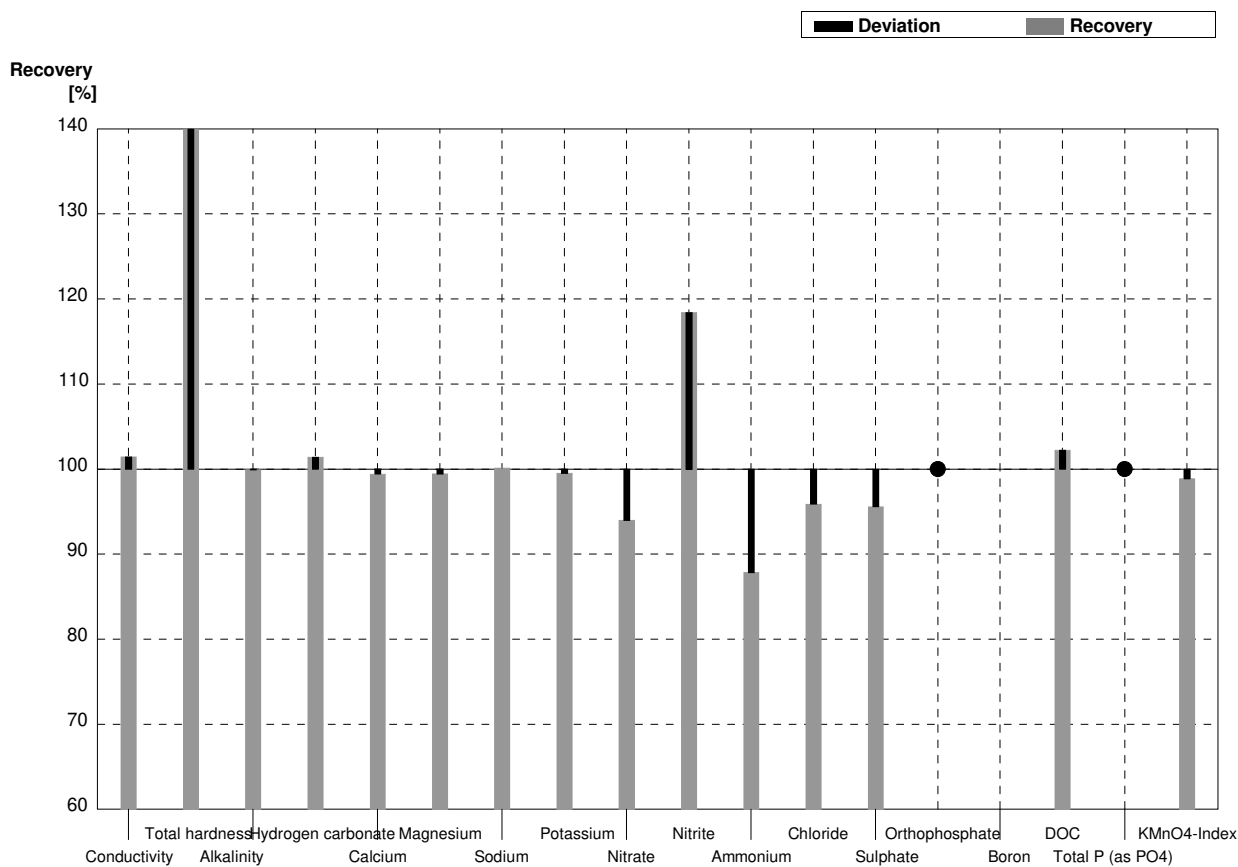
**Sample N164A**  
**Laboratory AA**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	315		µS/cm	102%
Total hardness	0,578	0,007	6,1		mmol/l	1055%
Alkalinity	2,158	0,012	2,17		mmol/l	101%
Hydrogen carbonate	128,6	0,8	132,1		mg/l	103%
Calcium	16,2	0,2	16,2		mg/l	100%
Magnesium	4,22	0,05	4,72		mg/l	112%
Sodium	41,36	0,16	41,42		mg/l	100%
Potassium	6,81	0,03	6,87		mg/l	101%
Nitrate	<0,2		<1,0		mg/l	•
Nitrite	0,0645	0,0002	0,070		mg/l	109%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	13,8	0,4	13,85		mg/l	100%
Sulphate	25,1	0,2	25,64		mg/l	102%
Orthophosphate	0,071	0,003	0,067		mg/l	94%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	9,91		mg/l	100%
Total P (as PO4)	0,118	0,002	0,110		mg/l	93%
KMnO4-Index	6,8	0,4	7,43		mg/l	109%



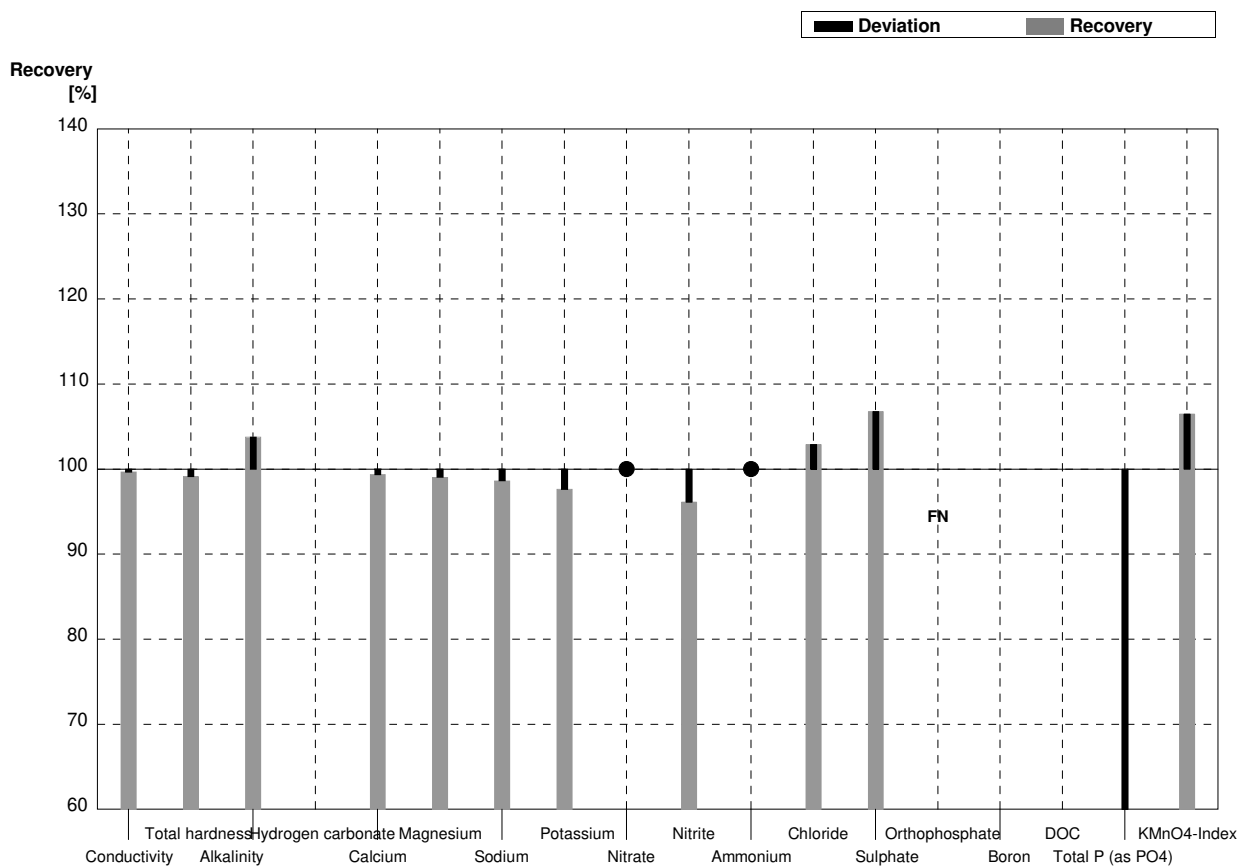
**Sample N164B**  
**Laboratory AA**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	561		µS/cm	101%
Total hardness	1,97	0,02	19,8		mmol/l	1005%
Alkalinity	1,671	0,014	1,67		mmol/l	100%
Hydrogen carbonate	98,9	0,9	100,3		mg/l	101%
Calcium	51,9	0,7	51,6		mg/l	99%
Magnesium	16,4	0,2	16,31		mg/l	99%
Sodium	28,39	0,19	28,43		mg/l	100%
Potassium	4,10	0,04	4,08		mg/l	100%
Nitrate	53,6	1,3	50,38		mg/l	94%
Nitrite	0,0152	0,0020	0,0180		mg/l	118%
Ammonium	0,0478	0,0053	0,0420		mg/l	88%
Chloride	48,9	0,9	46,89		mg/l	96%
Sulphate	64,9	0,8	62,04		mg/l	96%
Orthophosphate	<0,009		<0,009		mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	6,37		mg/l	102%
Total P (as PO4)	<0,009		<0,009		mg/l	•
KMnO4-Index	2,72	0,11	2,69		mg/l	99%



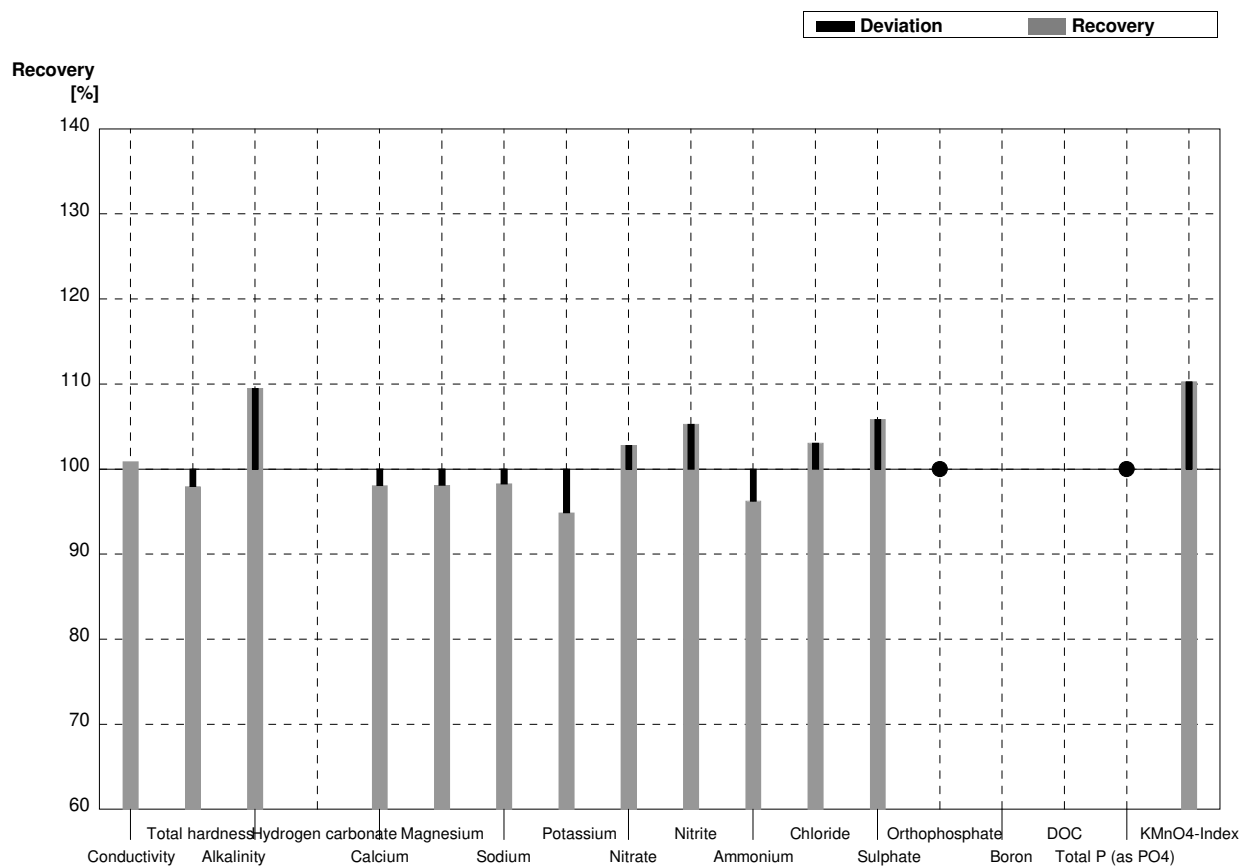
**Sample N164A**  
**Laboratory AB**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	309	16	µS/cm	100%
Total hardness	0,578	0,007	0,573		mmol/l	99%
Alkalinity	2,158	0,012	2,24	0,11	mmol/l	104%
Hydrogen carbonate	128,6	0,8			mg/l	
Calcium	16,2	0,2	16,1		mg/l	99%
Magnesium	4,22	0,05	4,18		mg/l	99%
Sodium	41,36	0,16	40,8		mg/l	99%
Potassium	6,81	0,03	6,65		mg/l	98%
Nitrate	<0,2		<1,0	0,15	mg/l	•
Nitrite	0,0645	0,0002	0,062	0,005	mg/l	96%
Ammonium	<0,01		<0,01	0,002	mg/l	•
Chloride	13,8	0,4	14,2	1,07	mg/l	103%
Sulphate	25,1	0,2	26,8	2,36	mg/l	107%
Orthophosphate	0,071	0,003	<0,015	0,002	mg/l	FN
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06			mg/l	
Total P (as PO4)	0,118	0,002	0,0280	0,0042	mg/l	24%
KMnO4-Index	6,8	0,4	7,24	2,25	mg/l	106%



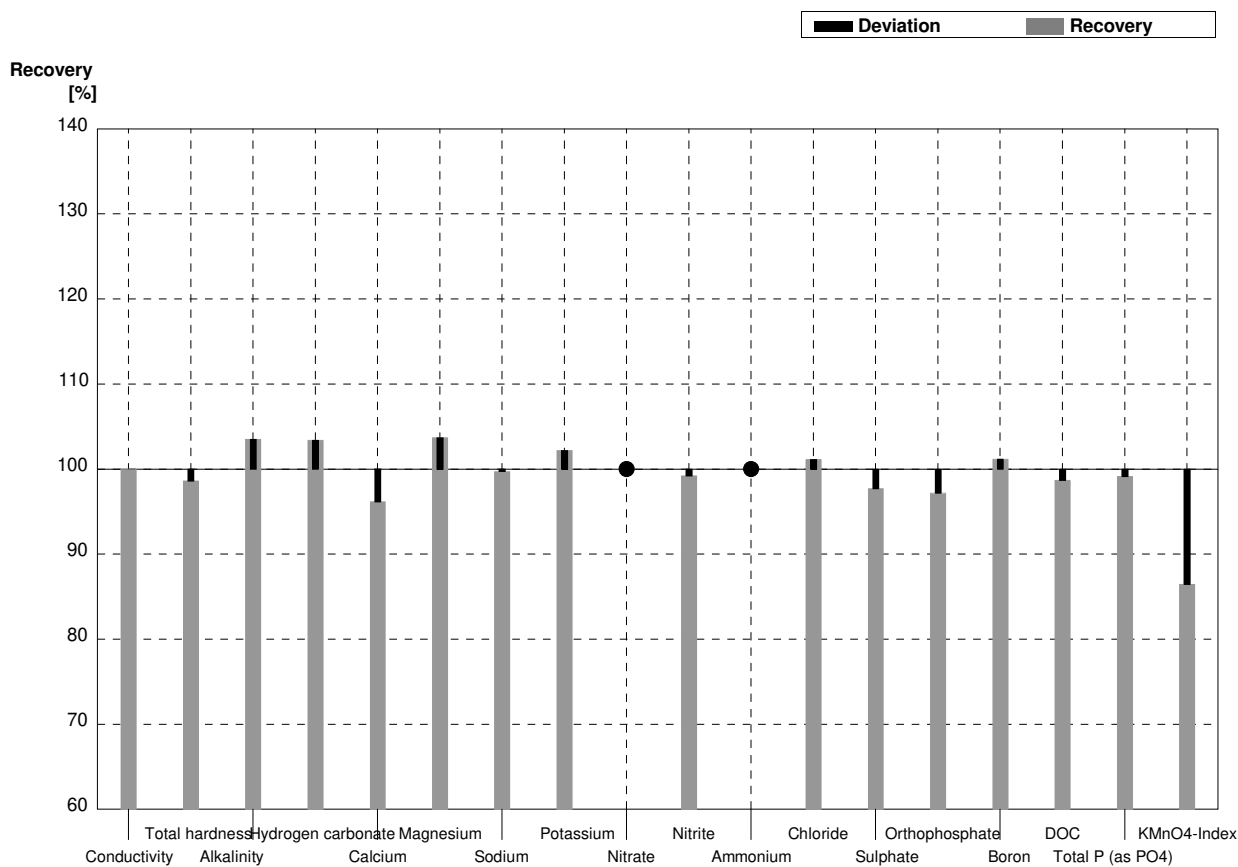
**Sample N164B**  
**Laboratory AB**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	558	28	µS/cm	101%
Total hardness	1,97	0,02	1,93		mmol/l	98%
Alkalinity	1,671	0,014	1,83	0,09	mmol/l	110%
Hydrogen carbonate	98,9	0,9			mg/l	
Calcium	51,9	0,7	50,9		mg/l	98%
Magnesium	16,4	0,2	16,09		mg/l	98%
Sodium	28,39	0,19	27,9		mg/l	98%
Potassium	4,10	0,04	3,89		mg/l	95%
Nitrate	53,6	1,3	55,1	8,38	mg/l	103%
Nitrite	0,0152	0,0020	0,0160	0,001	mg/l	105%
Ammonium	0,0478	0,0053	0,0460	0,008	mg/l	96%
Chloride	48,9	0,9	50,4	3,82	mg/l	103%
Sulphate	64,9	0,8	68,7	6,05	mg/l	106%
Orthophosphate	<0,009		<0,015	0,002	mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04			mg/l	
Total P (as PO4)	<0,009		<0,015	0,0022	mg/l	•
KMnO4-Index	2,72	0,11	3,00	0,90	mg/l	110%



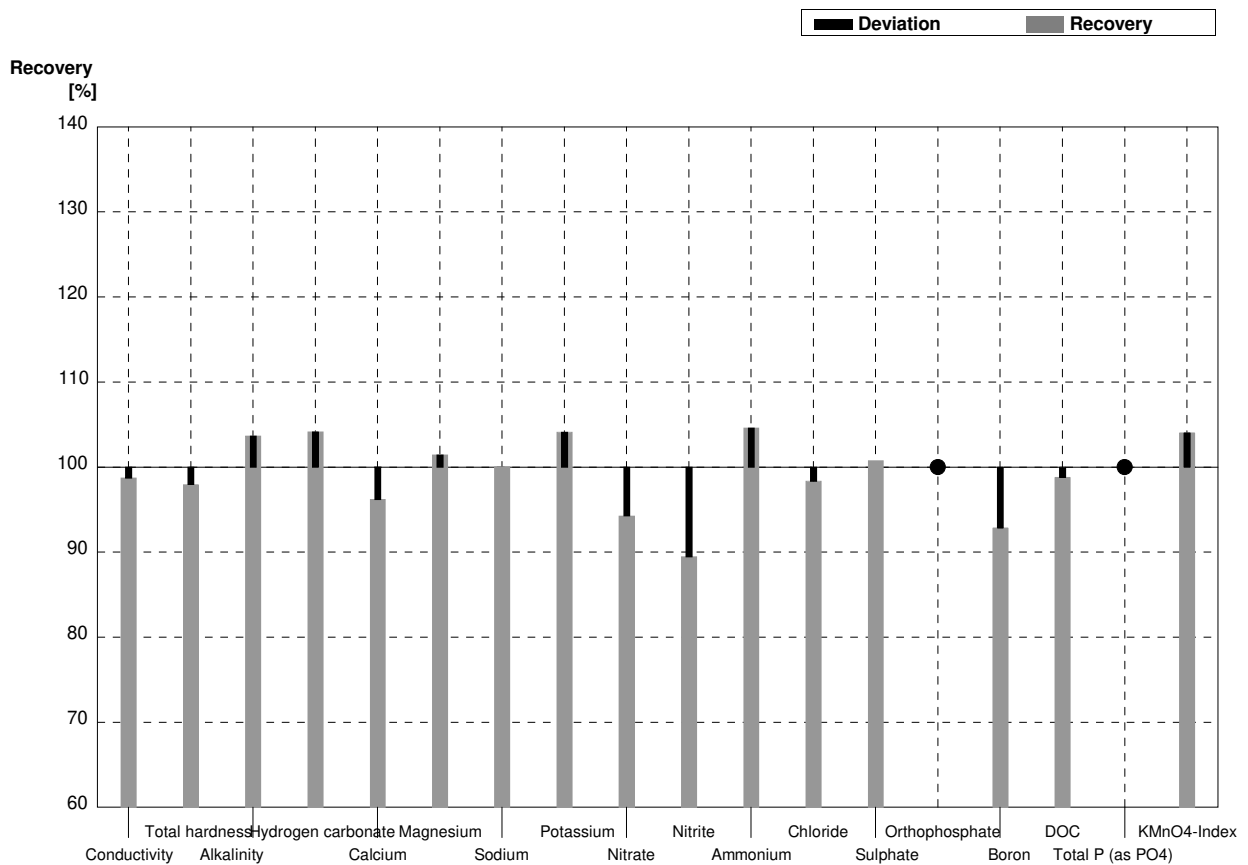
**Sample N164A**  
**Laboratory AC**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	310	17,24	µS/cm	100%
Total hardness	0,578	0,007	0,57	0,06	mmol/l	99%
Alkalinity	2,158	0,012	2,234	0,1117	mmol/l	104%
Hydrogen carbonate	128,6	0,8	133	6,65	mg/l	103%
Calcium	16,2	0,2	15,58	1,6	mg/l	96%
Magnesium	4,22	0,05	4,376	0,44	mg/l	104%
Sodium	41,36	0,16	41,25	4,1	mg/l	100%
Potassium	6,81	0,03	6,96	0,7	mg/l	102%
Nitrate	<0,2		<1		mg/l	•
Nitrite	0,0645	0,0002	0,064	0,006	mg/l	99%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	13,8	0,4	13,957	1,39	mg/l	101%
Sulphate	25,1	0,2	24,528	2,45	mg/l	98%
Orthophosphate	0,071	0,003	0,069	0,007	mg/l	97%
Boron	0,0253	0,0010	0,0256	0,003	mg/l	101%
DOC	9,91	0,06	9,78	1,7692	mg/l	99%
Total P (as PO4)	0,118	0,002	0,117	0,012	mg/l	99%
KMnO4-Index	6,8	0,4	5,88	0,88	mg/l	86%



