

# FLUXANA

## Final Proficiency Test Report RV-123 *(1. Correction)*

### FLX-CRM 123, FLX-CRM 124, FLX-CRM 125, FLX-CRM 126, FLX-CRM 127



Bedburg-Hau, 02.10.2015

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**Statistics and Report**  
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FLX-CRM 123	Mean %	U (95%)	s <sub>R</sub>	s <sub>F</sub>	Mean - 2*s <sub>R</sub>	Mean + 2*s <sub>R</sub>
Al <sub>2</sub> O <sub>3</sub>	4,630	±0,084	0,162	0,041	4,306	4,954
BaO	0,265	±0,016	0,022	0,008	0,220	0,310
CaO	29,819	±0,400	0,768	0,064	28,283	31,355
Cr <sub>2</sub> O <sub>3</sub>	0,018	±0,004	0,005	0,001	0,007	0,029
F	6,636	±0,299	0,432	0,093	5,773	7,500
Fe <sub>2</sub> O <sub>3</sub>	1,686	±0,073	0,138	0,013	1,411	1,961
K <sub>2</sub> O	0,408	±0,017	0,032	0,005	0,344	0,472
MgO	2,750	±0,062	0,119	0,020	2,511	2,989
MnO <sub>2</sub>	0,041	±0,009	0,017	0,002	0,008	0,074
Na <sub>2</sub> O	7,837	±0,146	0,269	0,049	7,300	8,374
P <sub>2</sub> O <sub>5</sub>	0,095	±0,006	0,010	0,002	0,075	0,114
SiO <sub>2</sub>	35,562	±0,376	0,722	0,106	34,119	37,006
TiO <sub>2</sub>	0,202	±0,010	0,019	0,003	0,165	0,240
ZnO	0,010	±0,002	0,003	0,001	0,004	0,016
ZrO <sub>2</sub>	0,021	±0,009	0,012	0,004	-0,004	0,045
C <sub>total</sub>	6,296	±0,115	0,211	0,050	5,875	6,717
CO <sub>2</sub>	7,387	±1,369	1,095	0,052	5,196	9,577

FLX-CRM 124	Mean %	U (95%)	s <sub>R</sub>	s <sub>F</sub>	Mean - 2*s <sub>R</sub>	Mean + 2*s <sub>R</sub>
Al <sub>2</sub> O <sub>3</sub>	7,364	±0,122	0,234	0,061	6,896	7,833
BaO	0,287	±0,024	0,034	0,007	0,219	0,354
CaO	32,826	±0,356	0,683	0,113	31,459	34,193
Cr <sub>2</sub> O <sub>3</sub>	0,009	±0,002	0,002	0,001	0,004	0,014
F	5,203	±0,363	0,524	0,109	4,155	6,251
Fe <sub>2</sub> O <sub>3</sub>	1,731	±0,079	0,149	0,017	1,434	2,029
K <sub>2</sub> O	0,355	±0,017	0,031	0,005	0,294	0,417
MgO	0,902	±0,035	0,068	0,007	0,767	1,038
MnO <sub>2</sub>	3,845	±0,128	0,241	0,016	3,363	4,326
Na <sub>2</sub> O	5,836	±0,099	0,182	0,056	5,472	6,200
P <sub>2</sub> O <sub>5</sub>	0,111	±0,003	0,006	0,002	0,098	0,123
SiO <sub>2</sub>	28,260	±0,313	0,601	0,118	27,057	29,463
TiO <sub>2</sub>	0,337	±0,011	0,021	0,005	0,294	0,380
ZnO	0,010	±0,003	0,004	0,001	0,002	0,017
ZrO <sub>2</sub>	0,020	±0,008	0,011	0,002	-0,002	0,043
C <sub>total</sub>	7,102	±0,108	0,198	0,030	6,706	7,499
CO <sub>2</sub>	10,405	±0,948	0,758	0,094	8,888	11,921

FLX-CRM 125	Mean %	U (95%)	S <sub>R</sub>	S <sub>F</sub>	Mean - 2*S <sub>R</sub>	Mean + 2*S <sub>R</sub>
Al <sub>2</sub> O <sub>3</sub>	7,120	±0,104	0,200	0,033	6,720	7,519
BaO	0,207	±0,022	0,030	0,005	0,146	0,267
CaO	32,065	±0,354	0,680	0,047	30,705	33,424
Cr <sub>2</sub> O <sub>3</sub>	0,011	±0,004	0,005	0,001	0,000	0,022
F	4,590	±0,329	0,475	0,105	3,640	5,540
Fe <sub>2</sub> O <sub>3</sub>	0,769	±0,032	0,059	0,009	0,651	0,888
K <sub>2</sub> O	0,214	±0,014	0,025	0,003	0,164	0,264
MgO	0,953	±0,040	0,077	0,018	0,798	1,107
MnO <sub>2</sub>	0,259	±0,011	0,020	0,003	0,219	0,299
Na <sub>2</sub> O	3,900	±0,080	0,147	0,055	3,606	4,194
P <sub>2</sub> O <sub>5</sub>	0,065	±0,005	0,009	0,001	0,047	0,084
SiO <sub>2</sub>	33,285	±0,257	0,493	0,046	32,298	34,272
TiO <sub>2</sub>	0,216	±0,007	0,014	0,005	0,188	0,244
ZnO	0,005	±0,003	0,003	0,001	-0,002	0,012
ZrO <sub>2</sub>	0,018	±0,008	0,011	0,001	-0,004	0,040
C <sub>total</sub>	9,142	±0,156	0,286	0,063	8,571	9,713
CO <sub>2</sub>	11,998	±1,660	1,328	0,031	9,341	14,654

FLX-CRM 126	Mean %	U (95%)	S <sub>R</sub>	S <sub>F</sub>	Mean - 2*S <sub>R</sub>	Mean + 2*S <sub>R</sub>
Al <sub>2</sub> O <sub>3</sub>	5,490	±0,096	0,184	0,044	5,121	5,859
BaO	0,061	±0,010	0,014	0,004	0,033	0,090
CaO	23,717	±0,405	0,778	0,101	22,162	25,273
Cr <sub>2</sub> O <sub>3</sub>	0,008	±0,002	0,003	0,001	0,002	0,014
F	4,514	±0,474	0,683	0,134	3,147	5,881
Fe <sub>2</sub> O <sub>3</sub>	1,408	±0,080	0,151	0,018	1,106	1,710
K <sub>2</sub> O	0,363	±0,020	0,037	0,005	0,288	0,437
MgO	2,470	±0,045	0,087	0,024	2,296	2,644
MnO <sub>2</sub>	0,082	±0,011	0,020	0,002	0,043	0,121
Na <sub>2</sub> O	7,837	±0,145	0,266	0,075	7,304	8,369
P <sub>2</sub> O <sub>5</sub>	0,066	±0,005	0,008	0,002	0,049	0,082
SiO <sub>2</sub>	33,451	±0,516	0,989	0,140	31,473	35,429
TiO <sub>2</sub>	0,330	±0,011	0,021	0,006	0,288	0,371
ZnO	0,007	±0,003	0,003	0,001	0,000	0,014
ZrO <sub>2</sub>	0,020	±0,008	0,010	0,002	-0,001	0,040
C <sub>total</sub>	15,831	±0,256	0,469	0,110	14,893	16,770
CO <sub>2</sub>	6,487	±1,193	0,954	0,136	4,578	8,395

FLX-CRM 127	Mean %	U (95%)	S <sub>R</sub>	S <sub>r</sub>	Mean - 2*S <sub>R</sub>	Mean + 2*S <sub>R</sub>
Al <sub>2</sub> O <sub>3</sub>	7,818	±0,132	0,253	0,048	7,311	8,325
BaO	0,301	±0,027	0,037	0,006	0,227	0,375
CaO	34,849	±0,507	0,973	0,071	32,904	36,795
Cr <sub>2</sub> O <sub>3</sub>	0,021	±0,004	0,005	0,002	0,010	0,032
F	8,674	±0,350	0,505	0,221	7,664	9,683
Fe <sub>2</sub> O <sub>3</sub>	0,570	±0,024	0,045	0,008	0,481	0,660
K <sub>2</sub> O	0,085	±0,007	0,012	0,002	0,061	0,110
MgO	2,590	±0,067	0,129	0,020	2,332	2,848
MnO <sub>2</sub>	0,032	±0,008	0,014	0,002	0,004	0,060
Na <sub>2</sub> O	10,454	±0,205	0,384	0,044	9,685	11,223
P <sub>2</sub> O <sub>5</sub>	0,037	±0,003	0,006	0,001	0,026	0,048
SiO <sub>2</sub>	37,268	±0,428	0,821	0,070	35,627	38,909
TiO <sub>2</sub>	0,241	±0,010	0,019	0,002	0,202	0,279
ZnO	0,079	±0,008	0,012	0,002	0,054	0,103
ZrO <sub>2</sub>	0,045	±0,016	0,022	0,002	0,001	0,090
C <sub>total</sub>	0,122	±0,011	0,019	0,003	0,083	0,160
CO <sub>2</sub>	0,386	±0,391	0,313	0,031	-0,240	1,012

All values are in mass % and are based on dried (105°C) sample material.

Mean	calculated
U (95%)	uncertainty calculated for a confidence interval of 95% (k=2)
S <sub>r</sub>	Repeatability standard deviation
S <sub>R</sub>	Reproducibility standard deviation
Range of tolerance	All labs within this range show satisfactory performance

***This report is the first correction of the final report from 15.09.2015. A few z-scores were recalculated. There was no change on other statistical data.***

### Interpretation of the results

The proficiency test shows a very good agreement between the participating laboratories. The determined reproducibility standard deviation corresponds well to the industrial need. In comparison to the repeatability standard deviation it demonstrates that each laboratories uses slightly different calibration standards.

During evaluation of CO<sub>2</sub> we found out that the samples contain some oxides which will help to oxidize also the carbon to CO<sub>2</sub>. Therefore a lot of results are higher than the expected value. However the aim was to see only the CO<sub>2</sub> coming from Carbonates. We had to revise the method and only a few laboratories could provide results.

## Introduction

X-ray fluorescence analysis is a widely used technique for the analysis of oxidic materials.

However, for the calibration of XRF instruments dedicated standard material is needed. As a worldwide supplier for XRF laboratories, FLUXANA has developed a number of services to support XRF users. One of these services is the production of new reference materials and the organization of proficiency tests (PT).

In 2011, FLUXANA introduced its own quality management.

In February 2014, FLUXANA received accreditation from German DAKKS according DIN EN ISO/IEC 17025 for the test laboratory in Bedburg-Hau.

The production of reference materials and the performance of proficiency tests is not yet accredited. However, FLUXANA has applied for the accreditation process at DAKKS.

Nevertheless, all evaluations are performed in agreement with DIN EN ISO/IEC 17043:2010-05, ISO Guide 34:2009, ISO Guide 31:2000 and ISO Guide 35:2006.

## Proficiency test provider / Ordering address for the samples

FLUXANA GmbH & CO.KG  
Borschelstrasse 3  
47551 Bedburg-Hau, Germany  
[info@fluxana.de](mailto:info@fluxana.de)

Coordinator: Charlotte Winkels-Herding, QM

Responsible for evaluation and data processing: Dr. Rainer Schramm, CEO

Responsible for in-house analytical tests: Dr. Barbara Schäfer, Head of test laboratory

## Subcontractors

Delivery of material by Imerys Metal Casting Germany GmbH, former: S&B Industrial Minerals GmbH  
Performing of analysis by Participants of PT

## Proficiency test items

The materials were delivered by:

Imerys Metal Casting Germany GmbH, former: S&B Industrial Minerals GmbH  
46015 Oberhausen, Germany

About 10 kg of each material were delivered to and homogeneously distributed into 50 ml bottles by FLUXANA. The bottles were then vacuum packed for storage.

Test item	Description
FLX-CRM 123	RV2014-1
FLX-CRM 124	RV2014-2
FLX-CRM 125	RV2014-3
FLX-CRM 126	RV2014-4
FLX-CRM 127	RV2014-5

### Proficiency test

All laboratories which applied until February 2015 for the participation of this proficiency test got their samples in March 2015 and sent in their results until April 2015.

### Certificate of Analysis

There is a certification process planned according ISO Guide 34:2009. This will be independent from this proficiency test.

### Homogeneity and stability

The material was used as delivered. Based on ISO Guide 35:2006 and DIN ISO 13528:2009-01, a homogeneity and stability study of the materials was performed.

### Metrological traceability

The analytical methods used by the participants must be in accordance with international measurement standards (XRF fusion, carbon analysis as combustion, ICP or any other wet chemical methods), which are considered as traceable. Other methods, like XRF pressed pellet or XRF standardless methods, are not recognized as being traceable. Values from these methods will not be taken into account for calculation of the assigned values and the target standard deviation. However, all values will be shown in the report and the laboratory evaluation report.

The evaluation of CO<sub>2</sub> can be only seen as information. The assigned value was calculated from laboratories who used the following method '**combustion acid**' (for information all values from all methods and laboratories are shown):

Use 200-250mg sample and place it into an Erlenmeyer flask (conical flask). Put it on a heating plate adjusted to ca. 100°C and add 20ml acetic acid 25%. Immediately CO<sub>2</sub> will be formed which should be collected by a stopper with a nitrogen inlet and a tube outlet which is linked to your combustion unit. The nitrogen will transport the CO<sub>2</sub> into the furnace and will then be measured with the IR cell.

### Measurement uncertainty

Measurement uncertainty includes components arising from systematic effects, such as components associated with corrections and the assigned quantity values of measurement standards, as well as the definitional uncertainty. The participants did not provide any uncertainty with the concentration values.

For this proficiency test the measurement uncertainty for the final mean was calculated from the repeatability and reproducibility standard deviations.

## **Evaluation**

Launching the process of accreditation according DIN EN ISO/IEC 17043:2010-05 FLUXANA has adapted the evaluation process to robust statistical methods.

The assigned values were determined as consensus values from the participants who used traceable methods. Additionally all statistical data were calculated using robust statistical methods according DIN ISO 13528:2009-01, ISO/TS 20612:2007 and DIN 38402-45:2014-06.

## **Advantages of using robust statistics**

Statistical methods are robust in the sense that any outliers have only a limited effect on the overall result. Steps were taken to ensure that the results are still meaningful even if the proportion of outliers is 1/3. Robust statistics are also preferable for small populations.

## **Outliers**

All data were used for the robust statistics after a check for obvious blunders. Outliers in the statistical sense are typically not detected when using robust statistical methods because the robust A+S algorithms were found to work better than the classical approach (which is outlier detection plus arithmetic mean and classical s.d. formula). Outlier shown in the table are only based on z-scores and marked with E.

## **Number of measurements**

All participants were requested to perform two measurements. This is necessary to perform the repeatability standard deviation for the laboratories. Nevertheless a few participants who performed only one measurement were taken into account and were not excluded. Robust statistics can handle different number of measurements per participant.

## **Publication of the results**

All participants will be informed about the results of the PT with this report. Which results were delivered by which laboratory will be kept confidential. All laboratories are encoded where the code is only known by the organizer and the individual laboratory. The final report is published on the FLUXANA website. First a preliminary report was sent out for verification by the participants.

## **Further information**

In the following evaluation report all accepted laboratory data are listed. Also all used methods are specified. Laboratories which are working under DIN EN ISO/IEC 17025 accreditation are highlighted. Under Remark additional information is given.

## Participants

Voestalpine Stahl Donawitz GmbH	Austria
Voestalpine Stahl GmbH	Austria
Carboox Resende Química Industria e Comercio LTDA	Brasilia
Sumicol - Suministros de Colombia S.A.	Colombia
SSAB	Finland
Aperam Isbergues	France
ArcelorMittal, Maizières Process, chemical lab	France
Vallourec	France
AG der Dillinger Hüttenwerke	Germany
AG der Dillinger Hüttenwerke	Germany
Bergisches Wasser- und Umweltlabor der BTV GmbH	Germany
Chemische Fabrik Budenheim KG	Germany
Dorfner Anzaplan	Germany
Eltra GmbH	Germany
FLUXANA GmbH & Co.KG	Germany
GBA Gesellschaft für Bioanalytik mbH	Germany
HuK Umweltlabor GmbH	Germany
Imerys Metal Casting Germany GmbH	Germany
Quarzwerke GmbH	Germany
Saarstahl AG	Germany
Technische Universität Bergakademie Freiberg Institut für Eisen- und Stahltechnologie	Germany
Thyssen Krupp Steel Europe AG	Germany
VGH Severstal	Germany
Voestalpine Böhler Welding Germany GmbH	Germany
COGNE ACCIAI SPECIALI	Italy
Instytut Materialów Ceramicznych i Budowlanych	Poland
IK4-AZTERLAN	Spain
ESAB AB	Sweden
SSAB Special Steels	Sweden



## Statistical Evaluation

### Calculation of Mean $m$

The mean  $m$  for all laboratories was calculated using the Hampel estimator (ISO/TS 20612:2007 9.2.3) based on the laboratory means  $\mu$ .

### Calculation of reproducibility standard deviation $s_R$

The reproducibility standard deviation  $s_R$  was calculated using the Q-method (ISO/TS 20612:2007 9.2.3).

### Calculation of repeatability standard deviation $s_r$

The repeatability standard deviation  $s_r$  was also calculated using the Q-method.

### Uncertainty of Mean $U$

The uncertainty of mean  $U$  for  $k=2$  (95% confidence level) was calculated from the reproducibility standard deviation  $s_R$  and the laboratories  $p$  with valid data according DIN ISO 13528:2009-01 and Nordtest TR 537 ed. 3.1:

$$(1) \quad U = 2 * 1.25 * \frac{s_R}{\sqrt{p}}$$

### Laboratory performance

Laboratory proficiency assessment was based on z-scores. From all laboratory means  $\mu$  the **z-score**  $z$  was calculated:

$$(2) \quad z = \frac{m - \mu}{s_R}$$

$m$	Mean value of all laboratories (assigned value)
$\mu$	Mean value of individual laboratory
$s_R$	Reproducibility standard deviation

### Assessment on z-scores:

$ z  \leq 2.0$	indicates, satisfactory' performance = generates no signal
$2.0 <  z  < 3.0$	indicates, questionable' performance = generates a warning signal
$ z  \geq 3.0$	indicates, unsatisfactory' performance = generates an action signal

All laboratory means  $\mu$  with  $|z| \geq 2$  were marked with an 'E'. z-scores with  $3 \geq |z| \geq 2$  were highlighted with a yellow color, z-scores with  $|z| \geq 3$  were highlighted with a red color.

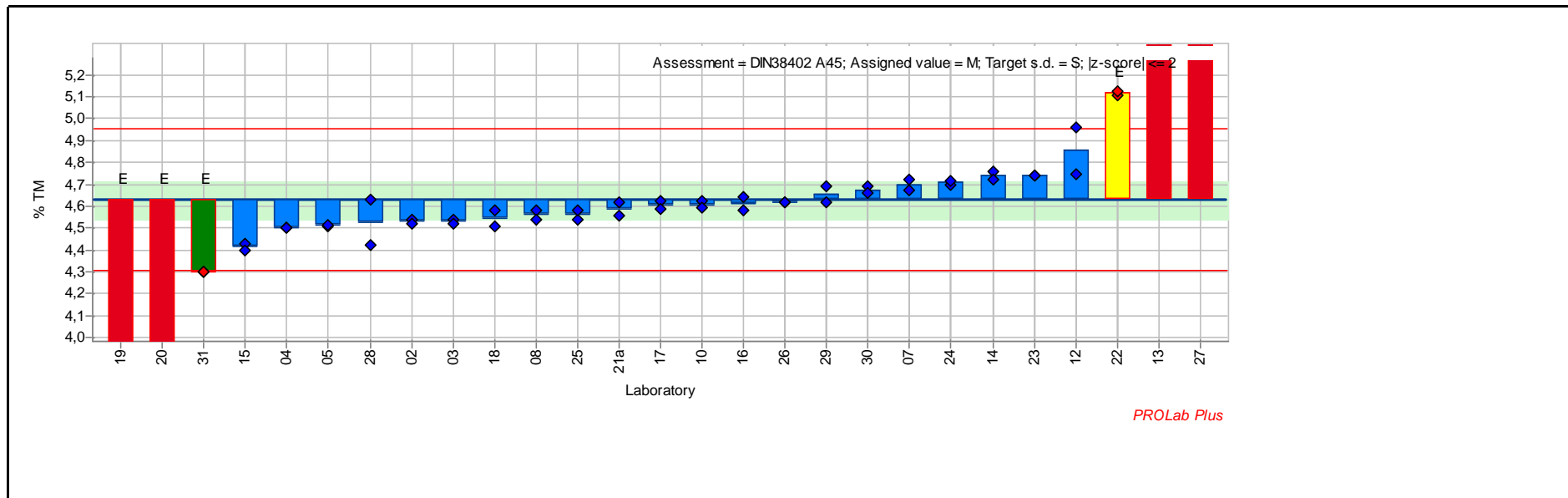
RV123

## Summary results



<b>Sample:</b>	<b>FLX-CRM 123</b>	<b>Reprod. s.d.</b>	<b>0,162 % TM</b>
<b>Measurand:</b>	<b>Al2O3</b>	<b>Repeat. s.d</b>	<b>0,041 % TM</b>
<b>Mean ± U(Mean):</b>	<b>4,630 ± 0,084 % TM</b>	<b>Range of tolerance:</b>	<b>4,306 - 4,954 % TM ( z-score  ≤ 2,0)</b>
<b>No. of laboratories:</b>	<b>23</b>	<b>Sample</b>	<b>DIN 38402 A45</b>
<b>Assigned value</b>	<b>4,630 % TM (Empirical value)</b>	<b>Target s.d.</b>	<b>0,162 % TM (Empirical value)</b>

E



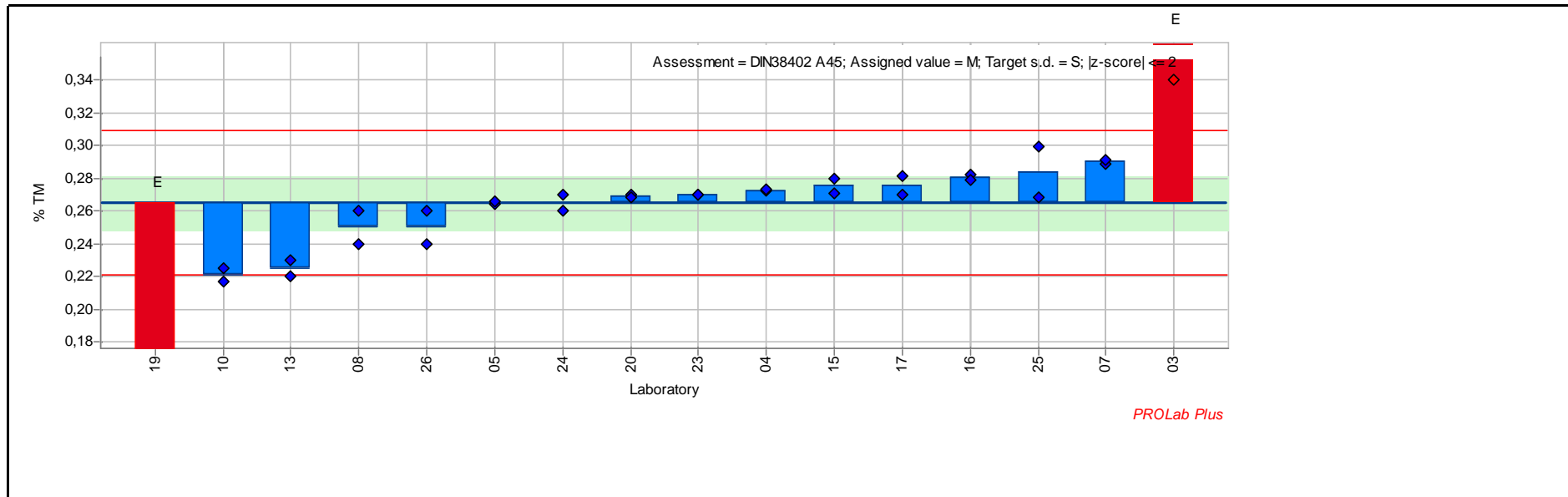
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	4,530	0,012	-0,6	4,538	4,521	no accreditation	XRF (fusion)		
03	4,530	0,014	-0,6	4,540	4,520	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
04	4,500	0,000	-0,8	4,500	4,500	no accreditation	XRF (fusion)		
05	4,512	0,007	-0,7	4,507	4,517	ISO 17025	XRF (fusion)		
07	4,695	0,035	0,4	4,670	4,720	ISO 17025	XRF (fusion)		
08	4,560	0,028	-0,4	4,580	4,540	no accreditation	XRF (fusion)		
10	4,609	0,025	-0,1	4,626	4,591	ISO 17025	XRF (fusion)		
12	4,854	0,151	1,4	4,747	4,960	ISO 17025	ICP-OES		
13	5,970	0,113	8,3	5,890	6,050	ISO 17025	XRF (fusion)		E
14	4,738	0,025	0,7	4,756	4,720	no accreditation	XRF (fusion)		
15	4,415	0,021	-1,3	4,430	4,400	no accreditation	XRF (Pellet) info only		
16	4,611	0,042	-0,1	4,582	4,641	ISO 17025	XRF (fusion)		
17	4,603	0,025	-0,2	4,621	4,585	ISO 17025	XRF (fusion)		
18	4,544	0,056	-0,5	4,505	4,584	no accreditation	XRF (fusion)		
19	3,511	0,160	-6,9	3,398	3,624	ISO 17025	XRF (fusion)		E
20	3,555	0,007	-6,6	3,560	3,550	no accreditation	XRF (Pellet) info only		E
21a	4,585	0,043	-0,3	4,615	4,554	no accreditation	XRF (fusion)		
22	5,118	0,013	3,0	5,109	5,127	no accreditation	XRF (fusion)		E
23	4,740	0,000	0,7	4,740	4,740	ISO 17025	XRF (fusion)		
24	4,707	0,013	0,5	4,698	4,717	no accreditation	XRF (fusion)		
25	4,560	0,028	-0,4	4,540	4,580	no accreditation	XRF (fusion)		
26	4,620	0,000	-0,1	4,620	4,620	no accreditation	Standardless info only		
27	9,412	0,049	29,5	9,377	9,447	no accreditation	XRF (fusion)		E
28	4,527	0,145	-0,6	4,630	4,425	no accreditation	XRF (fusion)		
29	4,652	0,052	0,1	4,689	4,615	no accreditation	XRF (fusion)		
30	4,675	0,021	0,3	4,690	4,660	no accreditation	XRF (fusion)		
31	4,300	0,000	-2,0	4,300	4,300	no accreditation	other	Wet Analysys	E

RV123

**Sample:** FLX-CRM 123      **Reprod. s.d.:** 0,022 % TM  
**Measurand:** BaO      **Repeat. s.d.:** 0,008 % TM  
**Mean ± U(Mean):** 0,265 ± 0,016 % TM      **Range of tolerance:** 0,220 - 0,310 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 12      **Sample:** DIN 38402 A45  
**Assigned value:** 0,265 % TM (Empirical value)      **Target s.d.:** 0,022 % TM (Empirical value)



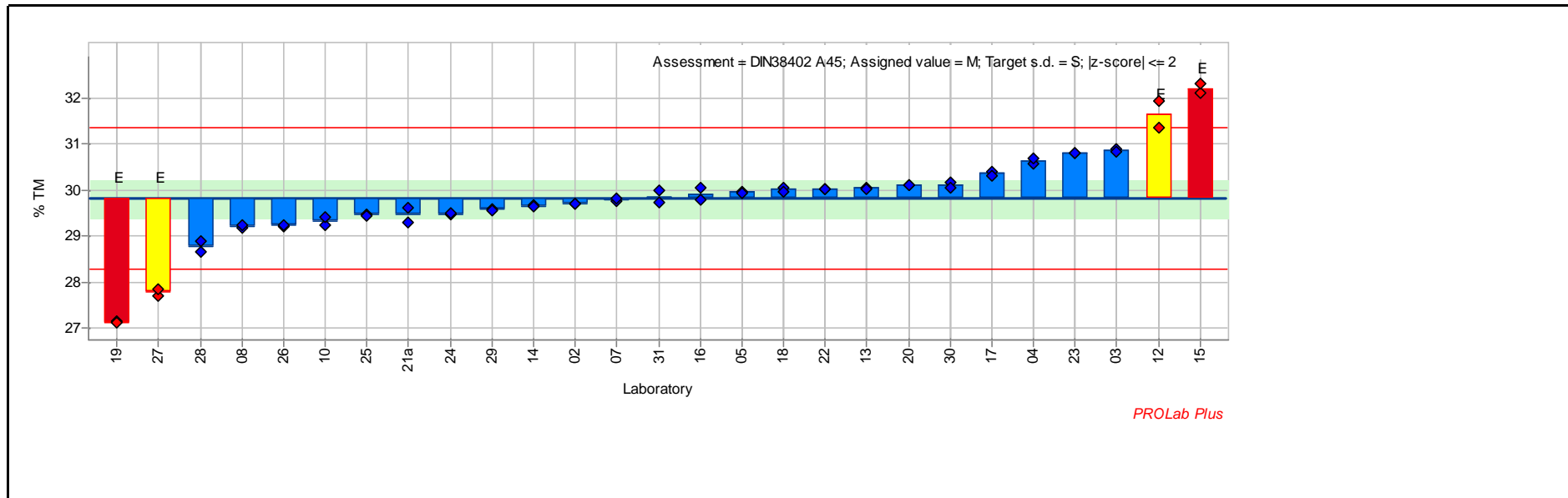
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,365	0,035	4,5	0,390	0,340	no accreditation	Standardless info only		E
04	0,273	0,001	0,3	0,272	0,273	no accreditation	XRF (fusion)		
05	0,265	0,001	0,0	0,264	0,266	ISO 17025	ICP-OES		
07	0,290	0,001	1,1	0,289	0,291	ISO 17025	ICP-OES		
08	0,250	0,014	-0,7	0,260	0,240	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,221	0,006	-2,0	0,225	0,217	ISO 17025	XRF (fusion)		
13	0,225	0,007	-1,8	0,220	0,230	ISO 17025	XRF (fusion)		
15	0,276	0,006	0,5	0,271	0,280	no accreditation	XRF (Pellet) info only		
16	0,280	0,002	0,7	0,282	0,279	ISO 17025	XRF (fusion)		
17	0,276	0,008	0,5	0,270	0,281	ISO 17025	XRF (fusion)		
19	0,138	0,002	-5,7	0,136	0,139	ISO 17025	XRF (fusion)		E
20	0,269	0,001	0,2	0,270	0,268	no accreditation	XRF (Pellet) info only		
23	0,270	0,000	0,2	0,270	0,270	no accreditation	ICP-OES		
24	0,265	0,007	0,0	0,270	0,260	no accreditation	XRF (fusion)		
25	0,283	0,022	0,8	0,268	0,299	no accreditation	XRF (fusion)		
26	0,250	0,014	-0,7	0,260	0,240	no accreditation	Standardless info only		

RV123

**Sample:** FLX-CRM 123      **Reprod. s.d.:** 0,768 % TM  
**Measurand:** CaO      **Repeat. s.d.:** 0,064 % TM  
**Mean ± U(Mean):** 29,819 ± 0,400 % TM      **Range of tolerance:** 28,283 - 31,355 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value:** 29,819 % TM (Empirical value)      **Target s.d.:** 0,768 % TM (Empirical value)



