

# IFA-Proficiency Testing Scheme for Water Analysis

Round C66  
Volatile Halogenated Hydrocarbons

Sample Dispatch: 28 March 2022

In accordance with the procedure: AVKPS.03 (03/2021)



University of Natural Resources and Life Sciences Vienna, Department of Agrobiotechnology  
Institute of Bioanalytics and Agro-Metabolomics, IFA-Proficiency Testing Scheme  
3430 Tulln, Konrad-Lorenz-Straße 20, [www.ifatest.eu](http://www.ifatest.eu)  
tel.: +43 (0)1 47654 ext. 97306 or 97361, fax.: +43 (0)1 47654 97309

**Address:**

**University of Natural Resources  
and Life Sciences, Vienna**

Department of Agrobiotechnology, IFA-Tulln  
 Institute of Bioanalytics and Agro-Metabolomics  
 Head: Prof. DI Dr. Rudolf Krska  
 Konrad-Lorenz-Str. 20  
 3430 Tulln  
 Austria

**Website:**

[www.ifatest.eu](http://www.ifatest.eu)  
[www.ifa-tulln.boku.ac.at](http://www.ifa-tulln.boku.ac.at)

**Telephone/Fax:**

+43(0) 1 47654 - Ext  
 +43(0) 1 47654 - 97309

**Proficiency Testing (PT) Scheme:**

Technical manager:

Dipl.-HTL-Ing. Andrea Koutnik    Ext 97306    [andrea.koutnik@boku.ac.at](mailto:andrea.koutnik@boku.ac.at)

Quality assurance representative:

Dr. Wolfgang Kandler                  Ext 97308    [wolfgang.kandler@boku.ac.at](mailto:wolfgang.kandler@boku.ac.at)

Method specialists:

Ing. Uta Kachelmeier	Ext 97361	<a href="mailto:uta.kachelmeier@boku.ac.at">uta.kachelmeier@boku.ac.at</a>
Ing. Caroline Stadlmann	Ext 97306	<a href="mailto:caroline.stadlmann@boku.ac.at">caroline.stadlmann@boku.ac.at</a>

Approved by:	Dipl.-HTL-Ing. Andrea Koutnik	
round:C66	Date / Signature:	27.04.2022

*A. koutnik*

Report: 1. Edition, created on 28 April 2022 by Ing. Caroline Stadlmann  
 91 pages

This report summarises the results of round “Volatile Halogenated Hydrocarbons” within the IFA-Test Proficiency Testing Scheme for Water Analysis. The samples were distributed to 21 participants on Monday, 28 March 2022. Each participant received two samples of 600 mL filled into aluminium bottles.

Closing date for reporting results to the IFA-Tulln was Friday, 22 April 2022. All laboratories submitted results. To make the participants anonymous, each laboratory obtained a letter code by random.

## Samples

For sample preparation, ultrapure water was spiked with concentrated solutions of inorganic salts in order to simulate the ionic composition of natural ground water. The following salts were added to the samples: Mg(NO<sub>3</sub>)<sub>2</sub>, MgSO<sub>4</sub>, Na<sub>2</sub>SO<sub>4</sub>, NaHCO<sub>3</sub>, KHCO<sub>3</sub>, CaCl<sub>2</sub> and Ca(NO<sub>3</sub>)<sub>2</sub>. Prior to sample preparation, samples of ultrapure water and artificial water matrix were analysed by Purge&Trap-GC-MS to exclude contamination.

The samples C66A and C66B were spiked with traces of trichloroethene, trichloromethane, 1,1,1-trichloroethane, tetrachloromethane, tribromomethane, tetrachloroethene, bromodichloromethane, 1,2-dichloroethane, dibromochloromethane, 1,1-dichloroethene, dichloromethane, cis-1,2-dichloroethene and trans-1,2-dichloroethene.

The calculation of the target concentrations of the compounds was based on the mass of standard added to the samples.

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

For verification of homogeneity samples were analysed for the compounds of interest by Purge&Trap-GC-MS measurements prior to shipment to the participants. The results of the measurements are listed in the result tables and the parameter oriented part of the report (“IFA result”).

Usually we perform an additional check of PT-samples’ stability five weeks after sample preparation. The results of the measurements are listed in the result tables and the parameter oriented part of the report (“Stability test”).

## Results

Data evaluation was based on target concentrations that were calculated from the weights of the standards used to prepare 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)”.

Recoveries for individual laboratory results and overall mean values are related to the assigned target concentrations. The results were tested for outliers using the Hampel outlier test (level of significance 99 %). A minimum number of four results was required for the outlier test.

The substance concentrations adjusted by standard addition were between 0.258 µg/l (tetrachloromethane in C66B) and 4.28 µg/l (dichloromethane in C66B).

1,2-dichloroethane and cis-1,2-dichloroethene were not added to sample C66B in order to check the analytical blank values. The target concentrations were set to < 0.1 µg/L 1,2-dichloroethane and < 0.1 µg/L cis-1,2-dichloroethene, 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.

Standard deviations and coefficients of variation (CVs) were only calculated, when at least three results were available. The recoveries of the target concentrations, calculated from outlier-corrected data mean values ranged between 84.5 % (tribromomethane in sample C66A) and 107.3 % (1,1,1-trichloroethane in sample C66B). The between-laboratory coefficients of variation ranged from 6.9 % (bromodichloromethane in sample C66A) to 21.6 % (trans-1,2-dichloroethene in sample C66B).

The confidence intervals of the outlier-corrected laboratory mean values encompass the corresponding target values with their uncertainties.

## **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 z-score criteria were determined from relative standard deviations from 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 7.20 µg/L for the parameter Dichloromethane (recovery of 120 %). The target value for Dichloromethane was 6.02 µg/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 14 %, which is 0.84 µg/L Dichloromethane, when based on the target value.

$$z = \frac{x_i - X}{\sigma_{pt}} = \frac{7.20 \text{ } \mu\text{g/L} - 6.02 \text{ } \mu\text{g/L}}{0.84 \text{ } \mu\text{g/L}} \approx 1.4 \quad \text{or} \quad \frac{120\% - 100\%}{14 \%} \approx 1.4$$

$z$       z-score

$x_i$       7.20 µg/L equivalent to 120 % (value of the laboratory)

$X$       6.02 µg/L equivalent to 100 % (target value)

$\sigma_{pt}$       0.84 µg/L equivalent to 14 % (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 standard deviations for proficiency assessment and their limits of applicability. Z-scores were only calculated, if the target values were higher than these limits.

Parameter	z-Score-criteria (%)	Lower limit [µg/L]
1,1,1-Trichloroethane	15	0.15
1,1-Dichloroethene	17	0.35
1,2-Dichloroethane	13	0.5
cis-1,2-Dichloroethene	14	0.15
trans-1,2-Dichloroethene	13	0.15
Bromodichloromethane	13	0.15
Dibromochloromethane	13	0.2
Dichloromethane	14	1
Tetrachloroethene	15	0.15
Tetrachloromethane	17	0.15
Tribromomethane	15	0.2
Trichloroethene	14	0.15
Trichloromethane	14	0.25

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 represented. 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 (\*) in the column "out". 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 value. The uncertainty intervals correspond to the expanded uncertainty (coverage factor  $k = 2$ ) as described in the EURACHEM / CITAC Guide "Quantifying Uncertainty in Analytical Measurement, 3<sup>rd</sup> Edition (2012)". The uncertainty interval of the reference concentration is illustrated in the graphs as a grey band around the 100 % recovery line.

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

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

Tulln, 28 April 2022

# EXPLANATION

## Sample C10B

### Parameter Dichloromethane

Target value  $\pm U (k=2)$   $10,4 \mu\text{g/l} \pm 0,5 \mu\text{g/l}$  **Obtained from mass weighed out,  $U = \text{uncertainty}$**

IFA result  $\pm U (k=2)$   $10,2 \mu\text{g/l} \pm 1,0 \mu\text{g/l}$  **Determined at IFA prior to shipment of samples**

Stability test  $\pm U (k=2)$   $10,2 \mu\text{g/l} \pm 1,0 \mu\text{g/l}$  **Determined at IFA 5 weeks after sample dispatch**

Lab code	Result	Out	$+/ -$	Unit	Recovery	z-Score
A	11,0		1,28	$\mu\text{g/l}$	106 %	0,30
B	9,0		1,8	$\mu\text{g/l}$	87 %	-0,71
C	10		2	$\mu\text{g/l}$	96 %	-0,20
D				$\mu\text{g/l}$		
E	13,7		0,40	$\mu\text{g/l}$	132 %	1,67
F	6,8		0,7	$\mu\text{g/l}$	65 %	-1,82
G	< 20			$\mu\text{g/l}$		
H				$\mu\text{g/l}$		
I	11,0			$\mu\text{g/l}$	106 %	0,30
J	24,1	*	1,51	$\mu\text{g/l}$	232 %	6,93
K	10,09		1,22	$\mu\text{g/l}$	97 %	-0,16
L	2,76	*		$\mu\text{g/l}$	27 %	-3,87
M	6,38		1,87	$\mu\text{g/l}$	61 %	-2,03
N	< 5		0,5	$\mu\text{g/l}$	FN	
O	15,6	*	4	$\mu\text{g/l}$	150 %	2,63
P	10,3		1,0	$\mu\text{g/l}$	99 %	-0,05
Q	10		1,14	$\mu\text{g/l}$	96 %	-0,20
R	8,88		0,46	$\mu\text{g/l}$	85 %	-0,77
S				$\mu\text{g/l}$		
T	9,03		0,08	$\mu\text{g/l}$	87 %	-0,69
U	22,5	*	0,5	$\mu\text{g/l}$	216 %	6,12
V	10,33		0,25	$\mu\text{g/l}$	99 %	-0,04

An asterisk indicates a result detected as outlier by Hampel test

Interval expected to encompass target value as stated by participant

	All results	Outliers excl.	Unit
Mean $+/ -$ CI (99%)	$11,3 \pm 3,8$	$9,7 \pm 1,6$	$\mu\text{g/l}$
Recov. $+/ -$ CI (99%)	$108,3 \pm 36,3$	$93,6 \pm 15,1$	%
SD between labs	5,3		$\mu\text{g/l}$
RSD between labs	47,3		%
n for calculation	17	13	

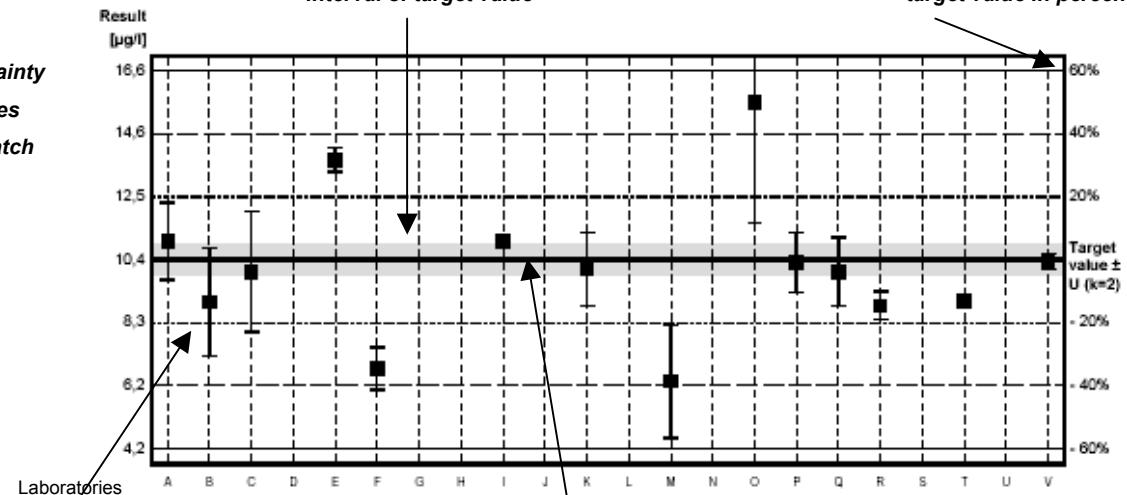
Between laboratory standard deviation

Number of data used for calculation of statistic parameters

Overall laboratory mean and recovery with corresponding confidence intervals ( $p=99\%$ )

grey band illustrates uncertainty interval of target value

Relative deviation from target value in percent



Recovery [%]

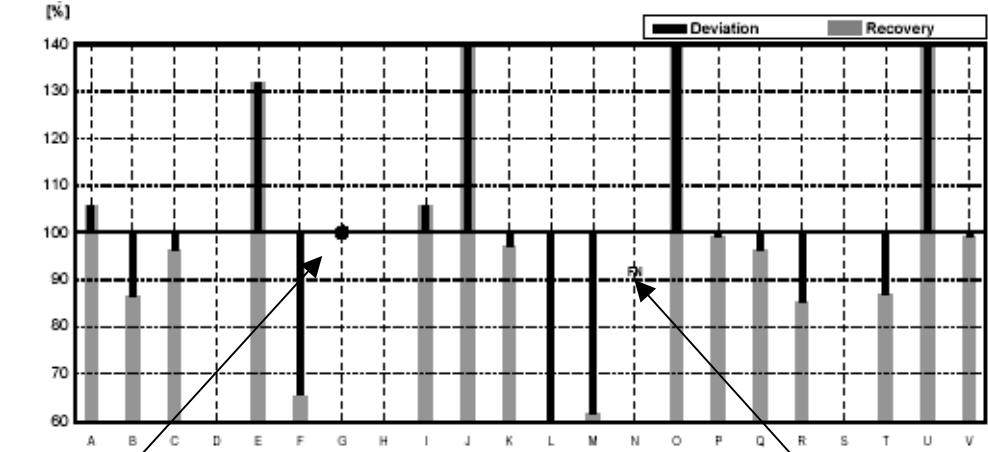


Diagram 2. Recoveries and deviations from target values





I F A



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

Round C66  
Volatile Halogenated Hydrocarbons

Sample Dispatch: 28 March 2022

## Results Sample C66A

	Trichloro-ethene	Tetrachloro-ethene	1,1,1-Tri-chloroethane	Trichloro-methane	Tetrachloro-methane	1,1-Dichloro-ethene	Tribromo-methane
Target value	0.70	0.271	0.91	1.76	1.23	0.79	0.69
IFA Result	0.69	0.281	0.90	1.77	1.22	0.80	0.62
Stability test	0.70	0.284	0.88	1.72	1.20	0.80	0.60
A	0.660	0.288	0.819	1.58	0.989	0.719	0.589
B	0.70	0.296	0.96	1.72	1.32	1.08	0.57
C	0.6430	0.2758					
D	0.690	0.270	0.910	1.750	1.150	0.810	0.680
E	0.722	0.313	0.912	1.754	1.213		0.796
F	0.495	0.341	0.98	2.05	1.41	0.89	0.60
G	0.617	0.241	0.848	1.681	1.143	0.749	0.525
H	0.77	0.260	0.82	1.80	1.28		0.69
I	0.78	0.73	1.07	1.75	1.49	0.88	0.635
J	0.540	0.265	0.700	1.515	0.960	0.630	
K	0.85	0.439	1.33	2.43	1.51	0.97	0.401
L	0.700	0.311	0.923	1.57	1.02	0.794	0.568
M	0.693	0.301	0.949	1.65	1.27	0.835	0.645
N	0.630	0.205	0.755	1.585	0.980	0.759	0.660
O	0.587	0.273	0.960	1.628	1.099		
P	0.82	0.117	1.06	2.04	1.44	0.97	<0.7
Q	0.593	0.232	0.819	1.61	1.12	0.744	0.490
R	0.588	0.180	0.779	1.49	0.986	0.609	0.432
S	0.572	0.234	0.867	1.53	1.13	0.731	0.475
T	0.686	0.282	0.913	1.73	1.17	0.866	0.547
U	0.74	0.287	0.98		1.44	0.94	0.61

All data in µg/L

## Measurement Uncertainties Sample C66A

	Trichloro-ethene ±	Tetrachloro-ethene ±	1,1,1-Tri-chloroethane ±	Trichloro-methane ±	Tetrachloro-methane ±	1,1-Dichloro-ethene ±	Tribromo-methane ±
Target value	0.04	0.024	0.05	0.09	0.06	0.04	0.04
IFA Result	0.10	0.042	0.14	0.27	0.18	0.12	0.09
Stability test	0.11	0.043	0.13	0.26	0.18	0.12	0.09
A	0.284	0.124	0.311	0.411	0.336	0.244	0.206
B	0.14	0.059	0.19	0.344	0.26	0.22	0.11
C	0.1865	0.1021					
D	0.138	0.054	0.182	0.350	0.230	0.162	0.136
E	0.127	0.118	0.135	0.266	0.265		0.195
F	0.074	0.051	0.15	0.31	0.21	0.13	0.09
G	0.105	0.036	0.170	0.202	0.171	0.142	0.063
H	0.14	0.05	0.16	0.36	0.24		0.14
I	0.02	0.02	0.02	0.04	0.04	0.03	0.017
J	0.080	0.075	0.060	0.155	0.020	0.030	
K	0.22	0.11	0.35	0.63	0.39	0.25	0.1
L	0.051	0.009	0.077	0.055	0.124	0.113	0.120
M	0.104	0.045	0.142	0.25	0.19	0.125	0.097
N	0.208	0.068	0.166	0.428	0.186	0.121	0.198
O	0.029	0.040	0.046	0.062	0.038		
P	0.164	0.029	0.212	0.408	0.361	0.243	0
Q	0.136	0.075	0.172	0.41	0.21	0.187	0.106
R	0.046	0.017	0.044	0.05	0.136	0.054	0.052
S	0.098	0.040	0.149	0.263	0.194	0.126	0.082
T	0.049	0.024	0.17	0.35	0.30	0.17	0.14
U	0.15	0.057	0.20		0.29	0.19	0.12

All data in µg/L

## Results Sample C66A

	Bromodichloro-methane	Dibromochloro-methane	Dichloro-methane	1,2-Dichloro-ethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene
Target value	0.455	0.71	1.46	3.05	2.72	1.40
IFA Result	0.469	0.72	1.50	3.05	2.77	1.41
Stability test	0.473	0.72	1.49	3.11	2.70	1.37
A	0.436	0.654	1.51	3.53	2.61	1.12
B	0.434	0.65	<BG	2.83	2.32	1.73
C						
D	0.470	0.750	1.540	3.170	2.850	1.450
E	0.457	0.798				
F	0.495	0.75	2.03	3.61	2.95	1.70
G	0.435	0.650	1.454	2.808	2.085	1.315
H	0.470	0.73	2.15	2.25		
I	0.464	0.651	1.57	3.09	3.05	1.56
J					2.430	1.363
K	0.417	0.62	2.07	3.49	2.87	1.91
L	0.423	0.671	1.43	3.10	2.76	1.47
M	0.490	0.786	1.48	2.71	2.93	1.45
N	0.447	0.785	1.419	3.095	3.300	1.195
O			1.067	2.575	2.627	
P	0.473	0.72	1.07	3.42	3.03	1.66
Q	0.411	0.630	1.60	3.00	2.25	1.31
R	0.379	0.273	1.33	2.77	2.41	1.16
S	0.424	0.622	1.36	2.63	2.25	1.23
T	0.435	0.666	1.33	2.93	2.59	1.49
U	0.486	0.73	1.77	2.63	2.93	1.60

All data in µg/L

## Measurement Uncertainties Sample C66A

	Bromodichloro-methane ±	Dibromochloro-methane ±	Dichloro-methane ±	1,2-Dichloro-ethane ±	cis-1,2-Dichloroethene ±	trans-1,2-Dichloroethene ±
Target value	0.028	0.04	0.09	0.17	0.14	0.07
IFA Result	0.070	0.11	0.23	0.46	0.42	0.21
Stability test	0.071	0.11	0.22	0.47	0.41	0.21
A	0.135	0.196	0.424	1.27	0.938	0.392
B	0.087	0.13		0.57	0.35	0.35
C						
D	0.094	0.150	0.308	0.634	0.570	0.290
E	0.095	0.156				
F	0.074	0.11	0.30	0.54	0.44	0.25
G	0.057	0.091	0.102	0.309	0.605	0.224
H	0.09	0.14	0.42	0.44		
I	0.009	0.009	0.20	0.06	0.1	0.06
J					0.140	0.047
K	0.11	0.16	0.54	0.91	0.75	0.5
L	0.110	0.096	0.103	0.205	0.071	0.104
M	0.074	0.118	0.22	0.41	0.44	0.22
N	0.112	0.204	0.412	1.052	0.759	0.311
O			0.194	0.108	0.079	
P	0.118	0.181	0.215	0.855	0.605	0.331
Q	0.103	0.161	0.40	0.71	0.38	0.29
R	0.024	0.018	0.06	0.18	0.21	0.10
S	0.073	0.107	0.234	0.452	0.387	0.212
T	0.11	0.17	0.33	0.71	0.48	0.30
U	0.097	0.15	0.35	0.53	0.59	0.32

All data in µg/L

## Results Sample C66B

	Trichloro-ethene	Tetrachloro-ethene	1,1,1-Tri-chloroethane	Trichloro-methane	Tetrachloro-methane	1,1-Dichloro-ethene	Tribromo-methane
Target value	0.289	0.73	0.312	0.78	0.258	2.33	1.94
IFA Result	0.252	0.68	0.340	0.78	0.253	2.36	1.80
Stability test	0.248	0.66	0.343	0.78	0.259	2.29	1.85
A	0.233	0.627	0.315	0.708	0.256	2.11	2.14
B	0.293	0.74	0.352	0.77	0.278	3.44	1.81
C	0.2416	0.6235					
D	0.250	0.710	0.350	0.780	0.240	2.480	2.000
E	0.297	0.697	0.332	0.766	0.241		2.563
F	0.133	0.76	0.337	0.80	0.277	2.67	1.94
G	0.240	0.602	0.294	0.704	0.204	2.074	1.700
H	0.300	0.63	0.300	0.88	0.250		2.09
I	0.305	0.294	0.428	0.763	0.281	2.62	1.76
J	0.258	0.615	0.265	0.725	0.235	1.820	
K	0.321	1.15	0.53	1.07	0.382	2.64	1.60
L	0.271	0.696	0.359	0.719	0.279	2.11	1.76
M	0.301	0.736	0.385	0.820	0.281	2.05	2.07
N	0.225	0.503	0.290	0.700	0.216	2.225	2.085
O	0.197	0.612	0.347	0.677	0.222		
P	0.262	0.52	0.376	0.83	0.266	2.61	1.91
Q	0.225	0.557	0.318	0.733	0.240	2.31	1.53
R	0.207	0.469	0.287	0.609	0.193	1.78	1.34
S	0.211	0.568	0.329	0.680	0.238	2.12	1.50
T	0.251	0.689	0.344	0.721	0.246	2.46	1.66
U	0.268	0.67	0.353		0.269	2.62	1.74

All data in µg/L

### Measurement Uncertainties Sample C66B

	Trichloro-ethene ±	Tetrachloro-ethene ±	1,1,1-Tri-chloroethane ±	Trichloro-methane ±	Tetrachloro-methane ±	1,1-Dichloro-ethene ±	Tribromo-methane ±
Target value	0.018	0.04	0.019	0.05	0.019	0.12	0.10
IFA Result	0.038	0.10	0.051	0.12	0.038	0.35	0.27
Stability test	0.037	0.10	0.051	0.12	0.039	0.34	0.28
A	0.100	0.270	0.120	0.184	0.087	0.718	0.748
B	0.059	0.15	0.070	0.15	0.056	0.69	0.36
C	0.0701	0.2307					
D	0.050	0.142	0.070	0.156	0.048	0.496	0.400
E	0.107	0.141	0.056	0.212	0.109		0.597
F	0.020	0.11	0.051	0.12	0.042	0.40	0.29
G	0.041	0.090	0.059	0.084	0.031	0.394	0.204
H	0.06	0.12	0.06	0.17	0.05		0.41
I	0.006	0.01	0.006	0.009	0.007	0.07	0.03
J	0.078	0.055	0.015	0.125	0.045	0.160	
K	0.08	0.30	0.14	0.28	0.10	0.69	0.42
L	0.012	0.093	0.007	0.052	0.003	0.156	0.111
M	0.045	0.110	0.058	0.123	0.042	0.31	0.31
N	0.074	0.166	0.064	0.189	0.041	0.359	0.626
O	0.021	0.031	0.020	0.046	0.016		
P	0.052	0.131	0.075	0.165	0.067	0.652	0.574
Q	0.051	0.179	0.067	0.187	0.045	0.58	0.33
R	0.016	0.045	0.016	0.021	0.027	0.16	0.16
S	0.036	0.098	0.057	0.117	0.041	0.365	0.258
T	0.018	0.057	0.065	0.14	0.062	0.48	0.42
U	0.054	0.13	0.071		0.054	0.52	0.35

All data in µg/L

## Results Sample C66B

	Bromodichloro-methane	Dibromochloro-methane	Dichloro-methane	1,2-Dichloro-ethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene
Target value	1.02	1.48	4.28	<0.1	<0.1	0.359
IFA Result	1.08	1.48	4.44	<0.1	<0.1	0.345
Stability test	1.09	1.49	4.32	<0.1	<0.1	0.349
A	1.07	1.38	4.12	<0.3	<0.1	0.296
B	1.10	1.49	3.26	<BG	<BG	0.496
C						
D	1.120	1.540	4.340	<0.040	<0.130	0.380
E	1.048	1.757				
F	1.16	1.52	5.7	<0.1	<0.1	0.359
G	1.034	1.408	4.206	<0.1	<0.1	0.325
H	0.94	1.47	5.21	<0.5		
I	1.09	1.39	4.27	<0.41	<0.75	0.410
J					<0.1	0.465
K	1.18	1.66	5.92	<0.1	<0.1	0.57
L	0.960	1.42	4.17	<0.05	<0.05	0.285
M	1.15	1.69	4.81	<0.5	<0.5	<0.5
N	1.075	1.700	4.165	<0.08	<0.05	0.315
O			2.927	<1.00	<1.00	
P	1.15	1.61	4.06	<0.3	<0.1	0.384
Q	0.987	1.36	4.84	<0.020	<0.020	0.345
R	0.871	0.529	3.86	<0.80	<0.30	0.281
S	1.01	1.34	3.99	<0.10	<0.10	0.308
T	1.01	1.39	4.00	<0.5	<0.1	0.366
U	1.11	1.43	4.96	<1.00	<0.100	0.403

All data in µg/L

### Measurement Uncertainties Sample C66B

	Bromodichloro-methane ±	Dibromochloro-methane ±	Dichloro-methane ±	1,2-Dichloro-ethane ±	cis-1,2-Dichloroethene ±	trans-1,2-Dichloroethene ±
Target value	0.05	0.08	0.22			0.023
IFA Result	0.16	0.22	0.67			0.052
Stability test	0.16	0.22	0.65			0.052
A	0.333	0.414	1.15			0.104
B	0.22	0.30	0.65			0.099
C						
D	0.224	0.308	0.868			0.076
E	0.211	0.327				
F	0.17	0.23	0.9			0.054
G	0.134	0.197	0.294			0.055
H	0.18	0.29	1.4	0.1		
I	0.003	0.01	0.07			0.002
J						0.055
K	0.31	0.43	1.54			0.15
L	0.105	0.091	0.261			0.008
M	0.17	0.25	0.72			
N	0.269	0.442	1.208	0.027	0.012	0.082
O			0.491			
P	0.286	0.403	0.813	0	0	0.077
Q	0.248	0.35	1.21			0.077
R	0.055	0.039	0.16			0.025
S	0.174	0.230	0.686			0.053
T	0.25	0.35	1.0			0.073
U	0.22	0.29	0.99			0.080

All data in µg/L

### Z-Scores Sample C66A

	Trichloro-ethene	Tetrachloro-ethene	1,1,1-Tri-chloroethane	Trichloro-methane	Tetrachloro-methane	1,1-Dichloro-ethene	Tribromo-methane
A	-0.41	0.42	-0.67	-0.73	-1.15	-0.53	-0.98
B	0.00	0.62	0.37	-0.16	0.43	2.16	-1.16
C	-0.58	0.12					
D	-0.10	-0.02	0.00	-0.04	-0.38	0.15	-0.10
E	0.22	1.03	0.01	-0.02	-0.08		1.02
F	-2.09	1.72	0.51	1.18	0.86	0.74	-0.87
G	-0.85	-0.74	-0.45	-0.32	-0.42	-0.31	-1.59
H	0.71	-0.27	-0.66	0.16	0.24		0.00
I	0.82	11.29	1.17	-0.04	1.24	0.67	-0.53
J	-1.63	-0.15	-1.54	-0.99	-1.29	-1.19	
K	1.53	4.13	3.08	2.72	1.34	1.34	-2.79
L	0.00	0.98	0.10	-0.77	-1.00	0.03	-1.18
M	-0.07	0.74	0.29	-0.45	0.19	0.34	-0.43
N	-0.71	-1.62	-1.14	-0.71	-1.20	-0.23	-0.29
O	-1.15	0.05	0.37	-0.54	-0.63		
P	1.22	-3.79	1.10	1.14	1.00	1.34	
Q	-1.09	-0.96	-0.67	-0.61	-0.53	-0.34	-1.93
R	-1.14	-2.24	-0.96	-1.10	-1.17	-1.35	-2.49
S	-1.31	-0.91	-0.32	-0.93	-0.48	-0.44	-2.08
T	-0.14	0.27	0.02	-0.12	-0.29	0.57	-1.38
U	0.41	0.39	0.51		1.00	1.12	-0.77

**Z-Scores Sample C66A**

	Bromodichloro-methane	Dibromochloro-methane	Dichloro-methane	1,2-Dichloro-ethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene
A	-0.32	-0.61	0.24	1.21	-0.29	-1.54
B	-0.36	-0.65		-0.55	-1.05	1.81
C						
D	0.25	0.43	0.39	0.30	0.34	0.27
E	0.03	0.95				
F	0.68	0.43	2.79	1.41	0.6	1.65
G	-0.34	-0.65	-0.03	-0.61	-1.67	-0.47
H	0.25	0.22	3.38	-2.02		
I	0.15	-0.64	0.54	0.10	0.87	0.88
J					-0.76	-0.20
K	-0.64	-0.98	2.98	1.11	0.39	2.80
L	-0.54	-0.42	-0.15	0.13	0.11	0.38
M	0.59	0.82	0.10	-0.86	0.55	0.27
N	-0.14	0.81	-0.20	0.11	1.52	-1.13
O			-1.92	-1.20	-0.24	
P	0.30	0.11	-1.91	0.93	0.81	1.43
Q	-0.74	-0.87	0.68	-0.13	-1.23	-0.49
R	-1.28	-4.73	-0.64	-0.71	-0.81	-1.32
S	-0.52	-0.95	-0.49	-1.06	-1.23	-0.93
T	-0.34	-0.48	-0.64	-0.30	-0.34	0.49
U	0.52	0.22	1.52	-1.06	0.55	1.10

### Z-Scores Sample C66B

	Trichloro-ethene	Tetrachloro-ethene	1,1,1-Tri-chloroethane	Trichloro-methane	Tetrachloro-methane	1,1-Dichloro-ethene	Tribromo-methane
A	-1.38	-0.94	0.06	-0.66	-0.05	-0.56	0.69
B	0.10	0.09	0.85	-0.09	0.46	2.80	-0.45
C	-1.17	-0.97					
D	-0.96	-0.18	0.81	0.00	-0.41	0.38	0.21
E	0.20	-0.30	0.43	-0.13	-0.39		2.14
F	-3.86	0.27	0.53	0.18	0.43	0.86	0.00
G	-1.21	-1.17	-0.38	-0.70	-1.23	-0.65	-0.82
H	0.27	-0.91	-0.26	0.92	-0.18		0.52
I	0.40	-3.98	2.48	-0.16	0.52	0.73	-0.62
J	-0.77	-1.05	-1.00	-0.50	-0.52	-1.29	
K	0.79	3.84	4.66	2.66	2.83	0.78	-1.17
L	-0.44	-0.31	1.00	-0.56	0.48	-0.56	-0.62
M	0.30	0.05	1.56	0.37	0.52	-0.71	0.45
N	-1.58	-2.07	-0.47	-0.73	-0.96	-0.27	0.50
O	-2.27	-1.08	0.75	-0.94	-0.82		
P	-0.67	-1.92	1.37	0.46	0.18	0.71	-0.10
Q	-1.58	-1.58	0.13	-0.43	-0.41	-0.05	-1.41
R	-2.03	-2.38	-0.53	-1.57	-1.48	-1.39	-2.06
S	-1.93	-1.48	0.36	-0.92	-0.46	-0.53	-1.51
T	-0.94	-0.37	0.68	-0.54	-0.27	0.33	-0.96
U	-0.52	-0.55	0.88		0.25	0.73	-0.69

**Z-Scores Sample C66B**

	Bromodichloro-methane	Dibromochloro-methane	Dichloro-methane	1,2-Dichloro-ethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene
A	0.38	-0.52	-0.27			-1.35
B	0.60	0.05	-1.7			2.94
C						
D	0.75	0.31	0.10			0.45
E	0.21	1.44				
F	1.06	0.21	2.37			0.00
G	0.11	-0.37	-0.12			-0.73
H	-0.60	-0.05	1.55			
I	0.53	-0.47	-0.02			1.09
J						2.27
K	1.21	0.94	2.74			4.52
L	-0.45	-0.31	-0.18			-1.59
M	0.98	1.09	0.88			
N	0.41	1.14	-0.19			-0.94
O			-2.26			
P	0.98	0.68	-0.37			0.54
Q	-0.25	-0.62	0.93			-0.30
R	-1.12	-4.94	-0.70			-1.67
S	-0.08	-0.73	-0.48			-1.09
T	-0.08	-0.47	-0.47			0.15
U	0.68	-0.26	1.13			0.94

## Sample C66A

### Parameter Trichloroethene

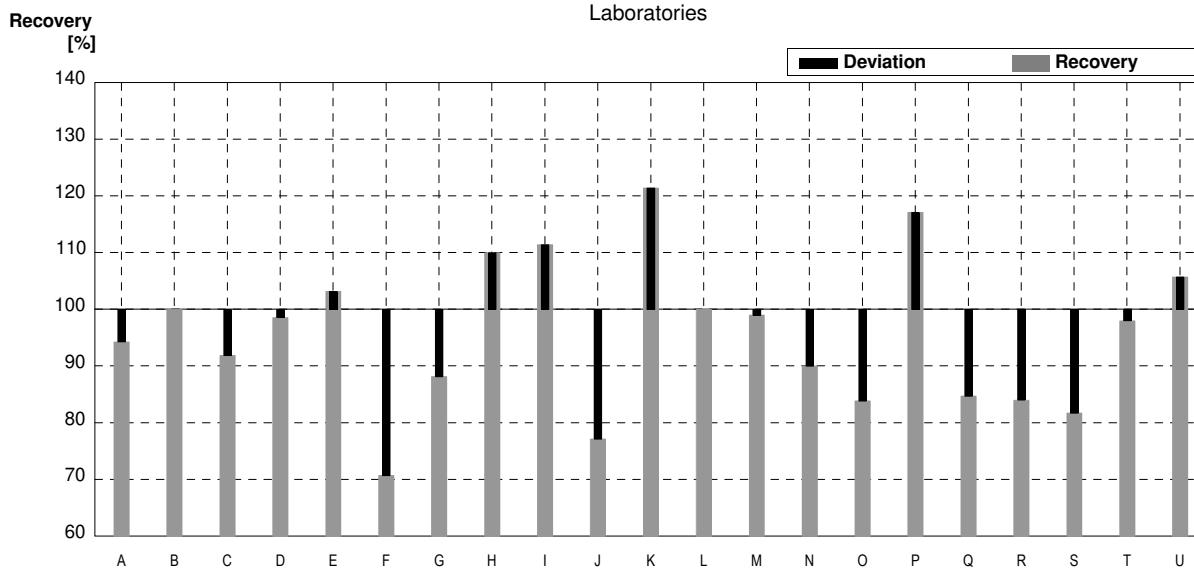
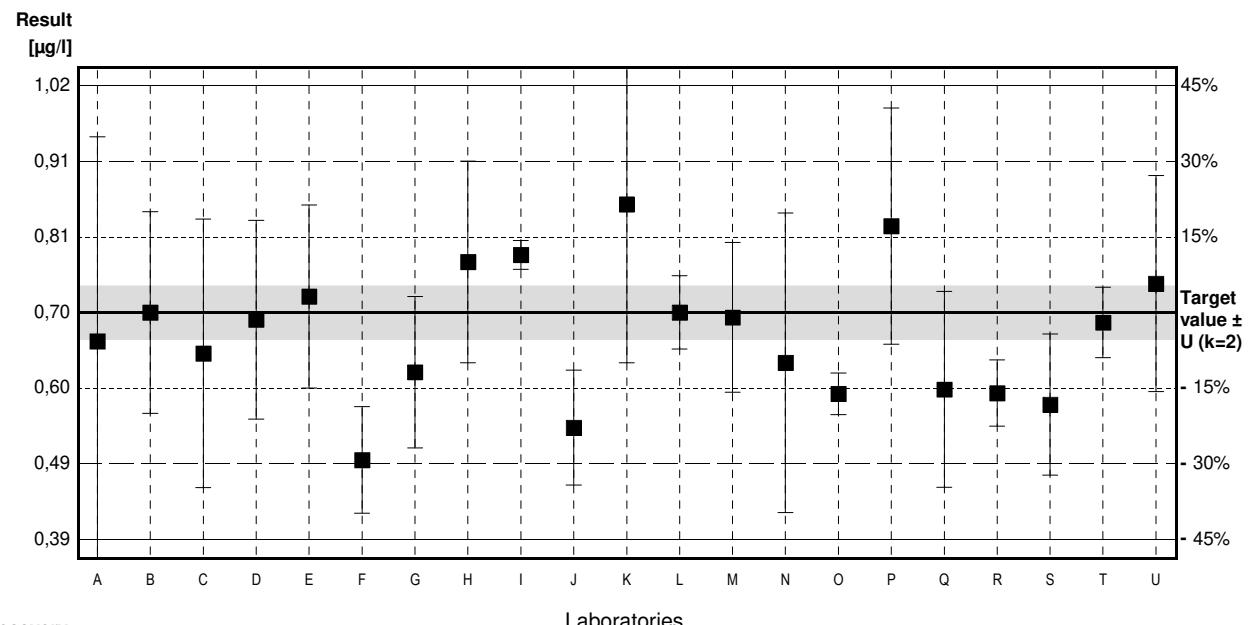
Target value  $\pm U$  ( $k=2$ ) 0,70 µg/l  $\pm$  0,04 µg/l

IFA result  $\pm U$  ( $k=2$ ) 0,69 µg/l  $\pm$  0,10 µg/l

Stability test  $\pm U$  ( $k=2$ ) 0,70 µg/l  $\pm$  0,11 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,660	0,284	µg/l	94%	-0,41
B	0,70	0,14	µg/l	100%	0,00
C	0,6430	0,1865	µg/l	92%	-0,58
D	0,690	0,138	µg/l	99%	-0,10
E	0,722	0,127	µg/l	103%	0,22
F	0,495	0,074	µg/l	71%	-2,09
G	0,617	0,105	µg/l	88%	-0,85
H	0,77	0,14	µg/l	110%	0,71
I	0,78	0,02	µg/l	111%	0,82
J	0,540	0,080	µg/l	77%	-1,63
K	0,85	0,22	µg/l	121%	1,53
L	0,700	0,051	µg/l	100%	0,00
M	0,693	0,104	µg/l	99%	-0,07
N	0,630	0,208	µg/l	90%	-0,71
O	0,587	0,029	µg/l	84%	-1,15
P	0,82	0,164	µg/l	117%	1,22
Q	0,593	0,136	µg/l	85%	-1,09
R	0,588	0,046	µg/l	84%	-1,14
S	0,572	0,098	µg/l	82%	-1,31
T	0,686	0,049	µg/l	98%	-0,14
U	0,74	0,15	µg/l	106%	0,41

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,67 $\pm$ 0,06	0,67 $\pm$ 0,06	µg/l
Recov. $\pm$ CI(99%)	95,8 $\pm$ 8,2	95,8 $\pm$ 8,2	%
SD between labs	0,09	0,09	µg/l
RSD between labs	13,7	13,7	%
n for calculation	21	21	



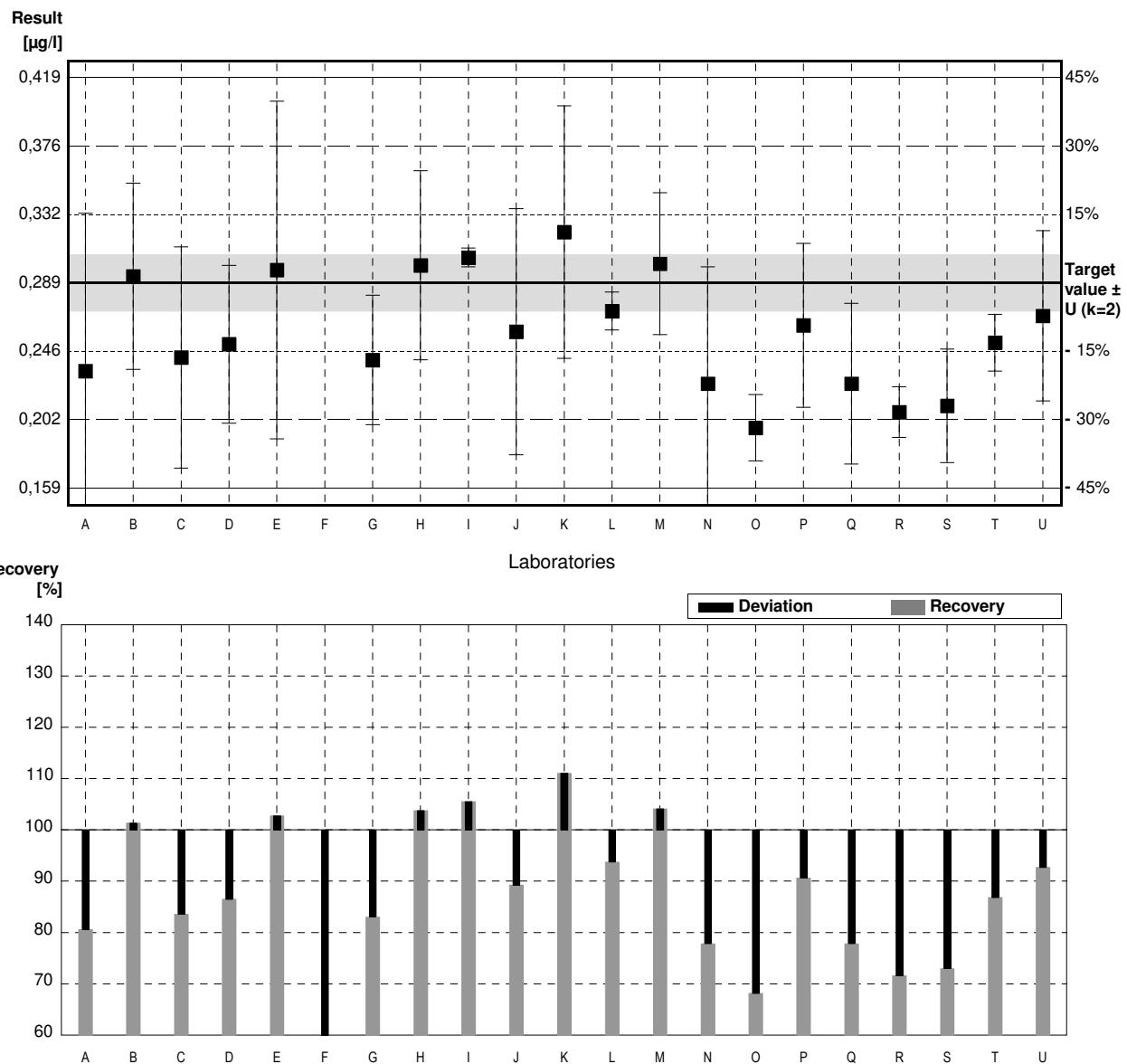
## Sample C66B

### Parameter Trichloroethene

Target value  $\pm U$  ( $k=2$ ) 0,289 µg/l  $\pm$  0,018 µg/l  
 IFA result  $\pm U$  ( $k=2$ ) 0,252 µg/l  $\pm$  0,038 µg/l  
 Stability test  $\pm U$  ( $k=2$ ) 0,248 µg/l  $\pm$  0,037 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,233	0,100	µg/l	81%	-1,38
B	0,293	0,059	µg/l	101%	0,10
C	0,2416	0,0701	µg/l	84%	-1,17
D	0,250	0,050	µg/l	87%	-0,96
E	0,297	0,107	µg/l	103%	0,20
F	0,133	0,020	µg/l	46%	-3,86
G	0,240	0,041	µg/l	83%	-1,21
H	0,300	0,06	µg/l	104%	0,27
I	0,305	0,006	µg/l	106%	0,40
J	0,258	0,078	µg/l	89%	-0,77
K	0,321	0,08	µg/l	111%	0,79
L	0,271	0,012	µg/l	94%	-0,44
M	0,301	0,045	µg/l	104%	0,30
N	0,225	0,074	µg/l	78%	-1,58
O	0,197	0,021	µg/l	68%	-2,27
P	0,262	0,052	µg/l	91%	-0,67
Q	0,225	0,051	µg/l	78%	-1,58
R	0,207	0,016	µg/l	72%	-2,03
S	0,211	0,036	µg/l	73%	-1,93
T	0,251	0,018	µg/l	87%	-0,94
U	0,268	0,054	µg/l	93%	-0,52

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,252 $\pm$ 0,028	0,252 $\pm$ 0,028	µg/l
Recov. $\pm$ CI(99%)	87,2 $\pm$ 9,6	87,2 $\pm$ 9,6	%
SD between labs	0,045	0,045	µg/l
RSD between labs	17,7	17,7	%
n for calculation	21	21	