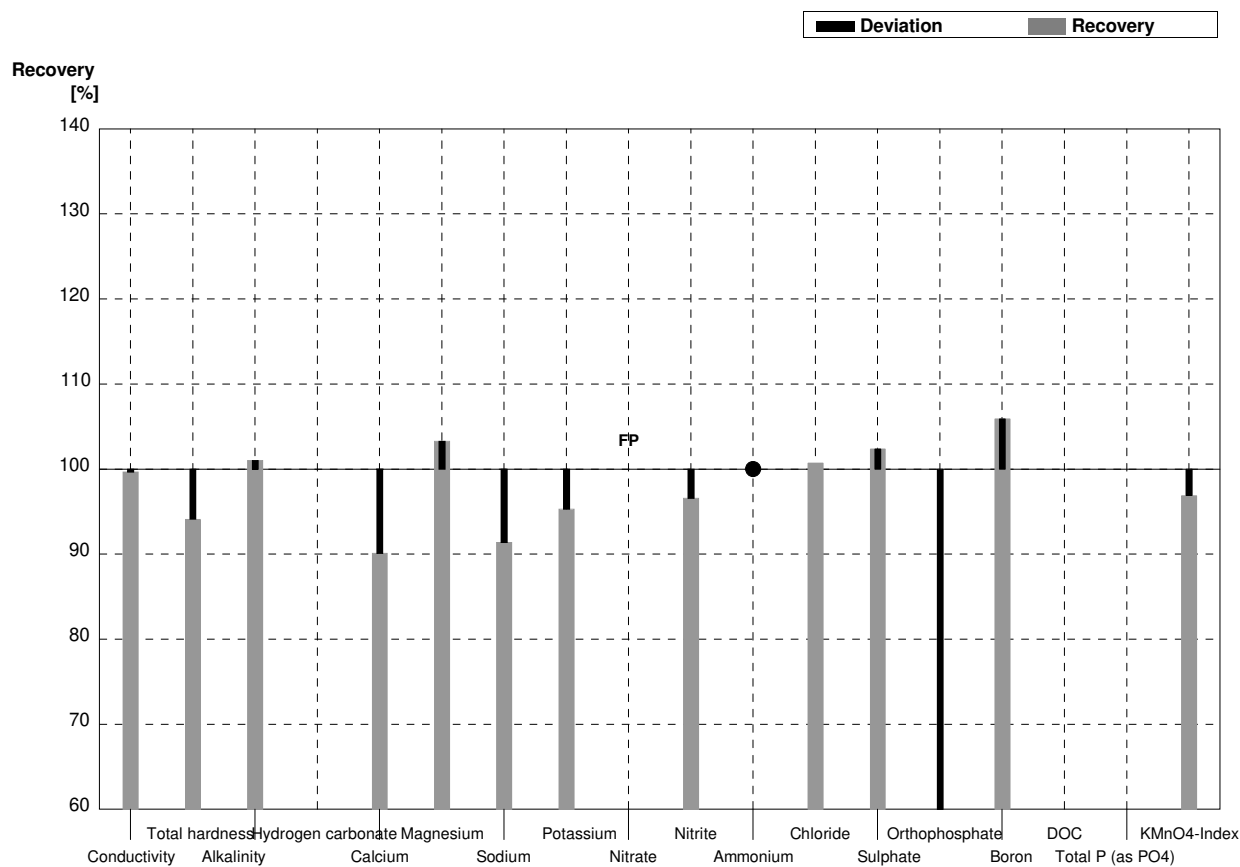
**Sample N164B**  
**Laboratory AC**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	546	30,36	µS/cm	99%
Total hardness	1,97	0,02	1,93	0,2	mmol/l	98%
Alkalinity	1,671	0,014	1,732	0,0866	mmol/l	104%
Hydrogen carbonate	98,9	0,9	103	5,15	mg/l	104%
Calcium	51,9	0,7	49,93	5	mg/l	96%
Magnesium	16,4	0,2	16,64	1,66	mg/l	101%
Sodium	28,39	0,19	28,41	2,84	mg/l	100%
Potassium	4,10	0,04	4,269	0,43	mg/l	104%
Nitrate	53,6	1,3	50,53	5,05	mg/l	94%
Nitrite	0,0152	0,0020	0,0136	0,001	mg/l	89%
Ammonium	0,0478	0,0053	0,050	0,005	mg/l	105%
Chloride	48,9	0,9	48,099	4,81	mg/l	98%
Sulphate	64,9	0,8	65,395	6,54	mg/l	101%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,0505	0,0004	0,0469	0,005	mg/l	93%
DOC	6,23	0,04	6,156	1,11362	mg/l	99%
Total P (as PO4)	<0,009		<0,01		mg/l	•
KMnO4-Index	2,72	0,11	2,83	0,42	mg/l	104%



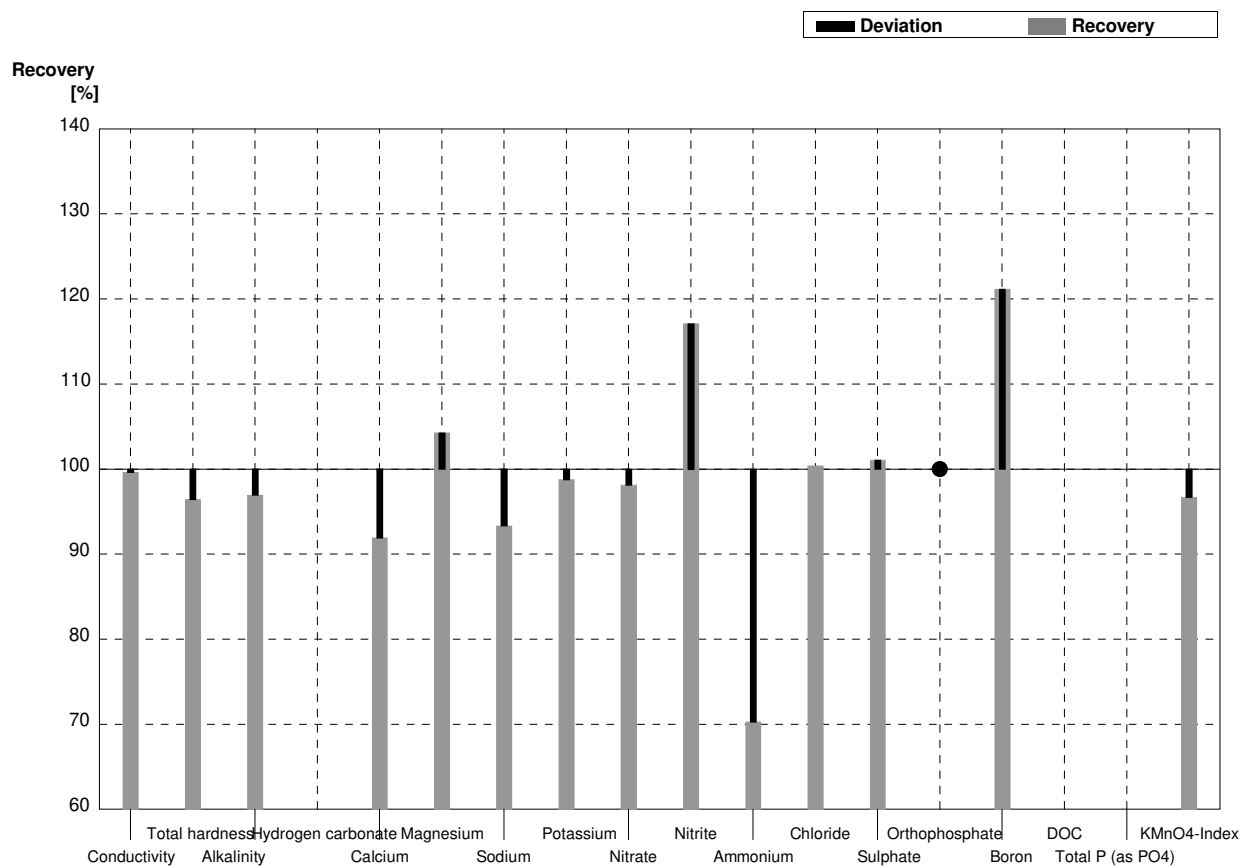
**Sample N164A**  
**Laboratory AD**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	309	2	µS/cm	100%
Total hardness	0,578	0,007	0,544	0,016	mmol/l	94%
Alkalinity	2,158	0,012	2,18	0,03	mmol/l	101%
Hydrogen carbonate	128,6	0,8			mg/l	
Calcium	16,2	0,2	14,6	0,4	mg/l	90%
Magnesium	4,22	0,05	4,36	0,13	mg/l	103%
Sodium	41,36	0,16	37,8	1,1	mg/l	91%
Potassium	6,81	0,03	6,49	0,19	mg/l	95%
Nitrate	<0,2		1,07	0,16	mg/l	FP
Nitrite	0,0645	0,0002	0,0623	0,0093	mg/l	97%
Ammonium	<0,01		<0,012		mg/l	•
Chloride	13,8	0,4	13,9	1,7	mg/l	101%
Sulphate	25,1	0,2	25,7	2,3	mg/l	102%
Orthophosphate	0,071	0,003	0,0172	0,0017	mg/l	24%
Boron	0,0253	0,0010	0,0268	0,0008	mg/l	106%
DOC	9,91	0,06			mg/l	
Total P (as PO4)	0,118	0,002			mg/l	
KMnO4-Index	6,8	0,4	6,59	0,22	mg/l	97%



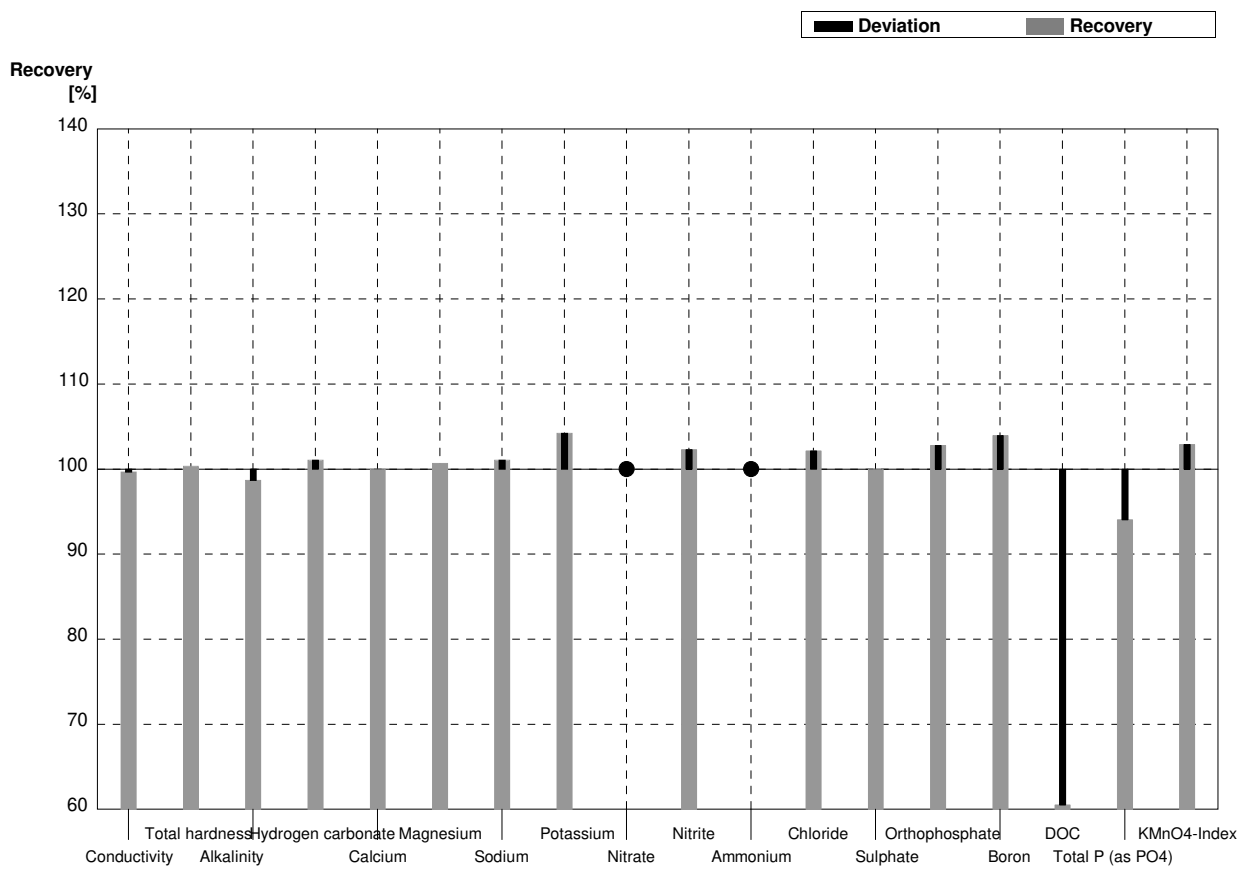
**Sample N164B**  
**Laboratory AD**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	551	3	µS/cm	100%
Total hardness	1,97	0,02	1,90	0,06	mmol/l	96%
Alkalinity	1,671	0,014	1,62	0,02	mmol/l	97%
Hydrogen carbonate	98,9	0,9			mg/l	
Calcium	51,9	0,7	47,7	1,4	mg/l	92%
Magnesium	16,4	0,2	17,1	0,5	mg/l	104%
Sodium	28,39	0,19	26,5	0,8	mg/l	93%
Potassium	4,10	0,04	4,05	0,12	mg/l	99%
Nitrate	53,6	1,3	52,6	7,9	mg/l	98%
Nitrite	0,0152	0,0020	0,0178	0,0027	mg/l	117%
Ammonium	0,0478	0,0053	0,0336	0,0044	mg/l	70%
Chloride	48,9	0,9	49,1	5,9	mg/l	100%
Sulphate	64,9	0,8	65,6	5,9	mg/l	101%
Orthophosphate	<0,009		0,00525	0,00053	mg/l	•
Boron	0,0505	0,0004	0,0612	0,0018	mg/l	121%
DOC	6,23	0,04			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	2,72	0,11	2,63	0,09	mg/l	97%



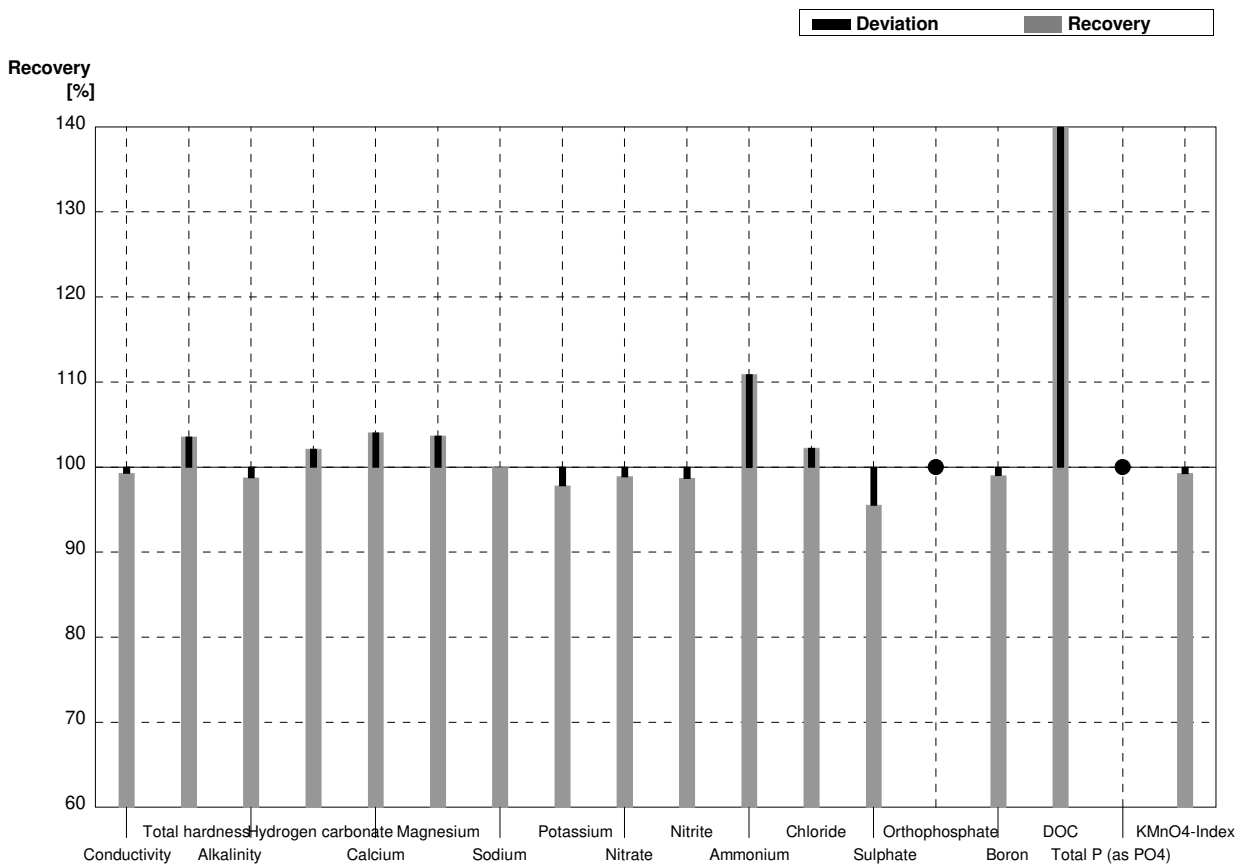
**Sample N164A**  
**Laboratory AE**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	309	6	µS/cm	100%
Total hardness	0,578	0,007	0,58	0,04	mmol/l	100%
Alkalinity	2,158	0,012	2,13	0,11	mmol/l	99%
Hydrogen carbonate	128,6	0,8	130	10	mg/l	101%
Calcium	16,2	0,2	16,2	1,5	mg/l	100%
Magnesium	4,22	0,05	4,25	0,3	mg/l	101%
Sodium	41,36	0,16	41,8	2,5	mg/l	101%
Potassium	6,81	0,03	7,1	0,78	mg/l	104%
Nitrate	<0,2		<1		mg/l	•
Nitrite	0,0645	0,0002	0,066	0,008	mg/l	102%
Ammonium	<0,01		<0,02		mg/l	•
Chloride	13,8	0,4	14,1	1,10	mg/l	102%
Sulphate	25,1	0,2	25,1	1,50	mg/l	100%
Orthophosphate	0,071	0,003	0,073	0,007	mg/l	103%
Boron	0,0253	0,0010	0,0263	0,004	mg/l	104%
DOC	9,91	0,06	6,0	0,72	mg/l	61%
Total P (as PO4)	0,118	0,002	0,111	0,010	mg/l	94%
KMnO4-Index	6,8	0,4	7,0	0,5	mg/l	103%



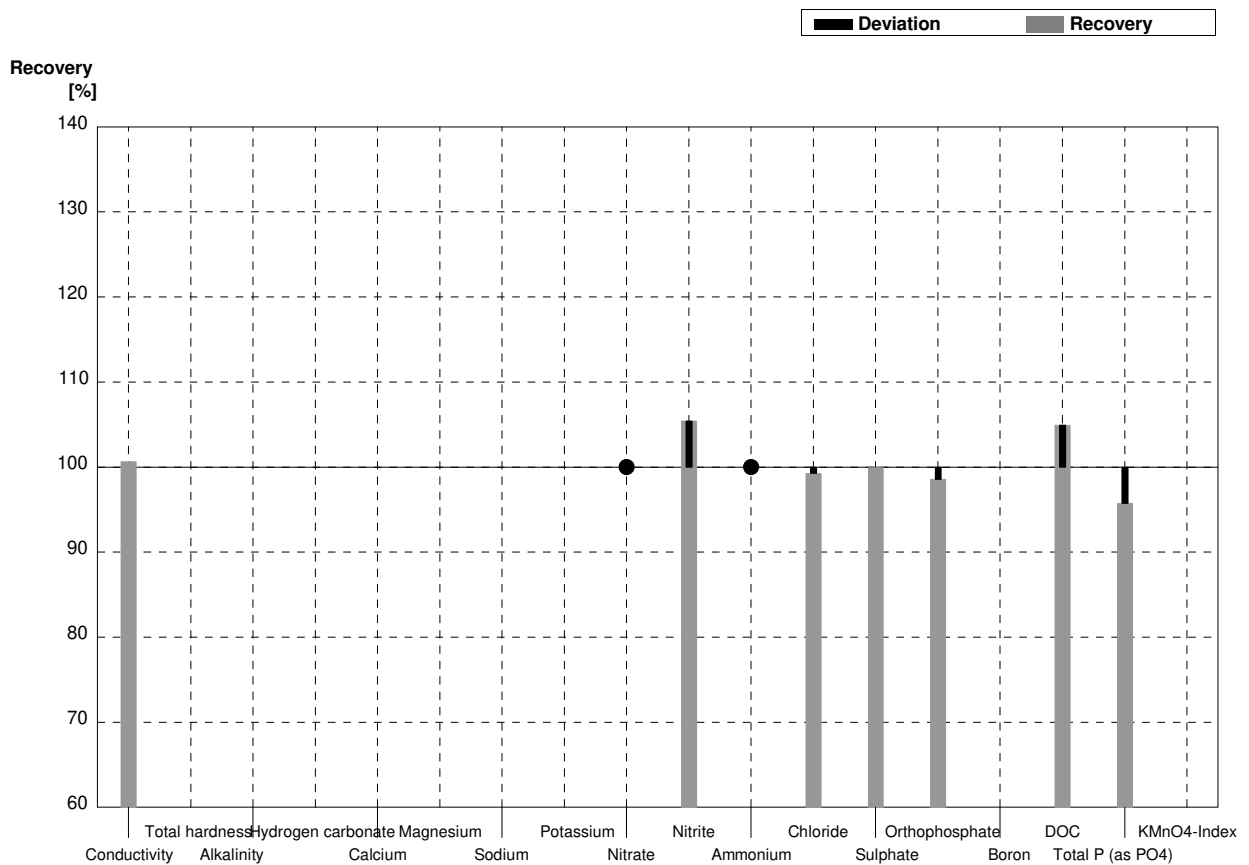
**Sample N164B**  
**Laboratory AE**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	549	11	µS/cm	99%
Total hardness	1,97	0,02	2,04	0,14	mmol/l	104%
Alkalinity	1,671	0,014	1,65	0,09	mmol/l	99%
Hydrogen carbonate	98,9	0,9	101	8	mg/l	102%
Calcium	51,9	0,7	54	4,3	mg/l	104%
Magnesium	16,4	0,2	17,0	1,36	mg/l	104%
Sodium	28,39	0,19	28,4	1,7	mg/l	100%
Potassium	4,10	0,04	4,01	0,44	mg/l	98%
Nitrate	53,6	1,3	53	4,2	mg/l	99%
Nitrite	0,0152	0,0020	0,0150	0,002	mg/l	99%
Ammonium	0,0478	0,0053	0,053	0,012	mg/l	111%
Chloride	48,9	0,9	50	3,98	mg/l	102%
Sulphate	64,9	0,8	62	3,74	mg/l	96%
Orthophosphate	<0,009		<0,009		mg/l	•
Boron	0,0505	0,0004	0,050	0,010	mg/l	99%
DOC	6,23	0,04	9,5	1,14	mg/l	152%
Total P (as PO4)	<0,009		<0,009		mg/l	•
KMnO4-Index	2,72	0,11	2,70	0,19	mg/l	99%