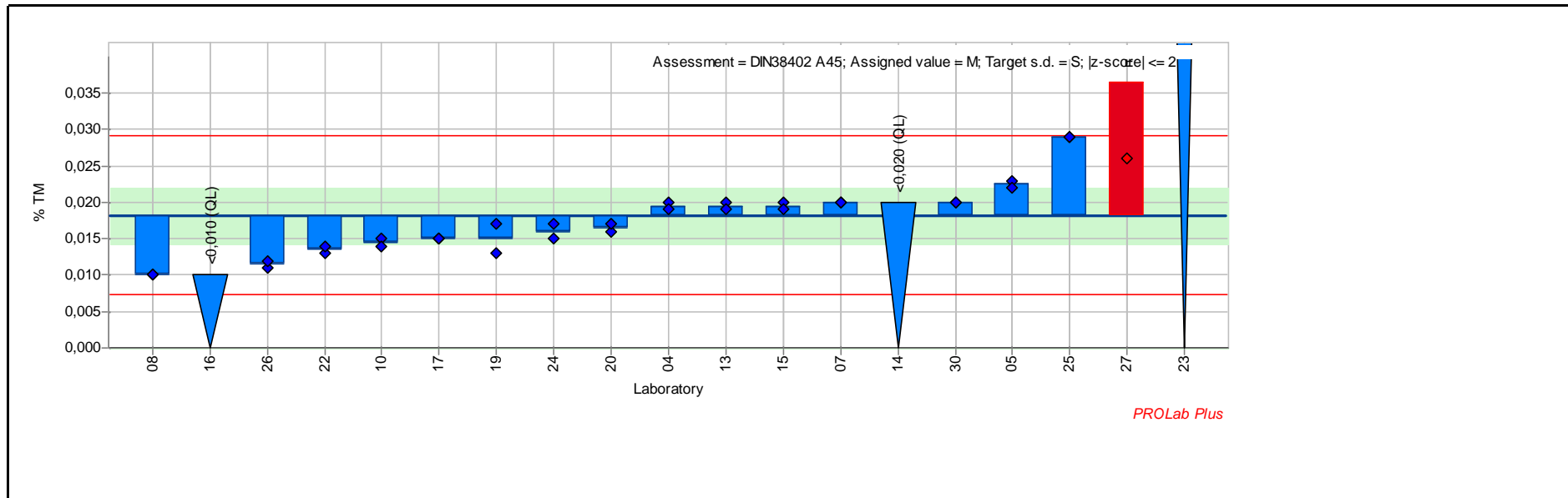
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	29,698	0,011	-0,2	29,691	29,706	no accreditation	XRF (fusion)		
03	30,860	0,028	1,4	30,880	30,840	no accreditation	XRF (fusion)		
04	30,629	0,094	1,1	30,562	30,695	no accreditation	XRF (fusion)		
05	29,953	0,021	0,2	29,968	29,938	ISO 17025	XRF (fusion)		
07	29,795	0,049	0,0	29,760	29,830	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	29,205	0,049	-0,8	29,170	29,240	no accreditation	XRF (fusion)		
10	29,328	0,108	-0,6	29,251	29,404	ISO 17025	XRF (fusion)		
12	31,640	0,397	2,4	31,921	31,360	ISO 17025	ICP-OES	CaOtotal	E
13	30,040	0,028	0,3	30,060	30,020	ISO 17025	XRF (fusion)		
14	29,655	0,010	-0,2	29,662	29,648	no accreditation	XRF (fusion)		
15	32,200	0,141	3,1	32,100	32,300	no accreditation	XRF (Pellet) info only		E
16	29,912	0,189	0,1	29,778	30,045	ISO 17025	XRF (fusion)		
17	30,360	0,063	0,7	30,404	30,315	ISO 17025	XRF (fusion)		
18	30,009	0,043	0,2	30,039	29,978	no accreditation	XRF (fusion)		
19	27,129	0,020	-3,5	27,143	27,115	ISO 17025	XRF (fusion)		E
20	30,100	0,000	0,4	30,100	30,100	no accreditation	XRF (Pellet) info only		
21a	29,462	0,234	-0,5	29,628	29,297	no accreditation	XRF (fusion)		
22	30,017	0,008	0,3	30,011	30,023	no accreditation	XRF (fusion)		
23	30,800	0,000	1,3	30,800	30,800	ISO 17025	XRF (fusion)		
24	29,485	0,008	-0,4	29,479	29,491	no accreditation	XRF (fusion)		
25	29,460	0,028	-0,5	29,480	29,440	no accreditation	XRF (fusion)		
26	29,235	0,021	-0,8	29,220	29,250	no accreditation	Standardless info only		
27	27,777	0,088	-2,7	27,715	27,839	no accreditation	XRF (fusion)		E
28	28,788	0,163	-1,3	28,672	28,903	no accreditation	XRF (fusion)		
29	29,578	0,030	-0,3	29,600	29,557	no accreditation	XRF (fusion)		
30	30,115	0,078	0,4	30,170	30,060	no accreditation	XRF (fusion)		
31	29,860	0,198	0,1	29,720	30,000	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 123      **Reprod. s.d.:** 0,005 % TM  
**Measurand:** Cr2O3      **Repeat. s.d.:** 0,001 % TM  
**Mean ± U(Mean):** 0,018 ± 0,004 % TM      **Range of tolerance:** 0,007 - 0,029 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 13      **Sample:** DIN 38402 A45  
**Assigned value:** 0,018 % TM (Empirical value)      **Target s.d.:** 0,005 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
04	0,020	0,001	0,2	0,020	0,019	no accreditation	XRF (fusion)		
05	0,022	0,001	0,8	0,023	0,022	ISO 17025	XRF (fusion)		
07	0,020	0,000	0,3	0,020	0,020	ISO 17025	XRF (fusion)		
08	0,010	0,000	-1,5	0,010	0,010	no accreditation	XRF (fusion)		
10	0,014	0,001	-0,7	0,015	0,014	ISO 17025	XRF (fusion)		

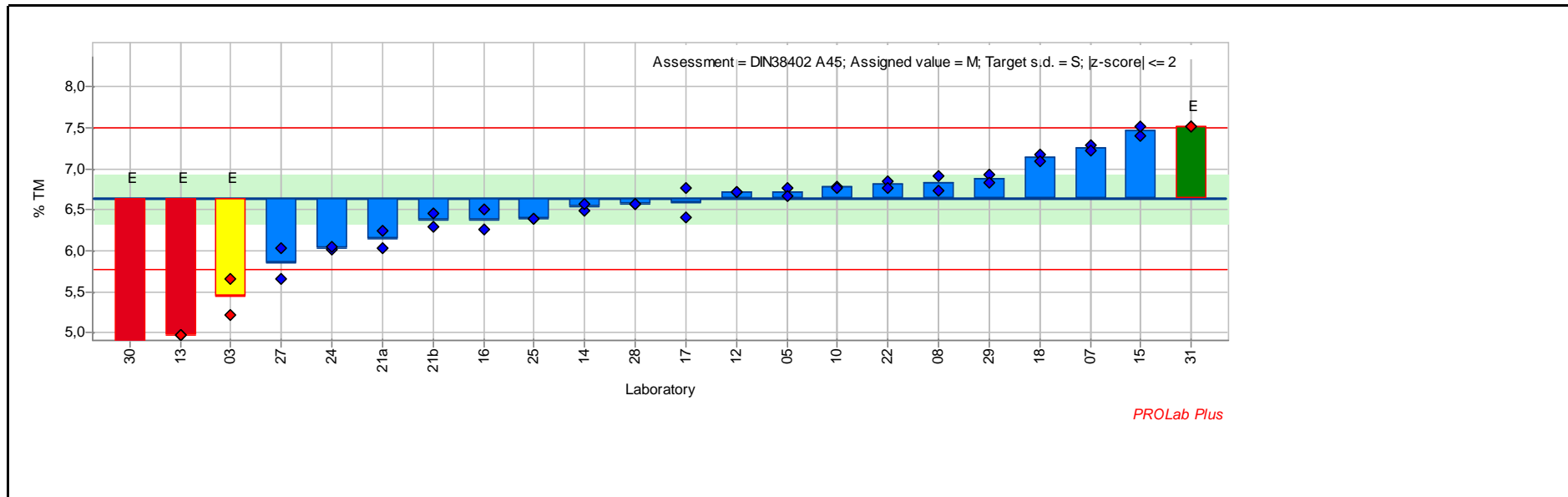


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
13	0,020	0,001	0,2	0,020	0,019	ISO 17025	XRF (fusion)		
14				<0,020	<0,020	no accreditation	XRF (fusion)		
15	0,020	0,001	0,2	0,020	0,019	no accreditation	XRF (Pellet) info only		
16				<0,010	<0,010	ISO 17025	XRF (fusion)		
17	0,015	0,000	-0,6	0,015	0,015	ISO 17025	XRF (fusion)		
19	0,015	0,003	-0,6	0,013	0,017	ISO 17025	XRF (fusion)		
20	0,017	0,001	-0,3	0,016	0,017	no accreditation	XRF (Pellet) info only		
22	0,013	0,001	-0,9	0,013	0,014	no accreditation	XRF (fusion)		
23				<0,100	<0,100	ISO 17025	XRF (fusion)		
24	0,016	0,001	-0,4	0,017	0,015	no accreditation	XRF (fusion)		
25	0,029	0,000	2,0	0,029	0,029	no accreditation	XRF (fusion)		
26	0,011	0,001	-1,2	0,011	0,012	no accreditation	Standardless info only		
27	0,036	0,015	3,4	0,047	0,026	no accreditation	XRF (fusion)		E
30	0,020	0,000	0,3	0,020	0,020	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 123      **Reprod. s.d.:** 0,432 % TM  
**Measurand:** F      **Repeat. s.d.:** 0,093 % TM  
**Mean ± U(Mean):** 6,636 ± 0,299 % TM      **Range of tolerance:** 5,773 - 7,500 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 13      **Sample:** DIN 38402 A45  
**Assigned value:** 6,636 % TM (Empirical value)      **Target s.d.:** 0,432 % TM (Empirical value)



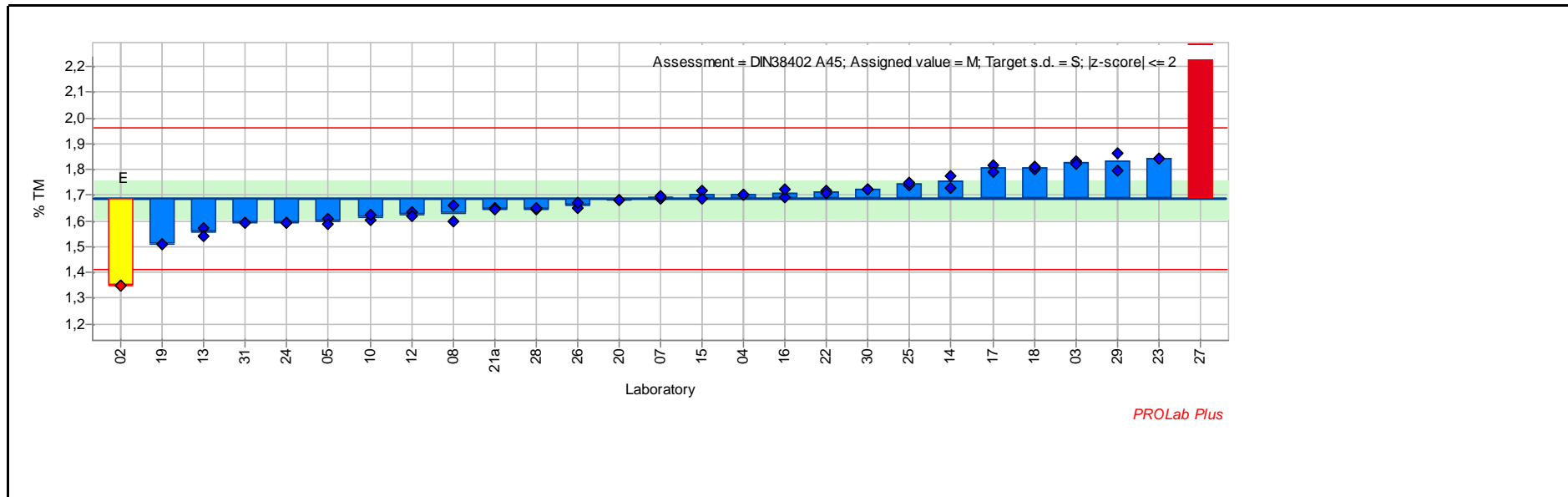
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	5,440	0,311	-2,8	5,220	5,660	no accreditation	XRF (Pellet) info only		E
05	6,720	0,063	0,2	6,765	6,676	ISO 17025	other	Fluorid wurde	
07	7,253	0,045	1,4	7,285	7,221	ISO 17025	Ion selective electrode		
08	6,830	0,127	0,4	6,740	6,920	no accreditation	XRF (fusion)		
10	6,775	0,004	0,3	6,778	6,772	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
12	6,715	0,007	0,2	6,720	6,710	ISO 17025	other	Potentiometry	
13	4,970	0,000	-3,9	4,970	4,970	ISO 17025	XRF (Pellet) info only		E
14	6,532	0,066	-0,2	6,486	6,579	no accreditation	XRF (fusion)		
15	7,465	0,078	1,9	7,410	7,520	no accreditation	XRF (Pellet) info only		
16	6,383	0,180	-0,6	6,510	6,255	ISO 17025	other	Melting digestion,	
17	6,592	0,251	-0,1	6,770	6,415	ISO 17025	XRF (fusion)		
18	7,133	0,056	1,2	7,173	7,094	no accreditation	XRF (fusion)		
21a	6,141	0,156	-1,1	6,030	6,251	no accreditation	XRF (fusion)		
21b	6,370	0,114	-0,6	6,450	6,289	no accreditation	Ion selective electrode		
22	6,809	0,066	0,4	6,856	6,762	no accreditation	Ion selective electrode		
24	6,031	0,022	-1,4	6,016	6,047	no accreditation	XRF (Pellet) info only		
25	6,400	0,000	-0,5	6,400	6,400	no accreditation	XRF (fusion)		
27	5,851	0,264	-1,8	6,038	5,665	no accreditation	XRF (fusion)		
28	6,569	0,004	-0,2	6,566	6,572	no accreditation	XRF (fusion)		
29	6,880	0,071	0,6	6,930	6,830	no accreditation	Ion selective electrode		
30	1,200	0,071	-12,6	1,150	1,250	no accreditation	other	Potentiometry	E
31	7,520	0,000	2,0	7,520	7,520	no accreditation	other	Wet Analysys	E

RV123

**Sample:** FLX-CRM 123      **Reprod. s.d.:** 0,138 % TM  
**Measurand:** Fe2O3      **Repeat. s.d.:** 0,013 % TM  
**Mean ± U(Mean):** 1,686 ± 0,073 % TM      **Range of tolerance:** 1,411 - 1,961 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 22      **Sample:** DIN 38402 A45  
**Assigned value:** 1,686 % TM (Empirical value)      **Target s.d.:** 0,138 % TM (Empirical value)



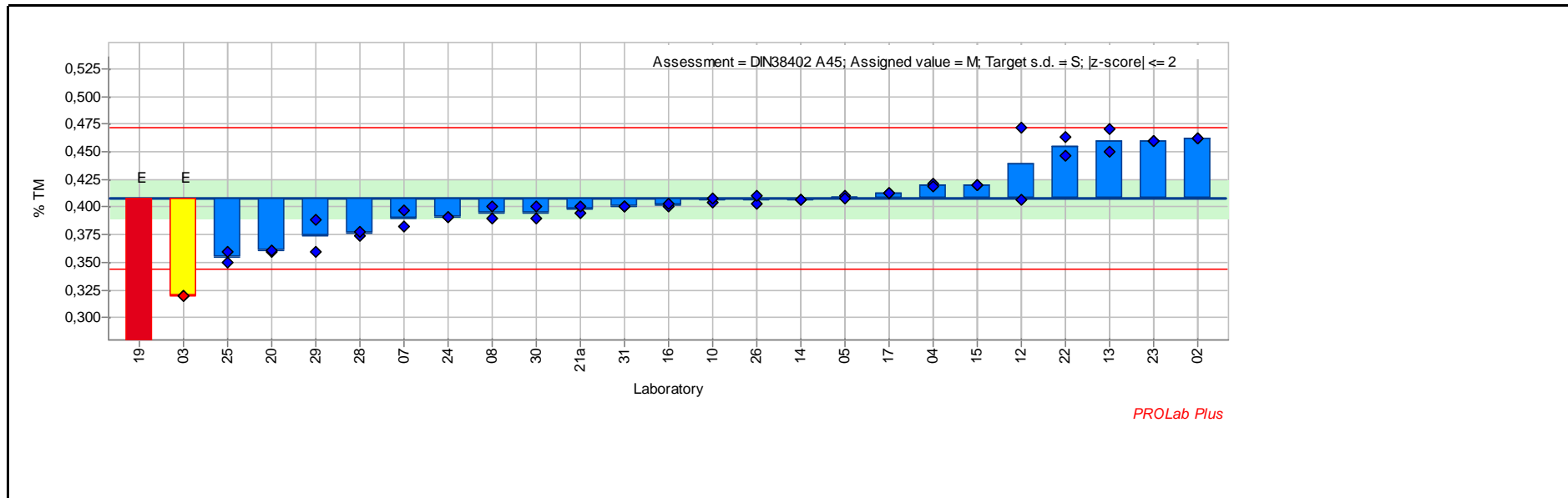
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	1,348	0,001	-2,5	1,347	1,348	no accreditation	XRF (fusion)		E
03	1,825	0,007	1,0	1,830	1,820	no accreditation	XRF (fusion)		
04	1,704	0,001	0,1	1,704	1,703	no accreditation	XRF (fusion)		
05	1,599	0,016	-0,6	1,610	1,588	ISO 17025	XRF (fusion)		
07	1,691	0,010	0,0	1,684	1,698	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	1,630	0,042	-0,4	1,600	1,660	no accreditation	XRF (fusion)		
10	1,614	0,015	-0,5	1,603	1,624	ISO 17025	XRF (fusion)		
12	1,626	0,008	-0,4	1,632	1,620	ISO 17025	other	AAS +	
13	1,555	0,021	-1,0	1,570	1,540	ISO 17025	XRF (fusion)		
14	1,753	0,033	0,5	1,776	1,730	no accreditation	XRF (fusion)		
15	1,702	0,021	0,1	1,716	1,687	no accreditation	XRF (Pellet) info only		
16	1,707	0,021	0,1	1,692	1,721	ISO 17025	XRF (fusion)		
17	1,804	0,016	0,9	1,815	1,792	ISO 17025	XRF (fusion)		
18	1,806	0,006	0,9	1,802	1,811	no accreditation	XRF (fusion)		
19	1,510	0,000	-1,3	1,510	1,510	ISO 17025	XRF (fusion)		
20	1,680	0,000	0,0	1,680	1,680	no accreditation	XRF (Pellet) info only		
21a	1,646	0,006	-0,3	1,650	1,642	no accreditation	XRF (fusion)		
22	1,710	0,007	0,2	1,715	1,705	no accreditation	XRF (fusion)		
23	1,840	0,000	1,1	1,840	1,840	ISO 17025	XRF (fusion)		
24	1,593	0,003	-0,7	1,595	1,591	no accreditation	XRF (fusion)		
25	1,745	0,007	0,4	1,740	1,750	no accreditation	XRF (fusion)		
26	1,660	0,014	-0,2	1,650	1,670	no accreditation	Standardless info only		
27	4,583	0,107	21,1	4,659	4,508	no accreditation	XRF (fusion)		E
28	1,647	0,006	-0,3	1,643	1,651	no accreditation	XRF (fusion)		
29	1,829	0,050	1,0	1,865	1,794	no accreditation	XRF (fusion)		
30	1,720	0,000	0,2	1,720	1,720	no accreditation	XRF (fusion)		
31	1,590	0,000	-0,7	1,590	1,590	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 123                      **Reprod. s.d.:** 0,032 % TM  
**Measurand:** K2O                              **Repeat. s.d.:** 0,005 % TM  
**Mean ± U(Mean):** 0,408 ± 0,017 % TM      **Range of tolerance:** 0,344 - 0,472 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 21                      **Sample:** DIN 38402 A45  
**Assigned value:** 0,408 % TM (Empirical value)      **Target s.d.:** 0,032 % TM (Empirical value)



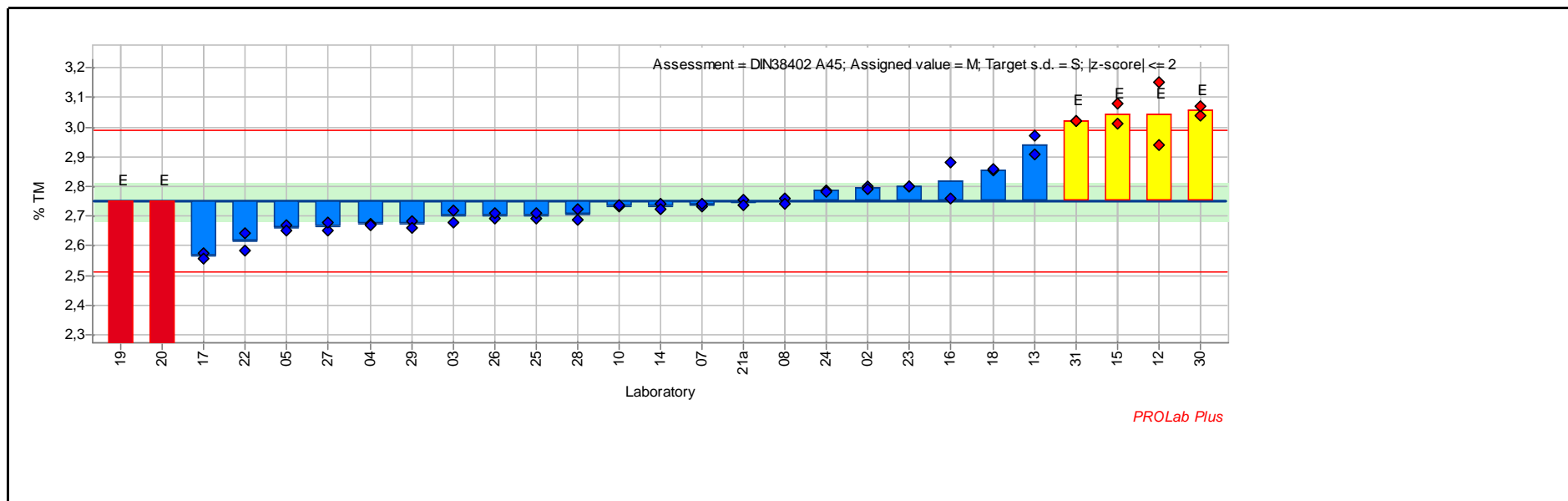
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,462	0,000	1,7	0,462	0,462	no accreditation	XRF (fusion)		
03	0,320	0,000	-2,7	0,320	0,320	no accreditation	XRF (fusion)		E
04	0,419	0,002	0,4	0,421	0,418	no accreditation	XRF (fusion)		
05	0,409	0,001	0,0	0,410	0,408	ISO 17025	ICP-OES		
07	0,390	0,011	-0,6	0,382	0,397	ISO 17025	ICP-OES		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,395	0,007	-0,4	0,390	0,400	no accreditation	XRF (fusion)		
10	0,406	0,003	-0,1	0,404	0,408	ISO 17025	XRF (fusion)		
12	0,440	0,046	1,0	0,472	0,407	ISO 17025	AAS		
13	0,460	0,014	1,6	0,450	0,470	ISO 17025	XRF (fusion)		
14	0,407	0,000	0,0	0,407	0,407	no accreditation	XRF (fusion)		
15	0,420	0,000	0,4	0,420	0,420	no accreditation	XRF (Pellet) info only		
16	0,402	0,002	-0,2	0,400	0,403	ISO 17025	XRF (fusion)		
17	0,412	0,001	0,2	0,412	0,413	ISO 17025	XRF (fusion)		
19	0,209	0,001	-6,2	0,210	0,208	ISO 17025	XRF (fusion)		E
20	0,360	0,001	-1,5	0,360	0,361	no accreditation	XRF (Pellet) info only		
21a	0,398	0,004	-0,3	0,395	0,400	no accreditation	XRF (fusion)		
22	0,455	0,012	1,5	0,446	0,463	no accreditation	ICP-OES		
23	0,460	0,000	1,6	0,460	0,460	ISO 17025	XRF (fusion)		
24	0,391	0,000	-0,5	0,391	0,391	no accreditation	XRF (fusion)		
25	0,355	0,007	-1,6	0,360	0,350	no accreditation	XRF (fusion)		
26	0,406	0,005	0,0	0,403	0,410	no accreditation	Standardless info only		
28	0,376	0,003	-1,0	0,374	0,378	no accreditation	XRF (fusion)		
29	0,374	0,020	-1,1	0,388	0,360	no accreditation	XRF (fusion)		
30	0,395	0,007	-0,4	0,390	0,400	no accreditation	XRF (fusion)		
31	0,400	0,000	-0,2	0,400	0,400	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 123                      **Reprod. s.d.:** 0,119 % TM  
**Measurand:** MgO                              **Repeat. s.d.:** 0,020 % TM  
**Mean ± U(Mean):** 2,750 ± 0,062 % TM                      **Range of tolerance:** 2,511 - 2,989 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 23                      **Sample:** DIN 38402 A45  
**Assigned value:** 2,750 % TM (Empirical value)                      **Target s.d.:** 0,119 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	2,796	0,004	0,4	2,798	2,793	no accreditation	XRF (fusion)		
03	2,700	0,028	-0,4	2,720	2,680	no accreditation	XRF (fusion)		
04	2,671	0,004	-0,7	2,674	2,669	no accreditation	XRF (fusion)		
05	2,660	0,014	-0,8	2,670	2,650	ISO 17025	XRF (fusion)		
07	2,735	0,007	-0,1	2,730	2,740	ISO 17025	XRF (fusion)		

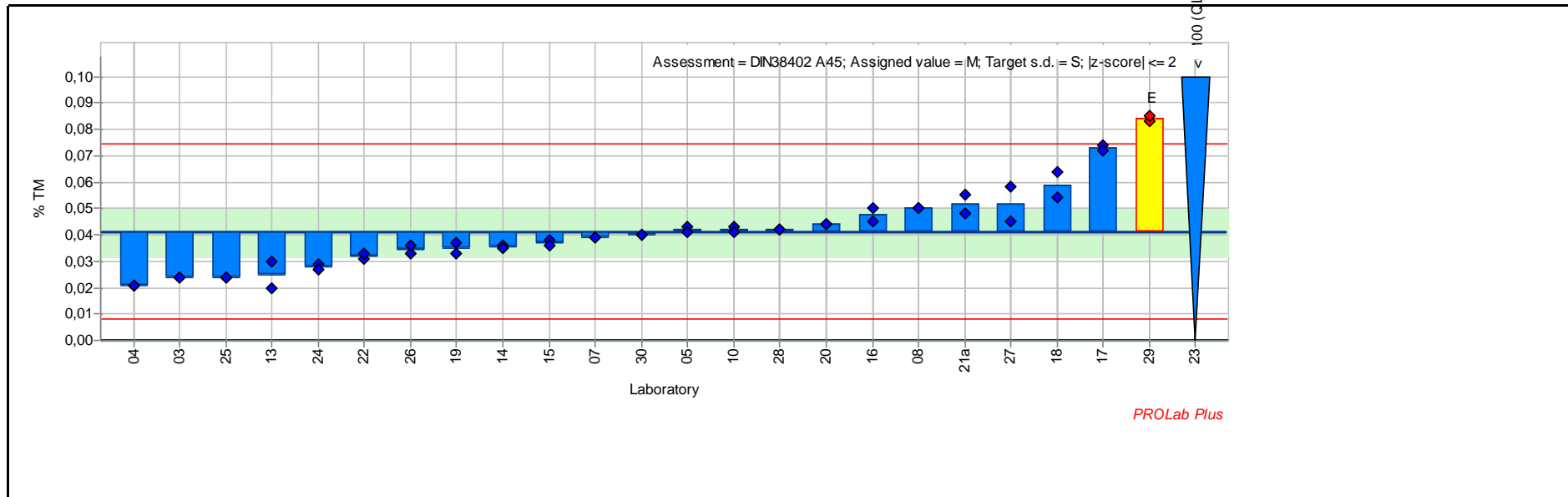


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	2,750	0,014	0,0	2,760	2,740	no accreditation	XRF (fusion)		
10	2,734	0,004	-0,1	2,731	2,736	ISO 17025	XRF (fusion)		
12	3,045	0,148	2,5	2,941	3,150	ISO 17025	ICP-OES		E
13	2,940	0,042	1,6	2,970	2,910	ISO 17025	XRF (fusion)		
14	2,734	0,013	-0,1	2,743	2,725	no accreditation	XRF (fusion)		
15	3,045	0,049	2,5	3,080	3,010	no accreditation	XRF (Pellet) info only		E
16	2,820	0,088	0,6	2,758	2,882	ISO 17025	XRF (fusion)		
17	2,564	0,013	-1,6	2,574	2,555	ISO 17025	XRF (fusion)		
18	2,856	0,006	0,9	2,852	2,860	no accreditation	XRF (fusion)		
19	1,765	0,006	-8,2	1,761	1,769	ISO 17025	XRF (fusion)		E
20	2,150	0,014	-5,0	2,140	2,160	no accreditation	XRF (Pellet) info only		E
21a	2,747	0,011	0,0	2,755	2,739	no accreditation	XRF (fusion)		
22	2,615	0,042	-1,1	2,644	2,585	no accreditation	XRF (fusion)		
23	2,800	0,000	0,4	2,800	2,800	ISO 17025	XRF (fusion)		
24	2,784	0,001	0,3	2,785	2,784	no accreditation	XRF (fusion)		
25	2,702	0,013	-0,4	2,692	2,711	no accreditation	XRF (fusion)		
26	2,700	0,014	-0,4	2,690	2,710	no accreditation	Standardless info only		
27	2,666	0,018	-0,7	2,653	2,679	no accreditation	XRF (fusion)		
28	2,706	0,024	-0,4	2,723	2,689	no accreditation	XRF (fusion)		
29	2,671	0,016	-0,7	2,683	2,660	no accreditation	XRF (fusion)		
30	3,055	0,021	2,6	3,040	3,070	no accreditation	XRF (fusion)		E
31	3,020	0,000	2,3	3,020	3,020	no accreditation	other	Wet Analysys	E

RV123

**Sample:** FLX-CRM 123      **Reprod. s.d.:** 0,017 % TM  
**Measurand:** MnO2      **Repeat. s.d.:** 0,002 % TM  
**Mean ± U(Mean):** 0,041 ± 0,009 % TM      **Range of tolerance:** 0,008 - 0,074 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 20      **Sample:** DIN 38402 A45  
**Assigned value:** 0,041 % TM (Empirical value)      **Target s.d.:** 0,017 % TM (Empirical value)



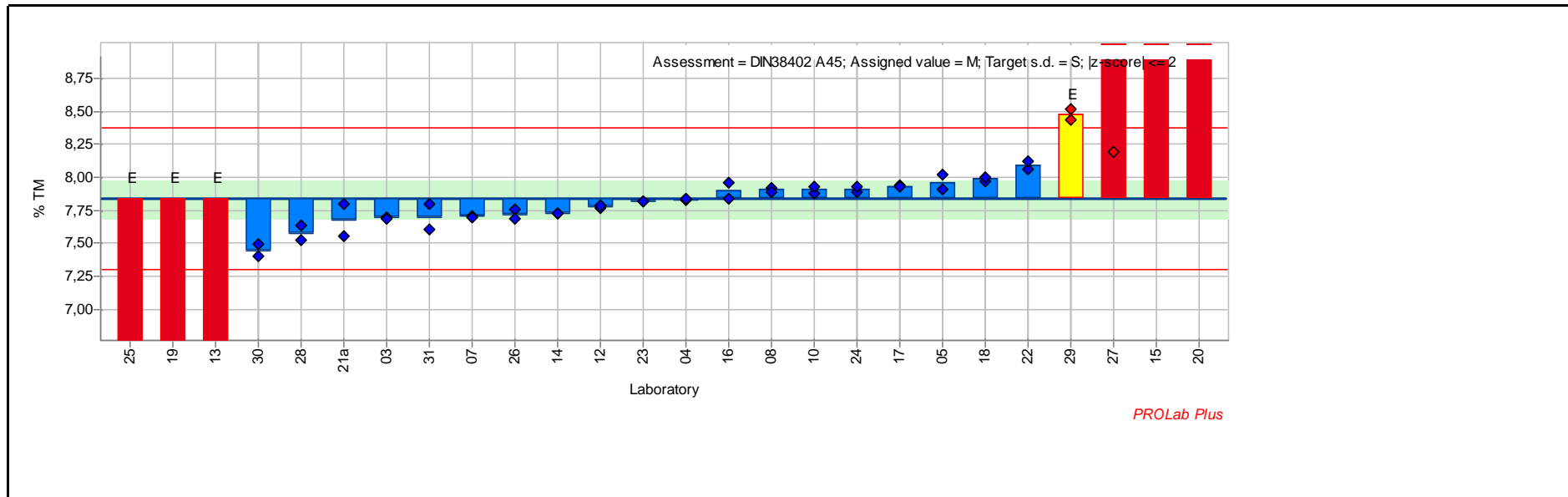
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,024	0,000	-1,0	0,024	0,024	no accreditation	XRF (fusion)		
04	0,021	0,000	-1,2	0,021	0,021	no accreditation	XRF (fusion)		
05	0,042	0,001	0,1	0,043	0,041	ISO 17025	XRF (fusion)		
07	0,039	0,000	-0,1	0,039	0,039	ISO 17025	XRF (fusion)		
08	0,050	0,000	0,5	0,050	0,050	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,042	0,001	0,1	0,043	0,041	ISO 17025	XRF (fusion)		
13	0,025	0,007	-1,0	0,020	0,030	ISO 17025	XRF (fusion)		
14	0,036	0,001	-0,3	0,036	0,035	no accreditation	XRF (fusion)		
15	0,037	0,001	-0,2	0,038	0,036	no accreditation	XRF (Pellet) info only		
16	0,048	0,004	0,4	0,050	0,045	ISO 17025	XRF (fusion)		
17	0,073	0,001	1,9	0,074	0,072	ISO 17025	XRF (fusion)		
18	0,059	0,007	1,1	0,054	0,064	no accreditation	XRF (fusion)		
19	0,035	0,003	-0,4	0,033	0,037	ISO 17025	XRF (fusion)		
20	0,044	0,000	0,2	0,044	0,044	no accreditation	XRF (Pellet) info only		
21a	0,052	0,005	0,6	0,055	0,048	no accreditation	XRF (fusion)		
22	0,032	0,001	-0,5	0,031	0,033	no accreditation	XRF (fusion)		
23				<0,100	<0,100	ISO 17025	XRF (fusion)		
24	0,028	0,001	-0,8	0,029	0,027	no accreditation	XRF (fusion)		
25	0,024	0,000	-1,0	0,024	0,024	no accreditation	XRF (fusion)		
26	0,035	0,002	-0,4	0,033	0,036	no accreditation	Standardless info only		
27	0,052	0,009	0,6	0,058	0,045	no accreditation	XRF (fusion)		
28	0,042	0,000	0,1	0,042	0,042	no accreditation	XRF (fusion)		
29	0,084	0,001	2,6	0,083	0,085	no accreditation	XRF (fusion)		E
30	0,040	0,000	-0,1	0,040	0,040	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 123      **Reprod. s.d.:** 0,269 % TM  
**Measurand:** Na2O      **Repeat. s.d.:** 0,049 % TM  
**Mean ± U(Mean):** 7,837 ± 0,146 % TM      **Range of tolerance:** 7,300 - 8,374 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 21      **Sample:** DIN 38402 A45  
**Assigned value:** 7,837 % TM (Empirical value)      **Target s.d.:** 0,269 % TM (Empirical value)