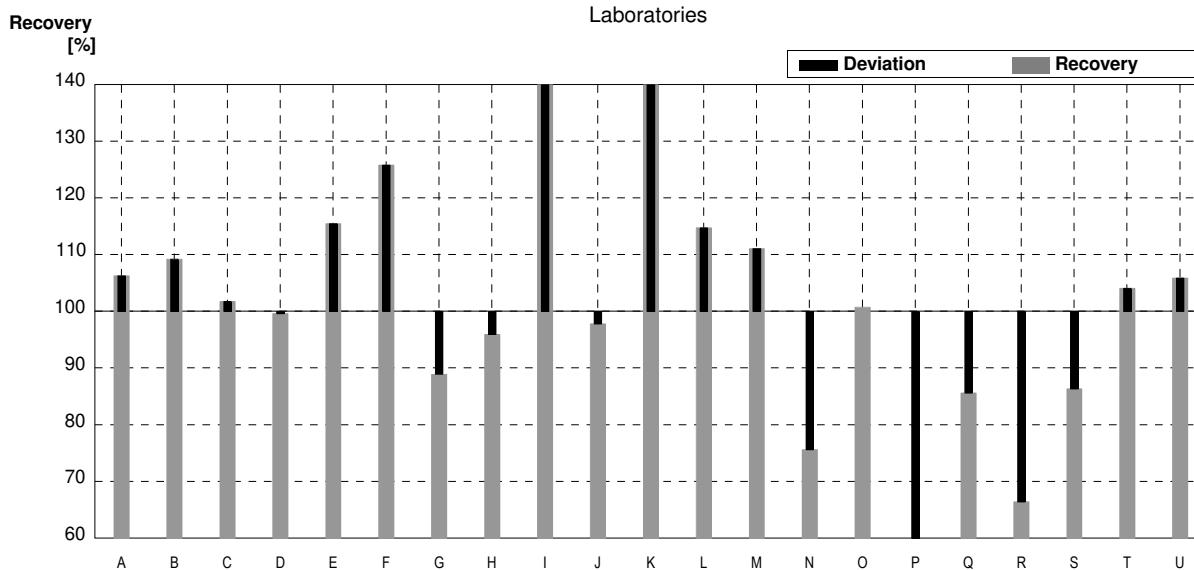
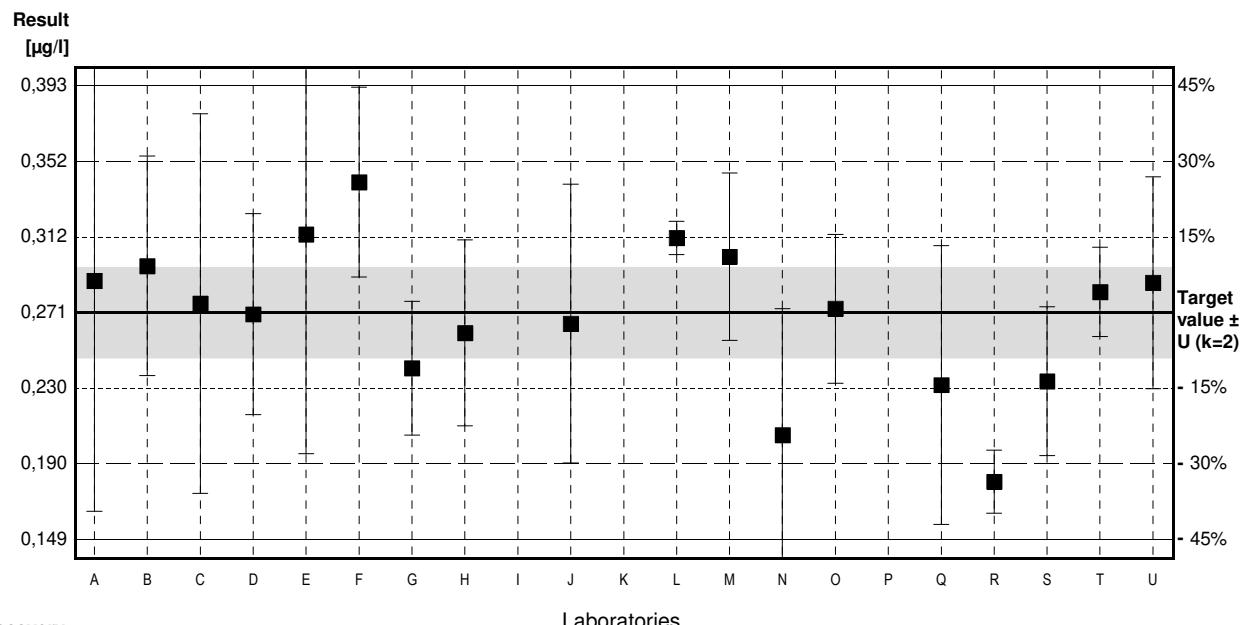
## Sample C66A

### Parameter Tetrachloroethene

Target value  $\pm U$  ( $k=2$ ) 0.271 µg/l  $\pm$  0.024 µg/l  
 IFA result  $\pm U$  ( $k=2$ ) 0.281 µg/l  $\pm$  0.042 µg/l  
 Stability test  $\pm U$  ( $k=2$ ) 0.284 µg/l  $\pm$  0.043 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,288	0,124	µg/l	106%	0,42
B	0,296	0,059	µg/l	109%	0,62
C	0,2758	0,1021	µg/l	102%	0,12
D	0,270	0,054	µg/l	100%	-0,02
E	0,313	0,118	µg/l	115%	1,03
F	0,341	0,051	µg/l	126%	1,72
G	0,241	0,036	µg/l	89%	-0,74
H	0,260	0,05	µg/l	96%	-0,27
I	0,73 *	0,02	µg/l	269%	11,29
J	0,265	0,075	µg/l	98%	-0,15
K	0,439 *	0,11	µg/l	162%	4,13
L	0,311	0,009	µg/l	115%	0,98
M	0,301	0,045	µg/l	111%	0,74
N	0,205	0,068	µg/l	76%	-1,62
O	0,273	0,040	µg/l	101%	0,05
P	0,117	0,029	µg/l	43%	-3,79
Q	0,232	0,075	µg/l	86%	-0,96
R	0,180	0,017	µg/l	66%	-2,24
S	0,234	0,040	µg/l	86%	-0,91
T	0,282	0,024	µg/l	104%	0,27
U	0,287	0,057	µg/l	106%	0,39

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,292 $\pm$ 0,074	0,262 $\pm$ 0,035	µg/l
Recov. $\pm$ CI(99%)	107,9 $\pm$ 27,2	96,6 $\pm$ 12,7	%
SD between labs	0,118	0,052	µg/l
RSD between labs	40,5	20,0	%
n for calculation	21	19	



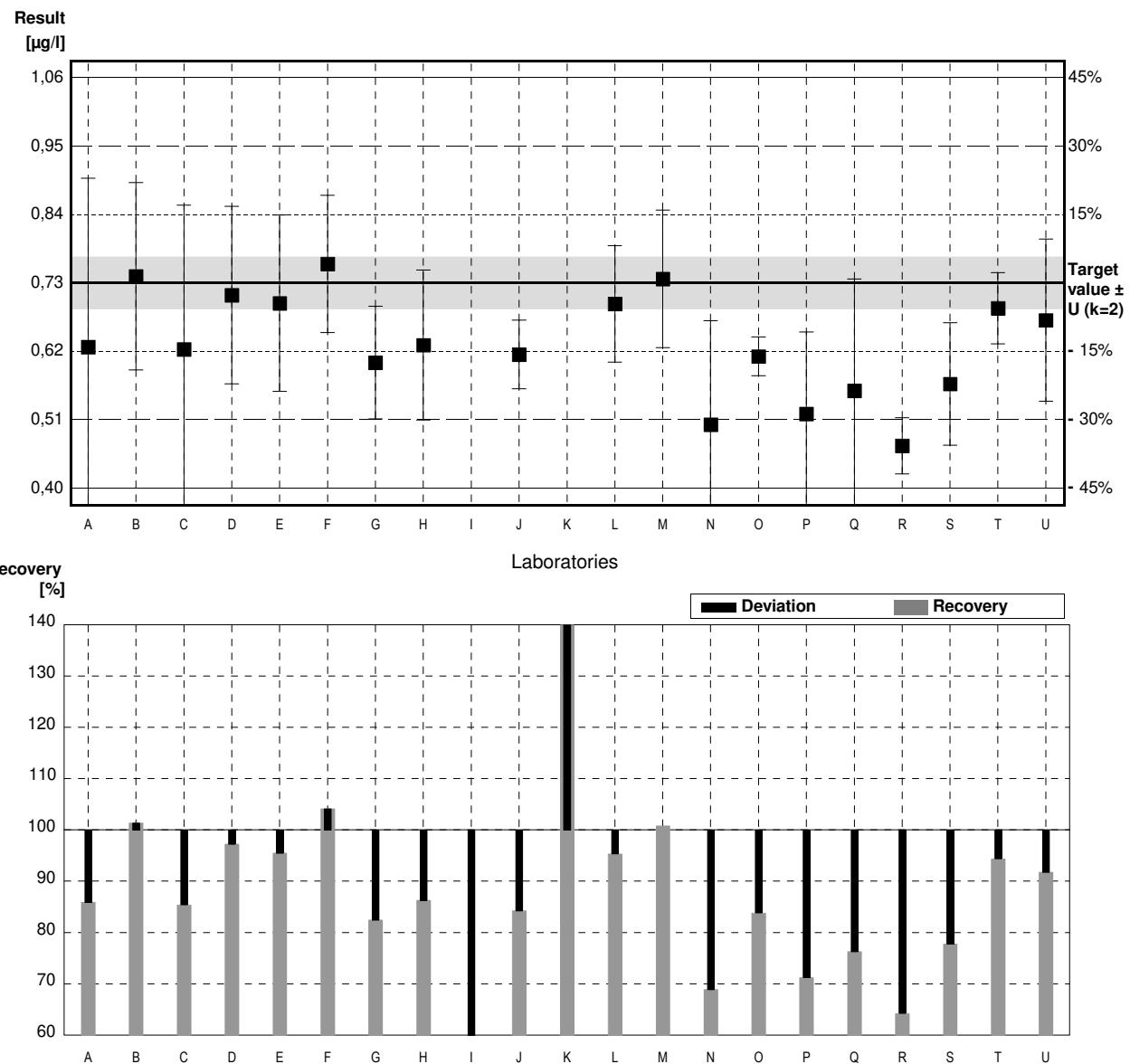
## Sample C66B

### Parameter Tetrachloroethene

Target value  $\pm U$  ( $k=2$ ) 0,73 µg/l  $\pm$  0,04 µg/l  
 IFA result  $\pm U$  ( $k=2$ ) 0,68 µg/l  $\pm$  0,10 µg/l  
 Stability test  $\pm U$  ( $k=2$ ) 0,66 µg/l  $\pm$  0,10 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,627	0,270	µg/l	86%	-0,94
B	0,74	0,15	µg/l	101%	0,09
C	0,6235	0,2307	µg/l	85%	-0,97
D	0,710	0,142	µg/l	97%	-0,18
E	0,697	0,141	µg/l	95%	-0,30
F	0,76	0,11	µg/l	104%	0,27
G	0,602	0,090	µg/l	82%	-1,17
H	0,63	0,12	µg/l	86%	-0,91
I	0,294 *	0,01	µg/l	40%	-3,98
J	0,615	0,055	µg/l	84%	-1,05
K	1,15 *	0,30	µg/l	158%	3,84
L	0,696	0,093	µg/l	95%	-0,31
M	0,736	0,110	µg/l	101%	0,05
N	0,503	0,166	µg/l	69%	-2,07
O	0,612	0,031	µg/l	84%	-1,08
P	0,52	0,131	µg/l	71%	-1,92
Q	0,557	0,179	µg/l	76%	-1,58
R	0,469	0,045	µg/l	64%	-2,38
S	0,568	0,098	µg/l	78%	-1,48
T	0,689	0,057	µg/l	94%	-0,37
U	0,67	0,13	µg/l	92%	-0,55

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,64 $\pm$ 0,10	0,63 $\pm$ 0,06	µg/l
Recov. $\pm$ CI(99%)	87,9 $\pm$ 13,5	86,7 $\pm$ 7,5	%
SD between labs	0,16	0,08	µg/l
RSD between labs	24,8	13,2	%
n for calculation	21	19	



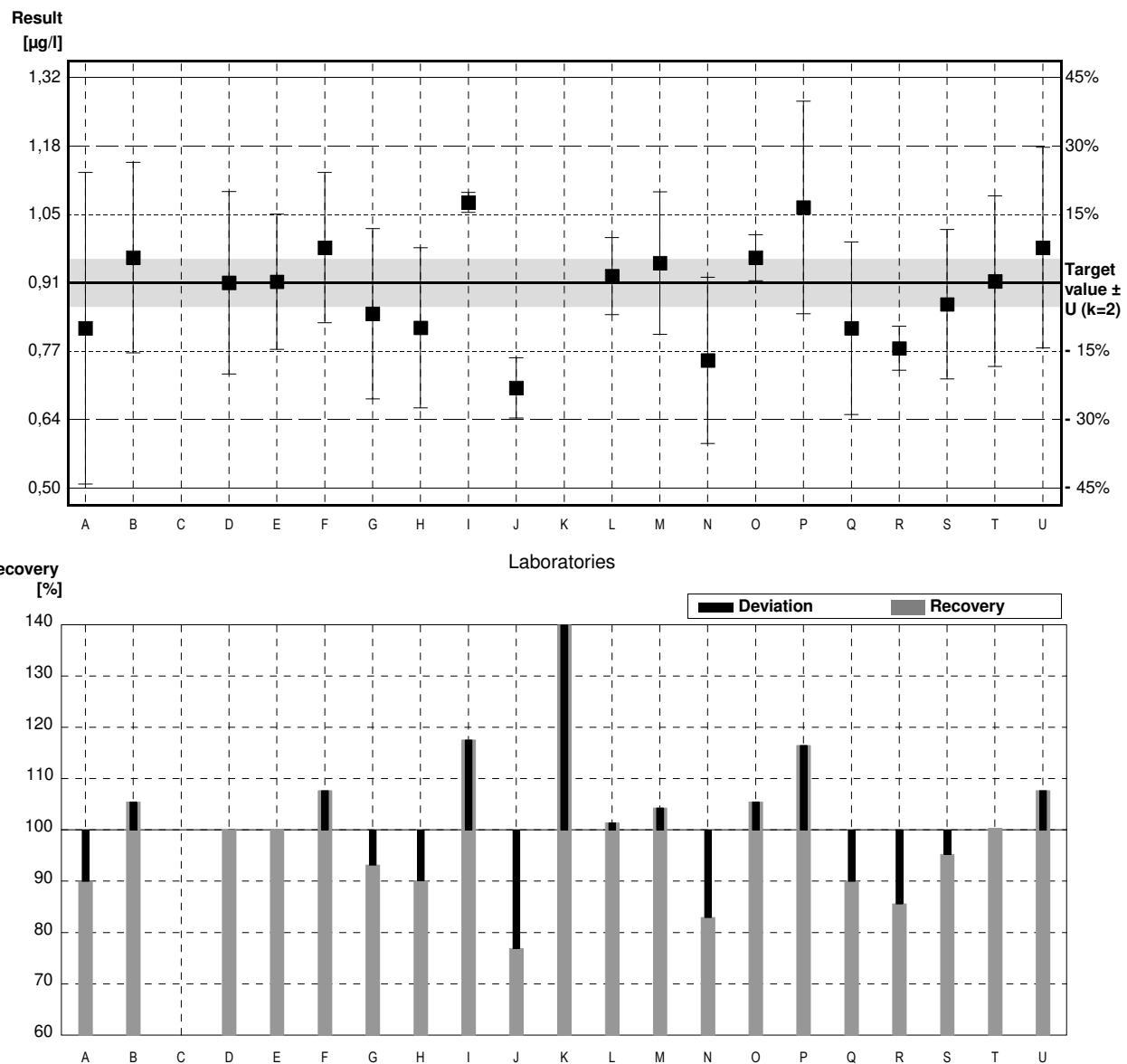
## Sample C66A

### Parameter 1,1,1-Trichloroethane

Target value  $\pm U$  ( $k=2$ )    0,91 µg/l     $\pm$     0,05 µg/l  
 IFA result  $\pm U$  ( $k=2$ )    0,90 µg/l     $\pm$     0,14 µg/l  
 Stability test  $\pm U$  ( $k=2$ )    0,88 µg/l     $\pm$     0,13 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,819	0,311	µg/l	90%	-0,67
B	0,96	0,19	µg/l	105%	0,37
C			µg/l		
D	0,910	0,182	µg/l	100%	0,00
E	0,912	0,135	µg/l	100%	0,01
F	0,98	0,15	µg/l	108%	0,51
G	0,848	0,170	µg/l	93%	-0,45
H	0,82	0,16	µg/l	90%	-0,66
I	1,07	0,02	µg/l	118%	1,17
J	0,700	0,060	µg/l	77%	-1,54
K	1,33 *	0,35	µg/l	146%	3,08
L	0,923	0,077	µg/l	101%	0,10
M	0,949	0,142	µg/l	104%	0,29
N	0,755	0,166	µg/l	83%	-1,14
O	0,960	0,046	µg/l	105%	0,37
P	1,06	0,212	µg/l	116%	1,10
Q	0,819	0,172	µg/l	90%	-0,67
R	0,779	0,044	µg/l	86%	-0,96
S	0,867	0,149	µg/l	95%	-0,32
T	0,913	0,17	µg/l	100%	0,02
U	0,98	0,20	µg/l	108%	0,51

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,92 $\pm$ 0,09	0,90 $\pm$ 0,07	µg/l
Recov. $\pm$ CI(99%)	100,8 $\pm$ 9,6	98,5 $\pm$ 7,2	%
SD between labs	0,14	0,10	µg/l
RSD between labs	14,9	11,1	%
n for calculation	20	19	



## Sample C66B

### Parameter 1,1,1-Trichloroethane

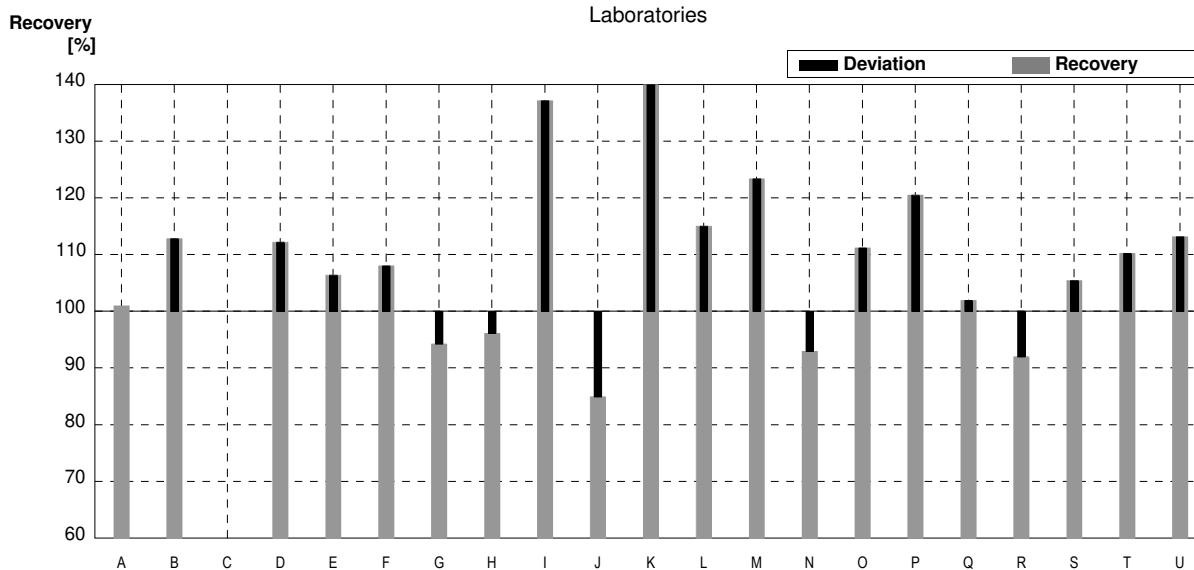
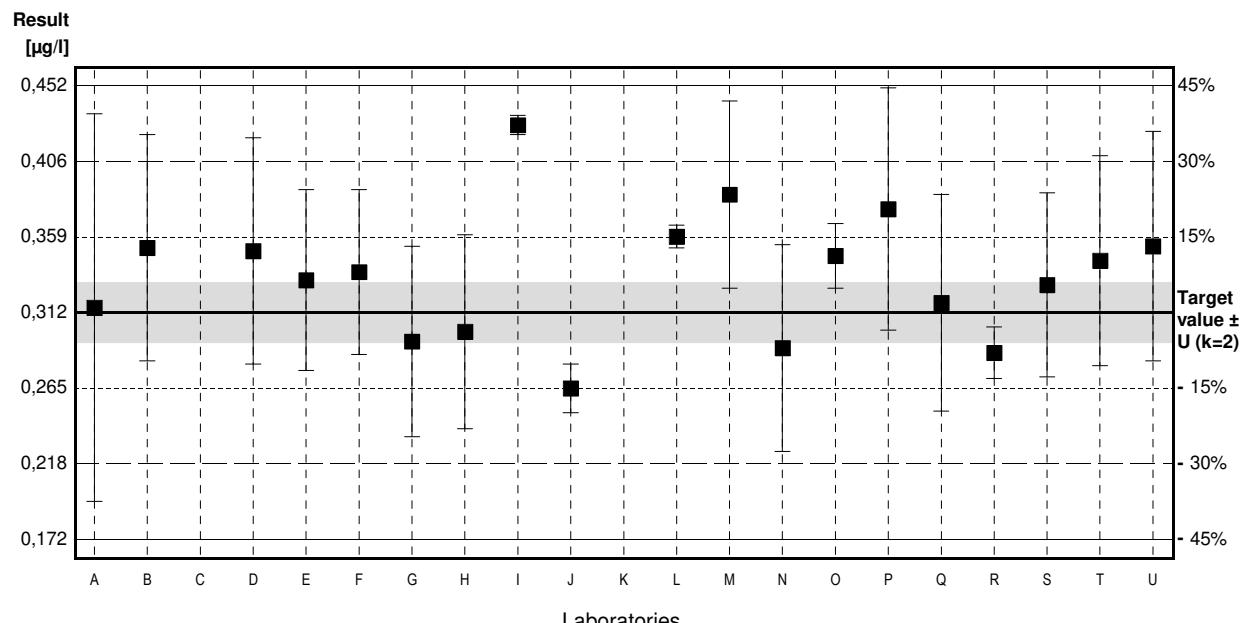
Target value  $\pm U$  ( $k=2$ ) 0,312 µg/l  $\pm$  0,019 µg/l

IFA result  $\pm U$  ( $k=2$ ) 0,340 µg/l  $\pm$  0,051 µg/l

Stability test  $\pm U$  ( $k=2$ ) 0,343 µg/l  $\pm$  0,051 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,315	0,120	µg/l	101%	0,06
B	0,352	0,070	µg/l	113%	0,85
C			µg/l		
D	0,350	0,070	µg/l	112%	0,81
E	0,332	0,056	µg/l	106%	0,43
F	0,337	0,051	µg/l	108%	0,53
G	0,294	0,059	µg/l	94%	-0,38
H	0,300	0,06	µg/l	96%	-0,26
I	0,428	0,006	µg/l	137%	2,48
J	0,265	0,015	µg/l	85%	-1,00
K	0,53 *	0,14	µg/l	170%	4,66
L	0,359	0,007	µg/l	115%	1,00
M	0,385	0,058	µg/l	123%	1,56
N	0,290	0,064	µg/l	93%	-0,47
O	0,347	0,020	µg/l	111%	0,75
P	0,376	0,075	µg/l	121%	1,37
Q	0,318	0,067	µg/l	102%	0,13
R	0,287	0,016	µg/l	92%	-0,53
S	0,329	0,057	µg/l	105%	0,36
T	0,344	0,065	µg/l	110%	0,68
U	0,353	0,071	µg/l	113%	0,88

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,345 $\pm$ 0,037	0,335 $\pm$ 0,026	µg/l
Recov. $\pm$ CI(99%)	110,4 $\pm$ 11,9	107,3 $\pm$ 8,3	%
SD between labs	0,058	0,039	µg/l
RSD between labs	16,8	11,6	%
n for calculation	20	19	



## Sample C66A

### Parameter Trichloromethane

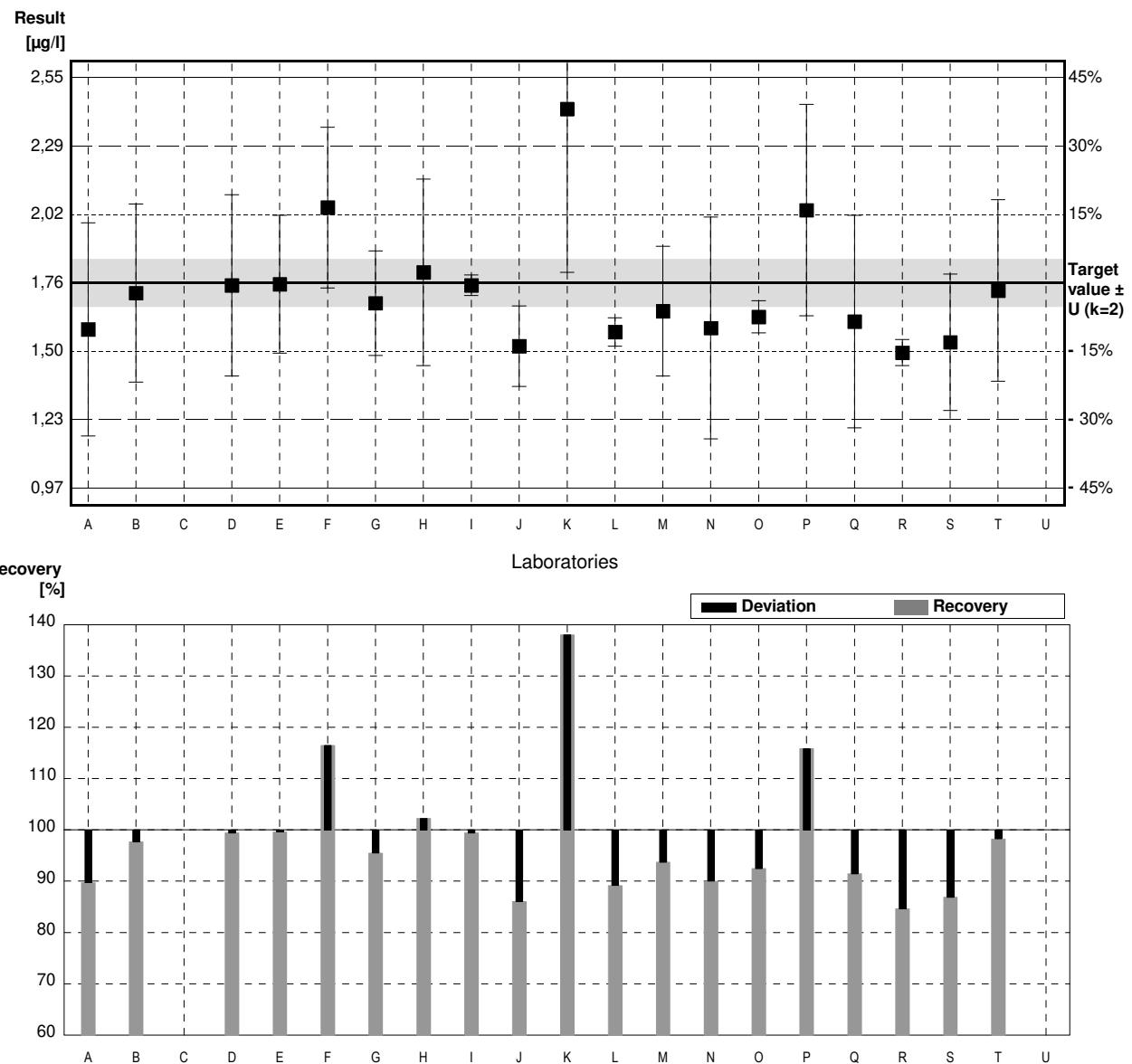
Target value  $\pm U$  ( $k=2$ ) 1,76 µg/l  $\pm$  0,09 µg/l

IFA result  $\pm U$  ( $k=2$ ) 1,77 µg/l  $\pm$  0,27 µg/l

Stability test  $\pm U$  ( $k=2$ ) 1,72 µg/l  $\pm$  0,26 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	1,58	0,411	µg/l	90%	-0,73
B	1,72	0,344	µg/l	98%	-0,16
C			µg/l		
D	1,750	0,350	µg/l	99%	-0,04
E	1,754	0,266	µg/l	100%	-0,02
F	2,05	0,31	µg/l	116%	1,18
G	1,681	0,202	µg/l	96%	-0,32
H	1,80	0,36	µg/l	102%	0,16
I	1,75	0,04	µg/l	99%	-0,04
J	1,515	0,155	µg/l	86%	-0,99
K	2,43 *	0,63	µg/l	138%	2,72
L	1,57	0,055	µg/l	89%	-0,77
M	1,65	0,25	µg/l	94%	-0,45
N	1,585	0,428	µg/l	90%	-0,71
O	1,628	0,062	µg/l	93%	-0,54
P	2,04	0,408	µg/l	116%	1,14
Q	1,61	0,41	µg/l	91%	-0,61
R	1,49	0,05	µg/l	85%	-1,10
S	1,53	0,263	µg/l	87%	-0,93
T	1,73	0,35	µg/l	98%	-0,12
U			µg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	1,73 $\pm$ 0,15	1,69 $\pm$ 0,11	µg/l
Recov. $\pm$ CI(99%)	98,3 $\pm$ 8,6	96,1 $\pm$ 6,1	%
SD between labs	0,23	0,16	µg/l
RSD between labs	13,2	9,3	%
n for calculation	19	18	



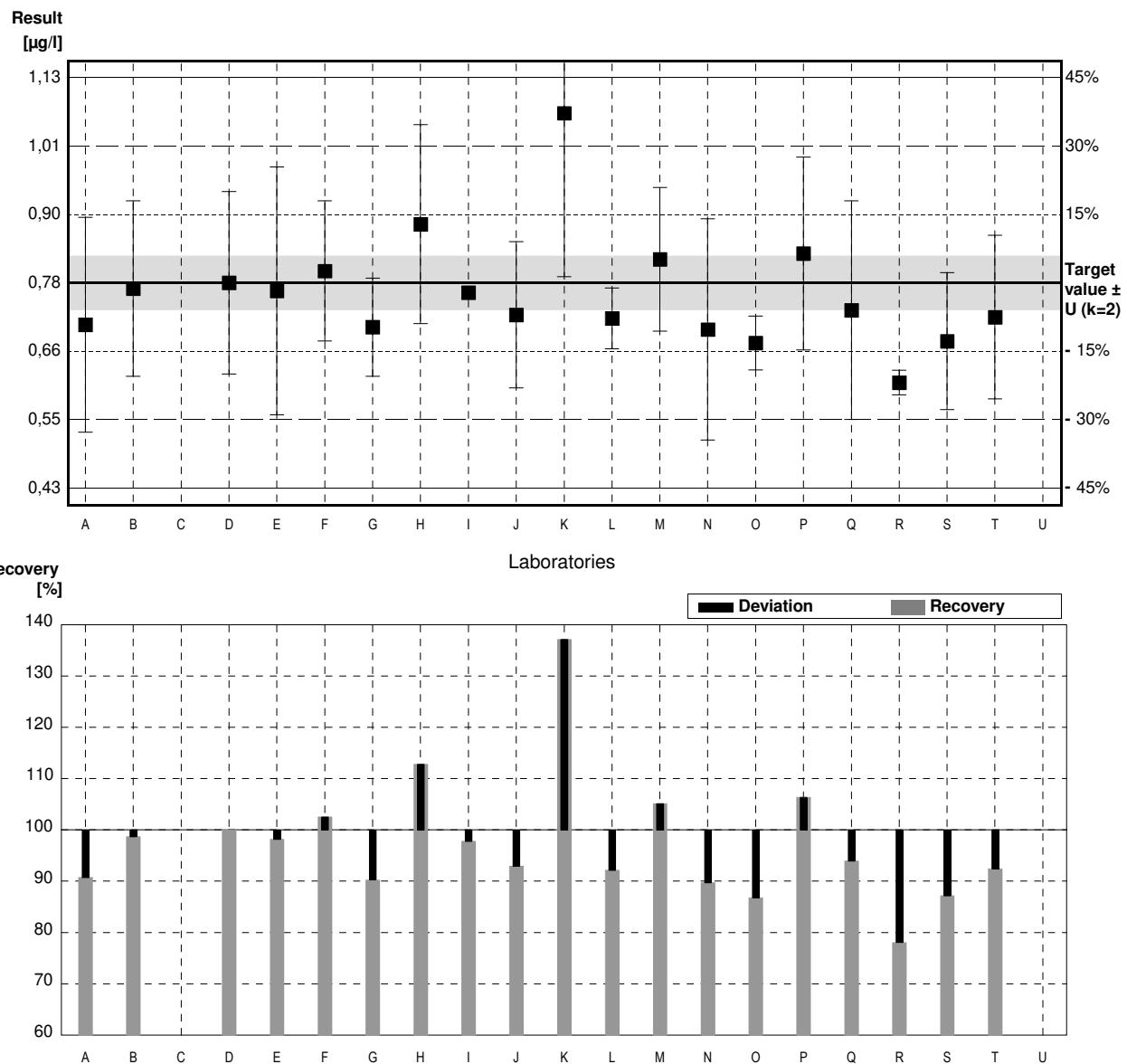
## Sample C66B

### Parameter Trichloromethane

Target value  $\pm U$  ( $k=2$ ) 0,78 µg/l  $\pm$  0,05 µg/l  
 IFA result  $\pm U$  ( $k=2$ ) 0,78 µg/l  $\pm$  0,12 µg/l  
 Stability test  $\pm U$  ( $k=2$ ) 0,78 µg/l  $\pm$  0,12 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,708	0,184	µg/l	91%	-0,66
B	0,77	0,15	µg/l	99%	-0,09
C			µg/l		
D	0,780	0,156	µg/l	100%	0,00
E	0,766	0,212	µg/l	98%	-0,13
F	0,80	0,12	µg/l	103%	0,18
G	0,704	0,084	µg/l	90%	-0,70
H	0,88	0,17	µg/l	113%	0,92
I	0,763	0,009	µg/l	98%	-0,16
J	0,725	0,125	µg/l	93%	-0,50
K	1,07 *	0,28	µg/l	137%	2,66
L	0,719	0,052	µg/l	92%	-0,56
M	0,820	0,123	µg/l	105%	0,37
N	0,700	0,189	µg/l	90%	-0,73
O	0,677	0,046	µg/l	87%	-0,94
P	0,83	0,165	µg/l	106%	0,46
Q	0,733	0,187	µg/l	94%	-0,43
R	0,609	0,021	µg/l	78%	-1,57
S	0,680	0,117	µg/l	87%	-0,92
T	0,721	0,14	µg/l	92%	-0,54
U			µg/l		

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,76 $\pm$ 0,06	0,74 $\pm$ 0,04	µg/l
Recov. $\pm$ CI(99%)	97,5 $\pm$ 8,3	95,3 $\pm$ 5,7	%
SD between labs	0,10	0,06	µg/l
RSD between labs	12,8	8,7	%
n for calculation	19	18	



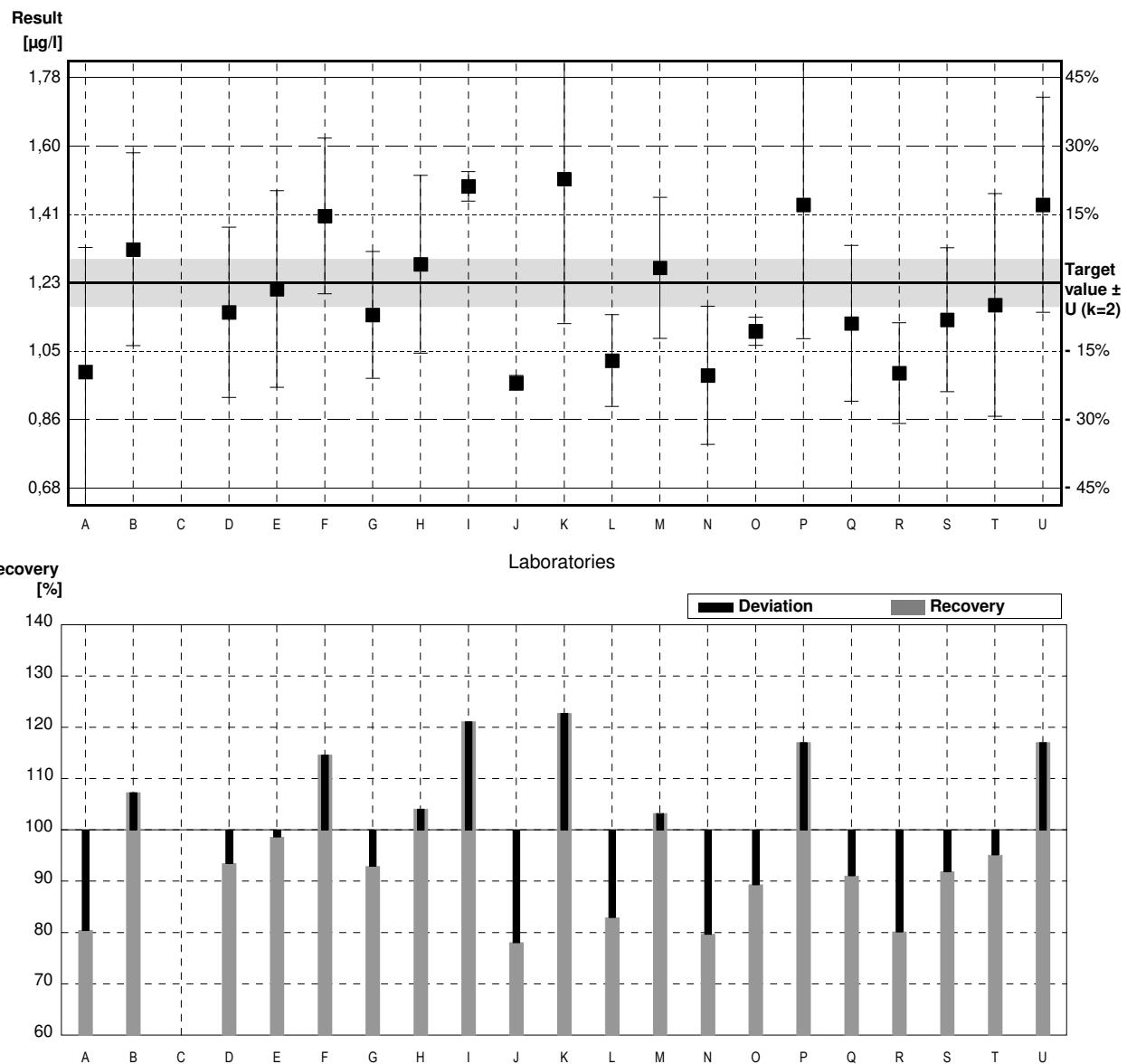
## Sample C66A

### Parameter Tetrachloromethane

Target value  $\pm U$  ( $k=2$ ) 1,23 µg/l  $\pm$  0,06 µg/l  
 IFA result  $\pm U$  ( $k=2$ ) 1,22 µg/l  $\pm$  0,18 µg/l  
 Stability test  $\pm U$  ( $k=2$ ) 1,20 µg/l  $\pm$  0,18 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,989	0,336	µg/l	80%	-1,15
B	1,32	0,26	µg/l	107%	0,43
C			µg/l		
D	1,150	0,230	µg/l	93%	-0,38
E	1,213	0,265	µg/l	99%	-0,08
F	1,41	0,21	µg/l	115%	0,86
G	1,143	0,171	µg/l	93%	-0,42
H	1,28	0,24	µg/l	104%	0,24
I	1,49	0,04	µg/l	121%	1,24
J	0,960	0,020	µg/l	78%	-1,29
K	1,51	0,39	µg/l	123%	1,34
L	1,02	0,124	µg/l	83%	-1,00
M	1,27	0,19	µg/l	103%	0,19
N	0,980	0,186	µg/l	80%	-1,20
O	1,099	0,038	µg/l	89%	-0,63
P	1,44	0,361	µg/l	117%	1,00
Q	1,12	0,21	µg/l	91%	-0,53
R	0,986	0,136	µg/l	80%	-1,17
S	1,13	0,194	µg/l	92%	-0,48
T	1,17	0,30	µg/l	95%	-0,29
U	1,44	0,29	µg/l	117%	1,00

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	1,21 $\pm$ 0,12	1,21 $\pm$ 0,12	µg/l
Recov. $\pm$ CI(99%)	98,0 $\pm$ 9,4	98,0 $\pm$ 9,4	%
SD between labs	0,18	0,18	µg/l
RSD between labs	15,0	15,0	%
n for calculation	20	20	



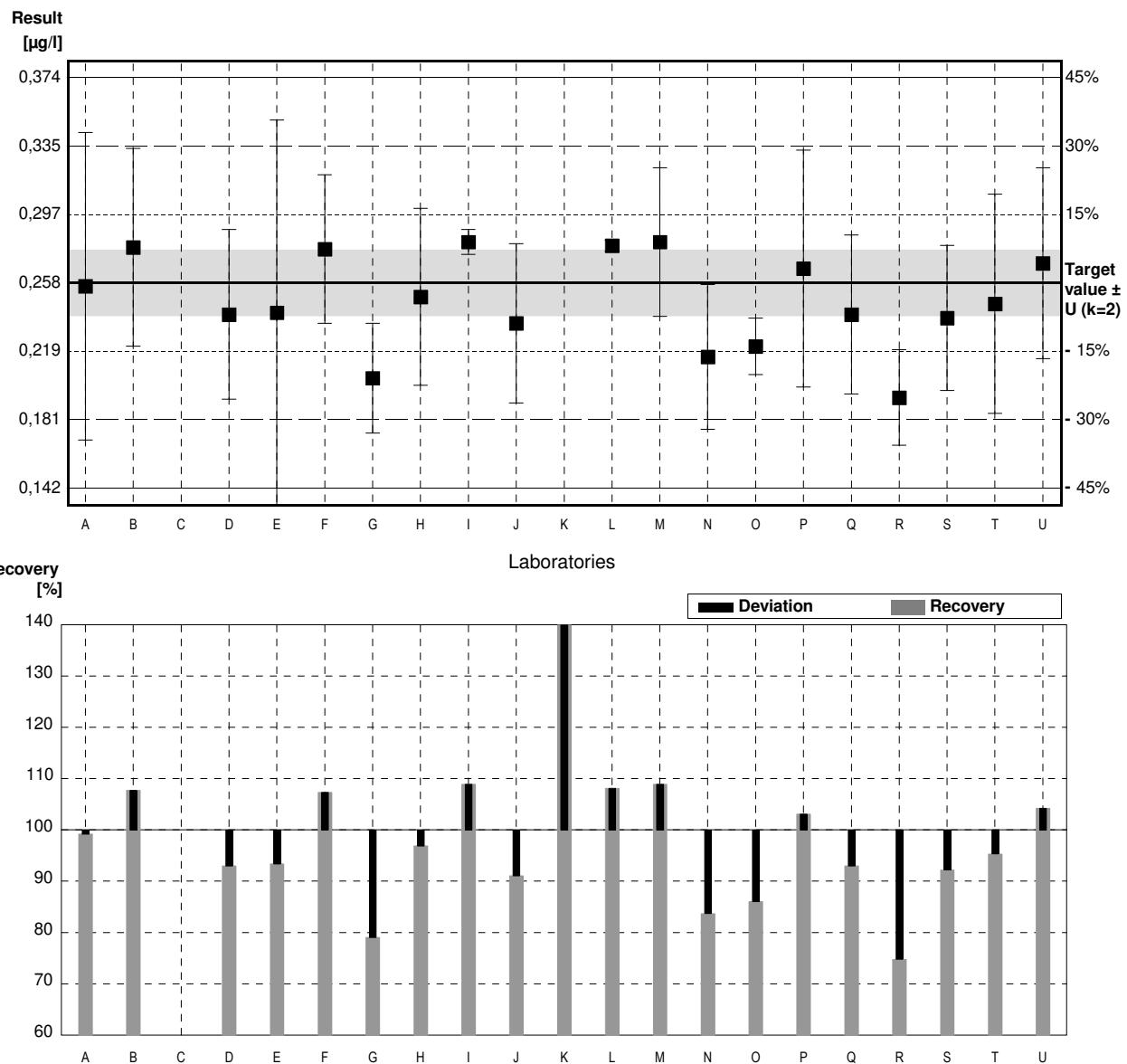
## Sample C66B

### Parameter Tetrachloromethane

Target value  $\pm U$  ( $k=2$ ) 0.258 µg/l  $\pm$  0.019 µg/l  
 IFA result  $\pm U$  ( $k=2$ ) 0.253 µg/l  $\pm$  0.038 µg/l  
 Stability test  $\pm U$  ( $k=2$ ) 0.259 µg/l  $\pm$  0.039 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,256	0,087	µg/l	99%	-0,05
B	0,278	0,056	µg/l	108%	0,46
C			µg/l		
D	0,240	0,048	µg/l	93%	-0,41
E	0,241	0,109	µg/l	93%	-0,39
F	0,277	0,042	µg/l	107%	0,43
G	0,204	0,031	µg/l	79%	-1,23
H	0,250	0,05	µg/l	97%	-0,18
I	0,281	0,007	µg/l	109%	0,52
J	0,235	0,045	µg/l	91%	-0,52
K	0,382 *	0,10	µg/l	148%	2,83
L	0,279	0,003	µg/l	108%	0,48
M	0,281	0,042	µg/l	109%	0,52
N	0,216	0,041	µg/l	84%	-0,96
O	0,222	0,016	µg/l	86%	-0,82
P	0,266	0,067	µg/l	103%	0,18
Q	0,240	0,045	µg/l	93%	-0,41
R	0,193	0,027	µg/l	75%	-1,48
S	0,238	0,041	µg/l	92%	-0,46
T	0,246	0,062	µg/l	95%	-0,27
U	0,269	0,054	µg/l	104%	0,25

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,255 $\pm$ 0,025	0,248 $\pm$ 0,018	µg/l
Recov. $\pm$ CI(99%)	98,7 $\pm$ 9,8	96,1 $\pm$ 6,8	%
SD between labs	0,040	0,027	µg/l
RSD between labs	15,6	10,8	%
n for calculation	20	19	



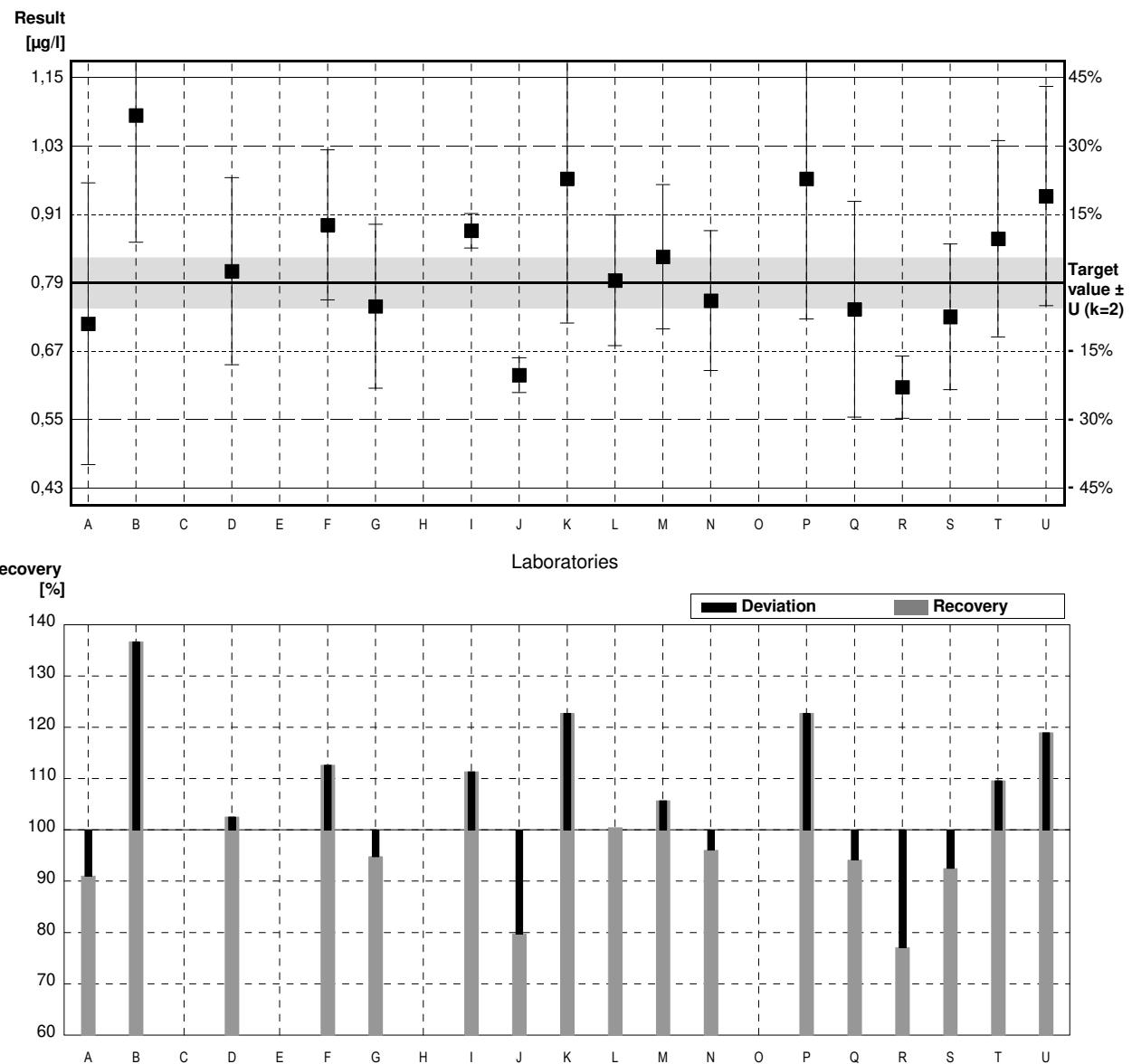
## Sample C66A

### Parameter 1,1-Dichloroethene

Target value  $\pm U$  ( $k=2$ ) 0,79 µg/l  $\pm$  0,04 µg/l  
 IFA result  $\pm U$  ( $k=2$ ) 0,80 µg/l  $\pm$  0,12 µg/l  
 Stability test  $\pm U$  ( $k=2$ ) 0,80 µg/l  $\pm$  0,12 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,719	0,244	µg/l	91%	-0,53
B	1,08	0,22	µg/l	137%	2,16
C			µg/l		
D	0,810	0,162	µg/l	103%	0,15
E			µg/l		
F	0,89	0,13	µg/l	113%	0,74
G	0,749	0,142	µg/l	95%	-0,31
H			µg/l		
I	0,88	0,03	µg/l	111%	0,67
J	0,630	0,030	µg/l	80%	-1,19
K	0,97	0,25	µg/l	123%	1,34
L	0,794	0,113	µg/l	101%	0,03
M	0,835	0,125	µg/l	106%	0,34
N	0,759	0,121	µg/l	96%	-0,23
O			µg/l		
P	0,97	0,243	µg/l	123%	1,34
Q	0,744	0,187	µg/l	94%	-0,34
R	0,609	0,054	µg/l	77%	-1,35
S	0,731	0,126	µg/l	93%	-0,44
T	0,866	0,17	µg/l	110%	0,57
U	0,94	0,19	µg/l	119%	1,12