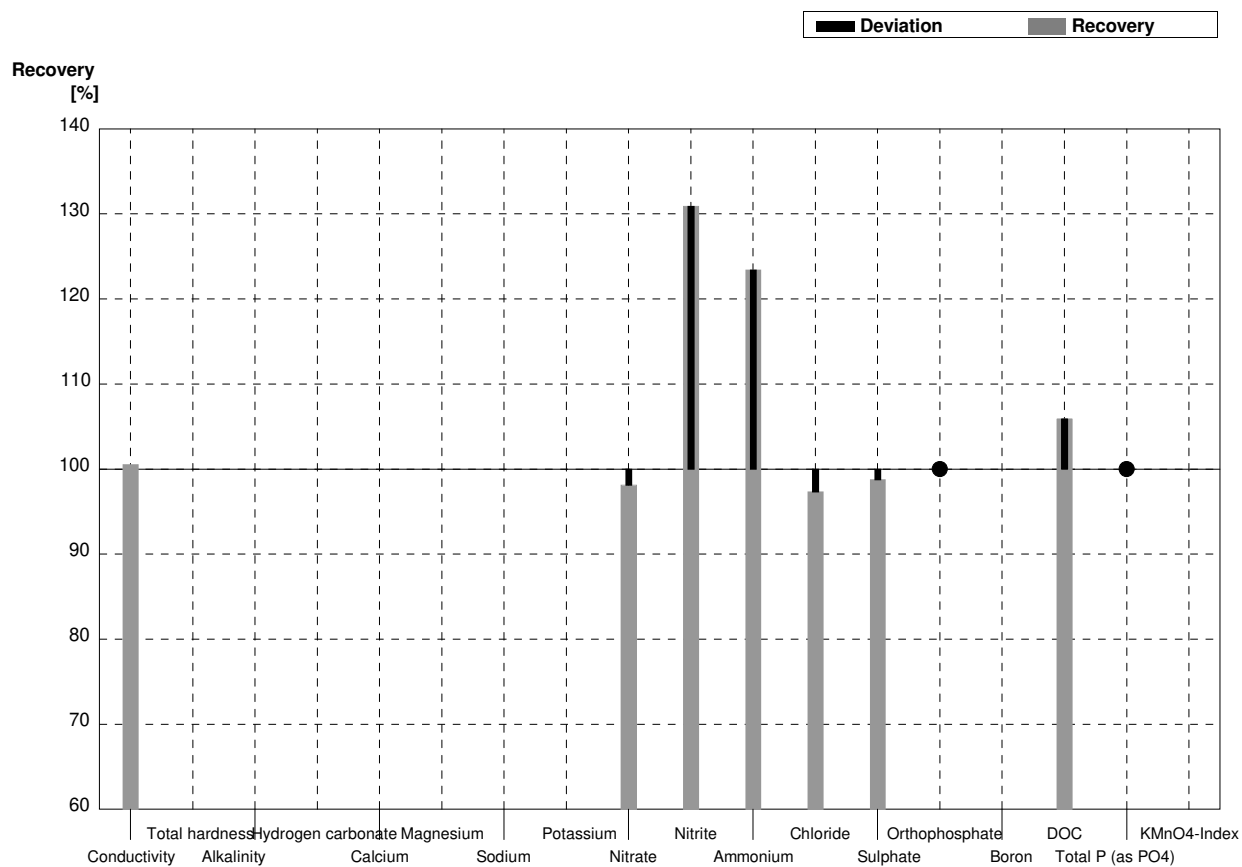
**Sample N164A**  
**Laboratory AF**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	312	16	µS/cm	101%
Total hardness	0,578	0,007			mmol/l	
Alkalinity	2,158	0,012			mmol/l	
Hydrogen carbonate	128,6	0,8			mg/l	
Calcium	16,2	0,2			mg/l	
Magnesium	4,22	0,05			mg/l	
Sodium	41,36	0,16			mg/l	
Potassium	6,81	0,03			mg/l	
Nitrate	<0,2		<0,797		mg/l	•
Nitrite	0,0645	0,0002	0,068	0,019	mg/l	105%
Ammonium	<0,01		<0,012		mg/l	•
Chloride	13,8	0,4	13,7	1,79	mg/l	99%
Sulphate	25,1	0,2	25,1	1,53	mg/l	100%
Orthophosphate	0,071	0,003	0,070	0,012	mg/l	99%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	10,4	1,88	mg/l	105%
Total P (as PO4)	0,118	0,002	0,113	0,014	mg/l	96%
KMnO4-Index	6,8	0,4			mg/l	



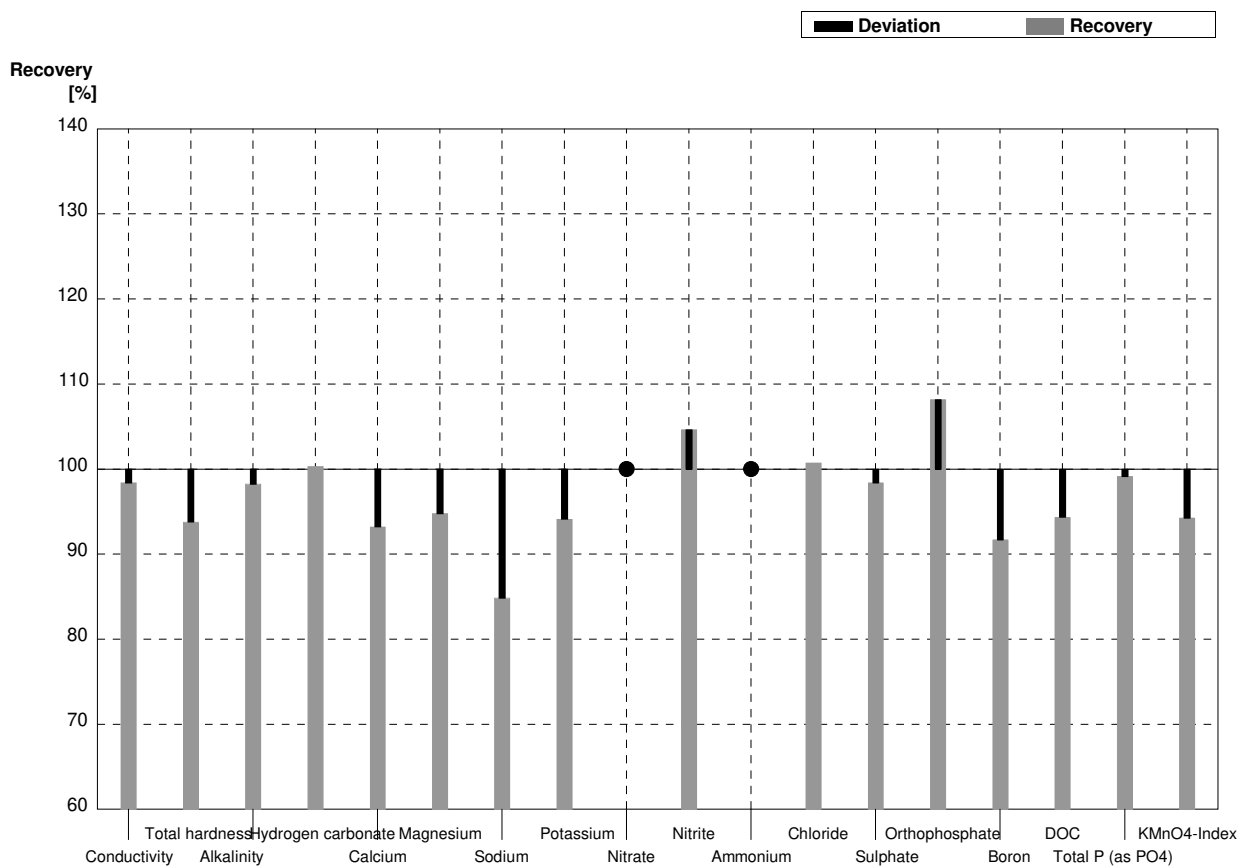
**Sample N164B**  
**Laboratory AF**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	556	28	µS/cm	101%
Total hardness	1,97	0,02			mmol/l	
Alkalinity	1,671	0,014			mmol/l	
Hydrogen carbonate	98,9	0,9			mg/l	
Calcium	51,9	0,7			mg/l	
Magnesium	16,4	0,2			mg/l	
Sodium	28,39	0,19			mg/l	
Potassium	4,10	0,04			mg/l	
Nitrate	53,6	1,3	52,6	2,33	mg/l	98%
Nitrite	0,0152	0,0020	0,0199	0,006	mg/l	131%
Ammonium	0,0478	0,0053	0,059	0,013	mg/l	123%
Chloride	48,9	0,9	47,6	6,22	mg/l	97%
Sulphate	64,9	0,8	64,1	3,91	mg/l	99%
Orthophosphate	<0,009		<0,015		mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	6,6	1,19	mg/l	106%
Total P (as PO4)	<0,009		<0,015		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



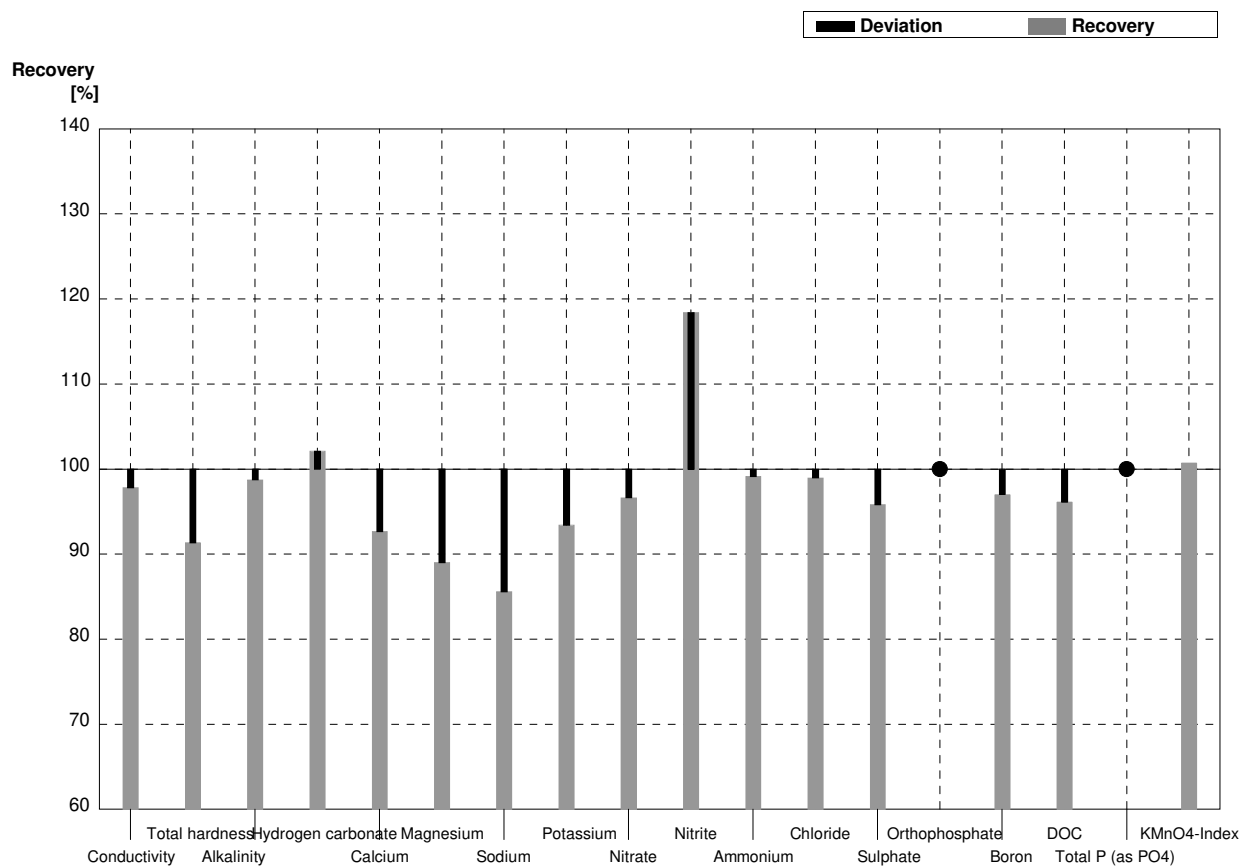
**Sample N164A**  
**Laboratory AG**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	305	9,2	µS/cm	98%
Total hardness	0,578	0,007	0,542	0,044	mmol/l	94%
Alkalinity	2,158	0,012	2,12	0,10	mmol/l	98%
Hydrogen carbonate	128,6	0,8	129	6,2	mg/l	100%
Calcium	16,2	0,2	15,1	0,69	mg/l	93%
Magnesium	4,22	0,05	4,00	0,33	mg/l	95%
Sodium	41,36	0,16	35,1	2,5	mg/l	85%
Potassium	6,81	0,03	6,41	0,46	mg/l	94%
Nitrate	<0,2		<0,2		mg/l	•
Nitrite	0,0645	0,0002	0,0675	0,007	mg/l	105%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	13,8	0,4	13,9	0,93	mg/l	101%
Sulphate	25,1	0,2	24,7	0,82	mg/l	98%
Orthophosphate	0,071	0,003	0,0768	0,0053	mg/l	108%
Boron	0,0253	0,0010	0,0232	0,0029	mg/l	92%
DOC	9,91	0,06	9,35	1,5	mg/l	94%
Total P (as PO4)	0,118	0,002	0,117	0,0081	mg/l	99%
KMnO4-Index	6,8	0,4	6,41	0,96	mg/l	94%



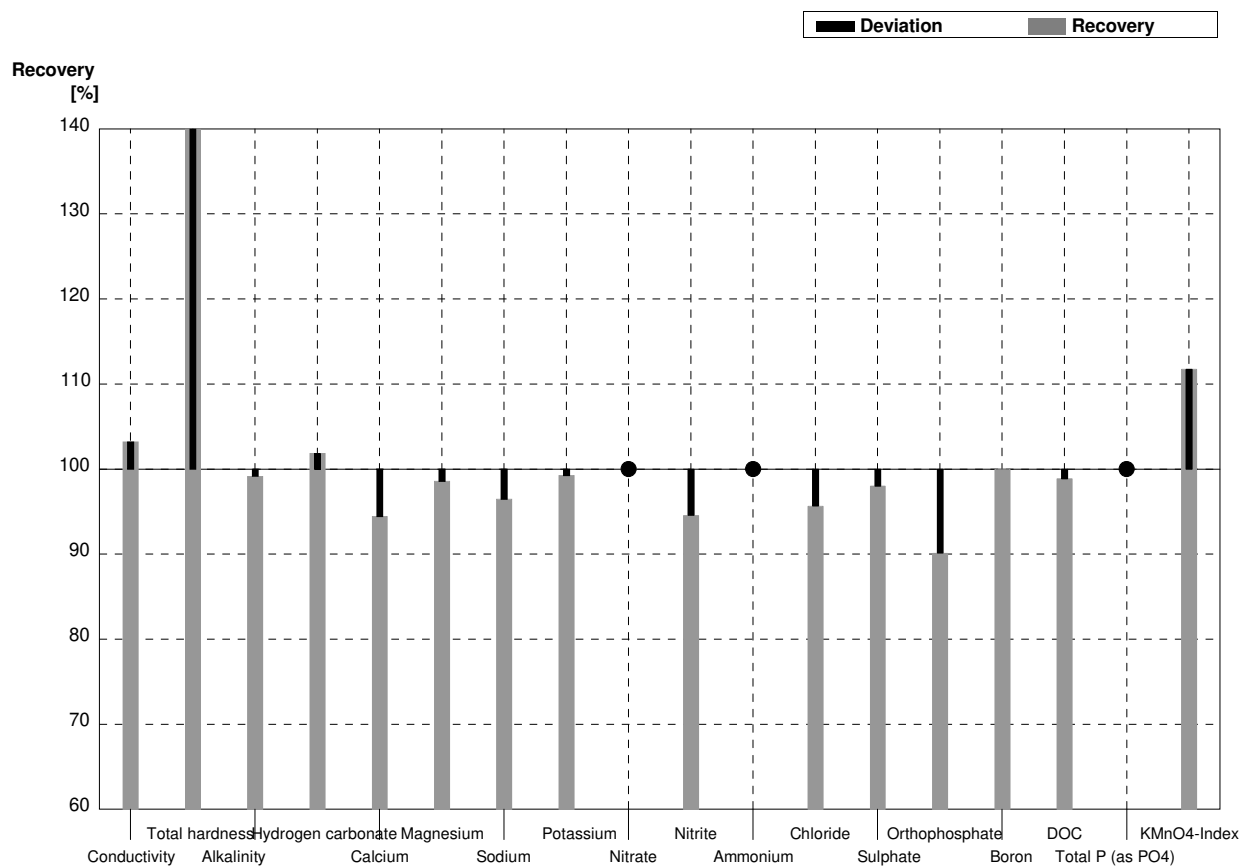
**Sample N164B**  
**Laboratory AG**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	541	16	µS/cm	98%
Total hardness	1,97	0,02	1,80	0,15	mmol/l	91%
Alkalinity	1,671	0,014	1,65	0,079	mmol/l	99%
Hydrogen carbonate	98,9	0,9	101	4,8	mg/l	102%
Calcium	51,9	0,7	48,1	2,2	mg/l	93%
Magnesium	16,4	0,2	14,6	1,20	mg/l	89%
Sodium	28,39	0,19	24,3	1,7	mg/l	86%
Potassium	4,10	0,04	3,83	0,28	mg/l	93%
Nitrate	53,6	1,3	51,8	1,71	mg/l	97%
Nitrite	0,0152	0,0020	0,0180	0,0036	mg/l	118%
Ammonium	0,0478	0,0053	0,0474	0,0033	mg/l	99%
Chloride	48,9	0,9	48,4	3,2	mg/l	99%
Sulphate	64,9	0,8	62,2	2,1	mg/l	96%
Orthophosphate	<0,009		<0,015		mg/l	•
Boron	0,0505	0,0004	0,0490	0,0061	mg/l	97%
DOC	6,23	0,04	5,99	0,96	mg/l	96%
Total P (as PO4)	<0,009		<0,015		mg/l	•
KMnO4-Index	2,72	0,11	2,74	0,41	mg/l	101%



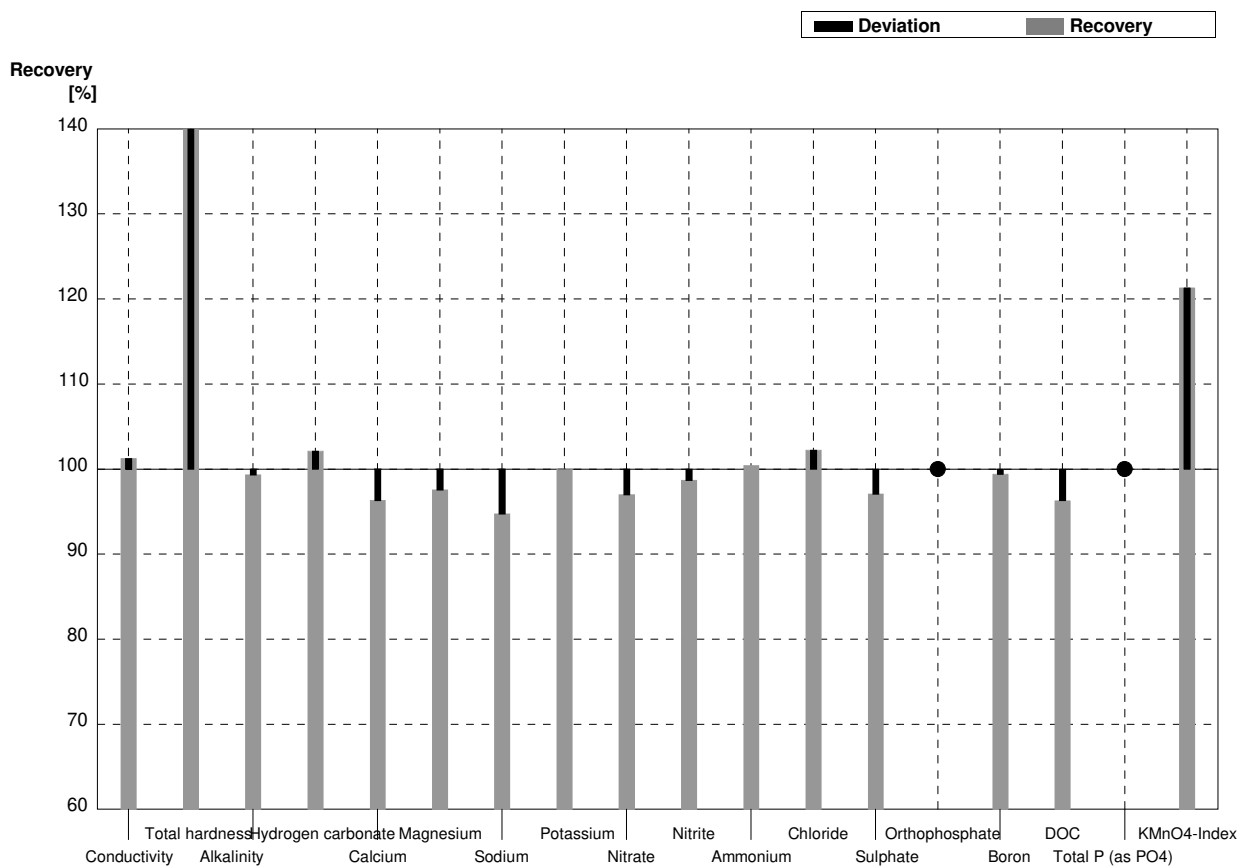
**Sample N164A**  
**Laboratory AH**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	320	1,12	µS/cm	103%
Total hardness	0,578	0,007	3,10		mmol/l	536%
Alkalinity	2,158	0,012	2,14	0,069	mmol/l	99%
Hydrogen carbonate	128,6	0,8	131	4,23	mg/l	102%
Calcium	16,2	0,2	15,3	1,40	mg/l	94%
Magnesium	4,22	0,05	4,16	0,304	mg/l	99%
Sodium	41,36	0,16	39,9	3,31	mg/l	96%
Potassium	6,81	0,03	6,76	0,77	mg/l	99%
Nitrate	<0,2		<1	0,045	mg/l	•
Nitrite	0,0645	0,0002	0,061	0,011	mg/l	95%
Ammonium	<0,01		<0,01	0,0018	mg/l	•
Chloride	13,8	0,4	13,2	0,610	mg/l	96%
Sulphate	25,1	0,2	24,6	1,39	mg/l	98%
Orthophosphate	0,071	0,003	0,064	0,012	mg/l	90%
Boron	0,0253	0,0010	0,0253	0,00193	mg/l	100%
DOC	9,91	0,06	9,8	2,1	mg/l	99%
Total P (as PO4)	0,118	0,002	<0,15	0,031	mg/l	•
KMnO4-Index	6,8	0,4	7,6	1,52	mg/l	112%