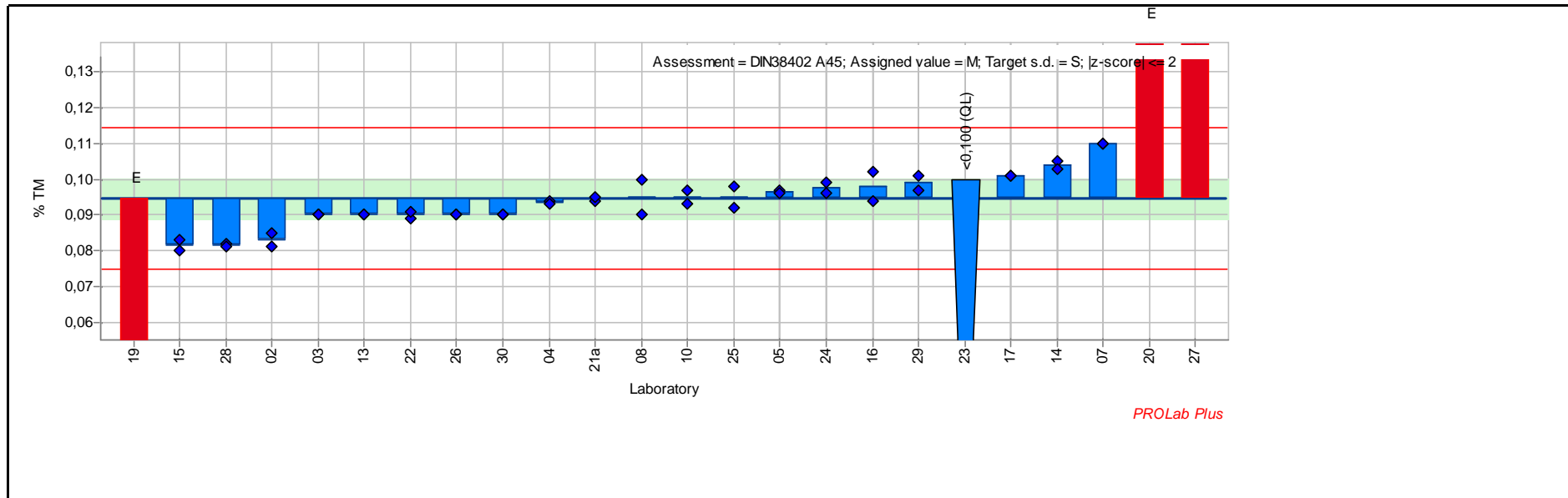
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	7,690	0,014	-0,5	7,700	7,680	no accreditation	XRF (fusion)		
04	7,831	0,011	0,0	7,823	7,838	no accreditation	XRF (fusion)		
05	7,963	0,074	0,5	7,911	8,015	ISO 17025	ICP-OES		
07	7,702	0,009	-0,5	7,708	7,695	ISO 17025	ICP-OES		
08	7,905	0,021	0,3	7,920	7,890	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	7,905	0,037	0,3	7,879	7,932	ISO 17025	XRF (fusion)		
12	7,775	0,013	-0,2	7,766	7,784	ISO 17025	AAS		
13	6,515	0,078	-4,9	6,460	6,570	ISO 17025	XRF (fusion)		E
14	7,728	0,001	-0,4	7,728	7,727	no accreditation	XRF (fusion)		
15	9,445	0,035	6,0	9,420	9,470	no accreditation	XRF (Pellet) info only		E
16	7,893	0,086	0,2	7,832	7,954	ISO 17025	XRF (fusion)		
17	7,933	0,011	0,4	7,941	7,925	ISO 17025	XRF (fusion)		
18	7,986	0,025	0,6	7,969	8,004	no accreditation	XRF (fusion)		
19	6,050	0,013	-6,7	6,040	6,059	ISO 17025	XRF (fusion)		E
20	13,450	0,354	20,9	13,200	13,700	no accreditation	XRF (Pellet) info only		E
21a	7,678	0,172	-0,6	7,556	7,799	no accreditation	AAS		
22	8,087	0,040	0,9	8,059	8,116	no accreditation	ICP-OES		
23	7,820	0,000	-0,1	7,820	7,820	ISO 17025	XRF (fusion)		
24	7,906	0,033	0,3	7,883	7,929	no accreditation	XRF (fusion)		
25	5,865	0,000	-7,3	5,865	5,865	no accreditation	XRF (Pellet) info only		E
26	7,720	0,057	-0,4	7,760	7,680	no accreditation	Standardless info only		
27	9,299	1,563	5,4	8,193	10,404	no accreditation	XRF (fusion)		E
28	7,578	0,074	-1,0	7,630	7,525	no accreditation	XRF (fusion)		
29	8,476	0,052	2,4	8,439	8,513	no accreditation	XRF (fusion)		E
30	7,445	0,064	-1,5	7,400	7,490	no accreditation	XRF (fusion)		
31	7,700	0,141	-0,5	7,800	7,600	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 123      **Reprod. s.d.:** 0,010 % TM  
**Measurand:** P2O5      **Repeat. s.d.:** 0,002 % TM  
**Mean ± U(Mean):** 0,095 ± 0,006 % TM      **Range of tolerance:** 0,075 - 0,114 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 20      **Sample:** DIN 38402 A45  
**Assigned value:** 0,095 % TM (Empirical value)      **Target s.d.:** 0,010 % TM (Empirical value)



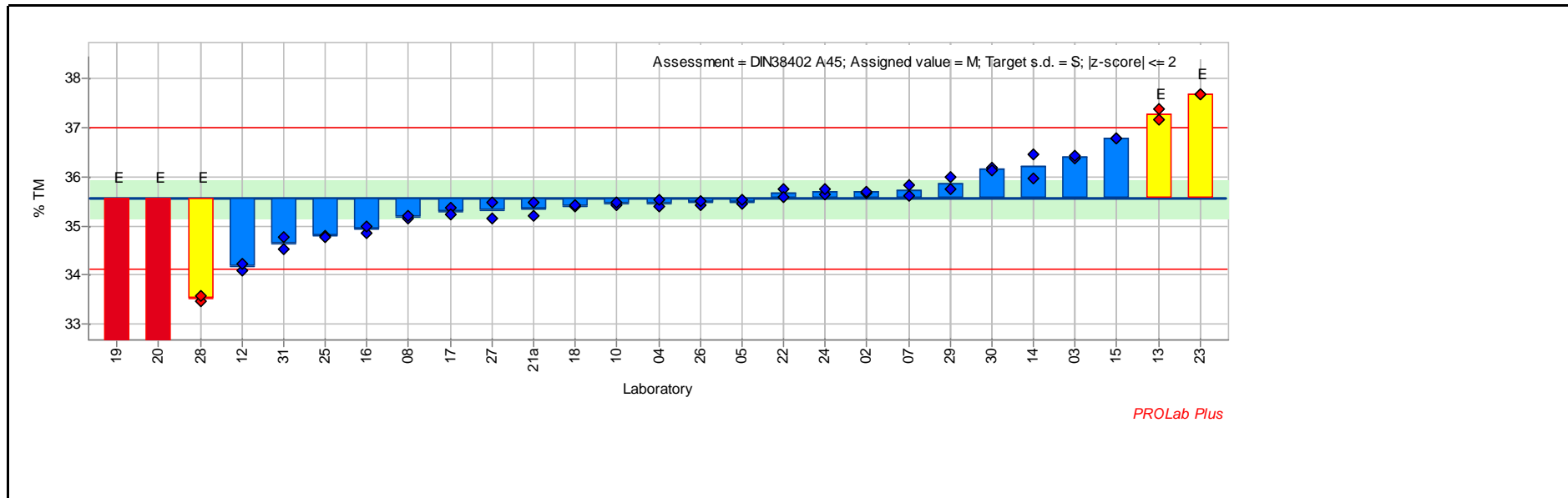
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,083	0,003	-1,2	0,081	0,085	no accreditation	XRF (fusion)		
03	0,090	0,000	-0,5	0,090	0,090	no accreditation	XRF (fusion)		
04	0,093	0,001	-0,1	0,094	0,093	no accreditation	XRF (fusion)		
05	0,097	0,001	0,2	0,097	0,096	ISO 17025	XRF (fusion)		
07	0,110	0,000	1,6	0,110	0,110	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,095	0,007	0,0	0,100	0,090	no accreditation	XRF (fusion)		
10	0,095	0,003	0,0	0,097	0,093	ISO 17025	XRF (fusion)		
13	0,090	0,000	-0,5	0,090	0,090	ISO 17025	XRF (fusion)		
14	0,104	0,001	0,9	0,105	0,103	no accreditation	XRF (fusion)		
15	0,082	0,002	-1,3	0,083	0,080	no accreditation	XRF (Pellet) info only		
16	0,098	0,006	0,3	0,102	0,094	ISO 17025	XRF (fusion)		
17	0,101	0,000	0,6	0,101	0,101	ISO 17025	XRF (fusion)		
19	0,036	0,002	-6,0	0,034	0,037	ISO 17025	XRF (fusion)		E
20	0,141	0,001	4,6	0,140	0,141	no accreditation	XRF (Pellet) info only		E
21a	0,095	0,001	0,0	0,094	0,095	no accreditation	XRF (fusion)		
22	0,090	0,001	-0,5	0,089	0,091	no accreditation	XRF (fusion)		
23				<0,100	<0,100	ISO 17025	XRF (fusion)		
24	0,098	0,002	0,3	0,099	0,096	no accreditation	XRF (fusion)		
25	0,095	0,004	0,0	0,092	0,098	no accreditation	XRF (fusion)		
26	0,090	0,000	-0,5	0,090	0,090	no accreditation	Standardless info only		
27	0,146	0,006	5,2	0,142	0,151	no accreditation	XRF (fusion)		E
28	0,082	0,001	-1,3	0,082	0,081	no accreditation	XRF (fusion)		
29	0,099	0,003	0,4	0,101	0,097	no accreditation	XRF (fusion)		
30	0,090	0,000	-0,5	0,090	0,090	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 123      **Reprod. s.d.:** 0,722 % TM  
**Measurand:** SiO2      **Repeat. s.d.:** 0,106 % TM  
**Mean ± U(Mean):** 35,562 ± 0,376 % TM      **Range of tolerance:** 34,119 - 37,006 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value:** 35,562 % TM (Empirical value)      **Target s.d.:** 0,722 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	35,695	0,021	0,2	35,680	35,709	no accreditation	XRF (fusion)		
03	36,415	0,035	1,2	36,390	36,440	no accreditation	XRF (fusion)		
04	35,467	0,091	-0,1	35,403	35,531	no accreditation	XRF (fusion)		
05	35,492	0,064	-0,1	35,447	35,537	ISO 17025	XRF (fusion)		
07	35,730	0,156	0,2	35,620	35,840	ISO 17025	XRF (fusion)		

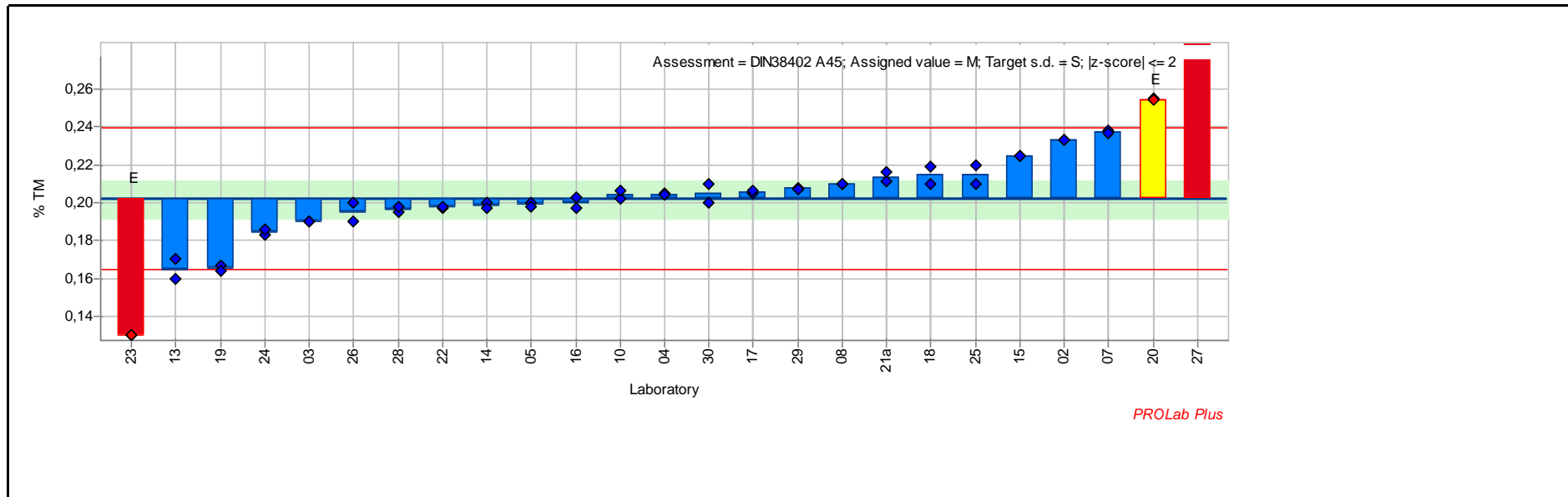


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	35,180	0,042	-0,5	35,150	35,210	no accreditation	XRF (fusion)		
10	35,458	0,027	-0,1	35,439	35,477	ISO 17025	XRF (fusion)		
12	34,162	0,082	-1,9	34,104	34,220	ISO 17025	ICP-OES		
13	37,285	0,148	2,4	37,390	37,180	ISO 17025	XRF (fusion)		E
14	36,212	0,359	0,9	36,465	35,958	no accreditation	XRF (fusion)		
15	36,800	0,000	1,7	36,800	36,800	no accreditation	XRF (Pellet) info only		
16	34,925	0,084	-0,9	34,865	34,984	ISO 17025	XRF (fusion)		
17	35,303	0,082	-0,4	35,361	35,245	ISO 17025	XRF (fusion)		
18	35,410	0,013	-0,2	35,401	35,419	no accreditation	XRF (fusion)		
19	27,943	0,057	-10,6	27,983	27,902	ISO 17025	XRF (fusion)		E
20	29,500	0,283	-8,4	29,700	29,300	no accreditation	XRF (Pellet) info only		E
21a	35,346	0,179	-0,3	35,472	35,219	no accreditation	XRF (fusion)		
22	35,672	0,103	0,2	35,745	35,599	no accreditation	XRF (fusion)		
23	37,700	0,000	3,0	37,700	37,700	ISO 17025	XRF (fusion)		E
24	35,689	0,072	0,2	35,638	35,740	no accreditation	XRF (fusion)		
25	34,795	0,021	-1,1	34,810	34,780	no accreditation	XRF (fusion)		
26	35,470	0,071	-0,1	35,420	35,520	no accreditation	Standardless info only		
27	35,315	0,235	-0,3	35,481	35,148	no accreditation	XRF (fusion)		
28	33,524	0,065	-2,8	33,478	33,570	no accreditation	XRF (fusion)		E
29	35,867	0,180	0,4	35,995	35,740	no accreditation	XRF (fusion)		
30	36,155	0,035	0,8	36,180	36,130	no accreditation	XRF (fusion)		
31	34,650	0,156	-1,3	34,540	34,760	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 123      **Reprod. s.d.:** 0,019 % TM  
**Measurand:** TiO2      **Repeat. s.d.:** 0,003 % TM  
**Mean ± U(Mean):** 0,202 ± 0,010 % TM      **Range of tolerance:** 0,165 - 0,240 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 22      **Sample:** DIN 38402 A45      E  
**Assigned value:** 0,202 % TM (Empirical value)      **Target s.d.:** 0,019 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,233	0,000	1,7	0,233	0,233	no accreditation	XRF (fusion)		
03	0,190	0,000	-0,6	0,190	0,190	no accreditation	XRF (fusion)		
04	0,204	0,001	0,1	0,205	0,204	no accreditation	XRF (fusion)		
05	0,199	0,001	-0,2	0,200	0,198	ISO 17025	XRF (fusion)		
07	0,237	0,001	1,9	0,238	0,237	ISO 17025	XRF (fusion)		

## RV123

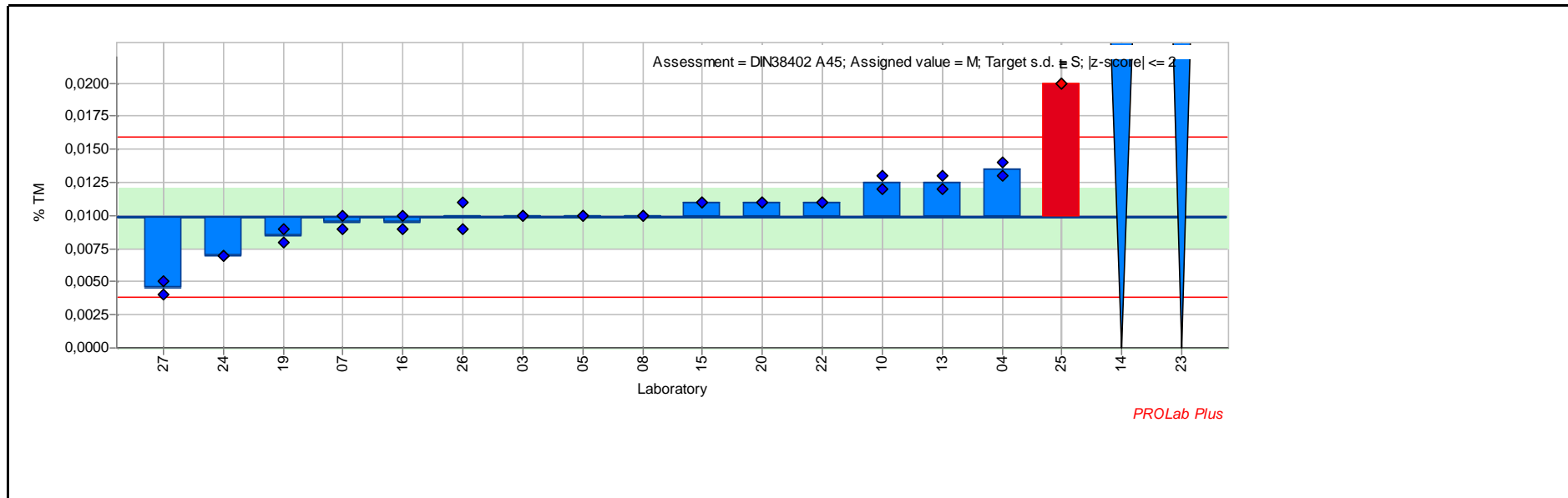
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,210	0,000	0,4	0,210	0,210	no accreditation	XRF (fusion)		
10	0,204	0,003	0,1	0,202	0,206	ISO 17025	XRF (fusion)		
13	0,165	0,007	-2,0	0,160	0,170	ISO 17025	XRF (fusion)		
14	0,199	0,002	-0,2	0,200	0,197	no accreditation	XRF (fusion)		
15	0,225	0,000	1,2	0,225	0,225	no accreditation	XRF (Pellet) info only		
16	0,200	0,004	-0,1	0,203	0,197	ISO 17025	XRF (fusion)		
17	0,205	0,001	0,2	0,205	0,206	ISO 17025	XRF (fusion)		
18	0,214	0,006	0,7	0,219	0,210	no accreditation	XRF (fusion)		
19	0,166	0,002	-2,0	0,167	0,164	ISO 17025	XRF (fusion)		
20	0,255	0,001	2,8	0,255	0,254	no accreditation	XRF (Pellet) info only		E
21a	0,213	0,004	0,6	0,211	0,216	no accreditation	XRF (fusion)		
22	0,198	0,001	-0,2	0,197	0,198	no accreditation	XRF (fusion)		
23	0,130	0,000	-3,9	0,130	0,130	ISO 17025	XRF (fusion)		E
24	0,184	0,002	-0,9	0,183	0,186	no accreditation	XRF (fusion)		
25	0,215	0,007	0,7	0,210	0,220	no accreditation	XRF (fusion)		
26	0,195	0,007	-0,4	0,200	0,190	no accreditation	Standardless info only		
27	0,323	0,032	6,4	0,345	0,300	no accreditation	XRF (fusion)		E
28	0,197	0,002	-0,3	0,195	0,198	no accreditation	XRF (fusion)		
29	0,207	0,001	0,3	0,208	0,207	no accreditation	XRF (fusion)		
30	0,205	0,007	0,2	0,200	0,210	no accreditation	XRF (fusion)		

RV123

<0,050

<0,040 (QL)

**Sample:** FLX-CRM 123      **Reprod. s.d.:** 0,003 % TM  
**Measurand:** ZnO      **Repeat. s.d.:** 0,001 % TM  
**Mean ± U(Mean):** 0,010 ± 0,002 % TM      **Range of tolerance:** 0,004 - 0,016 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 11      **Sample:** DIN 38402 A45  
**Assigned value:** 0,010 % TM (Empirical value)      **Target s.d.:** 0,003 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,010	0,000	0,1	0,010	0,010	no accreditation	XRF (fusion)		
04	0,013	0,001	1,2	0,013	0,014	no accreditation	XRF (fusion)		
05	0,010	0,000	0,1	0,010	0,010	ISO 17025	ICP-OES		
07	0,009	0,001	-0,1	0,009	0,010	ISO 17025	ICP-OES		
08	0,010	0,000	0,1	0,010	0,010	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,013	0,001	0,9	0,012	0,013	ISO 17025	XRF (fusion)		
13	0,013	0,001	0,9	0,012	0,013	ISO 17025	XRF (fusion)		
14				<0,040	<0,040	no accreditation	XRF (fusion)		
15	0,011	0,000	0,4	0,011	0,011	no accreditation	XRF (Pellet) info only		
16	0,009	0,001	-0,1	0,010	0,009	ISO 17025	XRF (fusion)		
19	0,009	0,001	-0,4	0,009	0,008	ISO 17025	XRF (fusion)		
20	0,011	0,000	0,4	0,011	0,011	no accreditation	XRF (Pellet) info only		
22	0,011	0,000	0,4	0,011	0,011	no accreditation	XRF (Pellet) info only		
23				<0,050	<0,050	no accreditation	ICP-OES		
24	0,007	0,000	-0,9	0,007	0,007	no accreditation	XRF (fusion)		
25	0,020	0,000	3,3	0,020	0,020	no accreditation	Standardless info only	Uniquant	E
26	0,010	0,001	0,1	0,009	0,011	no accreditation	Standardless info only		
27	0,005	0,001	-1,8	0,005	0,004	no accreditation	XRF (fusion)		

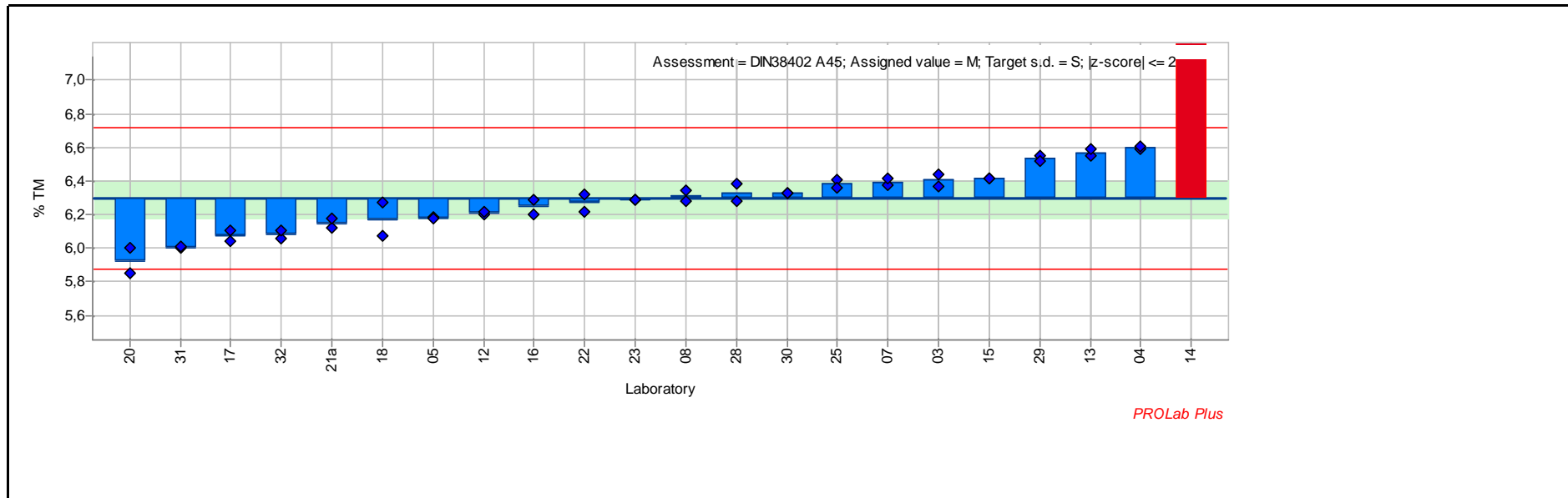


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
13	0,011	0,000	-0,8	0,011	0,011	ISO 17025	XRF (fusion)		
14				<0,030	<0,030	no accreditation	XRF (fusion)		
15	0,012	0,000	-0,7	0,012	0,012	no accreditation	XRF (Pellet) info only		
16	0,030	0,004	0,8	0,027	0,033	ISO 17025	XRF (fusion)	LOD 0,03	
17	0,020	0,003	-0,1	0,022	0,018	ISO 17025	XRF (fusion)		
19	0,056	0,011	2,9	0,064	0,048	ISO 17025	XRF (fusion)		E
20	0,012	0,000	-0,7	0,012	0,012	no accreditation	XRF (Pellet) info only		
23				<0,020	<0,020	no accreditation	ICP-OES		
24	0,011	0,000	-0,8	0,011	0,011	no accreditation	XRF (fusion)		
25	0,042	0,006	1,8	0,038	0,047	no accreditation	XRF (fusion)		
26				<0,002	<0,002	no accreditation	Standardless info only		
30	0,020	0,000	-0,1	0,020	0,020	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 123      **Reprod. s.d.:** 0,211 % TM  
**Measurand:** Ctotal      **Repeat. s.d.:** 0,050 % TM  
**Mean ± U(Mean):** 6,296 ± 0,115 % TM      **Range of tolerance:** 5,875 - 6,717 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 21      **Sample:** DIN 38402 A45  
**Assigned value:** 6,296 % TM (Empirical value)      **Target s.d.:** 0,211 % TM (Empirical value) E



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	6,405	0,049	0,5	6,370	6,440	no accreditation	combustion		
04	6,601	0,011	1,4	6,593	6,608	no accreditation	combustion		
05	6,178	0,006	-0,6	6,183	6,174	ISO 17025	combustion		
07	6,393	0,028	0,5	6,374	6,413	ISO 17025	combustion		
08	6,310	0,042	0,1	6,280	6,340	no accreditation	combustion		



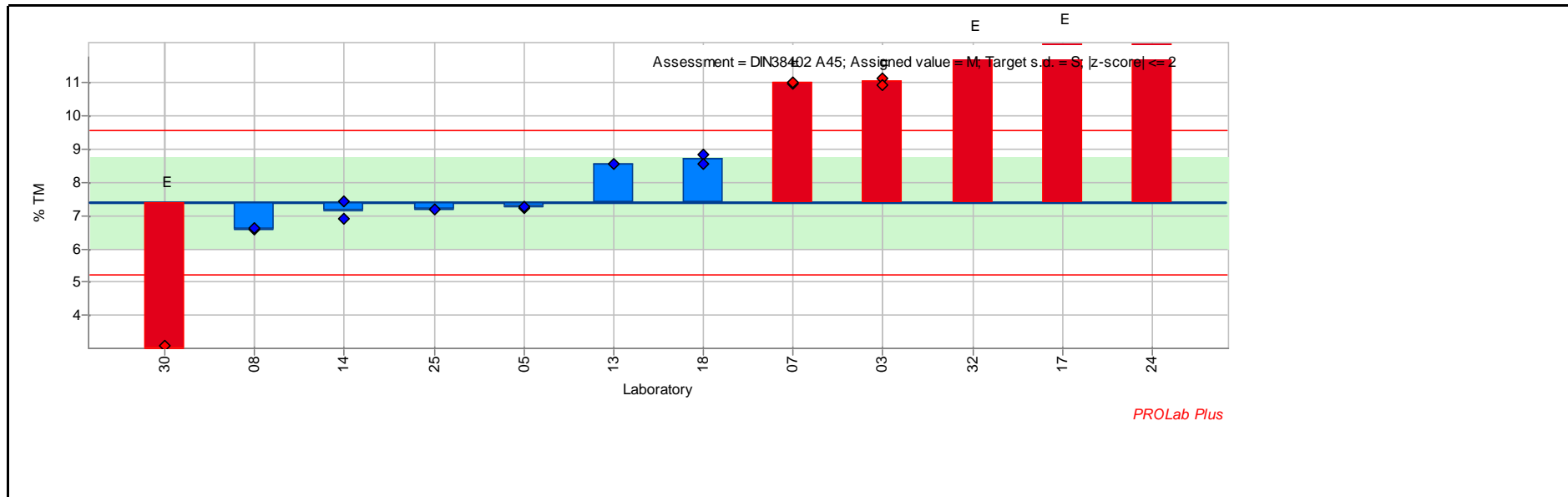
## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
12	6,208	0,009	-0,4	6,202	6,215	ISO 17025	combustion		
13	6,570	0,028	1,3	6,550	6,590	ISO 17025	combustion		
14	7,544	0,035	5,9	7,519	7,569	no accreditation	combustion		E
15	6,415	0,001	0,6	6,416	6,414	no accreditation	combustion		
16	6,245	0,064	-0,2	6,200	6,290	ISO 17025	combustion		
17	6,074	0,049	-1,1	6,109	6,039	ISO 17025	combustion		
18	6,170	0,141	-0,6	6,070	6,270	no accreditation	combustion		
20	5,925	0,103	-1,8	5,853	5,998	no accreditation	combustion	DIN EN 13137	
21a	6,147	0,042	-0,7	6,118	6,177	no accreditation	combustion		
22	6,270	0,071	-0,1	6,220	6,320	no accreditation	combustion		
23	6,290	0,000	0,0	6,290	6,290	ISO 17025	combustion		
25	6,385	0,035	0,4	6,410	6,360	no accreditation	combustion		
28	6,330	0,071	0,2	6,380	6,280	no accreditation	combustion		
29	6,534	0,022	1,1	6,549	6,518	no accreditation	combustion		
30	6,330	0,000	0,2	6,330	6,330	no accreditation	combustion		
31	6,005	0,007	-1,4	6,000	6,010	no accreditation	other	Wet Analysys	
32	6,085	0,034	-1,0	6,061	6,108	no accreditation	combustion		