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,82 $\pm$ 0,09	0,82 $\pm$ 0,09	µg/l
Recov. $\pm$ CI(99%)	104,1 $\pm$ 11,2	104,1 $\pm$ 11,2	%
SD between labs	0,13	0,13	µg/l
RSD between labs	15,3	15,3	%
n for calculation	17	17	



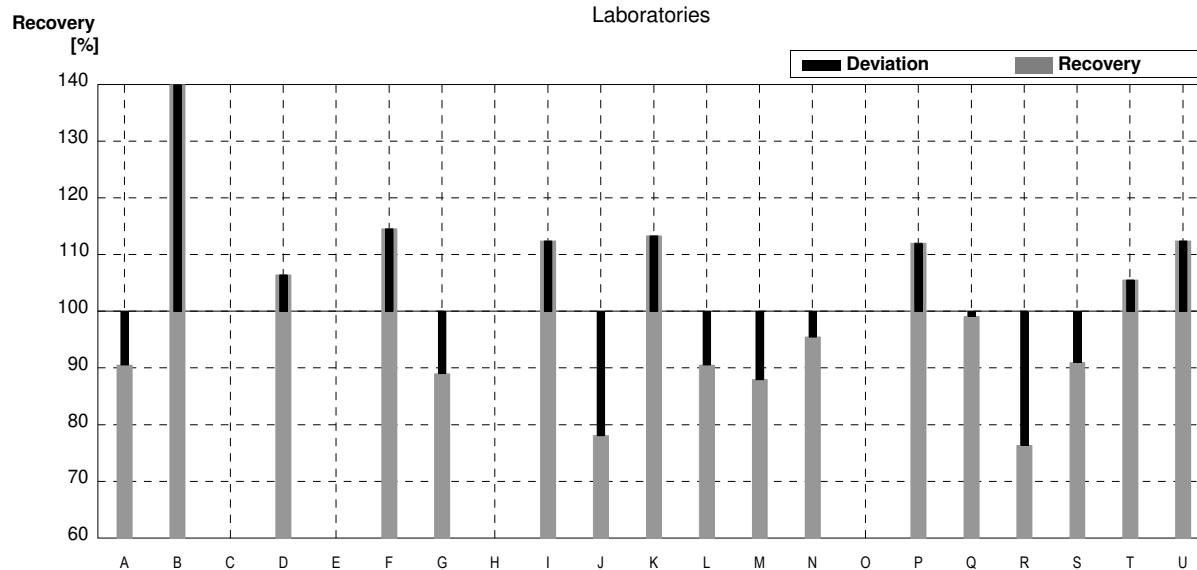
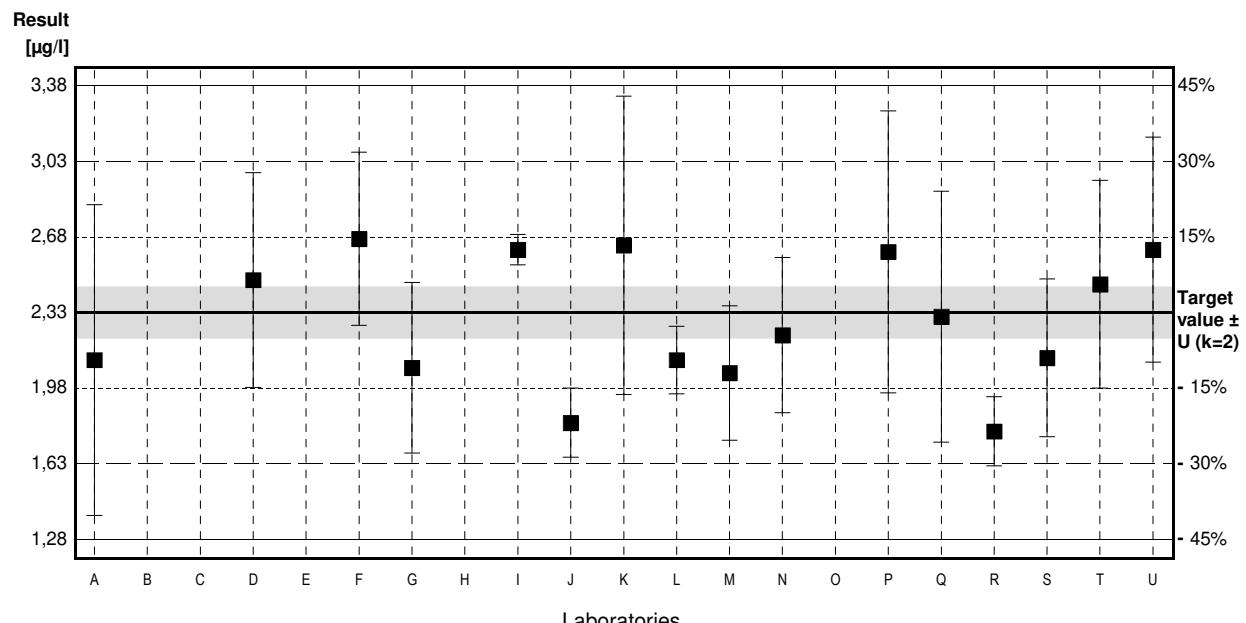
## Sample C66B

### Parameter 1,1-Dichloroethene

Target value  $\pm U (k=2)$  2,33 µg/l  $\pm$  0,12 µg/l  
 IFA result  $\pm U (k=2)$  2,36 µg/l  $\pm$  0,35 µg/l  
 Stability test  $\pm U (k=2)$  2,29 µg/l  $\pm$  0,34 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	2,11	0,718	µg/l	91%	-0,56
B	3,44	0,69	µg/l	148%	2,80
C			µg/l		
D	2,480	0,496	µg/l	106%	0,38
E			µg/l		
F	2,67	0,40	µg/l	115%	0,86
G	2,074	0,394	µg/l	89%	-0,65
H			µg/l		
I	2,62	0,07	µg/l	112%	0,73
J	1,820	0,160	µg/l	78%	-1,29
K	2,64	0,69	µg/l	113%	0,78
L	2,11	0,156	µg/l	91%	-0,56
M	2,05	0,31	µg/l	88%	-0,71
N	2,225	0,359	µg/l	95%	-0,27
O			µg/l		
P	2,61	0,652	µg/l	112%	0,71
Q	2,31	0,58	µg/l	99%	-0,05
R	1,78	0,16	µg/l	76%	-1,39
S	2,12	0,365	µg/l	91%	-0,53
T	2,46	0,48	µg/l	106%	0,33
U	2,62	0,52	µg/l	112%	0,73

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	2,36 $\pm$ 0,28	2,36 $\pm$ 0,28	µg/l
Recov. $\pm CI(99\%)$	101,3 $\pm$ 12,2	101,3 $\pm$ 12,2	%
SD between labs	0,40	0,40	µg/l
RSD between labs	17,0	17,0	%
n for calculation	17	17	



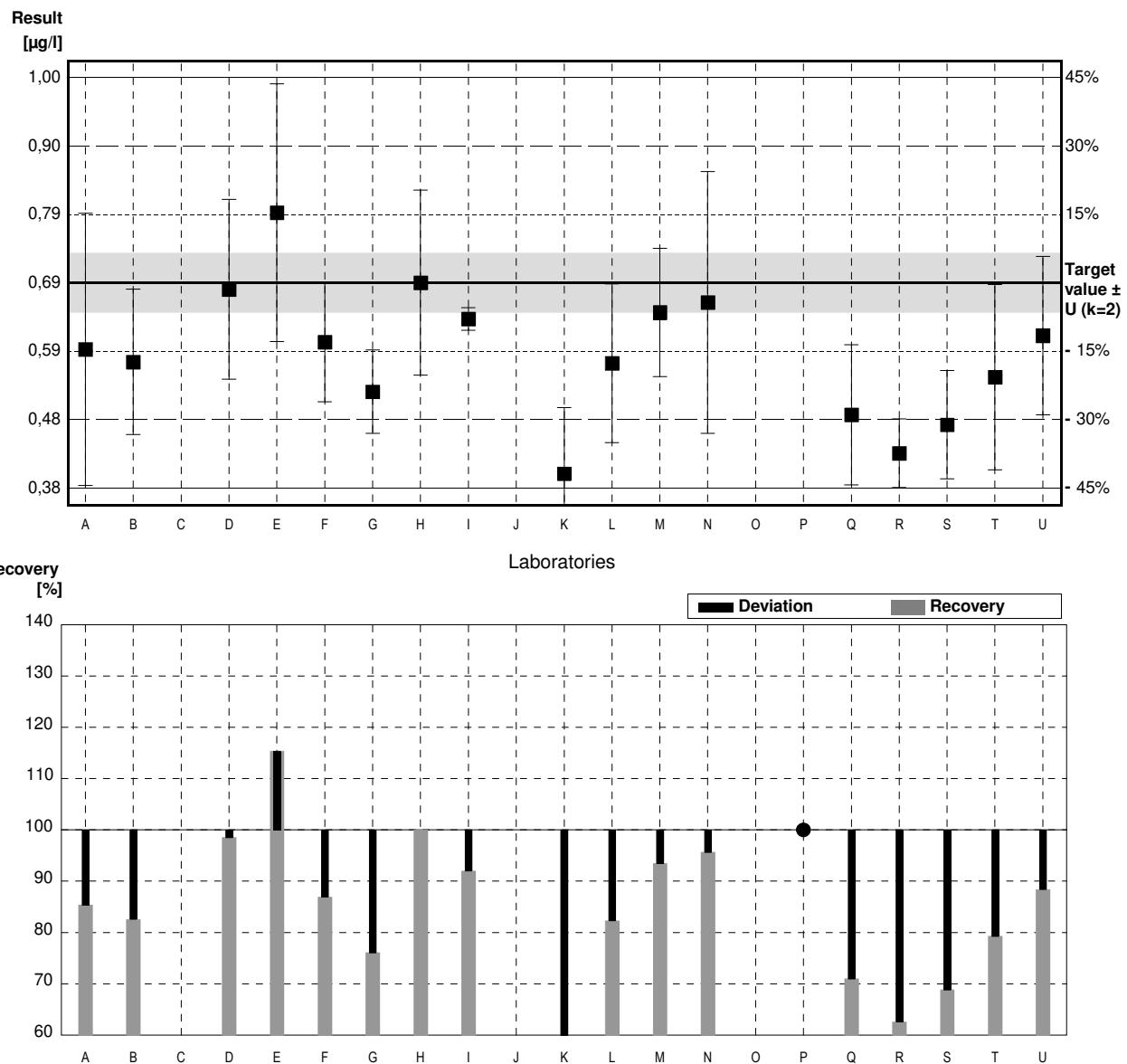
## Sample C66A

### Parameter Tribromomethane

Target value  $\pm U$  ( $k=2$ ) 0,69 µg/l  $\pm$  0,04 µg/l  
 IFA result  $\pm U$  ( $k=2$ ) 0,62 µg/l  $\pm$  0,09 µg/l  
 Stability test  $\pm U$  ( $k=2$ ) 0,60 µg/l  $\pm$  0,09 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,589	0,206	µg/l	85%	-0,98
B	0,57	0,11	µg/l	83%	-1,16
C			µg/l		
D	0,680	0,136	µg/l	99%	-0,10
E	0,796	0,195	µg/l	115%	1,02
F	0,60	0,09	µg/l	87%	-0,87
G	0,525	0,063	µg/l	76%	-1,59
H	0,69	0,14	µg/l	100%	0,00
I	0,635	0,017	µg/l	92%	-0,53
J			µg/l		
K	0,401	0,1	µg/l	58%	-2,79
L	0,568	0,120	µg/l	82%	-1,18
M	0,645	0,097	µg/l	93%	-0,43
N	0,660	0,198	µg/l	96%	-0,29
O			µg/l		
P	<0,7	0	µg/l	*	
Q	0,490	0,106	µg/l	71%	-1,93
R	0,432	0,052	µg/l	63%	-2,49
S	0,475	0,082	µg/l	69%	-2,08
T	0,547	0,14	µg/l	79%	-1,38
U	0,61	0,12	µg/l	88%	-0,77

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,58 $\pm$ 0,07	0,58 $\pm$ 0,07	µg/l
Recov. $\pm$ CI(99%)	84,5 $\pm$ 10,3	84,5 $\pm$ 10,3	%
SD between labs	0,10	0,10	µg/l
RSD between labs	17,2	17,2	%
n for calculation	17	17	



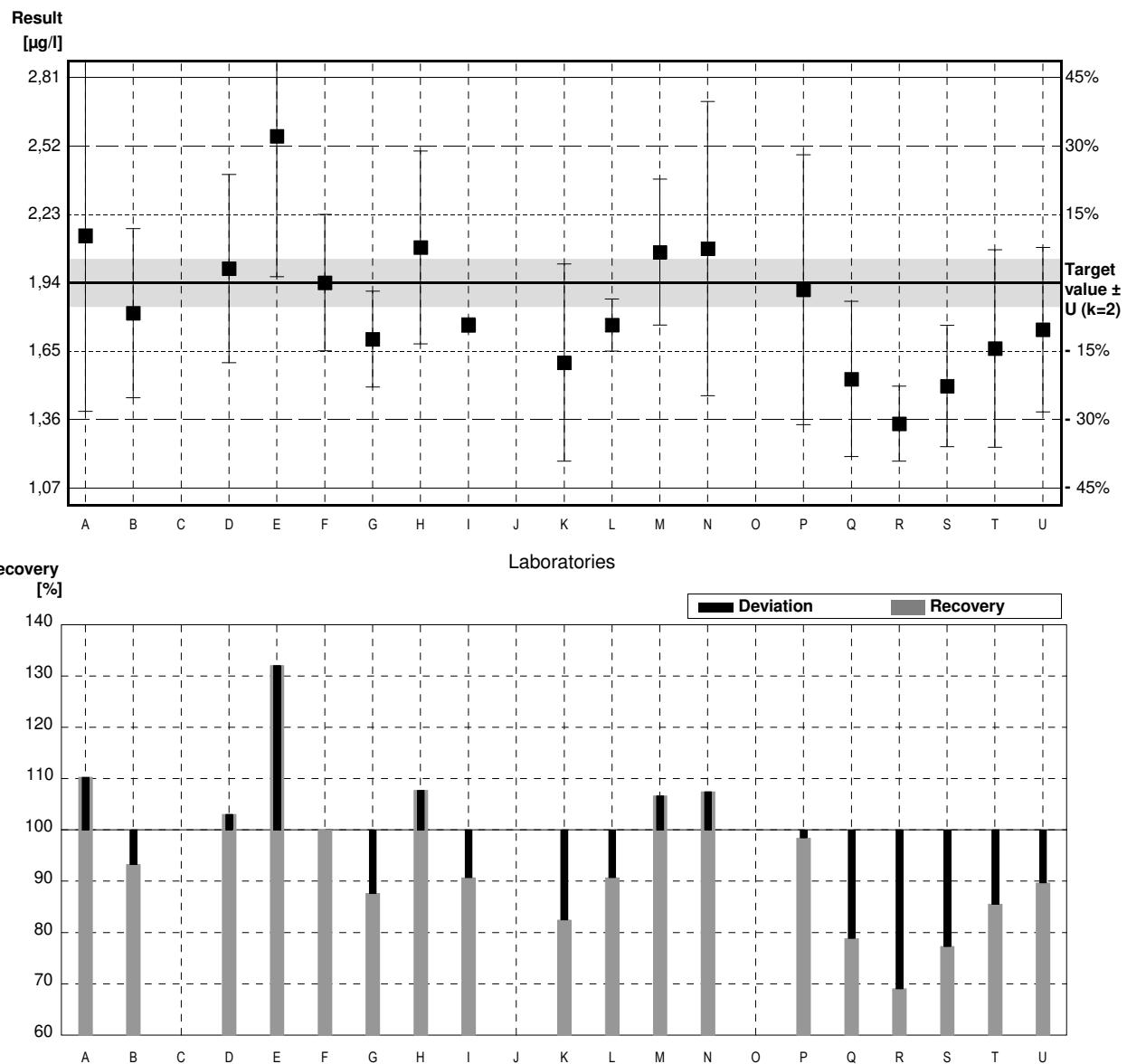
## Sample C66B

### Parameter Tribromomethane

Target value  $\pm U$  ( $k=2$ ) 1,94 µg/l  $\pm$  0,10 µg/l  
 IFA result  $\pm U$  ( $k=2$ ) 1,80 µg/l  $\pm$  0,27 µg/l  
 Stability test  $\pm U$  ( $k=2$ ) 1,85 µg/l  $\pm$  0,28 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	2,14	0,748	µg/l	110%	0,69
B	1,81	0,36	µg/l	93%	-0,45
C			µg/l		
D	2,000	0,400	µg/l	103%	0,21
E	2,563	0,597	µg/l	132%	2,14
F	1,94	0,29	µg/l	100%	0,00
G	1,700	0,204	µg/l	88%	-0,82
H	2,09	0,41	µg/l	108%	0,52
I	1,76	0,03	µg/l	91%	-0,62
J			µg/l		
K	1,60	0,42	µg/l	82%	-1,17
L	1,76	0,111	µg/l	91%	-0,62
M	2,07	0,31	µg/l	107%	0,45
N	2,085	0,626	µg/l	107%	0,50
O			µg/l		
P	1,91	0,574	µg/l	98%	-0,10
Q	1,53	0,33	µg/l	79%	-1,41
R	1,34	0,16	µg/l	69%	-2,06
S	1,50	0,258	µg/l	77%	-1,51
T	1,66	0,42	µg/l	86%	-0,96
U	1,74	0,35	µg/l	90%	-0,69

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	1,84 $\pm$ 0,20	1,84 $\pm$ 0,20	µg/l
Recov. $\pm$ CI(99%)	95,1 $\pm$ 10,2	95,1 $\pm$ 10,2	%
SD between labs	0,29	0,29	µg/l
RSD between labs	15,7	15,7	%
n for calculation	18	18	



## Sample C66A

### Parameter Bromodichloromethane

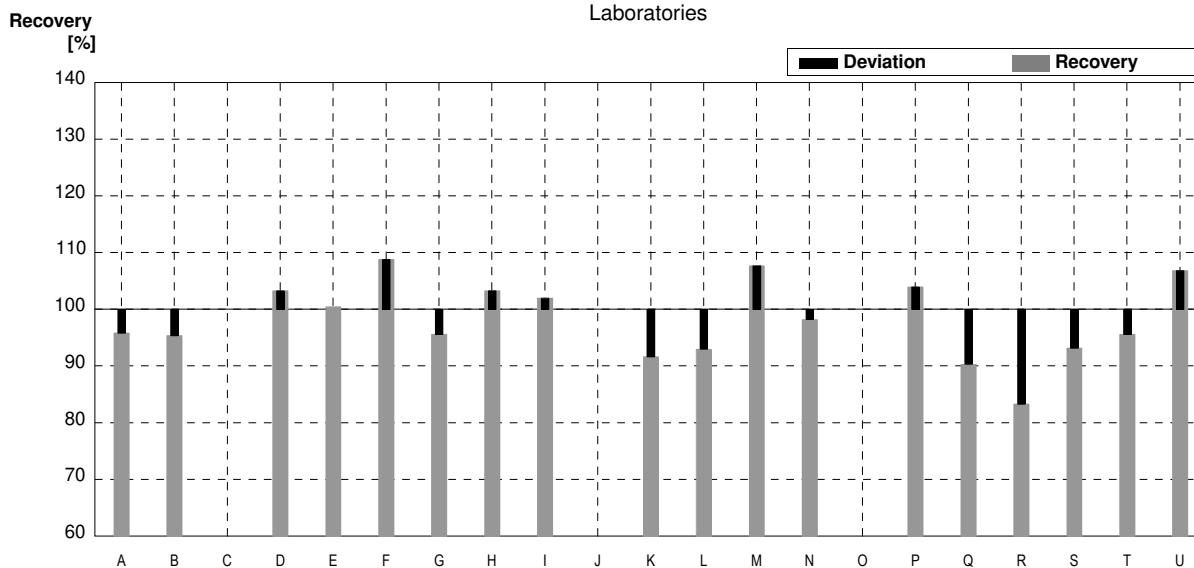
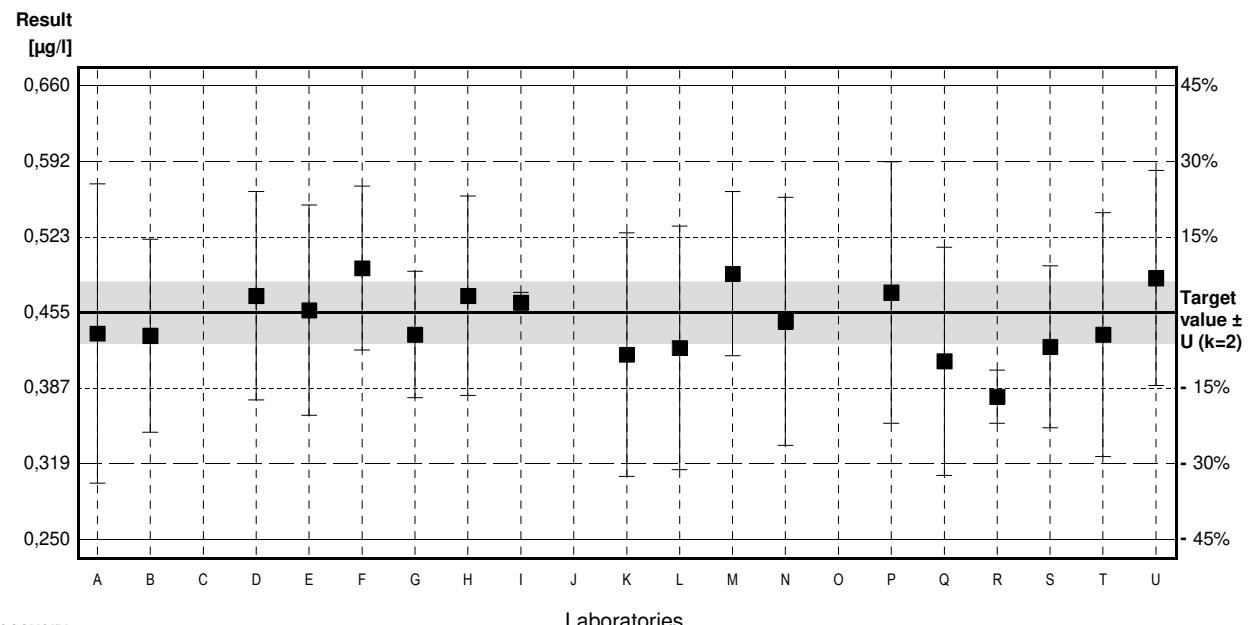
Target value  $\pm U$  ( $k=2$ ) 0.455 µg/l  $\pm$  0.028 µg/l

IFA result  $\pm U$  ( $k=2$ ) 0.469 µg/l  $\pm$  0.070 µg/l

Stability test  $\pm U$  ( $k=2$ ) 0.473 µg/l  $\pm$  0.071 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,436	0,135	µg/l	96%	-0,32
B	0,434	0,087	µg/l	95%	-0,36
C			µg/l		
D	0,470	0,094	µg/l	103%	0,25
E	0,457	0,095	µg/l	100%	0,03
F	0,495	0,074	µg/l	109%	0,68
G	0,435	0,057	µg/l	96%	-0,34
H	0,470	0,09	µg/l	103%	0,25
I	0,464	0,009	µg/l	102%	0,15
J			µg/l		
K	0,417	0,11	µg/l	92%	-0,64
L	0,423	0,110	µg/l	93%	-0,54
M	0,490	0,074	µg/l	108%	0,59
N	0,447	0,112	µg/l	98%	-0,14
O			µg/l		
P	0,473	0,118	µg/l	104%	0,30
Q	0,411	0,103	µg/l	90%	-0,74
R	0,379	0,024	µg/l	83%	-1,28
S	0,424	0,073	µg/l	93%	-0,52
T	0,435	0,11	µg/l	96%	-0,34
U	0,486	0,097	µg/l	107%	0,52

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,447 $\pm$ 0,021	0,447 $\pm$ 0,021	µg/l
Recov. $\pm$ CI(99%)	98,2 $\pm$ 4,7	98,2 $\pm$ 4,7	%
SD between labs	0,031	0,031	µg/l
RSD between labs	6,9	6,9	%
n for calculation	18	18	



## Sample C66B

### Parameter Bromodichloromethane

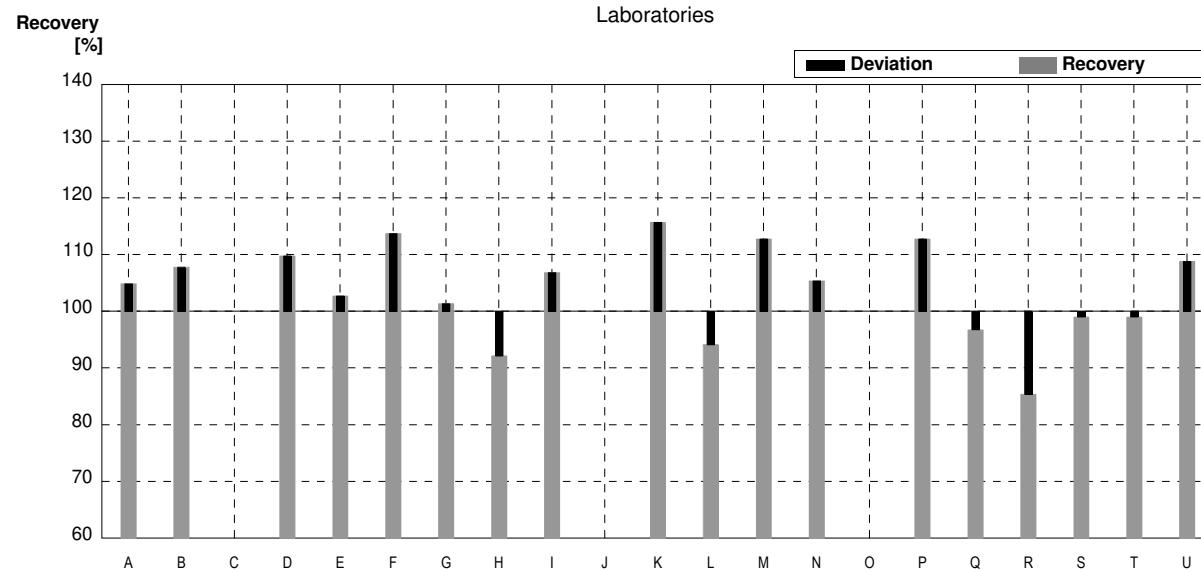
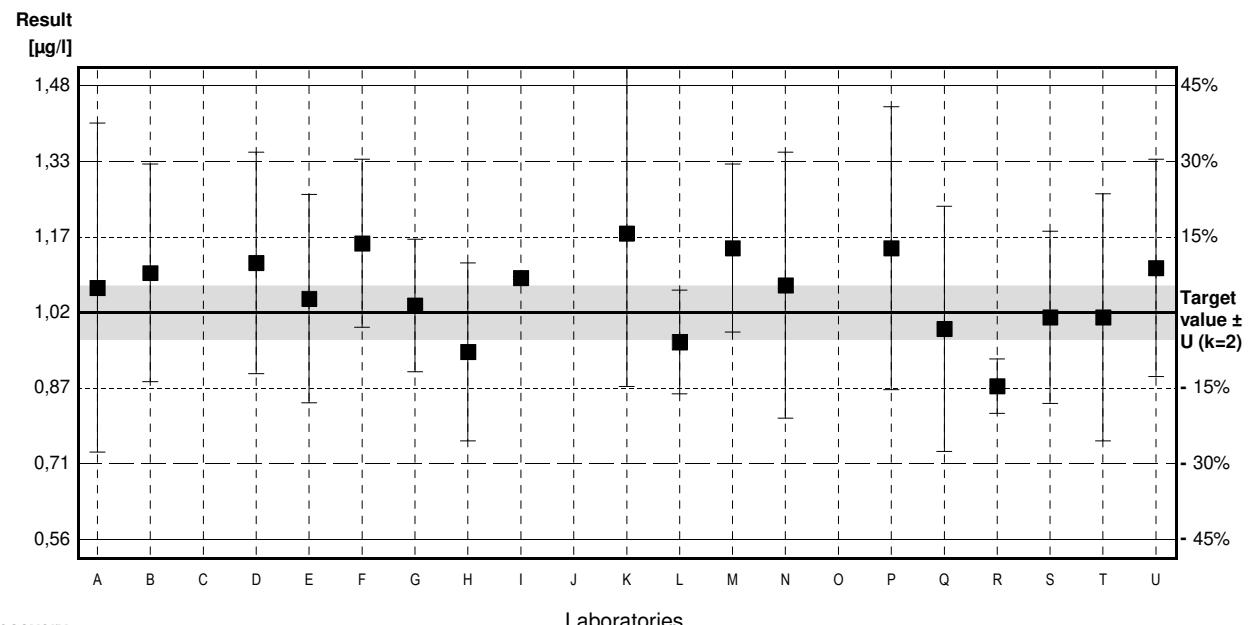
Target value  $\pm U$  ( $k=2$ ) 1,02 µg/l  $\pm$  0,05 µg/l

IFA result  $\pm U$  ( $k=2$ ) 1,08 µg/l  $\pm$  0,16 µg/l

Stability test  $\pm U$  ( $k=2$ ) 1,09 µg/l  $\pm$  0,16 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	1,07	0,333	µg/l	105%	0,38
B	1,10	0,22	µg/l	108%	0,60
C			µg/l		
D	1,120	0,224	µg/l	110%	0,75
E	1,048	0,211	µg/l	103%	0,21
F	1,16	0,17	µg/l	114%	1,06
G	1,034	0,134	µg/l	101%	0,11
H	0,94	0,18	µg/l	92%	-0,60
I	1,09	0,003	µg/l	107%	0,53
J			µg/l		
K	1,18	0,31	µg/l	116%	1,21
L	0,960	0,105	µg/l	94%	-0,45
M	1,15	0,17	µg/l	113%	0,98
N	1,075	0,269	µg/l	105%	0,41
O			µg/l		
P	1,15	0,286	µg/l	113%	0,98
Q	0,987	0,248	µg/l	97%	-0,25
R	0,871	0,055	µg/l	85%	-1,12
S	1,01	0,174	µg/l	99%	-0,08
T	1,01	0,25	µg/l	99%	-0,08
U	1,11	0,22	µg/l	109%	0,68

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	1,06 $\pm$ 0,06	1,06 $\pm$ 0,06	µg/l
Recov. $\pm$ CI(99%)	103,8 $\pm$ 5,6	103,8 $\pm$ 5,6	%
SD between labs	0,08	0,08	µg/l
RSD between labs	8,0	8,0	%
n for calculation	18	18	



## Sample C66A

### Parameter Dibromochloromethane

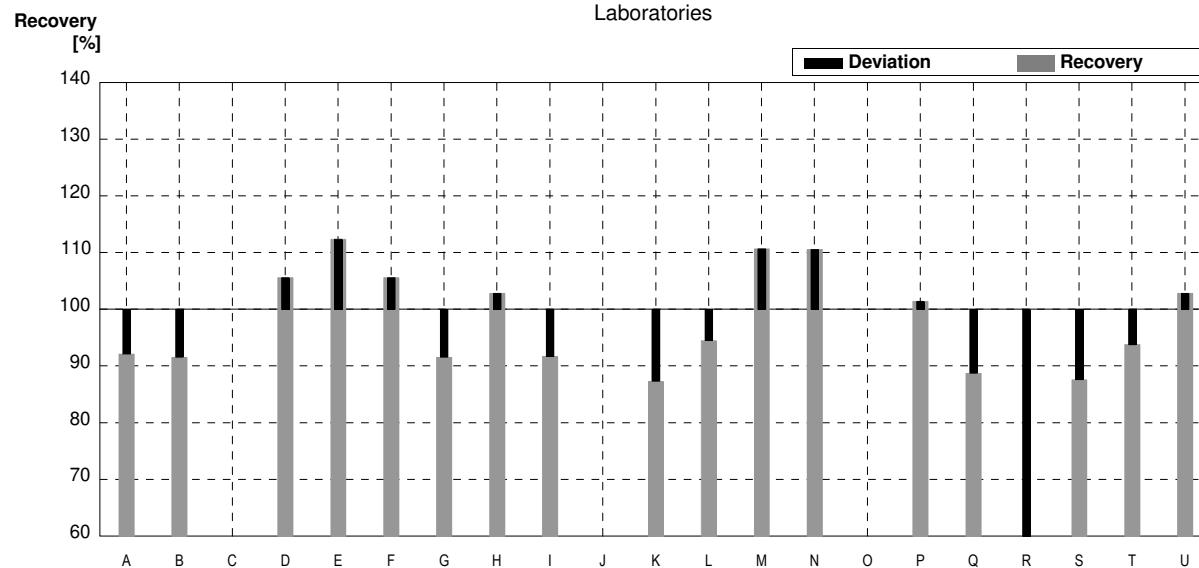
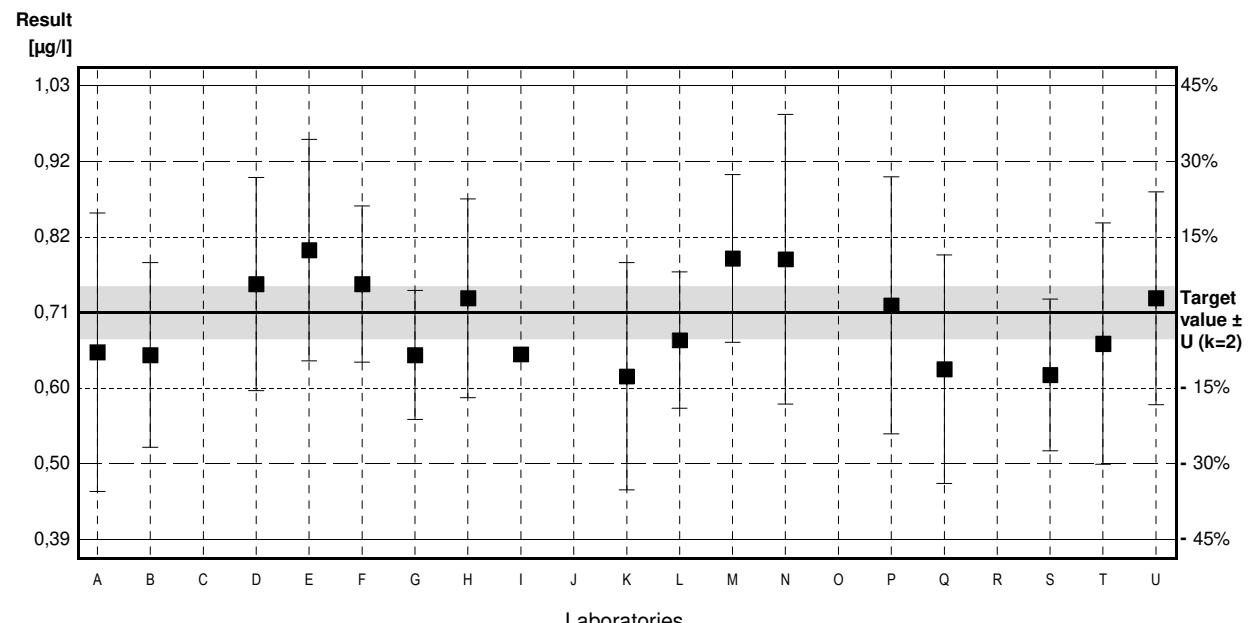
Target value  $\pm U$  ( $k=2$ ) 0,71 µg/l  $\pm$  0,04 µg/l

IFA result  $\pm U$  ( $k=2$ ) 0,72 µg/l  $\pm$  0,11 µg/l

Stability test  $\pm U$  ( $k=2$ ) 0,72 µg/l  $\pm$  0,11 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,654	0,196	µg/l	92%	-0,61
B	0,65	0,13	µg/l	92%	-0,65
C			µg/l		
D	0,750	0,150	µg/l	106%	0,43
E	0,798	0,156	µg/l	112%	0,95
F	0,75	0,11	µg/l	106%	0,43
G	0,650	0,091	µg/l	92%	-0,65
H	0,73	0,14	µg/l	103%	0,22
I	0,651	0,009	µg/l	92%	-0,64
J			µg/l		
K	0,62	0,16	µg/l	87%	-0,98
L	0,671	0,096	µg/l	95%	-0,42
M	0,786	0,118	µg/l	111%	0,82
N	0,785	0,204	µg/l	111%	0,81
O			µg/l		
P	0,72	0,181	µg/l	101%	0,11
Q	0,630	0,161	µg/l	89%	-0,87
R	0,273 *	0,018	µg/l	38%	-4,73
S	0,622	0,107	µg/l	88%	-0,95
T	0,666	0,17	µg/l	94%	-0,48
U	0,73	0,15	µg/l	103%	0,22

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,67 $\pm$ 0,08	0,70 $\pm$ 0,04	µg/l
Recov. $\pm$ CI(99%)	95,0 $\pm$ 11,2	98,3 $\pm$ 6,1	%
SD between labs	0,12	0,06	µg/l
RSD between labs	17,3	8,8	%
n for calculation	18	17	



## Sample C66B

### Parameter Dibromochloromethane

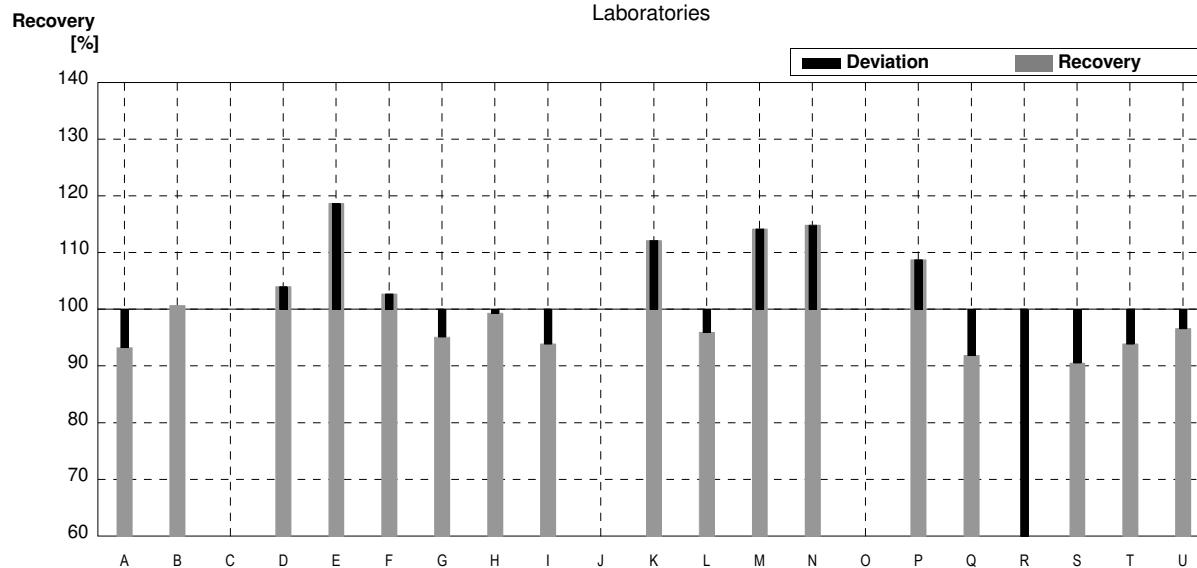
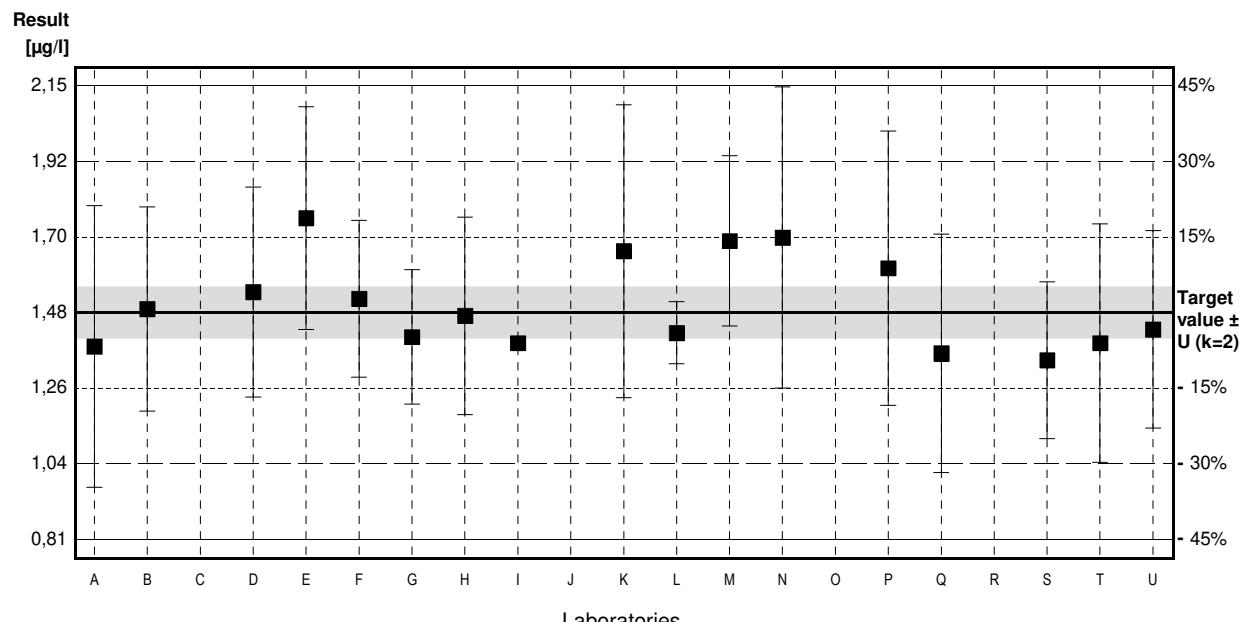
Target value  $\pm U$  ( $k=2$ ) 1,48 µg/l  $\pm$  0,08 µg/l

IFA result  $\pm U$  ( $k=2$ ) 1,48 µg/l  $\pm$  0,22 µg/l

Stability test  $\pm U$  ( $k=2$ ) 1,49 µg/l  $\pm$  0,22 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	1,38	0,414	µg/l	93%	-0,52
B	1,49	0,30	µg/l	101%	0,05
C			µg/l		
D	1,540	0,308	µg/l	104%	0,31
E	1,757	0,327	µg/l	119%	1,44
F	1,52	0,23	µg/l	103%	0,21
G	1,408	0,197	µg/l	95%	-0,37
H	1,47	0,29	µg/l	99%	-0,05
I	1,39	0,01	µg/l	94%	-0,47
J			µg/l		
K	1,66	0,43	µg/l	112%	0,94
L	1,42	0,091	µg/l	96%	-0,31
M	1,69	0,25	µg/l	114%	1,09
N	1,700	0,442	µg/l	115%	1,14
O			µg/l		
P	1,61	0,403	µg/l	109%	0,68
Q	1,36	0,35	µg/l	92%	-0,62
R	0,529 *	0,039	µg/l	36%	-4,94
S	1,34	0,230	µg/l	91%	-0,73
T	1,39	0,35	µg/l	94%	-0,47
U	1,43	0,29	µg/l	97%	-0,26

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	1,45 $\pm$ 0,18	1,50 $\pm$ 0,09	µg/l
Recov. $\pm$ CI(99%)	97,9 $\pm$ 12,2	101,6 $\pm$ 6,4	%
SD between labs	0,26	0,13	µg/l
RSD between labs	18,2	8,9	%
n for calculation	18	17	



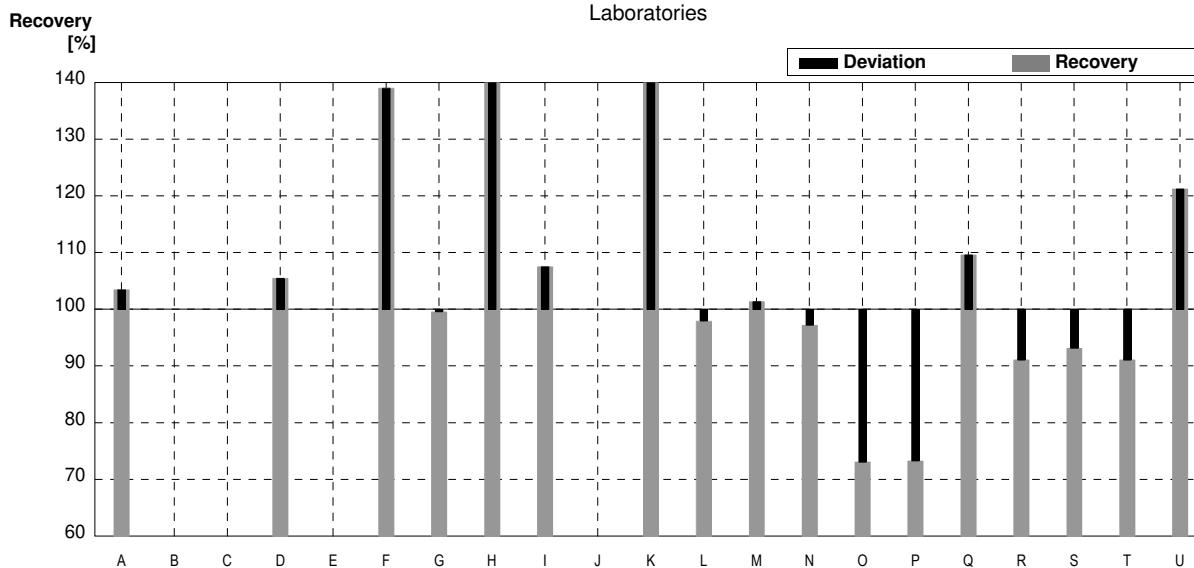
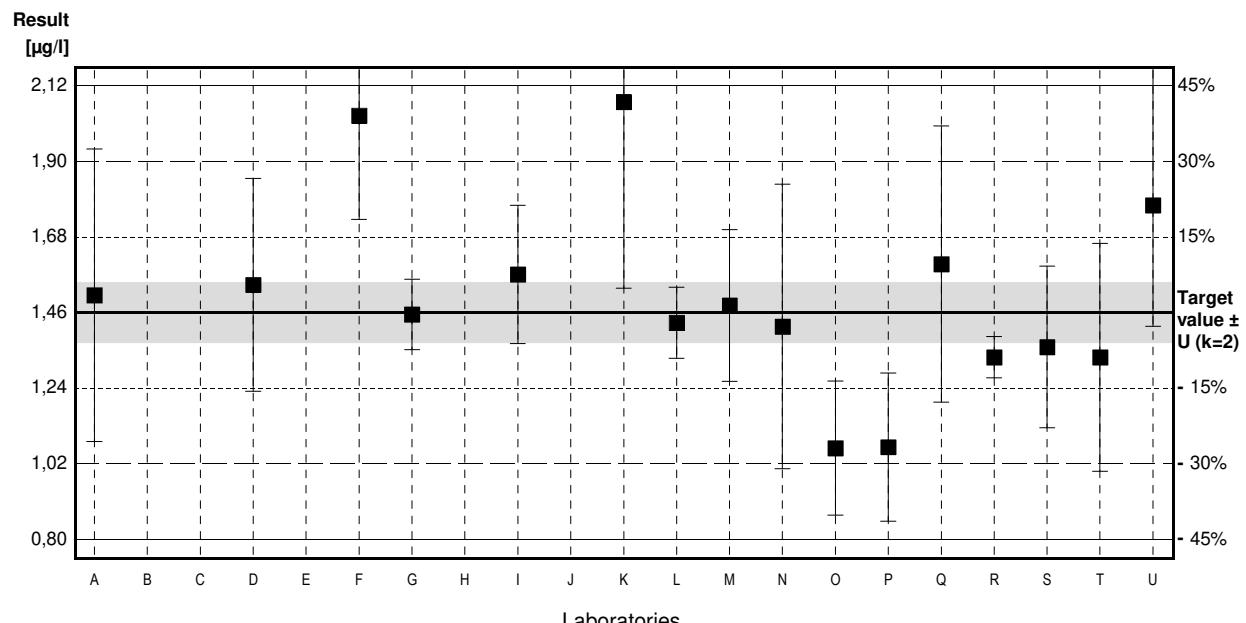
## Sample C66A