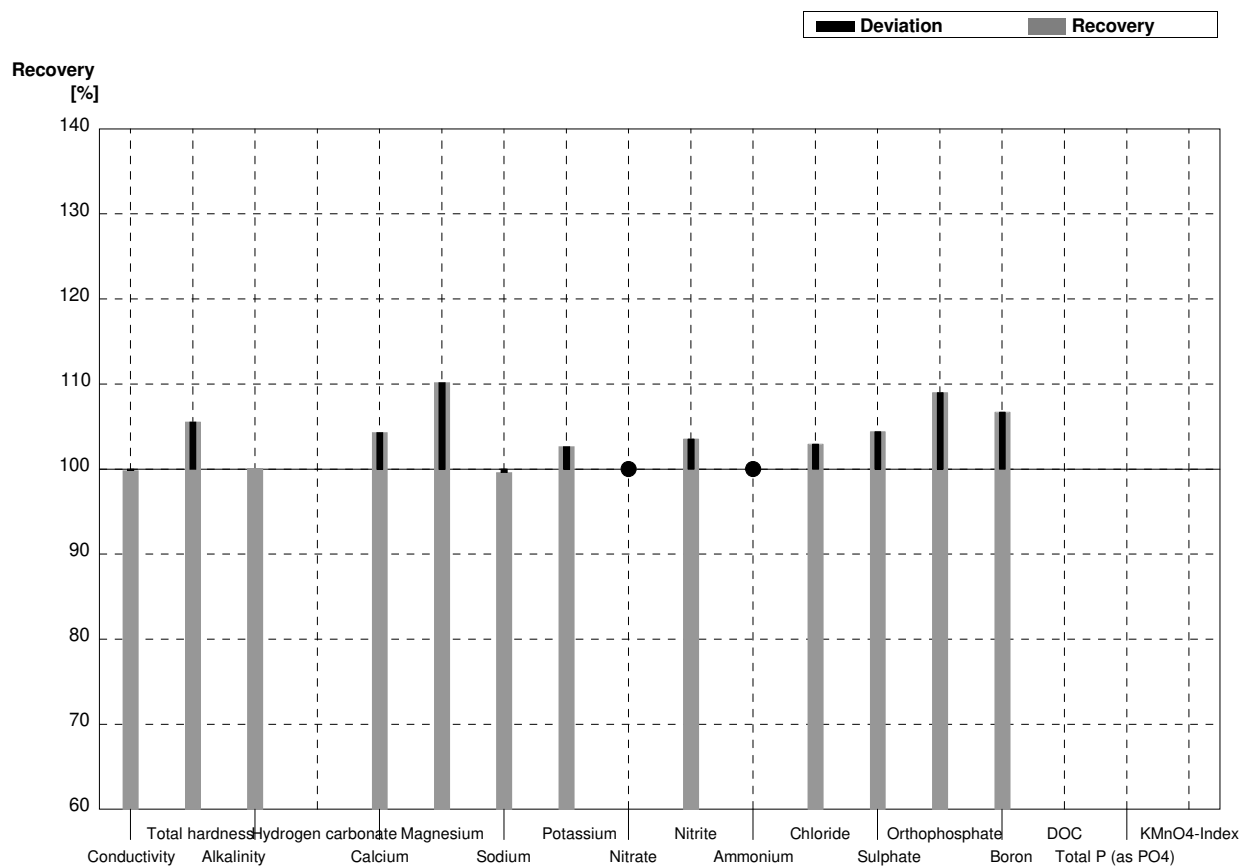
**Sample N164B**  
**Laboratory AH**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	560	2,0	µS/cm	101%
Total hardness	1,97	0,02	10,7		mmol/l	543%
Alkalinity	1,671	0,014	1,66	0,054	mmol/l	99%
Hydrogen carbonate	98,9	0,9	101	3,26	mg/l	102%
Calcium	51,9	0,7	50	4,6	mg/l	96%
Magnesium	16,4	0,2	16,0	1,17	mg/l	98%
Sodium	28,39	0,19	26,9	2,23	mg/l	95%
Potassium	4,10	0,04	4,10	0,47	mg/l	100%
Nitrate	53,6	1,3	52	2,34	mg/l	97%
Nitrite	0,0152	0,0020	0,0150	0,003	mg/l	99%
Ammonium	0,0478	0,0053	0,0480	0,011	mg/l	100%
Chloride	48,9	0,9	50	2,31	mg/l	102%
Sulphate	64,9	0,8	63	3,55	mg/l	97%
Orthophosphate	<0,009		<0,02	0,004	mg/l	•
Boron	0,0505	0,0004	0,0502	0,00383	mg/l	99%
DOC	6,23	0,04	6,0	1,3	mg/l	96%
Total P (as PO4)	<0,009		<0,15	0,031	mg/l	•
KMnO4-Index	2,72	0,11	3,30	0,66	mg/l	121%



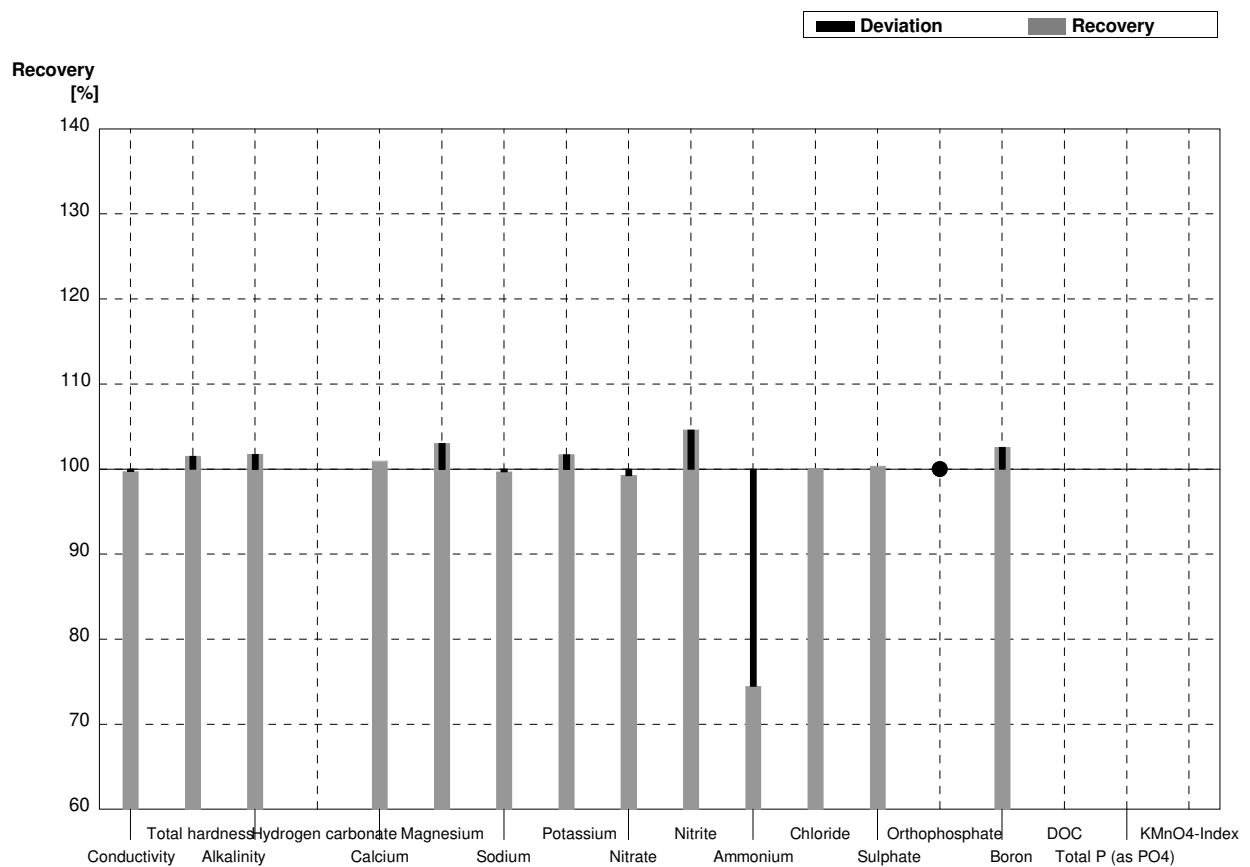
**Sample N164A**  
**Laboratory AI**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	309,5	9,3	µS/cm	100%
Total hardness	0,578	0,007	0,610	0,03	mmol/l	106%
Alkalinity	2,158	0,012	2,16	0,1	mmol/l	100%
Hydrogen carbonate	128,6	0,8	na		mg/l	
Calcium	16,2	0,2	16,9	1,7	mg/l	104%
Magnesium	4,22	0,05	4,65	0,5	mg/l	110%
Sodium	41,36	0,16	41,2	4,1	mg/l	100%
Potassium	6,81	0,03	6,99	0,7	mg/l	103%
Nitrate	<0,2		<1		mg/l	•
Nitrite	0,0645	0,0002	0,0668	0,007	mg/l	104%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	13,8	0,4	14,21	0,7	mg/l	103%
Sulphate	25,1	0,2	26,21	2,6	mg/l	104%
Orthophosphate	0,071	0,003	0,0774	0,008	mg/l	109%
Boron	0,0253	0,0010	0,0270	0,005	mg/l	107%
DOC	9,91	0,06	na		mg/l	
Total P (as PO4)	0,118	0,002	na		mg/l	
KMnO4-Index	6,8	0,4	na		mg/l	



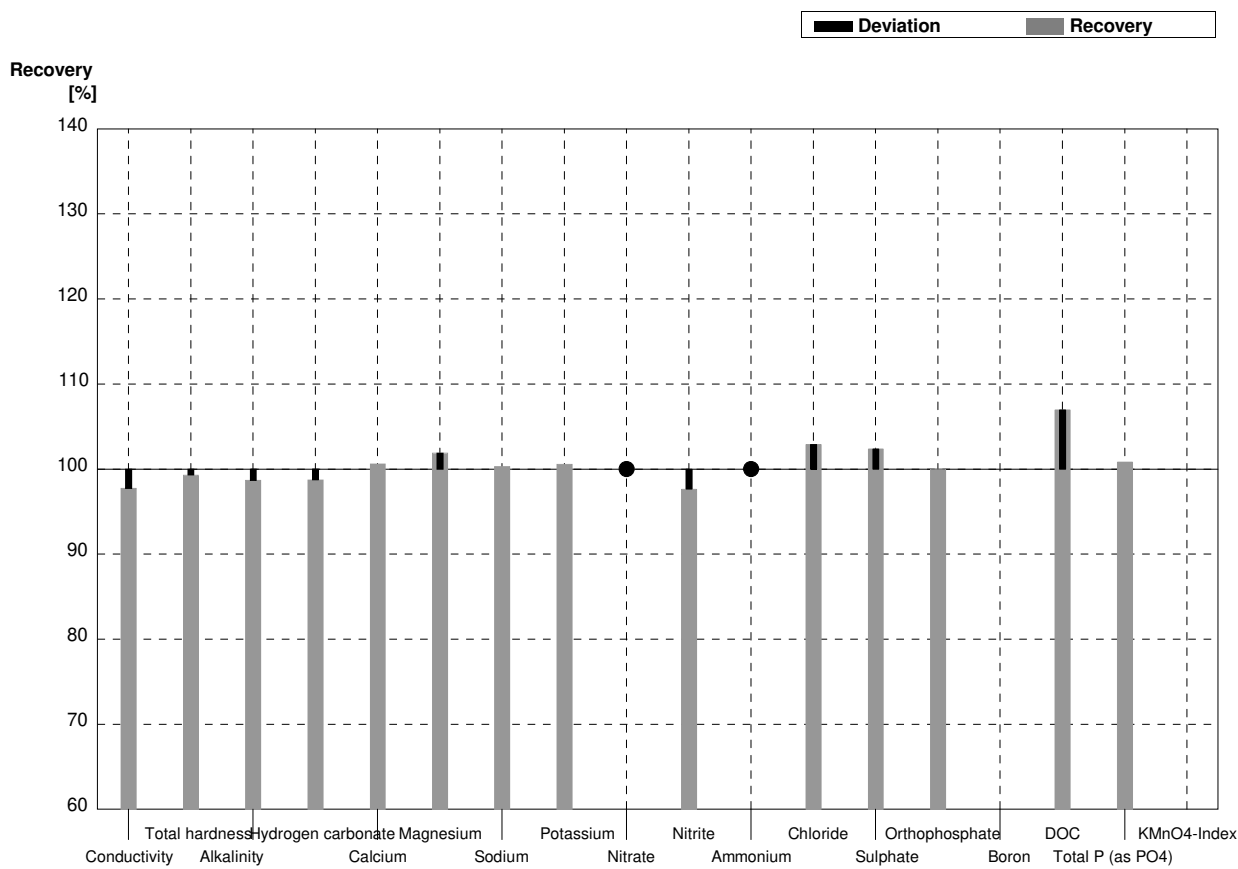
**Sample N164B**  
**Laboratory AI**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	551,5	16,5	µS/cm	100%
Total hardness	1,97	0,02	2,00	0,1	mmol/l	102%
Alkalinity	1,671	0,014	1,70	0,09	mmol/l	102%
Hydrogen carbonate	98,9	0,9	na		mg/l	
Calcium	51,9	0,7	52,4	5,2	mg/l	101%
Magnesium	16,4	0,2	16,9	1,7	mg/l	103%
Sodium	28,39	0,19	28,3	2,8	mg/l	100%
Potassium	4,10	0,04	4,17	0,4	mg/l	102%
Nitrate	53,6	1,3	53,2	2,7	mg/l	99%
Nitrite	0,0152	0,0020	0,0159	0,002	mg/l	105%
Ammonium	0,0478	0,0053	0,0356	0,004	mg/l	74%
Chloride	48,9	0,9	48,940	2,5	mg/l	100%
Sulphate	64,9	0,8	65,125	6,5	mg/l	100%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,0505	0,0004	0,0518	0,01	mg/l	103%
DOC	6,23	0,04	na		mg/l	
Total P (as PO4)	<0,009		na		mg/l	
KMnO4-Index	2,72	0,11	na		mg/l	



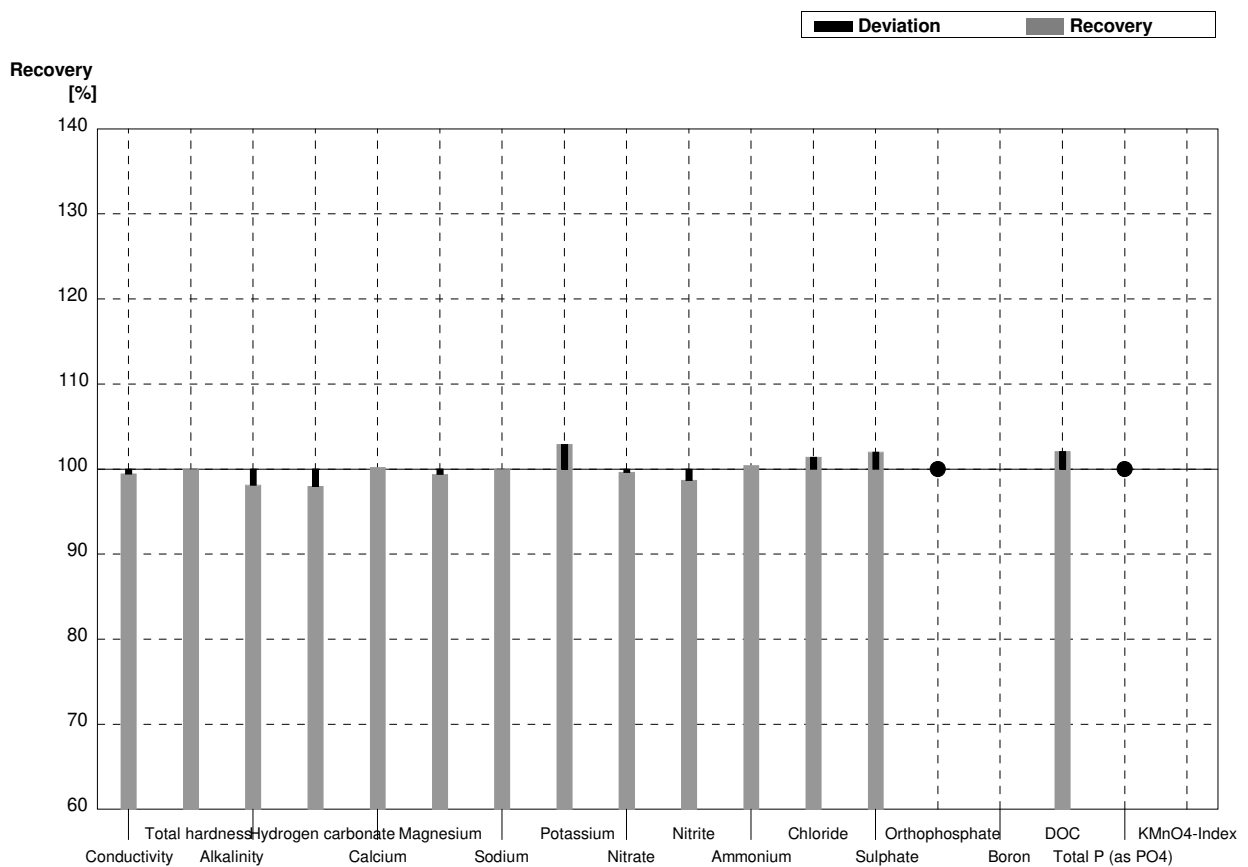
**Sample N164A**  
**Laboratory AJ**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	303	13	µS/cm	98%
Total hardness	0,578	0,007	0,574	0,02	mmol/l	99%
Alkalinity	2,158	0,012	2,13	0,1	mmol/l	99%
Hydrogen carbonate	128,6	0,8	127	6	mg/l	99%
Calcium	16,2	0,2	16,3	1,4	mg/l	101%
Magnesium	4,22	0,05	4,30	0,6	mg/l	102%
Sodium	41,36	0,16	41,5	7	mg/l	100%
Potassium	6,81	0,03	6,85	1	mg/l	101%
Nitrate	<0,2		<0,25		mg/l	•
Nitrite	0,0645	0,0002	0,063	0,005	mg/l	98%
Ammonium	<0,01		<0,013		mg/l	•
Chloride	13,8	0,4	14,2	0,9	mg/l	103%
Sulphate	25,1	0,2	25,7	2	mg/l	102%
Orthophosphate	0,071	0,003	0,071	0,007	mg/l	100%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	10,6	1,5	mg/l	107%
Total P (as PO4)	0,118	0,002	0,119	0,01	mg/l	101%
KMnO4-Index	6,8	0,4			mg/l	