RV123

**Sample:** FLX-CRM 123                      **Reprod. s.d.** 1,095 % TM  
**Measurand:** CO2                              **Repeat. s.d.** 0,052 % TM  
**Mean ± U(Mean):** 7,387 ± 1,369 % TM      **Range of tolerance:** 5,196 - 9,577 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 4                      **Sample** DIN 38402 A45  
**Assigned value** 7,387 % TM (Empirical value)      **Target s.d.** 1,095 % TM (Empirical value)

E



PROLab Plus

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	11,030	0,141	3,3	11,130	10,930	no accreditation	other	inert gas	E
05	7,253	0,035	-0,1	7,228	7,278	ISO 17025	combustion	acid	
07	10,995	0,030	3,3	10,974	11,017	ISO 17025	combustion		E
08	6,590	0,028	-0,7	6,570	6,610	no accreditation	combustion	acid	
13	8,540		1,1	8,540		ISO 17025	combustion	acid	

## RV123

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Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
14	7,163	0,360	-0,2	7,418	6,909	no accreditation	combustion	acid	
17	12,302	0,106	4,5	12,227	12,377	no accreditation	combustion	Leco RC 612	E
18	8,700	0,198	1,2	8,840	8,560	no accreditation	other	loss of weight	
24	13,877	0,027	5,9	13,896	13,858	no accreditation	combustion	LOI in a muffel	E
25	7,200		-0,2	7,200		no accreditation	combustion		
30	3,020	0,085	-4,0	3,080	2,960	no accreditation	combustion		E
32	12,093		4,3	12,093		no accreditation	combustion		E

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## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	7,225	0,035	-0,6	7,200	7,250	no accreditation	XRF (fusion)		
10	7,329	0,013	-0,2	7,319	7,338	ISO 17025	XRF (fusion)		
12	7,693	0,052	1,4	7,656	7,730	ISO 17025	ICP-OES		
13	7,980	0,071	2,6	8,030	7,930	ISO 17025	XRF (fusion)		E
14	7,491	0,037	0,5	7,465	7,517	no accreditation	XRF (fusion)		
15	6,575	0,035	-3,4	6,550	6,600	no accreditation	XRF (Pellet) info only		E
16	7,280	0,094	-0,4	7,347	7,214	ISO 17025	XRF (fusion)		
17	7,223	0,337	-0,6	7,461	6,985	ISO 17025	XRF (fusion)		
18	7,271	0,004	-0,4	7,274	7,269	no accreditation	XRF (fusion)		
19	5,585	0,062	-7,6	5,542	5,629	ISO 17025	XRF (fusion)		E
20	5,215	0,078	-9,2	5,270	5,160	no accreditation	XRF (Pellet) info only		E
21a	7,341	0,072	-0,1	7,290	7,392	no accreditation	XRF (fusion)		
22	7,981	0,077	2,6	8,035	7,926	no accreditation	XRF (fusion)		E
23	7,490	0,000	0,5	7,490	7,490	ISO 17025	XRF (fusion)		
24	7,417	0,017	0,2	7,429	7,405	no accreditation	XRF (fusion)		
25	7,370	0,042	0,0	7,340	7,400	no accreditation	XRF (fusion)		
26	7,315	0,021	-0,2	7,300	7,330	no accreditation	Standardless info only		
27	16,181	0,159	37,7	16,068	16,293	no accreditation	XRF (fusion)		E
28	7,021	0,081	-1,5	7,079	6,964	no accreditation	XRF (fusion)		
29	7,436	0,025	0,3	7,454	7,419	no accreditation	XRF (fusion)		
30	7,365	0,007	0,0	7,370	7,360	no accreditation	XRF (fusion)		
31	6,575	0,007	-3,4	6,570	6,580	no accreditation	other	Wet Analysys	E

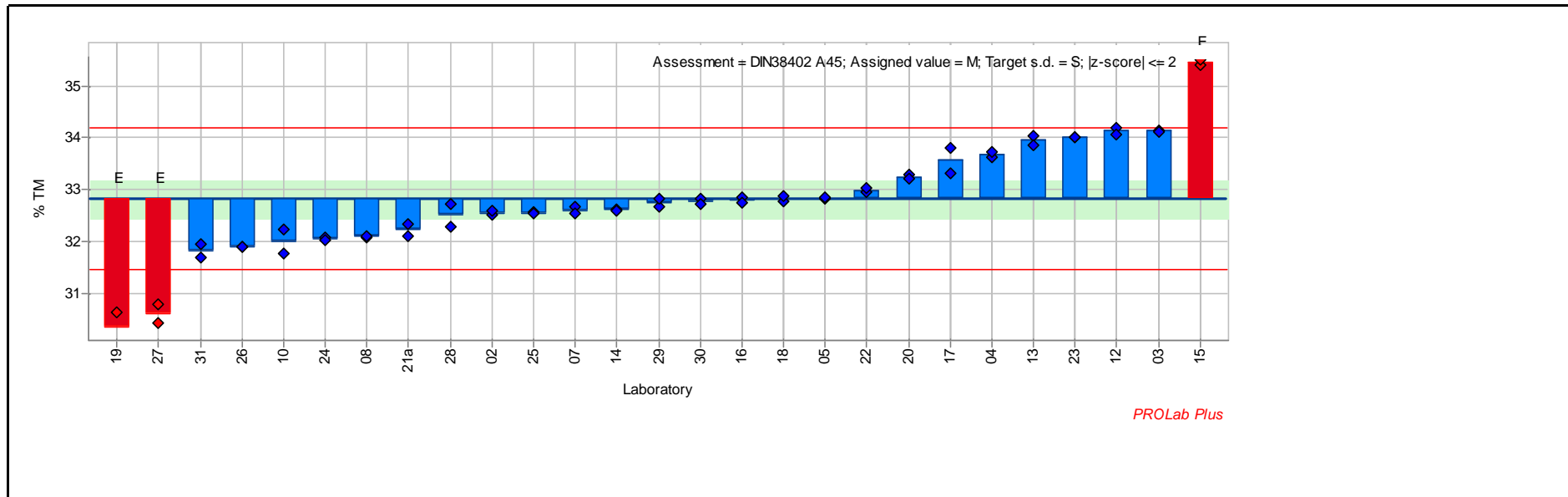


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,247	0,008	-1,2	0,242	0,253	ISO 17025	XRF (fusion)		
13	0,245	0,007	-1,2	0,240	0,250	ISO 17025	XRF (fusion)		
15	0,304	0,002	0,5	0,303	0,306	no accreditation	XRF (Pellet) info only		
16	0,317	0,010	0,9	0,324	0,310	ISO 17025	XRF (fusion)		
17	0,293	0,004	0,2	0,291	0,296	ISO 17025	XRF (fusion)		
19	0,140	0,000	-4,3	0,140	0,140	ISO 17025	XRF (fusion)		E
20	0,294	0,001	0,2	0,295	0,293	no accreditation	XRF (Pellet) info only		
23	0,310	0,000	0,7	0,310	0,310	no accreditation	ICP-OES		
24	0,284	0,005	-0,1	0,281	0,288	no accreditation	XRF (fusion)		
25	0,289	0,006	0,1	0,294	0,285	no accreditation	XRF (fusion)		
26	0,260	0,000	-0,8	0,260	0,260	no accreditation	Standardless info only		

RV123

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,683 % TM  
**Measurand:** CaO      **Repeat. s.d.:** 0,113 % TM  
**Mean ± U(Mean):** 32,826 ± 0,356 % TM      **Range of tolerance:** 31,459 - 34,193 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value:** 32,826 % TM (Empirical value)      **Target s.d.:** 0,683 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	32,549	0,047	-0,4	32,516	32,583	no accreditation	XRF (fusion)		
03	34,135	0,021	1,9	34,150	34,120	no accreditation	XRF (fusion)		
04	33,674	0,074	1,2	33,622	33,727	no accreditation	XRF (fusion)		
05	32,834	0,028	0,0	32,814	32,854	ISO 17025	XRF (fusion)		
07	32,605	0,078	-0,3	32,660	32,550	ISO 17025	XRF (fusion)		

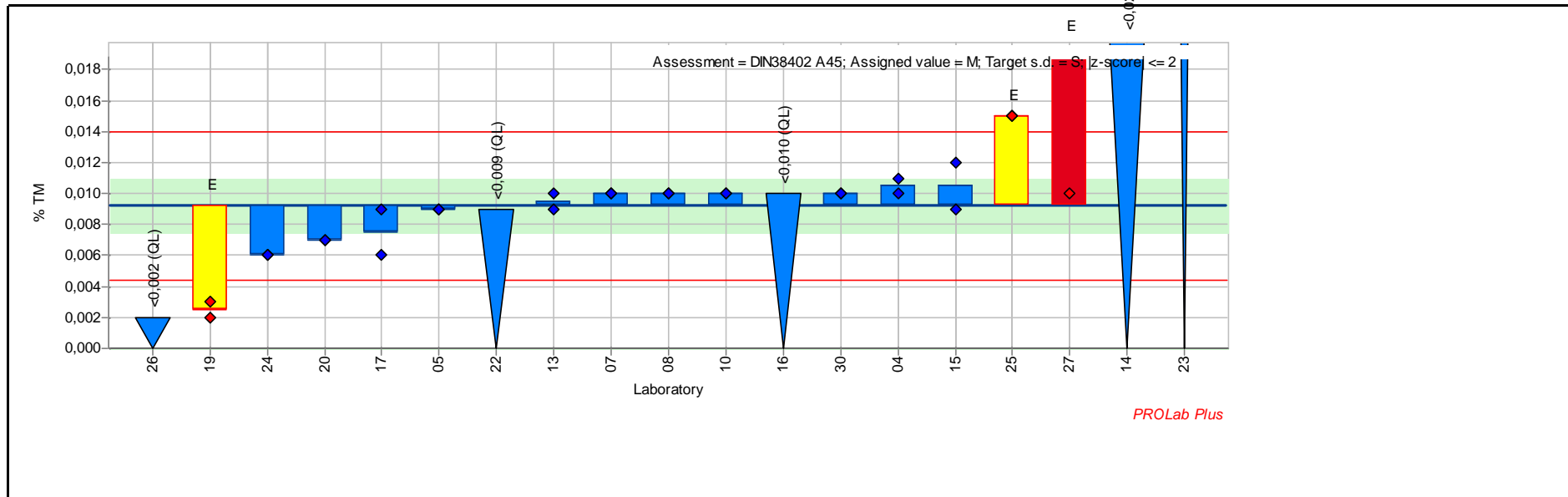


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	32,095	0,021	-1,1	32,080	32,110	no accreditation	XRF (fusion)		
10	32,002	0,317	-1,2	31,778	32,227	ISO 17025	XRF (fusion)		
12	34,130	0,085	1,9	34,190	34,070	ISO 17025	ICP-OES	CaOtotal	
13	33,950	0,141	1,6	34,050	33,850	ISO 17025	XRF (fusion)		
14	32,608	0,026	-0,3	32,626	32,589	no accreditation	XRF (fusion)		
15	35,450	0,071	3,8	35,400	35,500	no accreditation	XRF (Pellet) info only		E
16	32,799	0,081	0,0	32,856	32,742	ISO 17025	XRF (fusion)		
17	33,568	0,349	1,1	33,321	33,815	ISO 17025	XRF (fusion)		
18	32,833	0,080	0,0	32,776	32,889	no accreditation	XRF (fusion)		
19	30,351	0,406	-3,6	30,064	30,638	ISO 17025	XRF (fusion)		E
20	33,250	0,071	0,6	33,300	33,200	no accreditation	XRF (Pellet) info only		
21a	32,222	0,173	-0,9	32,100	32,344	no accreditation	XRF (fusion)		
22	32,992	0,058	0,2	32,951	33,033	no accreditation	XRF (fusion)		
23	34,000	0,000	1,7	34,000	34,000	ISO 17025	XRF (fusion)		
24	32,044	0,033	-1,1	32,067	32,020	no accreditation	XRF (fusion)		
25	32,555	0,035	-0,4	32,580	32,530	no accreditation	XRF (fusion)		
26	31,900	0,014	-1,4	31,890	31,910	no accreditation	Standardless info only		
27	30,605	0,252	-3,2	30,427	30,784	no accreditation	XRF (fusion)		E
28	32,504	0,317	-0,5	32,280	32,728	no accreditation	XRF (fusion)		
29	32,743	0,119	-0,1	32,659	32,827	no accreditation	XRF (fusion)		
30	32,770	0,085	-0,1	32,830	32,710	no accreditation	XRF (fusion)		
31	31,820	0,198	-1,5	31,960	31,680	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,002 % TM  
**Measurand:** Cr2O3      **Repeat. s.d.:** 0,001 % TM  
**Mean ± U(Mean):** 0,009 ± 0,002 % TM      **Range of tolerance:** 0,004 - 0,014 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 12      **Sample:** DIN 38402 A45  
**Assigned value:** 0,009 % TM (Empirical value)      **Target s.d.:** 0,002 % TM (Empirical value)



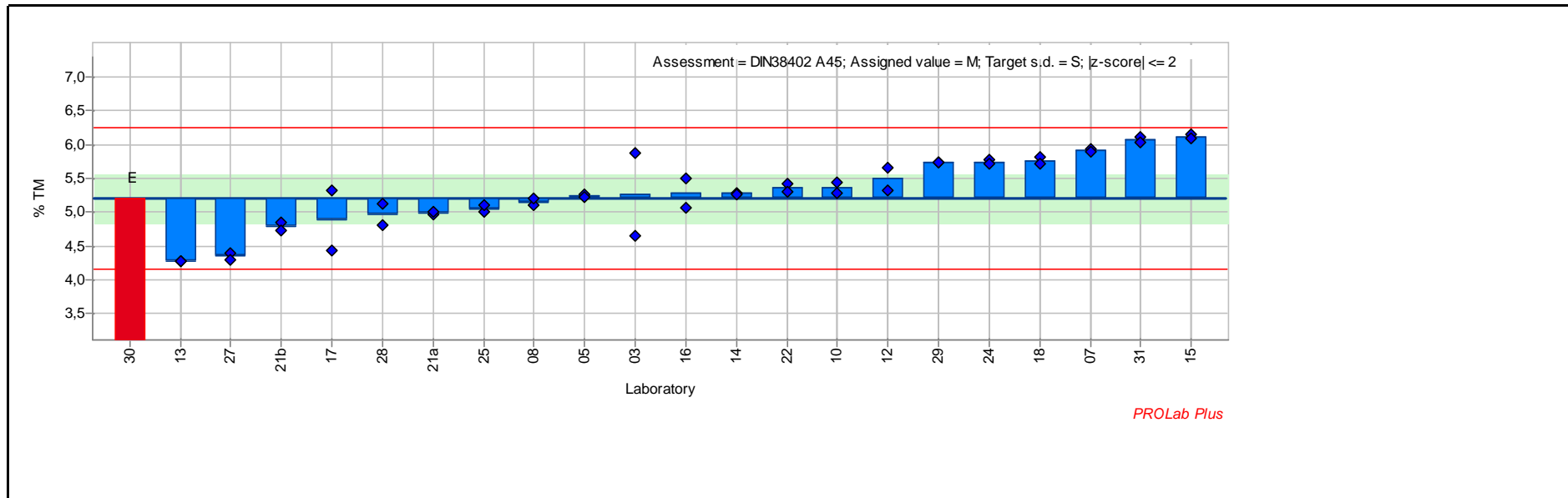
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
04	0,010	0,001	0,5	0,011	0,010	no accreditation	XRF (fusion)		
05	0,009	0,000	-0,1	0,009	0,009	ISO 17025	XRF (fusion)		
07	0,010	0,000	0,3	0,010	0,010	ISO 17025	XRF (fusion)		
08	0,010	0,000	0,3	0,010	0,010	no accreditation	XRF (fusion)		
10	0,010	0,000	0,3	0,010	0,010	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
13	0,009	0,001	0,1	0,009	0,010	ISO 17025	XRF (fusion)		
14				<0,020	<0,020	no accreditation	XRF (fusion)		
15	0,010	0,002	0,5	0,012	0,009	no accreditation	XRF (Pellet) info only		
16				<0,010	<0,010	ISO 17025	XRF (fusion)		
17	0,007	0,002	-0,7	0,006	0,009	ISO 17025	XRF (fusion)		
19	0,003	0,001	-2,8	0,003	0,002	ISO 17025	XRF (fusion)		E
20	0,007	0,000	-0,9	0,007	0,007	no accreditation	XRF (Pellet) info only		
22				<0,009	<0,009	no accreditation	XRF (fusion)		
23				<0,100	<0,100	ISO 17025	XRF (fusion)		
24	0,006	0,000	-1,3	0,006	0,006	no accreditation	XRF (fusion)		
25	0,015	0,000	2,4	0,015	0,015	no accreditation	XRF (fusion)		E
26				<0,002	<0,002	no accreditation	Standardless info only		
27	0,020	0,013	4,3	0,029	0,010	no accreditation	XRF (fusion)		E
30	0,010	0,000	0,3	0,010	0,010	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,524 % TM  
**Measurand:** F      **Repeat. s.d.:** 0,109 % TM  
**Mean ± U(Mean):** 5,203 ± 0,363 % TM      **Range of tolerance:** 4,155 - 6,251 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 13      **Sample:** DIN 38402 A45  
**Assigned value:** 5,203 % TM (Empirical value)      **Target s.d.:** 0,524 % TM (Empirical value)



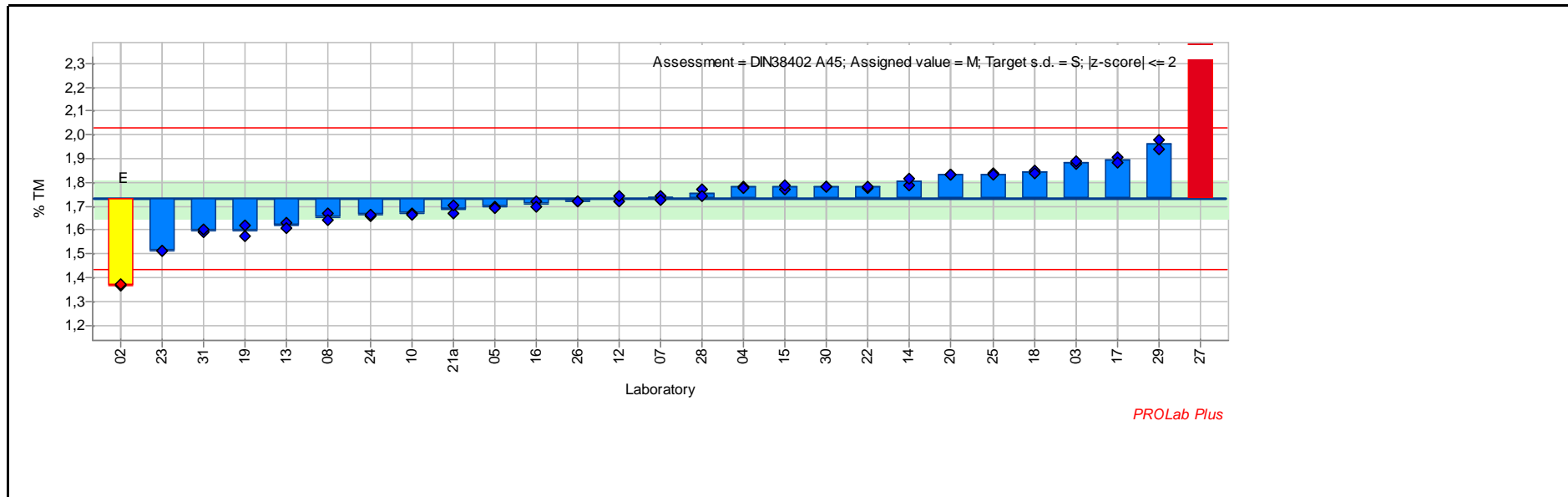
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	5,255	0,870	0,1	4,640	5,870	no accreditation	XRF (Pellet) info only		
05	5,240	0,038	0,1	5,267	5,213	ISO 17025	other	Fluorid wurde	
07	5,915	0,038	1,4	5,942	5,888	ISO 17025	Ion selective electrode		
08	5,150	0,071	-0,1	5,100	5,200	no accreditation	XRF (fusion)		
10	5,361	0,112	0,3	5,440	5,281	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
12	5,490	0,226	0,5	5,650	5,330	ISO 17025	other	Potentiometry	
13	4,270	0,000	-1,8	4,270	4,270	ISO 17025	XRF (Pellet) info only		
14	5,278	0,017	0,1	5,290	5,266	no accreditation	XRF (fusion)		
15	6,120	0,042	1,7	6,150	6,090	no accreditation	XRF (Pellet) info only		
16	5,275	0,311	0,1	5,055	5,495	ISO 17025	other	Melting digestion,	
17	4,881	0,626	-0,6	5,324	4,439	ISO 17025	XRF (fusion)		
18	5,763	0,075	1,1	5,816	5,710	no accreditation	XRF (fusion)		
21a	4,981	0,031	-0,4	4,959	5,003	no accreditation	XRF (fusion)		
21b	4,787	0,094	-0,8	4,854	4,721	no accreditation	Ion selective electrode		
22	5,355	0,082	0,3	5,413	5,297	no accreditation	Ion selective electrode		
24	5,744	0,045	1,0	5,775	5,712	no accreditation	XRF (Pellet) info only		
25	5,050	0,071	-0,3	5,000	5,100	no accreditation	XRF (fusion)		
27	4,345	0,075	-1,6	4,398	4,292	no accreditation	XRF (fusion)		
28	4,966	0,221	-0,5	5,123	4,810	no accreditation	XRF (fusion)		
29	5,735	0,007	1,0	5,740	5,730	no accreditation	Ion selective electrode		
30	2,140	0,071	-5,8	2,090	2,190	no accreditation	other	Potentiometry	E
31	6,080	0,057	1,7	6,120	6,040	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 124                      **Reprod. s.d.:** 0,149 % TM  
**Measurand:** Fe2O3                        **Repeat. s.d.:** 0,017 % TM  
**Mean ± U(Mean):** 1,731 ± 0,079 % TM      **Range of tolerance:** 1,434 - 2,029 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 22                    **Sample:** DIN 38402 A45  
**Assigned value:** 1,731 % TM (Empirical value)      **Target s.d.:** 0,149 % TM (Empirical value)



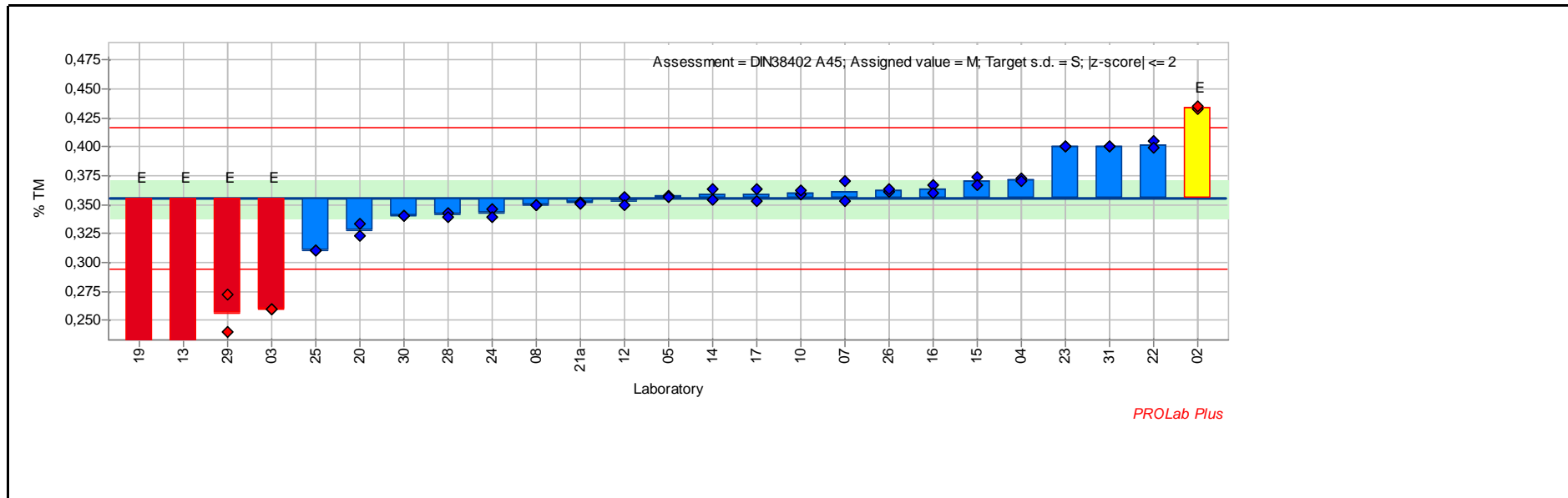
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	1,367	0,004	-2,4	1,364	1,370	no accreditation	XRF (fusion)		E
03	1,885	0,007	1,0	1,880	1,890	no accreditation	XRF (fusion)		
04	1,780	0,004	0,3	1,783	1,777	no accreditation	XRF (fusion)		
05	1,695	0,003	-0,2	1,697	1,693	ISO 17025	XRF (fusion)		
07	1,735	0,011	0,0	1,742	1,727	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	1,655	0,021	-0,5	1,670	1,640	no accreditation	XRF (fusion)		
10	1,667	0,004	-0,4	1,670	1,665	ISO 17025	XRF (fusion)		
12	1,731	0,016	0,0	1,720	1,742	ISO 17025	other	AAS +	
13	1,620	0,014	-0,7	1,630	1,610	ISO 17025	XRF (fusion)		
14	1,804	0,020	0,5	1,790	1,818	no accreditation	XRF (fusion)		
15	1,780	0,010	0,3	1,773	1,787	no accreditation	XRF (Pellet) info only		
16	1,711	0,015	-0,1	1,721	1,700	ISO 17025	XRF (fusion)		
17	1,894	0,015	1,1	1,905	1,884	ISO 17025	XRF (fusion)		
18	1,843	0,007	0,8	1,848	1,838	no accreditation	XRF (fusion)		
19	1,596	0,030	-0,9	1,575	1,617	ISO 17025	XRF (fusion)		
20	1,830	0,000	0,7	1,830	1,830	no accreditation	XRF (Pellet) info only		
21a	1,687	0,025	-0,3	1,669	1,705	no accreditation	XRF (fusion)		
22	1,780	0,002	0,3	1,779	1,782	no accreditation	XRF (fusion)		
23	1,510	0,000	-1,5	1,510	1,510	ISO 17025	XRF (fusion)		
24	1,661	0,005	-0,5	1,658	1,665	no accreditation	XRF (fusion)		
25	1,835	0,007	0,7	1,840	1,830	no accreditation	XRF (fusion)		
26	1,720	0,000	-0,1	1,720	1,720	no accreditation	Standardless info only		
27	4,937	0,031	21,5	4,915	4,959	no accreditation	XRF (fusion)		E
28	1,756	0,017	0,2	1,768	1,744	no accreditation	XRF (fusion)		
29	1,960	0,029	1,5	1,980	1,939	no accreditation	XRF (fusion)		
30	1,780	0,000	0,3	1,780	1,780	no accreditation	XRF (fusion)		
31	1,595	0,007	-0,9	1,590	1,600	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,031 % TM  
**Measurand:** K2O      **Repeat. s.d.:** 0,005 % TM  
**Mean ± U(Mean):** 0,355 ± 0,017 % TM      **Range of tolerance:** 0,294 - 0,417 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 21      **Sample:** DIN 38402 A45  
**Assigned value:** 0,355 % TM (Empirical value)      **Target s.d.:** 0,031 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,434	0,001	2,6	0,433	0,435	no accreditation	XRF (fusion)		E
03	0,260	0,000	-3,1	0,260	0,260	no accreditation	XRF (fusion)		E
04	0,372	0,001	0,5	0,373	0,371	no accreditation	XRF (fusion)		
05	0,357	0,001	0,1	0,358	0,357	ISO 17025	ICP-OES		
07	0,361	0,012	0,2	0,353	0,370	ISO 17025	ICP-OES		



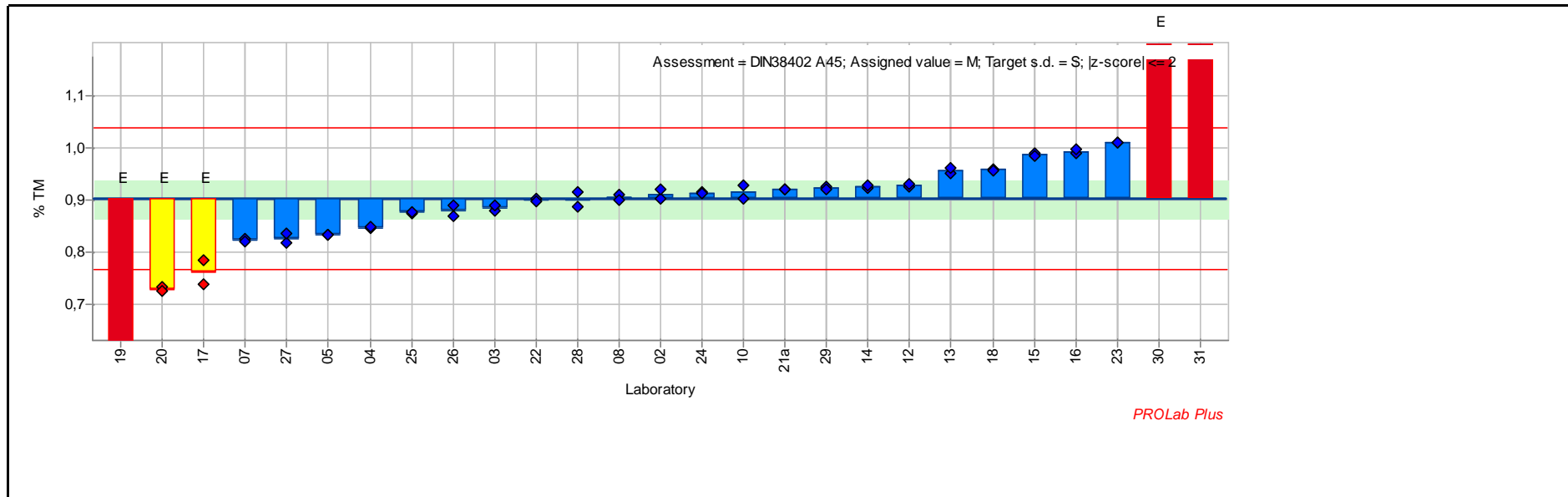
## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,350	0,000	-0,2	0,350	0,350	no accreditation	XRF (fusion)		
10	0,360	0,002	0,2	0,359	0,362	ISO 17025	XRF (fusion)		
12	0,353	0,004	-0,1	0,356	0,350	ISO 17025	AAS		
13	0,145	0,007	-6,9	0,140	0,150	ISO 17025	XRF (fusion)		E
14	0,358	0,006	0,1	0,354	0,363	no accreditation	XRF (fusion)		
15	0,370	0,005	0,5	0,374	0,367	no accreditation	XRF (Pellet) info only		
16	0,363	0,005	0,3	0,367	0,360	ISO 17025	XRF (fusion)		
17	0,358	0,008	0,1	0,364	0,353	ISO 17025	XRF (fusion)		
19	0,144	0,004	-6,9	0,147	0,142	ISO 17025	XRF (fusion)		E
20	0,328	0,007	-0,9	0,333	0,323	no accreditation	XRF (Pellet) info only		
21a	0,351	0,001	-0,1	0,352	0,351	no accreditation	XRF (fusion)		
22	0,402	0,004	1,5	0,405	0,399	no accreditation	ICP-OES		
23	0,400	0,000	1,5	0,400	0,400	ISO 17025	XRF (fusion)		
24	0,343	0,005	-0,4	0,346	0,339	no accreditation	XRF (fusion)		
25	0,310	0,000	-1,5	0,310	0,310	no accreditation	XRF (fusion)		
26	0,362	0,001	0,2	0,361	0,363	no accreditation	Standardless info only		
28	0,341	0,003	-0,5	0,343	0,339	no accreditation	XRF (fusion)		
29	0,256	0,023	-3,2	0,240	0,272	no accreditation	XRF (fusion)		E
30	0,340	0,000	-0,5	0,340	0,340	no accreditation	XRF (fusion)		
31	0,400	0,000	1,5	0,400	0,400	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,068 % TM  
**Measurand:** MgO      **Repeat. s.d.:** 0,007 % TM  
**Mean ± U(Mean):** 0,902 ± 0,035 % TM      **Range of tolerance:** 0,767 - 1,038 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value:** 0,902 % TM (Empirical value)      **Target s.d.:** 0,068 % TM (Empirical value)