### Parameter Dichloromethane

Target value  $\pm U$  ( $k=2$ ) 1,46 µg/l  $\pm$  0,09 µg/l  
 IFA result  $\pm U$  ( $k=2$ ) 1,50 µg/l  $\pm$  0,23 µg/l  
 Stability test  $\pm U$  ( $k=2$ ) 1,49 µg/l  $\pm$  0,22 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	1,51	0,424	µg/l	103%	0,24
B	<BG		µg/l		
C			µg/l		
D	1,540	0,308	µg/l	105%	0,39
E			µg/l		
F	2,03	0,30	µg/l	139%	2,79
G	1,454	0,102	µg/l	100%	-0,03
H	2,15 *	0,42	µg/l	147%	3,38
I	1,57	0,20	µg/l	108%	0,54
J			µg/l		
K	2,07 *	0,54	µg/l	142%	2,98
L	1,43	0,103	µg/l	98%	-0,15
M	1,48	0,22	µg/l	101%	0,10
N	1,419	0,412	µg/l	97%	-0,20
O	1,067	0,194	µg/l	73%	-1,92
P	1,07	0,215	µg/l	73%	-1,91
Q	1,60	0,40	µg/l	110%	0,68
R	1,33	0,06	µg/l	91%	-0,64
S	1,36	0,234	µg/l	93%	-0,49
T	1,33	0,33	µg/l	91%	-0,64
U	1,77	0,35	µg/l	121%	1,52

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	1,54 $\pm$ 0,22	1,46 $\pm$ 0,19	µg/l
Recov. $\pm$ CI(99%)	105,5 $\pm$ 15,1	100,3 $\pm$ 12,7	%
SD between labs	0,31	0,24	µg/l
RSD between labs	20,2	16,5	%
n for calculation	17	15	



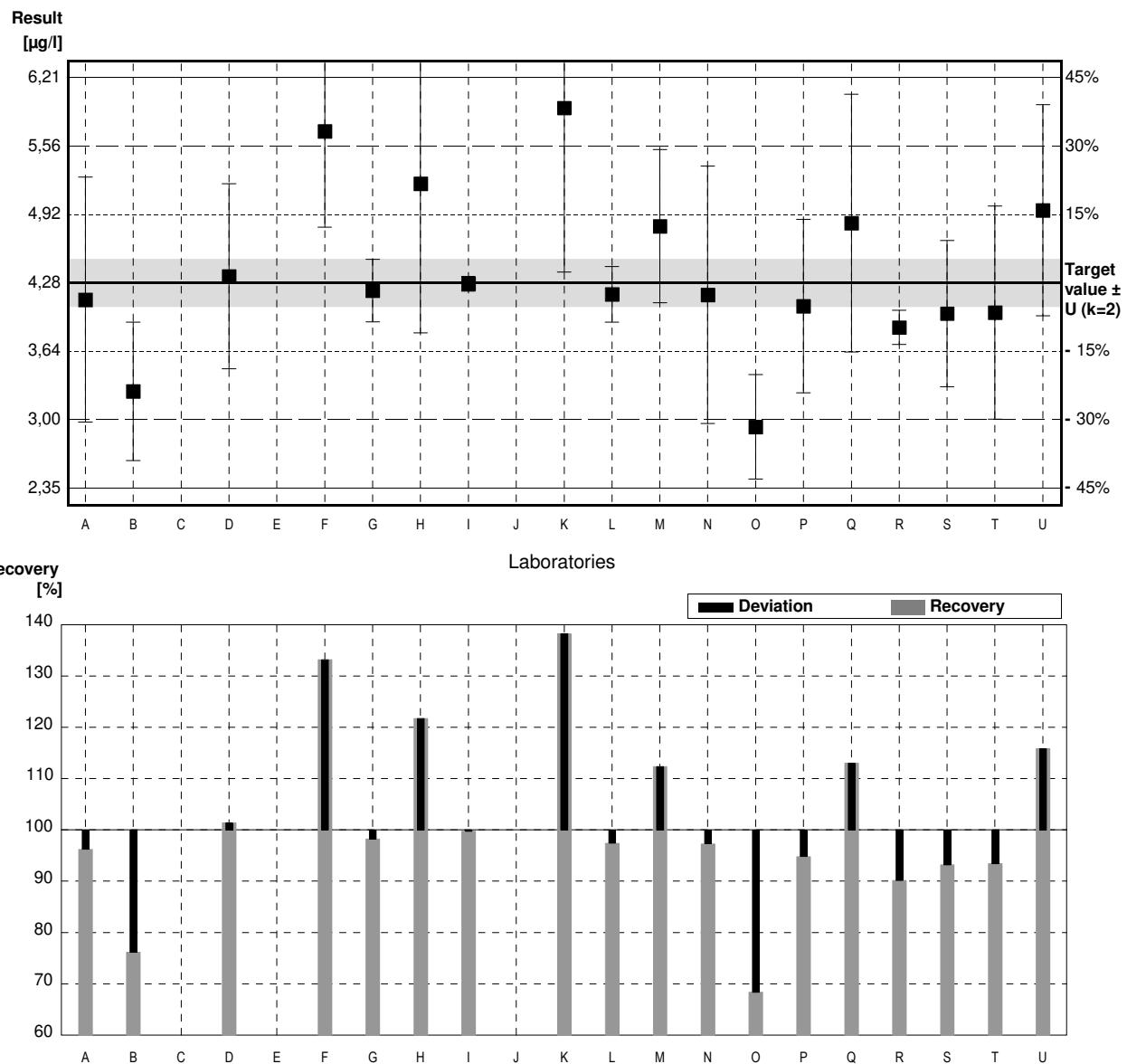
## Sample C66B

### Parameter Dichloromethane

Target value  $\pm U$  ( $k=2$ )    4,28 µg/l     $\pm$     0,22 µg/l  
 IFA result  $\pm U$  ( $k=2$ )    4,44 µg/l     $\pm$     0,67 µg/l  
 Stability test  $\pm U$  ( $k=2$ )    4,32 µg/l     $\pm$     0,65 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	4,12	1,15	µg/l	96%	-0,27
B	3,26	0,65	µg/l	76%	-1,70
C			µg/l		
D	4,340	0,868	µg/l	101%	0,10
E			µg/l		
F	5,7 *	0,9	µg/l	133%	2,37
G	4,206	0,294	µg/l	98%	-0,12
H	5,21	1,4	µg/l	122%	1,55
I	4,27	0,07	µg/l	100%	-0,02
J			µg/l		
K	5,92 *	1,54	µg/l	138%	2,74
L	4,17	0,261	µg/l	97%	-0,18
M	4,81	0,72	µg/l	112%	0,88
N	4,165	1,208	µg/l	97%	-0,19
O	2,927 *	0,491	µg/l	68%	-2,26
P	4,06	0,813	µg/l	95%	-0,37
Q	4,84	1,21	µg/l	113%	0,93
R	3,86	0,16	µg/l	90%	-0,70
S	3,99	0,686	µg/l	93%	-0,48
T	4,00	1,0	µg/l	93%	-0,47
U	4,96	0,99	µg/l	116%	1,13

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	4,38 $\pm$ 0,52	4,28 $\pm$ 0,38	µg/l
Recov. $\pm$ CI(99%)	102,3 $\pm$ 12,1	100,1 $\pm$ 8,9	%
SD between labs	0,76	0,49	µg/l
RSD between labs	17,3	11,5	%
n for calculation	18	15	



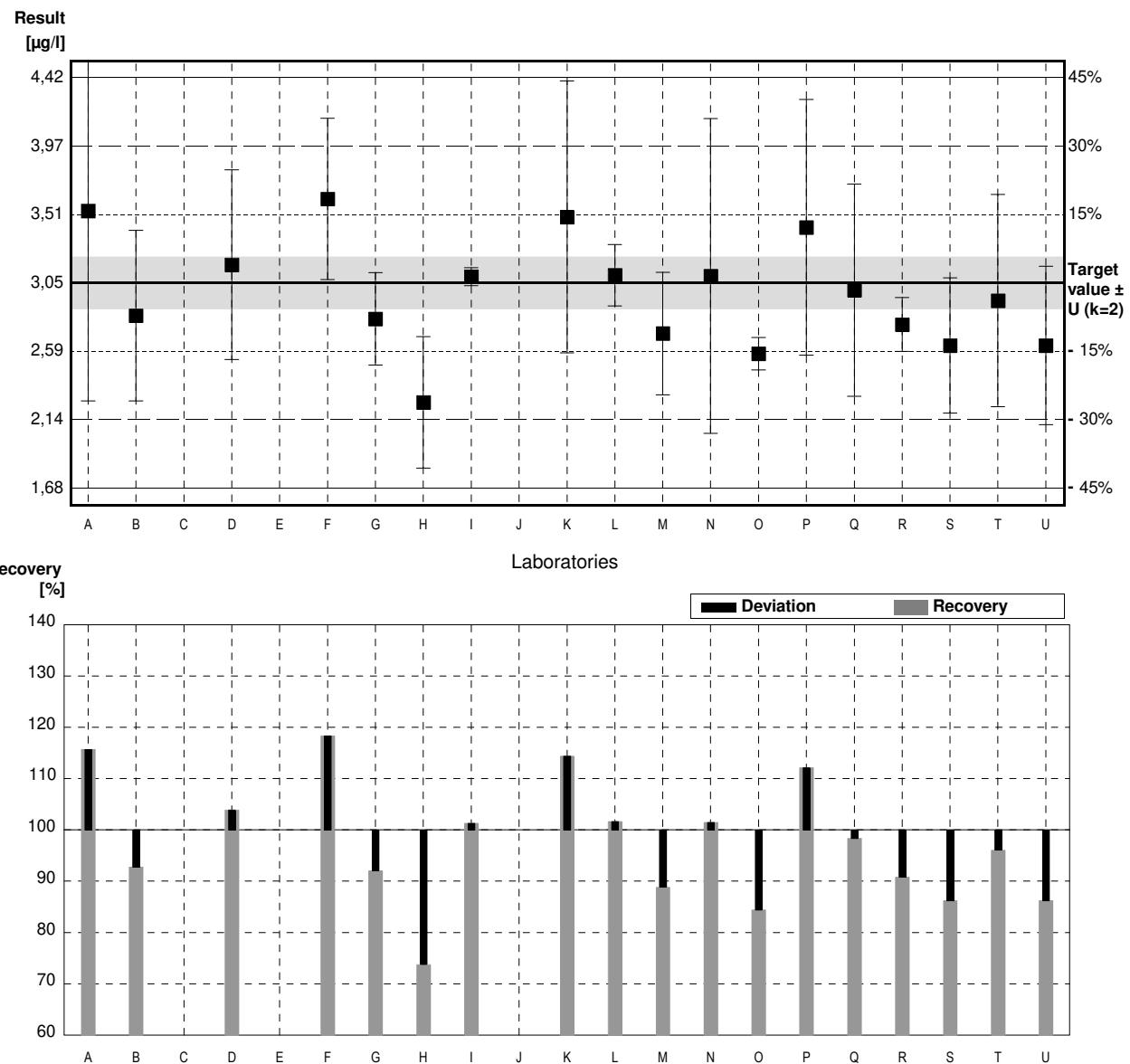
## Sample C66A

### Parameter 1,2-Dichloroethane

Target value  $\pm U (k=2)$  3,05 µg/l  $\pm$  0,17 µg/l  
 IFA result  $\pm U (k=2)$  3,05 µg/l  $\pm$  0,46 µg/l  
 Stability test  $\pm U (k=2)$  3,11 µg/l  $\pm$  0,47 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	3,53	1,27	µg/l	116%	1,21
B	2,83	0,57	µg/l	93%	-0,55
C			µg/l		
D	3,170	0,634	µg/l	104%	0,30
E			µg/l		
F	3,61	0,54	µg/l	118%	1,41
G	2,808	0,309	µg/l	92%	-0,61
H	2,25	0,44	µg/l	74%	-2,02
I	3,09	0,06	µg/l	101%	0,10
J			µg/l		
K	3,49	0,91	µg/l	114%	1,11
L	3,10	0,205	µg/l	102%	0,13
M	2,71	0,41	µg/l	89%	-0,86
N	3,095	1,052	µg/l	101%	0,11
O	2,575	0,108	µg/l	84%	-1,20
P	3,42	0,855	µg/l	112%	0,93
Q	3,00	0,71	µg/l	98%	-0,13
R	2,77	0,18	µg/l	91%	-0,71
S	2,63	0,452	µg/l	86%	-1,06
T	2,93	0,71	µg/l	96%	-0,30
U	2,63	0,53	µg/l	86%	-1,06

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	2,98 $\pm$ 0,25	2,98 $\pm$ 0,25	µg/l
Recov. $\pm CI(99\%)$	97,7 $\pm$ 8,3	97,7 $\pm$ 8,3	%
SD between labs	0,37	0,37	µg/l
RSD between labs	12,5	12,5	%
n for calculation	18	18	



## Sample C66B

### Parameter 1,2-Dichloroethane

Target value <0,1 µg/l

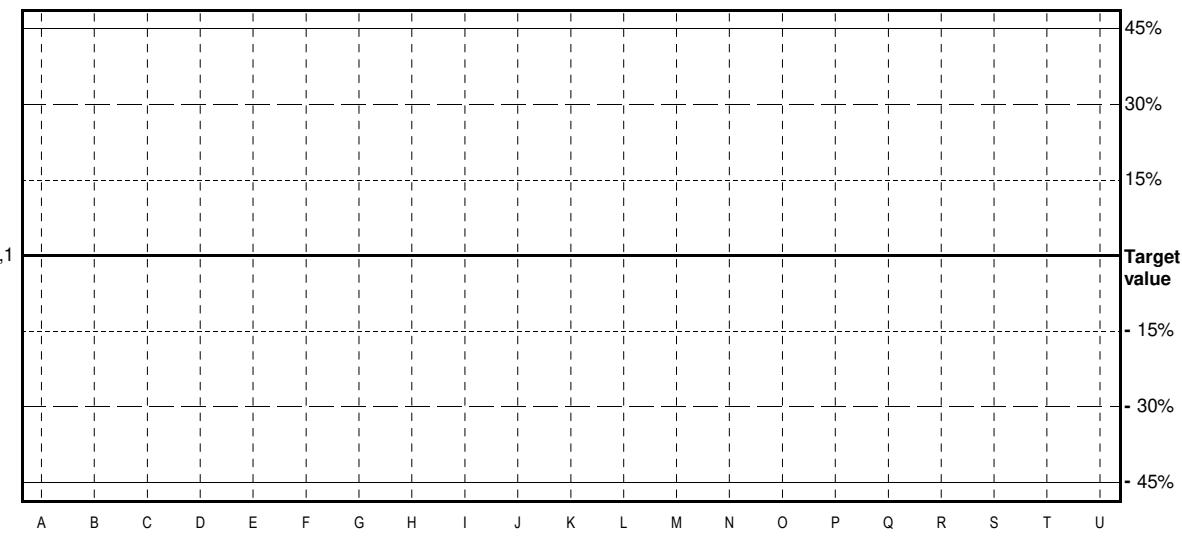
IFA result <0,1 µg/l

Stability test <0,1 µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<0,3		µg/l	•	
B	<BG		µg/l		
C			µg/l		
D	<0,040		µg/l	•	
E			µg/l		
F	<0,1		µg/l	•	
G	<0,1		µg/l	•	
H	<0,5	0,1	µg/l	•	
I	<0,41		µg/l	•	
J			µg/l		
K	<0,1		µg/l	•	
L	<0,05		µg/l	•	
M	<0,5		µg/l	•	
N	<0,08	0,027	µg/l	•	
O	<1,00		µg/l	•	
P	<0,3	0	µg/l	•	
Q	<0,020		µg/l	•	
R	<0,80		µg/l	•	
S	<0,10		µg/l	•	
T	<0,5		µg/l	•	
U	<1,00		µg/l	•	

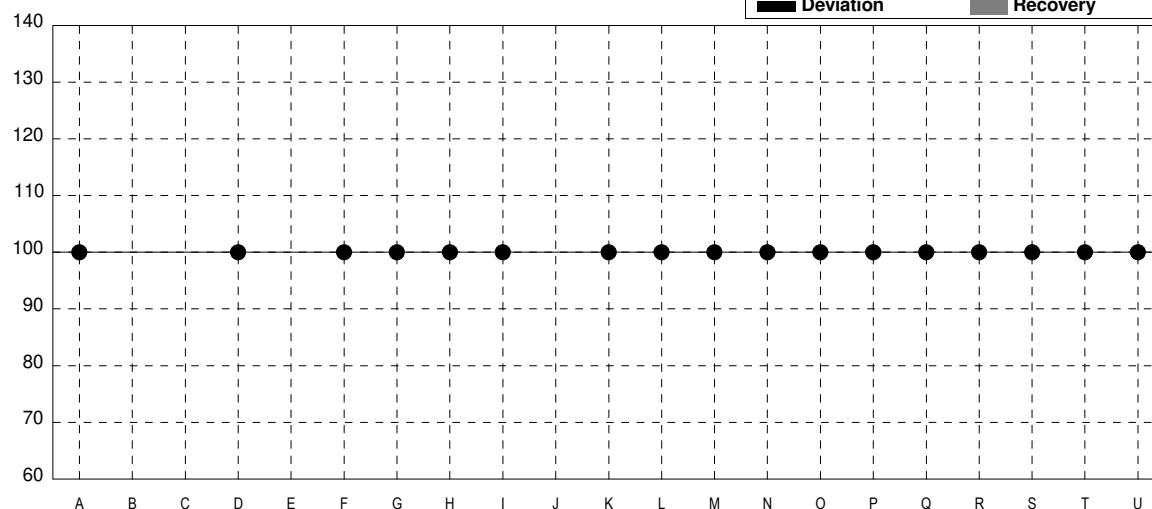
### Result

[µg/l]



### Recovery

[%]



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

## Sample C66A

### Parameter cis-1,2-Dichloroethene

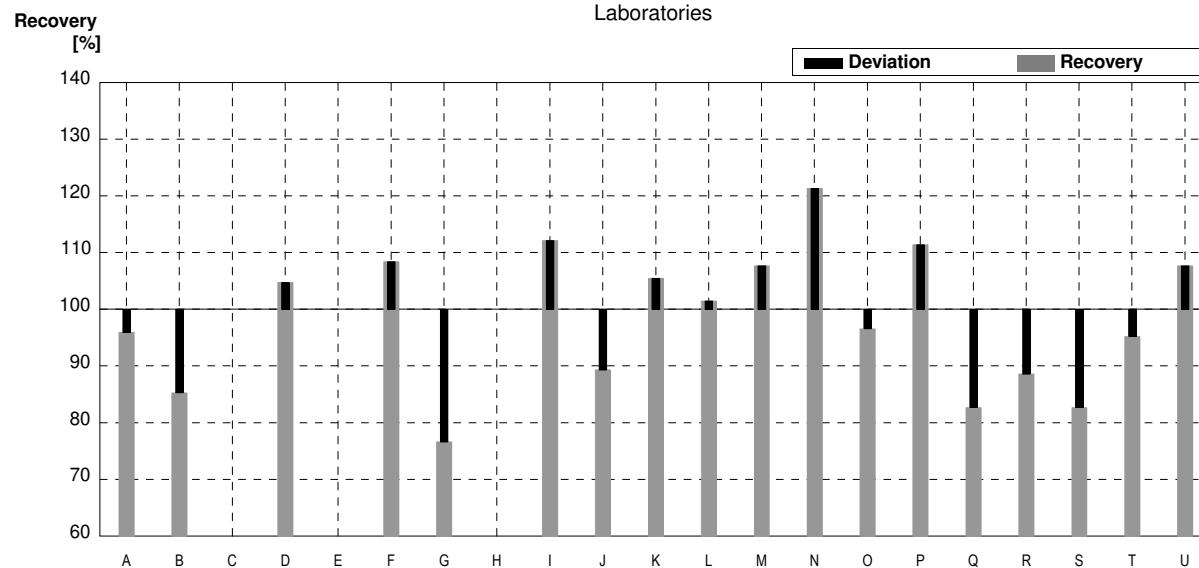
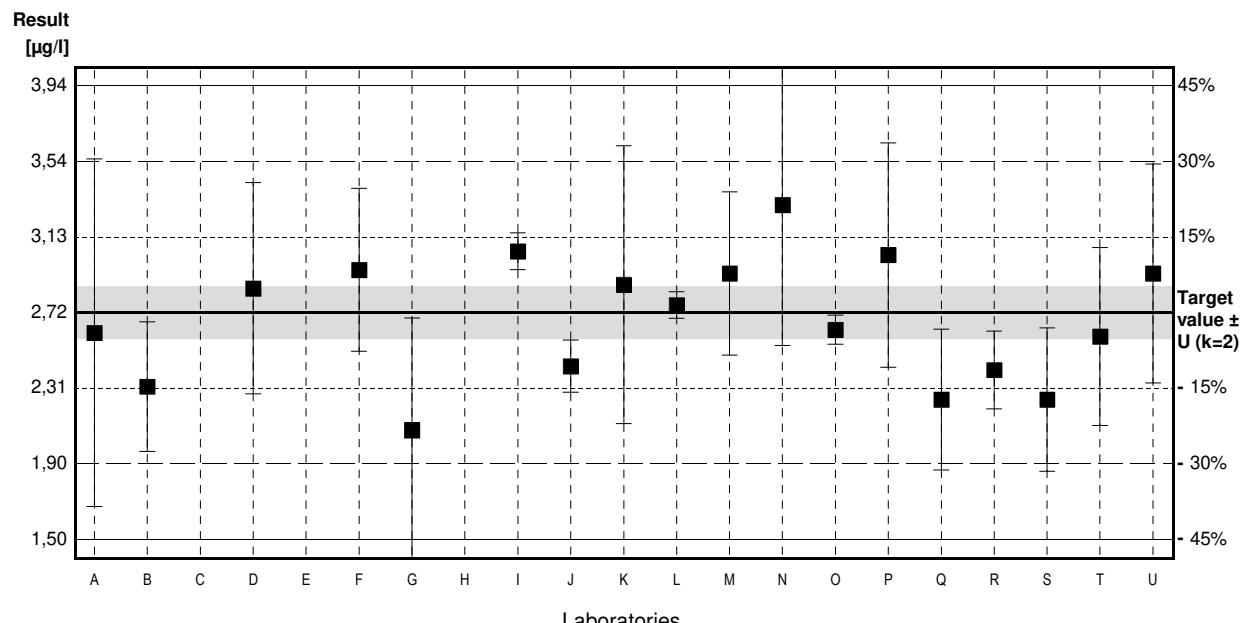
Target value  $\pm U (k=2)$  2,72 µg/l  $\pm$  0,14 µg/l

IFA result  $\pm U (k=2)$  2,77 µg/l  $\pm$  0,42 µg/l

Stability test  $\pm U (k=2)$  2,70 µg/l  $\pm$  0,41 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	2,61	0,938	µg/l	96%	-0,29
B	2,32	0,35	µg/l	85%	-1,05
C			µg/l		
D	2,850	0,570	µg/l	105%	0,34
E			µg/l		
F	2,95	0,44	µg/l	108%	0,60
G	2,085	0,605	µg/l	77%	-1,67
H			µg/l		
I	3,05	0,1	µg/l	112%	0,87
J	2,430	0,140	µg/l	89%	-0,76
K	2,87	0,75	µg/l	106%	0,39
L	2,76	0,071	µg/l	101%	0,11
M	2,93	0,44	µg/l	108%	0,55
N	3,300	0,759	µg/l	121%	1,52
O	2,627	0,079	µg/l	97%	-0,24
P	3,03	0,605	µg/l	111%	0,81
Q	2,25	0,38	µg/l	83%	-1,23
R	2,41	0,21	µg/l	89%	-0,81
S	2,25	0,387	µg/l	83%	-1,23
T	2,59	0,48	µg/l	95%	-0,34
U	2,93	0,59	µg/l	108%	0,55

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	2,68 $\pm$ 0,23	2,68 $\pm$ 0,23	µg/l
Recov. $\pm$ CI(99%)	98,5 $\pm$ 8,4	98,5 $\pm$ 8,4	%
SD between labs	0,34	0,34	µg/l
RSD between labs	12,5	12,5	%
n for calculation	18	18	



## Sample C66B

### Parameter cis-1,2-Dichloroethene

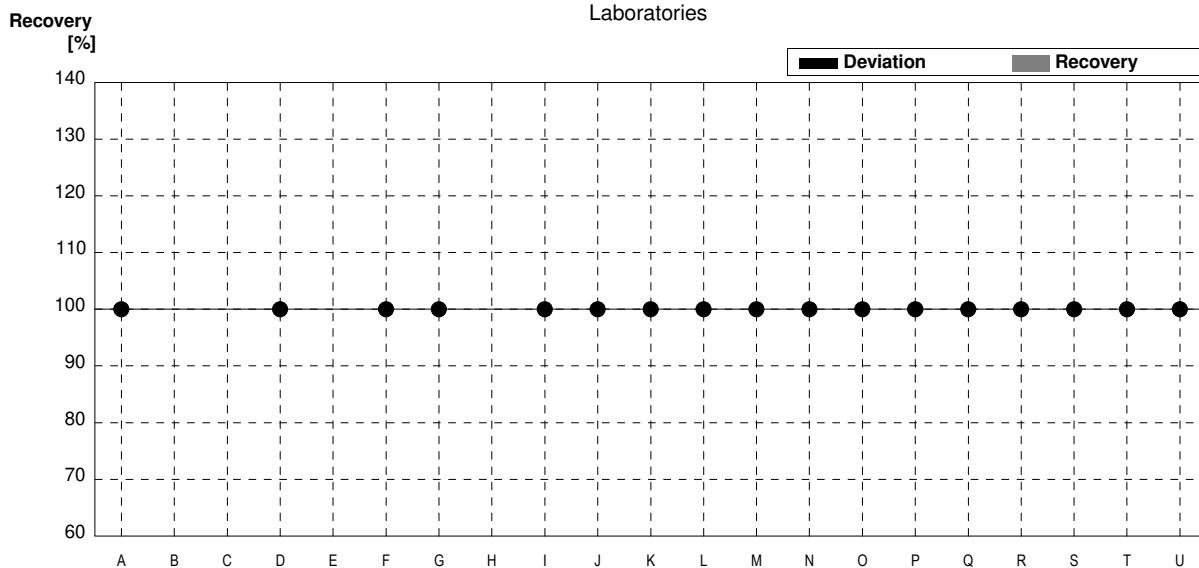
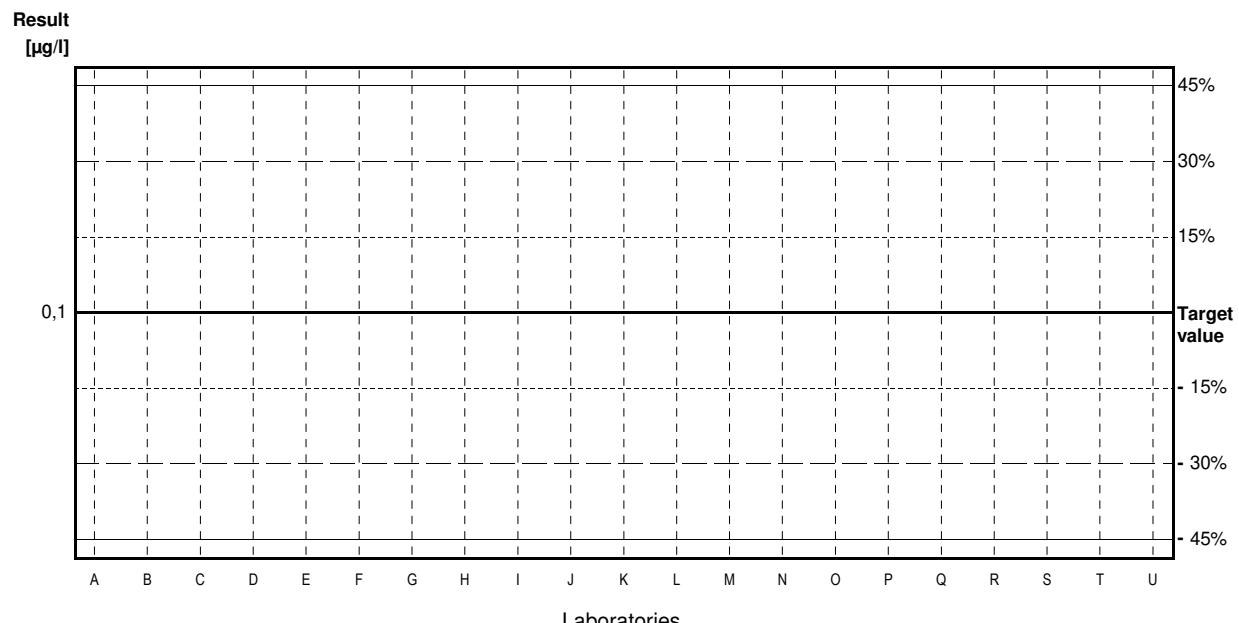
Target value <0,1 µg/l

IFA result <0,1 µg/l

Stability test <0,1 µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<0,1		µg/l	•	
B	<BG		µg/l		
C			µg/l		
D	<0,130		µg/l	•	
E			µg/l		
F	<0,1		µg/l	•	
G	<0,1		µg/l	•	
H			µg/l		
I	<0,75		µg/l	•	
J	<0,1		µg/l	•	
K	<0,1		µg/l	•	
L	<0,05		µg/l	•	
M	<0,5		µg/l	•	
N	<0,05	0,012	µg/l	•	
O	<1,00		µg/l	•	
P	<0,1	0	µg/l	•	
Q	<0,020		µg/l	•	
R	<0,30		µg/l	•	
S	<0,10		µg/l	•	
T	<0,1		µg/l	•	
U	<0,100		µg/l	•	

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



## Sample C66A

### Parameter trans-1,2-Dichloroethene

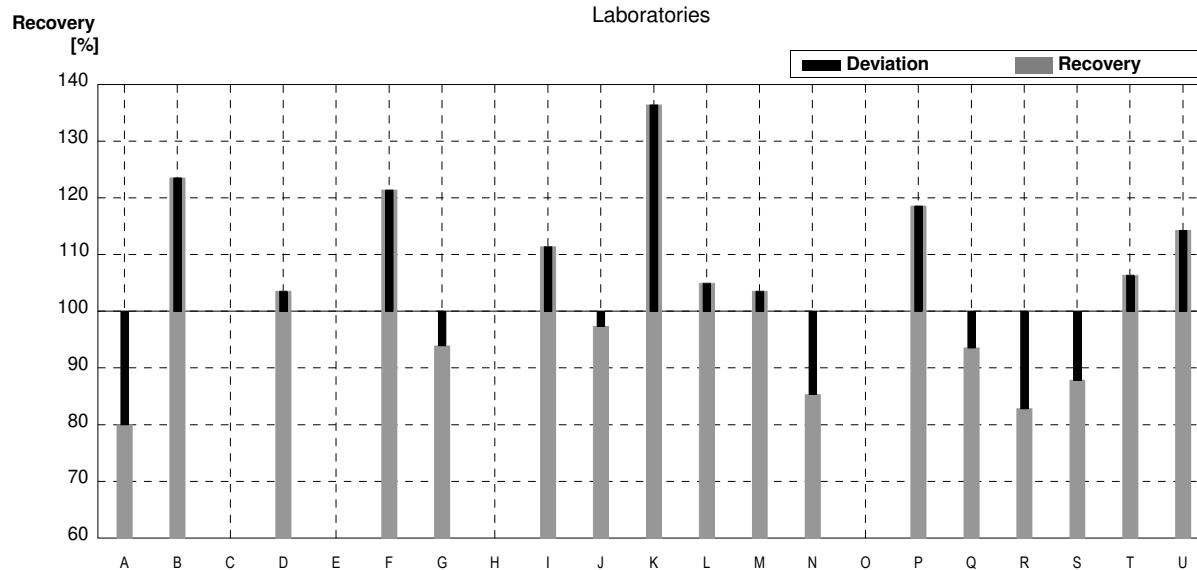
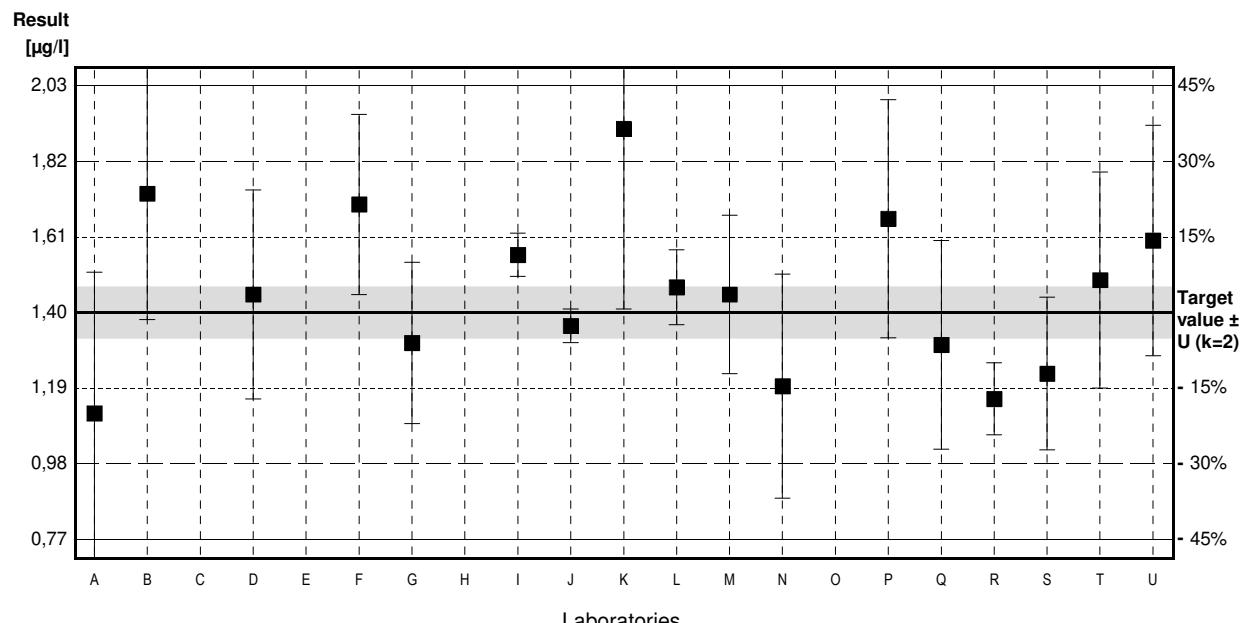
Target value  $\pm U$  ( $k=2$ ) 1,40 µg/l  $\pm$  0,07 µg/l

IFA result  $\pm U$  ( $k=2$ ) 1,41 µg/l  $\pm$  0,21 µg/l

Stability test  $\pm U$  ( $k=2$ ) 1,37 µg/l  $\pm$  0,21 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	1,12	0,392	µg/l	80%	-1,54
B	1,73	0,35	µg/l	124%	1,81
C			µg/l		
D	1,450	0,290	µg/l	104%	0,27
E			µg/l		
F	1,70	0,25	µg/l	121%	1,65
G	1,315	0,224	µg/l	94%	-0,47
H			µg/l		
I	1,56	0,06	µg/l	111%	0,88
J	1,363	0,047	µg/l	97%	-0,20
K	1,91	0,5	µg/l	136%	2,80
L	1,47	0,104	µg/l	105%	0,38
M	1,45	0,22	µg/l	104%	0,27
N	1,195	0,311	µg/l	85%	-1,13
O			µg/l		
P	1,66	0,331	µg/l	119%	1,43
Q	1,31	0,29	µg/l	94%	-0,49
R	1,16	0,10	µg/l	83%	-1,32
S	1,23	0,212	µg/l	88%	-0,93
T	1,49	0,30	µg/l	106%	0,49
U	1,60	0,32	µg/l	114%	1,10

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	1,45 $\pm$ 0,16	1,45 $\pm$ 0,16	µg/l
Recov. $\pm$ CI(99%)	103,8 $\pm$ 11,2	103,8 $\pm$ 11,2	%
SD between labs	0,22	0,22	µg/l
RSD between labs	15,2	15,2	%
n for calculation	17	17	



## Sample C66B

### Parameter trans-1,2-Dichloroethene

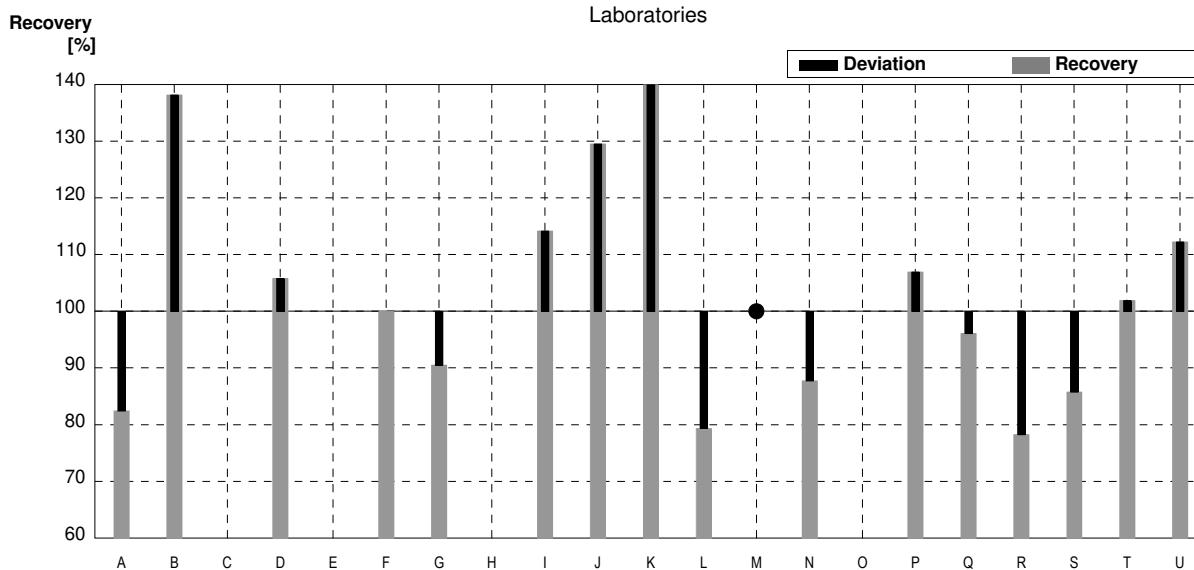
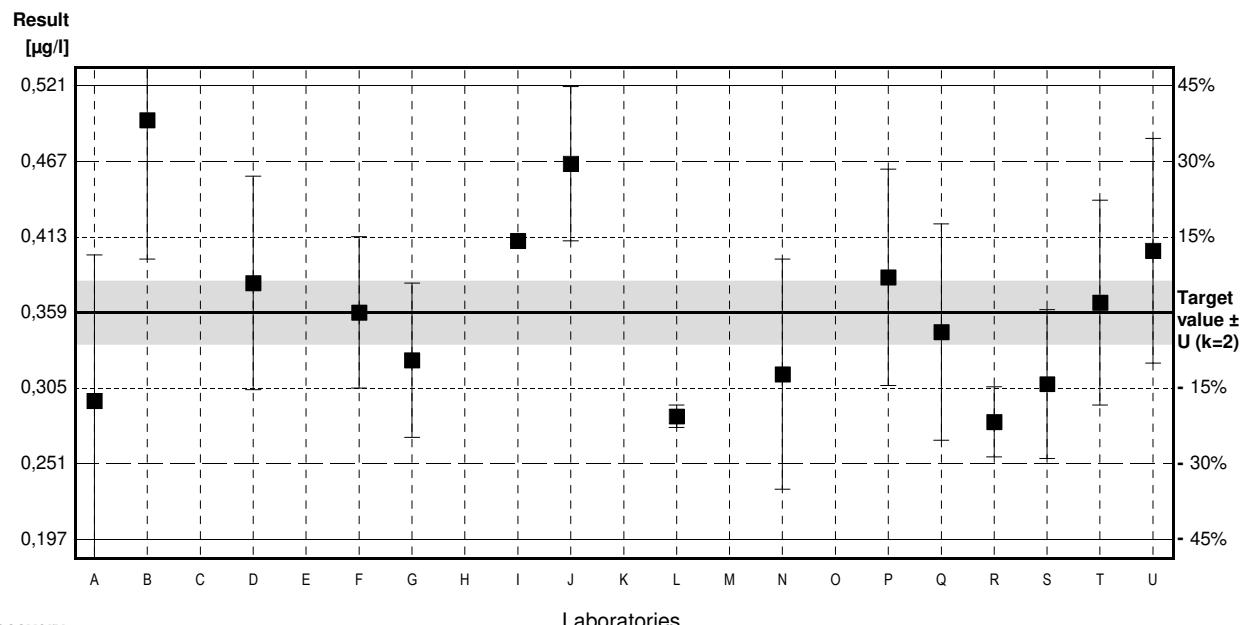
Target value  $\pm U$  ( $k=2$ ) 0.359 µg/l  $\pm$  0.023 µg/l

IFA result  $\pm U$  ( $k=2$ ) 0.345 µg/l  $\pm$  0.052 µg/l

Stability test  $\pm U$  ( $k=2$ ) 0.349 µg/l  $\pm$  0.052 µg/l

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	0,296	0,104	µg/l	82%	-1,35
B	0,496	0,099	µg/l	138%	2,94
C			µg/l		
D	0,380	0,076	µg/l	106%	0,45
E			µg/l		
F	0,359	0,054	µg/l	100%	0,00
G	0,325	0,055	µg/l	91%	-0,73
H			µg/l		
I	0,410	0,002	µg/l	114%	1,09
J	0,465	0,055	µg/l	130%	2,27
K	0,57	0,15	µg/l	159%	4,52
L	0,285	0,008	µg/l	79%	-1,59
M	<0,5		µg/l	*	
N	0,315	0,082	µg/l	88%	-0,94
O			µg/l		
P	0,384	0,077	µg/l	107%	0,54
Q	0,345	0,077	µg/l	96%	-0,30
R	0,281	0,025	µg/l	78%	-1,67
S	0,308	0,053	µg/l	86%	-1,09
T	0,366	0,073	µg/l	102%	0,15
U	0,403	0,080	µg/l	112%	0,94

	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	0,374 $\pm$ 0,060	0,374 $\pm$ 0,060	µg/l
Recov. $\pm$ CI(99%)	104,2 $\pm$ 16,6	104,2 $\pm$ 16,6	%
SD between labs	0,081	0,081	µg/l
RSD between labs	21,6	21,6	%
n for calculation	16	16	







I F A



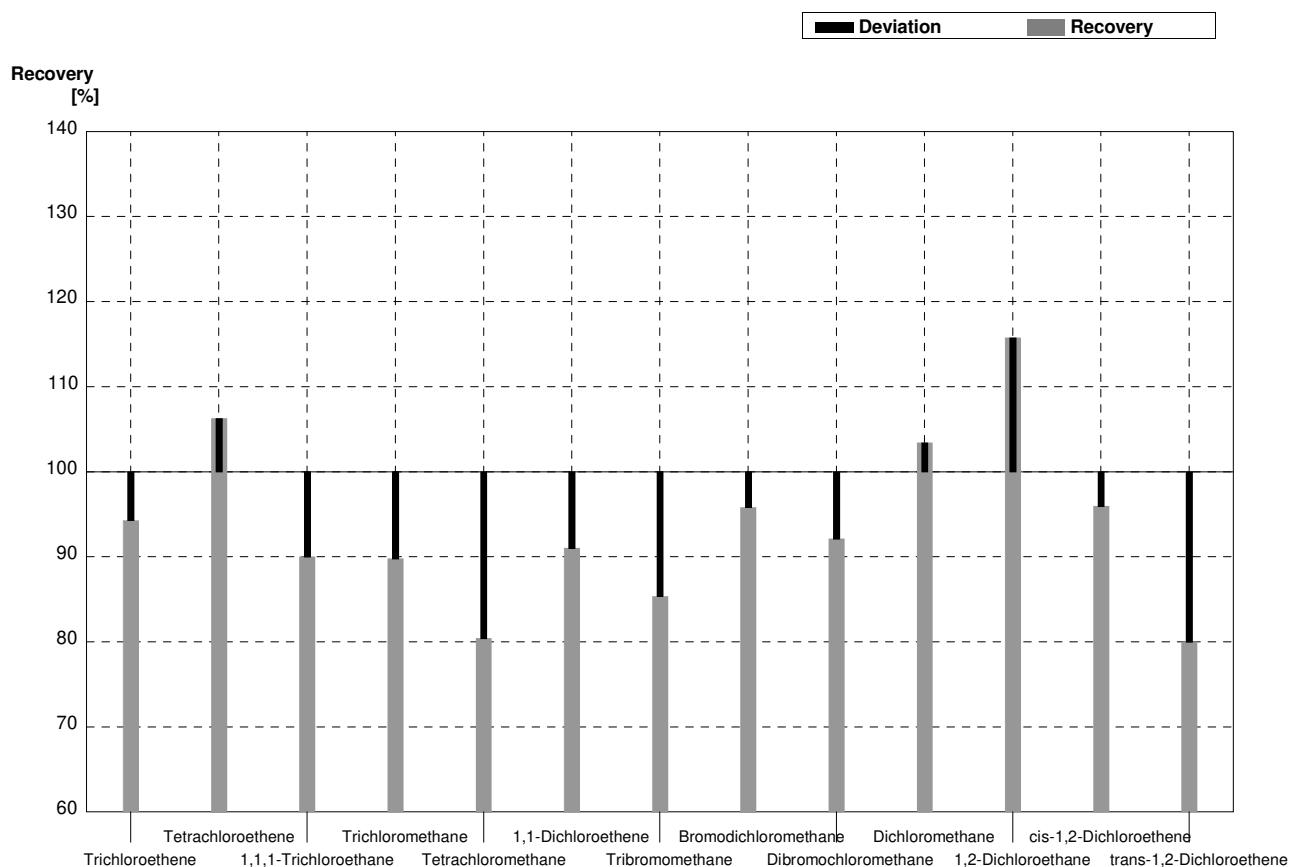
## **Illustration of Results Laboratory Oriented Part**