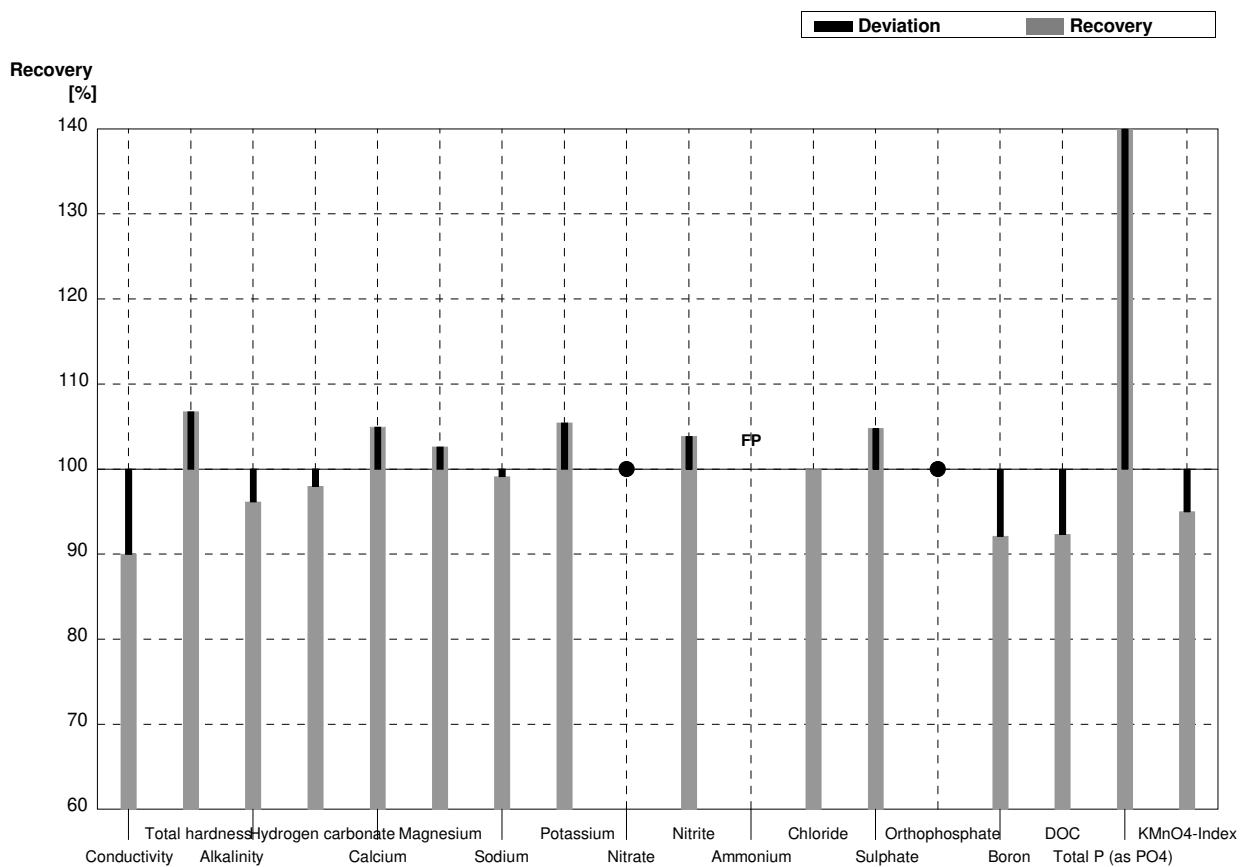
**Sample N164B**  
**Laboratory AJ**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	550	22	µS/cm	99%
Total hardness	1,97	0,02	1,97	0,1	mmol/l	100%
Alkalinity	1,671	0,014	1,64	0,1	mmol/l	98%
Hydrogen carbonate	98,9	0,9	96,9	4	mg/l	98%
Calcium	51,9	0,7	52,0	5	mg/l	100%
Magnesium	16,4	0,2	16,3	2	mg/l	99%
Sodium	28,39	0,19	28,4	5	mg/l	100%
Potassium	4,10	0,04	4,22	0,6	mg/l	103%
Nitrate	53,6	1,3	53,4	4	mg/l	100%
Nitrite	0,0152	0,0020	0,0150	0,002	mg/l	99%
Ammonium	0,0478	0,0053	0,0480	0,006	mg/l	100%
Chloride	48,9	0,9	49,6	3	mg/l	101%
Sulphate	64,9	0,8	66,2	5	mg/l	102%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	6,36	0,9	mg/l	102%
Total P (as PO4)	<0,009		<0,013		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



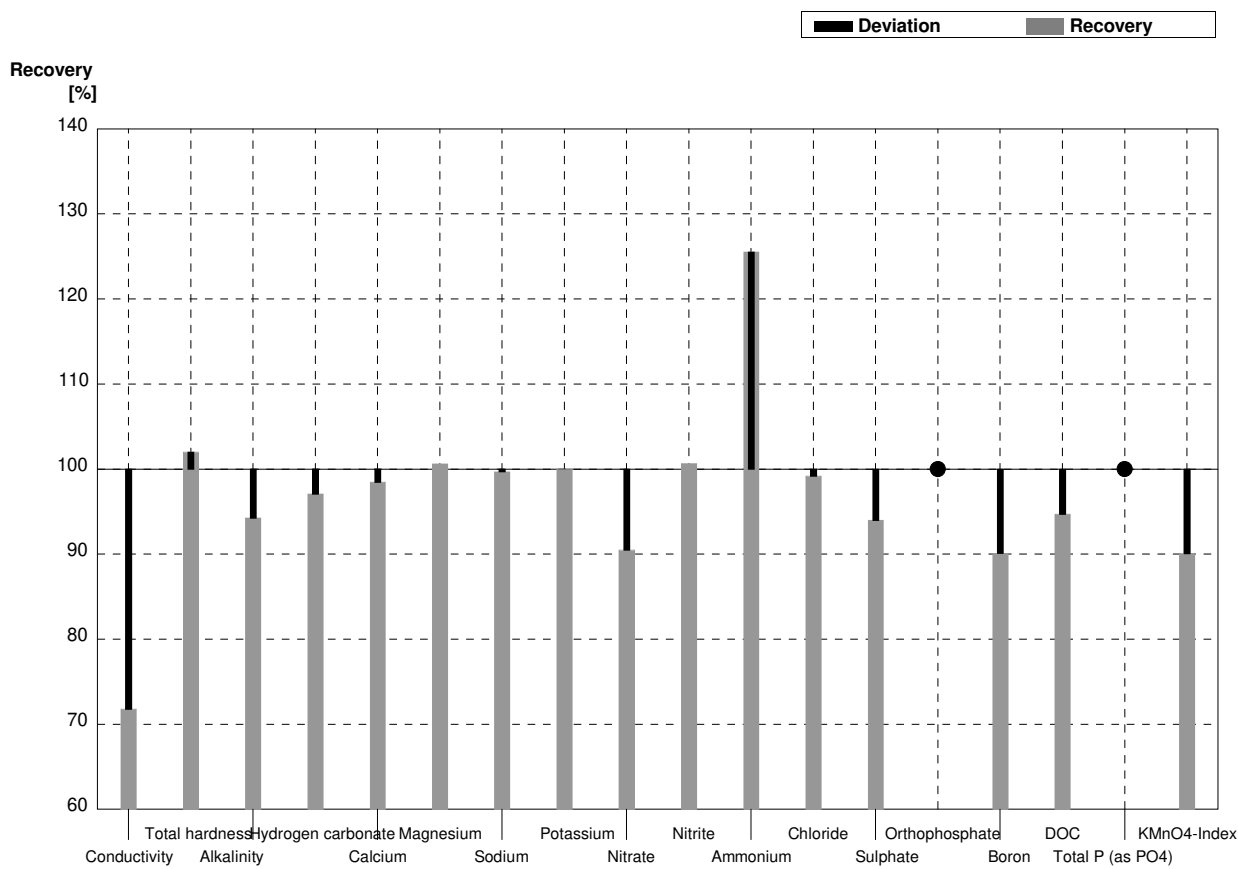
**Sample N164A**  
**Laboratory AK**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	279	28	µS/cm	90%
Total hardness	0,578	0,007	0,617	0,12	mmol/l	107%
Alkalinity	2,158	0,012	2,075	0,208	mmol/l	96%
Hydrogen carbonate	128,6	0,8	126	13	mg/l	98%
Calcium	16,2	0,2	17,0	3,4	mg/l	105%
Magnesium	4,22	0,05	4,33	0,87	mg/l	103%
Sodium	41,36	0,16	41,0	8,2	mg/l	99%
Potassium	6,81	0,03	7,18	1,44	mg/l	105%
Nitrate	<0,2		<0,1		mg/l	•
Nitrite	0,0645	0,0002	0,067	0,010	mg/l	104%
Ammonium	<0,01		0,0200	0,004	mg/l	FP
Chloride	13,8	0,4	13,8	2,06	mg/l	100%
Sulphate	25,1	0,2	26,3	3,9	mg/l	105%
Orthophosphate	0,071	0,003	<0,1		mg/l	•
Boron	0,0253	0,0010	0,0233	0,0047	mg/l	92%
DOC	9,91	0,06	9,15	2,7	mg/l	92%
Total P (as PO4)	0,118	0,002	114	23	mg/l	96610%
KMnO4-Index	6,8	0,4	6,46	0,65	mg/l	95%



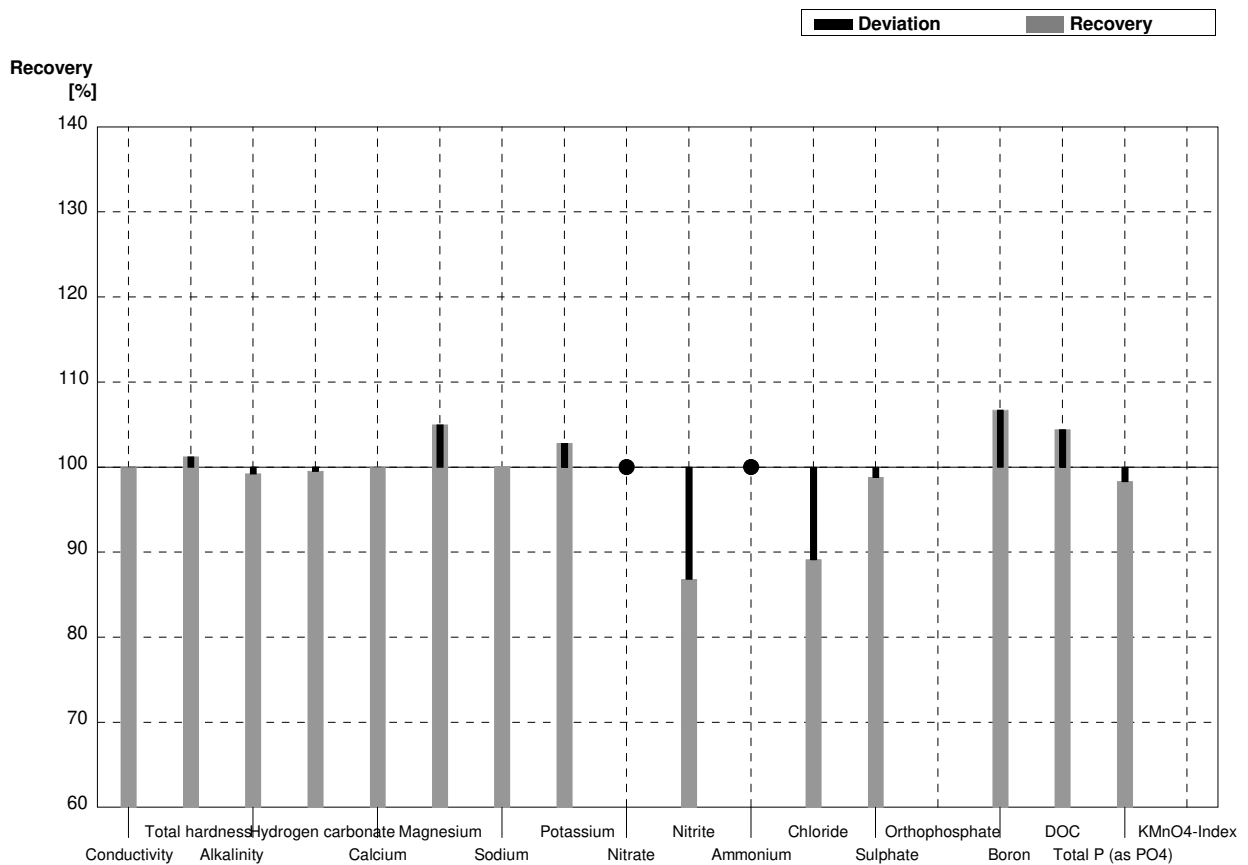
**Sample N164B**  
**Laboratory AK**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	397	40	µS/cm	72%
Total hardness	1,97	0,02	2,01	0,40	mmol/l	102%
Alkalinity	1,671	0,014	1,575	0,158	mmol/l	94%
Hydrogen carbonate	98,9	0,9	96,0	9,6	mg/l	97%
Calcium	51,9	0,7	51,1	10	mg/l	98%
Magnesium	16,4	0,2	16,5	3,3	mg/l	101%
Sodium	28,39	0,19	28,3	5,7	mg/l	100%
Potassium	4,10	0,04	4,10	0,82	mg/l	100%
Nitrate	53,6	1,3	48,5	7,3	mg/l	90%
Nitrite	0,0152	0,0020	0,0153	0,002	mg/l	101%
Ammonium	0,0478	0,0053	0,0600	0,012	mg/l	126%
Chloride	48,9	0,9	48,5	7,3	mg/l	99%
Sulphate	64,9	0,8	61,0	9,2	mg/l	94%
Orthophosphate	<0,009		<0,1		mg/l	•
Boron	0,0505	0,0004	0,0455	0,0091	mg/l	90%
DOC	6,23	0,04	5,90	1,8	mg/l	95%
Total P (as PO4)	<0,009		<31		mg/l	•
KMnO4-Index	2,72	0,11	2,45	0,25	mg/l	90%



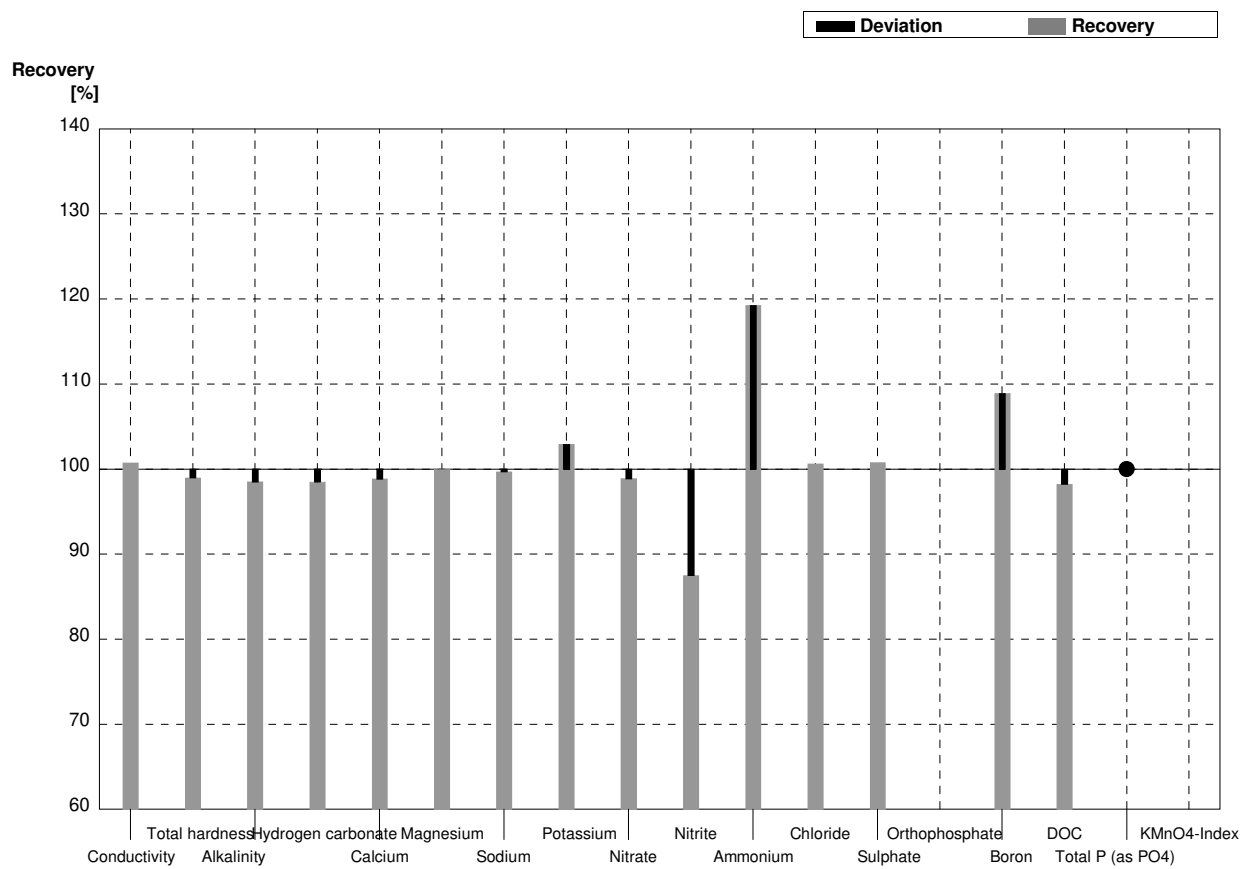
**Sample N164A**  
**Laboratory AL**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	310	8	µS/cm	100%
Total hardness	0,578	0,007	0,585		mmol/l	101%
Alkalinity	2,158	0,012	2,141	0,143	mmol/l	99%
Hydrogen carbonate	128,6	0,8	128		mg/l	100%
Calcium	16,2	0,2	16,2	1,1	mg/l	100%
Magnesium	4,22	0,05	4,43	0,4	mg/l	105%
Sodium	41,36	0,16	41,4	3,9	mg/l	100%
Potassium	6,81	0,03	7,0	0,7	mg/l	103%
Nitrate	<0,2		<2,0		mg/l	•
Nitrite	0,0645	0,0002	0,056	0,014	mg/l	87%
Ammonium	<0,01		<0,05		mg/l	•
Chloride	13,8	0,4	12,3	1,2	mg/l	89%
Sulphate	25,1	0,2	24,8	2,4	mg/l	99%
Orthophosphate	0,071	0,003			mg/l	
Boron	0,0253	0,0010	0,0270	0,003	mg/l	107%
DOC	9,91	0,06	10,35	1,91	mg/l	104%
Total P (as PO4)	0,118	0,002	0,116	0,012	mg/l	98%
KMnO4-Index	6,8	0,4			mg/l	



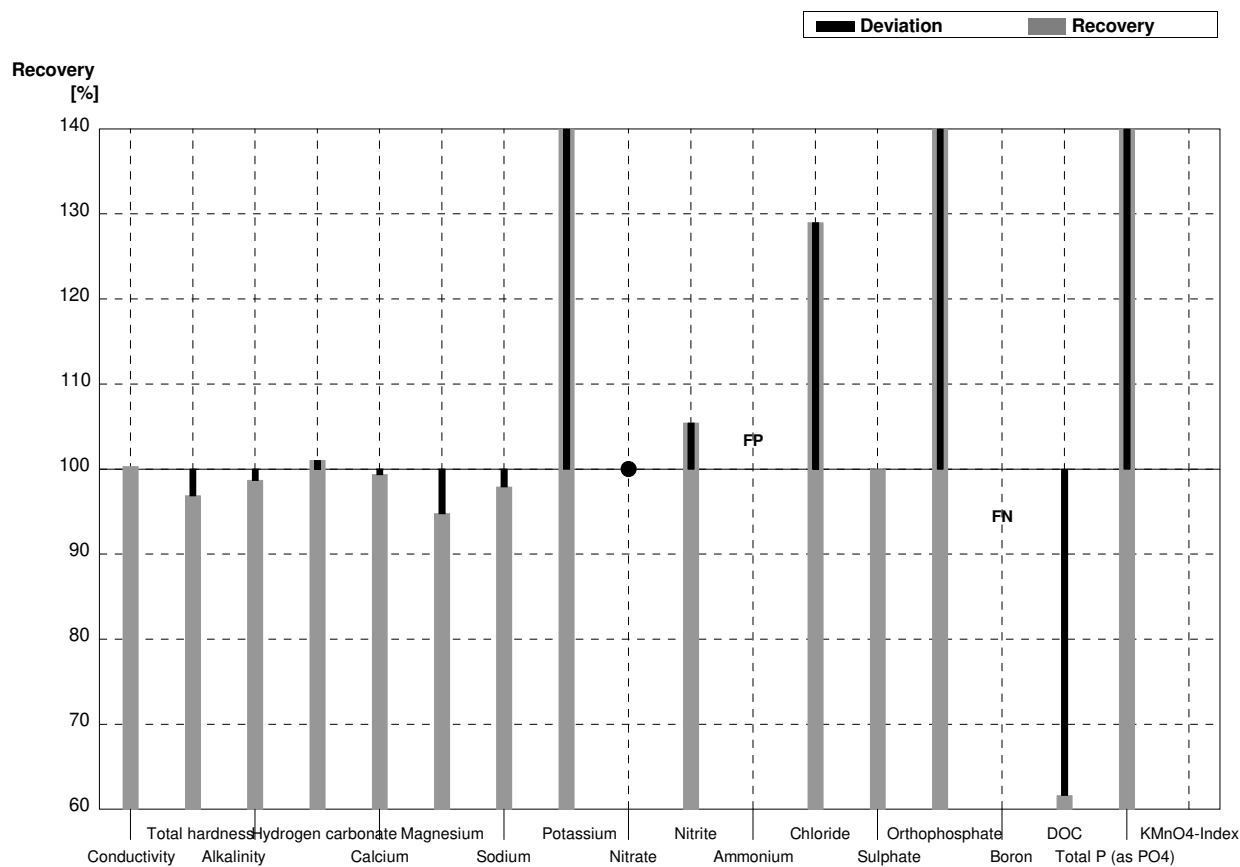
**Sample N164B**  
**Laboratory AL**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	557	15	µS/cm	101%
Total hardness	1,97	0,02	1,95		mmol/l	99%
Alkalinity	1,671	0,014	1,646	0,110	mmol/l	99%
Hydrogen carbonate	98,9	0,9	97,4		mg/l	98%
Calcium	51,9	0,7	51,3	3,5	mg/l	99%
Magnesium	16,4	0,2	16,4	1,5	mg/l	100%
Sodium	28,39	0,19	28,3	2,7	mg/l	100%
Potassium	4,10	0,04	4,22	0,4	mg/l	103%
Nitrate	53,6	1,3	53,0	5,5	mg/l	99%
Nitrite	0,0152	0,0020	0,0133	0,003	mg/l	88%
Ammonium	0,0478	0,0053	0,057	0,02	mg/l	119%
Chloride	48,9	0,9	49,2	4,6	mg/l	101%
Sulphate	64,9	0,8	65,4	6,2	mg/l	101%
Orthophosphate	<0,009				mg/l	
Boron	0,0505	0,0004	0,0550	0,006	mg/l	109%
DOC	6,23	0,04	6,12	1,13	mg/l	98%
Total P (as PO4)	<0,009		<0,030		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