E



PROLab Plus

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,911	0,011	0,1	0,903	0,919	no accreditation	XRF (fusion)		
03	0,885	0,007	-0,3	0,880	0,890	no accreditation	XRF (fusion)		
04	0,847	0,001	-0,8	0,846	0,848	no accreditation	XRF (fusion)		
05	0,832	0,000	-1,0	0,832	0,832	ISO 17025	XRF (fusion)		
07	0,823	0,004	-1,2	0,826	0,820	ISO 17025	XRF (fusion)		

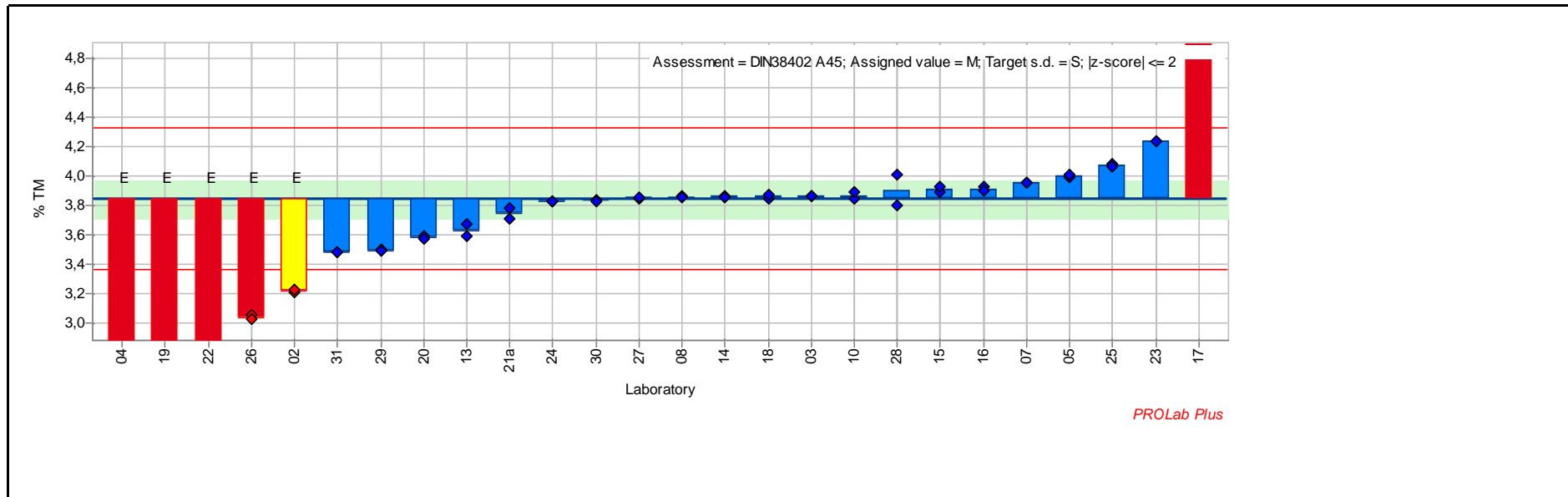
## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,905	0,007	0,0	0,910	0,900	no accreditation	XRF (fusion)		
10	0,915	0,019	0,2	0,928	0,901	ISO 17025	XRF (fusion)		
12	0,928	0,003	0,4	0,926	0,930	ISO 17025	ICP-OES		
13	0,955	0,007	0,8	0,950	0,960	ISO 17025	XRF (fusion)		
14	0,925	0,004	0,3	0,923	0,928	no accreditation	XRF (fusion)		
15	0,987	0,004	1,3	0,990	0,984	no accreditation	XRF (Pellet) info only		
16	0,992	0,006	1,3	0,988	0,997	ISO 17025	XRF (fusion)		
17	0,762	0,033	-2,1	0,785	0,739	ISO 17025	XRF (fusion)		E
18	0,958	0,001	0,8	0,958	0,957	no accreditation	XRF (fusion)		
19	0,303	0,020	-8,9	0,289	0,317	ISO 17025	XRF (fusion)		E
20	0,730	0,006	-2,5	0,734	0,725	no accreditation	XRF (Pellet) info only		E
21a	0,921	0,001	0,3	0,921	0,920	no accreditation	XRF (fusion)		
22	0,899	0,004	0,0	0,902	0,897	no accreditation	XRF (fusion)		
23	1,010	0,000	1,6	1,010	1,010	ISO 17025	XRF (fusion)		
24	0,913	0,001	0,2	0,914	0,913	no accreditation	XRF (fusion)		
25	0,875	0,002	-0,4	0,874	0,877	no accreditation	XRF (fusion)		
26	0,880	0,014	-0,3	0,890	0,870	no accreditation	Standardless info only		
27	0,826	0,013	-1,1	0,817	0,835	no accreditation	XRF (fusion)		
28	0,901	0,019	0,0	0,914	0,887	no accreditation	XRF (fusion)		
29	0,922	0,003	0,3	0,924	0,920	no accreditation	XRF (fusion)		
30	1,200	0,000	4,4	1,200	1,200	no accreditation	XRF (fusion)		E
31	1,310	0,141	6,0	1,210	1,410	no accreditation	other	Wet Analysys	E

RV123

E

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,241 % TM  
**Measurand:** MnO2      **Repeat. s.d.:** 0,016 % TM  
**Mean ± U(Mean):** 3,845 ± 0,128 % TM      **Range of tolerance:** 3,363 - 4,326 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 22      **Sample:** DIN 38402 A45  
**Assigned value:** 3,845 % TM (Empirical value)      **Target s.d.:** 0,241 % TM (Empirical value)



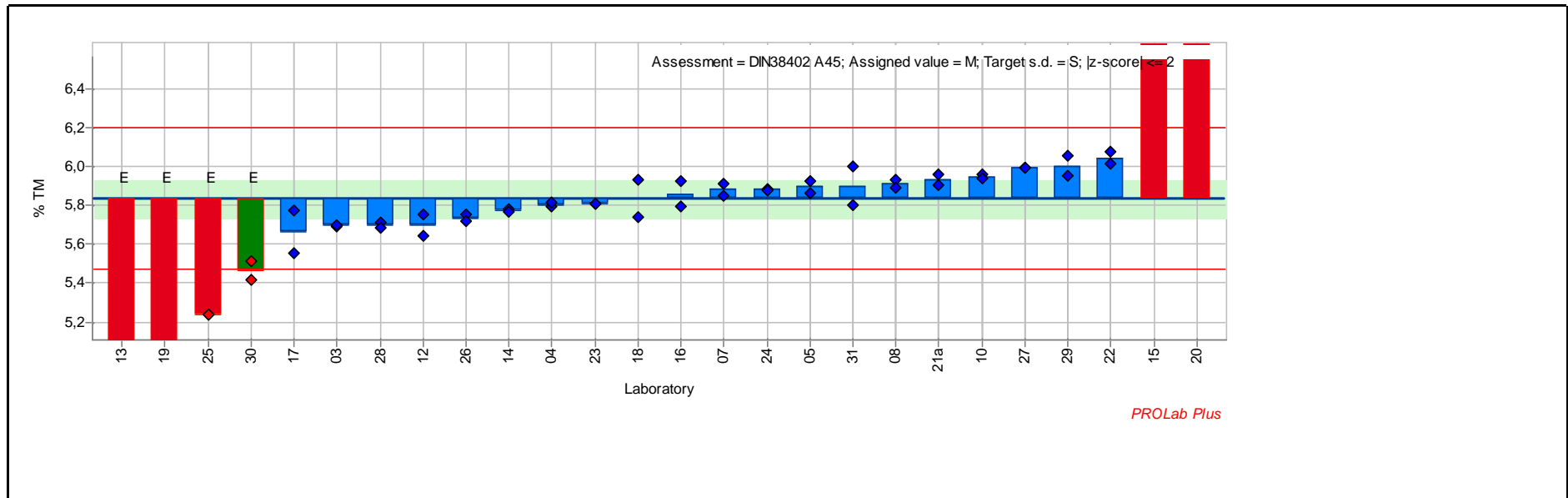
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	3,220	0,013	-2,6	3,211	3,230	no accreditation	XRF (fusion)		E
03	3,860	0,000	0,1	3,860	3,860	no accreditation	XRF (fusion)		
04	2,199	0,005	-6,8	2,195	2,202	no accreditation	XRF (fusion)		E
05	3,999	0,008	0,6	3,993	4,005	ISO 17025	XRF (fusion)		
07	3,953	0,000	0,4	3,953	3,953	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	3,855	0,007	0,0	3,860	3,850	no accreditation	XRF (fusion)		
10	3,864	0,031	0,1	3,842	3,886	ISO 17025	XRF (fusion)		
13	3,630	0,057	-0,9	3,670	3,590	ISO 17025	XRF (fusion)		
14	3,859	0,005	0,1	3,862	3,855	no accreditation	XRF (fusion)		
15	3,909	0,023	0,3	3,893	3,925	no accreditation	XRF (Pellet) info only		
16	3,911	0,023	0,3	3,927	3,895	ISO 17025	XRF (fusion)		
17	6,580	0,028	11,4	6,600	6,561	ISO 17025	XRF (fusion)		E
18	3,859	0,021	0,1	3,844	3,873	no accreditation	XRF (fusion)		
19	2,256	0,050	-6,6	2,220	2,291	ISO 17025	XRF (fusion)		E
20	3,580	0,014	-1,1	3,590	3,570	no accreditation	XRF (Pellet) info only		
21a	3,745	0,057	-0,4	3,704	3,785	no accreditation	XRF (fusion)		
22	2,466	0,008	-5,7	2,461	2,472	no accreditation	XRF (fusion)		E
23	4,240	0,000	1,6	4,240	4,240	ISO 17025	XRF (fusion)		
24	3,830	0,000	-0,1	3,830	3,830	no accreditation	XRF (fusion)		
25	4,071	0,013	0,9	4,080	4,061	no accreditation	XRF (fusion)		
26	3,040	0,014	-3,3	3,050	3,030	no accreditation	Standardless info only		E
27	3,849	0,006	0,0	3,845	3,854	no accreditation	XRF (fusion)		
28	3,904	0,145	0,2	3,801	4,006	no accreditation	XRF (fusion)		
29	3,494	0,004	-1,5	3,497	3,491	no accreditation	XRF (fusion)		
30	3,835	0,007	0,0	3,840	3,830	no accreditation	XRF (fusion)		
31	3,480	0,000	-1,5	3,480	3,480	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 124                      **Reprod. s.d.:** 0,182 % TM  
**Measurand:** Na2O                            **Repeat. s.d.:** 0,056 % TM                      E  
**Mean ± U(Mean):** 5,836 ± 0,099 % TM                      **Range of tolerance:** 5,472 - 6,200 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 21                      **Sample:** DIN 38402 A45  
**Assigned value:** 5,836 % TM (Empirical value)                      **Target s.d.:** 0,182 % TM (Empirical value)



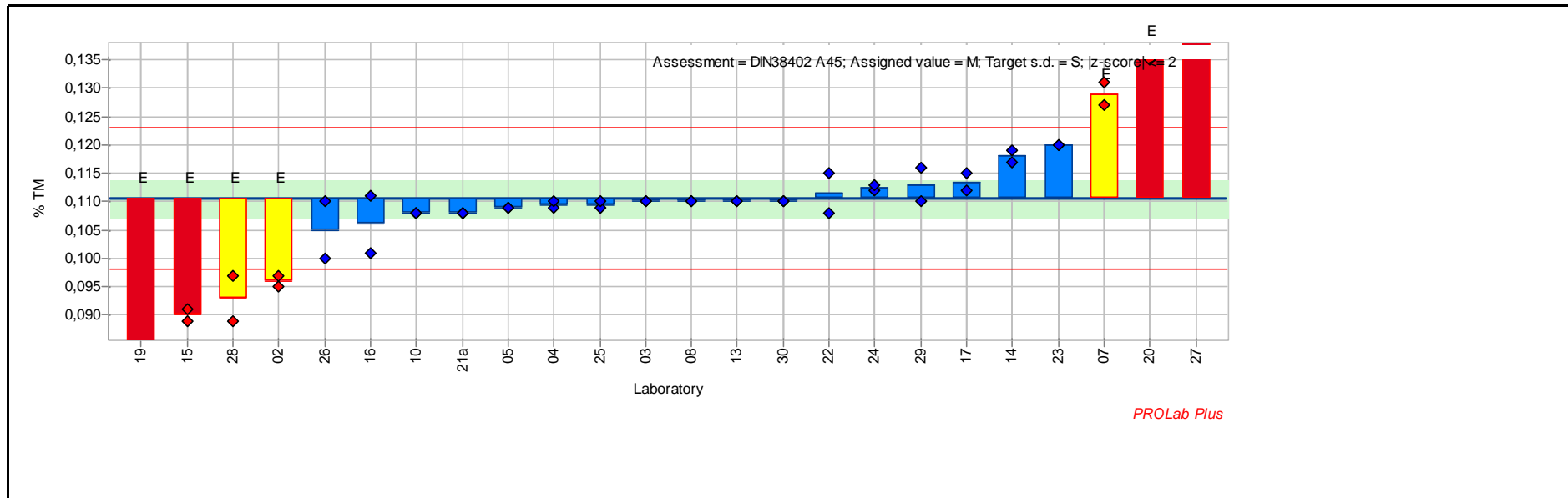
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	5,695	0,007	-0,8	5,690	5,700	no accreditation	XRF (fusion)		
04	5,804	0,017	-0,2	5,792	5,816	no accreditation	XRF (fusion)		
05	5,895	0,042	0,3	5,865	5,924	ISO 17025	ICP-OES		
07	5,880	0,040	0,2	5,852	5,909	ISO 17025	ICP-OES		
08	5,910	0,028	0,4	5,930	5,890	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	5,947	0,013	0,6	5,957	5,938	ISO 17025	XRF (fusion)		
12	5,697	0,077	-0,8	5,643	5,752	ISO 17025	AAS		
13	3,810	0,099	-11,1	3,880	3,740	ISO 17025	XRF (fusion)		E
14	5,774	0,012	-0,3	5,782	5,765	no accreditation	XRF (fusion)		
15	7,465	0,007	9,0	7,460	7,470	no accreditation	XRF (Pellet) info only		E
16	5,858	0,090	0,1	5,922	5,795	ISO 17025	XRF (fusion)		
17	5,663	0,158	-0,9	5,775	5,551	ISO 17025	XRF (fusion)		
18	5,835	0,135	0,0	5,740	5,931	no accreditation	XRF (fusion)		
19	3,917	0,024	-10,5	3,900	3,934	ISO 17025	XRF (fusion)		E
20	11,175	0,064	29,3	11,130	11,220	no accreditation	XRF (Pellet) info only		E
21a	5,929	0,039	0,5	5,902	5,957	no accreditation	AAS		
22	6,043	0,045	1,1	6,012	6,075	no accreditation	ICP-OES		
23	5,810	0,000	-0,1	5,810	5,810	ISO 17025	XRF (fusion)		
24	5,880	0,009	0,2	5,887	5,874	no accreditation	XRF (fusion)		
25	5,236	0,000	-3,3	5,236	5,236	no accreditation	XRF (Pellet) info only		E
26	5,735	0,021	-0,6	5,750	5,720	no accreditation	Standardless info only		
27	5,994	0,004	0,9	5,991	5,997	no accreditation	XRF (fusion)		
28	5,697	0,021	-0,8	5,712	5,682	no accreditation	XRF (fusion)		
29	6,002	0,073	0,9	6,054	5,951	no accreditation	XRF (fusion)		
30	5,465	0,064	-2,0	5,510	5,420	no accreditation	XRF (fusion)		E
31	5,900	0,141	0,4	6,000	5,800	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,006 % TM  
**Measurand:** P2O5      **Repeat. s.d.:** 0,002 % TM      E  
**Mean ± U(Mean):** 0,111 ± 0,003 % TM      **Range of tolerance:** 0,098 - 0,123 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 21      **Sample:** DIN 38402 A45  
**Assigned value:** 0,111 % TM (Empirical value)      **Target s.d.:** 0,006 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,096	0,001	-2,3	0,095	0,097	no accreditation	XRF (fusion)		E
03	0,110	0,000	-0,1	0,110	0,110	no accreditation	XRF (fusion)		
04	0,110	0,001	-0,2	0,109	0,110	no accreditation	XRF (fusion)		
05	0,109	0,000	-0,3	0,109	0,109	ISO 17025	XRF (fusion)		
07	0,129	0,003	3,0	0,127	0,131	ISO 17025	XRF (fusion)		E

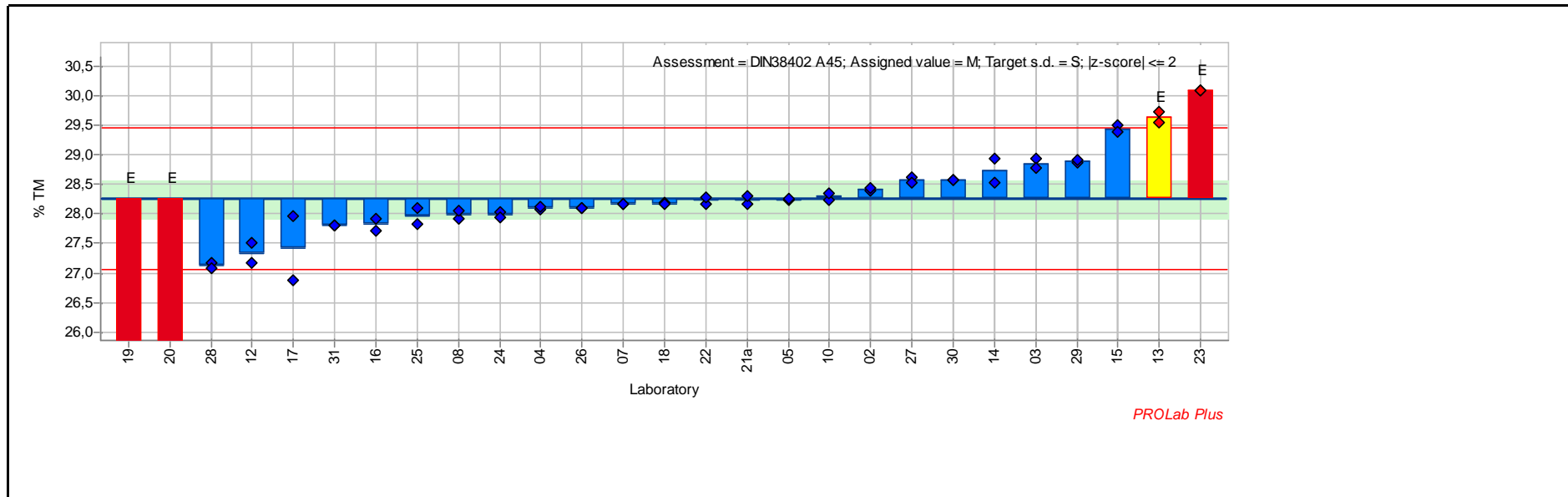


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,110	0,000	-0,1	0,110	0,110	no accreditation	XRF (fusion)		
10	0,108	0,000	-0,4	0,108	0,108	ISO 17025	XRF (fusion)		
13	0,110	0,000	-0,1	0,110	0,110	ISO 17025	XRF (fusion)		
14	0,118	0,001	1,2	0,119	0,117	no accreditation	XRF (fusion)		
15	0,090	0,001	-3,3	0,089	0,091	no accreditation	XRF (Pellet) info only		E
16	0,106	0,007	-0,7	0,111	0,101	ISO 17025	XRF (fusion)		
17	0,114	0,002	0,5	0,115	0,112	ISO 17025	XRF (fusion)		
19	0,057	0,002	-8,7	0,055	0,058	ISO 17025	XRF (fusion)		E
20	0,137	0,002	4,2	0,135	0,138	no accreditation	XRF (Pellet) info only		E
21a	0,108	0,000	-0,4	0,108	0,108	no accreditation	XRF (fusion)		
22	0,112	0,005	0,1	0,108	0,115	no accreditation	XRF (fusion)		
23	0,120	0,000	1,5	0,120	0,120	ISO 17025	XRF (fusion)		
24	0,113	0,001	0,3	0,112	0,113	no accreditation	XRF (fusion)		
25	0,110	0,001	-0,2	0,109	0,110	no accreditation	XRF (fusion)		
26	0,105	0,007	-0,9	0,100	0,110	no accreditation	Standardless info only		
27	0,165	0,020	8,7	0,179	0,151	no accreditation	XRF (fusion)		E
28	0,093	0,006	-2,8	0,097	0,089	no accreditation	XRF (fusion)		E
29	0,113	0,004	0,4	0,116	0,110	no accreditation	XRF (fusion)		
30	0,110	0,000	-0,1	0,110	0,110	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,601 % TM  
**Measurand:** SiO2      **Repeat. s.d.:** 0,118 % TM  
**Mean ± U(Mean):** 28,260 ± 0,313 % TM      **Range of tolerance:** 27,057 - 29,463 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value** 28,260 % TM (Empirical value)      **Target s.d.:** 0,601 % TM (Empirical value)



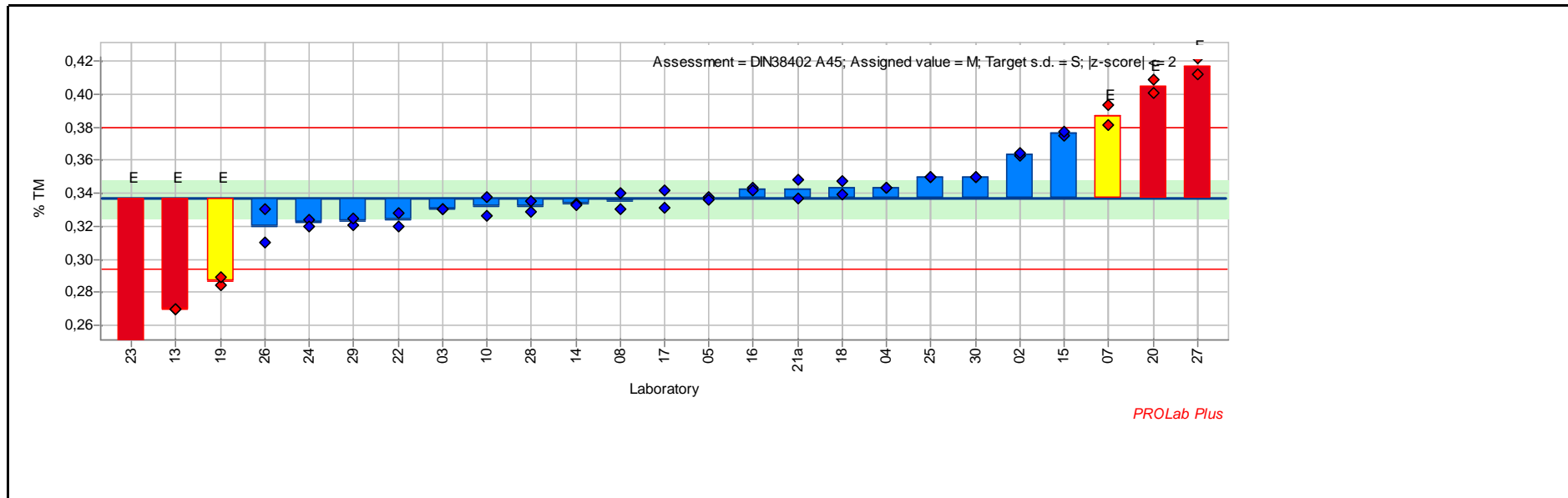
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	28,423	0,033	0,3	28,400	28,446	no accreditation	XRF (fusion)		
03	28,860	0,113	1,0	28,940	28,780	no accreditation	XRF (fusion)		
04	28,105	0,033	-0,3	28,081	28,128	no accreditation	XRF (fusion)		
05	28,241	0,014	0,0	28,231	28,251	ISO 17025	XRF (fusion)		
07	28,175	0,007	-0,1	28,180	28,170	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	27,980	0,099	-0,5	27,910	28,050	no accreditation	XRF (fusion)		
10	28,294	0,077	0,1	28,240	28,349	ISO 17025	XRF (fusion)		
12	27,340	0,240	-1,5	27,171	27,510	ISO 17025	ICP-OES		
13	29,640	0,127	2,3	29,730	29,550	ISO 17025	XRF (fusion)		E
14	28,735	0,303	0,8	28,521	28,949	no accreditation	XRF (fusion)		
15	29,450	0,071	2,0	29,500	29,400	no accreditation	XRF (Pellet) info only		
16	27,823	0,143	-0,7	27,924	27,722	ISO 17025	XRF (fusion)		
17	27,419	0,780	-1,4	27,970	26,867	ISO 17025	XRF (fusion)		
18	28,180	0,025	-0,1	28,198	28,162	no accreditation	XRF (fusion)		
19	22,511	0,288	-9,6	22,307	22,714	ISO 17025	XRF (fusion)		E
20	24,050	0,212	-7,0	24,200	23,900	no accreditation	XRF (Pellet) info only		E
21a	28,238	0,088	0,0	28,176	28,300	no accreditation	XRF (fusion)		
22	28,227	0,088	-0,1	28,165	28,290	no accreditation	XRF (fusion)		
23	30,100	0,000	3,1	30,100	30,100	ISO 17025	XRF (fusion)		E
24	27,995	0,062	-0,4	28,039	27,951	no accreditation	XRF (fusion)		
25	27,970	0,198	-0,5	27,830	28,110	no accreditation	XRF (fusion)		
26	28,110	0,000	-0,2	28,110	28,110	no accreditation	Standardless info only		
27	28,576	0,054	0,5	28,615	28,538	no accreditation	XRF (fusion)		
28	27,123	0,071	-1,9	27,174	27,073	no accreditation	XRF (fusion)		
29	28,895	0,042	1,1	28,865	28,924	no accreditation	XRF (fusion)		
30	28,580	0,000	0,5	28,580	28,580	no accreditation	XRF (fusion)		
31	27,800	0,000	-0,8	27,800	27,800	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,021 % TM  
**Measurand:** TiO2      **Repeat. s.d.:** 0,005 % TM  
**Mean ± U(Mean):** 0,337 ± 0,011 % TM      **Range of tolerance:** 0,294 - 0,380 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 22      **Sample:** DIN 38402 A45  
**Assigned value:** 0,337 % TM (Empirical value)      **Target s.d.:** 0,021 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,363	0,001	1,2	0,363	0,364	no accreditation	XRF (fusion)		
03	0,330	0,000	-0,3	0,330	0,330	no accreditation	XRF (fusion)		
04	0,343	0,000	0,3	0,343	0,343	no accreditation	XRF (fusion)		
05	0,337	0,001	0,0	0,338	0,336	ISO 17025	XRF (fusion)		
07	0,387	0,008	2,3	0,381	0,393	ISO 17025	XRF (fusion)		E

## RV123

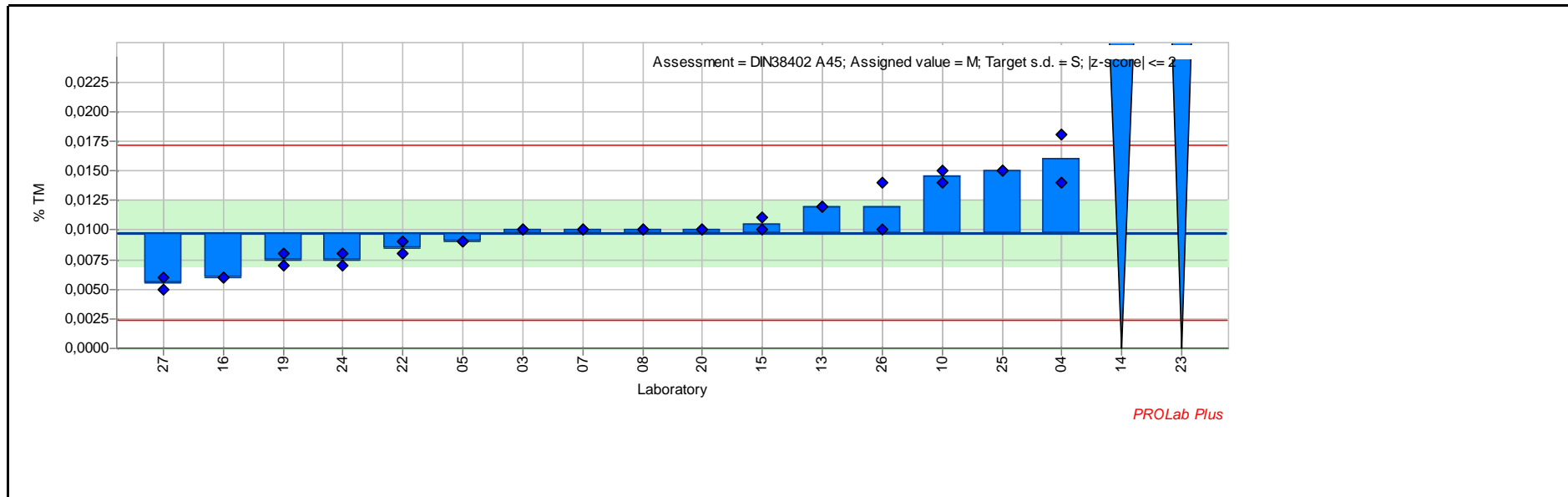
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,335	0,007	-0,1	0,330	0,340	no accreditation	XRF (fusion)		
10	0,332	0,008	-0,2	0,326	0,338	ISO 17025	XRF (fusion)		
13	0,270	0,000	-3,1	0,270	0,270	ISO 17025	XRF (fusion)		E
14	0,334	0,001	-0,2	0,334	0,333	no accreditation	XRF (fusion)		
15	0,376	0,001	1,8	0,375	0,377	no accreditation	XRF (Pellet) info only		
16	0,343	0,001	0,3	0,343	0,342	ISO 17025	XRF (fusion)		
17	0,337	0,008	0,0	0,342	0,331	ISO 17025	XRF (fusion)		
18	0,343	0,006	0,3	0,339	0,347	no accreditation	XRF (fusion)		
19	0,286	0,004	-2,4	0,284	0,289	ISO 17025	XRF (fusion)		E
20	0,405	0,006	3,2	0,409	0,401	no accreditation	XRF (Pellet) info only		E
21a	0,343	0,008	0,3	0,337	0,348	no accreditation	XRF (fusion)		
22	0,324	0,006	-0,6	0,328	0,320	no accreditation	XRF (fusion)		
23	0,240	0,000	-4,5	0,240	0,240	ISO 17025	XRF (fusion)		E
24	0,322	0,003	-0,7	0,324	0,320	no accreditation	XRF (fusion)		
25	0,350	0,000	0,6	0,350	0,350	no accreditation	XRF (fusion)		
26	0,320	0,014	-0,8	0,330	0,310	no accreditation	Standardless info only		
27	0,417	0,007	3,7	0,412	0,422	no accreditation	XRF (fusion)		E
28	0,332	0,004	-0,2	0,329	0,335	no accreditation	XRF (fusion)		
29	0,323	0,003	-0,6	0,321	0,325	no accreditation	XRF (fusion)		
30	0,350	0,000	0,6	0,350	0,350	no accreditation	XRF (fusion)		

RV123

<0,050 (QL)

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,004 % TM  
**Measurand:** ZnO      **Repeat. s.d.:** 0,001 % TM  
**Mean ± U(Mean):** 0,010 ± 0,003 % TM      **Range of tolerance:** 0,002 - 0,017 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 11      **Sample:** DIN 38402 A45  
**Assigned value:** 0,010 % TM (Empirical value)      **Target s.d.:** 0,004 % TM (Empirical value)

<0,040 (QL)