**Round C66  
Volatile Halogenated Hydrocarbons**

**Sample Dispatch: 28 March 2022**

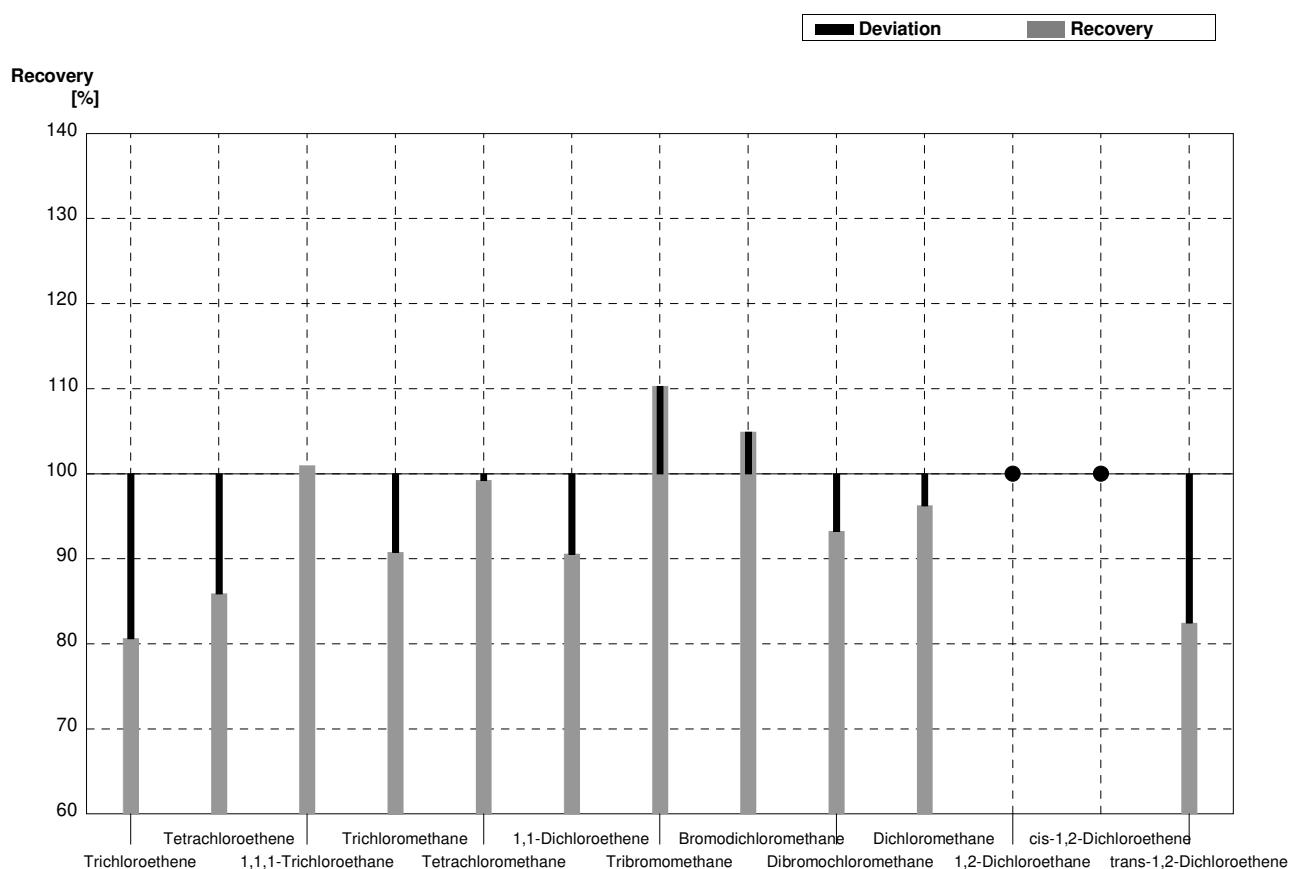
**Sample C66A**  
**Laboratory A**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,660	0,284	$\mu\text{g/l}$	94%
Tetrachloroethene	0,271	0,024	0,288	0,124	$\mu\text{g/l}$	106%
1,1,1-Trichloroethane	0,91	0,05	0,819	0,311	$\mu\text{g/l}$	90%
Trichloromethane	1,76	0,09	1,58	0,411	$\mu\text{g/l}$	90%
Tetrachloromethane	1,23	0,06	0,989	0,336	$\mu\text{g/l}$	80%
1,1-Dichloroethene	0,79	0,04	0,719	0,244	$\mu\text{g/l}$	91%
Tribromomethane	0,69	0,04	0,589	0,206	$\mu\text{g/l}$	85%
Bromodichloromethane	0,455	0,028	0,436	0,135	$\mu\text{g/l}$	96%
Dibromochloromethane	0,71	0,04	0,654	0,196	$\mu\text{g/l}$	92%
Dichloromethane	1,46	0,09	1,51	0,424	$\mu\text{g/l}$	103%
1,2-Dichloroethane	3,05	0,17	3,53	1,27	$\mu\text{g/l}$	116%
cis-1,2-Dichloroethene	2,72	0,14	2,61	0,938	$\mu\text{g/l}$	96%
trans-1,2-Dichloroethene	1,40	0,07	1,12	0,392	$\mu\text{g/l}$	80%



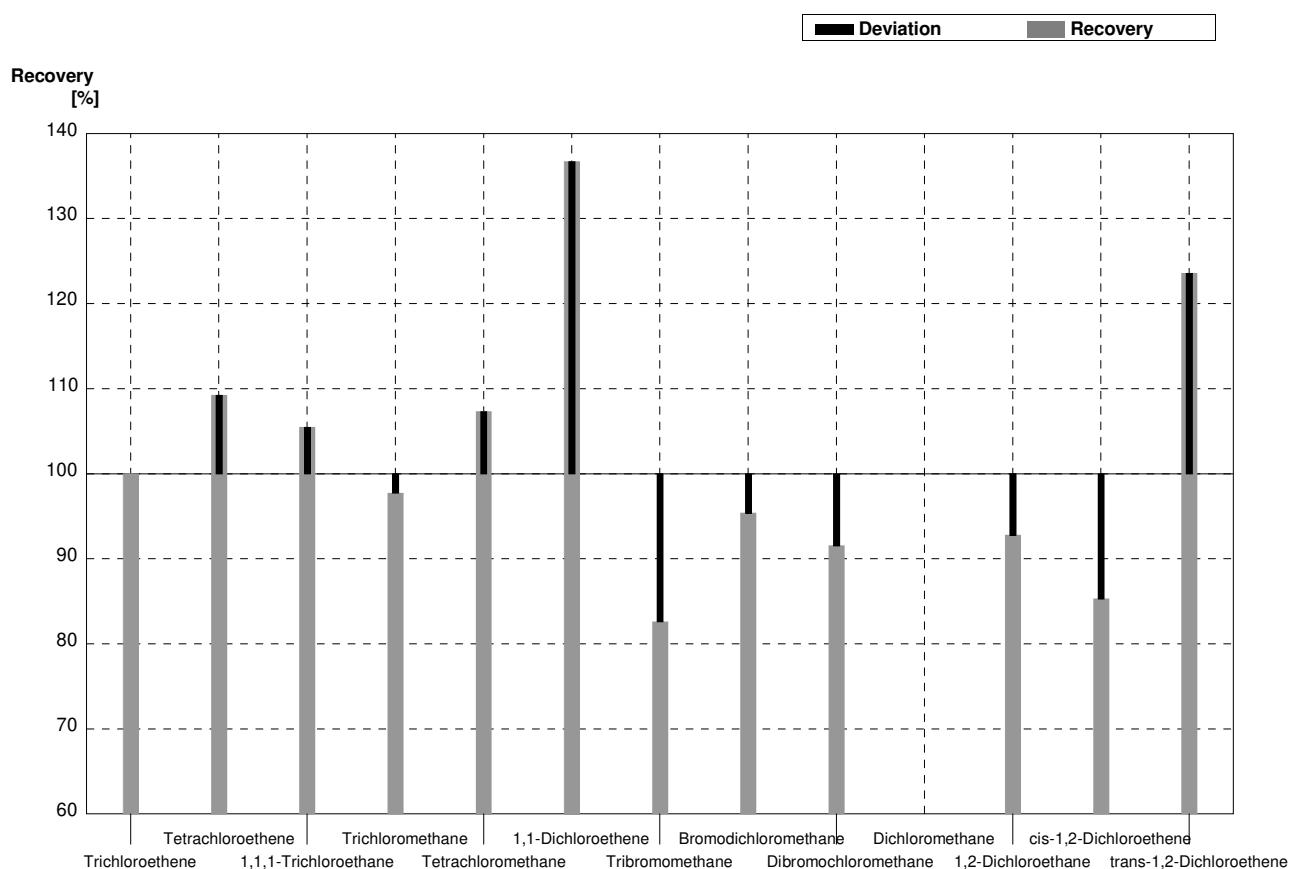
**Sample C66B**  
**Laboratory A**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,233	0,100	$\mu\text{g/l}$	81%
Tetrachloroethene	0,73	0,04	0,627	0,270	$\mu\text{g/l}$	86%
1,1,1-Trichloroethane	0,312	0,019	0,315	0,120	$\mu\text{g/l}$	101%
Trichloromethane	0,78	0,05	0,708	0,184	$\mu\text{g/l}$	91%
Tetrachloromethane	0,258	0,019	0,256	0,087	$\mu\text{g/l}$	99%
1,1-Dichloroethene	2,33	0,12	2,11	0,718	$\mu\text{g/l}$	91%
Tribromomethane	1,94	0,10	2,14	0,748	$\mu\text{g/l}$	110%
Bromodichloromethane	1,02	0,05	1,07	0,333	$\mu\text{g/l}$	105%
Dibromochloromethane	1,48	0,08	1,38	0,414	$\mu\text{g/l}$	93%
Dichloromethane	4,28	0,22	4,12	1,15	$\mu\text{g/l}$	96%
1,2-Dichloroethane	<0,1		<0,3		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,1		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,296	0,104	$\mu\text{g/l}$	82%



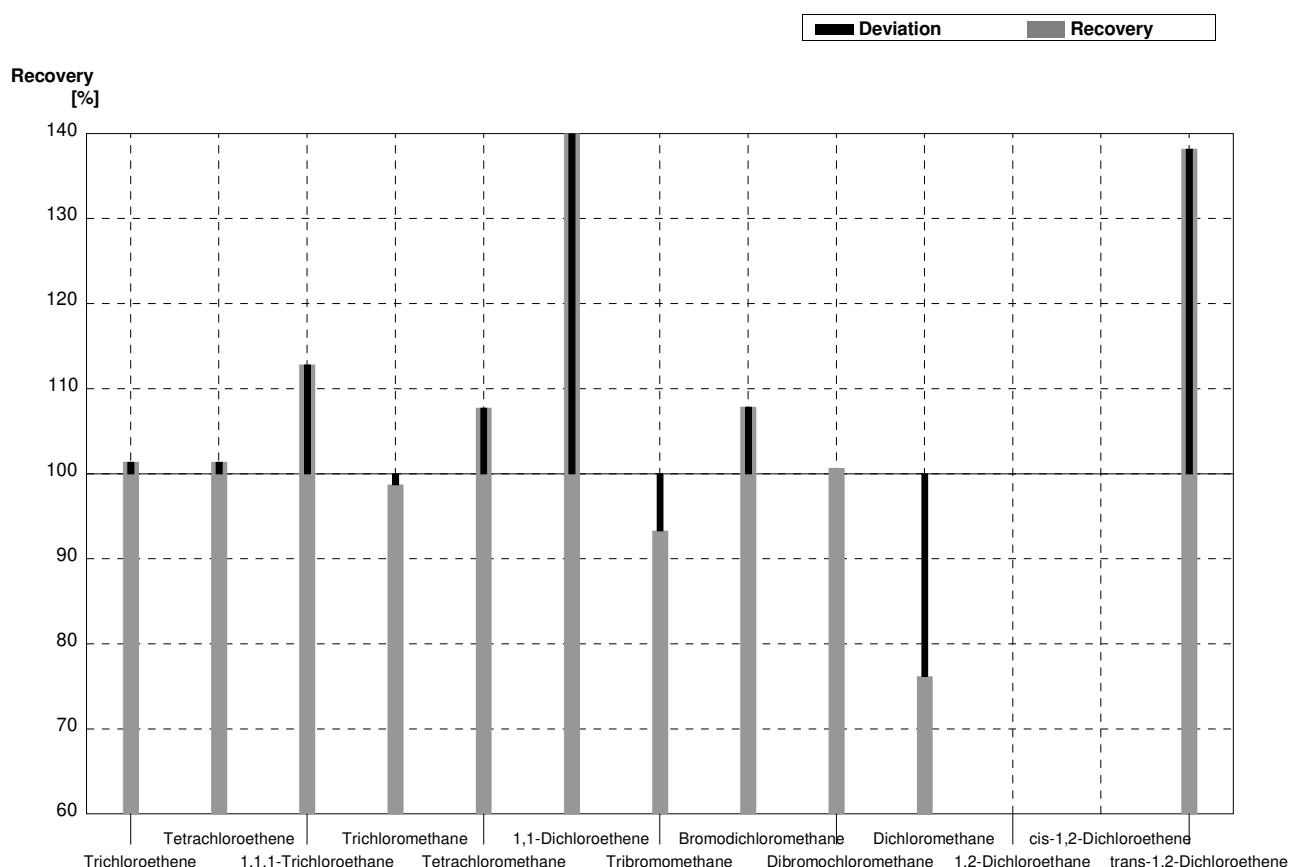
**Sample C66A**  
**Laboratory B**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,70	0,14	$\mu\text{g/l}$	100%
Tetrachloroethene	0,271	0,024	0,296	0,059	$\mu\text{g/l}$	109%
1,1,1-Trichloroethane	0,91	0,05	0,96	0,19	$\mu\text{g/l}$	105%
Trichloromethane	1,76	0,09	1,72	0,344	$\mu\text{g/l}$	98%
Tetrachloromethane	1,23	0,06	1,32	0,26	$\mu\text{g/l}$	107%
1,1-Dichloroethene	0,79	0,04	1,08	0,22	$\mu\text{g/l}$	137%
Tribromomethane	0,69	0,04	0,57	0,11	$\mu\text{g/l}$	83%
Bromodichloromethane	0,455	0,028	0,434	0,087	$\mu\text{g/l}$	95%
Dibromochloromethane	0,71	0,04	0,65	0,13	$\mu\text{g/l}$	92%
Dichloromethane	1,46	0,09	<BG		$\mu\text{g/l}$	
1,2-Dichloroethane	3,05	0,17	2,83	0,57	$\mu\text{g/l}$	93%
cis-1,2-Dichloroethene	2,72	0,14	2,32	0,35	$\mu\text{g/l}$	85%
trans-1,2-Dichloroethene	1,40	0,07	1,73	0,35	$\mu\text{g/l}$	124%



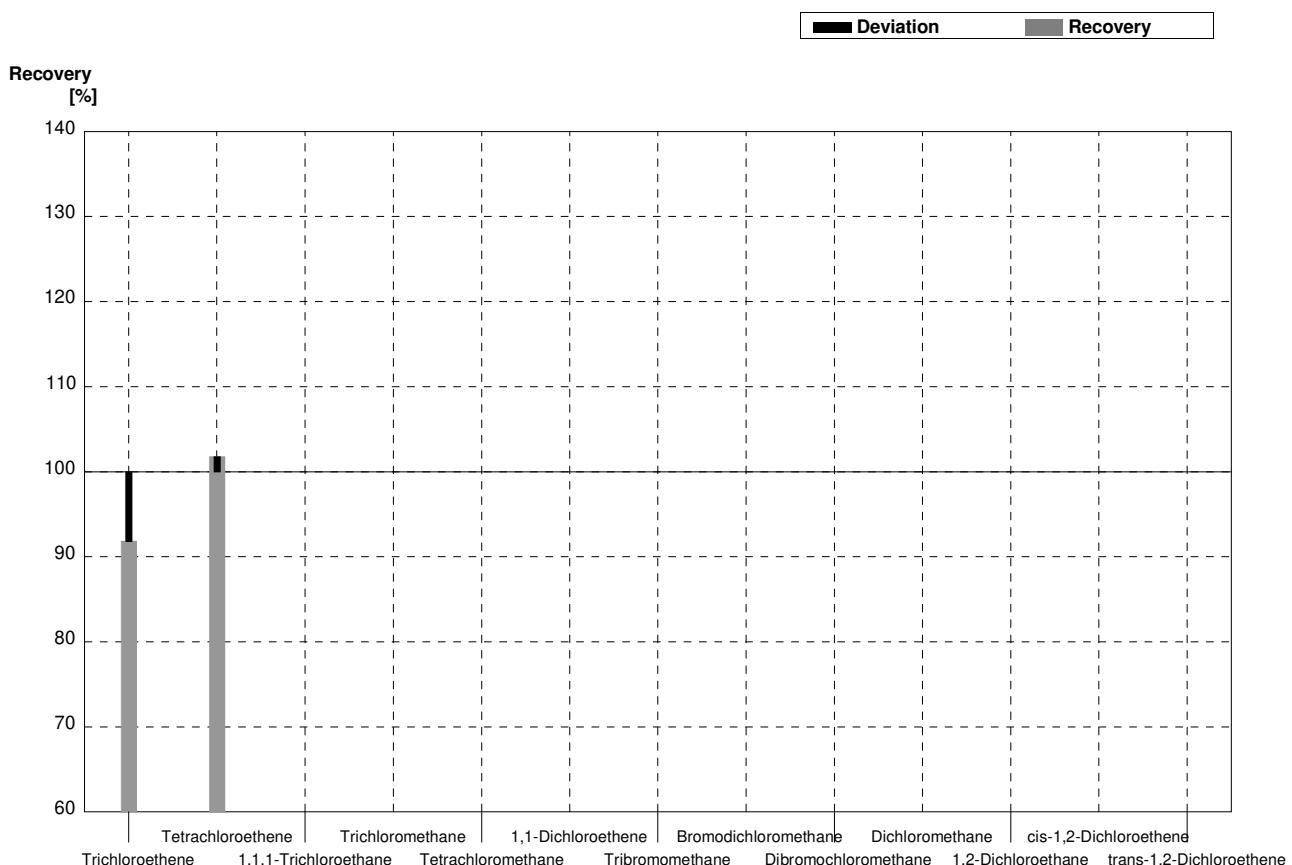
**Sample C66B**  
**Laboratory B**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,293	0,059	$\mu\text{g/l}$	101%
Tetrachloroethene	0,73	0,04	0,74	0,15	$\mu\text{g/l}$	101%
1,1,1-Trichloroethane	0,312	0,019	0,352	0,070	$\mu\text{g/l}$	113%
Trichloromethane	0,78	0,05	0,77	0,15	$\mu\text{g/l}$	99%
Tetrachloromethane	0,258	0,019	0,278	0,056	$\mu\text{g/l}$	108%
1,1-Dichloroethene	2,33	0,12	3,44	0,69	$\mu\text{g/l}$	148%
Tribromomethane	1,94	0,10	1,81	0,36	$\mu\text{g/l}$	93%
Bromodichloromethane	1,02	0,05	1,10	0,22	$\mu\text{g/l}$	108%
Dibromochloromethane	1,48	0,08	1,49	0,30	$\mu\text{g/l}$	101%
Dichloromethane	4,28	0,22	3,26	0,65	$\mu\text{g/l}$	76%
1,2-Dichloroethane	<0,1		<BG		$\mu\text{g/l}$	
cis-1,2-Dichloroethene	<0,1		<BG		$\mu\text{g/l}$	
trans-1,2-Dichloroethene	0,359	0,023	0,496	0,099	$\mu\text{g/l}$	138%



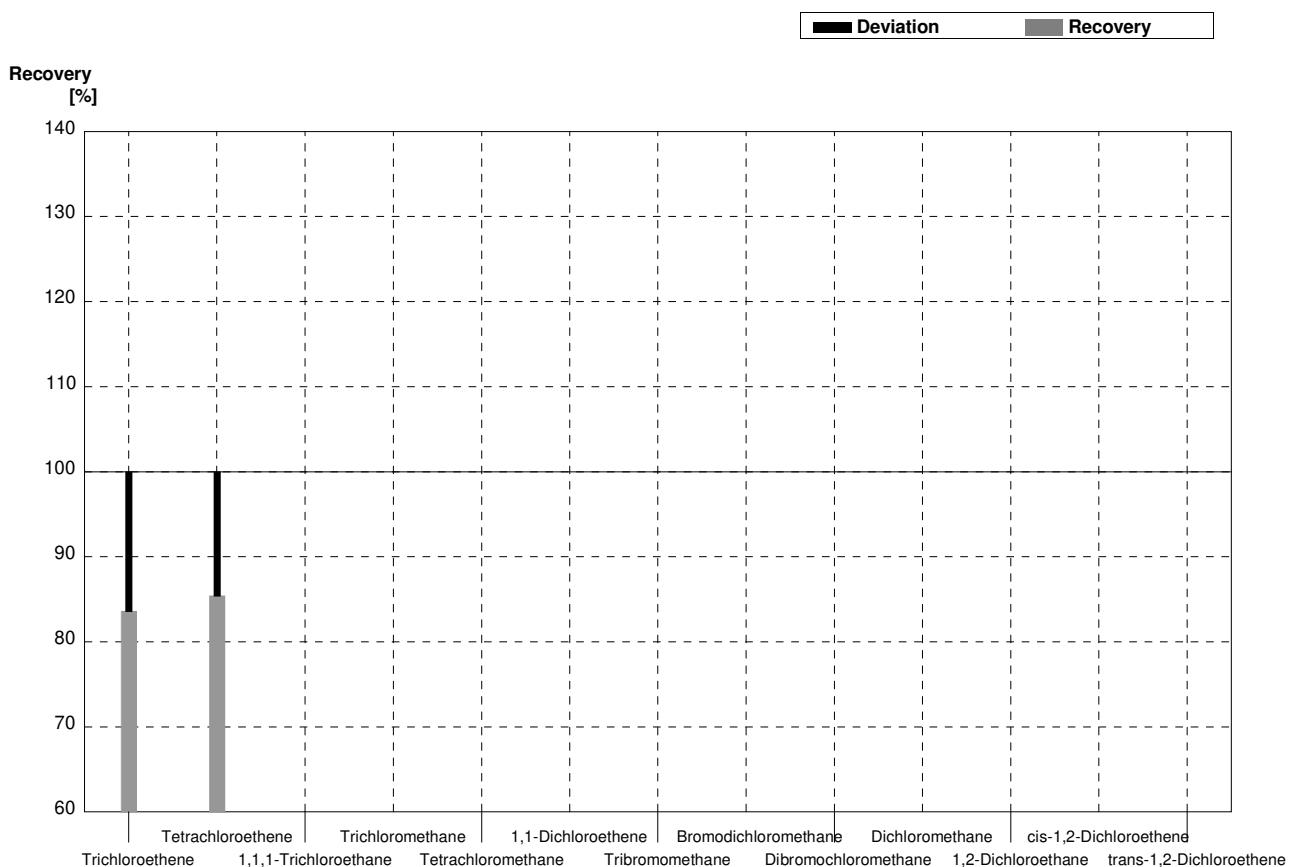
**Sample C66A**  
**Laboratory C**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,6430	0,1865	$\mu\text{g/l}$	92%
Tetrachloroethene	0,271	0,024	0,2758	0,1021	$\mu\text{g/l}$	102%
1,1,1-Trichloroethane	0,91	0,05			$\mu\text{g/l}$	
Trichloromethane	1,76	0,09			$\mu\text{g/l}$	
Tetrachloromethane	1,23	0,06			$\mu\text{g/l}$	
1,1-Dichloroethene	0,79	0,04			$\mu\text{g/l}$	
Tribromomethane	0,69	0,04			$\mu\text{g/l}$	
Bromodichloromethane	0,455	0,028			$\mu\text{g/l}$	
Dibromochloromethane	0,71	0,04			$\mu\text{g/l}$	
Dichloromethane	1,46	0,09			$\mu\text{g/l}$	
1,2-Dichloroethane	3,05	0,17			$\mu\text{g/l}$	
cis-1,2-Dichloroethene	2,72	0,14			$\mu\text{g/l}$	
trans-1,2-Dichloroethene	1,40	0,07			$\mu\text{g/l}$	



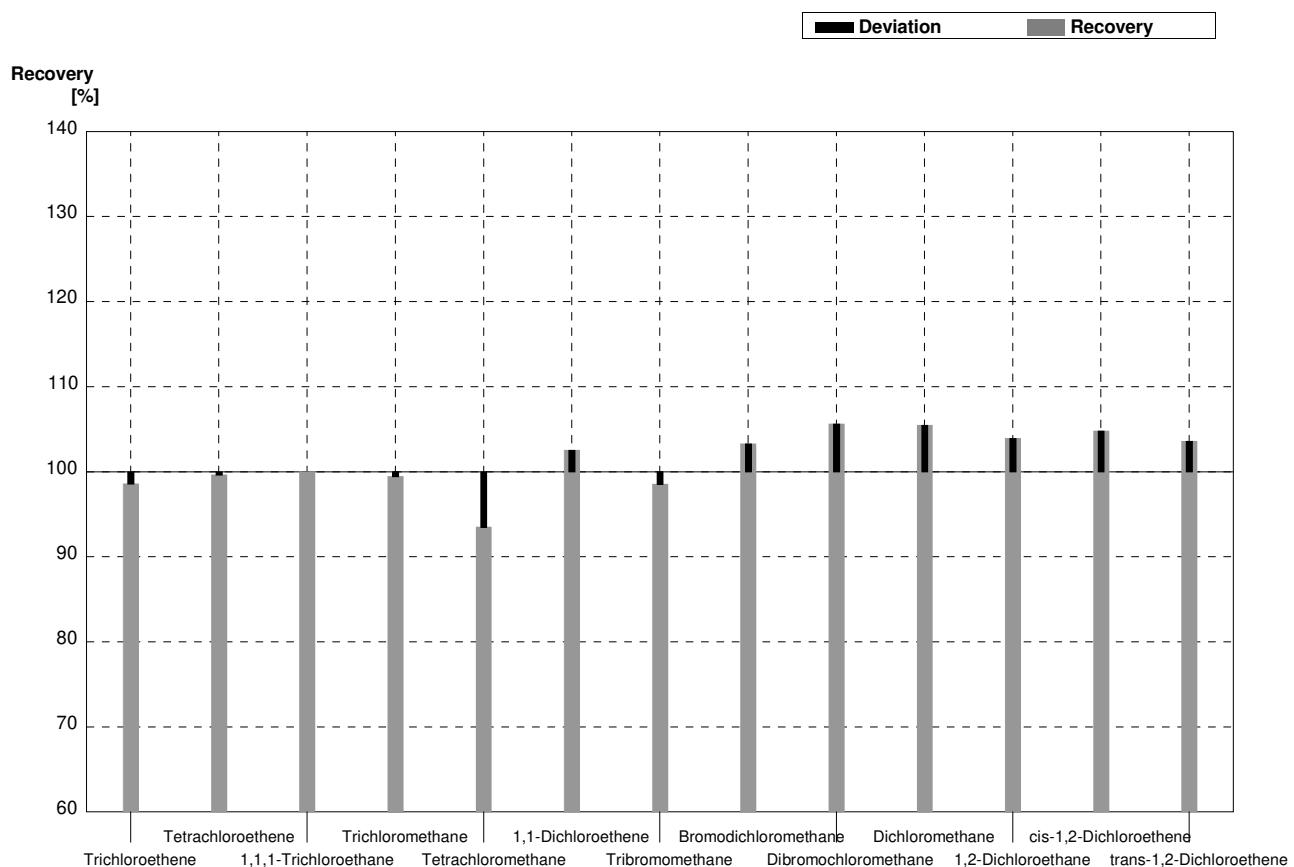
**Sample C66B**  
**Laboratory C**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Trichloroethene	0,289	0,018	0,2416	0,0701	µg/l	84%
Tetrachloroethene	0,73	0,04	0,6235	0,2307	µg/l	85%
1,1,1-Trichloroethane	0,312	0,019			µg/l	
Trichloromethane	0,78	0,05			µg/l	
Tetrachloromethane	0,258	0,019			µg/l	
1,1-Dichloroethene	2,33	0,12			µg/l	
Tribromomethane	1,94	0,10			µg/l	
Bromodichloromethane	1,02	0,05			µg/l	
Dibromochloromethane	1,48	0,08			µg/l	
Dichloromethane	4,28	0,22			µg/l	
1,2-Dichloroethane	<0,1				µg/l	
cis-1,2-Dichloroethene	<0,1				µg/l	
trans-1,2-Dichloroethene	0,359	0,023			µg/l	



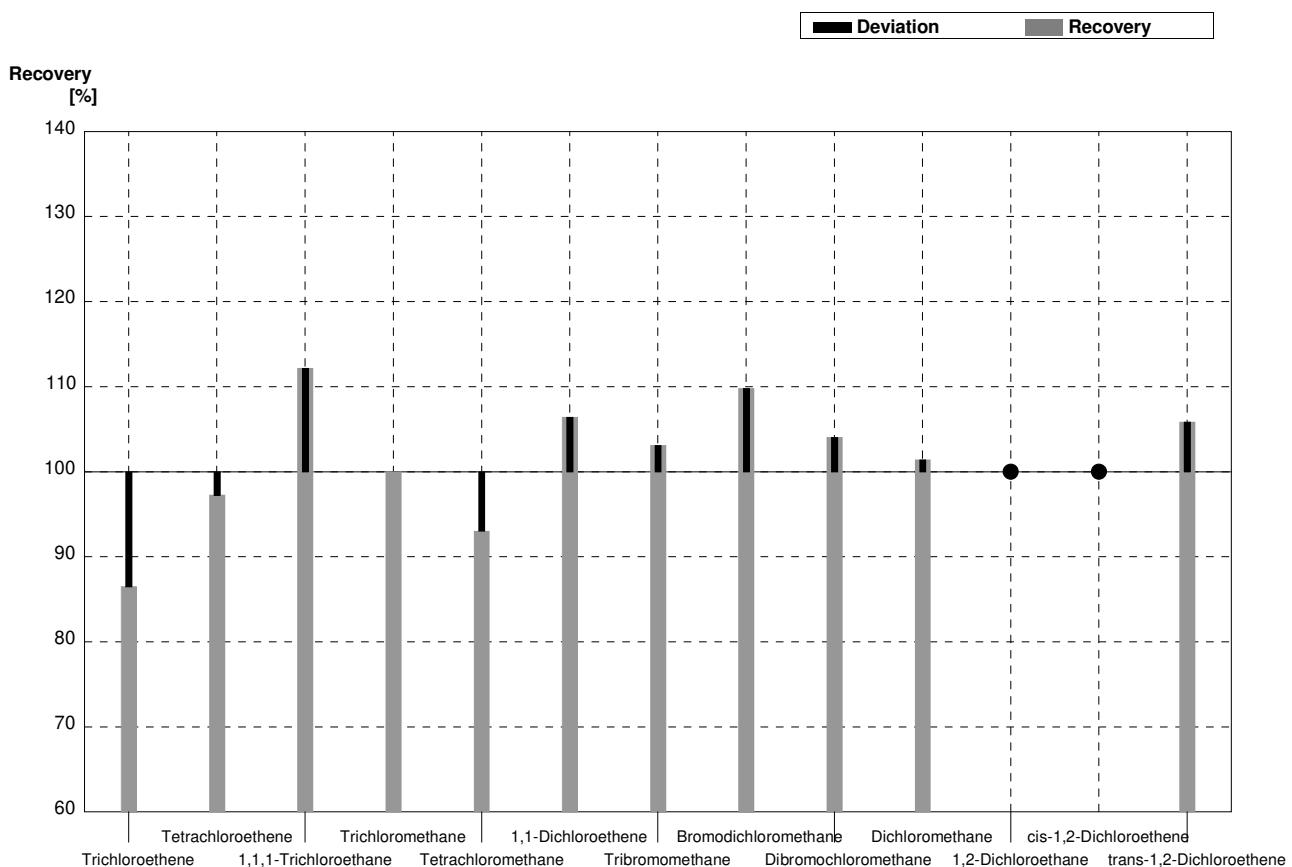
**Sample C66A**  
**Laboratory D**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,690	0,138	$\mu\text{g/l}$	99%
Tetrachloroethene	0,271	0,024	0,270	0,054	$\mu\text{g/l}$	100%
1,1,1-Trichloroethane	0,91	0,05	0,910	0,182	$\mu\text{g/l}$	100%
Trichloromethane	1,76	0,09	1,750	0,350	$\mu\text{g/l}$	99%
Tetrachloromethane	1,23	0,06	1,150	0,230	$\mu\text{g/l}$	93%
1,1-Dichloroethene	0,79	0,04	0,810	0,162	$\mu\text{g/l}$	103%
Tribromomethane	0,69	0,04	0,680	0,136	$\mu\text{g/l}$	99%
Bromodichloromethane	0,455	0,028	0,470	0,094	$\mu\text{g/l}$	103%
Dibromochloromethane	0,71	0,04	0,750	0,150	$\mu\text{g/l}$	106%
Dichloromethane	1,46	0,09	1,540	0,308	$\mu\text{g/l}$	105%
1,2-Dichloroethane	3,05	0,17	3,170	0,634	$\mu\text{g/l}$	104%
cis-1,2-Dichloroethene	2,72	0,14	2,850	0,570	$\mu\text{g/l}$	105%
trans-1,2-Dichloroethene	1,40	0,07	1,450	0,290	$\mu\text{g/l}$	104%



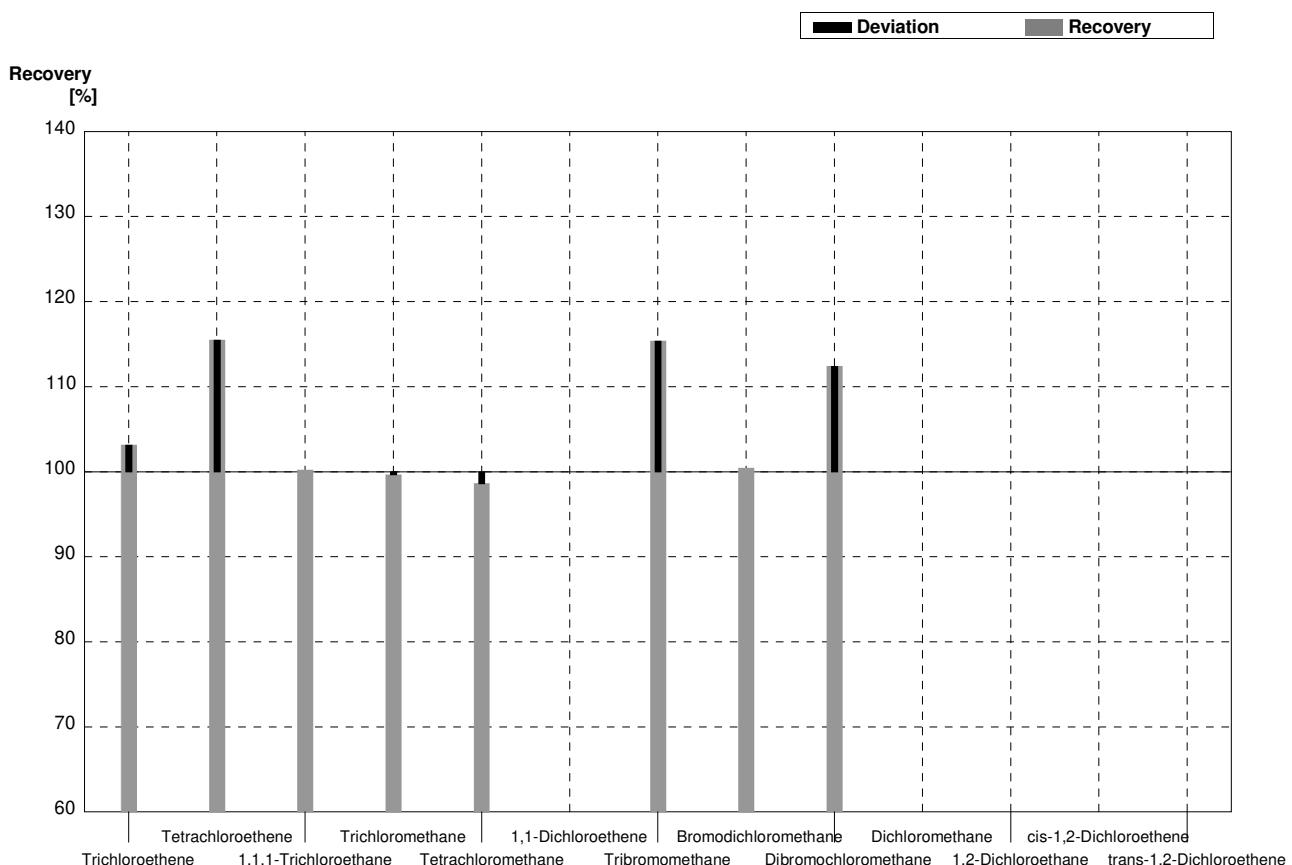
**Sample C66B**  
**Laboratory D**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,250	0,050	$\mu\text{g/l}$	87%
Tetrachloroethene	0,73	0,04	0,710	0,142	$\mu\text{g/l}$	97%
1,1,1-Trichloroethane	0,312	0,019	0,350	0,070	$\mu\text{g/l}$	112%
Trichloromethane	0,78	0,05	0,780	0,156	$\mu\text{g/l}$	100%
Tetrachloromethane	0,258	0,019	0,240	0,048	$\mu\text{g/l}$	93%
1,1-Dichloroethene	2,33	0,12	2,480	0,496	$\mu\text{g/l}$	106%
Tribromomethane	1,94	0,10	2,000	0,400	$\mu\text{g/l}$	103%
Bromodichloromethane	1,02	0,05	1,120	0,224	$\mu\text{g/l}$	110%
Dibromochloromethane	1,48	0,08	1,540	0,308	$\mu\text{g/l}$	104%
Dichloromethane	4,28	0,22	4,340	0,868	$\mu\text{g/l}$	101%
1,2-Dichloroethane	<0,1		<0,040		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,130		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,380	0,076	$\mu\text{g/l}$	106%



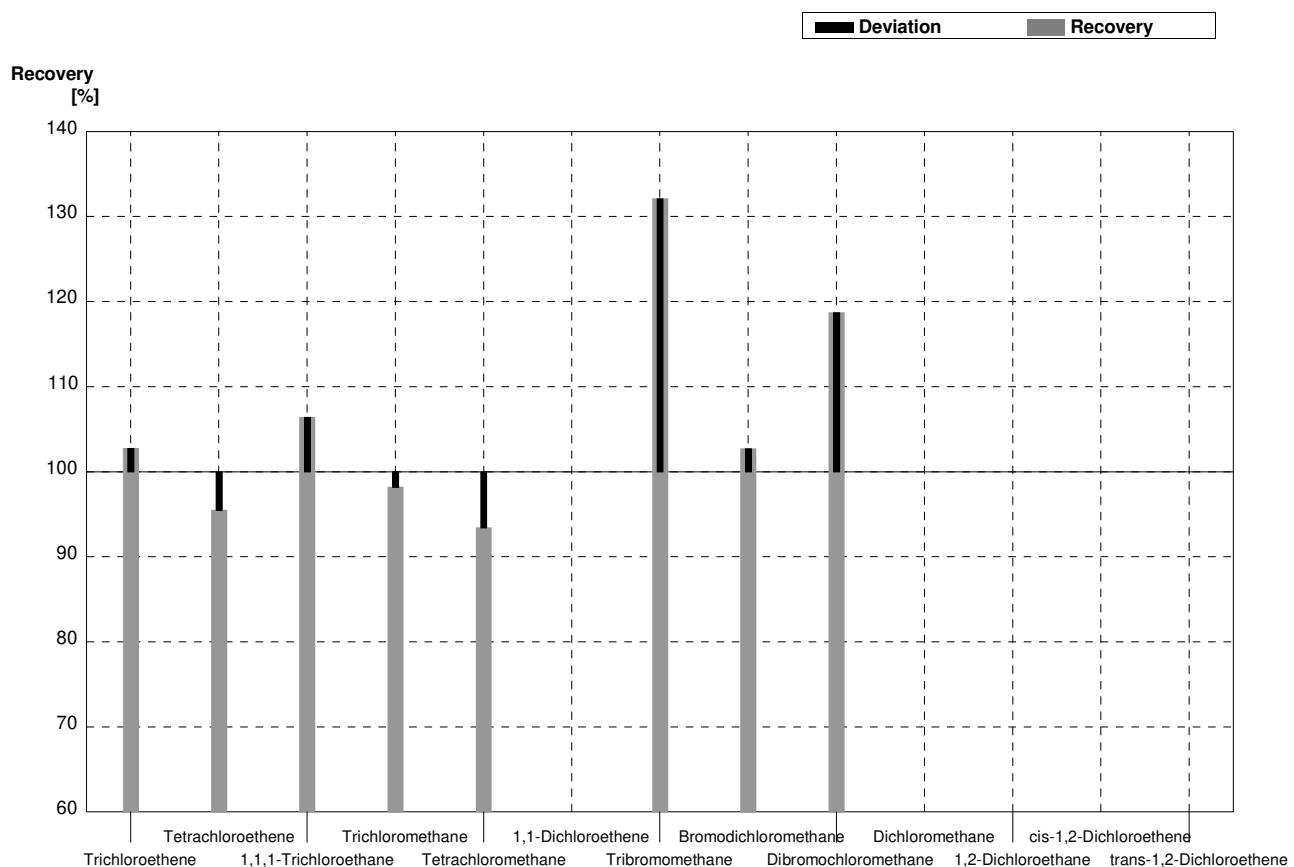
**Sample C66A**  
**Laboratory E**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,722	0,127	$\mu\text{g/l}$	103%
Tetrachloroethene	0,271	0,024	0,313	0,118	$\mu\text{g/l}$	115%
1,1,1-Trichloroethane	0,91	0,05	0,912	0,135	$\mu\text{g/l}$	100%
Trichloromethane	1,76	0,09	1,754	0,266	$\mu\text{g/l}$	100%
Tetrachloromethane	1,23	0,06	1,213	0,265	$\mu\text{g/l}$	99%
1,1-Dichloroethene	0,79	0,04			$\mu\text{g/l}$	
Tribromomethane	0,69	0,04	0,796	0,195	$\mu\text{g/l}$	115%
Bromodichloromethane	0,455	0,028	0,457	0,095	$\mu\text{g/l}$	100%
Dibromochloromethane	0,71	0,04	0,798	0,156	$\mu\text{g/l}$	112%
Dichloromethane	1,46	0,09			$\mu\text{g/l}$	
1,2-Dichloroethane	3,05	0,17			$\mu\text{g/l}$	
cis-1,2-Dichloroethene	2,72	0,14			$\mu\text{g/l}$	
trans-1,2-Dichloroethene	1,40	0,07			$\mu\text{g/l}$	



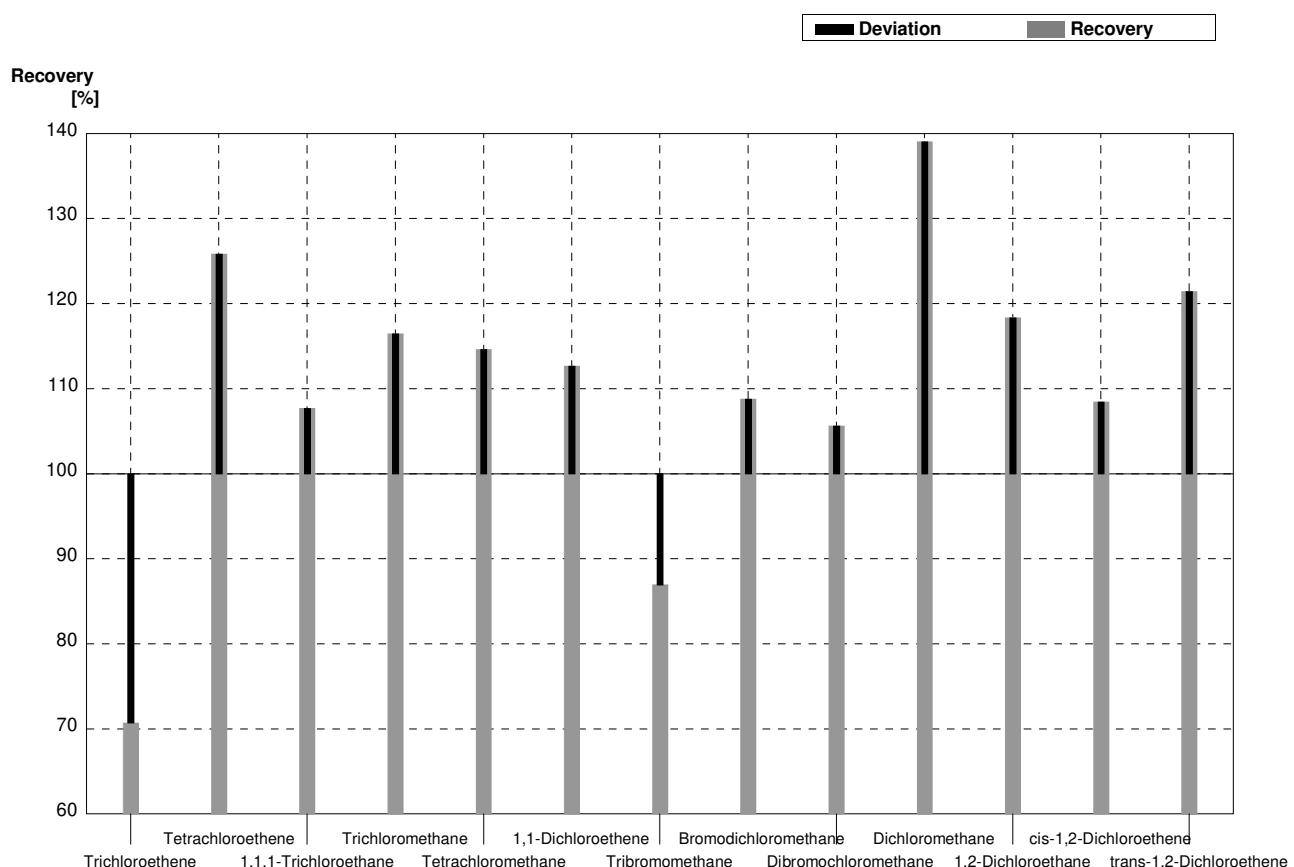
**Sample C66B**  
**Laboratory E**

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Trichloroethene	0,289	0,018	0,297	0,107	µg/l	103%
Tetrachloroethene	0,73	0,04	0,697	0,141	µg/l	95%
1,1,1-Trichloroethane	0,312	0,019	0,332	0,056	µg/l	106%
Trichloromethane	0,78	0,05	0,766	0,212	µg/l	98%
Tetrachloromethane	0,258	0,019	0,241	0,109	µg/l	93%
1,1-Dichloroethene	2,33	0,12			µg/l	
Tribromomethane	1,94	0,10	2,563	0,597	µg/l	132%
Bromodichloromethane	1,02	0,05	1,048	0,211	µg/l	103%
Dibromochloromethane	1,48	0,08	1,757	0,327	µg/l	119%
Dichloromethane	4,28	0,22			µg/l	
1,2-Dichloroethane	<0,1				µg/l	
cis-1,2-Dichloroethene	<0,1				µg/l	
trans-1,2-Dichloroethene	0,359	0,023			µg/l	