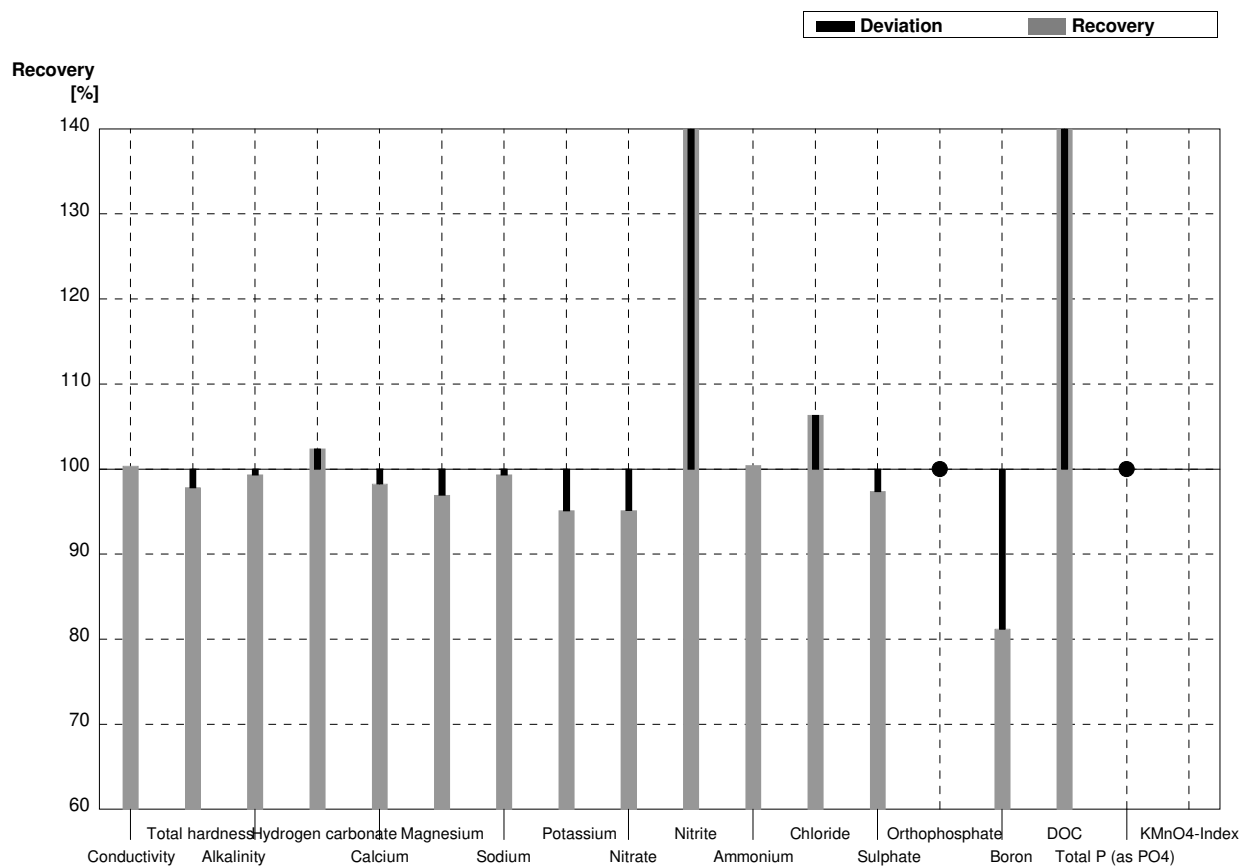
**Sample N164A**  
**Laboratory AM**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	311	3	µS/cm	100%
Total hardness	0,578	0,007	0,560	0,016	mmol/l	97%
Alkalinity	2,158	0,012	2,13	0,041	mmol/l	99%
Hydrogen carbonate	128,6	0,8	129,93	2,50	mg/l	101%
Calcium	16,2	0,2	16,1	0,483	mg/l	99%
Magnesium	4,22	0,05	4,00	0,120	mg/l	95%
Sodium	41,36	0,16	40,5	1,29	mg/l	98%
Potassium	6,81	0,03	9,60	0,384	mg/l	141%
Nitrate	<0,2		<0,05		mg/l	•
Nitrite	0,0645	0,0002	0,068	0,003	mg/l	105%
Ammonium	<0,01		0,0220	0,0030	mg/l	FP
Chloride	13,8	0,4	17,8	0,427	mg/l	129%
Sulphate	25,1	0,2	25,1	0,708	mg/l	100%
Orthophosphate	0,071	0,003	0,190	0,015	mg/l	268%
Boron	0,0253	0,0010	<0,010		mg/l	FN
DOC	9,91	0,06	6,11	0,23	mg/l	62%
Total P (as PO4)	0,118	0,002	0,239	0,020	mg/l	203%
KMnO4-Index	6,8	0,4			mg/l	



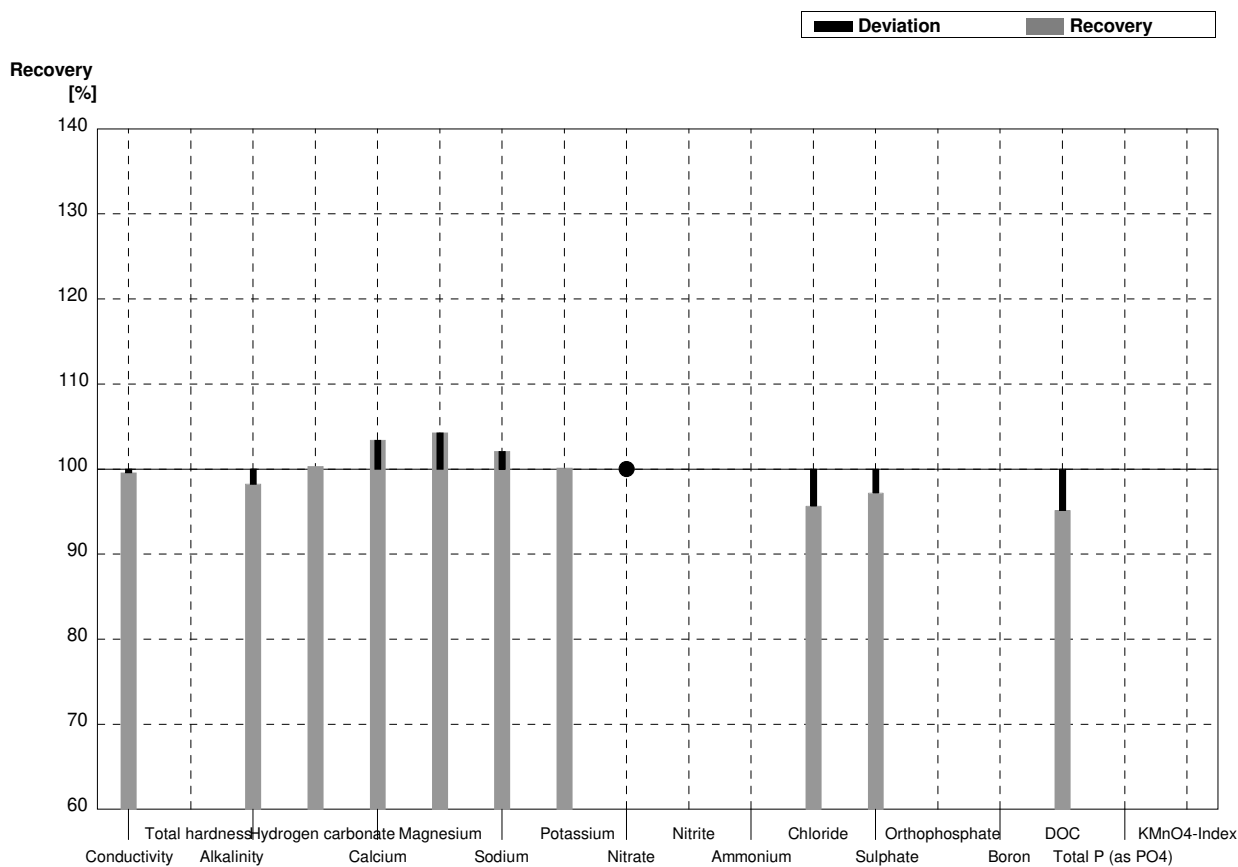
**Sample N164B**  
**Laboratory AM**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	555	5	µS/cm	100%
Total hardness	1,97	0,02	1,927	0,055	mmol/l	98%
Alkalinity	1,671	0,014	1,66	0,030	mmol/l	99%
Hydrogen carbonate	98,9	0,9	101,26	2,01	mg/l	102%
Calcium	51,9	0,7	51,0	1,53	mg/l	98%
Magnesium	16,4	0,2	15,9	0,530	mg/l	97%
Sodium	28,39	0,19	28,2	0,902	mg/l	99%
Potassium	4,10	0,04	3,90	0,151	mg/l	95%
Nitrate	53,6	1,3	51,0	1,63	mg/l	95%
Nitrite	0,0152	0,0020	0,050	0,002	mg/l	329%
Ammonium	0,0478	0,0053	0,0480	0,0050	mg/l	100%
Chloride	48,9	0,9	52,0	1,50	mg/l	106%
Sulphate	64,9	0,8	63,2	1,90	mg/l	97%
Orthophosphate	<0,009		<0,009		mg/l	•
Boron	0,0505	0,0004	0,0410	0,0020	mg/l	81%
DOC	6,23	0,04	10,1	0,35	mg/l	162%
Total P (as PO4)	<0,009		<0,009		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



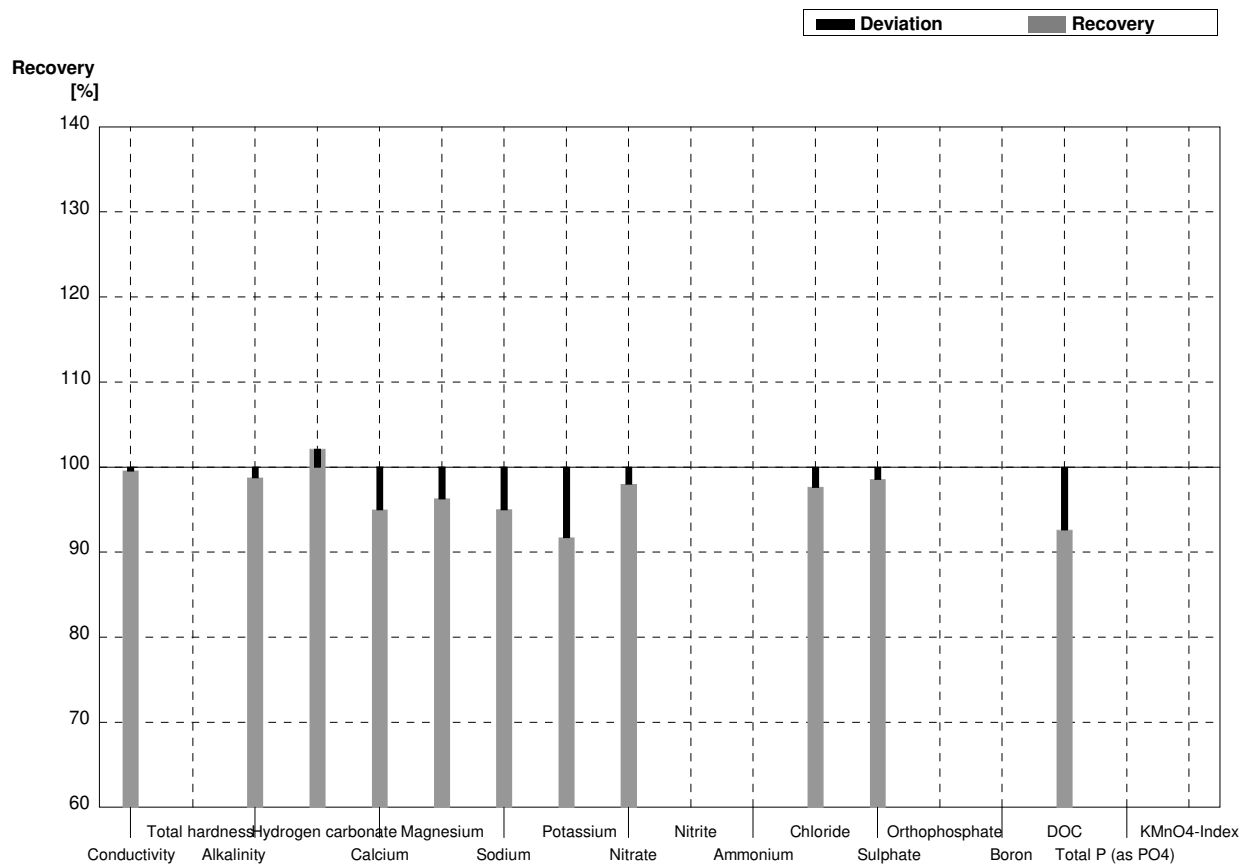
**Sample N164A**  
**Laboratory AN**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	308,7	30,9	µS/cm	100%
Total hardness	0,578	0,007			mmol/l	
Alkalinity	2,158	0,012	2,12	0,212	mmol/l	98%
Hydrogen carbonate	128,6	0,8	129,0	12,90	mg/l	100%
Calcium	16,2	0,2	16,75	2,51	mg/l	103%
Magnesium	4,22	0,05	4,40	0,66	mg/l	104%
Sodium	41,36	0,16	42,22	6,33	mg/l	102%
Potassium	6,81	0,03	6,82	1,02	mg/l	100%
Nitrate	<0,2		<0,10	0,03	mg/l	•
Nitrite	0,0645	0,0002			mg/l	
Ammonium	<0,01				mg/l	
Chloride	13,8	0,4	13,20	3,30	mg/l	96%
Sulphate	25,1	0,2	24,40	6,10	mg/l	97%
Orthophosphate	0,071	0,003			mg/l	
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	9,43	2,360	mg/l	95%
Total P (as PO4)	0,118	0,002			mg/l	
KMnO4-Index	6,8	0,4			mg/l	



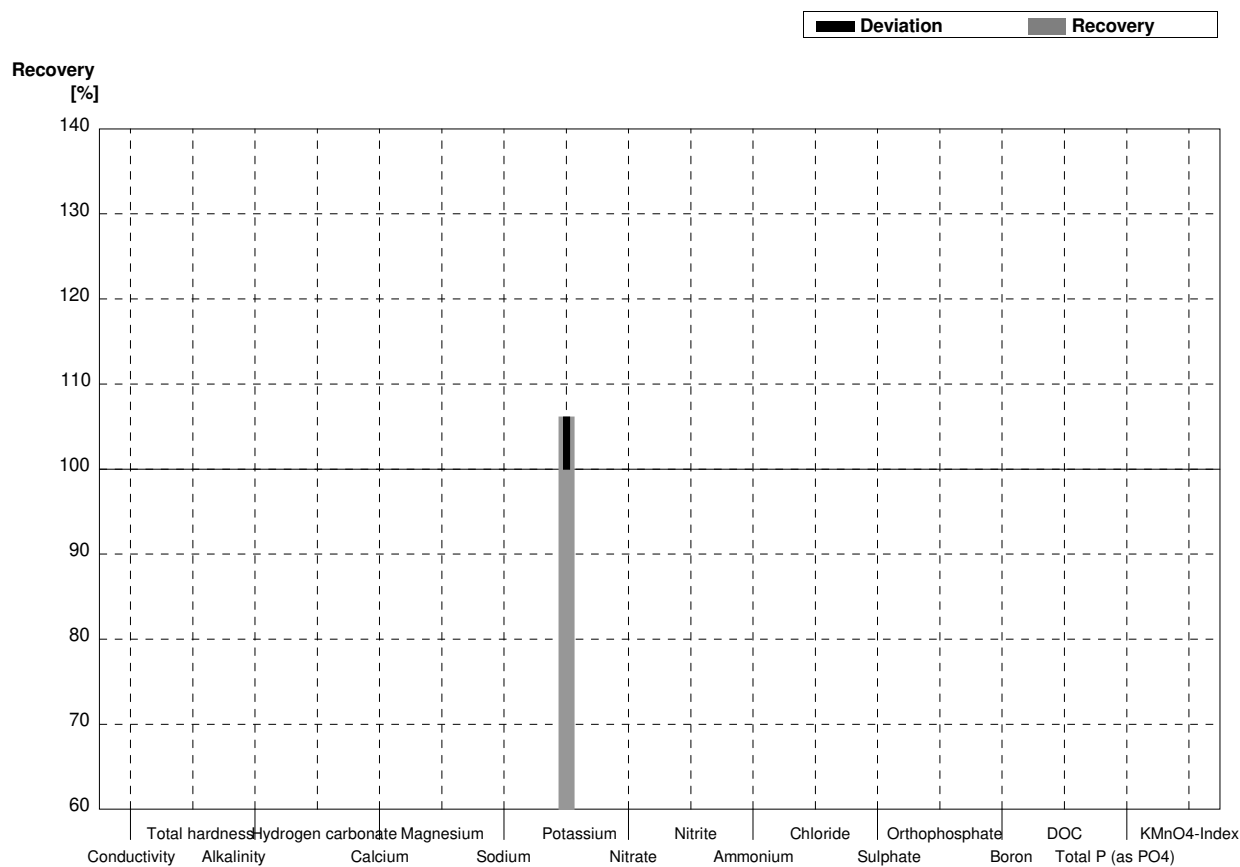
**Sample N164B**  
**Laboratory AN**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	550,6	55,1	µS/cm	100%
Total hardness	1,97	0,02			mmol/l	
Alkalinity	1,671	0,014	1,65	0,165	mmol/l	99%
Hydrogen carbonate	98,9	0,9	101,0	10,10	mg/l	102%
Calcium	51,9	0,7	49,30	7,40	mg/l	95%
Magnesium	16,4	0,2	15,79	2,37	mg/l	96%
Sodium	28,39	0,19	26,97	4,10	mg/l	95%
Potassium	4,10	0,04	3,76	0,60	mg/l	92%
Nitrate	53,6	1,3	52,53	13,13	mg/l	98%
Nitrite	0,0152	0,0020			mg/l	
Ammonium	0,0478	0,0053			mg/l	
Chloride	48,9	0,9	47,74	11,94	mg/l	98%
Sulphate	64,9	0,8	63,97	16,00	mg/l	99%
Orthophosphate	<0,009				mg/l	
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	5,77	1,443	mg/l	93%
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	2,72	0,11			mg/l	



**Sample N164A**  
**Laboratory AO**

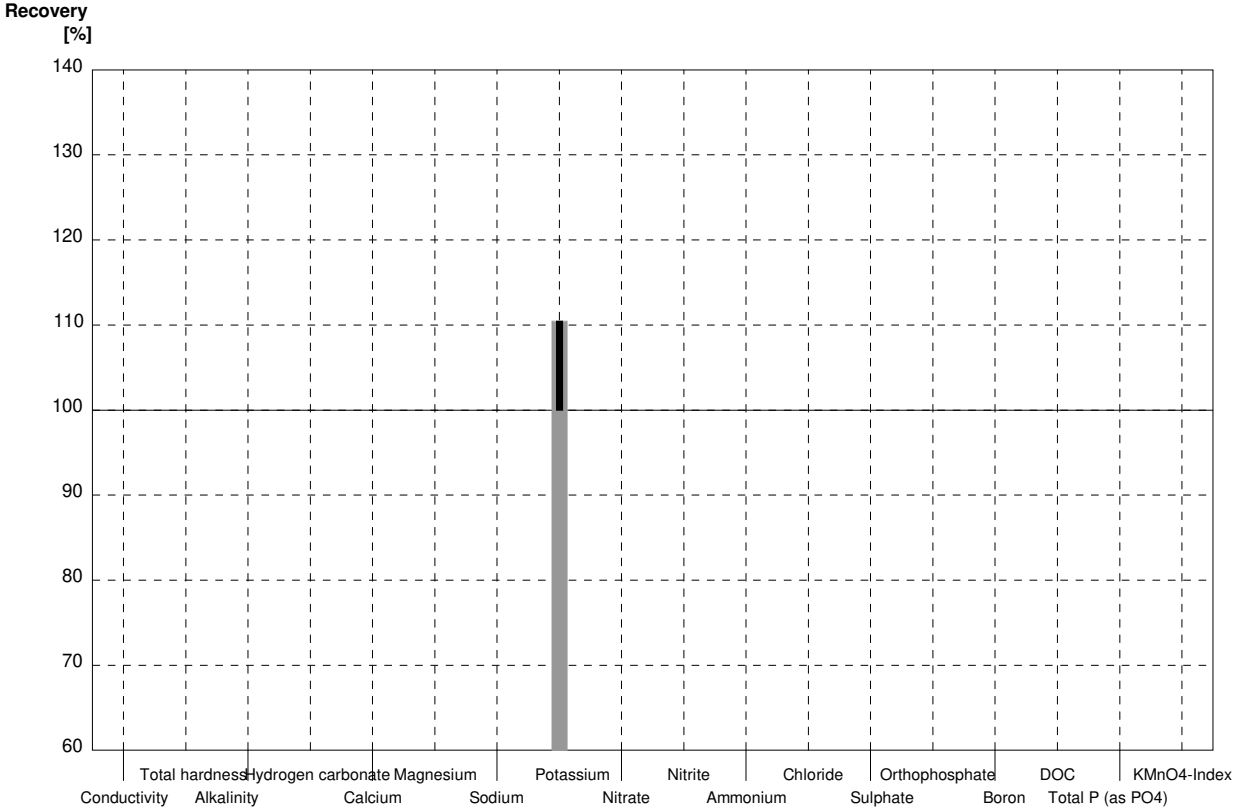
Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1			µS/cm	
Total hardness	0,578	0,007			mmol/l	
Alkalinity	2,158	0,012			mmol/l	
Hydrogen carbonate	128,6	0,8			mg/l	
Calcium	16,2	0,2			mg/l	
Magnesium	4,22	0,05			mg/l	
Sodium	41,36	0,16			mg/l	
Potassium	6,81	0,03	7,23	0,723	mg/l	106%
Nitrate	<0,2				mg/l	
Nitrite	0,0645	0,0002			mg/l	
Ammonium	<0,01				mg/l	
Chloride	13,8	0,4			mg/l	
Sulphate	25,1	0,2			mg/l	
Orthophosphate	0,071	0,003			mg/l	
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06			mg/l	
Total P (as PO4)	0,118	0,002			mg/l	
KMnO4-Index	6,8	0,4			mg/l	