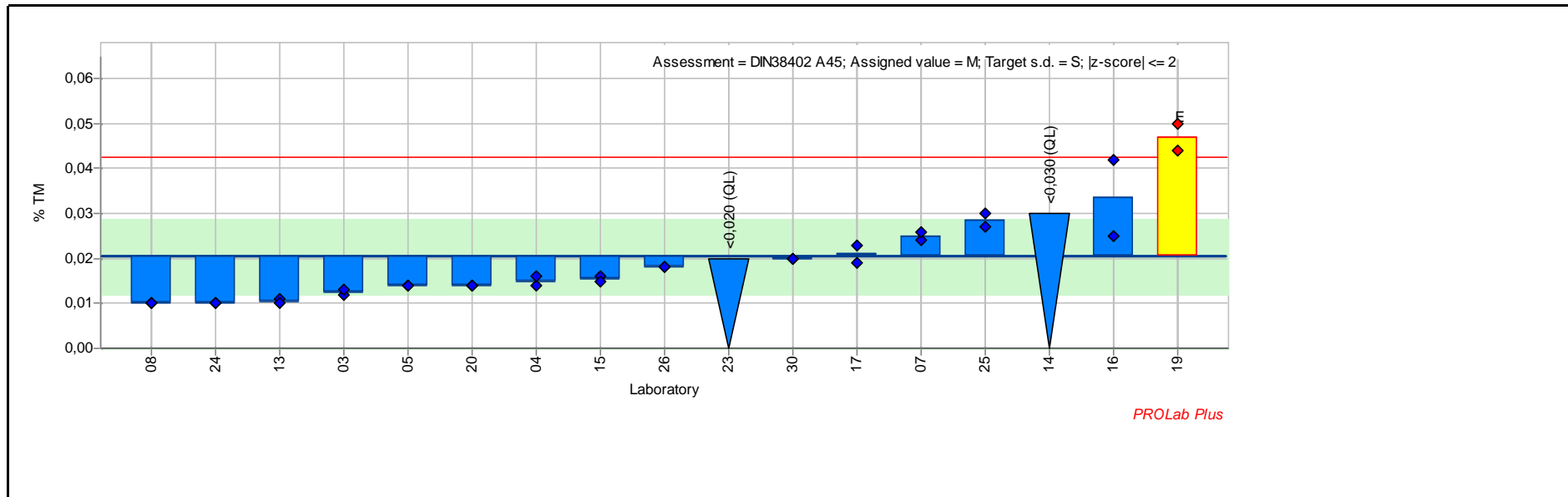
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,010	0,000	0,1	0,010	0,010	no accreditation	XRF (fusion)		
04	0,016	0,003	1,7	0,018	0,014	no accreditation	XRF (fusion)		
05	0,009	0,000	-0,2	0,009	0,009	ISO 17025	ICP-OES		
07	0,010	0,000	0,1	0,010	0,010	ISO 17025	ICP-OES		
08	0,010	0,000	0,1	0,010	0,010	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,014	0,001	1,3	0,015	0,014	ISO 17025	XRF (fusion)		
13	0,012	0,000	0,6	0,012	0,012	ISO 17025	XRF (fusion)		
14				<0,040	<0,040	no accreditation	XRF (fusion)		
15	0,010	0,001	0,2	0,011	0,010	no accreditation	XRF (Pellet) info only		
16	0,006	0,000	-1,0	0,006	0,006	ISO 17025	XRF (fusion)		
19	0,007	0,001	-0,6	0,008	0,007	ISO 17025	XRF (fusion)		
20	0,010	0,000	0,1	0,010	0,010	no accreditation	XRF (Pellet) info only		
22	0,009	0,001	-0,3	0,009	0,008	no accreditation	XRF (Pellet) info only		
23				<0,050	<0,050	no accreditation	ICP-OES		
24	0,007	0,001	-0,6	0,007	0,008	no accreditation	XRF (fusion)		
25	0,015	0,000	1,4	0,015	0,015	no accreditation	Standardless info only	Uniquant	
26	0,012	0,003	0,6	0,014	0,010	no accreditation	Standardless info only		
27	0,005	0,001	-1,1	0,006	0,005	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,011 % TM  
**Measurand:** ZrO2      **Repeat. s.d.:** 0,002 % TM  
**Mean ± U(Mean):** 0,020 ± 0,008 % TM      **Range of tolerance:** -0,002 - 0,043 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 11      **Sample:** DIN 38402 A45  
**Assigned value:** 0,020 % TM (Empirical value)      **Target s.d.:** 0,011 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,013	0,001	-0,7	0,012	0,013	no accreditation	Standardless info only		
04	0,015	0,001	-0,5	0,014	0,016	no accreditation	XRF (fusion)		
05	0,014	0,000	-0,6	0,014	0,014	ISO 17025	ICP-OES		
07	0,025	0,001	0,4	0,024	0,026	ISO 17025	ICP-OES		
08	0,010	0,000	-0,9	0,010	0,010	no accreditation	XRF (fusion)		



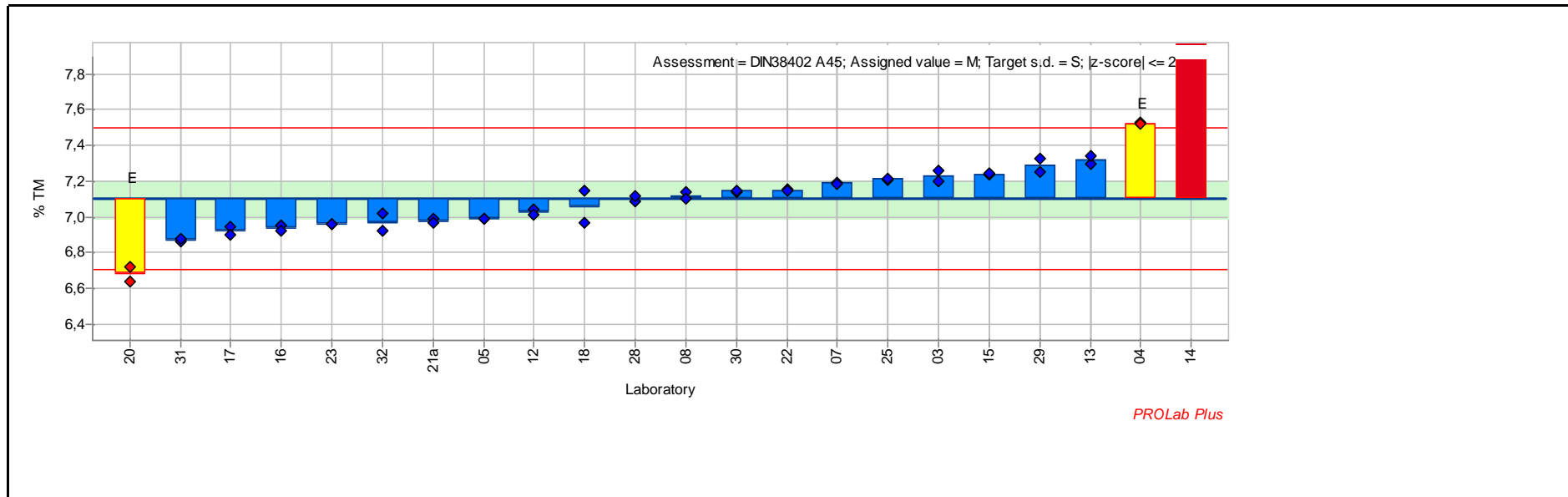
## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
13	0,010	0,001	-0,9	0,011	0,010	ISO 17025	XRF (fusion)		
14				<0,030	<0,030	no accreditation	XRF (fusion)		
15	0,015	0,001	-0,4	0,016	0,015	no accreditation	XRF (Pellet) info only		
16	0,034	0,012	1,2	0,042	0,025	ISO 17025	XRF (fusion)	LOD 0,03	
17	0,021	0,003	0,1	0,019	0,023	ISO 17025	XRF (fusion)		
19	0,047	0,004	2,4	0,050	0,044	ISO 17025	XRF (fusion)		E
20	0,014	0,000	-0,6	0,014	0,014	no accreditation	XRF (Pellet) info only		
23				<0,020	<0,020	no accreditation	ICP-OES		
24	0,010	0,000	-0,9	0,010	0,010	no accreditation	XRF (fusion)		
25	0,028	0,002	0,7	0,027	0,030	no accreditation	XRF (fusion)		
26	0,018	0,000	-0,2	0,018	0,018	no accreditation	Standardless info only		
30	0,020	0,000	0,0	0,020	0,020	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,198 % TM  
**Measurand:** Ctotal      **Repeat. s.d.:** 0,030 % TM  
**Mean ± U(Mean):** 7,102 ± 0,108 % TM      **Range of tolerance:** 6,706 - 7,499 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 21      **Sample:** DIN 38402 A45  
**Assigned value:** 7,102 % TM (Empirical value)      **Target s.d.:** 0,198 % TM (Empirical value)

E



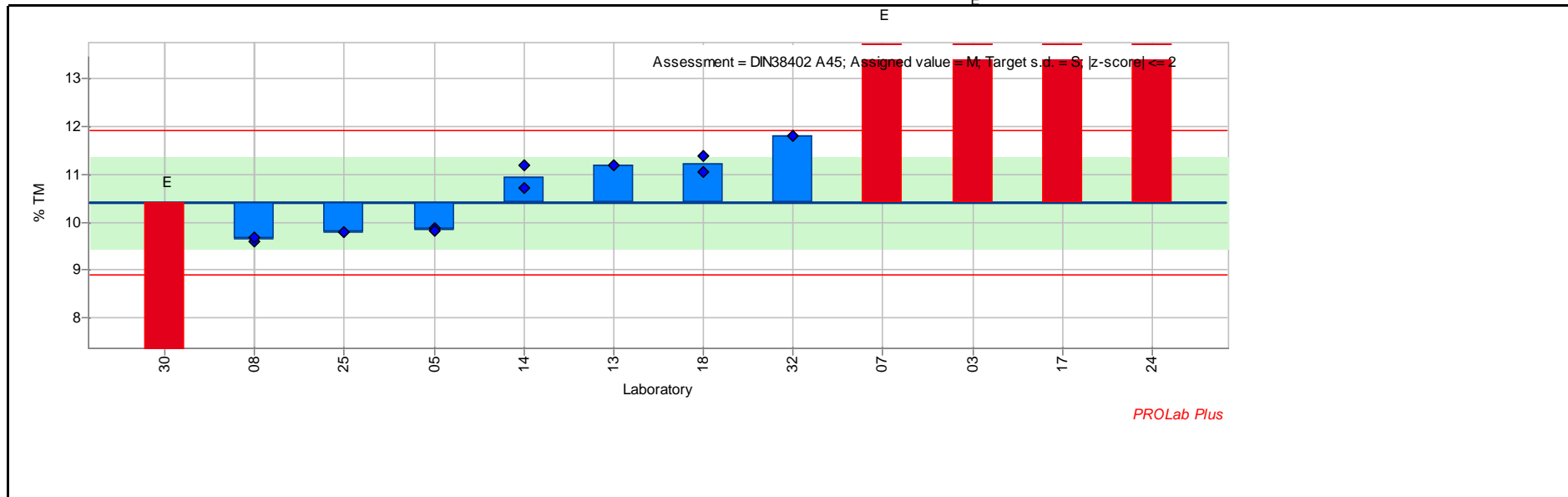
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	7,230	0,042	0,6	7,260	7,200	no accreditation	combustion		
04	7,524	0,004	2,1	7,526	7,521	no accreditation	combustion		E
05	6,992	0,001	-0,6	6,991	6,993	ISO 17025	combustion		
07	7,190	0,004	0,4	7,193	7,187	ISO 17025	combustion		
08	7,120	0,028	0,1	7,140	7,100	no accreditation	combustion		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
12	7,024	0,021	-0,4	7,039	7,009	ISO 17025	combustion		
13	7,320	0,028	1,1	7,300	7,340	ISO 17025	combustion		
14	8,335	0,008	6,2	8,340	8,329	no accreditation	combustion		E
15	7,240	0,001	0,7	7,240	7,241	no accreditation	combustion		
16	6,935	0,021	-0,8	6,950	6,920	ISO 17025	combustion		
17	6,925	0,032	-0,9	6,948	6,903	ISO 17025	combustion		
18	7,060	0,127	-0,2	7,150	6,970	no accreditation	combustion		
20	6,681	0,059	-2,1	6,723	6,639	no accreditation	combustion	DIN EN 13137	E
21a	6,978	0,013	-0,6	6,987	6,968	no accreditation	combustion		
22	7,149	0,006	0,2	7,153	7,145	no accreditation	combustion		
23	6,960	0,000	-0,7	6,960	6,960	ISO 17025	combustion		
25	7,212	0,006	0,6	7,207	7,216	no accreditation	combustion		
28	7,105	0,021	0,0	7,090	7,120	no accreditation	combustion		
29	7,288	0,051	0,9	7,252	7,324	no accreditation	combustion		
30	7,145	0,007	0,2	7,140	7,150	no accreditation	combustion		
31	6,870	0,014	-1,2	6,860	6,880	no accreditation	other	Wet Analysys	
32	6,971	0,071	-0,7	7,021	6,921	no accreditation	combustion		

RV123

**Sample:** FLX-CRM 124      **Reprod. s.d.:** 0,758 % TM  
**Measurand:** CO2      **Repeat. s.d.:** 0,094 % TM  
**Mean ± U(Mean):** 10,405 ± 0,948 % TM      **Range of tolerance:** 8,888 - 11,921 % TM (|z-score| ≤ 2,0) E  
**No. of laboratories:** 4      **Sample:** DIN 38402 A45 E  
**Assigned value:** 10,405 % TM (Empirical value)      **Target s.d.:** 0,758 % TM (Empirical value) E



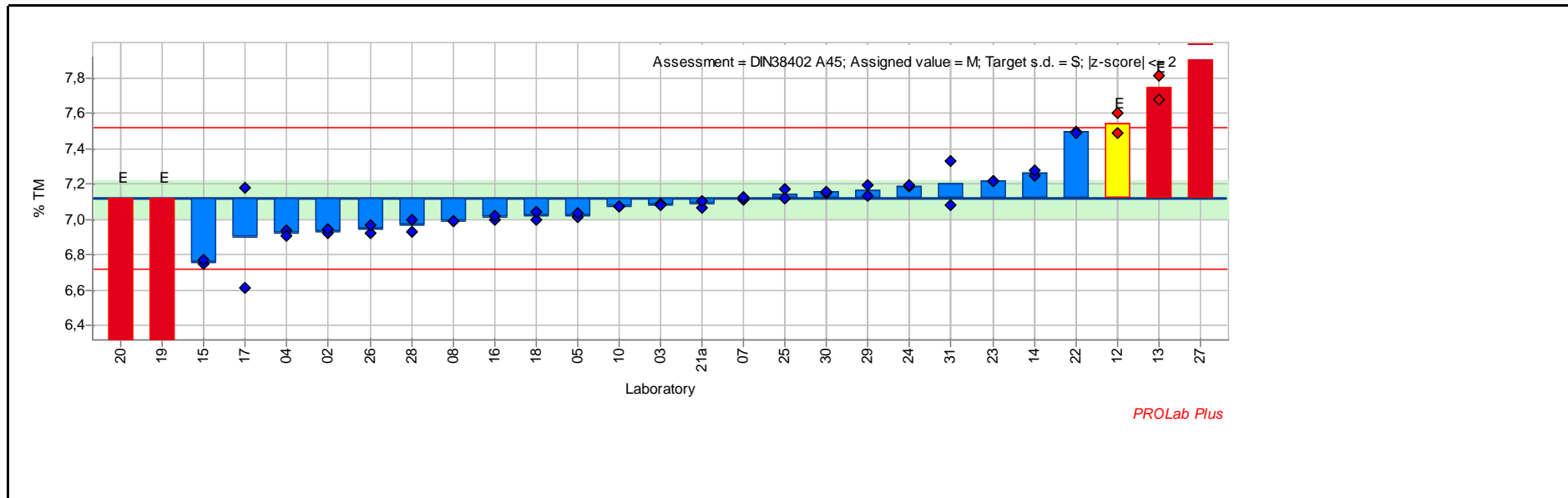
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	14,180	0,014	5,0	14,170	14,190	no accreditation	other	inert gas	E
05	9,851	0,039	-0,7	9,878	9,823	ISO 17025	combustion	acid	
07	13,894	0,008	4,6	13,900	13,888	ISO 17025	combustion		E
08	9,645	0,064	-1,0	9,600	9,690	no accreditation	combustion	acid	
13	11,180		1,0	11,180		ISO 17025	combustion	acid	

**RV123**

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
14	10,944	0,330	0,7	11,177	10,711	no accreditation	combustion	acid	
17	15,116	0,827	6,2	15,701	14,531	no accreditation	combustion	Leco RC 612	E
18	11,215	0,233	1,1	11,050	11,380	no accreditation	other	loss of weight	
24	16,303	0,033	7,8	16,327	16,280	no accreditation	combustion	LOI in a muffel	E
25	9,800		-0,8	9,800		no accreditation	combustion		
30	3,780	0,057	-8,7	3,740	3,820	no accreditation	combustion		E
32	11,806		1,8	11,806		no accreditation	combustion		

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 0,200 % TM  
**Measurand:** Al2O3      **Repeat. s.d.:** 0,033 % TM  
**Mean ± U(Mean):** 7,120 ± 0,104 % TM      **Range of tolerance:** 6,720 - 7,519 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value:** 7,120 % TM (Empirical value)      **Target s.d.:** 0,200 % TM (Empirical value)



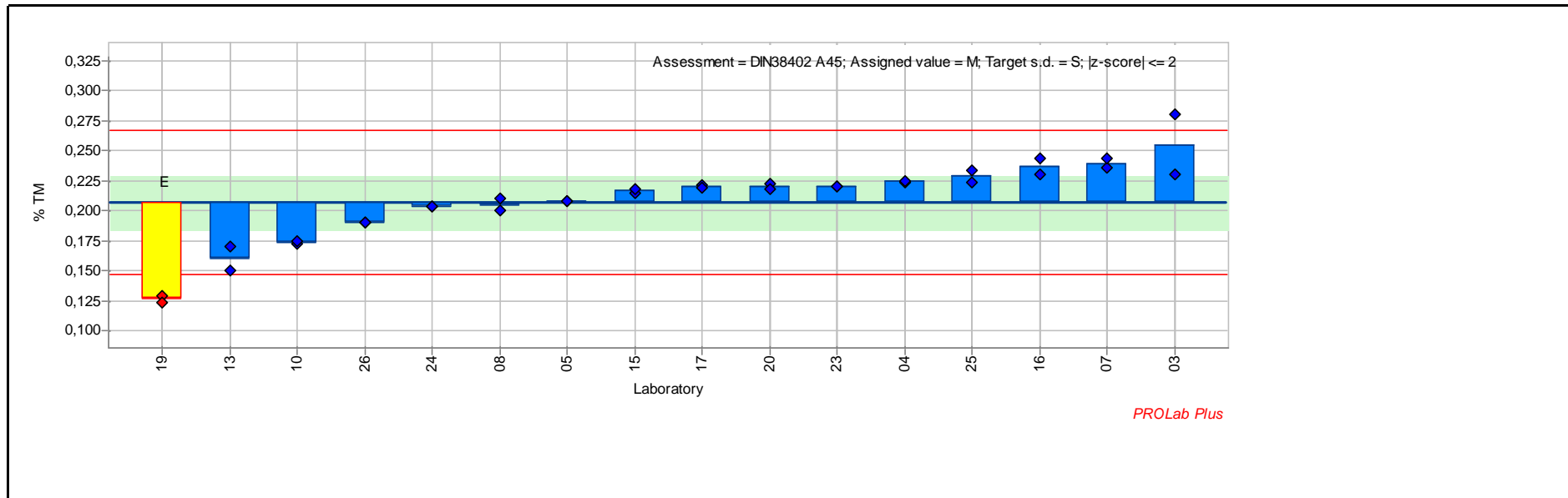
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	6,934	0,013	-0,9	6,925	6,943	no accreditation	XRF (fusion)		
03	7,085	0,007	-0,2	7,090	7,080	no accreditation	XRF (fusion)		
04	6,923	0,025	-1,0	6,941	6,906	no accreditation	XRF (fusion)		
05	7,025	0,014	-0,5	7,015	7,035	ISO 17025	XRF (fusion)		
07	7,120	0,014	0,0	7,110	7,130	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	6,990	0,000	-0,6	6,990	6,990	no accreditation	XRF (fusion)		
10	7,074	0,001	-0,2	7,074	7,073	ISO 17025	XRF (fusion)		
12	7,544	0,078	2,1	7,489	7,600	ISO 17025	ICP-OES		E
13	7,745	0,092	3,1	7,810	7,680	ISO 17025	XRF (fusion)		E
14	7,264	0,021	0,7	7,249	7,279	no accreditation	XRF (fusion)		
15	6,760	0,014	-1,8	6,750	6,770	no accreditation	XRF (Pellet) info only		
16	7,013	0,016	-0,5	7,002	7,024	ISO 17025	XRF (fusion)		
17	6,898	0,402	-1,1	7,182	6,614	ISO 17025	XRF (fusion)		
18	7,021	0,033	-0,5	6,998	7,045	no accreditation	XRF (fusion)		
19	5,889	0,091	-6,2	5,953	5,824	ISO 17025	XRF (fusion)		E
20	5,020	0,000	-10,5	5,020	5,020	no accreditation	XRF (Pellet) info only		E
21a	7,088	0,028	-0,2	7,069	7,108	no accreditation	XRF (fusion)		
22	7,495	0,008	1,9	7,500	7,489	no accreditation	XRF (fusion)		
23	7,220	0,000	0,5	7,220	7,220	ISO 17025	XRF (fusion)		
24	7,191	0,010	0,4	7,184	7,198	no accreditation	XRF (fusion)		
25	7,145	0,035	0,1	7,170	7,120	no accreditation	XRF (fusion)		
26	6,945	0,035	-0,9	6,920	6,970	no accreditation	Standardless info only		
27	15,346	0,030	41,2	15,367	15,324	no accreditation	XRF (fusion)		E
28	6,966	0,050	-0,8	6,931	7,002	no accreditation	XRF (fusion)		
29	7,168	0,042	0,2	7,138	7,198	no accreditation	XRF (fusion)		
30	7,155	0,007	0,2	7,150	7,160	no accreditation	XRF (fusion)		
31	7,205	0,177	0,4	7,330	7,080	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 0,030 % TM  
**Measurand:** BaO      **Repeat. s.d.:** 0,005 % TM  
**Mean ± U(Mean):** 0,207 ± 0,022 % TM      **Range of tolerance:** 0,146 - 0,267 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 12      **Sample:** DIN 38402 A45  
**Assigned value:** 0,207 % TM (Empirical value)      **Target s.d.:** 0,030 % TM (Empirical value)



PROLab Plus

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,255	0,035	1,6	0,230	0,280	no accreditation	Standardless info only		
04	0,225	0,001	0,6	0,224	0,225	no accreditation	XRF (fusion)		
05	0,208	0,000	0,0	0,208	0,208	ISO 17025	ICP-OES		
07	0,239	0,005	1,1	0,236	0,243	ISO 17025	ICP-OES		
08	0,205	0,007	-0,1	0,200	0,210	no accreditation	XRF (fusion)		

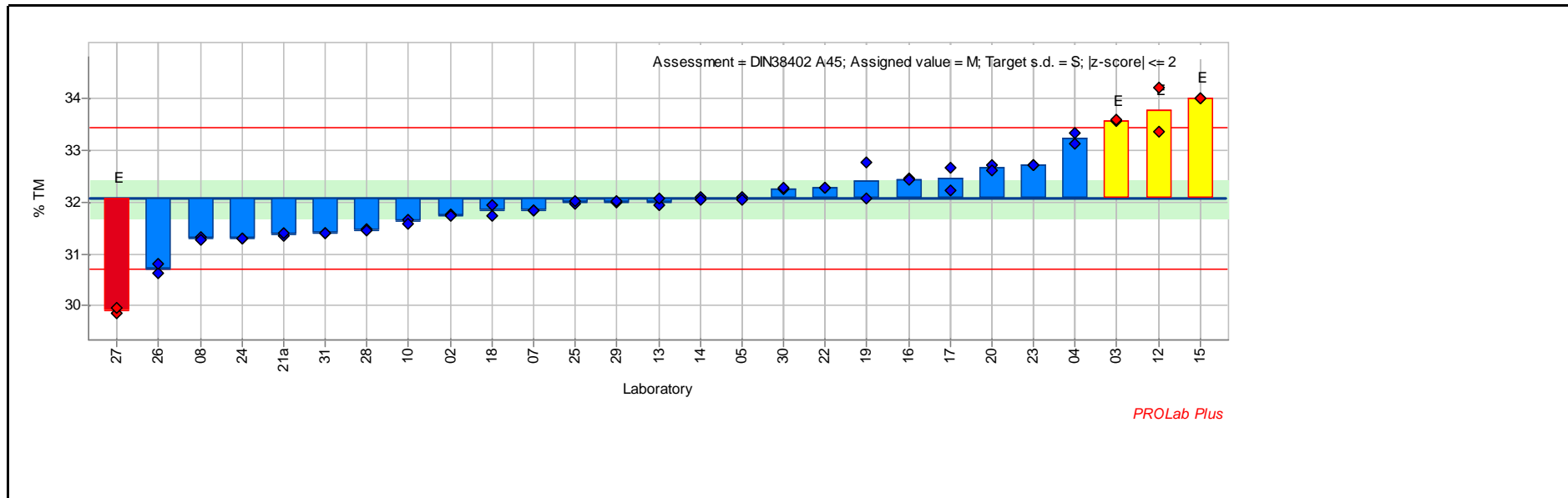


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,173	0,002	-1,1	0,172	0,175	ISO 17025	XRF (fusion)		
13	0,160	0,014	-1,5	0,150	0,170	ISO 17025	XRF (fusion)		
15	0,216	0,002	0,3	0,215	0,218	no accreditation	XRF (Pellet) info only		
16	0,236	0,009	1,0	0,230	0,243	ISO 17025	XRF (fusion)		
17	0,220	0,001	0,4	0,221	0,219	ISO 17025	XRF (fusion)		
19	0,127	0,004	-2,7	0,129	0,124	ISO 17025	XRF (fusion)		E
20	0,220	0,003	0,4	0,222	0,218	no accreditation	XRF (Pellet) info only		
23	0,220	0,000	0,4	0,220	0,220	no accreditation	ICP-OES		
24	0,204	0,001	-0,1	0,203	0,204	no accreditation	XRF (fusion)		
25	0,229	0,008	0,7	0,223	0,234	no accreditation	XRF (fusion)		
26	0,190	0,000	-0,6	0,190	0,190	no accreditation	Standardless info only		

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 0,680 % TM  
**Measurand:** CaO      **Repeat. s.d.:** 0,047 % TM  
**Mean ± U(Mean):** 32,065 ± 0,354 % TM      **Range of tolerance:** 30,705 - 33,424 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value** 32,065 % TM (Empirical value)      **Target s.d.:** 0,680 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	31,742	0,018	-0,5	31,755	31,730	no accreditation	XRF (fusion)		
03	33,560	0,028	2,2	33,540	33,580	no accreditation	XRF (fusion)		E
04	33,221	0,150	1,7	33,327	33,115	no accreditation	XRF (fusion)		
05	32,075	0,036	0,0	32,100	32,049	ISO 17025	XRF (fusion)		
07	31,840	0,000	-0,3	31,840	31,840	ISO 17025	XRF (fusion)		

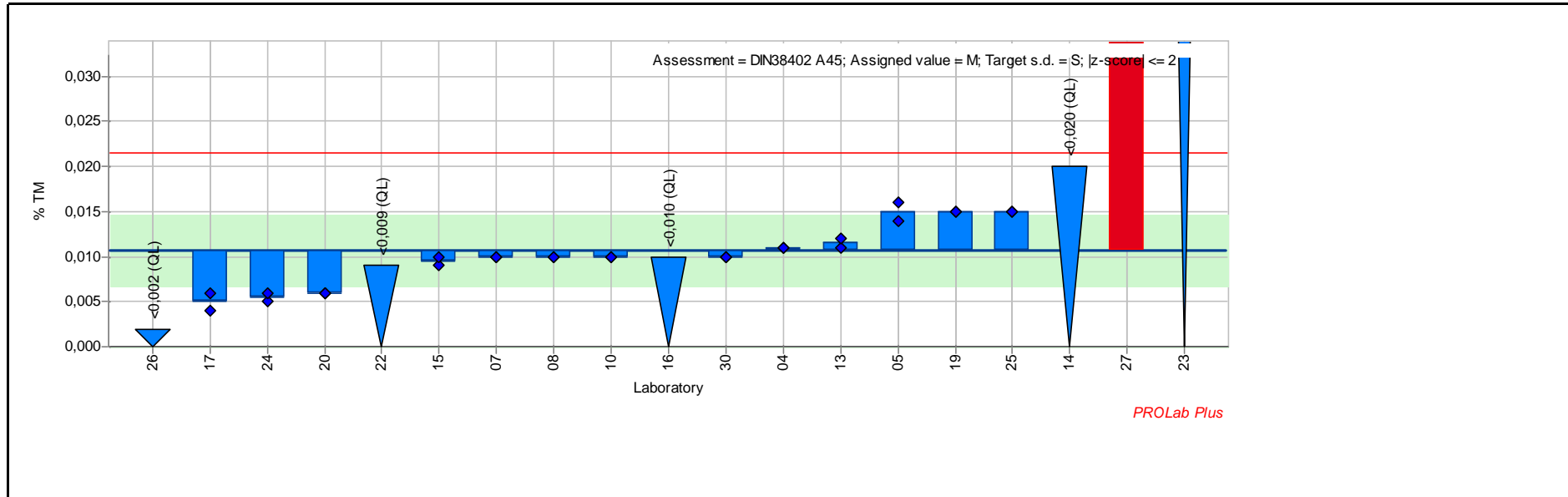
## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	31,290	0,042	-1,1	31,320	31,260	no accreditation	XRF (fusion)		
10	31,622	0,059	-0,7	31,664	31,580	ISO 17025	XRF (fusion)		
12	33,769	0,607	2,5	34,198	33,340	ISO 17025	ICP-OES	CaOtotal	E
13	31,995	0,092	-0,1	31,930	32,060	ISO 17025	XRF (fusion)		
14	32,069	0,033	0,0	32,092	32,045	no accreditation	XRF (fusion)		
15	34,000	0,000	2,8	34,000	34,000	no accreditation	XRF (Pellet) info only		E
16	32,426	0,016	0,5	32,437	32,415	ISO 17025	XRF (fusion)		
17	32,448	0,307	0,6	32,665	32,231	ISO 17025	XRF (fusion)		
18	31,838	0,137	-0,3	31,741	31,935	no accreditation	XRF (fusion)		
19	32,404	0,482	0,5	32,745	32,063	ISO 17025	XRF (fusion)		
20	32,650	0,071	0,9	32,700	32,600	no accreditation	XRF (Pellet) info only		
21a	31,377	0,028	-1,0	31,357	31,397	no accreditation	XRF (fusion)		
22	32,266	0,009	0,3	32,272	32,259	no accreditation	XRF (fusion)		
23	32,700	0,000	0,9	32,700	32,700	ISO 17025	XRF (fusion)		
24	31,298	0,001	-1,1	31,299	31,298	no accreditation	XRF (fusion)		
25	31,985	0,035	-0,1	31,960	32,010	no accreditation	XRF (fusion)		
26	30,715	0,134	-2,0	30,620	30,810	no accreditation	Standardless info only		
27	29,911	0,064	-3,2	29,866	29,956	no accreditation	XRF (fusion)		E
28	31,459	0,019	-0,9	31,473	31,446	no accreditation	XRF (fusion)		
29	31,991	0,018	-0,1	31,978	32,003	no accreditation	XRF (fusion)		
30	32,250	0,014	0,3	32,240	32,260	no accreditation	XRF (fusion)		
31	31,400	0,000	-1,0	31,400	31,400	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 0,005 % TM  
**Measurand:** Cr2O3      **Repeat. s.d.:** 0,001 % TM  
**Mean ± U(Mean):** 0,011 ± 0,004 % TM      **Range of tolerance:** 0,000 - 0,022 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 12      **Sample:** DIN 38402 A45  
**Assigned value:** 0,011 % TM (Empirical value)      **Target s.d.:** 0,005 % TM (Empirical value)