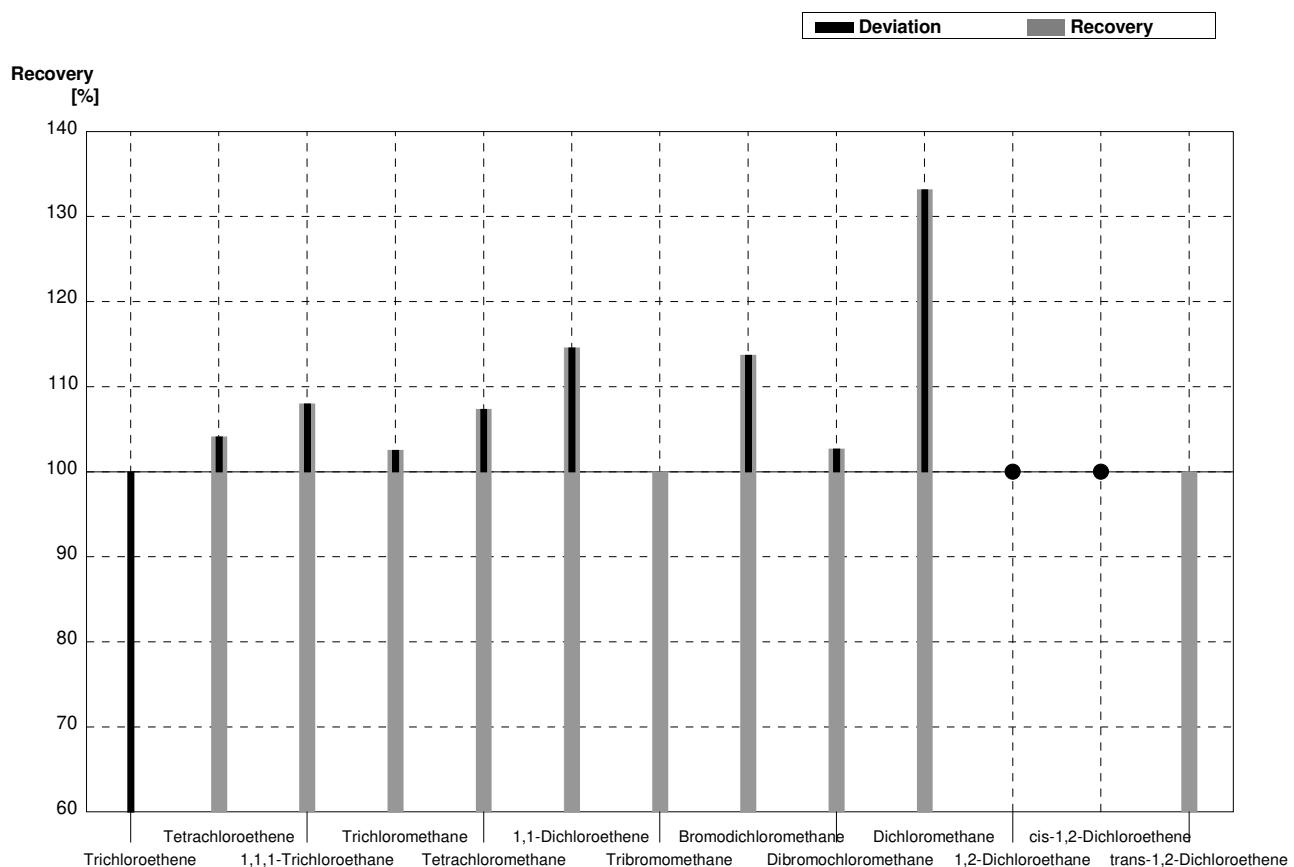
**Sample C66A**  
**Laboratory F**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,495	0,074	$\mu\text{g/l}$	71%
Tetrachloroethene	0,271	0,024	0,341	0,051	$\mu\text{g/l}$	126%
1,1,1-Trichloroethane	0,91	0,05	0,98	0,15	$\mu\text{g/l}$	108%
Trichloromethane	1,76	0,09	2,05	0,31	$\mu\text{g/l}$	116%
Tetrachloromethane	1,23	0,06	1,41	0,21	$\mu\text{g/l}$	115%
1,1-Dichloroethene	0,79	0,04	0,89	0,13	$\mu\text{g/l}$	113%
Tribromomethane	0,69	0,04	0,60	0,09	$\mu\text{g/l}$	87%
Bromodichloromethane	0,455	0,028	0,495	0,074	$\mu\text{g/l}$	109%
Dibromochloromethane	0,71	0,04	0,75	0,11	$\mu\text{g/l}$	106%
Dichloromethane	1,46	0,09	2,03	0,30	$\mu\text{g/l}$	139%
1,2-Dichloroethane	3,05	0,17	3,61	0,54	$\mu\text{g/l}$	118%
cis-1,2-Dichloroethene	2,72	0,14	2,95	0,44	$\mu\text{g/l}$	108%
trans-1,2-Dichloroethene	1,40	0,07	1,70	0,25	$\mu\text{g/l}$	121%



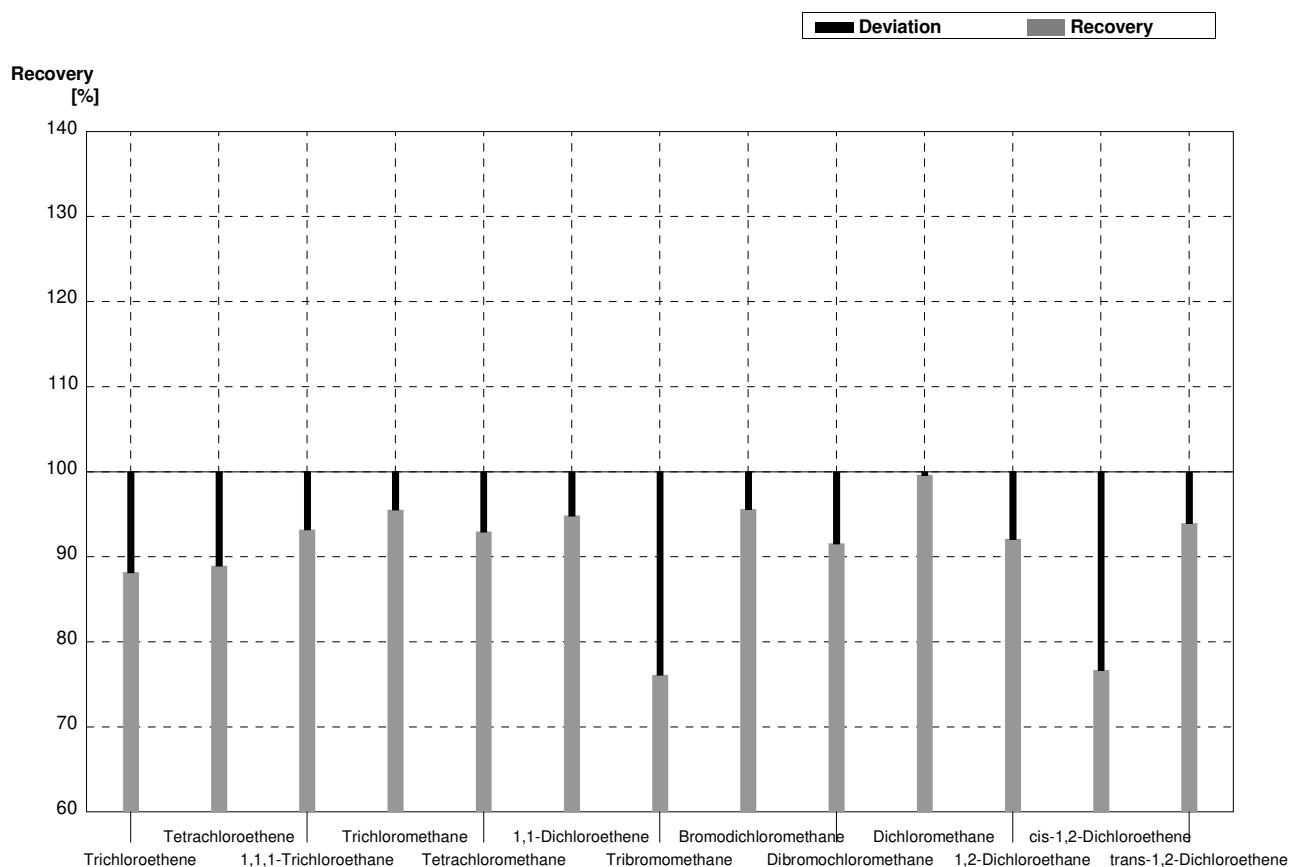
**Sample C66B**  
**Laboratory F**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,133	0,020	$\mu\text{g/l}$	46%
Tetrachloroethene	0,73	0,04	0,76	0,11	$\mu\text{g/l}$	104%
1,1,1-Trichloroethane	0,312	0,019	0,337	0,051	$\mu\text{g/l}$	108%
Trichloromethane	0,78	0,05	0,80	0,12	$\mu\text{g/l}$	103%
Tetrachloromethane	0,258	0,019	0,277	0,042	$\mu\text{g/l}$	107%
1,1-Dichloroethene	2,33	0,12	2,67	0,40	$\mu\text{g/l}$	115%
Tribromomethane	1,94	0,10	1,94	0,29	$\mu\text{g/l}$	100%
Bromodichloromethane	1,02	0,05	1,16	0,17	$\mu\text{g/l}$	114%
Dibromochloromethane	1,48	0,08	1,52	0,23	$\mu\text{g/l}$	103%
Dichloromethane	4,28	0,22	5,7	0,9	$\mu\text{g/l}$	133%
1,2-Dichloroethane	<0,1		<0,1		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,1		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,359	0,054	$\mu\text{g/l}$	100%



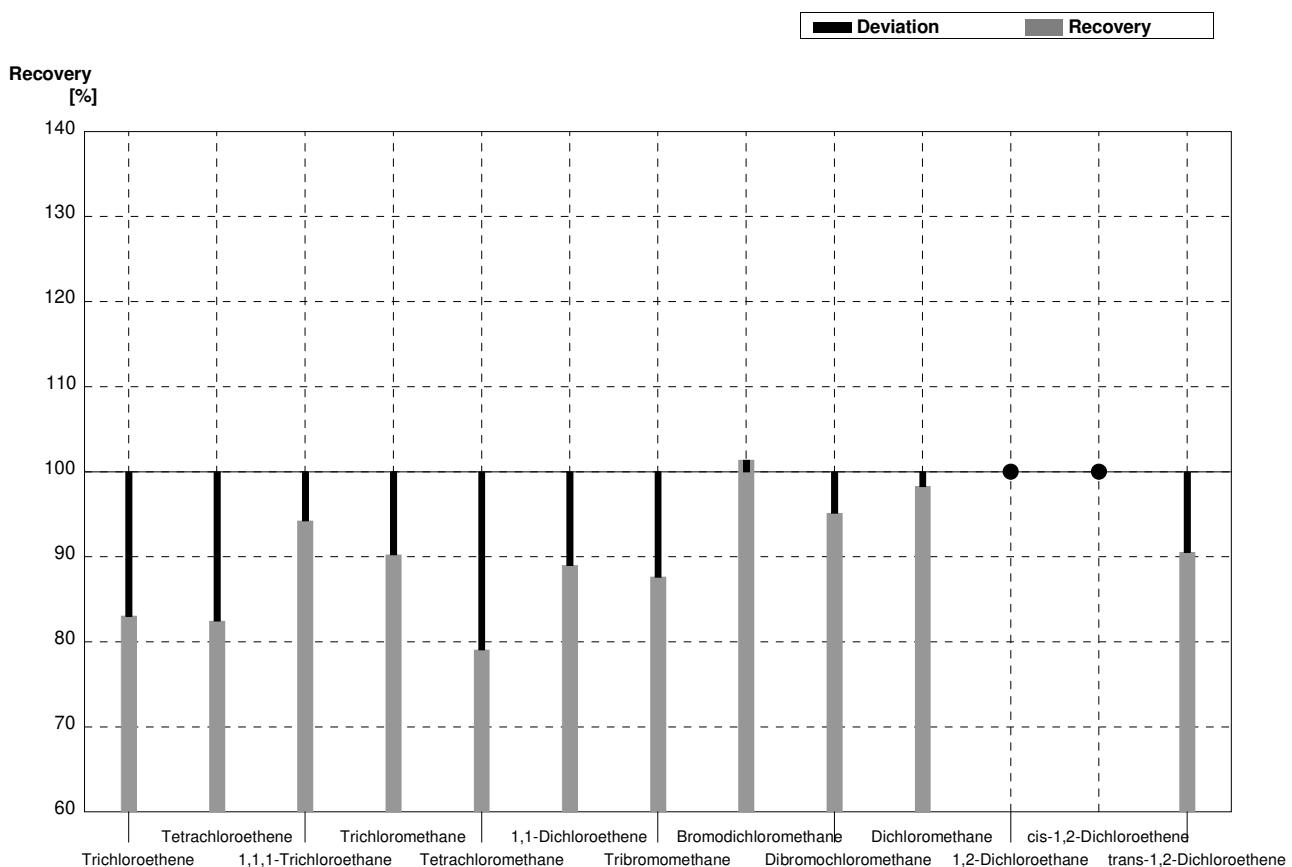
**Sample C66A**  
**Laboratory G**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,617	0,105	$\mu\text{g/l}$	88%
Tetrachloroethene	0,271	0,024	0,241	0,036	$\mu\text{g/l}$	89%
1,1,1-Trichloroethane	0,91	0,05	0,848	0,170	$\mu\text{g/l}$	93%
Trichloromethane	1,76	0,09	1,681	0,202	$\mu\text{g/l}$	96%
Tetrachloromethane	1,23	0,06	1,143	0,171	$\mu\text{g/l}$	93%
1,1-Dichloroethene	0,79	0,04	0,749	0,142	$\mu\text{g/l}$	95%
Tribromomethane	0,69	0,04	0,525	0,063	$\mu\text{g/l}$	76%
Bromodichloromethane	0,455	0,028	0,435	0,057	$\mu\text{g/l}$	96%
Dibromochloromethane	0,71	0,04	0,650	0,091	$\mu\text{g/l}$	92%
Dichloromethane	1,46	0,09	1,454	0,102	$\mu\text{g/l}$	100%
1,2-Dichloroethane	3,05	0,17	2,808	0,309	$\mu\text{g/l}$	92%
cis-1,2-Dichloroethene	2,72	0,14	2,085	0,605	$\mu\text{g/l}$	77%
trans-1,2-Dichloroethene	1,40	0,07	1,315	0,224	$\mu\text{g/l}$	94%



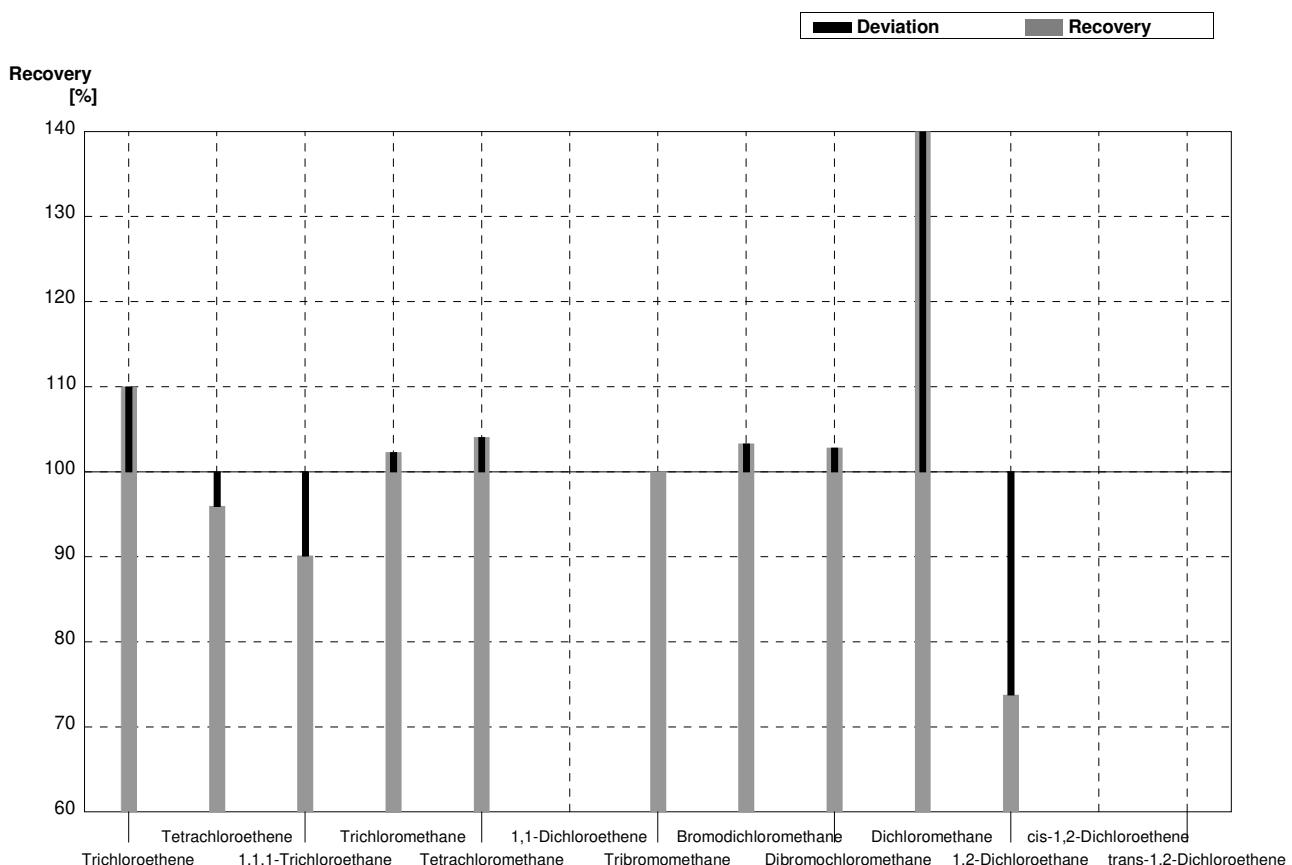
**Sample C66B**  
**Laboratory G**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,240	0,041	$\mu\text{g/l}$	83%
Tetrachloroethene	0,73	0,04	0,602	0,090	$\mu\text{g/l}$	82%
1,1,1-Trichloroethane	0,312	0,019	0,294	0,059	$\mu\text{g/l}$	94%
Trichloromethane	0,78	0,05	0,704	0,084	$\mu\text{g/l}$	90%
Tetrachloromethane	0,258	0,019	0,204	0,031	$\mu\text{g/l}$	79%
1,1-Dichloroethene	2,33	0,12	2,074	0,394	$\mu\text{g/l}$	89%
Tribromomethane	1,94	0,10	1,700	0,204	$\mu\text{g/l}$	88%
Bromodichloromethane	1,02	0,05	1,034	0,134	$\mu\text{g/l}$	101%
Dibromochloromethane	1,48	0,08	1,408	0,197	$\mu\text{g/l}$	95%
Dichloromethane	4,28	0,22	4,206	0,294	$\mu\text{g/l}$	98%
1,2-Dichloroethane	<0,1		<0,1		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,1		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,325	0,055	$\mu\text{g/l}$	91%



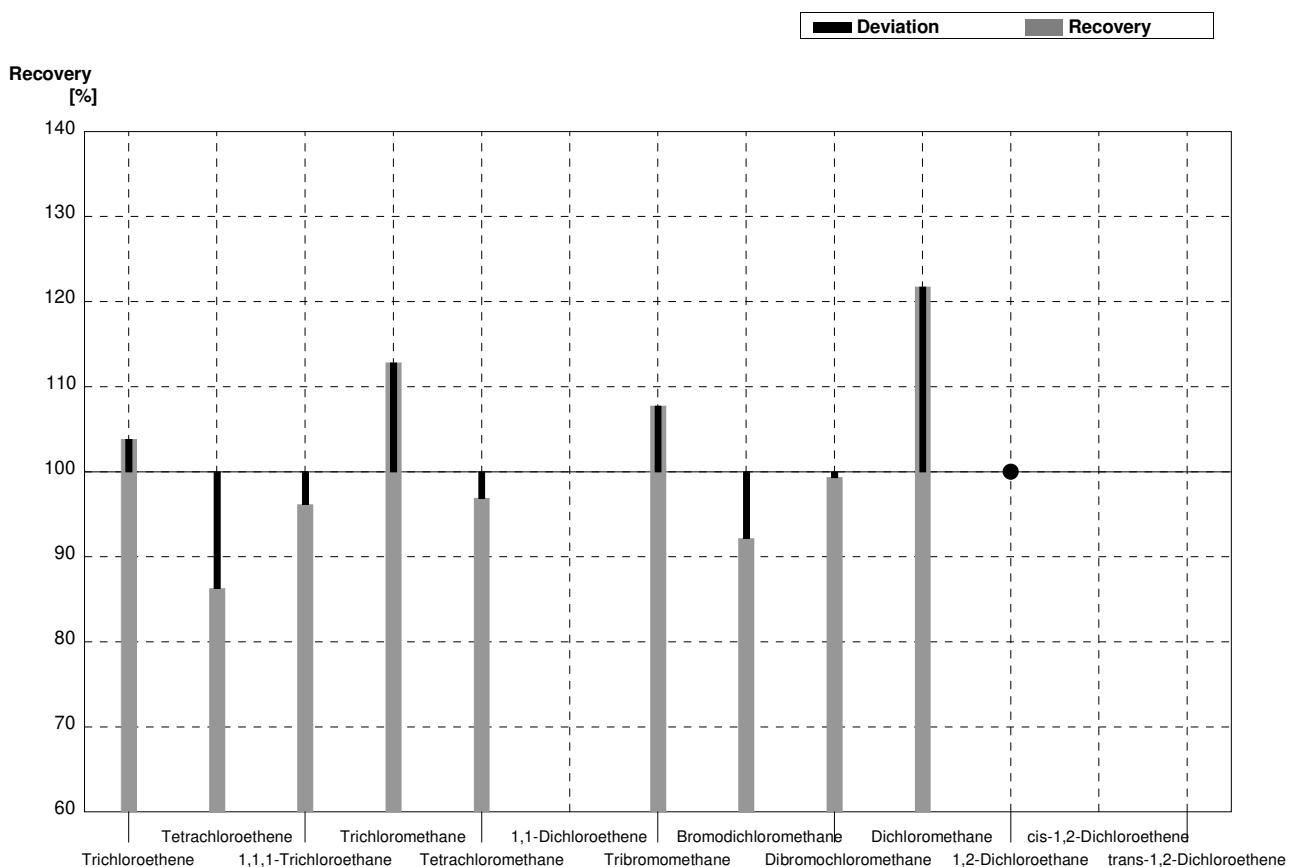
**Sample C66A**  
**Laboratory H**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,77	0,14	$\mu\text{g/l}$	110%
Tetrachloroethene	0,271	0,024	0,260	0,05	$\mu\text{g/l}$	96%
1,1,1-Trichloroethane	0,91	0,05	0,82	0,16	$\mu\text{g/l}$	90%
Trichloromethane	1,76	0,09	1,80	0,36	$\mu\text{g/l}$	102%
Tetrachloromethane	1,23	0,06	1,28	0,24	$\mu\text{g/l}$	104%
1,1-Dichloroethene	0,79	0,04			$\mu\text{g/l}$	
Tribromomethane	0,69	0,04	0,69	0,14	$\mu\text{g/l}$	100%
Bromodichloromethane	0,455	0,028	0,470	0,09	$\mu\text{g/l}$	103%
Dibromochloromethane	0,71	0,04	0,73	0,14	$\mu\text{g/l}$	103%
Dichloromethane	1,46	0,09	2,15	0,42	$\mu\text{g/l}$	147%
1,2-Dichloroethane	3,05	0,17	2,25	0,44	$\mu\text{g/l}$	74%
cis-1,2-Dichloroethene	2,72	0,14			$\mu\text{g/l}$	
trans-1,2-Dichloroethene	1,40	0,07			$\mu\text{g/l}$	



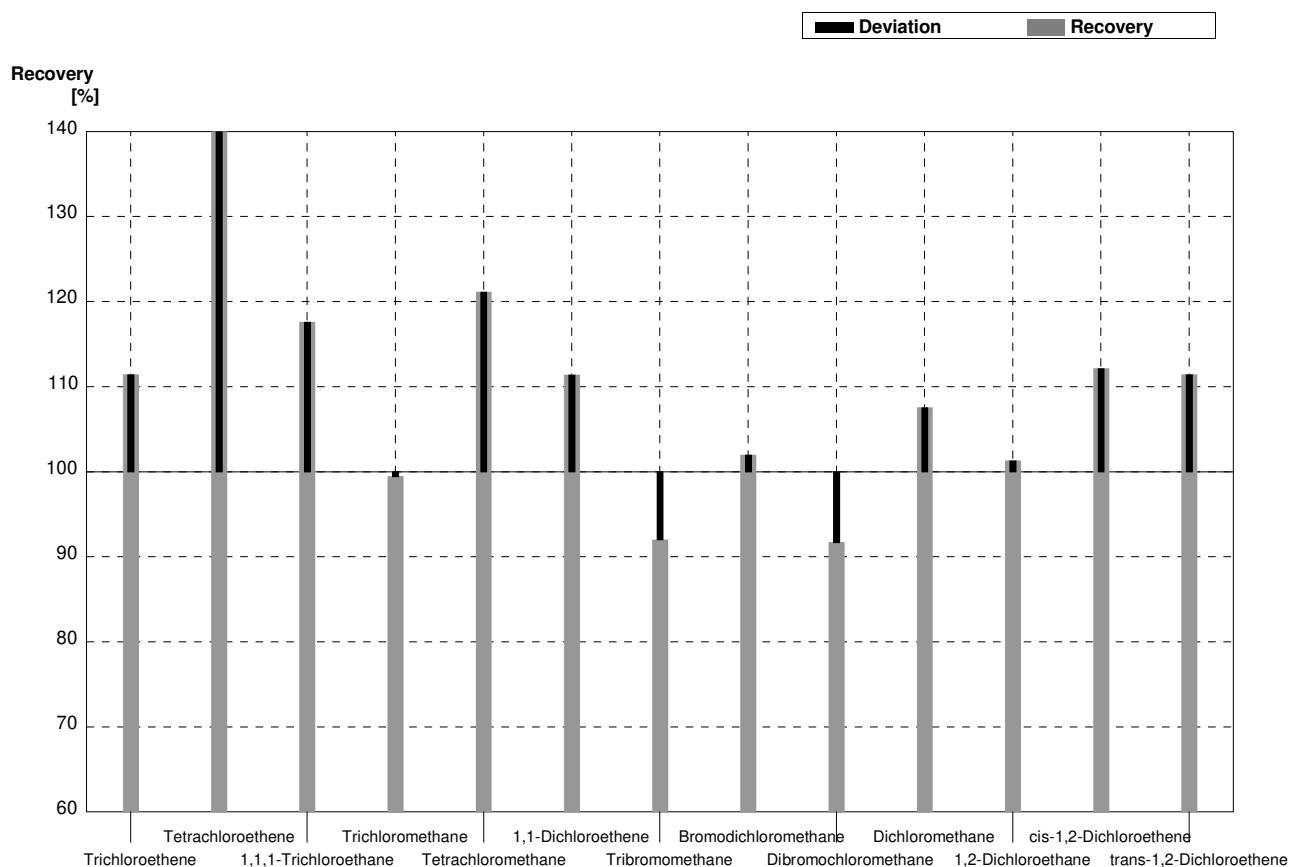
**Sample C66B**  
**Laboratory H**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,300	0,06	$\mu\text{g/l}$	104%
Tetrachloroethene	0,73	0,04	0,63	0,12	$\mu\text{g/l}$	86%
1,1,1-Trichloroethane	0,312	0,019	0,300	0,06	$\mu\text{g/l}$	96%
Trichloromethane	0,78	0,05	0,88	0,17	$\mu\text{g/l}$	113%
Tetrachloromethane	0,258	0,019	0,250	0,05	$\mu\text{g/l}$	97%
1,1-Dichloroethene	2,33	0,12			$\mu\text{g/l}$	
Tribromomethane	1,94	0,10	2,09	0,41	$\mu\text{g/l}$	108%
Bromodichloromethane	1,02	0,05	0,94	0,18	$\mu\text{g/l}$	92%
Dibromochloromethane	1,48	0,08	1,47	0,29	$\mu\text{g/l}$	99%
Dichloromethane	4,28	0,22	5,21	1,4	$\mu\text{g/l}$	122%
1,2-Dichloroethane	<0,1		<0,5	0,1	$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1				$\mu\text{g/l}$	
trans-1,2-Dichloroethene	0,359	0,023			$\mu\text{g/l}$	



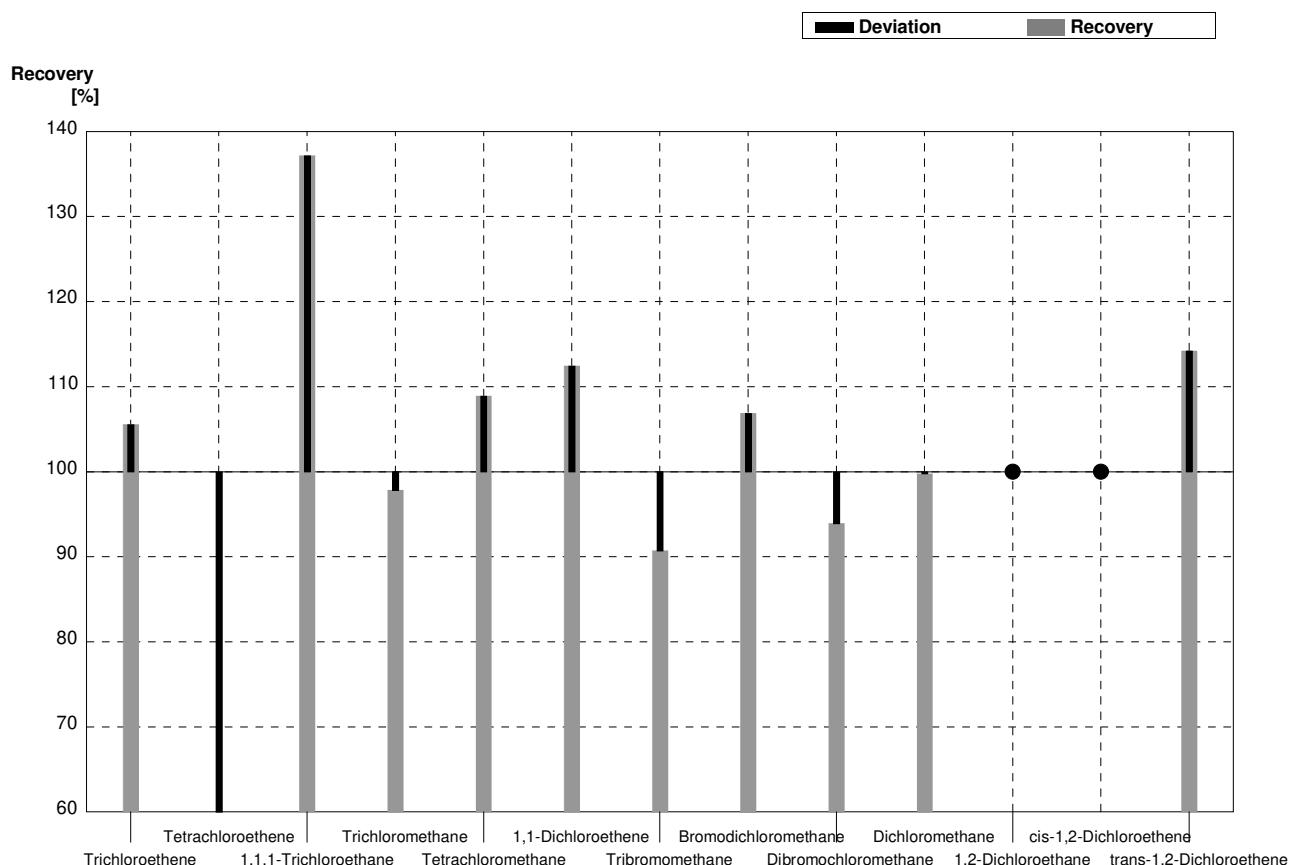
**Sample C66A**  
**Laboratory I**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,78	0,02	$\mu\text{g/l}$	111%
Tetrachloroethene	0,271	0,024	0,73	0,02	$\mu\text{g/l}$	269%
1,1,1-Trichloroethane	0,91	0,05	1,07	0,02	$\mu\text{g/l}$	118%
Trichloromethane	1,76	0,09	1,75	0,04	$\mu\text{g/l}$	99%
Tetrachloromethane	1,23	0,06	1,49	0,04	$\mu\text{g/l}$	121%
1,1-Dichloroethene	0,79	0,04	0,88	0,03	$\mu\text{g/l}$	111%
Tribromomethane	0,69	0,04	0,635	0,017	$\mu\text{g/l}$	92%
Bromodichloromethane	0,455	0,028	0,464	0,009	$\mu\text{g/l}$	102%
Dibromochloromethane	0,71	0,04	0,651	0,009	$\mu\text{g/l}$	92%
Dichloromethane	1,46	0,09	1,57	0,20	$\mu\text{g/l}$	108%
1,2-Dichloroethane	3,05	0,17	3,09	0,06	$\mu\text{g/l}$	101%
cis-1,2-Dichloroethene	2,72	0,14	3,05	0,1	$\mu\text{g/l}$	112%
trans-1,2-Dichloroethene	1,40	0,07	1,56	0,06	$\mu\text{g/l}$	111%



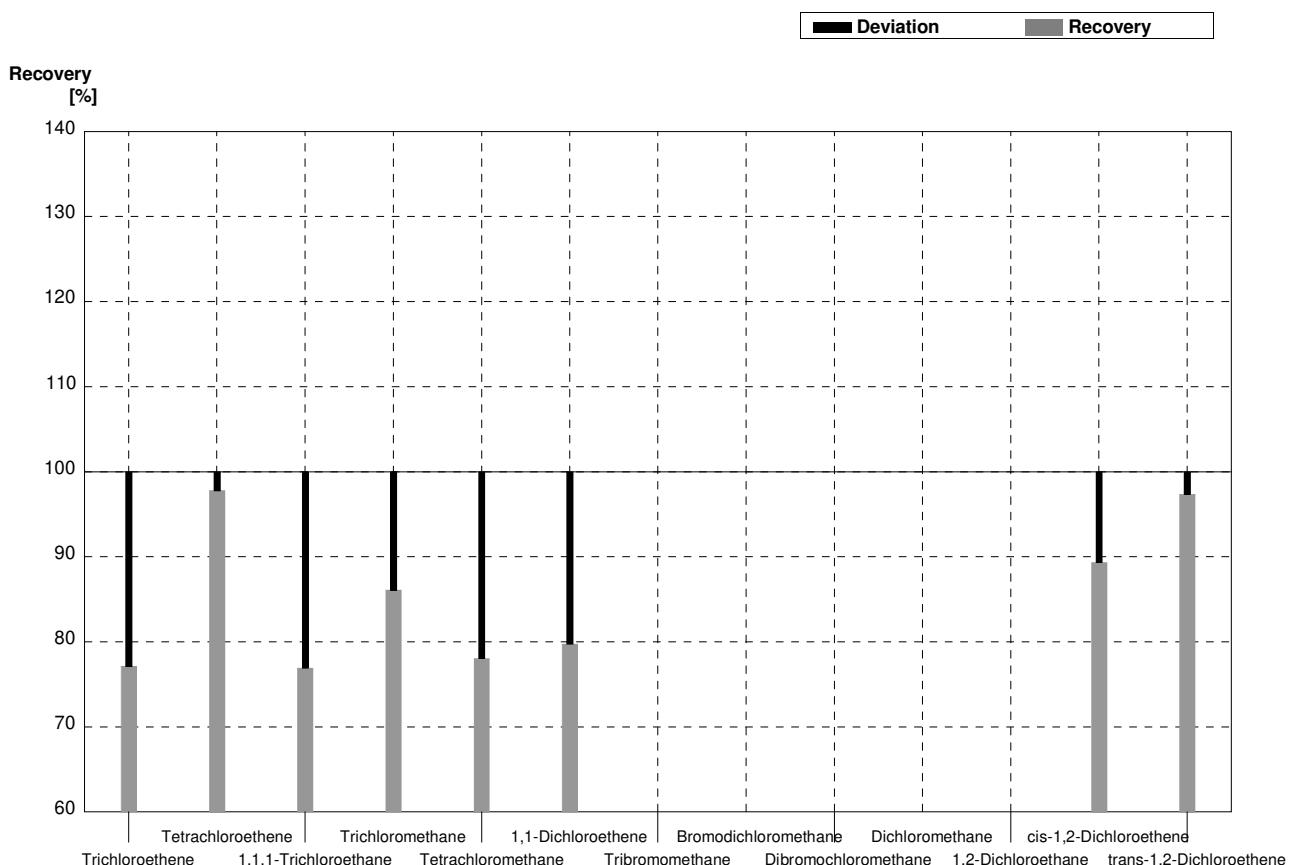
**Sample C66B**  
**Laboratory I**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,305	0,006	$\mu\text{g/l}$	106%
Tetrachloroethene	0,73	0,04	0,294	0,01	$\mu\text{g/l}$	40%
1,1,1-Trichloroethane	0,312	0,019	0,428	0,006	$\mu\text{g/l}$	137%
Trichloromethane	0,78	0,05	0,763	0,009	$\mu\text{g/l}$	98%
Tetrachloromethane	0,258	0,019	0,281	0,007	$\mu\text{g/l}$	109%
1,1-Dichloroethene	2,33	0,12	2,62	0,07	$\mu\text{g/l}$	112%
Tribromomethane	1,94	0,10	1,76	0,03	$\mu\text{g/l}$	91%
Bromodichloromethane	1,02	0,05	1,09	0,003	$\mu\text{g/l}$	107%
Dibromochloromethane	1,48	0,08	1,39	0,01	$\mu\text{g/l}$	94%
Dichloromethane	4,28	0,22	4,27	0,07	$\mu\text{g/l}$	100%
1,2-Dichloroethane	<0,1		<0,41		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,75		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,410	0,002	$\mu\text{g/l}$	114%



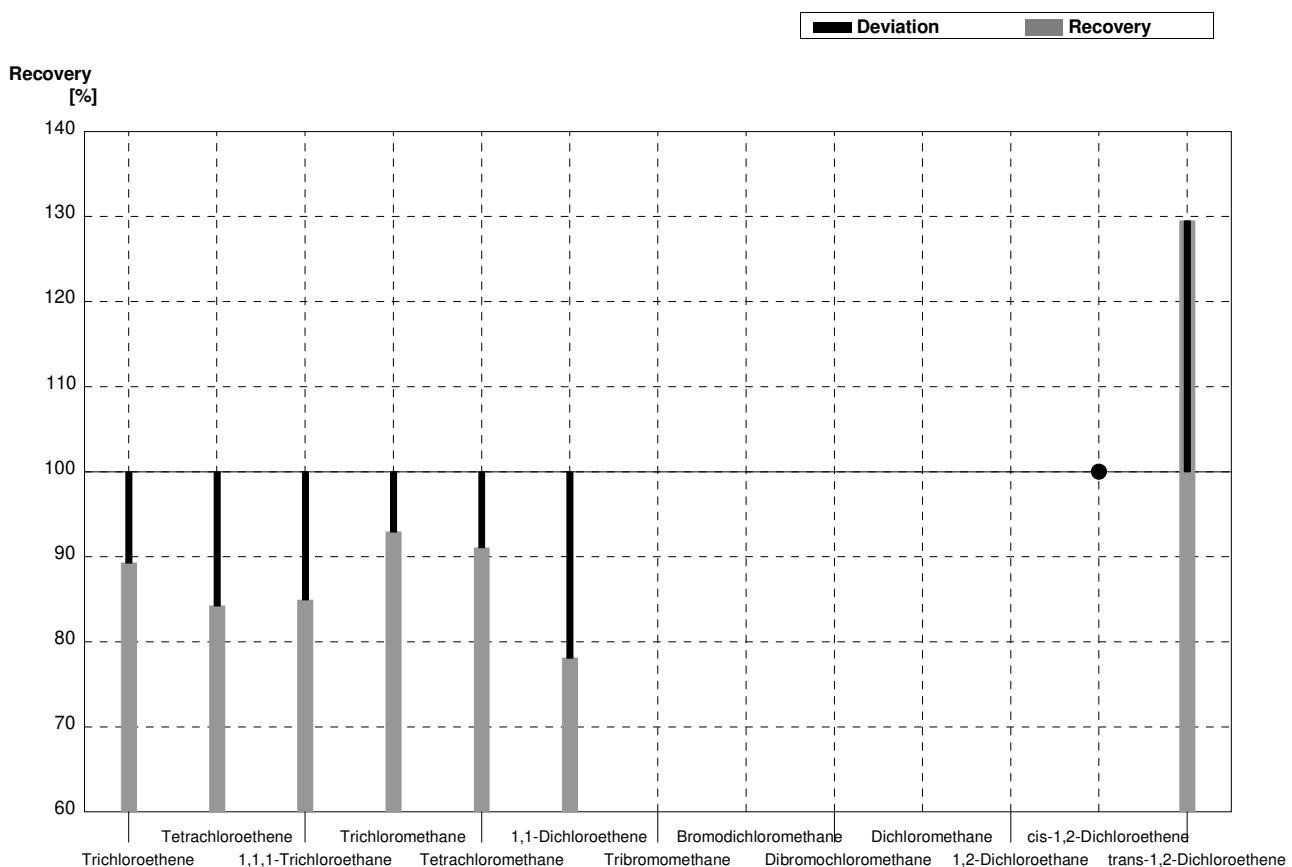
**Sample C66A**  
**Laboratory J**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,540	0,080	$\mu\text{g/l}$	77%
Tetrachloroethene	0,271	0,024	0,265	0,075	$\mu\text{g/l}$	98%
1,1,1-Trichloroethane	0,91	0,05	0,700	0,060	$\mu\text{g/l}$	77%
Trichloromethane	1,76	0,09	1,515	0,155	$\mu\text{g/l}$	86%
Tetrachloromethane	1,23	0,06	0,960	0,020	$\mu\text{g/l}$	78%
1,1-Dichloroethene	0,79	0,04	0,630	0,030	$\mu\text{g/l}$	80%
Tribromomethane	0,69	0,04			$\mu\text{g/l}$	
Bromodichloromethane	0,455	0,028			$\mu\text{g/l}$	
Dibromochloromethane	0,71	0,04			$\mu\text{g/l}$	
Dichloromethane	1,46	0,09			$\mu\text{g/l}$	
1,2-Dichloroethane	3,05	0,17			$\mu\text{g/l}$	
cis-1,2-Dichloroethene	2,72	0,14	2,430	0,140	$\mu\text{g/l}$	89%
trans-1,2-Dichloroethene	1,40	0,07	1,363	0,047	$\mu\text{g/l}$	97%



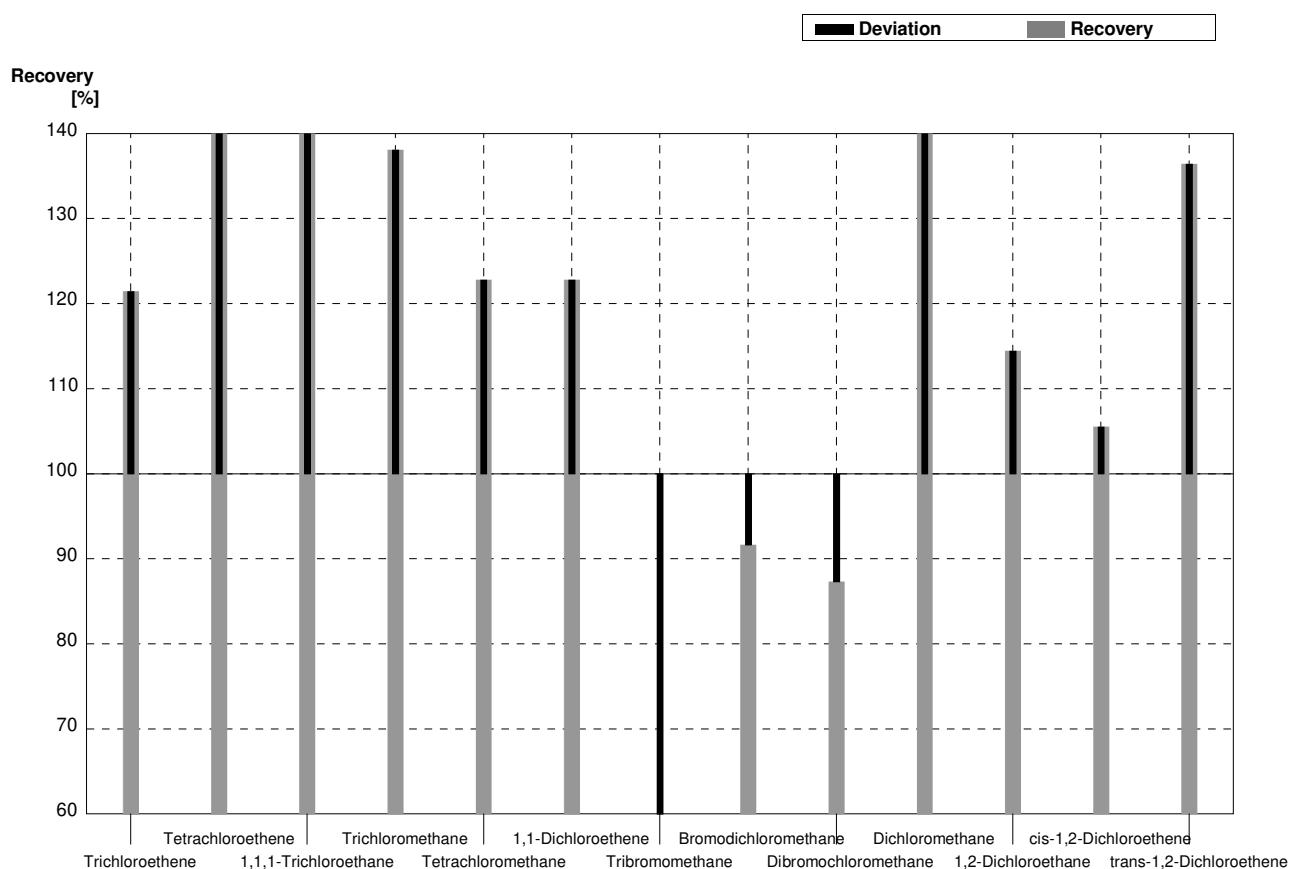
**Sample C66B**  
**Laboratory J**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,258	0,078	$\mu\text{g/l}$	89%
Tetrachloroethene	0,73	0,04	0,615	0,055	$\mu\text{g/l}$	84%
1,1,1-Trichloroethane	0,312	0,019	0,265	0,015	$\mu\text{g/l}$	85%
Trichloromethane	0,78	0,05	0,725	0,125	$\mu\text{g/l}$	93%
Tetrachloromethane	0,258	0,019	0,235	0,045	$\mu\text{g/l}$	91%
1,1-Dichloroethene	2,33	0,12	1,820	0,160	$\mu\text{g/l}$	78%
Tribromomethane	1,94	0,10			$\mu\text{g/l}$	
Bromodichloromethane	1,02	0,05			$\mu\text{g/l}$	
Dibromochloromethane	1,48	0,08			$\mu\text{g/l}$	
Dichloromethane	4,28	0,22			$\mu\text{g/l}$	
1,2-Dichloroethane	<0,1				$\mu\text{g/l}$	
cis-1,2-Dichloroethene	<0,1		<0,1		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,465	0,055	$\mu\text{g/l}$	130%