**Sample N164B**  
**Laboratory AO**

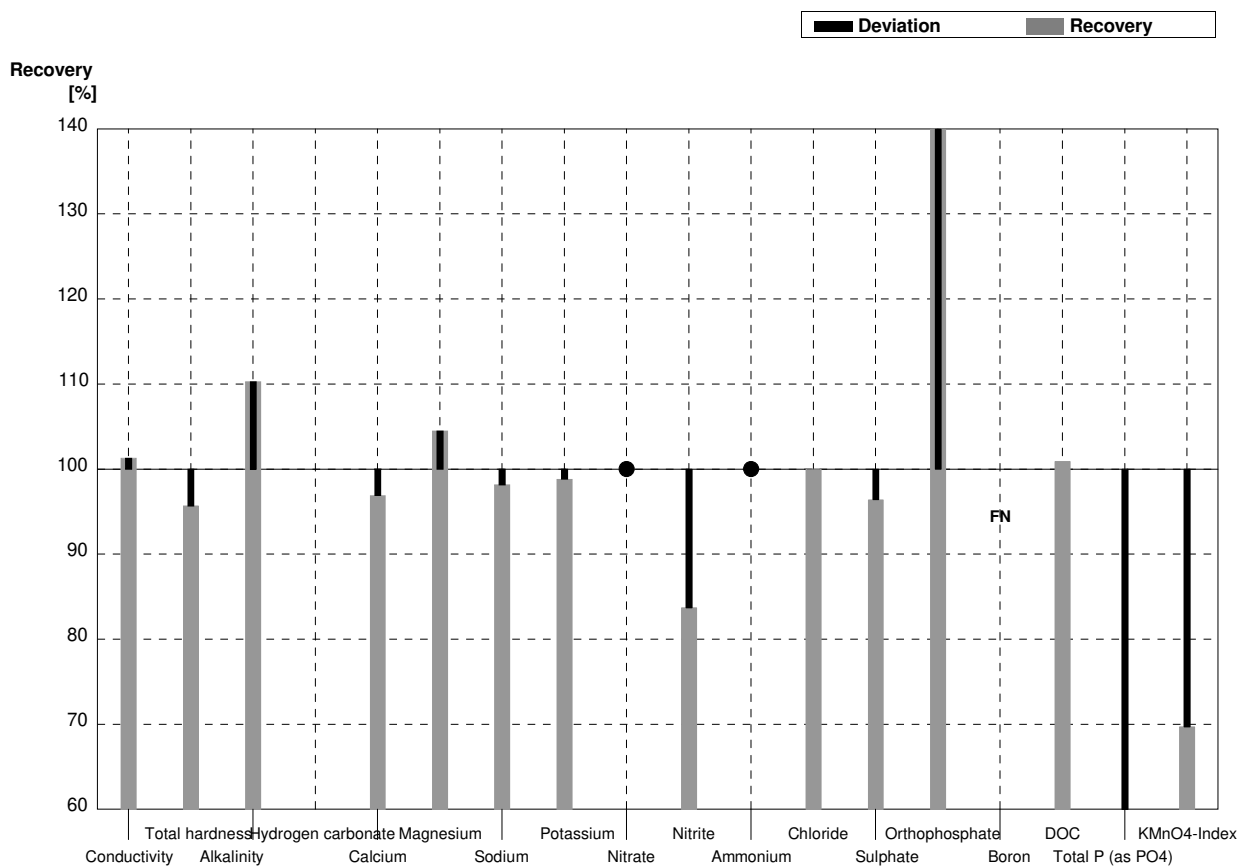
Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2			µS/cm	
Total hardness	1,97	0,02			mmol/l	
Alkalinity	1,671	0,014			mmol/l	
Hydrogen carbonate	98,9	0,9			mg/l	
Calcium	51,9	0,7			mg/l	
Magnesium	16,4	0,2			mg/l	
Sodium	28,39	0,19			mg/l	
Potassium	4,10	0,04	4,53	0,453	mg/l	110%
Nitrate	53,6	1,3			mg/l	
Nitrite	0,0152	0,0020			mg/l	
Ammonium	0,0478	0,0053			mg/l	
Chloride	48,9	0,9			mg/l	
Sulphate	64,9	0,8			mg/l	
Orthophosphate	<0,009				mg/l	
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04			mg/l	
Total P (as PO4)	<0,009				mg/l	
KMnO4-Index	2,72	0,11			mg/l	

■ Deviation    ■ Recovery



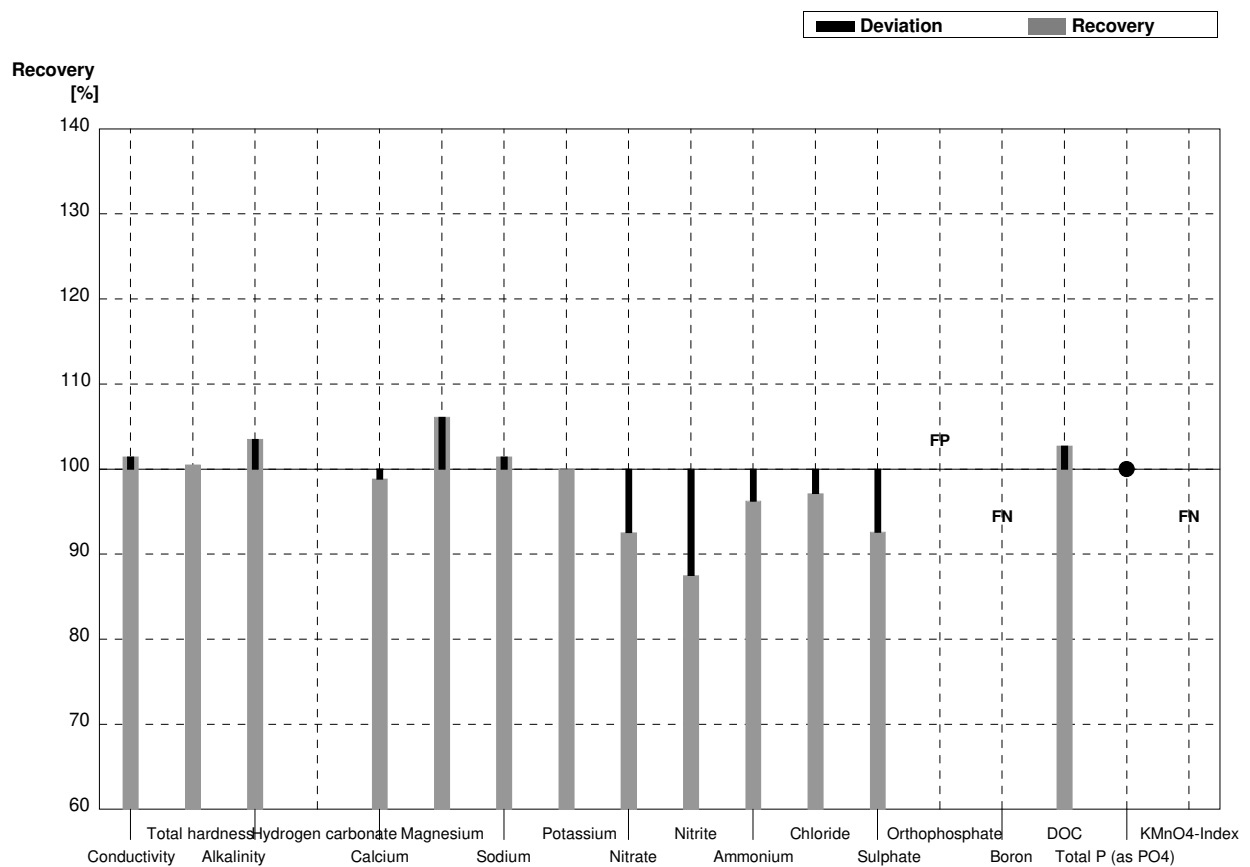
**Sample N164A**  
**Laboratory AP**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	314	3,67	µS/cm	101%
Total hardness	0,578	0,007	0,553	0,06	mmol/l	96%
Alkalinity	2,158	0,012	2,38	0,36	mmol/l	110%
Hydrogen carbonate	128,6	0,8			mg/l	
Calcium	16,2	0,2	15,7	1,54	mg/l	97%
Magnesium	4,22	0,05	4,41	0,53	mg/l	105%
Sodium	41,36	0,16	40,6	4,54	mg/l	98%
Potassium	6,81	0,03	6,73	1,10	mg/l	99%
Nitrate	<0,2		0,0915	0,0129	mg/l	•
Nitrite	0,0645	0,0002	0,054	0,0078	mg/l	84%
Ammonium	<0,01		<0,01	0,0011	mg/l	•
Chloride	13,8	0,4	13,8	2,06	mg/l	100%
Sulphate	25,1	0,2	24,2	3,89	mg/l	96%
Orthophosphate	0,071	0,003	0,145	0,0218	mg/l	204%
Boron	0,0253	0,0010	<0,012	0,001	mg/l	FN
DOC	9,91	0,06	10,00	0,57	mg/l	101%
Total P (as PO4)	0,118	0,002	0,0659	0,0092	mg/l	56%
KMnO4-Index	6,8	0,4	4,74	0,711	mg/l	70%



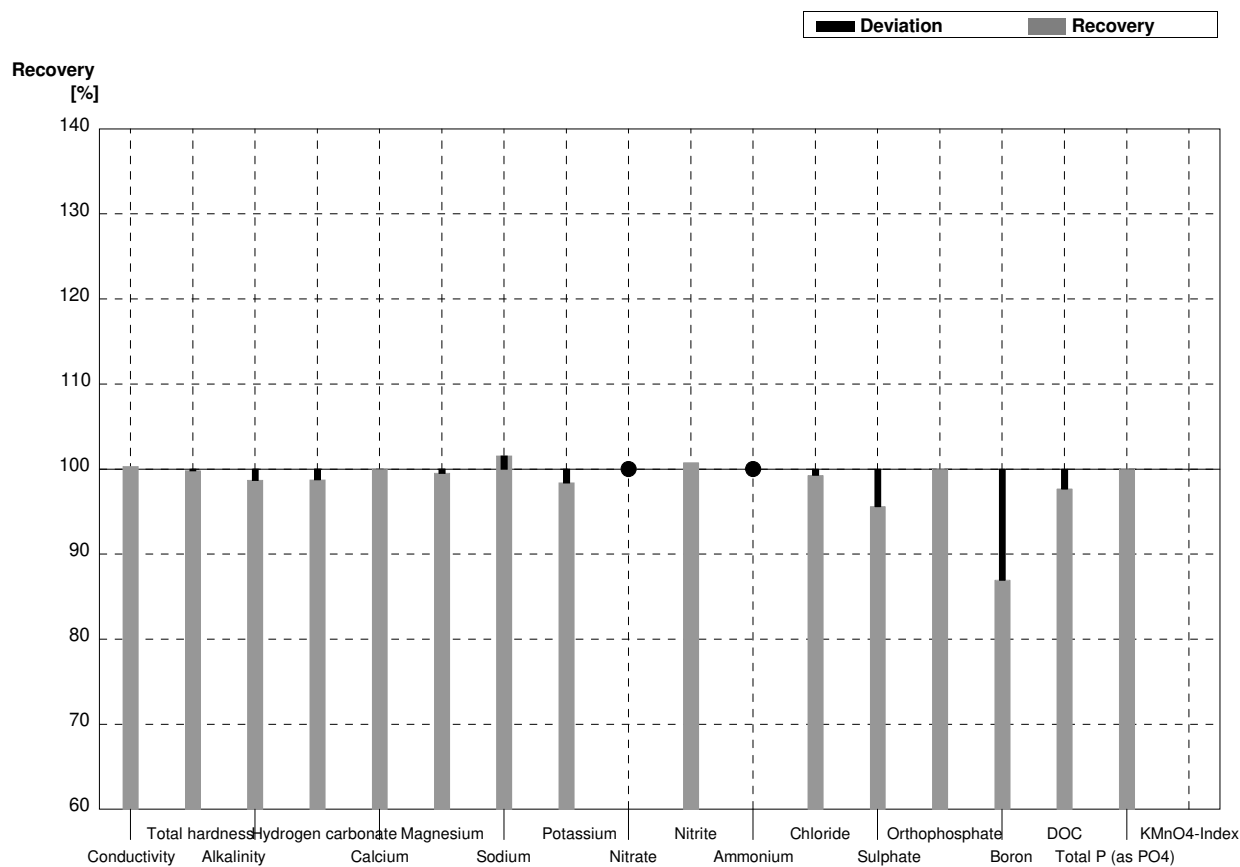
**Sample N164B**  
**Laboratory AP**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	561	6,56	µS/cm	101%
Total hardness	1,97	0,02	1,98	0,215	mmol/l	101%
Alkalinity	1,671	0,014	1,73	0,26	mmol/l	104%
Hydrogen carbonate	98,9	0,9			mg/l	
Calcium	51,9	0,7	51,3	5,02	mg/l	99%
Magnesium	16,4	0,2	17,4	2,08	mg/l	106%
Sodium	28,39	0,19	28,8	3,22	mg/l	101%
Potassium	4,10	0,04	4,10	0,67	mg/l	100%
Nitrate	53,6	1,3	49,6	6,98	mg/l	93%
Nitrite	0,0152	0,0020	0,0133	0,0019	mg/l	88%
Ammonium	0,0478	0,0053	0,0460	0,0049	mg/l	96%
Chloride	48,9	0,9	47,5	7,09	mg/l	97%
Sulphate	64,9	0,8	60,1	9,66	mg/l	93%
Orthophosphate	<0,009		0,0278	0,0042	mg/l	FP
Boron	0,0505	0,0004	<0,012	0,001	mg/l	FN
DOC	6,23	0,04	6,40	0,365	mg/l	103%
Total P (as PO4)	<0,009		<0,015	0,0021	mg/l	•
KMnO4-Index	2,72	0,11	<1	0,15	mg/l	FN



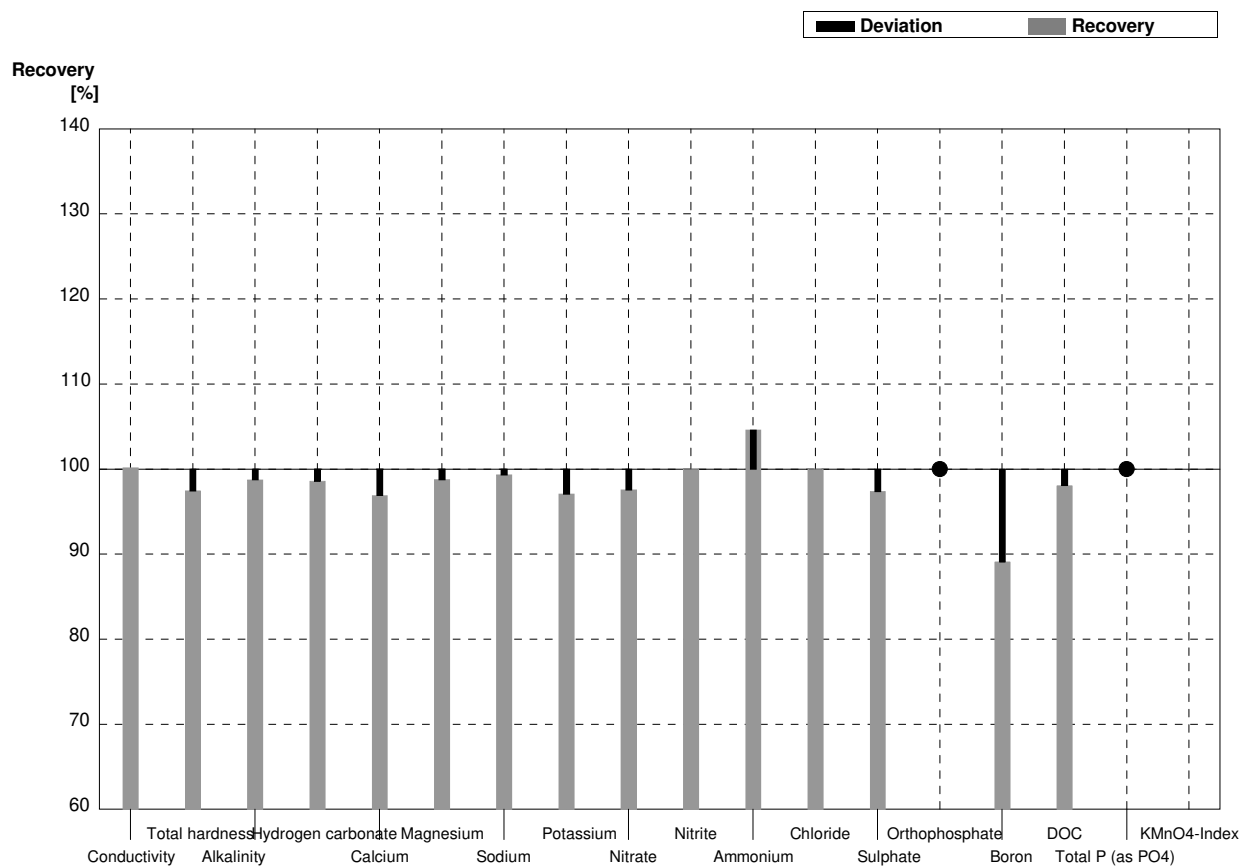
**Sample N164A**  
**Laboratory AQ**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	311	10	µS/cm	100%
Total hardness	0,578	0,007	0,577	0,047	mmol/l	100%
Alkalinity	2,158	0,012	2,13	0,09	mmol/l	99%
Hydrogen carbonate	128,6	0,8	127	5	mg/l	99%
Calcium	16,2	0,2	16,2	0,9	mg/l	100%
Magnesium	4,22	0,05	4,20	0,26	mg/l	100%
Sodium	41,36	0,16	42,0	1,7	mg/l	102%
Potassium	6,81	0,03	6,70	0,54	mg/l	98%
Nitrate	<0,2		<0,5		mg/l	•
Nitrite	0,0645	0,0002	0,065	0,005	mg/l	101%
Ammonium	<0,01		<0,008		mg/l	•
Chloride	13,8	0,4	13,7	0,7	mg/l	99%
Sulphate	25,1	0,2	24,0	1,5	mg/l	96%
Orthophosphate	0,071	0,003	0,071	0,004	mg/l	100%
Boron	0,0253	0,0010	0,0220	0,0022	mg/l	87%
DOC	9,91	0,06	9,68	0,87	mg/l	98%
Total P (as PO4)	0,118	0,002	0,118	0,009	mg/l	100%
KMnO4-Index	6,8	0,4			mg/l	



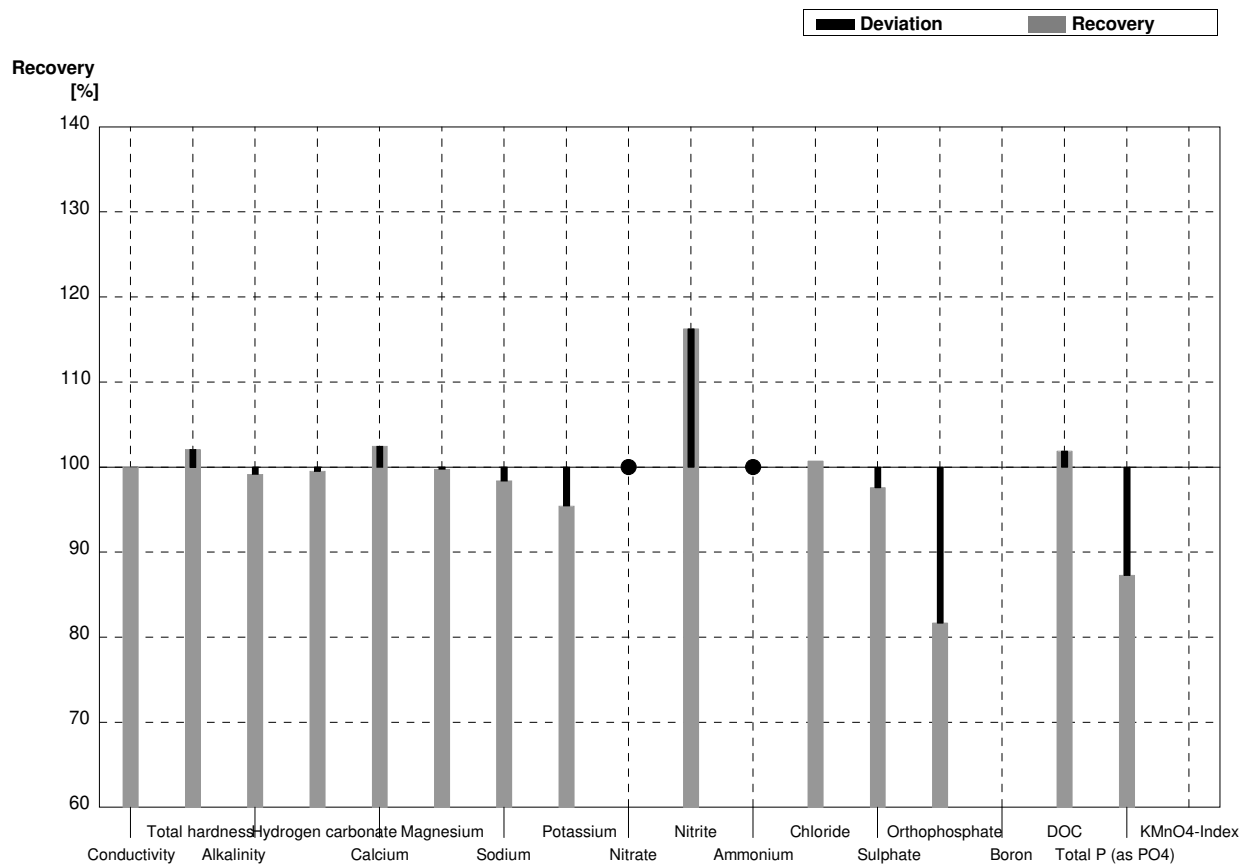
**Sample N164B**  
**Laboratory AQ**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	554	17	µS/cm	100%
Total hardness	1,97	0,02	1,92	0,16	mmol/l	97%
Alkalinity	1,671	0,014	1,65	0,07	mmol/l	99%
Hydrogen carbonate	98,9	0,9	97,5	3,9	mg/l	99%
Calcium	51,9	0,7	50,3	2,5	mg/l	97%
Magnesium	16,4	0,2	16,2	1,0	mg/l	99%
Sodium	28,39	0,19	28,2	1,2	mg/l	99%
Potassium	4,10	0,04	3,98	0,32	mg/l	97%
Nitrate	53,6	1,3	52,3	3,2	mg/l	98%
Nitrite	0,0152	0,0020	0,0152	0,0025	mg/l	100%
Ammonium	0,0478	0,0053	0,050	0,005	mg/l	105%
Chloride	48,9	0,9	48,9	2,5	mg/l	100%
Sulphate	64,9	0,8	63,2	3,8	mg/l	97%
Orthophosphate	<0,009		<0,006		mg/l	•
Boron	0,0505	0,0004	0,0450	0,0045	mg/l	89%
DOC	6,23	0,04	6,11	0,55	mg/l	98%
Total P (as PO4)	<0,009		<0,006		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