E



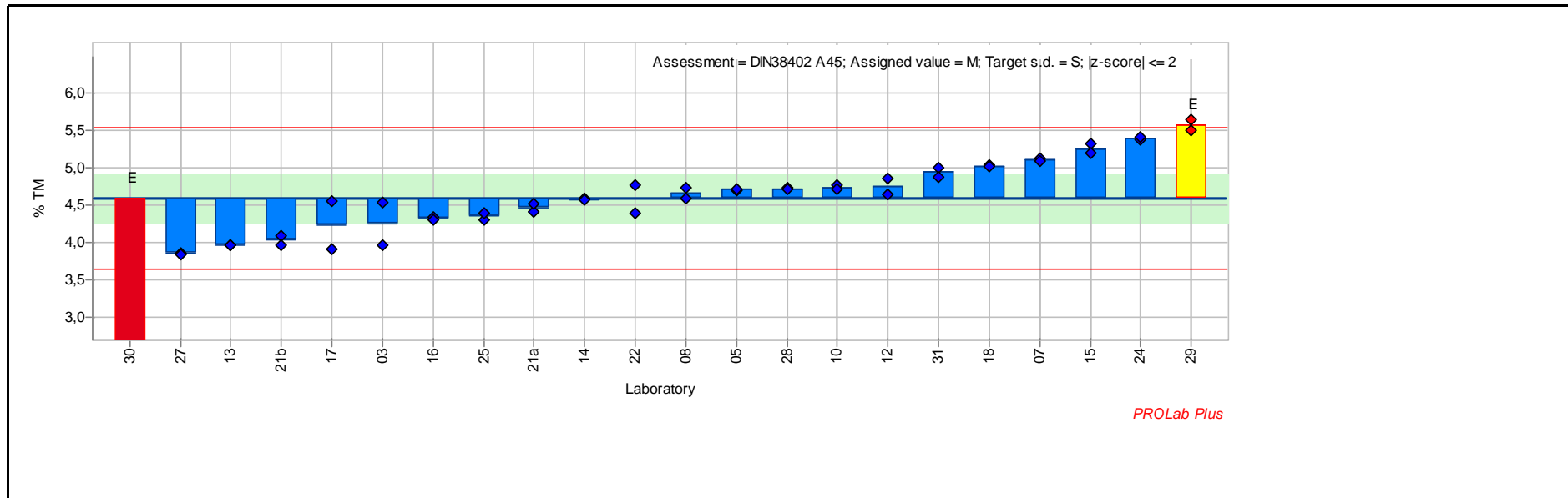
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
04	0,011	0,000	0,1	0,011	0,011	no accreditation	XRF (fusion)		
05	0,015	0,001	0,8	0,014	0,016	ISO 17025	XRF (fusion)		
07	0,010	0,000	-0,1	0,010	0,010	ISO 17025	XRF (fusion)		
08	0,010	0,000	-0,1	0,010	0,010	no accreditation	XRF (fusion)		
10	0,010	0,000	-0,1	0,010	0,010	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
13	0,011	0,001	0,1	0,011	0,012	ISO 17025	XRF (fusion)		
14				<0,020	<0,020	no accreditation	XRF (fusion)		
15	0,009	0,001	-0,2	0,009	0,010	no accreditation	XRF (Pellet) info only		
16				<0,010	<0,010	ISO 17025	XRF (fusion)		
17	0,005	0,001	-1,1	0,004	0,006	ISO 17025	XRF (fusion)		
19	0,015	0,000	0,8	0,015	0,015	ISO 17025	XRF (fusion)		
20	0,006	0,000	-0,9	0,006	0,006	no accreditation	XRF (Pellet) info only		
22				<0,009	<0,009	no accreditation	XRF (fusion)		
23				<0,100	<0,100	ISO 17025	XRF (fusion)		
24	0,005	0,001	-1,0	0,005	0,006	no accreditation	XRF (fusion)		
25	0,015	0,000	0,8	0,015	0,015	no accreditation	XRF (fusion)		
26				<0,002	<0,002	no accreditation	Standardless info only		
27	0,050	0,012	7,2	0,058	0,041	no accreditation	XRF (fusion)		E
30	0,010	0,000	-0,1	0,010	0,010	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 0,475 % TM  
**Measurand:** F      **Repeat. s.d.:** 0,105 % TM  
**Mean ± U(Mean):** 4,590 ± 0,329 % TM      **Range of tolerance:** 3,640 - 5,540 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 13      **Sample:** DIN 38402 A45  
**Assigned value:** 4,590 % TM (Empirical value)      **Target s.d.:** 0,475 % TM (Empirical value)



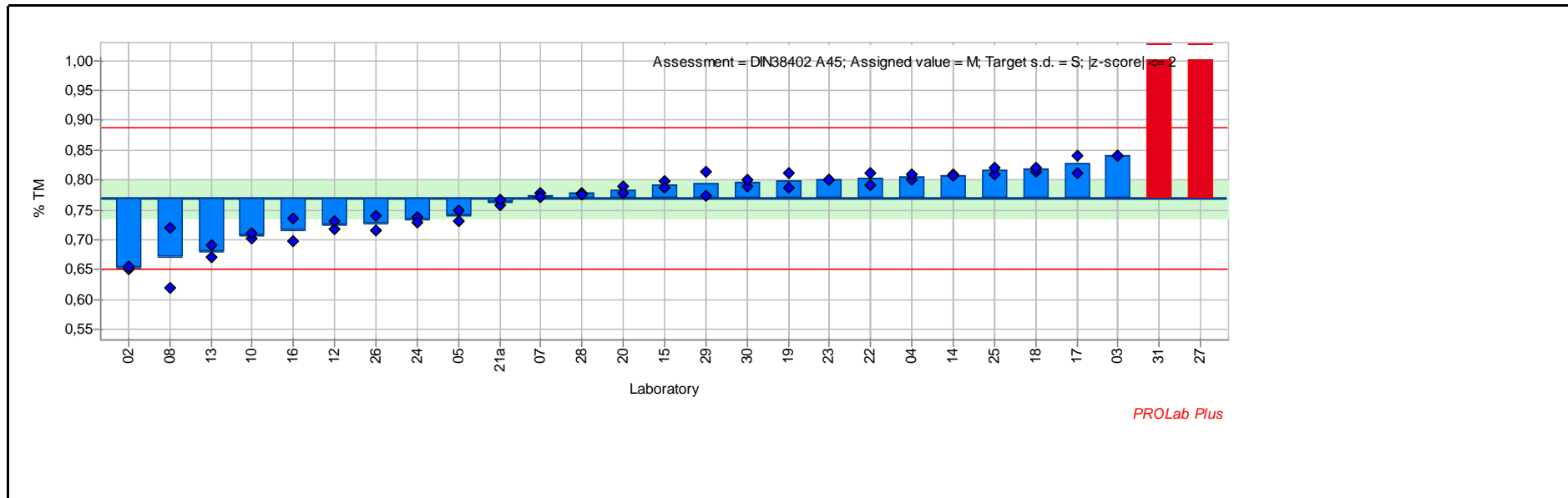
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	4,245	0,403	-0,7	3,960	4,530	no accreditation	XRF (Pellet) info only		
05	4,708	0,010	0,2	4,701	4,715	ISO 17025	other	Fluorid wurde	
07	5,110	0,017	1,1	5,122	5,098	ISO 17025	Ion selective electrode		
08	4,660	0,099	0,1	4,590	4,730	no accreditation	XRF (fusion)		
10	4,738	0,041	0,3	4,767	4,709	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
12	4,750	0,156	0,3	4,860	4,640	ISO 17025	other	Potentiometry	
13	3,960	0,000	-1,3	3,960	3,960	ISO 17025	XRF (Pellet) info only		
14	4,576	0,011	0,0	4,584	4,568	no accreditation	XRF (fusion)		
15	5,260	0,085	1,4	5,320	5,200	no accreditation	XRF (Pellet) info only		
16	4,320	0,028	-0,6	4,340	4,300	ISO 17025	other	Melting digestion,	
17	4,236	0,457	-0,7	4,560	3,913	ISO 17025	XRF (fusion)		
18	5,027	0,008	0,9	5,032	5,021	no accreditation	XRF (fusion)		
21a	4,462	0,077	-0,3	4,407	4,516	no accreditation	XRF (fusion)		
21b	4,029	0,083	-1,2	4,088	3,970	no accreditation	Ion selective electrode		
22	4,582	0,276	0,0	4,387	4,777	no accreditation	Ion selective electrode		
24	5,393	0,031	1,7	5,371	5,415	no accreditation	XRF (Pellet) info only		
25	4,350	0,071	-0,5	4,300	4,400	no accreditation	XRF (fusion)		
27	3,849	0,012	-1,6	3,857	3,840	no accreditation	XRF (fusion)		
28	4,719	0,014	0,3	4,729	4,709	no accreditation	XRF (fusion)		
29	5,575	0,106	2,1	5,500	5,650	no accreditation	Ion selective electrode		E
30	2,240	0,057	-4,9	2,280	2,200	no accreditation	other	Potentiometry	E
31	4,940	0,085	0,7	5,000	4,880	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 0,059 % TM  
**Measurand:** Fe2O3      **Repeat. s.d.:** 0,009 % TM  
**Mean ± U(Mean):** 0,769 ± 0,032 % TM      **Range of tolerance:** 0,651 - 0,888 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 22      **Sample:** DIN 38402 A45      E  
**Assigned value:** 0,769 % TM (Empirical value)      **Target s.d.:** 0,059 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,653	0,003	-2,0	0,651	0,655	no accreditation	XRF (fusion)		
03	0,840	0,000	1,2	0,840	0,840	no accreditation	XRF (fusion)		
04	0,804	0,006	0,6	0,800	0,809	no accreditation	XRF (fusion)		
05	0,740	0,012	-0,5	0,748	0,731	ISO 17025	XRF (fusion)		
07	0,774	0,004	0,1	0,777	0,772	ISO 17025	XRF (fusion)		

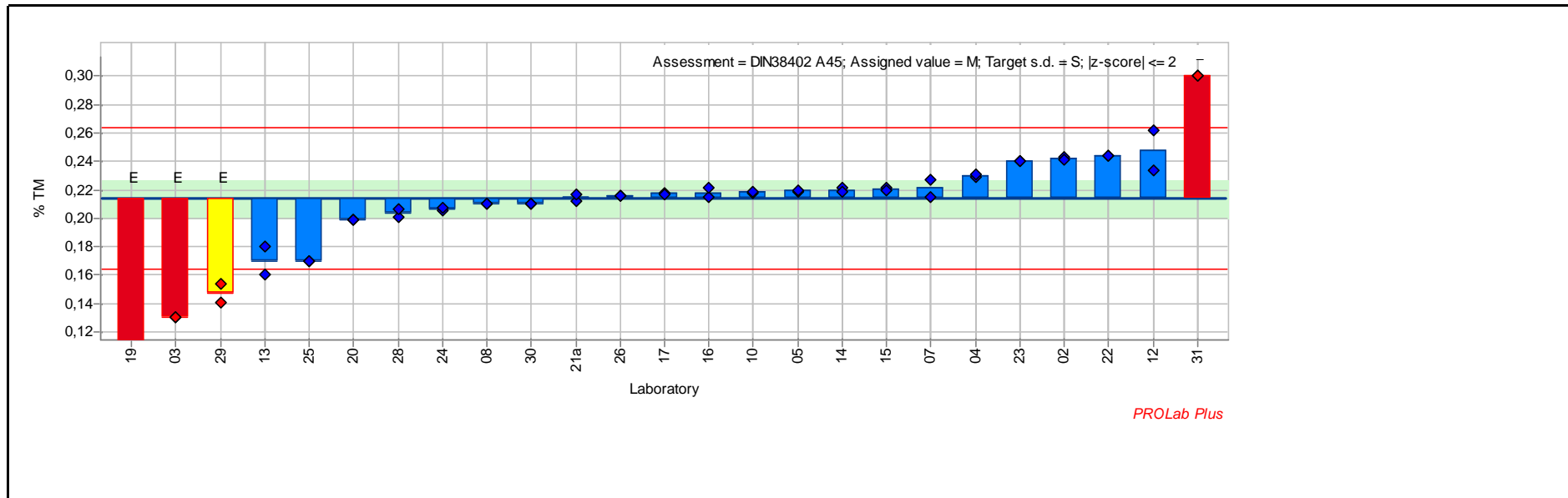


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,670	0,071	-1,7	0,720	0,620	no accreditation	XRF (fusion)		
10	0,706	0,008	-1,1	0,701	0,712	ISO 17025	XRF (fusion)		
12	0,725	0,010	-0,7	0,718	0,732	ISO 17025	other	AAS +	
13	0,680	0,014	-1,5	0,670	0,690	ISO 17025	XRF (fusion)		
14	0,808	0,001	0,7	0,809	0,807	no accreditation	XRF (fusion)		
15	0,792	0,008	0,4	0,798	0,786	no accreditation	XRF (Pellet) info only		
16	0,716	0,028	-0,9	0,736	0,697	ISO 17025	XRF (fusion)		
17	0,827	0,021	1,0	0,841	0,812	ISO 17025	XRF (fusion)		
18	0,817	0,005	0,8	0,814	0,821	no accreditation	XRF (fusion)		
19	0,799	0,018	0,5	0,812	0,786	ISO 17025	XRF (fusion)		
20	0,784	0,009	0,2	0,790	0,777	no accreditation	XRF (Pellet) info only		
21a	0,762	0,006	-0,1	0,758	0,767	no accreditation	XRF (fusion)		
22	0,802	0,014	0,6	0,812	0,792	no accreditation	XRF (fusion)		
23	0,800	0,000	0,5	0,800	0,800	ISO 17025	XRF (fusion)		
24	0,733	0,006	-0,6	0,737	0,729	no accreditation	XRF (fusion)		
25	0,815	0,007	0,8	0,810	0,820	no accreditation	XRF (fusion)		
26	0,727	0,017	-0,7	0,715	0,739	no accreditation	Standardless info only		
27	2,163	0,004	23,5	2,166	2,161	no accreditation	XRF (fusion)		E
28	0,777	0,003	0,1	0,779	0,775	no accreditation	XRF (fusion)		
29	0,793	0,028	0,4	0,773	0,813	no accreditation	XRF (fusion)		
30	0,795	0,007	0,4	0,790	0,800	no accreditation	XRF (fusion)		
31	1,190	0,000	7,1	1,190	1,190	no accreditation	other	Wet Analysys	E

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 0,025 % TM  
**Measurand:** K2O      **Repeat. s.d.:** 0,003 % TM  
**Mean ± U(Mean):** 0,214 ± 0,014 % TM      **Range of tolerance:** 0,164 - 0,264 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 21      **Sample:** DIN 38402 A45  
**Assigned value:** 0,214 % TM (Empirical value)      **Target s.d.:** 0,025 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,242	0,001	1,1	0,243	0,241	no accreditation	XRF (fusion)		
03	0,130	0,000	-3,4	0,130	0,130	no accreditation	XRF (fusion)		E
04	0,230	0,001	0,6	0,229	0,231	no accreditation	XRF (fusion)		
05	0,220	0,001	0,2	0,219	0,220	ISO 17025	ICP-OES		
07	0,221	0,008	0,3	0,227	0,215	ISO 17025	ICP-OES		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,210	0,000	-0,2	0,210	0,210	no accreditation	XRF (fusion)		
10	0,219	0,001	0,2	0,218	0,219	ISO 17025	XRF (fusion)		
12	0,248	0,020	1,4	0,234	0,262	ISO 17025	AAS		
13	0,170	0,014	-1,8	0,160	0,180	ISO 17025	XRF (fusion)		
14	0,220	0,001	0,2	0,221	0,219	no accreditation	XRF (fusion)		
15	0,221	0,001	0,3	0,221	0,220	no accreditation	XRF (Pellet) info only		
16	0,218	0,004	0,2	0,215	0,221	ISO 17025	XRF (fusion)		
17	0,217	0,001	0,1	0,218	0,217	ISO 17025	XRF (fusion)		
19	0,029	0,001	-7,4	0,030	0,029	ISO 17025	XRF (fusion)		E
20	0,199	0,000	-0,6	0,199	0,199	no accreditation	XRF (Pellet) info only		
21a	0,214	0,004	0,0	0,212	0,217	no accreditation	XRF (fusion)		
22	0,244	0,000	1,2	0,244	0,244	no accreditation	ICP-OES		
23	0,240	0,000	1,0	0,240	0,240	ISO 17025	XRF (fusion)		
24	0,206	0,001	-0,3	0,205	0,207	no accreditation	XRF (fusion)		
25	0,170	0,000	-1,8	0,170	0,170	no accreditation	XRF (fusion)		
26	0,216	0,000	0,1	0,216	0,216	no accreditation	Standardless info only		
28	0,204	0,004	-0,4	0,201	0,206	no accreditation	XRF (fusion)		
29	0,147	0,009	-2,7	0,141	0,154	no accreditation	XRF (fusion)		E
30	0,210	0,000	-0,2	0,210	0,210	no accreditation	XRF (fusion)		
31	0,300	0,000	3,5	0,300	0,300	no accreditation	other	Wet Analysys	E

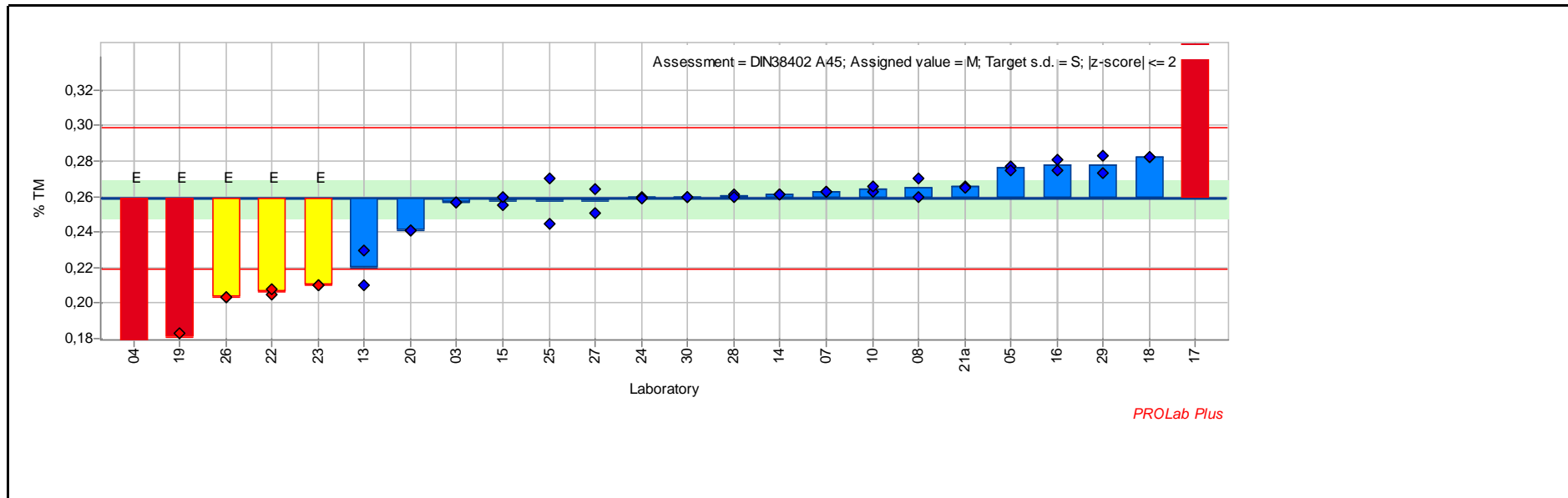


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,960	0,014	0,1	0,970	0,950	no accreditation	XRF (fusion)		
10	0,956	0,001	0,0	0,955	0,956	ISO 17025	XRF (fusion)		
12	1,008	0,016	0,7	0,997	1,020	ISO 17025	ICP-OES		
13	0,970	0,014	0,2	0,960	0,980	ISO 17025	XRF (fusion)		
14	0,968	0,011	0,2	0,961	0,976	no accreditation	XRF (fusion)		
15	1,020	0,000	0,9	1,020	1,020	no accreditation	XRF (Pellet) info only		
16	1,032	0,028	1,0	1,012	1,052	ISO 17025	XRF (fusion)		
17	0,831	0,015	-1,6	0,842	0,821	ISO 17025	XRF (fusion)		
18	1,004	0,012	0,7	0,995	1,012	no accreditation	XRF (fusion)		
19	0,280	0,030	-8,7	0,259	0,302	ISO 17025	XRF (fusion)		E
20	0,776	0,002	-2,3	0,777	0,774	no accreditation	XRF (Pellet) info only		E
21a	0,968	0,005	0,2	0,972	0,965	no accreditation	XRF (fusion)		
22	0,908	0,049	-0,6	0,873	0,943	no accreditation	XRF (fusion)		
23	1,040	0,000	1,1	1,040	1,040	ISO 17025	XRF (fusion)		
24	0,967	0,004	0,2	0,970	0,964	no accreditation	XRF (fusion)		
25	0,916	0,028	-0,5	0,896	0,936	no accreditation	XRF (fusion)		
26	0,915	0,007	-0,5	0,910	0,920	no accreditation	Standardless info only		
27	0,897	0,016	-0,7	0,885	0,908	no accreditation	XRF (fusion)		
28	0,978	0,005	0,3	0,974	0,981	no accreditation	XRF (fusion)		
29	1,014	0,015	0,8	1,003	1,024	no accreditation	XRF (fusion)		
30	1,210	0,000	3,3	1,210	1,210	no accreditation	XRF (fusion)		E
31	1,510	0,141	7,2	1,410	1,610	no accreditation	other	Wet Analysys	E

RV123

**Sample:** FLX-CRM 125 **Reprod. s.d.:** 0,020 % TM **E**  
**Measurand:** MnO2 **Repeat. s.d.:** 0,003 % TM  
**Mean ± U(Mean):** 0,259 ± 0,011 % TM **Range of tolerance:** 0,219 - 0,299 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 21 **Sample:** DIN 38402 A45  
**Assigned value:** 0,259 % TM (Empirical value) **Target s.d.:** 0,020 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,257	0,000	-0,1	0,257	0,257	no accreditation	XRF (fusion)		
04	0,149	0,001	-5,5	0,148	0,150	no accreditation	XRF (fusion)		E
05	0,276	0,001	0,9	0,277	0,275	ISO 17025	XRF (fusion)		
07	0,263	0,000	0,2	0,263	0,263	ISO 17025	XRF (fusion)		
08	0,265	0,007	0,3	0,260	0,270	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,265	0,002	0,3	0,263	0,266	ISO 17025	XRF (fusion)		
13	0,220	0,014	-2,0	0,210	0,230	ISO 17025	XRF (fusion)		
14	0,261	0,000	0,1	0,261	0,261	no accreditation	XRF (fusion)		
15	0,258	0,004	-0,1	0,255	0,260	no accreditation	XRF (Pellet) info only		
16	0,278	0,004	1,0	0,275	0,281	ISO 17025	XRF (fusion)		
17	0,454	0,006	9,8	0,450	0,458	ISO 17025	XRF (fusion)		E
18	0,282	0,000	1,2	0,282	0,282	no accreditation	XRF (fusion)		
19	0,181	0,003	-3,9	0,183	0,179	ISO 17025	XRF (fusion)		E
20	0,241	0,000	-0,9	0,241	0,241	no accreditation	XRF (Pellet) info only		
21a	0,266	0,001	0,3	0,266	0,265	no accreditation	XRF (fusion)		
22	0,206	0,002	-2,6	0,205	0,208	no accreditation	XRF (fusion)		E
23	0,210	0,000	-2,5	0,210	0,210	ISO 17025	XRF (fusion)		E
24	0,260	0,001	0,0	0,260	0,259	no accreditation	XRF (fusion)		
25	0,258	0,018	-0,1	0,245	0,270	no accreditation	XRF (fusion)		
26	0,203	0,000	-2,8	0,203	0,203	no accreditation	Standardless info only		E
27	0,258	0,009	-0,1	0,251	0,264	no accreditation	XRF (fusion)		
28	0,261	0,001	0,1	0,261	0,260	no accreditation	XRF (fusion)		
29	0,278	0,007	1,0	0,273	0,283	no accreditation	XRF (fusion)		
30	0,260	0,000	0,1	0,260	0,260	no accreditation	XRF (fusion)		



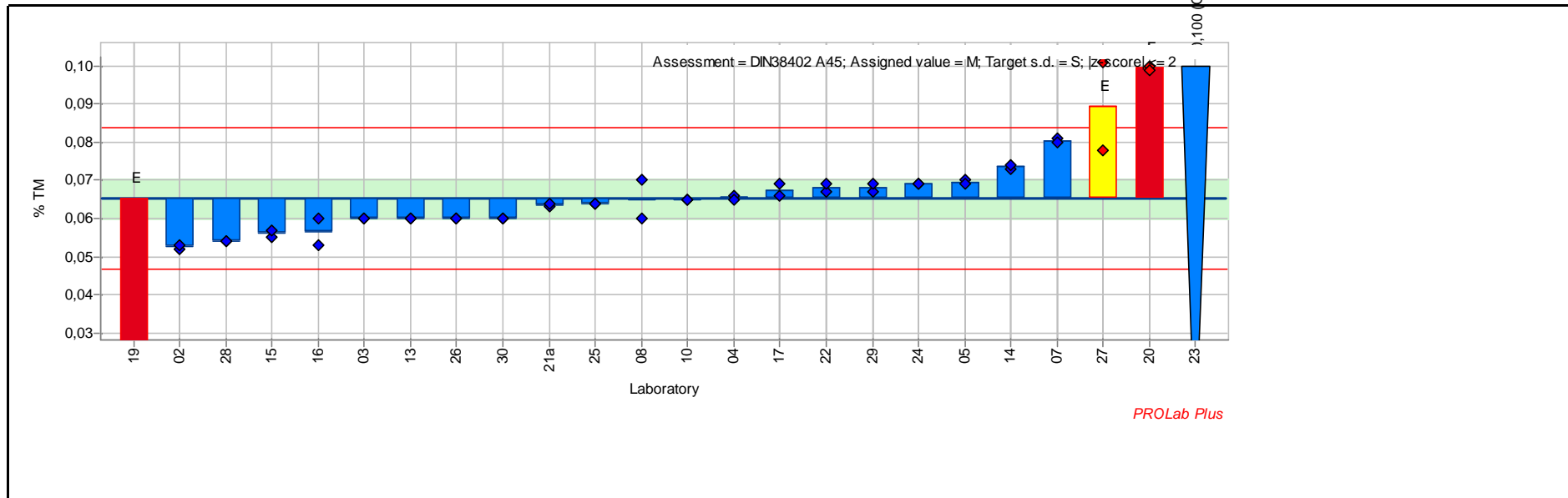


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	3,947	0,031	0,3	3,969	3,925	ISO 17025	XRF (fusion)		
12	4,046	0,155	1,0	3,937	4,156	ISO 17025	AAS		
13	2,795	0,120	-7,5	2,880	2,710	ISO 17025	XRF (fusion)		E
14	3,915	0,030	0,1	3,936	3,894	no accreditation	XRF (fusion)		
15	4,665	0,007	5,2	4,670	4,660	no accreditation	XRF (Pellet) info only		E
16	3,968	0,052	0,5	3,932	4,005	ISO 17025	XRF (fusion)		
17	3,780	0,114	-0,8	3,861	3,700	ISO 17025	XRF (fusion)		
18	3,941	0,014	0,3	3,931	3,951	no accreditation	XRF (fusion)		
19	2,755	0,043	-7,8	2,785	2,724	ISO 17025	XRF (fusion)		E
20	5,940	0,071	13,9	5,990	5,890	no accreditation	XRF (Pellet) info only		E
21a	3,838	0,107	-0,4	3,914	3,762	no accreditation	AAS		
22	3,911	0,103	0,1	3,838	3,984	no accreditation	ICP-OES		
23	3,870	0,000	-0,2	3,870	3,870	ISO 17025	XRF (fusion)		
24	3,913	0,010	0,1	3,920	3,906	no accreditation	XRF (fusion)		
25	2,958	0,000	-6,4	2,958	2,958	no accreditation	XRF (Pellet) info only		E
26	3,745	0,007	-1,1	3,750	3,740	no accreditation	Standardless info only		
27	4,038	0,400	0,9	4,321	3,756	no accreditation	XRF (fusion)		
28	3,817	0,022	-0,6	3,802	3,833	no accreditation	XRF (fusion)		
29	4,091	0,045	1,3	4,059	4,123	no accreditation	XRF (fusion)		
30	3,665	0,021	-1,6	3,650	3,680	no accreditation	XRF (fusion)		
31	4,100	0,000	1,4	4,100	4,100	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 0,009 % TM  
**Measurand:** P2O5      **Repeat. s.d.:** 0,001 % TM  
**Mean ± U(Mean):** 0,065 ± 0,005 % TM      **Range of tolerance:** 0,047 - 0,084 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 20      **Sample:** DIN 38402 A45  
**Assigned value:** 0,065 % TM (Empirical value)      **Target s.d.:** 0,009 % TM (Empirical value)



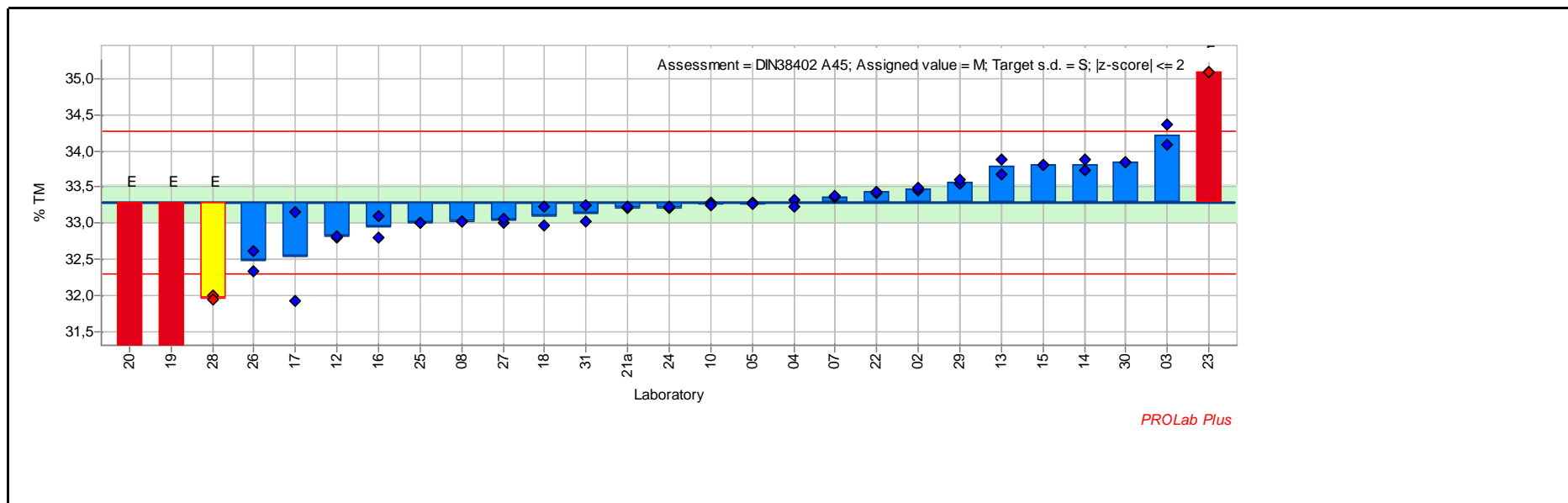
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,052	0,001	-1,4	0,052	0,053	no accreditation	XRF (fusion)		
03	0,060	0,000	-0,6	0,060	0,060	no accreditation	XRF (fusion)		
04	0,066	0,001	0,0	0,066	0,065	no accreditation	XRF (fusion)		
05	0,070	0,001	0,5	0,070	0,069	ISO 17025	XRF (fusion)		
07	0,081	0,001	1,6	0,081	0,080	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,065	0,007	0,0	0,060	0,070	no accreditation	XRF (fusion)		
10	0,065	0,000	0,0	0,065	0,065	ISO 17025	XRF (fusion)		
13	0,060	0,000	-0,6	0,060	0,060	ISO 17025	XRF (fusion)		
14	0,073	0,001	0,9	0,073	0,074	no accreditation	XRF (fusion)		
15	0,056	0,001	-1,0	0,055	0,057	no accreditation	XRF (Pellet) info only		
16	0,056	0,005	-0,9	0,053	0,060	ISO 17025	XRF (fusion)		
17	0,068	0,002	0,2	0,069	0,066	ISO 17025	XRF (fusion)		
19	0,018	0,000	-5,1	0,018	0,018	ISO 17025	XRF (fusion)		E
20	0,100	0,001	3,7	0,100	0,099	no accreditation	XRF (Pellet) info only		E
21a	0,064	0,001	-0,2	0,063	0,064	no accreditation	XRF (fusion)		
22	0,068	0,001	0,3	0,067	0,069	no accreditation	XRF (fusion)		
23				<0,100	<0,100	ISO 17025	XRF (fusion)		
24	0,069	0,000	0,4	0,069	0,069	no accreditation	XRF (fusion)		
25	0,064	0,000	-0,1	0,064	0,064	no accreditation	XRF (fusion)		
26	0,060	0,000	-0,6	0,060	0,060	no accreditation	Standardless info only		
27	0,089	0,016	2,6	0,101	0,078	no accreditation	XRF (fusion)		E
28	0,054	0,000	-1,2	0,054	0,054	no accreditation	XRF (fusion)		
29	0,068	0,001	0,3	0,067	0,069	no accreditation	XRF (fusion)		
30	0,060	0,000	-0,6	0,060	0,060	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 0,493 % TM  
**Measurand:** SiO2      **Repeat. s.d.:** 0,046 % TM  
**Mean ± U(Mean):** 33,285 ± 0,257 % TM      **Range of tolerance:** 32,298 - 34,272 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value:** 33,285 % TM (Empirical value)      **Target s.d.:** 0,493 % TM (Empirical value)