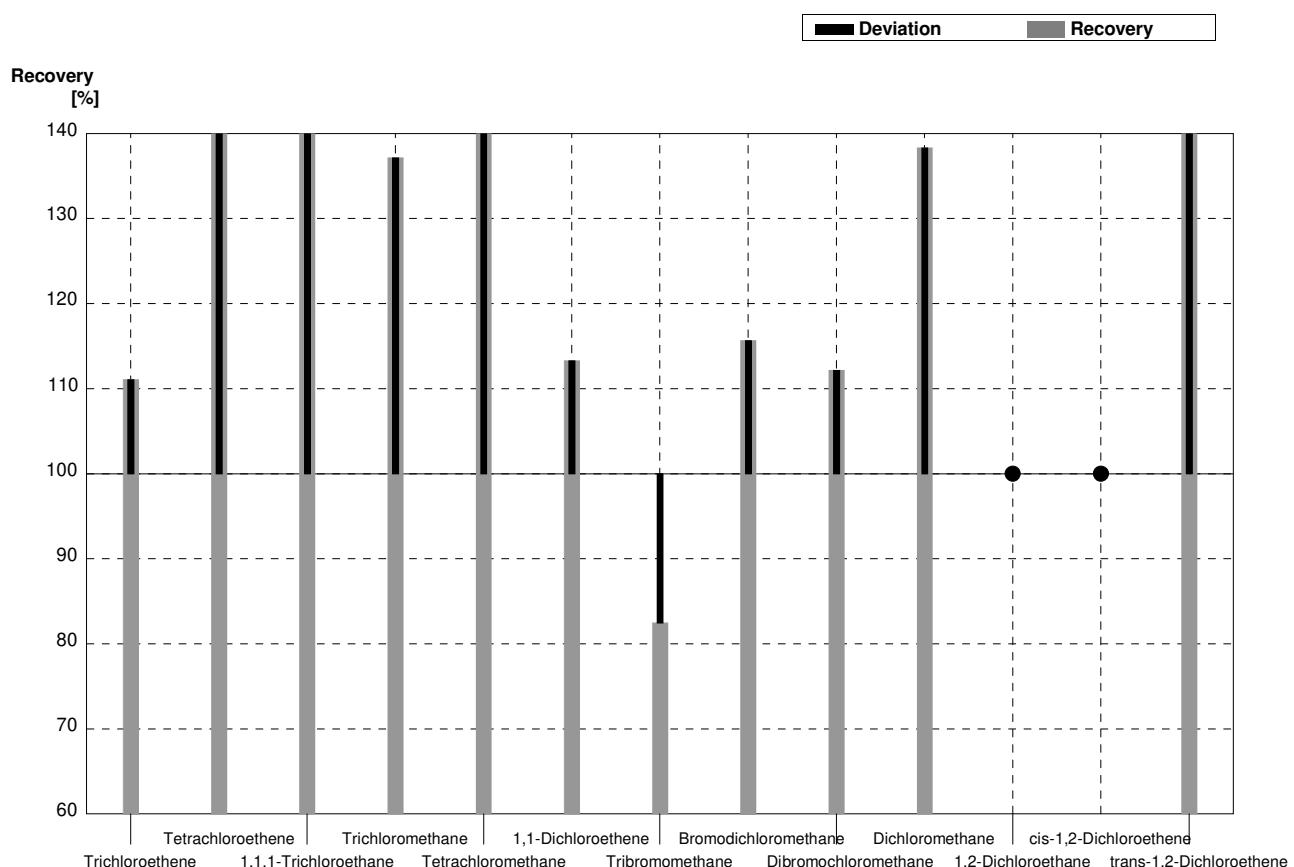
**Sample C66A**  
**Laboratory K**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,85	0,22	$\mu\text{g/l}$	121%
Tetrachloroethene	0,271	0,024	0,439	0,11	$\mu\text{g/l}$	162%
1,1,1-Trichloroethane	0,91	0,05	1,33	0,35	$\mu\text{g/l}$	146%
Trichloromethane	1,76	0,09	2,43	0,63	$\mu\text{g/l}$	138%
Tetrachloromethane	1,23	0,06	1,51	0,39	$\mu\text{g/l}$	123%
1,1-Dichloroethene	0,79	0,04	0,97	0,25	$\mu\text{g/l}$	123%
Tribromomethane	0,69	0,04	0,401	0,1	$\mu\text{g/l}$	58%
Bromodichloromethane	0,455	0,028	0,417	0,11	$\mu\text{g/l}$	92%
Dibromochloromethane	0,71	0,04	0,62	0,16	$\mu\text{g/l}$	87%
Dichloromethane	1,46	0,09	2,07	0,54	$\mu\text{g/l}$	142%
1,2-Dichloroethane	3,05	0,17	3,49	0,91	$\mu\text{g/l}$	114%
cis-1,2-Dichloroethene	2,72	0,14	2,87	0,75	$\mu\text{g/l}$	106%
trans-1,2-Dichloroethene	1,40	0,07	1,91	0,5	$\mu\text{g/l}$	136%



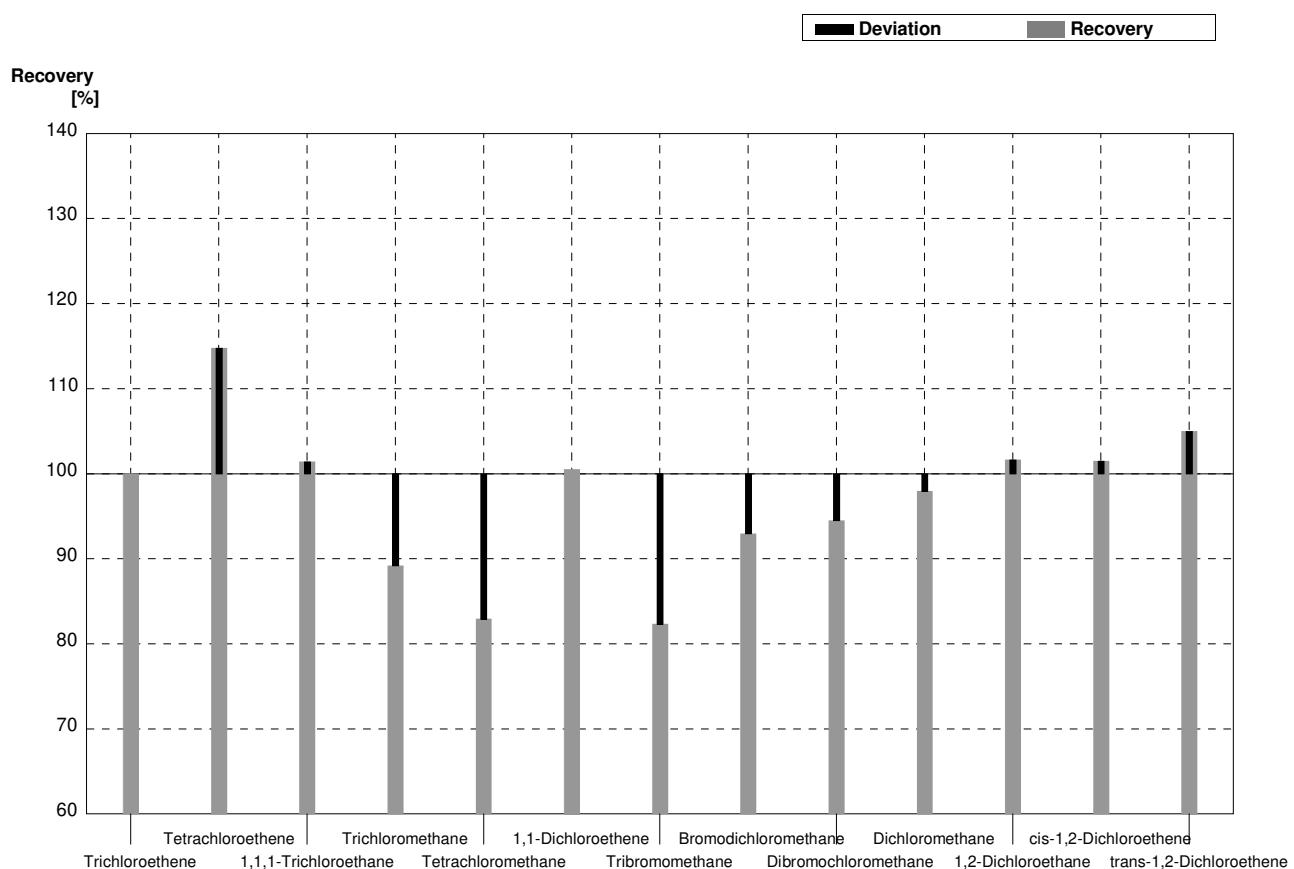
**Sample C66B**  
**Laboratory K**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,321	0,08	$\mu\text{g/l}$	111%
Tetrachloroethene	0,73	0,04	1,15	0,30	$\mu\text{g/l}$	158%
1,1,1-Trichloroethane	0,312	0,019	0,53	0,14	$\mu\text{g/l}$	170%
Trichloromethane	0,78	0,05	1,07	0,28	$\mu\text{g/l}$	137%
Tetrachloromethane	0,258	0,019	0,382	0,10	$\mu\text{g/l}$	148%
1,1-Dichloroethene	2,33	0,12	2,64	0,69	$\mu\text{g/l}$	113%
Tribromomethane	1,94	0,10	1,60	0,42	$\mu\text{g/l}$	82%
Bromodichloromethane	1,02	0,05	1,18	0,31	$\mu\text{g/l}$	116%
Dibromochloromethane	1,48	0,08	1,66	0,43	$\mu\text{g/l}$	112%
Dichloromethane	4,28	0,22	5,92	1,54	$\mu\text{g/l}$	138%
1,2-Dichloroethane	<0,1		<0,1		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,1		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,57	0,15	$\mu\text{g/l}$	159%



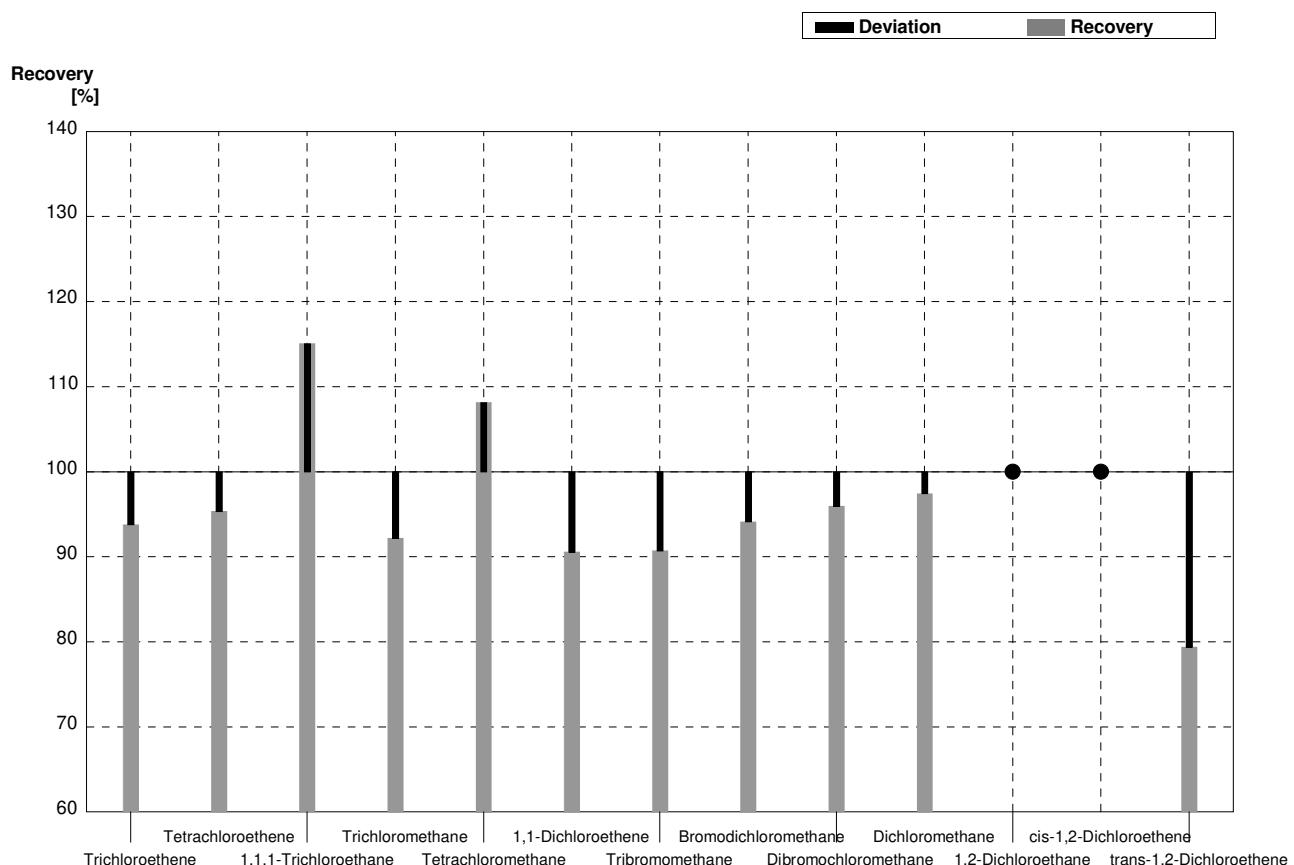
**Sample C66A**  
**Laboratory L**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,700	0,051	$\mu\text{g/l}$	100%
Tetrachloroethene	0,271	0,024	0,311	0,009	$\mu\text{g/l}$	115%
1,1,1-Trichloroethane	0,91	0,05	0,923	0,077	$\mu\text{g/l}$	101%
Trichloromethane	1,76	0,09	1,57	0,055	$\mu\text{g/l}$	89%
Tetrachloromethane	1,23	0,06	1,02	0,124	$\mu\text{g/l}$	83%
1,1-Dichloroethene	0,79	0,04	0,794	0,113	$\mu\text{g/l}$	101%
Tribromomethane	0,69	0,04	0,568	0,120	$\mu\text{g/l}$	82%
Bromodichloromethane	0,455	0,028	0,423	0,110	$\mu\text{g/l}$	93%
Dibromochloromethane	0,71	0,04	0,671	0,096	$\mu\text{g/l}$	95%
Dichloromethane	1,46	0,09	1,43	0,103	$\mu\text{g/l}$	98%
1,2-Dichloroethane	3,05	0,17	3,10	0,205	$\mu\text{g/l}$	102%
cis-1,2-Dichloroethene	2,72	0,14	2,76	0,071	$\mu\text{g/l}$	101%
trans-1,2-Dichloroethene	1,40	0,07	1,47	0,104	$\mu\text{g/l}$	105%



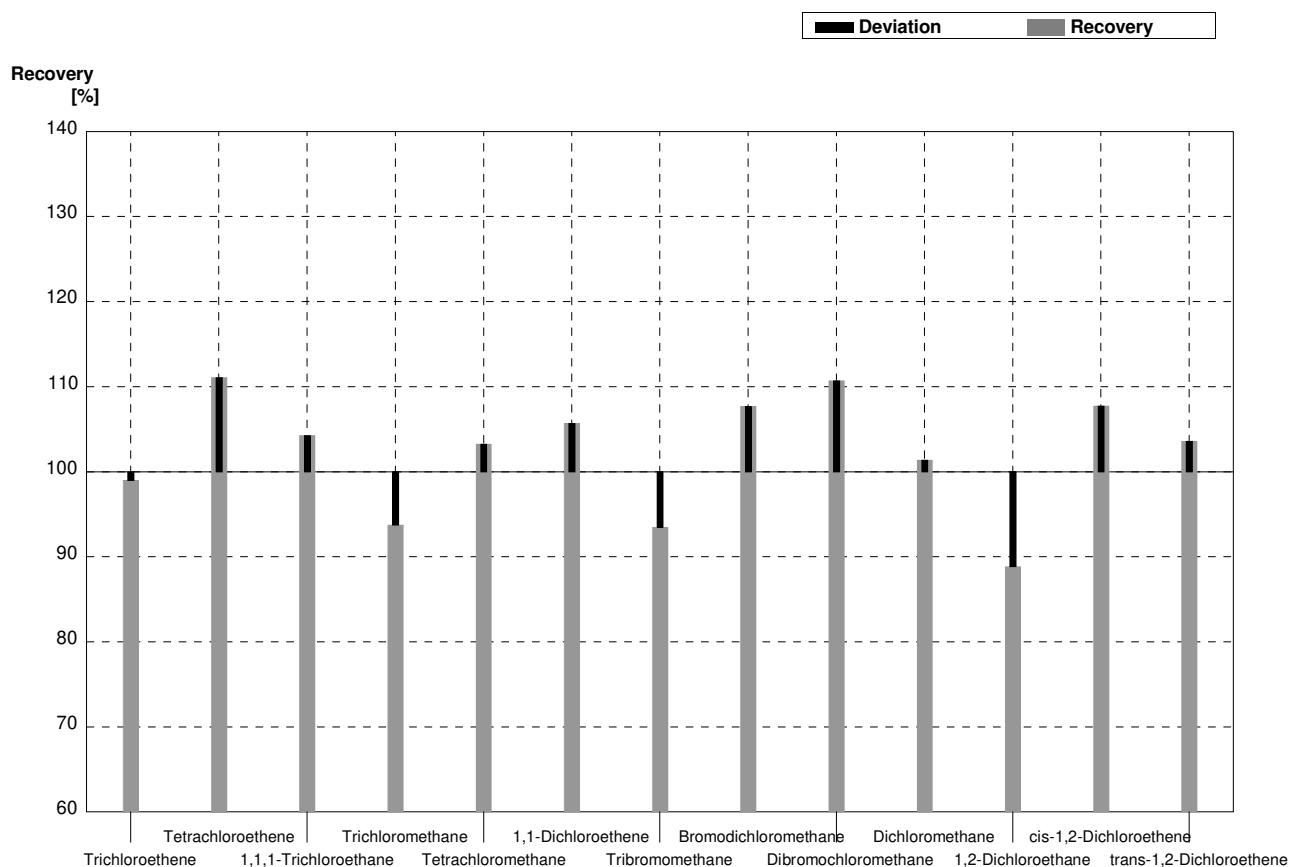
**Sample C66B**  
**Laboratory L**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,271	0,012	$\mu\text{g/l}$	94%
Tetrachloroethene	0,73	0,04	0,696	0,093	$\mu\text{g/l}$	95%
1,1,1-Trichloroethane	0,312	0,019	0,359	0,007	$\mu\text{g/l}$	115%
Trichloromethane	0,78	0,05	0,719	0,052	$\mu\text{g/l}$	92%
Tetrachloromethane	0,258	0,019	0,279	0,003	$\mu\text{g/l}$	108%
1,1-Dichloroethene	2,33	0,12	2,11	0,156	$\mu\text{g/l}$	91%
Tribromomethane	1,94	0,10	1,76	0,111	$\mu\text{g/l}$	91%
Bromodichloromethane	1,02	0,05	0,960	0,105	$\mu\text{g/l}$	94%
Dibromochloromethane	1,48	0,08	1,42	0,091	$\mu\text{g/l}$	96%
Dichloromethane	4,28	0,22	4,17	0,261	$\mu\text{g/l}$	97%
1,2-Dichloroethane	<0,1		<0,05		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,05		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,285	0,008	$\mu\text{g/l}$	79%



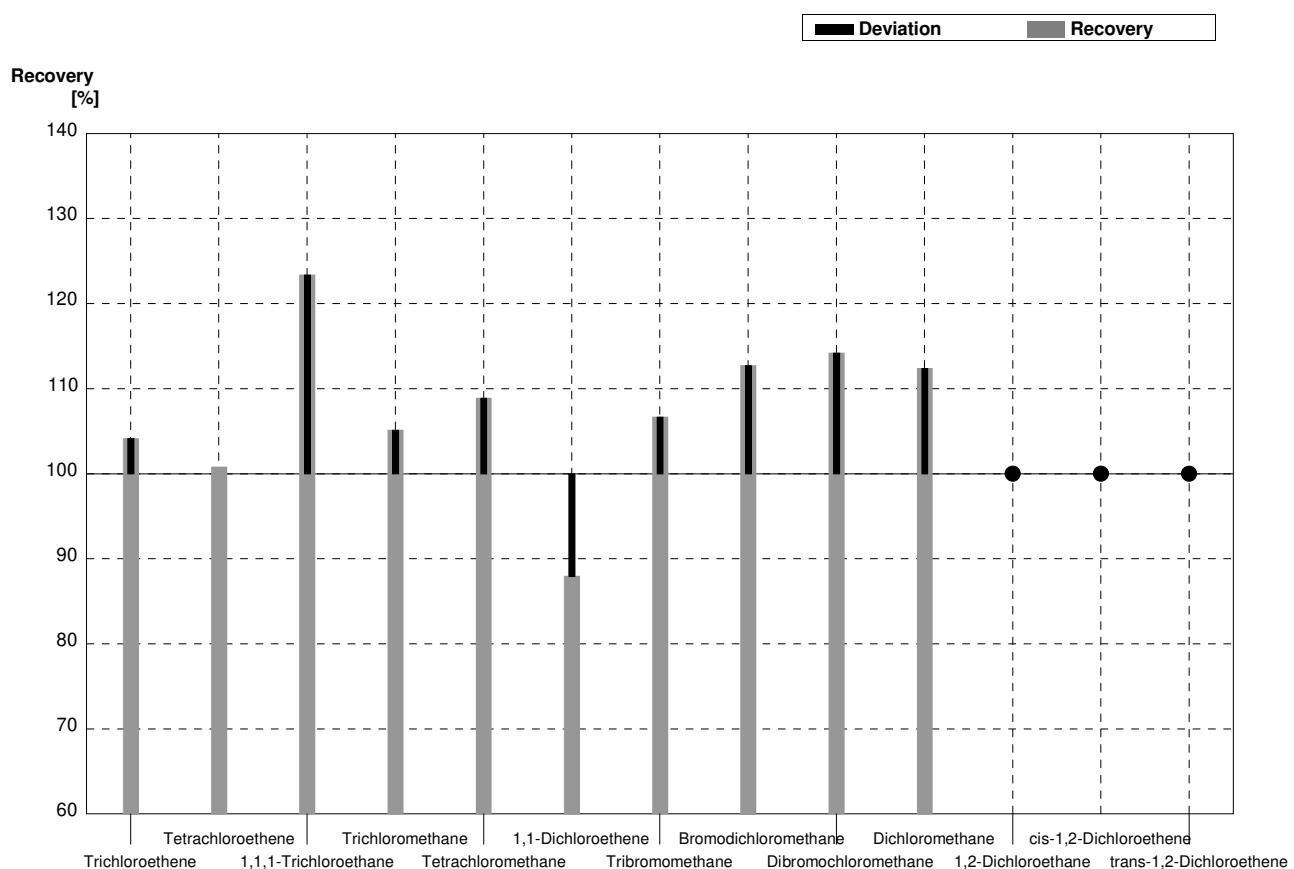
**Sample C66A**  
**Laboratory M**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,693	0,104	$\mu\text{g/l}$	99%
Tetrachloroethene	0,271	0,024	0,301	0,045	$\mu\text{g/l}$	111%
1,1,1-Trichloroethane	0,91	0,05	0,949	0,142	$\mu\text{g/l}$	104%
Trichloromethane	1,76	0,09	1,65	0,25	$\mu\text{g/l}$	94%
Tetrachloromethane	1,23	0,06	1,27	0,19	$\mu\text{g/l}$	103%
1,1-Dichloroethene	0,79	0,04	0,835	0,125	$\mu\text{g/l}$	106%
Tribromomethane	0,69	0,04	0,645	0,097	$\mu\text{g/l}$	93%
Bromodichloromethane	0,455	0,028	0,490	0,074	$\mu\text{g/l}$	108%
Dibromochloromethane	0,71	0,04	0,786	0,118	$\mu\text{g/l}$	111%
Dichloromethane	1,46	0,09	1,48	0,22	$\mu\text{g/l}$	101%
1,2-Dichloroethane	3,05	0,17	2,71	0,41	$\mu\text{g/l}$	89%
cis-1,2-Dichloroethene	2,72	0,14	2,93	0,44	$\mu\text{g/l}$	108%
trans-1,2-Dichloroethene	1,40	0,07	1,45	0,22	$\mu\text{g/l}$	104%



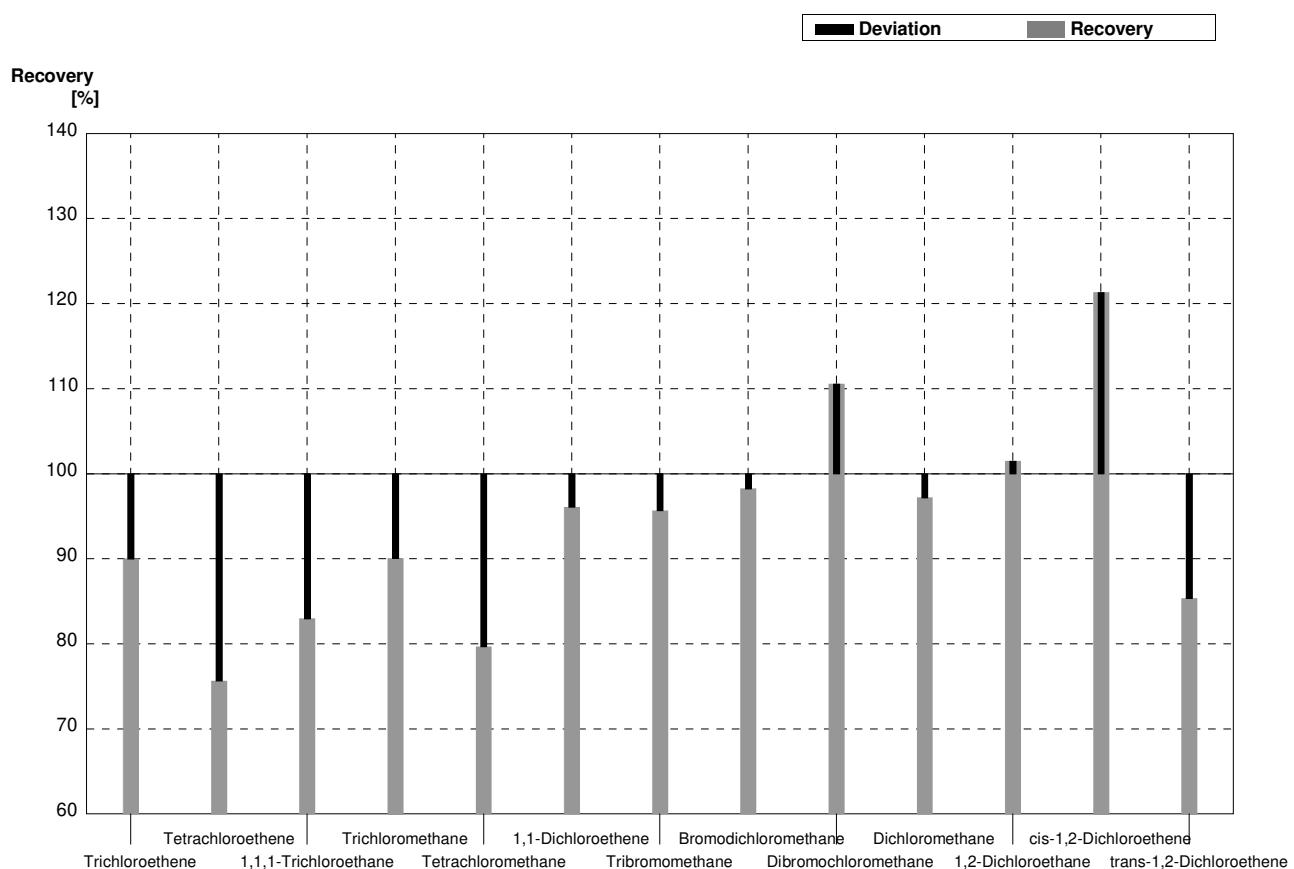
**Sample C66B**  
**Laboratory M**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,301	0,045	$\mu\text{g/l}$	104%
Tetrachloroethene	0,73	0,04	0,736	0,110	$\mu\text{g/l}$	101%
1,1,1-Trichloroethane	0,312	0,019	0,385	0,058	$\mu\text{g/l}$	123%
Trichloromethane	0,78	0,05	0,820	0,123	$\mu\text{g/l}$	105%
Tetrachloromethane	0,258	0,019	0,281	0,042	$\mu\text{g/l}$	109%
1,1-Dichloroethene	2,33	0,12	2,05	0,31	$\mu\text{g/l}$	88%
Tribromomethane	1,94	0,10	2,07	0,31	$\mu\text{g/l}$	107%
Bromodichloromethane	1,02	0,05	1,15	0,17	$\mu\text{g/l}$	113%
Dibromochloromethane	1,48	0,08	1,69	0,25	$\mu\text{g/l}$	114%
Dichloromethane	4,28	0,22	4,81	0,72	$\mu\text{g/l}$	112%
1,2-Dichloroethane	<0,1		<0,5		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,5		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	<0,5		$\mu\text{g/l}$	•



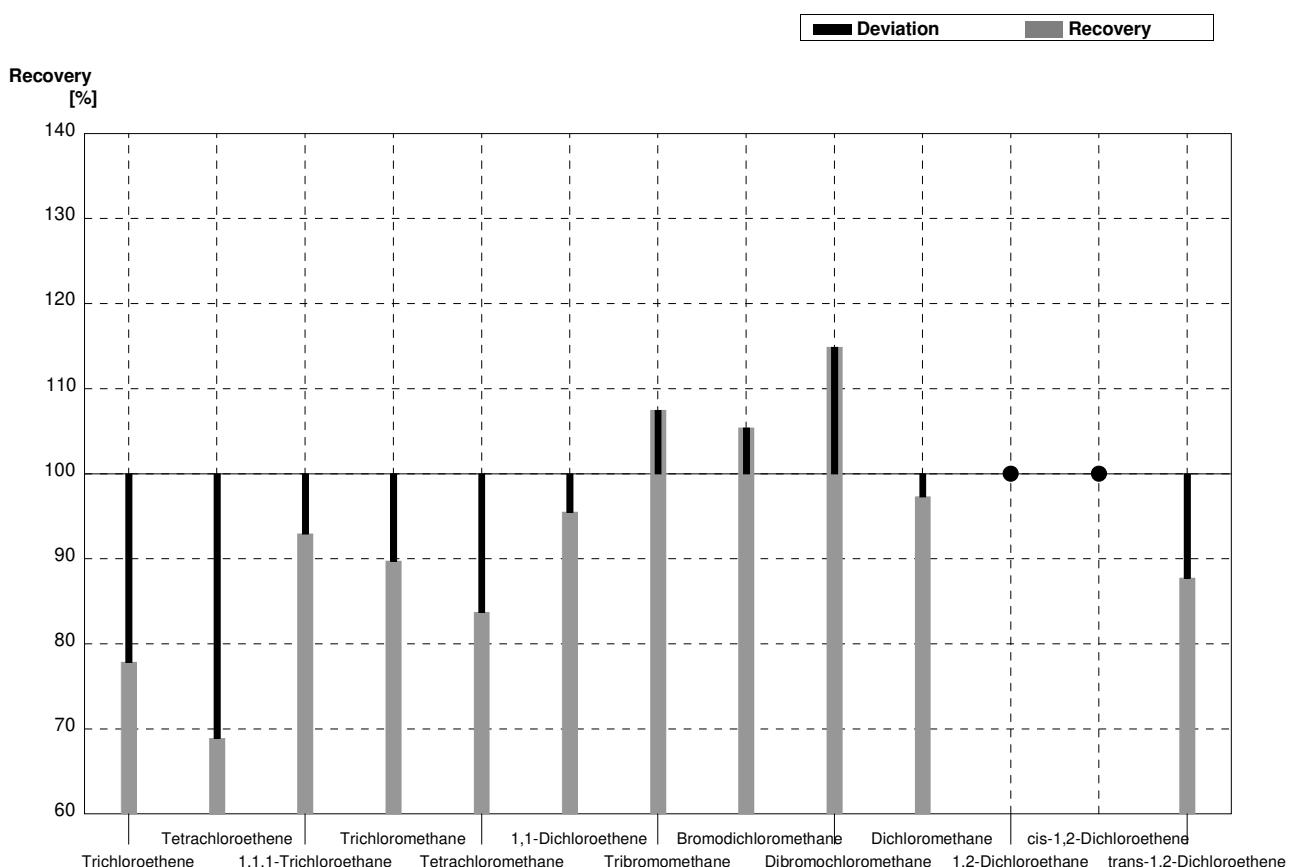
**Sample C66A**  
**Laboratory N**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,630	0,208	$\mu\text{g/l}$	90%
Tetrachloroethene	0,271	0,024	0,205	0,068	$\mu\text{g/l}$	76%
1,1,1-Trichloroethane	0,91	0,05	0,755	0,166	$\mu\text{g/l}$	83%
Trichloromethane	1,76	0,09	1,585	0,428	$\mu\text{g/l}$	90%
Tetrachloromethane	1,23	0,06	0,980	0,186	$\mu\text{g/l}$	80%
1,1-Dichloroethene	0,79	0,04	0,759	0,121	$\mu\text{g/l}$	96%
Tribromomethane	0,69	0,04	0,660	0,198	$\mu\text{g/l}$	96%
Bromodichloromethane	0,455	0,028	0,447	0,112	$\mu\text{g/l}$	98%
Dibromochloromethane	0,71	0,04	0,785	0,204	$\mu\text{g/l}$	111%
Dichloromethane	1,46	0,09	1,419	0,412	$\mu\text{g/l}$	97%
1,2-Dichloroethane	3,05	0,17	3,095	1,052	$\mu\text{g/l}$	101%
cis-1,2-Dichloroethene	2,72	0,14	3,300	0,759	$\mu\text{g/l}$	121%
trans-1,2-Dichloroethene	1,40	0,07	1,195	0,311	$\mu\text{g/l}$	85%



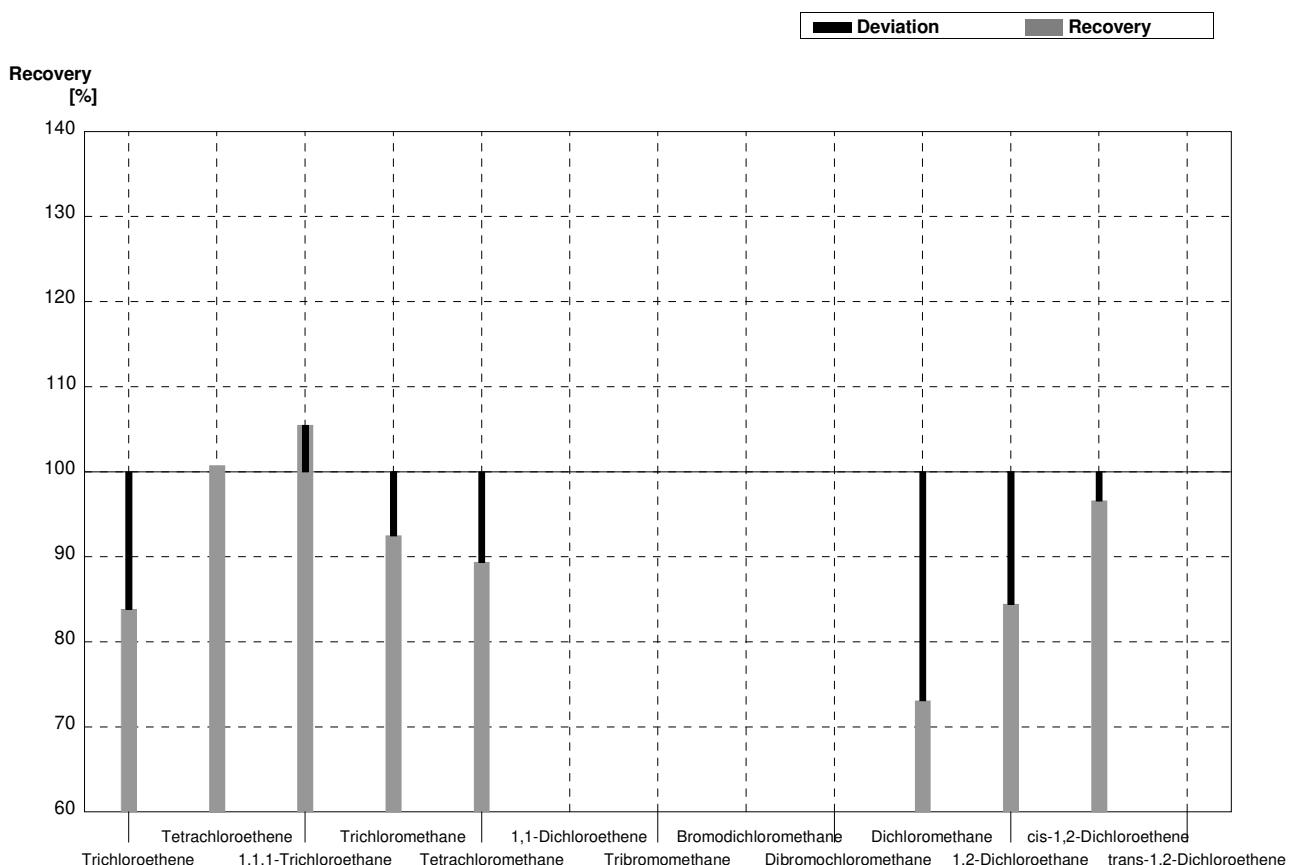
**Sample C66B**  
**Laboratory N**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,225	0,074	$\mu\text{g/l}$	78%
Tetrachloroethene	0,73	0,04	0,503	0,166	$\mu\text{g/l}$	69%
1,1,1-Trichloroethane	0,312	0,019	0,290	0,064	$\mu\text{g/l}$	93%
Trichloromethane	0,78	0,05	0,700	0,189	$\mu\text{g/l}$	90%
Tetrachloromethane	0,258	0,019	0,216	0,041	$\mu\text{g/l}$	84%
1,1-Dichloroethene	2,33	0,12	2,225	0,359	$\mu\text{g/l}$	95%
Tribromomethane	1,94	0,10	2,085	0,626	$\mu\text{g/l}$	107%
Bromodichloromethane	1,02	0,05	1,075	0,269	$\mu\text{g/l}$	105%
Dibromochloromethane	1,48	0,08	1,700	0,442	$\mu\text{g/l}$	115%
Dichloromethane	4,28	0,22	4,165	1,208	$\mu\text{g/l}$	97%
1,2-Dichloroethane	<0,1		<0,08	0,027	$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,05	0,012	$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,315	0,082	$\mu\text{g/l}$	88%



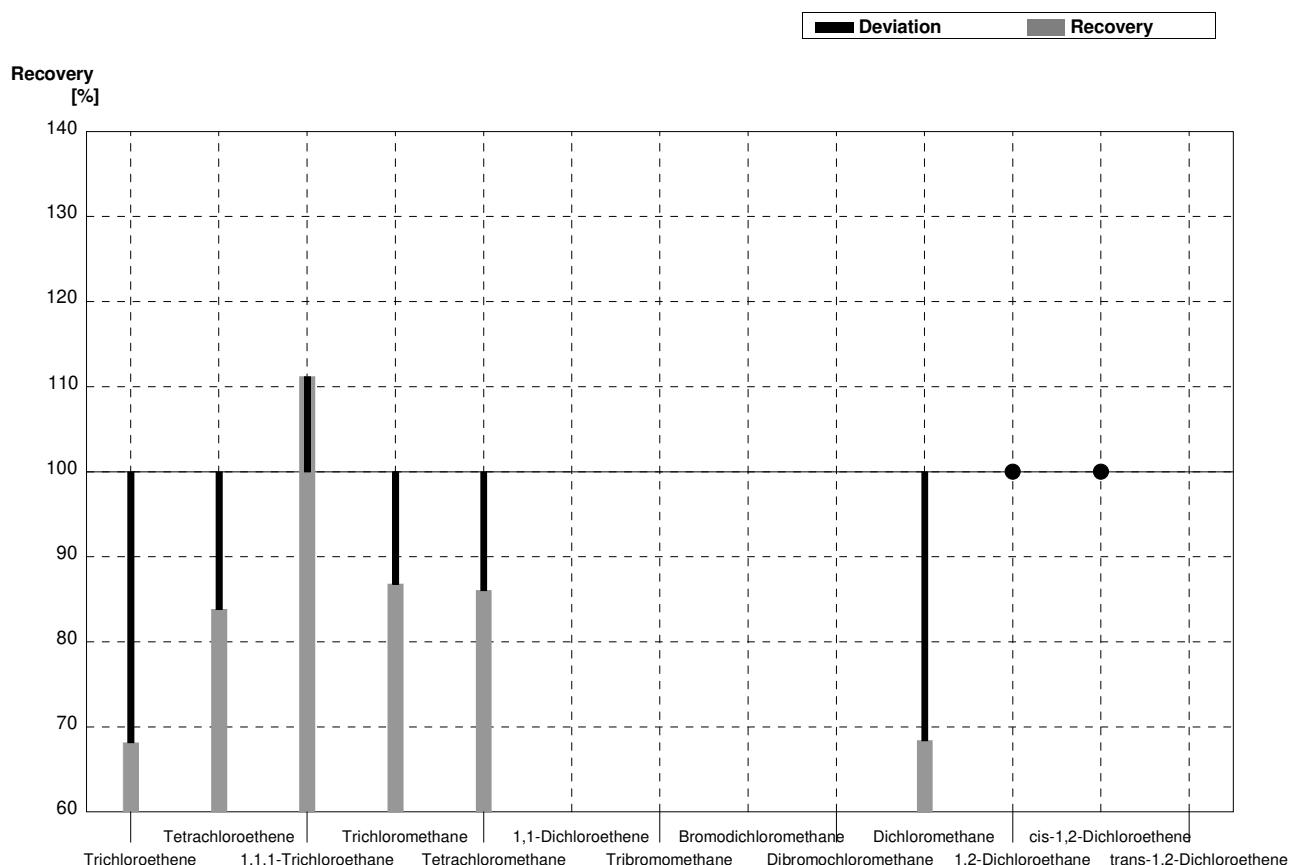
**Sample C66A**  
**Laboratory O**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,587	0,029	$\mu\text{g/l}$	84%
Tetrachloroethene	0,271	0,024	0,273	0,040	$\mu\text{g/l}$	101%
1,1,1-Trichloroethane	0,91	0,05	0,960	0,046	$\mu\text{g/l}$	105%
Trichloromethane	1,76	0,09	1,628	0,062	$\mu\text{g/l}$	93%
Tetrachloromethane	1,23	0,06	1,099	0,038	$\mu\text{g/l}$	89%
1,1-Dichloroethene	0,79	0,04			$\mu\text{g/l}$	
Tribromomethane	0,69	0,04			$\mu\text{g/l}$	
Bromodichloromethane	0,455	0,028			$\mu\text{g/l}$	
Dibromochloromethane	0,71	0,04			$\mu\text{g/l}$	
Dichloromethane	1,46	0,09	1,067	0,194	$\mu\text{g/l}$	73%
1,2-Dichloroethane	3,05	0,17	2,575	0,108	$\mu\text{g/l}$	84%
cis-1,2-Dichloroethene	2,72	0,14	2,627	0,079	$\mu\text{g/l}$	97%
trans-1,2-Dichloroethene	1,40	0,07			$\mu\text{g/l}$	



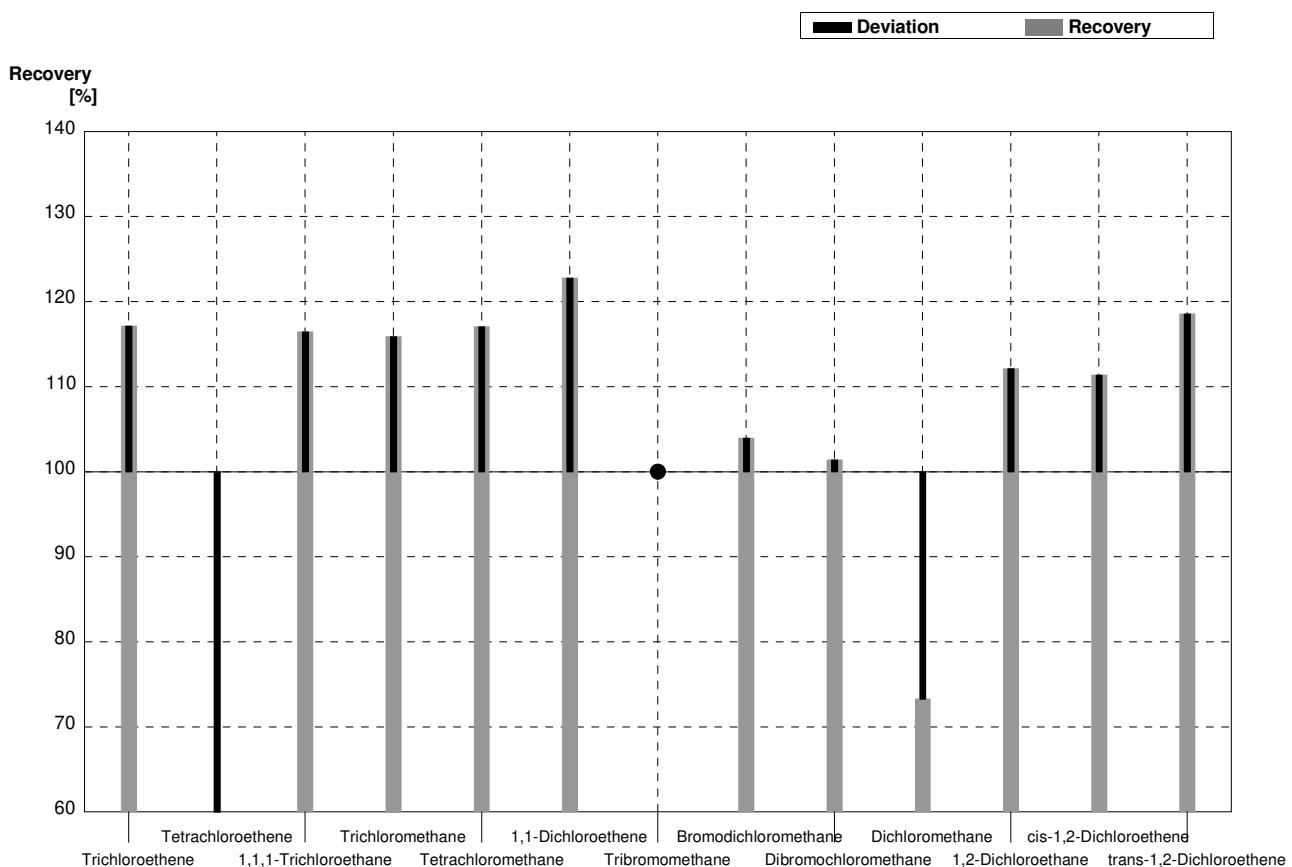
**Sample C66B**  
**Laboratory O**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,197	0,021	$\mu\text{g/l}$	68%
Tetrachloroethene	0,73	0,04	0,612	0,031	$\mu\text{g/l}$	84%
1,1,1-Trichloroethane	0,312	0,019	0,347	0,020	$\mu\text{g/l}$	111%
Trichloromethane	0,78	0,05	0,677	0,046	$\mu\text{g/l}$	87%
Tetrachloromethane	0,258	0,019	0,222	0,016	$\mu\text{g/l}$	86%
1,1-Dichloroethene	2,33	0,12			$\mu\text{g/l}$	
Tribromomethane	1,94	0,10			$\mu\text{g/l}$	
Bromodichloromethane	1,02	0,05			$\mu\text{g/l}$	
Dibromochloromethane	1,48	0,08			$\mu\text{g/l}$	
Dichloromethane	4,28	0,22	2,927	0,491	$\mu\text{g/l}$	68%
1,2-Dichloroethane	<0,1		<1,00		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<1,00		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023			$\mu\text{g/l}$	