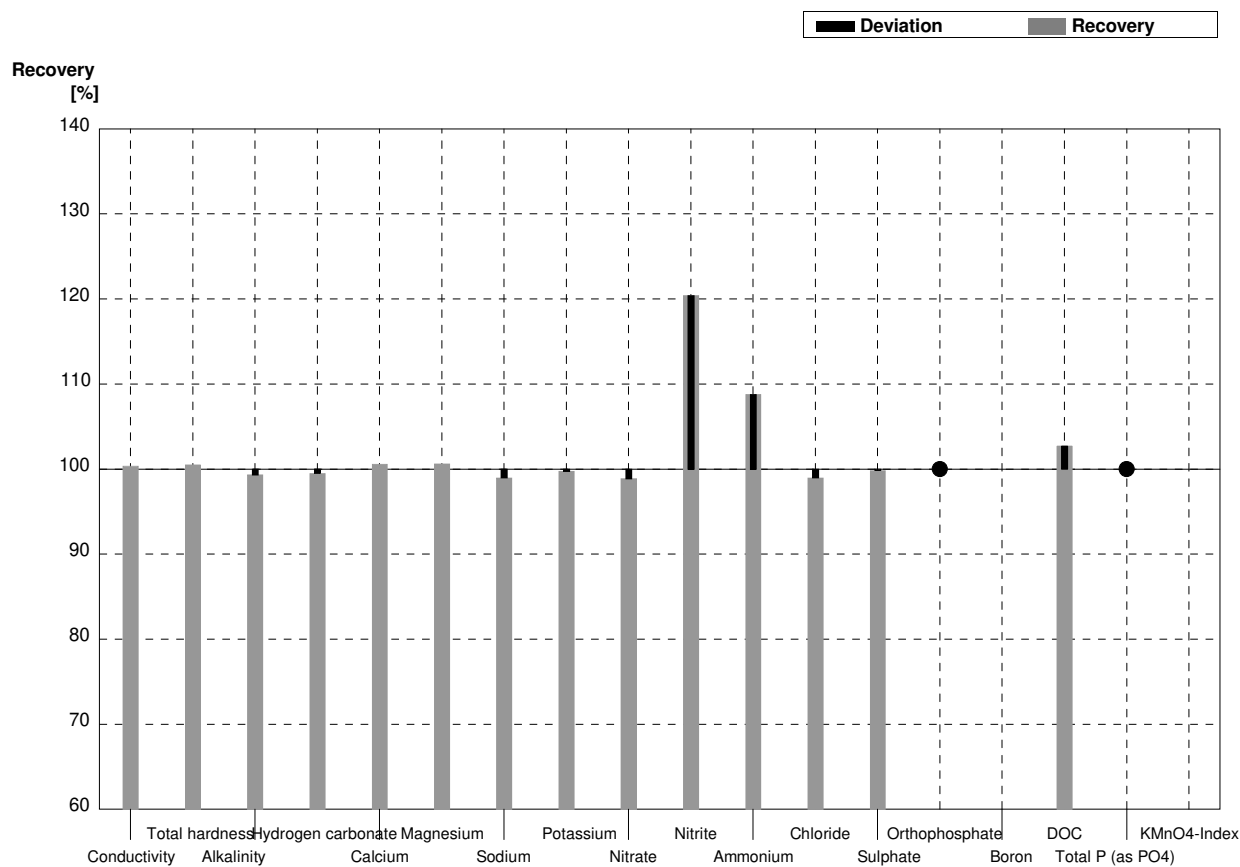
**Sample N164A**  
**Laboratory AR**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	310	5	µS/cm	100%
Total hardness	0,578	0,007	0,59	0,2	mmol/l	102%
Alkalinity	2,158	0,012	2,14	0,2	mmol/l	99%
Hydrogen carbonate	128,6	0,8	128	6	mg/l	100%
Calcium	16,2	0,2	16,6	3	mg/l	102%
Magnesium	4,22	0,05	4,21	1,5	mg/l	100%
Sodium	41,36	0,16	40,7	2	mg/l	98%
Potassium	6,81	0,03	6,5	0,8	mg/l	95%
Nitrate	<0,2		<0,20		mg/l	•
Nitrite	0,0645	0,0002	0,075	0,021	mg/l	116%
Ammonium	<0,01		<0,05		mg/l	•
Chloride	13,8	0,4	13,9	2	mg/l	101%
Sulphate	25,1	0,2	24,5	2	mg/l	98%
Orthophosphate	0,071	0,003	0,058	0,02	mg/l	82%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	10,1	1,5	mg/l	102%
Total P (as PO4)	0,118	0,002	0,103	0,03	mg/l	87%
KMnO4-Index	6,8	0,4			mg/l	



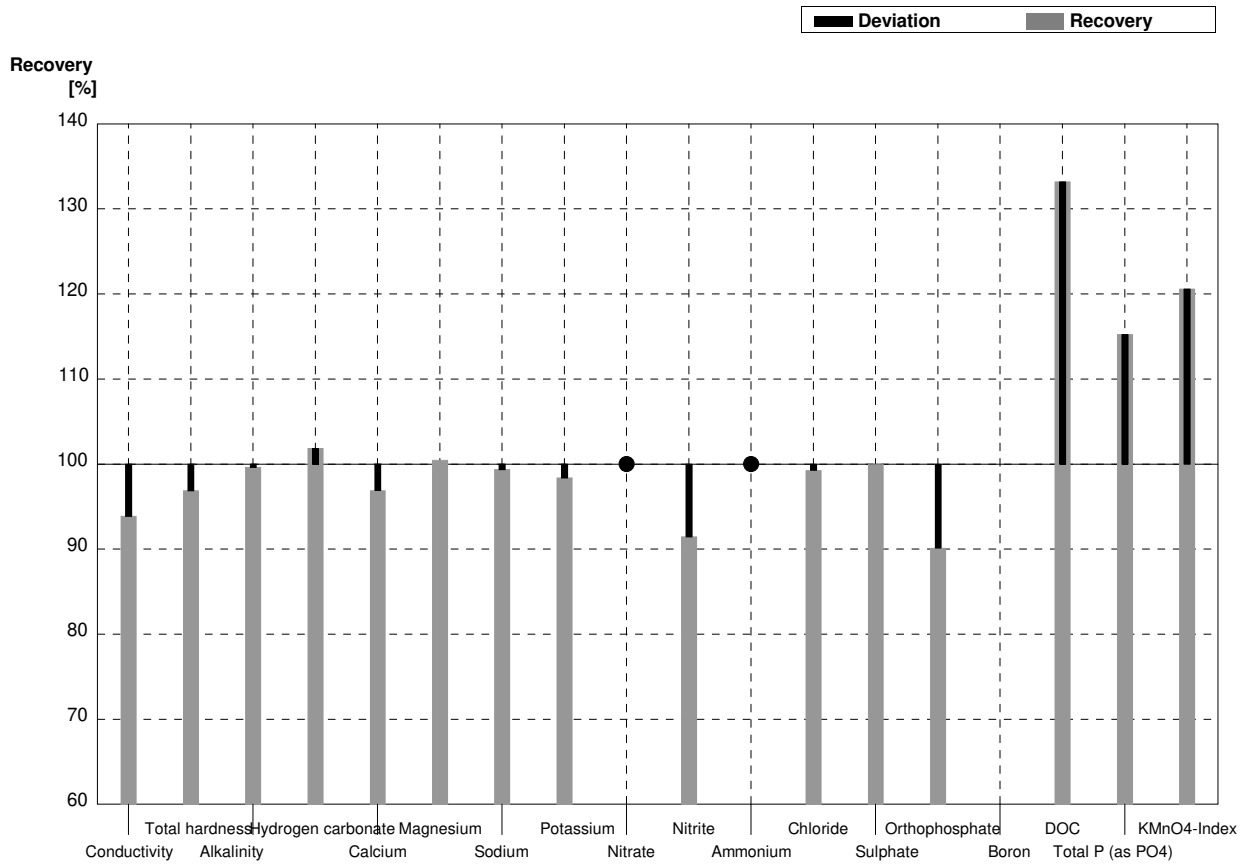
**Sample N164B**  
**Laboratory AR**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	555	8	µS/cm	100%
Total hardness	1,97	0,02	1,98	0,31	mmol/l	101%
Alkalinity	1,671	0,014	1,66	0,21	mmol/l	99%
Hydrogen carbonate	98,9	0,9	98,4	5	mg/l	99%
Calcium	51,9	0,7	52,2	4	mg/l	101%
Magnesium	16,4	0,2	16,5	2	mg/l	101%
Sodium	28,39	0,19	28,1	2	mg/l	99%
Potassium	4,10	0,04	4,09	0,8	mg/l	100%
Nitrate	53,6	1,3	53,0	4	mg/l	99%
Nitrite	0,0152	0,0020	0,0183	0,011	mg/l	120%
Ammonium	0,0478	0,0053	0,052	0,02	mg/l	109%
Chloride	48,9	0,9	48,4	3	mg/l	99%
Sulphate	64,9	0,8	64,8	4	mg/l	100%
Orthophosphate	<0,009		<0,05		mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	6,4	1	mg/l	103%
Total P (as PO4)	<0,009		<0,05		mg/l	•
KMnO4-Index	2,72	0,11			mg/l	



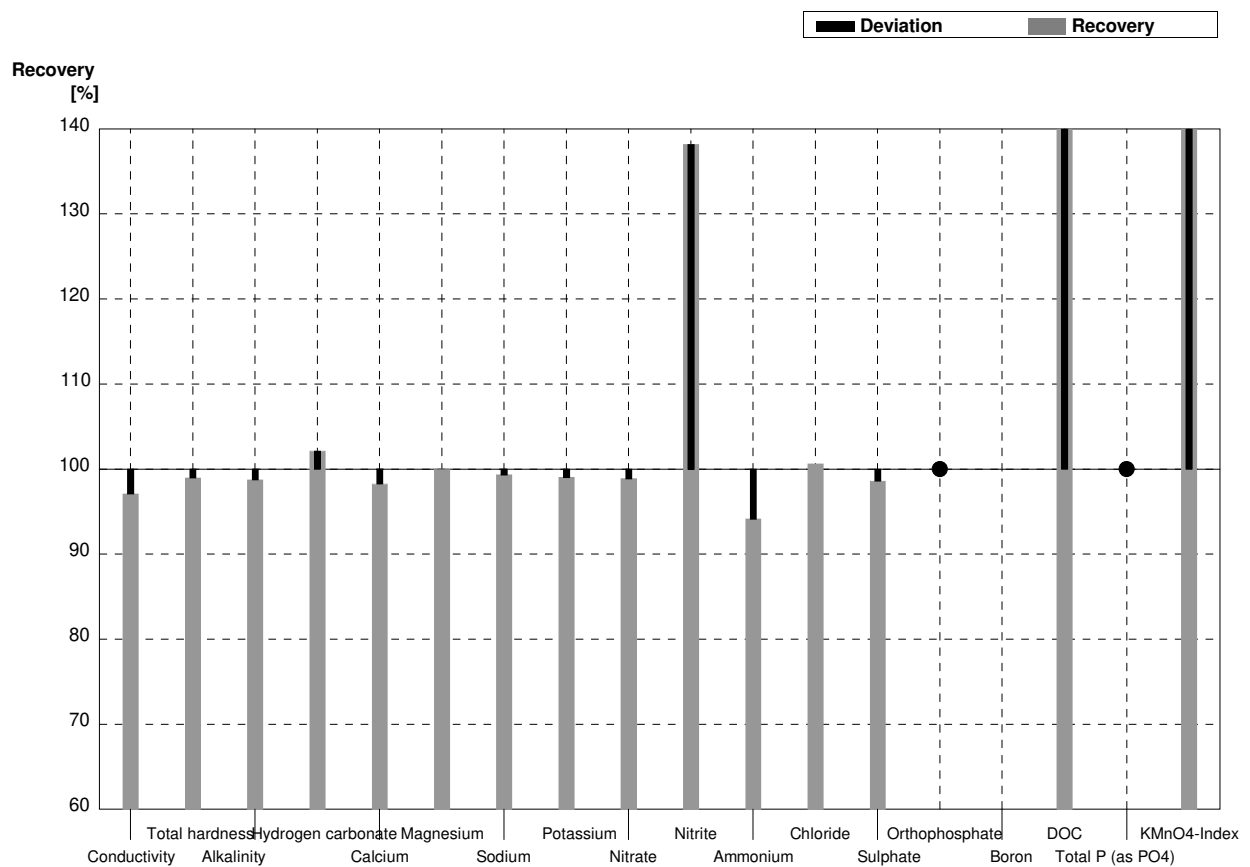
**Sample N164A**  
**Laboratory AS**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	291	6,3	µS/cm	94%
Total hardness	0,578	0,007	0,56	0,05	mmol/l	97%
Alkalinity	2,158	0,012	2,15	0,10	mmol/l	100%
Hydrogen carbonate	128,6	0,8	131	5,9	mg/l	102%
Calcium	16,2	0,2	15,7	0,81	mg/l	97%
Magnesium	4,22	0,05	4,24	0,24	mg/l	100%
Sodium	41,36	0,16	41,1	3,1	mg/l	99%
Potassium	6,81	0,03	6,7	0,23	mg/l	98%
Nitrate	<0,2		<0,50		mg/l	•
Nitrite	0,0645	0,0002	0,059	0,0087	mg/l	91%
Ammonium	<0,01		<0,01		mg/l	•
Chloride	13,8	0,4	13,7	1,1	mg/l	99%
Sulphate	25,1	0,2	25,1	1,5	mg/l	100%
Orthophosphate	0,071	0,003	0,064	0,0054	mg/l	90%
Boron	0,0253	0,0010			mg/l	
DOC	9,91	0,06	13,2	2,2	mg/l	133%
Total P (as PO4)	0,118	0,002	0,136	0,018	mg/l	115%
KMnO4-Index	6,8	0,4	8,2	0,51	mg/l	121%



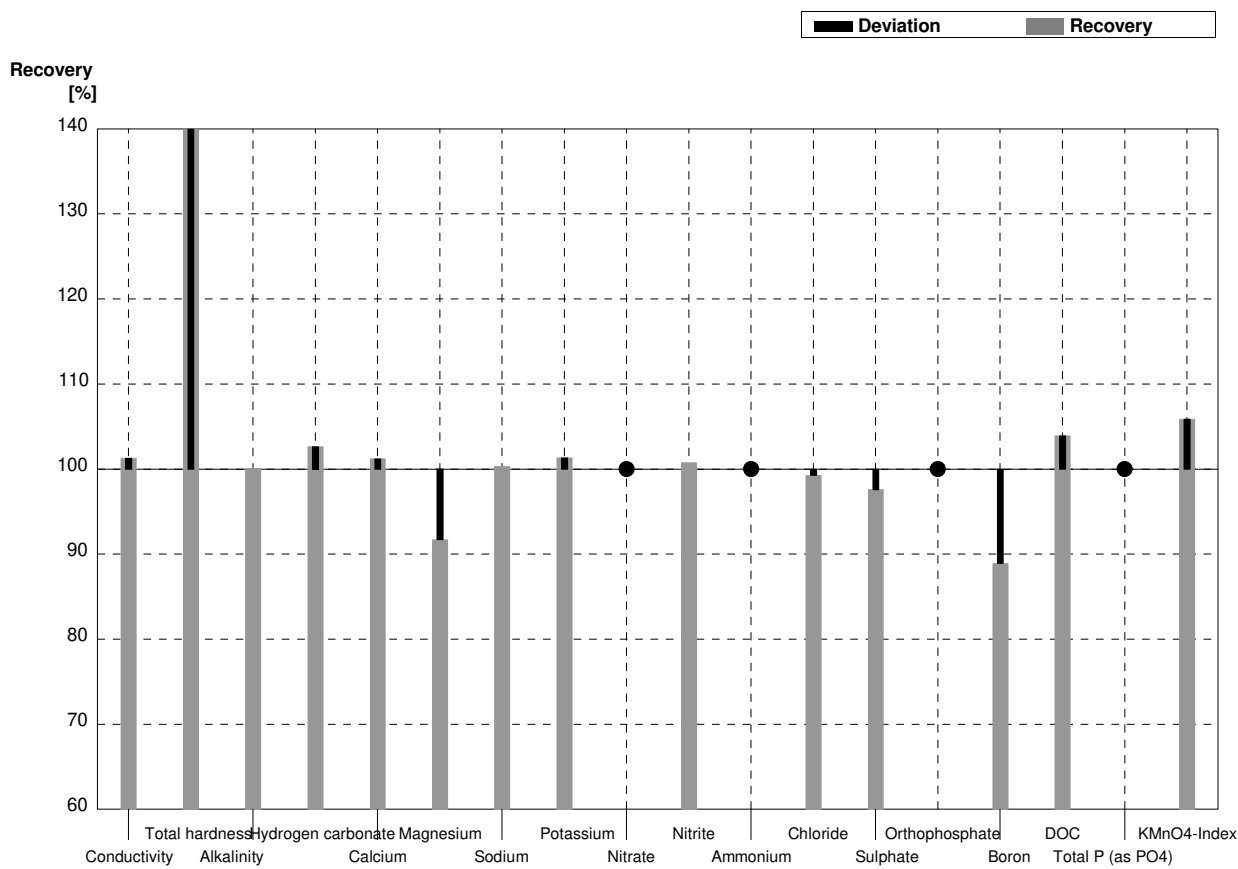
**Sample N164B**  
**Laboratory AS**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	537	12	µS/cm	97%
Total hardness	1,97	0,02	1,95	0,13	mmol/l	99%
Alkalinity	1,671	0,014	1,65	0,07	mmol/l	99%
Hydrogen carbonate	98,9	0,9	101	4,5	mg/l	102%
Calcium	51,9	0,7	51	2,6	mg/l	98%
Magnesium	16,4	0,2	16,4	1,1	mg/l	100%
Sodium	28,39	0,19	28,2	2,1	mg/l	99%
Potassium	4,10	0,04	4,06	0,14	mg/l	99%
Nitrate	53,6	1,3	53	2,6	mg/l	99%
Nitrite	0,0152	0,0020	0,0210	0,0031	mg/l	138%
Ammonium	0,0478	0,0053	0,0450	0,0033	mg/l	94%
Chloride	48,9	0,9	49,2	3,9	mg/l	101%
Sulphate	64,9	0,8	64	3,9	mg/l	99%
Orthophosphate	<0,009		<0,01		mg/l	•
Boron	0,0505	0,0004			mg/l	
DOC	6,23	0,04	9,0	1,5	mg/l	144%
Total P (as PO4)	<0,009		<0,01		mg/l	•
KMnO4-Index	2,72	0,11	4,74	0,30	mg/l	174%



**Sample N164A**  
**Laboratory AT**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	310	1	314	4	µS/cm	101%
Total hardness	0,578	0,007	3,18	0,07	mmol/l	550%
Alkalinity	2,158	0,012	2,16	0,15	mmol/l	100%
Hydrogen carbonate	128,6	0,8	132		mg/l	103%
Calcium	16,2	0,2	16,4	0,51	mg/l	101%
Magnesium	4,22	0,05	3,87	0,32	mg/l	92%
Sodium	41,36	0,16	41,5	2,0	mg/l	100%
Potassium	6,81	0,03	6,9	0,5	mg/l	101%
Nitrate	<0,2		<0,50	0,049	mg/l	•
Nitrite	0,0645	0,0002	0,065	0,0041	mg/l	101%
Ammonium	<0,01		<0,0100	0,001	mg/l	•
Chloride	13,8	0,4	13,7	0,7	mg/l	99%
Sulphate	25,1	0,2	24,5	1,1	mg/l	98%
Orthophosphate	0,071	0,003	<0,150	0,0096	mg/l	•
Boron	0,0253	0,0010	0,0225	0,0045	mg/l	89%
DOC	9,91	0,06	10,3	1,1	mg/l	104%
Total P (as PO4)	0,118	0,002	<0,150	0,0096	mg/l	•
KMnO4-Index	6,8	0,4	7,2	1,2	mg/l	106%



**Sample N164B**  
**Laboratory AT**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Conductivity	553	2	550	7	µS/cm	99%
Total hardness	1,97	0,02	11,0	0,2	mmol/l	558%
Alkalinity	1,671	0,014	1,67	0,12	mmol/l	100%
Hydrogen carbonate	98,9	0,9	102		mg/l	103%
Calcium	51,9	0,7	52	1,6	mg/l	100%
Magnesium	16,4	0,2	16,3	1,3	mg/l	99%
Sodium	28,39	0,19	28,3	1,4	mg/l	100%
Potassium	4,10	0,04	4,11	0,3	mg/l	100%
Nitrate	53,6	1,3	53	4,7	mg/l	99%
Nitrite	0,0152	0,0020	0,0160	0,001	mg/l	105%
Ammonium	0,0478	0,0053	0,0480	0,005	mg/l	100%
Chloride	48,9	0,9	48,7	2,3	mg/l	100%
Sulphate	64,9	0,8	64	2,9	mg/l	99%
Orthophosphate	<0,009		<0,150	0,0096	mg/l	•
Boron	0,0505	0,0004	0,0465	0,0093	mg/l	92%
DOC	6,23	0,04	6,5	0,7	mg/l	104%
Total P (as PO4)	<0,009		<0,150	0,0096	mg/l	•
KMnO4-Index	2,72	0,11	3,00	0,50	mg/l	110%