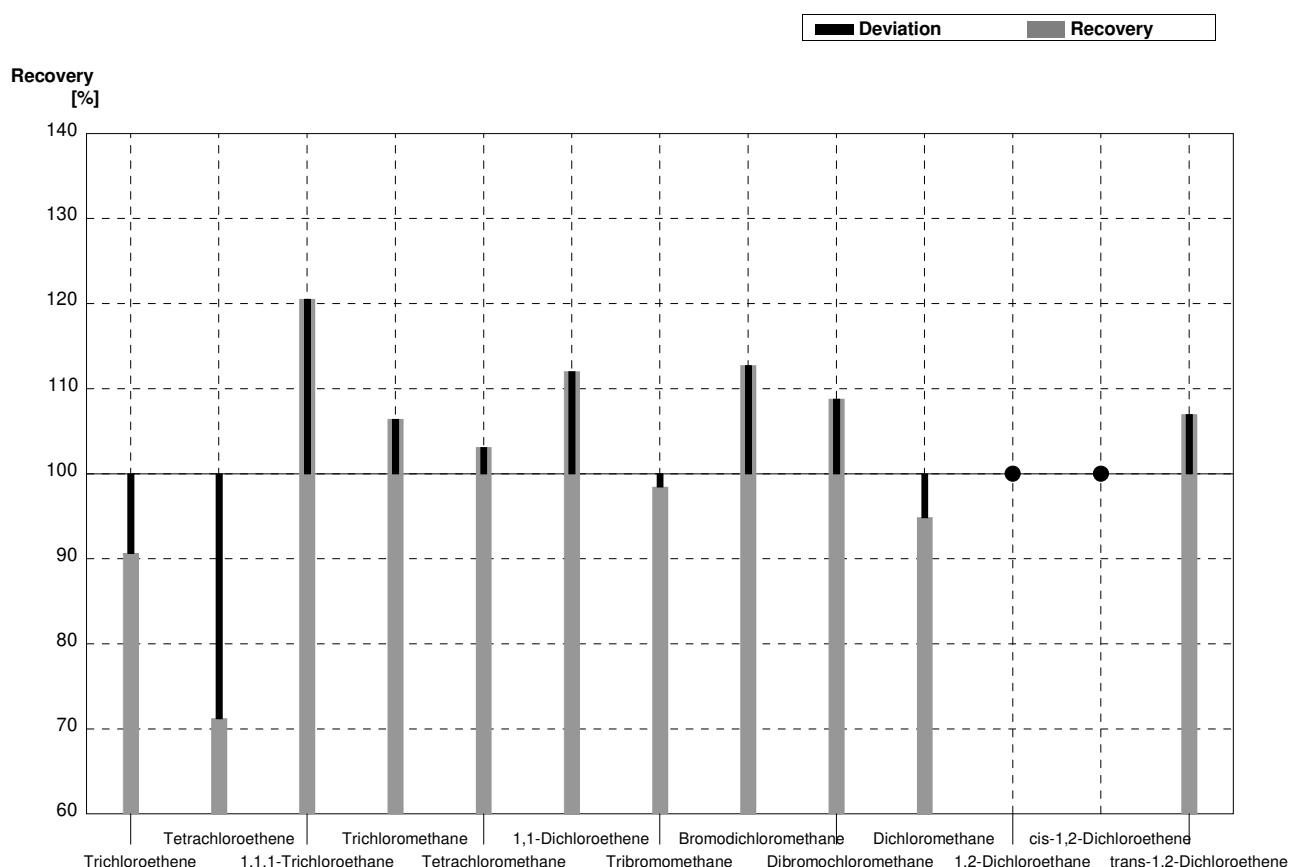
**Sample C66A**  
**Laboratory P**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,82	0,164	$\mu\text{g/l}$	117%
Tetrachloroethene	0,271	0,024	0,117	0,029	$\mu\text{g/l}$	43%
1,1,1-Trichloroethane	0,91	0,05	1,06	0,212	$\mu\text{g/l}$	116%
Trichloromethane	1,76	0,09	2,04	0,408	$\mu\text{g/l}$	116%
Tetrachloromethane	1,23	0,06	1,44	0,361	$\mu\text{g/l}$	117%
1,1-Dichloroethene	0,79	0,04	0,97	0,243	$\mu\text{g/l}$	123%
Tribromomethane	0,69	0,04	<0,7	0	$\mu\text{g/l}$	•
Bromodichloromethane	0,455	0,028	0,473	0,118	$\mu\text{g/l}$	104%
Dibromochloromethane	0,71	0,04	0,72	0,181	$\mu\text{g/l}$	101%
Dichloromethane	1,46	0,09	1,07	0,215	$\mu\text{g/l}$	73%
1,2-Dichloroethane	3,05	0,17	3,42	0,855	$\mu\text{g/l}$	112%
cis-1,2-Dichloroethene	2,72	0,14	3,03	0,605	$\mu\text{g/l}$	111%
trans-1,2-Dichloroethene	1,40	0,07	1,66	0,331	$\mu\text{g/l}$	119%



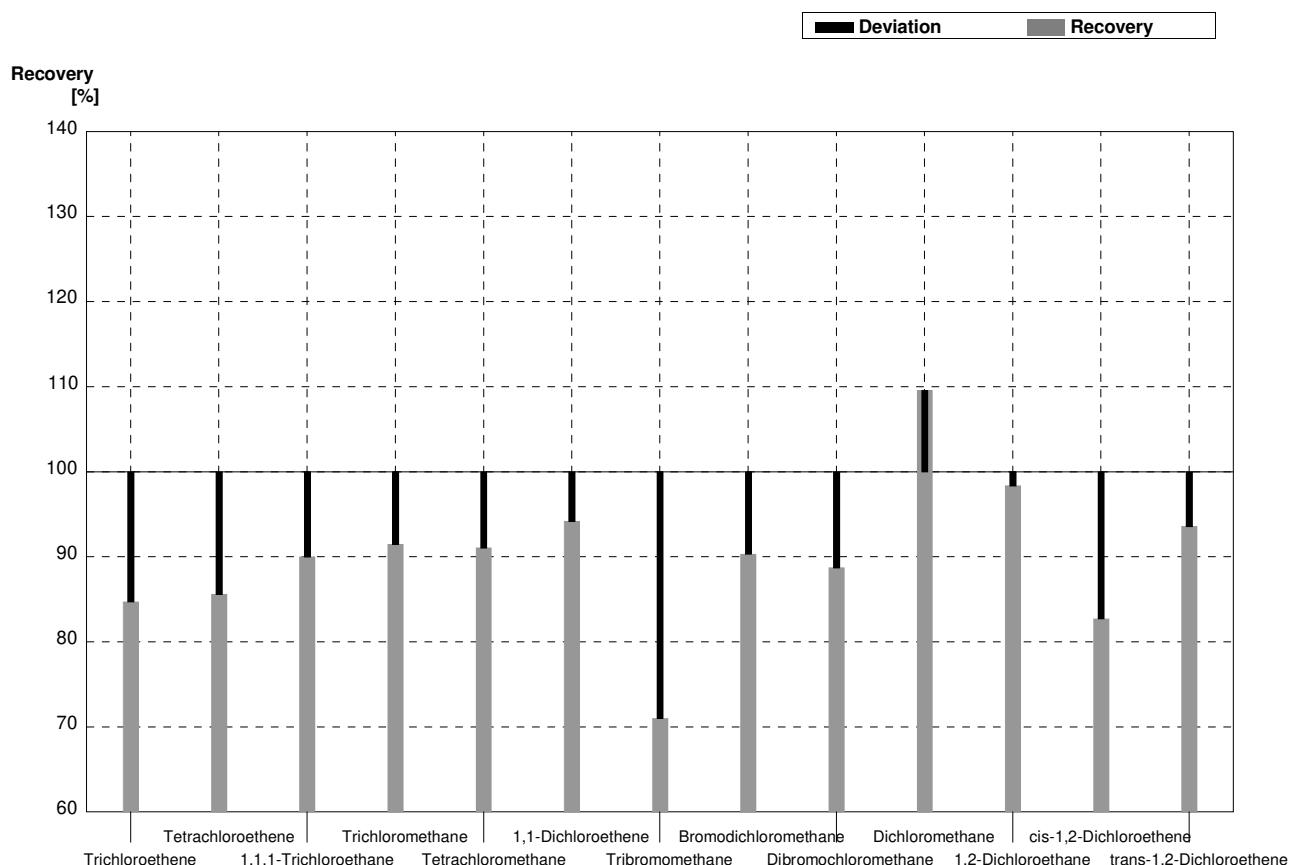
**Sample C66B**  
**Laboratory P**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,262	0,052	$\mu\text{g/l}$	91%
Tetrachloroethene	0,73	0,04	0,52	0,131	$\mu\text{g/l}$	71%
1,1,1-Trichloroethane	0,312	0,019	0,376	0,075	$\mu\text{g/l}$	121%
Trichloromethane	0,78	0,05	0,83	0,165	$\mu\text{g/l}$	106%
Tetrachloromethane	0,258	0,019	0,266	0,067	$\mu\text{g/l}$	103%
1,1-Dichloroethene	2,33	0,12	2,61	0,652	$\mu\text{g/l}$	112%
Tribromomethane	1,94	0,10	1,91	0,574	$\mu\text{g/l}$	98%
Bromodichloromethane	1,02	0,05	1,15	0,286	$\mu\text{g/l}$	113%
Dibromochloromethane	1,48	0,08	1,61	0,403	$\mu\text{g/l}$	109%
Dichloromethane	4,28	0,22	4,06	0,813	$\mu\text{g/l}$	95%
1,2-Dichloroethane	<0,1		<0,3	0	$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,1	0	$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,384	0,077	$\mu\text{g/l}$	107%



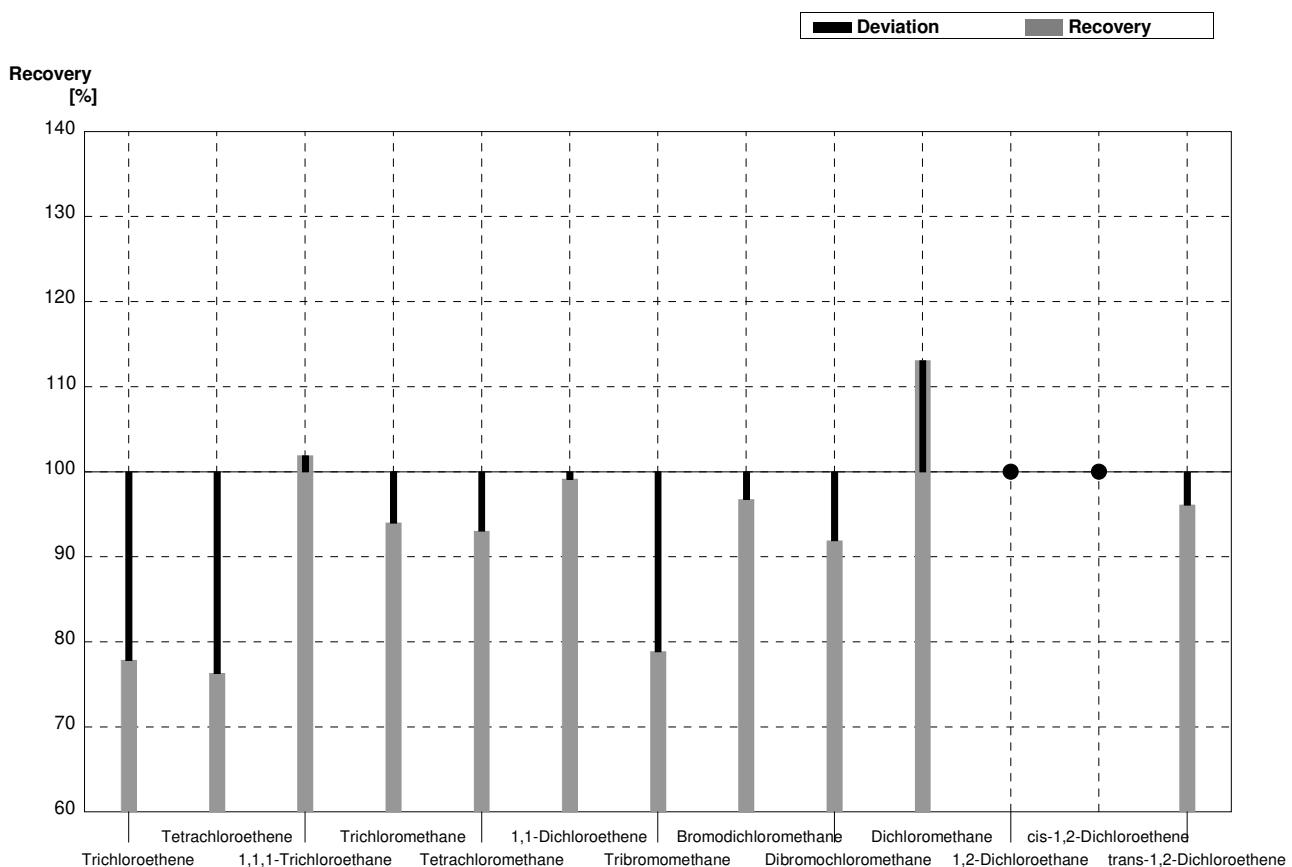
**Sample C66A**  
**Laboratory Q**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,593	0,136	$\mu\text{g/l}$	85%
Tetrachloroethene	0,271	0,024	0,232	0,075	$\mu\text{g/l}$	86%
1,1,1-Trichloroethane	0,91	0,05	0,819	0,172	$\mu\text{g/l}$	90%
Trichloromethane	1,76	0,09	1,61	0,41	$\mu\text{g/l}$	91%
Tetrachloromethane	1,23	0,06	1,12	0,21	$\mu\text{g/l}$	91%
1,1-Dichloroethene	0,79	0,04	0,744	0,187	$\mu\text{g/l}$	94%
Tribromomethane	0,69	0,04	0,490	0,106	$\mu\text{g/l}$	71%
Bromodichloromethane	0,455	0,028	0,411	0,103	$\mu\text{g/l}$	90%
Dibromochloromethane	0,71	0,04	0,630	0,161	$\mu\text{g/l}$	89%
Dichloromethane	1,46	0,09	1,60	0,40	$\mu\text{g/l}$	110%
1,2-Dichloroethane	3,05	0,17	3,00	0,71	$\mu\text{g/l}$	98%
cis-1,2-Dichloroethene	2,72	0,14	2,25	0,38	$\mu\text{g/l}$	83%
trans-1,2-Dichloroethene	1,40	0,07	1,31	0,29	$\mu\text{g/l}$	94%



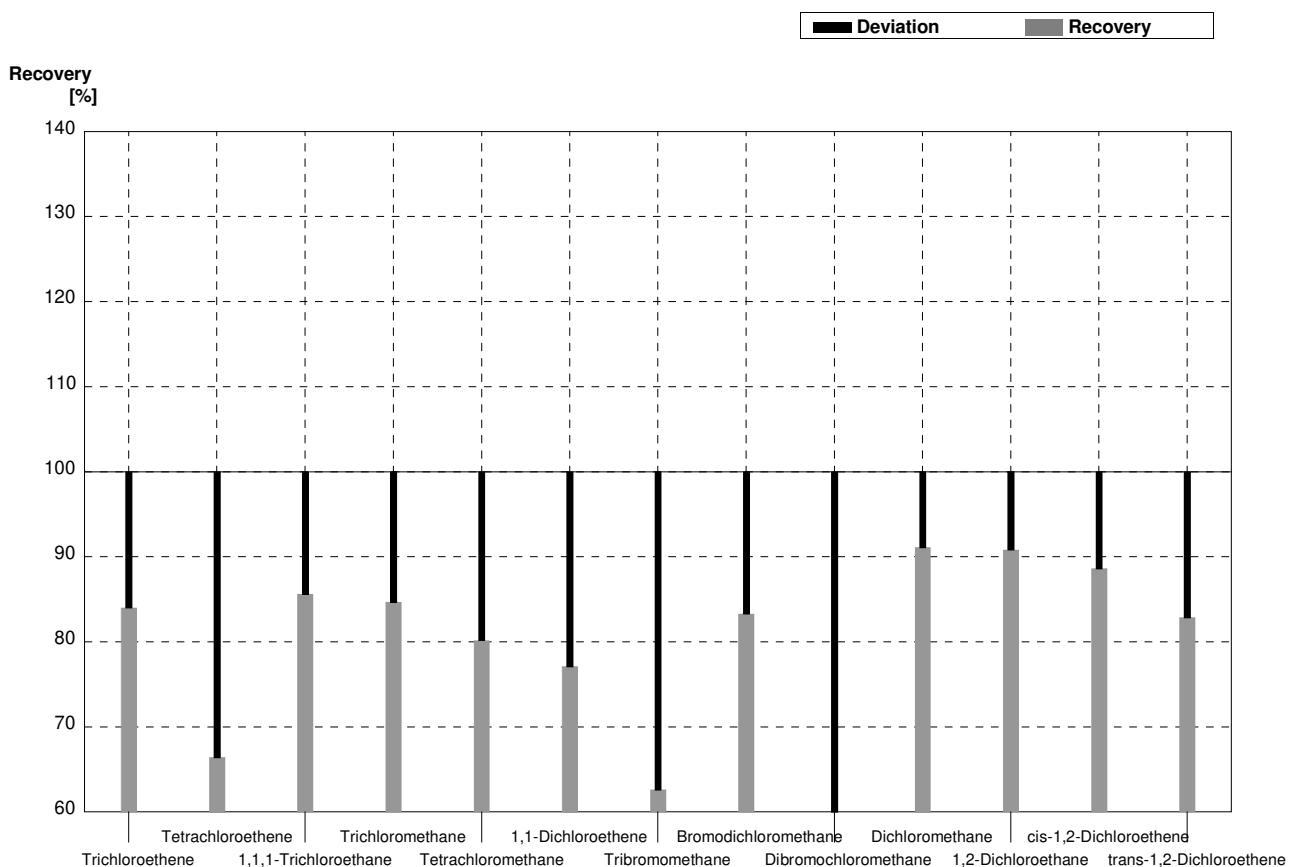
**Sample C66B**  
**Laboratory Q**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,225	0,051	$\mu\text{g/l}$	78%
Tetrachloroethene	0,73	0,04	0,557	0,179	$\mu\text{g/l}$	76%
1,1,1-Trichloroethane	0,312	0,019	0,318	0,067	$\mu\text{g/l}$	102%
Trichloromethane	0,78	0,05	0,733	0,187	$\mu\text{g/l}$	94%
Tetrachloromethane	0,258	0,019	0,240	0,045	$\mu\text{g/l}$	93%
1,1-Dichloroethene	2,33	0,12	2,31	0,58	$\mu\text{g/l}$	99%
Tribromomethane	1,94	0,10	1,53	0,33	$\mu\text{g/l}$	79%
Bromodichloromethane	1,02	0,05	0,987	0,248	$\mu\text{g/l}$	97%
Dibromochloromethane	1,48	0,08	1,36	0,35	$\mu\text{g/l}$	92%
Dichloromethane	4,28	0,22	4,84	1,21	$\mu\text{g/l}$	113%
1,2-Dichloroethane	<0,1		<0,020		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,020		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,345	0,077	$\mu\text{g/l}$	96%



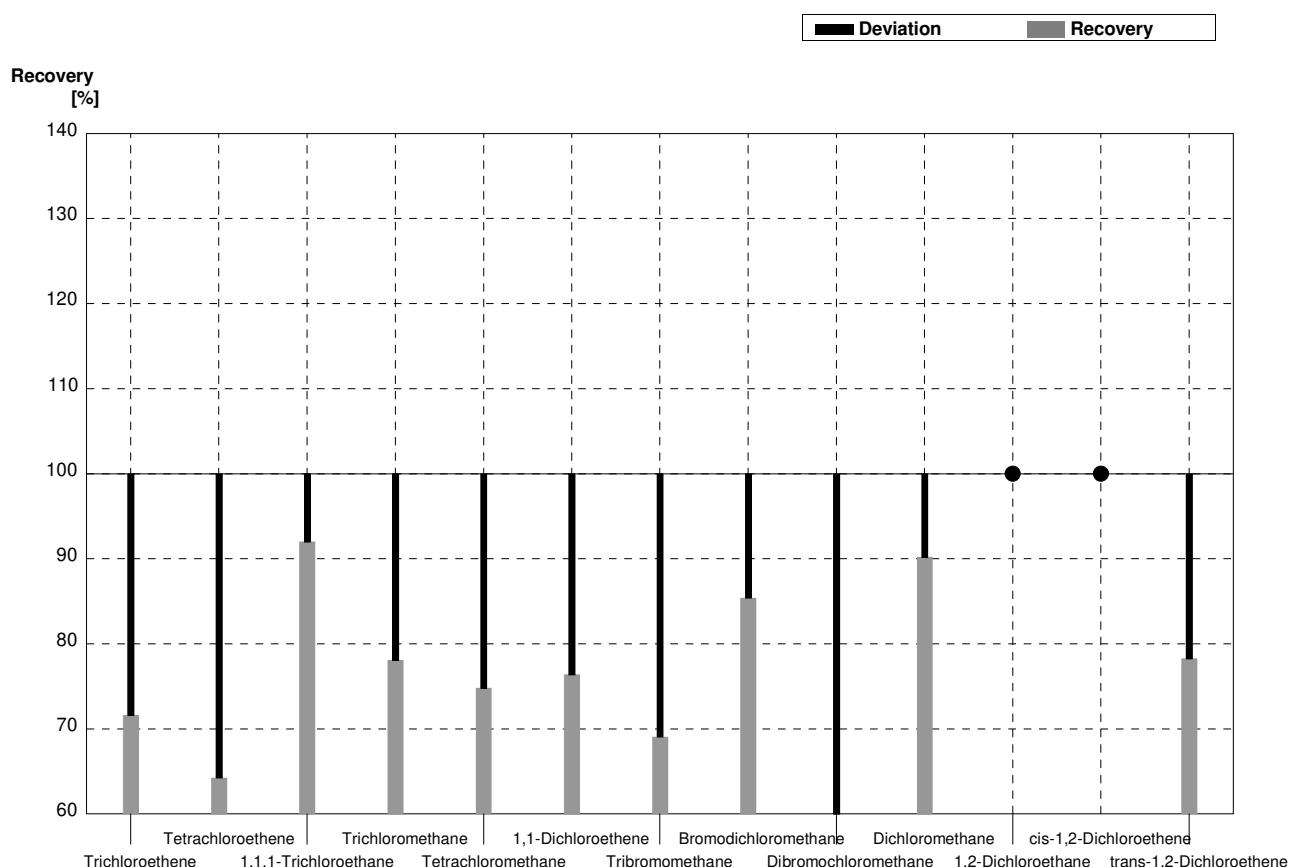
**Sample C66A**  
**Laboratory R**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,588	0,046	$\mu\text{g/l}$	84%
Tetrachloroethene	0,271	0,024	0,180	0,017	$\mu\text{g/l}$	66%
1,1,1-Trichloroethane	0,91	0,05	0,779	0,044	$\mu\text{g/l}$	86%
Trichloromethane	1,76	0,09	1,49	0,05	$\mu\text{g/l}$	85%
Tetrachloromethane	1,23	0,06	0,986	0,136	$\mu\text{g/l}$	80%
1,1-Dichloroethene	0,79	0,04	0,609	0,054	$\mu\text{g/l}$	77%
Tribromomethane	0,69	0,04	0,432	0,052	$\mu\text{g/l}$	63%
Bromodichloromethane	0,455	0,028	0,379	0,024	$\mu\text{g/l}$	83%
Dibromochloromethane	0,71	0,04	0,273	0,018	$\mu\text{g/l}$	38%
Dichloromethane	1,46	0,09	1,33	0,06	$\mu\text{g/l}$	91%
1,2-Dichloroethane	3,05	0,17	2,77	0,18	$\mu\text{g/l}$	91%
cis-1,2-Dichloroethene	2,72	0,14	2,41	0,21	$\mu\text{g/l}$	89%
trans-1,2-Dichloroethene	1,40	0,07	1,16	0,10	$\mu\text{g/l}$	83%



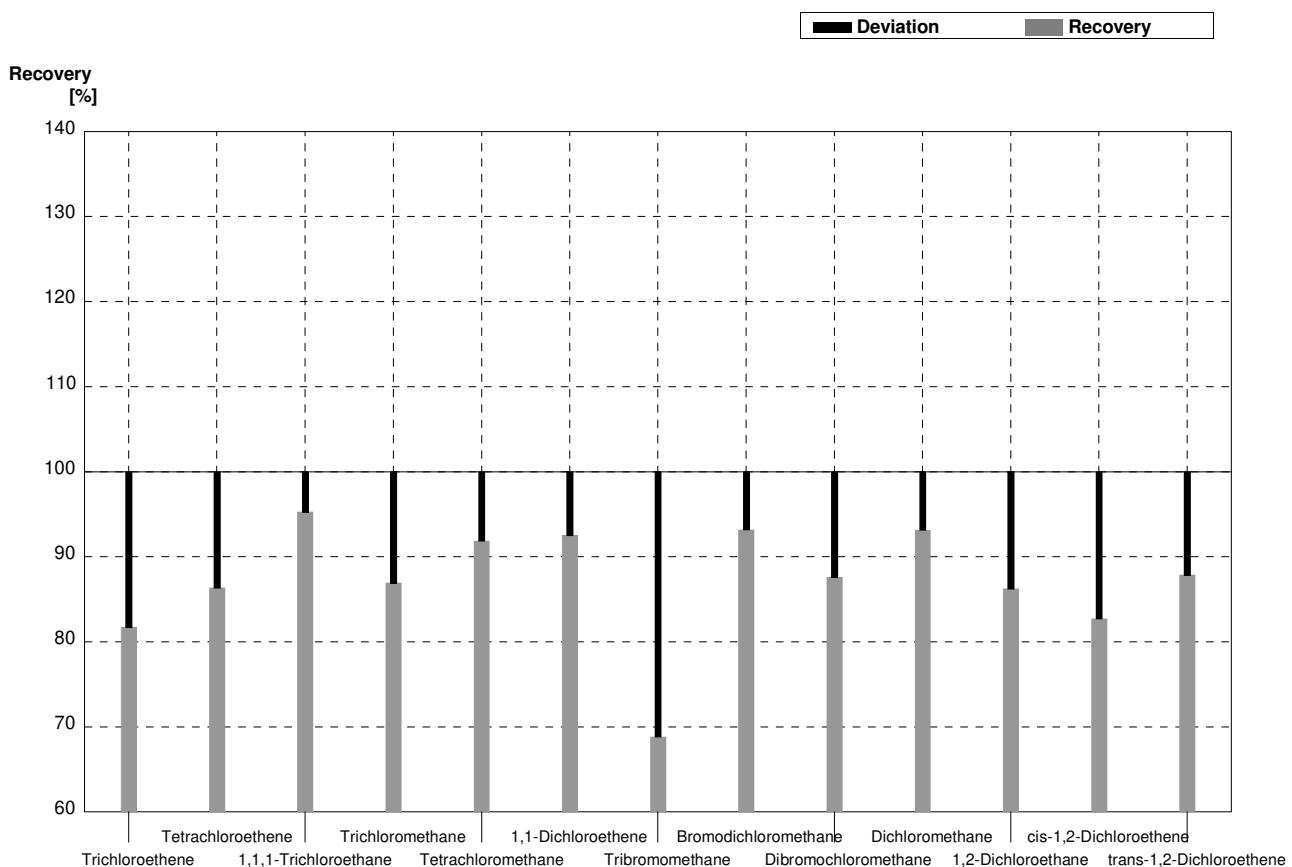
**Sample C66B**  
**Laboratory R**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,207	0,016	$\mu\text{g/l}$	72%
Tetrachloroethene	0,73	0,04	0,469	0,045	$\mu\text{g/l}$	64%
1,1,1-Trichloroethane	0,312	0,019	0,287	0,016	$\mu\text{g/l}$	92%
Trichloromethane	0,78	0,05	0,609	0,021	$\mu\text{g/l}$	78%
Tetrachloromethane	0,258	0,019	0,193	0,027	$\mu\text{g/l}$	75%
1,1-Dichloroethene	2,33	0,12	1,78	0,16	$\mu\text{g/l}$	76%
Tribromomethane	1,94	0,10	1,34	0,16	$\mu\text{g/l}$	69%
Bromodichloromethane	1,02	0,05	0,871	0,055	$\mu\text{g/l}$	85%
Dibromochloromethane	1,48	0,08	0,529	0,039	$\mu\text{g/l}$	36%
Dichloromethane	4,28	0,22	3,86	0,16	$\mu\text{g/l}$	90%
1,2-Dichloroethane	<0,1		<0,80		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,30		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,281	0,025	$\mu\text{g/l}$	78%



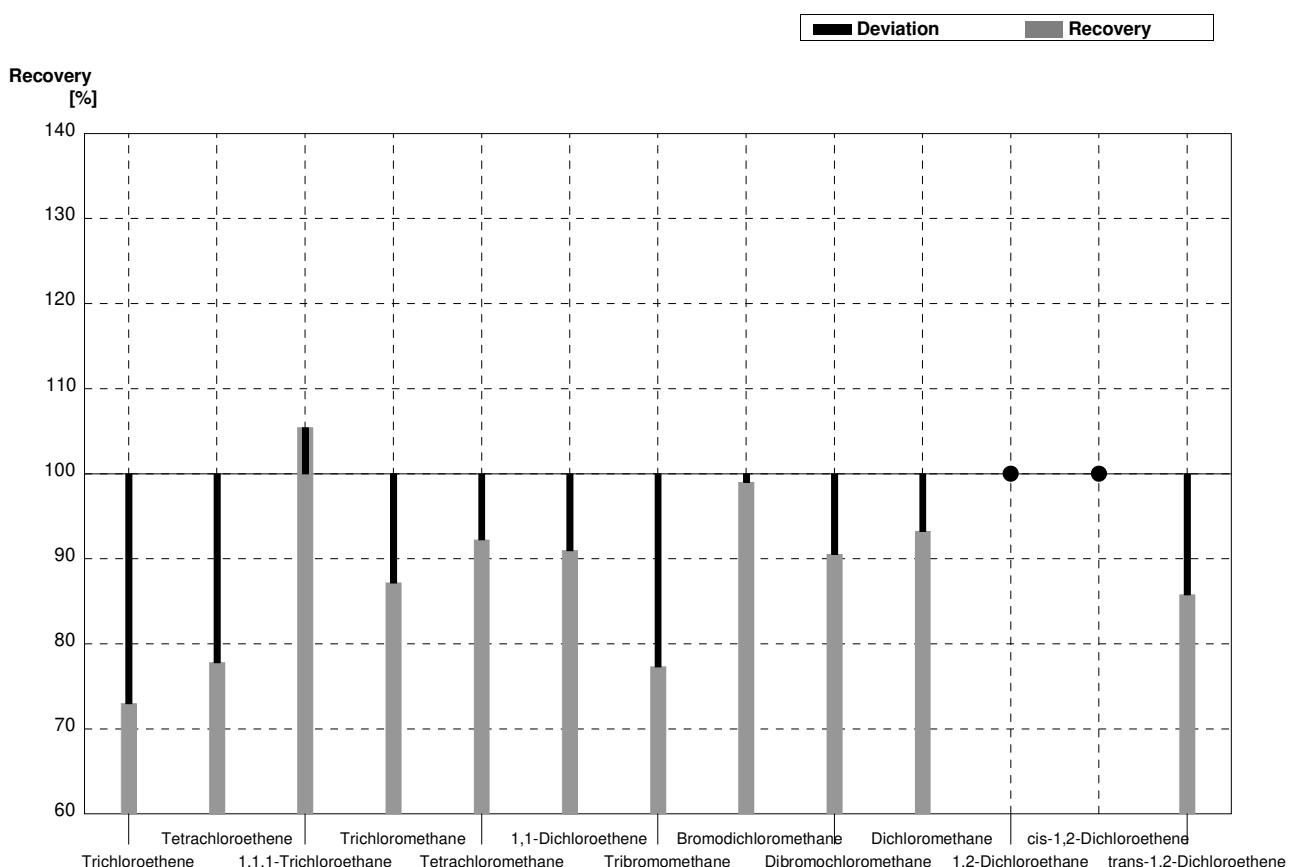
**Sample C66A**  
**Laboratory S**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,572	0,098	$\mu\text{g/l}$	82%
Tetrachloroethene	0,271	0,024	0,234	0,040	$\mu\text{g/l}$	86%
1,1,1-Trichloroethane	0,91	0,05	0,867	0,149	$\mu\text{g/l}$	95%
Trichloromethane	1,76	0,09	1,53	0,263	$\mu\text{g/l}$	87%
Tetrachloromethane	1,23	0,06	1,13	0,194	$\mu\text{g/l}$	92%
1,1-Dichloroethene	0,79	0,04	0,731	0,126	$\mu\text{g/l}$	93%
Tribromomethane	0,69	0,04	0,475	0,082	$\mu\text{g/l}$	69%
Bromodichloromethane	0,455	0,028	0,424	0,073	$\mu\text{g/l}$	93%
Dibromochloromethane	0,71	0,04	0,622	0,107	$\mu\text{g/l}$	88%
Dichloromethane	1,46	0,09	1,36	0,234	$\mu\text{g/l}$	93%
1,2-Dichloroethane	3,05	0,17	2,63	0,452	$\mu\text{g/l}$	86%
cis-1,2-Dichloroethene	2,72	0,14	2,25	0,387	$\mu\text{g/l}$	83%
trans-1,2-Dichloroethene	1,40	0,07	1,23	0,212	$\mu\text{g/l}$	88%



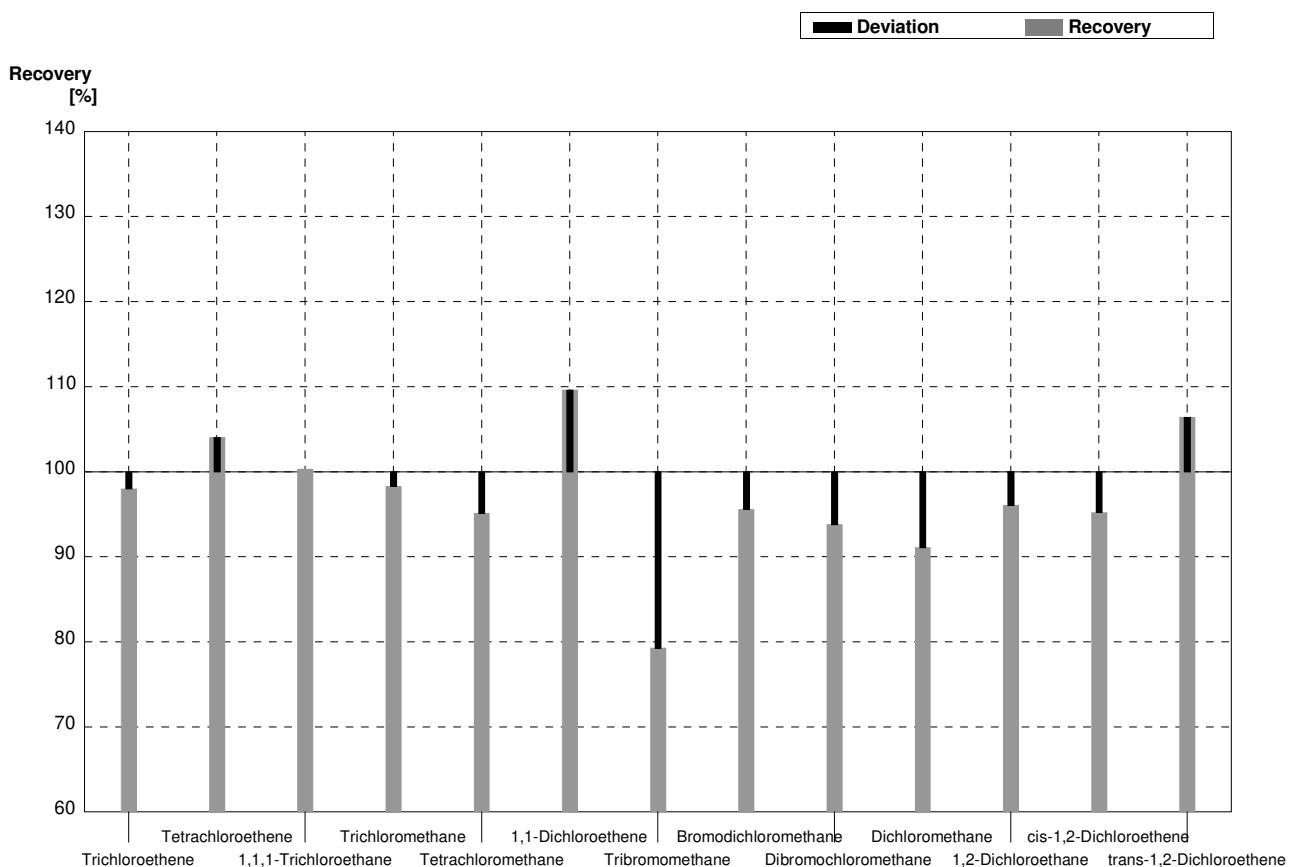
**Sample C66B**  
**Laboratory S**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,211	0,036	$\mu\text{g/l}$	73%
Tetrachloroethene	0,73	0,04	0,568	0,098	$\mu\text{g/l}$	78%
1,1,1-Trichloroethane	0,312	0,019	0,329	0,057	$\mu\text{g/l}$	105%
Trichloromethane	0,78	0,05	0,680	0,117	$\mu\text{g/l}$	87%
Tetrachloromethane	0,258	0,019	0,238	0,041	$\mu\text{g/l}$	92%
1,1-Dichloroethene	2,33	0,12	2,12	0,365	$\mu\text{g/l}$	91%
Tribromomethane	1,94	0,10	1,50	0,258	$\mu\text{g/l}$	77%
Bromodichloromethane	1,02	0,05	1,01	0,174	$\mu\text{g/l}$	99%
Dibromochloromethane	1,48	0,08	1,34	0,230	$\mu\text{g/l}$	91%
Dichloromethane	4,28	0,22	3,99	0,686	$\mu\text{g/l}$	93%
1,2-Dichloroethane	<0,1		<0,10		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,10		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,308	0,053	$\mu\text{g/l}$	86%



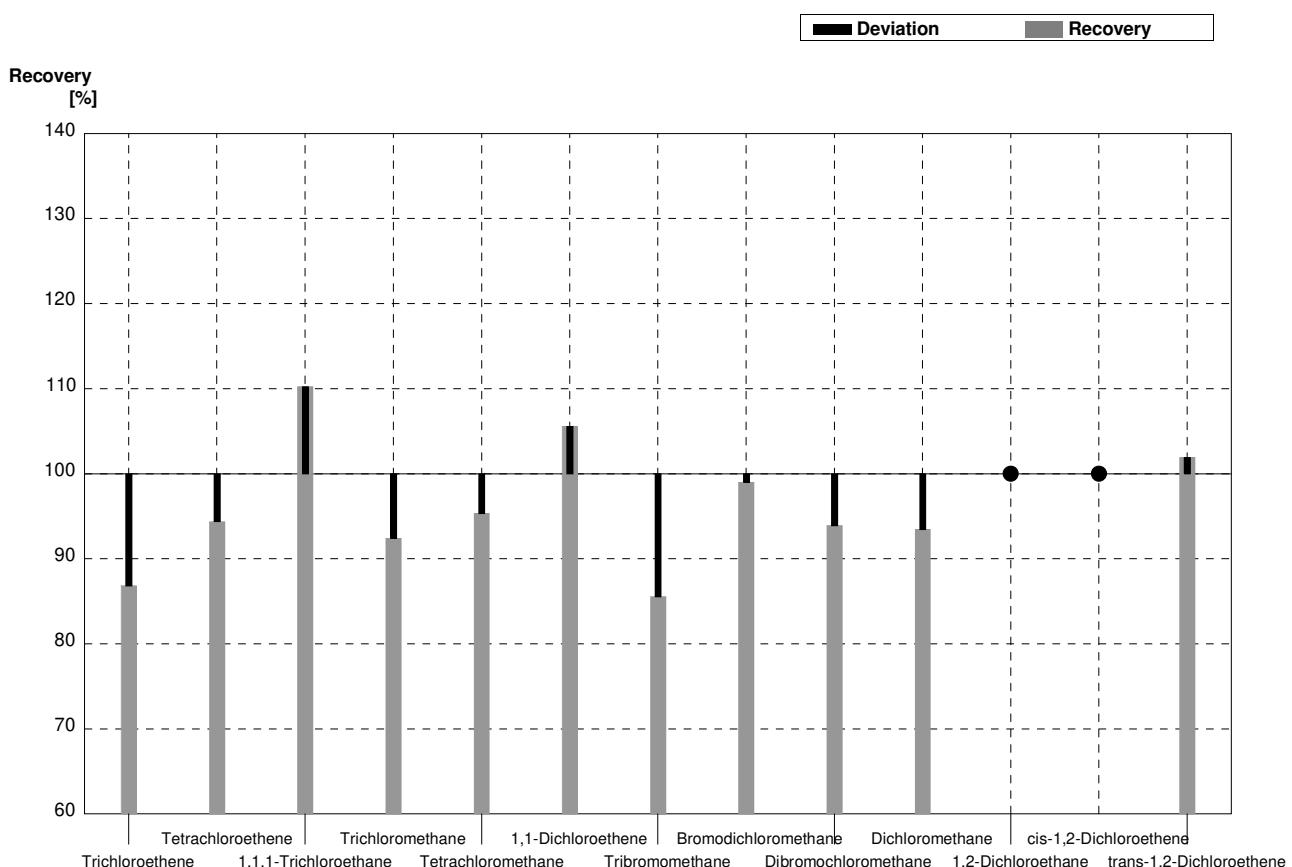
**Sample C66A**  
**Laboratory T**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,686	0,049	$\mu\text{g/l}$	98%
Tetrachloroethene	0,271	0,024	0,282	0,024	$\mu\text{g/l}$	104%
1,1,1-Trichloroethane	0,91	0,05	0,913	0,17	$\mu\text{g/l}$	100%
Trichloromethane	1,76	0,09	1,73	0,35	$\mu\text{g/l}$	98%
Tetrachloromethane	1,23	0,06	1,17	0,30	$\mu\text{g/l}$	95%
1,1-Dichloroethene	0,79	0,04	0,866	0,17	$\mu\text{g/l}$	110%
Tribromomethane	0,69	0,04	0,547	0,14	$\mu\text{g/l}$	79%
Bromodichloromethane	0,455	0,028	0,435	0,11	$\mu\text{g/l}$	96%
Dibromochloromethane	0,71	0,04	0,666	0,17	$\mu\text{g/l}$	94%
Dichloromethane	1,46	0,09	1,33	0,33	$\mu\text{g/l}$	91%
1,2-Dichloroethane	3,05	0,17	2,93	0,71	$\mu\text{g/l}$	96%
cis-1,2-Dichloroethene	2,72	0,14	2,59	0,48	$\mu\text{g/l}$	95%
trans-1,2-Dichloroethene	1,40	0,07	1,49	0,30	$\mu\text{g/l}$	106%



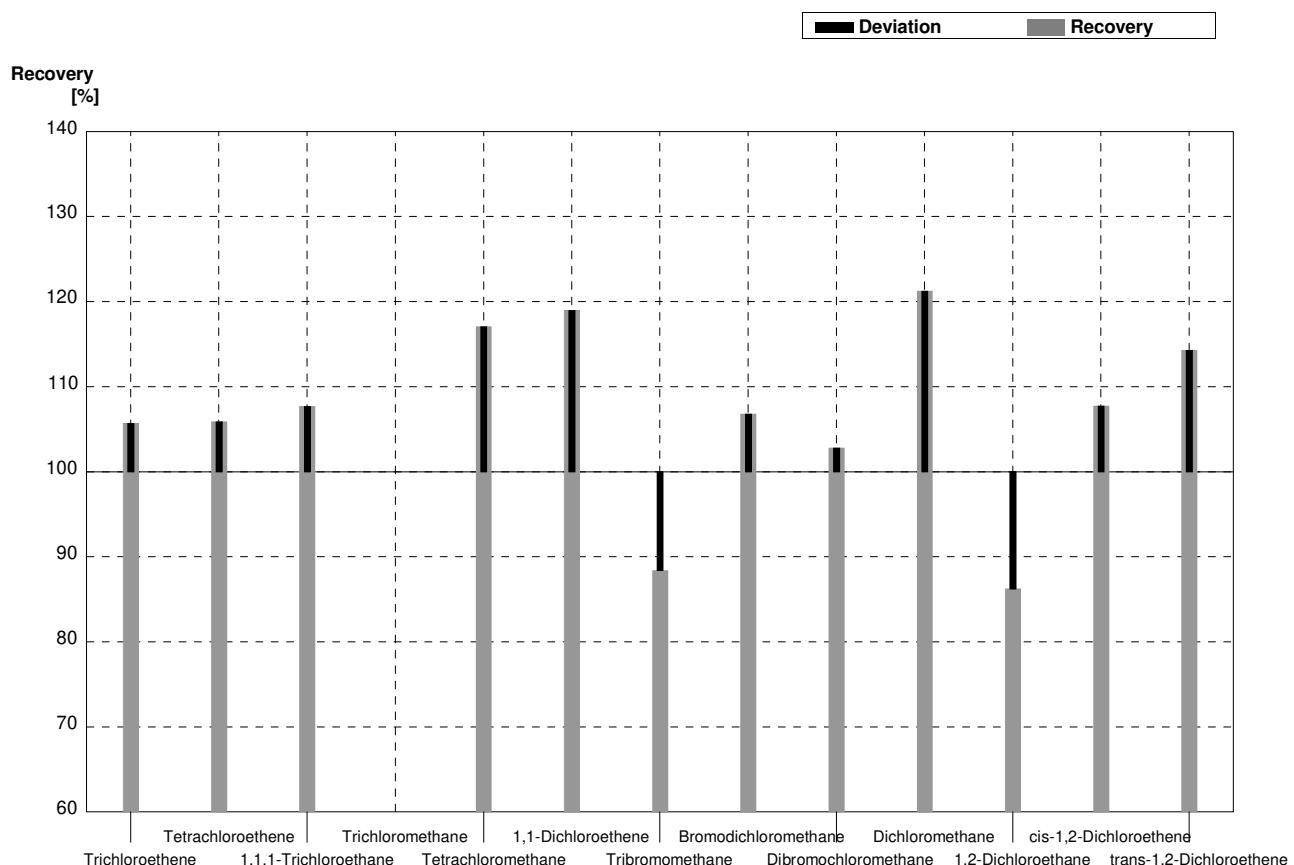
**Sample C66B**  
**Laboratory T**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,251	0,018	$\mu\text{g/l}$	87%
Tetrachloroethene	0,73	0,04	0,689	0,057	$\mu\text{g/l}$	94%
1,1,1-Trichloroethane	0,312	0,019	0,344	0,065	$\mu\text{g/l}$	110%
Trichloromethane	0,78	0,05	0,721	0,14	$\mu\text{g/l}$	92%
Tetrachloromethane	0,258	0,019	0,246	0,062	$\mu\text{g/l}$	95%
1,1-Dichloroethene	2,33	0,12	2,46	0,48	$\mu\text{g/l}$	106%
Tribromomethane	1,94	0,10	1,66	0,42	$\mu\text{g/l}$	86%
Bromodichloromethane	1,02	0,05	1,01	0,25	$\mu\text{g/l}$	99%
Dibromochloromethane	1,48	0,08	1,39	0,35	$\mu\text{g/l}$	94%
Dichloromethane	4,28	0,22	4,00	1,0	$\mu\text{g/l}$	93%
1,2-Dichloroethane	<0,1		<0,5		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,1		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,366	0,073	$\mu\text{g/l}$	102%



**Sample C66A**  
**Laboratory U**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,70	0,04	0,74	0,15	$\mu\text{g/l}$	106%
Tetrachloroethene	0,271	0,024	0,287	0,057	$\mu\text{g/l}$	106%
1,1,1-Trichloroethane	0,91	0,05	0,98	0,20	$\mu\text{g/l}$	108%
Trichloromethane	1,76	0,09			$\mu\text{g/l}$	
Tetrachloromethane	1,23	0,06	1,44	0,29	$\mu\text{g/l}$	117%
1,1-Dichloroethene	0,79	0,04	0,94	0,19	$\mu\text{g/l}$	119%
Tribromomethane	0,69	0,04	0,61	0,12	$\mu\text{g/l}$	88%
Bromodichloromethane	0,455	0,028	0,486	0,097	$\mu\text{g/l}$	107%
Dibromochloromethane	0,71	0,04	0,73	0,15	$\mu\text{g/l}$	103%
Dichloromethane	1,46	0,09	1,77	0,35	$\mu\text{g/l}$	121%
1,2-Dichloroethane	3,05	0,17	2,63	0,53	$\mu\text{g/l}$	86%
cis-1,2-Dichloroethene	2,72	0,14	2,93	0,59	$\mu\text{g/l}$	108%
trans-1,2-Dichloroethene	1,40	0,07	1,60	0,32	$\mu\text{g/l}$	114%



**Sample C66B**  
**Laboratory U**

Parameter	Target value	$\pm U$ ( $k=2$ )	Result	$\pm$	Unit	Recovery
Trichloroethene	0,289	0,018	0,268	0,054	$\mu\text{g/l}$	93%
Tetrachloroethene	0,73	0,04	0,67	0,13	$\mu\text{g/l}$	92%
1,1,1-Trichloroethane	0,312	0,019	0,353	0,071	$\mu\text{g/l}$	113%
Trichloromethane	0,78	0,05			$\mu\text{g/l}$	
Tetrachloromethane	0,258	0,019	0,269	0,054	$\mu\text{g/l}$	104%
1,1-Dichloroethene	2,33	0,12	2,62	0,52	$\mu\text{g/l}$	112%
Tribromomethane	1,94	0,10	1,74	0,35	$\mu\text{g/l}$	90%
Bromodichloromethane	1,02	0,05	1,11	0,22	$\mu\text{g/l}$	109%
Dibromochloromethane	1,48	0,08	1,43	0,29	$\mu\text{g/l}$	97%
Dichloromethane	4,28	0,22	4,96	0,99	$\mu\text{g/l}$	116%
1,2-Dichloroethane	<0,1		<1,00		$\mu\text{g/l}$	•
cis-1,2-Dichloroethene	<0,1		<0,100		$\mu\text{g/l}$	•
trans-1,2-Dichloroethene	0,359	0,023	0,403	0,080	$\mu\text{g/l}$	112%