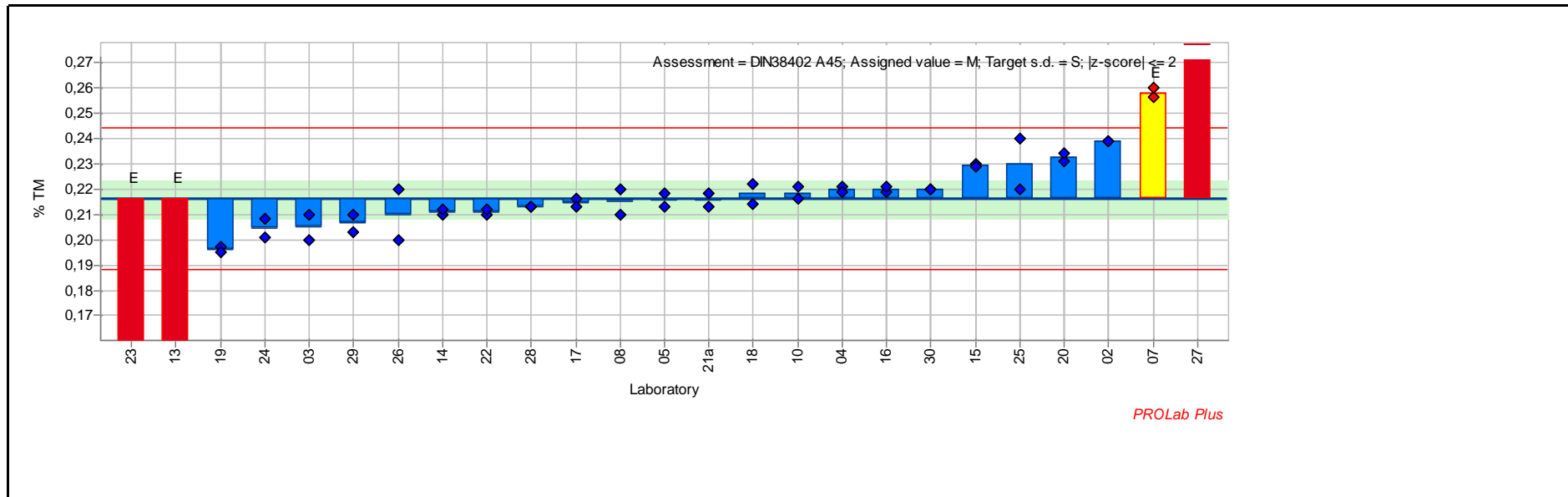
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	33,474	0,019	0,4	33,461	33,488	no accreditation	XRF (fusion)		
03	34,220	0,198	1,9	34,080	34,360	no accreditation	XRF (fusion)		
04	33,283	0,065	0,0	33,329	33,237	no accreditation	XRF (fusion)		
05	33,273	0,007	0,0	33,278	33,268	ISO 17025	XRF (fusion)		
07	33,365	0,007	0,2	33,360	33,370	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	33,025	0,007	-0,5	33,020	33,030	no accreditation	XRF (fusion)		
10	33,269	0,035	0,0	33,294	33,245	ISO 17025	XRF (fusion)		
12	32,812	0,018	-1,0	32,799	32,825	ISO 17025	ICP-OES		
13	33,785	0,148	1,0	33,890	33,680	ISO 17025	XRF (fusion)		
14	33,808	0,111	1,1	33,730	33,887	no accreditation	XRF (fusion)		
15	33,800	0,000	1,0	33,800	33,800	no accreditation	XRF (Pellet) info only		
16	32,945	0,209	-0,7	33,093	32,797	ISO 17025	XRF (fusion)		
17	32,543	0,860	-1,5	33,151	31,935	ISO 17025	XRF (fusion)		
18	33,096	0,185	-0,4	32,966	33,227	no accreditation	XRF (fusion)		
19	28,819	0,380	-9,1	29,088	28,550	ISO 17025	XRF (fusion)		E
20	27,150	0,071	-12,4	27,100	27,200	no accreditation	XRF (Pellet) info only		E
21a	33,213	0,009	-0,1	33,207	33,220	no accreditation	XRF (fusion)		
22	33,428	0,008	0,3	33,423	33,434	no accreditation	XRF (fusion)		
23	35,100	0,000	3,7	35,100	35,100	ISO 17025	XRF (fusion)		E
24	33,218	0,023	-0,1	33,202	33,234	no accreditation	XRF (fusion)		
25	33,010	0,000	-0,6	33,010	33,010	no accreditation	XRF (fusion)		
26	32,480	0,198	-1,6	32,340	32,620	no accreditation	Standardless info only		
27	33,035	0,035	-0,5	33,011	33,060	no accreditation	XRF (fusion)		
28	31,969	0,044	-2,7	32,000	31,938	no accreditation	XRF (fusion)		E
29	33,573	0,037	0,6	33,547	33,599	no accreditation	XRF (fusion)		
30	33,850	0,000	1,1	33,850	33,850	no accreditation	XRF (fusion)		
31	33,130	0,156	-0,3	33,020	33,240	no accreditation	other	Wet Analysys	

RV123

<b>Sample:</b>	<b>FLX-CRM 125</b>	<b>Reprod. s.d.:</b>	<b>0,014 % TM</b>	
<b>Measurand:</b>	<b>TiO2</b>	<b>Repeat. s.d.:</b>	<b>0,005 % TM</b>	
<b>Mean ± U(Mean):</b>	<b>0,216 ± 0,007 % TM</b>	<b>Range of tolerance:</b>	<b>0,188 - 0,244 % TM ( z-score  ≤ 2,0)</b>	E
<b>No. of laboratories:</b>	<b>22</b>	<b>Sample</b>	<b>DIN 38402 A45</b>	
<b>Assigned value</b>	<b>0,216 % TM (Empirical value)</b>	<b>Target s.d.</b>	<b>0,014 % TM (Empirical value)</b>	



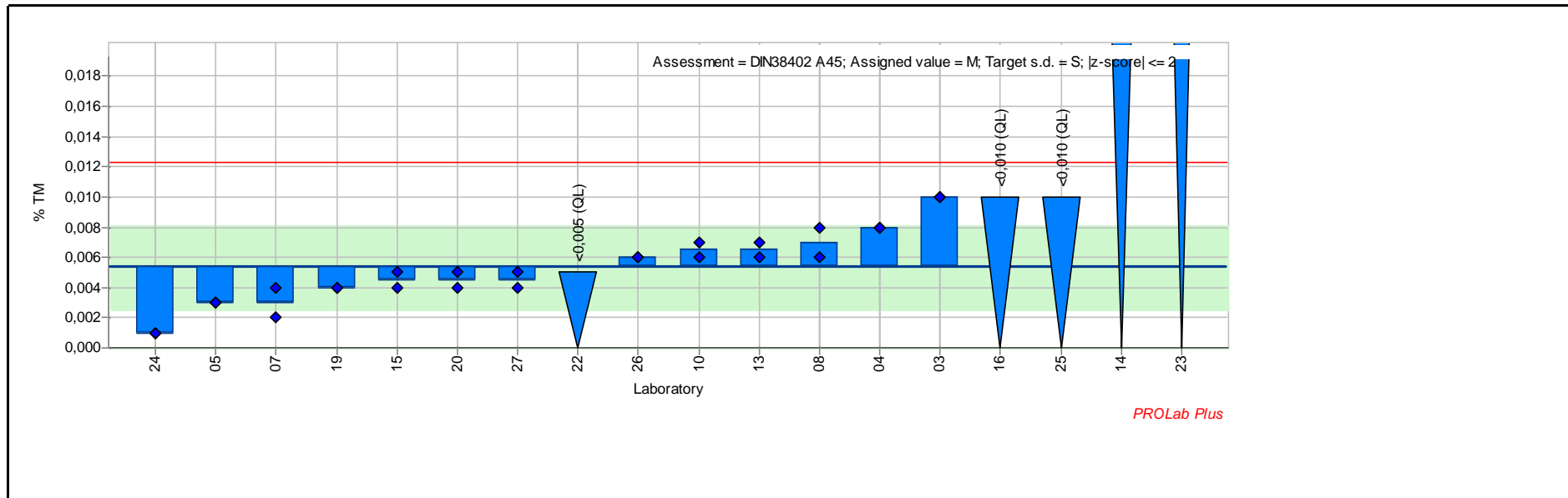
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,239	0,000	1,6	0,239	0,239	no accreditation	XRF (fusion)		
03	0,205	0,007	-0,8	0,210	0,200	no accreditation	XRF (fusion)		
04	0,220	0,001	0,3	0,221	0,219	no accreditation	XRF (fusion)		
05	0,215	0,004	0,0	0,213	0,218	ISO 17025	XRF (fusion)		
07	0,258	0,003	3,0	0,256	0,260	ISO 17025	XRF (fusion)		E

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,215	0,007	-0,1	0,210	0,220	no accreditation	XRF (fusion)		
10	0,219	0,004	0,2	0,216	0,221	ISO 17025	XRF (fusion)		
13	0,155	0,007	-4,4	0,150	0,160	ISO 17025	XRF (fusion)		E
14	0,211	0,001	-0,4	0,210	0,212	no accreditation	XRF (fusion)		
15	0,230	0,001	1,0	0,230	0,229	no accreditation	XRF (Pellet) info only		
16	0,220	0,001	0,3	0,219	0,221	ISO 17025	XRF (fusion)		
17	0,214	0,002	-0,1	0,216	0,213	ISO 17025	XRF (fusion)		
18	0,218	0,006	0,1	0,222	0,214	no accreditation	XRF (fusion)		
19	0,196	0,001	-1,4	0,197	0,195	ISO 17025	XRF (fusion)		
20	0,233	0,002	1,2	0,231	0,234	no accreditation	XRF (Pellet) info only		
21a	0,215	0,004	0,0	0,213	0,218	no accreditation	XRF (fusion)		
22	0,211	0,001	-0,4	0,210	0,212	no accreditation	XRF (fusion)		
23	0,150	0,000	-4,7	0,150	0,150	ISO 17025	XRF (fusion)		E
24	0,205	0,005	-0,8	0,201	0,208	no accreditation	XRF (fusion)		
25	0,230	0,014	1,0	0,220	0,240	no accreditation	XRF (fusion)		
26	0,210	0,014	-0,4	0,220	0,200	no accreditation	Standardless info only		
27	0,320	0,063	7,4	0,275	0,364	no accreditation	XRF (fusion)		E
28	0,213	0,000	-0,2	0,213	0,213	no accreditation	XRF (fusion)		
29	0,207	0,005	-0,7	0,203	0,210	no accreditation	XRF (fusion)		
30	0,220	0,000	0,3	0,220	0,220	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 0,003 % TM  
**Measurand:** ZnO      **Repeat. s.d.:** 0,001 % TM  
**Mean ± U(Mean):** 0,005 ± 0,003 % TM      **Range of tolerance:** -0,002 - 0,012 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 10      **Sample:** DIN 38402 A45  
**Assigned value:** 0,005 % TM (Empirical value)      **Target s.d.:** 0,003 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,010	0,000	1,3	0,010	0,010	no accreditation	XRF (fusion)		
04	0,008	0,000	0,8	0,008	0,008	no accreditation	XRF (fusion)		
05	0,003	0,000	-0,7	0,003	0,003	ISO 17025	ICP-OES		
07	0,003	0,001	-0,7	0,004	0,002	ISO 17025	ICP-OES		
08	0,007	0,001	0,5	0,008	0,006	no accreditation	XRF (fusion)		

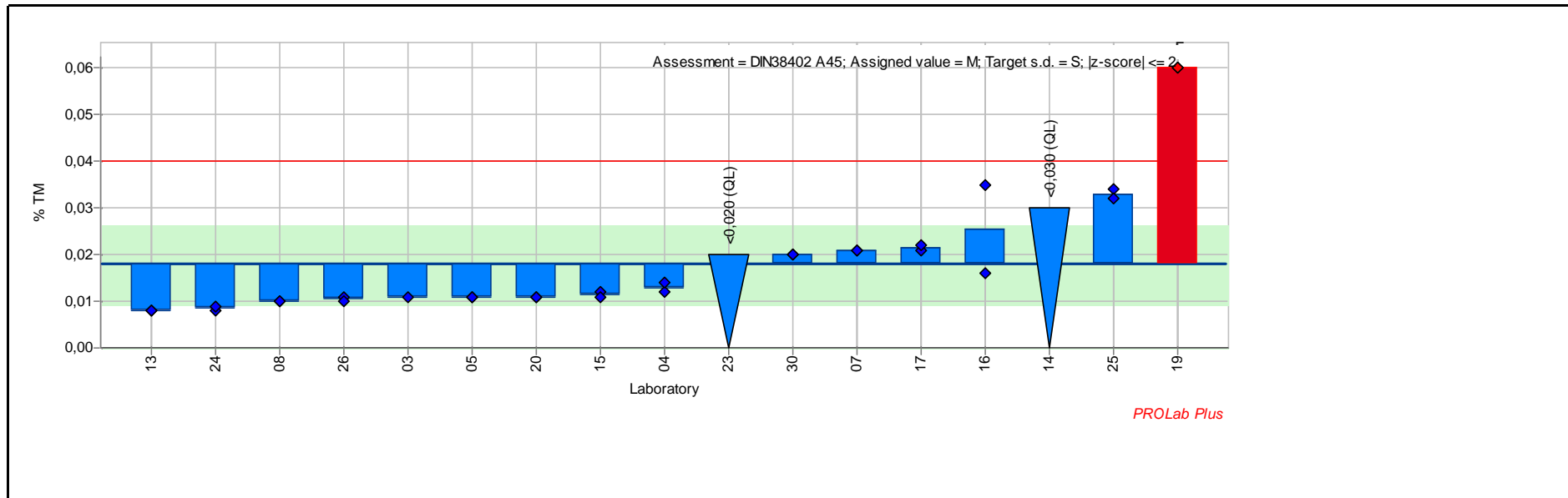


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,007	0,001	0,3	0,007	0,006	ISO 17025	XRF (fusion)		
13	0,007	0,001	0,3	0,006	0,007	ISO 17025	XRF (fusion)		
14				<0,040	<0,040	no accreditation	XRF (fusion)		
15	0,005	0,001	-0,2	0,005	0,004	no accreditation	XRF (Pellet) info only		
16				<0,010	<0,010	ISO 17025	XRF (fusion)		
19	0,004	0,000	-0,4	0,004	0,004	ISO 17025	XRF (fusion)		
20	0,005	0,001	-0,2	0,004	0,005	no accreditation	XRF (Pellet) info only		
22				<0,005	<0,005	no accreditation	XRF (Pellet) info only		
23				<0,050	<0,050	no accreditation	ICP-OES		
24	0,001	0,000	-1,2	0,001	0,001	no accreditation	XRF (fusion)		
25				<0,010	<0,010	no accreditation	Standardless info only	Uniquant	
26	0,006	0,000	0,2	0,006	0,006	no accreditation	Standardless info only		
27	0,005	0,001	-0,2	0,005	0,004	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 0,011 % TM  
**Measurand:** ZrO2      **Repeat. s.d.:** 0,001 % TM  
**Mean ± U(Mean):** 0,018 ± 0,008 % TM      **Range of tolerance:** -0,004 - 0,040 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 11      **Sample:** DIN 38402 A45  
**Assigned value:** 0,018 % TM (Empirical value)      **Target s.d.:** 0,011 % TM (Empirical value)



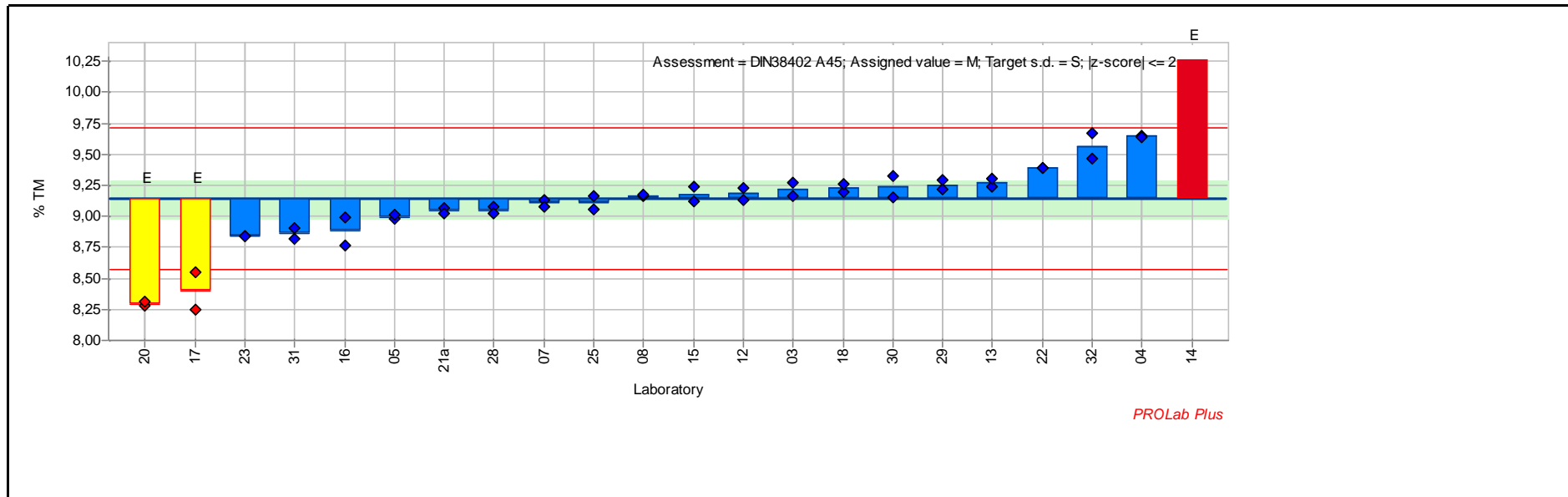
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,011		-0,6	0,011		no accreditation	Standardless info only		
04	0,013	0,001	-0,4	0,012	0,014	no accreditation	XRF (fusion)		
05	0,011	0,000	-0,6	0,011	0,011	ISO 17025	ICP-OES		
07	0,021	0,000	0,3	0,021	0,021	ISO 17025	ICP-OES		
08	0,010	0,000	-0,7	0,010	0,010	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
13	0,008	0,000	-0,9	0,008	0,008	ISO 17025	XRF (fusion)		
14				<0,030	<0,030	no accreditation	XRF (fusion)		
15	0,011	0,001	-0,6	0,012	0,011	no accreditation	XRF (Pellet) info only		
16	0,026	0,013	0,7	0,035	0,016	ISO 17025	XRF (fusion)	LOD 0,03	
17	0,021	0,001	0,3	0,021	0,022	ISO 17025	XRF (fusion)		
19	0,060	0,000	3,8	0,060	0,060	ISO 17025	XRF (fusion)		E
20	0,011	0,000	-0,6	0,011	0,011	no accreditation	XRF (Pellet) info only		
23				<0,020	<0,020	no accreditation	ICP-OES		
24	0,009	0,001	-0,9	0,008	0,009	no accreditation	XRF (fusion)		
25	0,033	0,001	1,4	0,034	0,032	no accreditation	XRF (fusion)		
26	0,010	0,001	-0,7	0,011	0,010	no accreditation	Standardless info only		
30	0,020	0,000	0,2	0,020	0,020	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 0,286 % TM  
**Measurand:** Ctotal      **Repeat. s.d.:** 0,063 % TM  
**Mean ± U(Mean):** 9,142 ± 0,156 % TM      **Range of tolerance:** 8,571 - 9,713 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 21      **Sample:** DIN 38402 A45  
**Assigned value:** 9,142 % TM (Empirical value)      **Target s.d.:** 0,286 % TM (Empirical value)



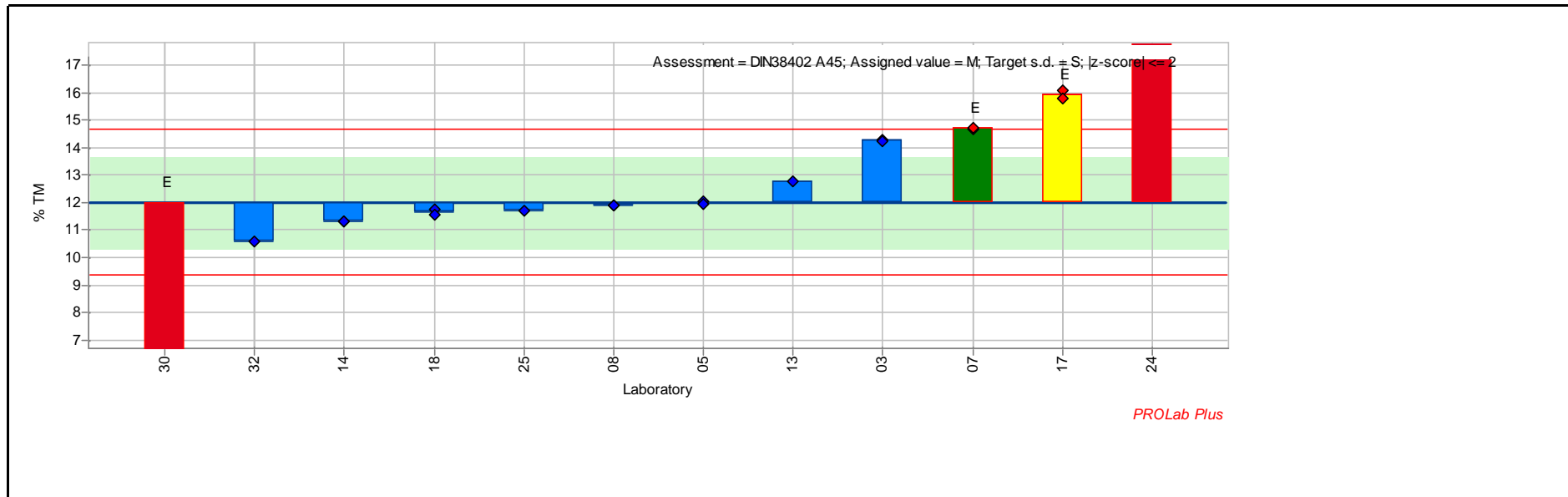
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	9,215	0,078	0,3	9,160	9,270	no accreditation	combustion		
04	9,645	0,003	1,8	9,647	9,643	no accreditation	combustion		
05	8,994	0,025	-0,5	8,976	9,012	ISO 17025	combustion		
07	9,107	0,035	-0,1	9,131	9,082	ISO 17025	combustion		
08	9,165	0,007	0,1	9,160	9,170	no accreditation	combustion		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
12	9,180	0,063	0,1	9,225	9,136	ISO 17025	combustion		
13	9,270	0,042	0,4	9,240	9,300	ISO 17025	combustion		
14	10,297	0,005	4,0	10,293	10,300	no accreditation	combustion		E
15	9,177	0,081	0,1	9,119	9,234	no accreditation	combustion		
16	8,880	0,156	-0,9	8,770	8,990	ISO 17025	combustion		
17	8,402	0,214	-2,6	8,553	8,250	ISO 17025	combustion		E
18	9,230	0,042	0,3	9,200	9,260	no accreditation	combustion		
20	8,292	0,023	-3,0	8,276	8,308	no accreditation	combustion	DIN EN 13137	E
21a	9,044	0,033	-0,3	9,068	9,021	no accreditation	combustion		
22	9,389	0,004	0,9	9,391	9,386	no accreditation	combustion		
23	8,840	0,000	-1,1	8,840	8,840	ISO 17025	combustion		
25	9,111	0,074	-0,1	9,163	9,059	no accreditation	combustion		
28	9,050	0,042	-0,3	9,080	9,020	no accreditation	combustion		
29	9,255	0,053	0,4	9,217	9,292	no accreditation	combustion		
30	9,240	0,127	0,3	9,150	9,330	no accreditation	combustion		
31	8,860	0,057	-1,0	8,820	8,900	no accreditation	other	Wet Analysys	
32	9,567	0,145	1,5	9,669	9,464	no accreditation	combustion		

RV123

**Sample:** FLX-CRM 125      **Reprod. s.d.:** 1,328 % TM  
**Measurand:** CO2      **Repeat. s.d.:** 0,031 % TM  
**Mean ± U(Mean):** 11,998 ± 1,660 % TM      **Range of tolerance:** 9,341 - 14,654 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 4      **Sample:** DIN 38402 A45  
**Assigned value:** 11,998 % TM (Empirical value)      **Target s.d.:** 1,328 % TM (Empirical value)      E



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	14,275	0,049	1,7	14,310	14,240	no accreditation	other	inert gas	
05	11,998	0,056	0,0	12,038	11,959	ISO 17025	combustion	acid	
07	14,720	0,028	2,0	14,700	14,740	ISO 17025	combustion		E
08	11,895	0,021	-0,1	11,880	11,910	no accreditation	combustion	acid	
13	12,800		0,6	12,800		ISO 17025	combustion	acid	

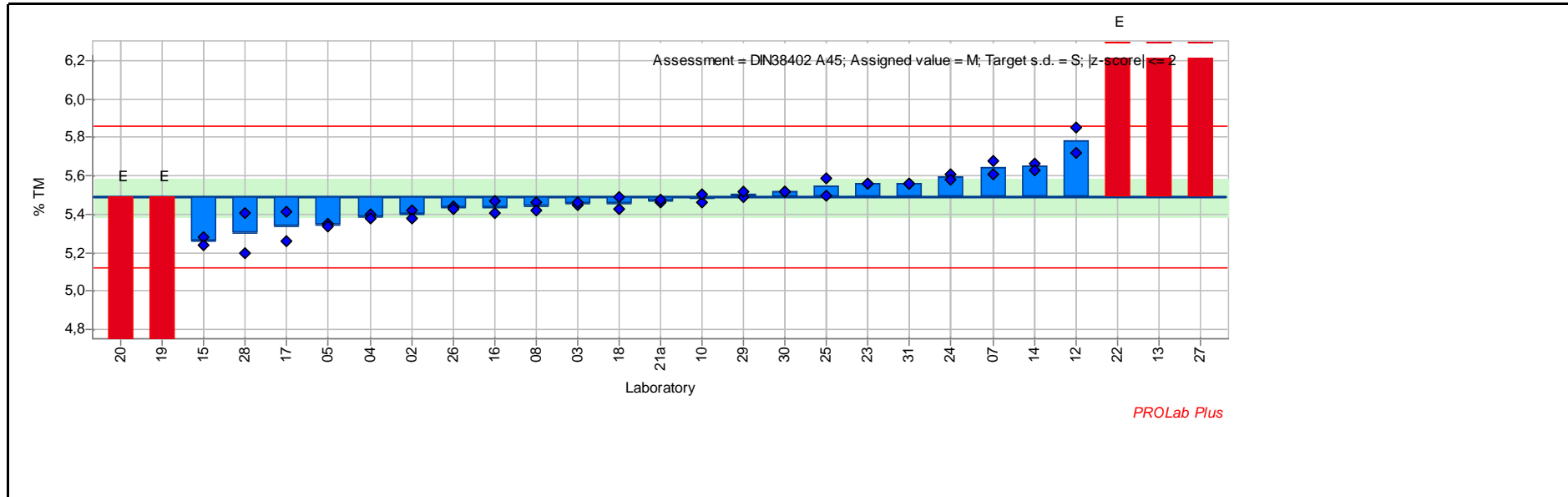
## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
14	11,297	0,006	-0,5	11,301	11,292	no accreditation	combustion	acid	
17	15,948	0,199	3,0	16,089	15,807	no accreditation	combustion	Leco RC 612	E
18	11,645	0,134	-0,3	11,740	11,550	no accreditation	other	loss of weight	
24	19,480	0,006	5,6	19,476	19,485	no accreditation	combustion	LOI in a muffel	E
25	11,700		-0,2	11,700		no accreditation	combustion		
30	3,785	0,078	-6,2	3,730	3,840	no accreditation	combustion		E
32	10,573		-1,1	10,573		no accreditation	combustion		

RV123

E

**Sample:** FLX-CRM 126                      **Reprod. s.d.:** 0,184 % TM  
**Measurand:** Al2O3                              **Repeat. s.d.:** 0,044 % TM  
**Mean ± U(Mean):** 5,490 ± 0,096 % TM                      **Range of tolerance:** 5,121 - 5,859 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 23                      **Sample:** DIN 38402 A45  
**Assigned value:** 5,490 % TM (Empirical value)                      **Target s.d.:** 0,184 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	5,397	0,030	-0,5	5,418	5,376	no accreditation	XRF (fusion)		
03	5,455	0,007	-0,2	5,450	5,460	no accreditation	XRF (fusion)		
04	5,389	0,017	-0,5	5,401	5,377	no accreditation	XRF (fusion)		
05	5,345	0,007	-0,8	5,350	5,340	ISO 17025	XRF (fusion)		
07	5,645	0,049	0,8	5,680	5,610	ISO 17025	XRF (fusion)		

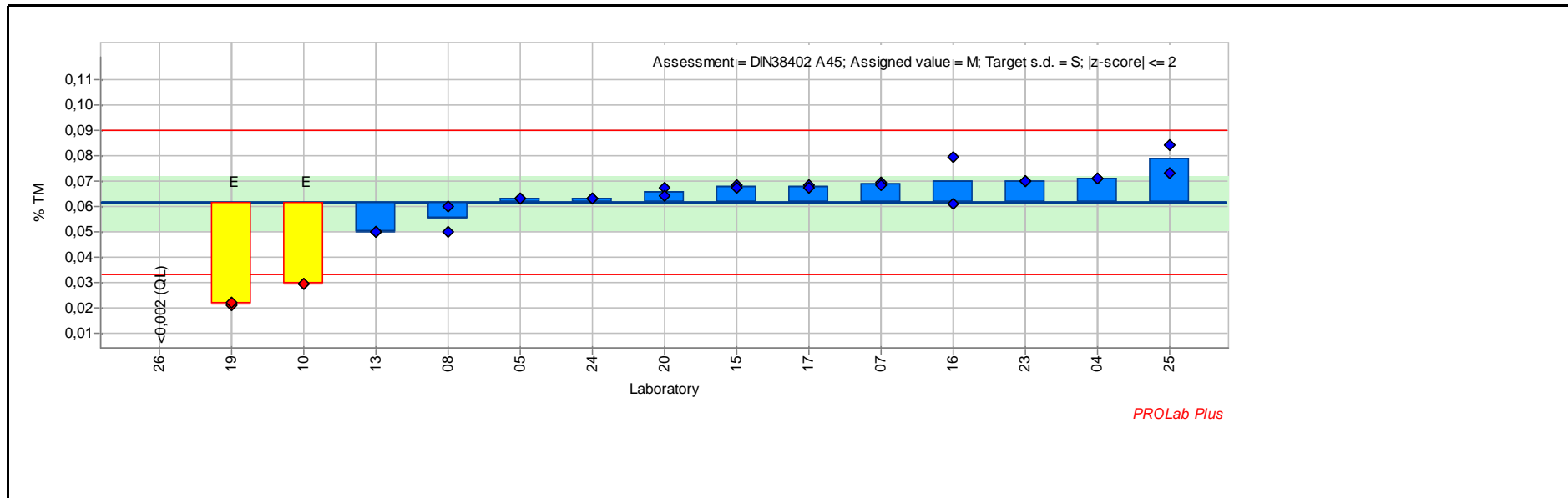


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	5,440	0,028	-0,3	5,460	5,420	no accreditation	XRF (fusion)		
10	5,482	0,033	0,0	5,459	5,505	ISO 17025	XRF (fusion)		
12	5,785	0,092	1,6	5,850	5,720	ISO 17025	ICP-OES		
13	7,495	0,106	10,9	7,420	7,570	ISO 17025	XRF (fusion)		E
14	5,647	0,021	0,9	5,662	5,632	no accreditation	XRF (fusion)		
15	5,260	0,028	-1,2	5,280	5,240	no accreditation	XRF (Pellet) info only		
16	5,435	0,045	-0,3	5,467	5,404	ISO 17025	XRF (fusion)		
17	5,337	0,105	-0,8	5,411	5,263	ISO 17025	XRF (fusion)		
18	5,457	0,045	-0,2	5,425	5,488	no accreditation	XRF (fusion)		
19	4,443	0,083	-5,7	4,501	4,384	ISO 17025	XRF (fusion)		E
20	4,395	0,035	-5,9	4,420	4,370	no accreditation	XRF (Pellet) info only		E
21a	5,470	0,007	-0,1	5,465	5,475	no accreditation	XRF (fusion)		
22	6,300	0,083	4,4	6,359	6,242	no accreditation	XRF (fusion)		E
23	5,560	0,000	0,4	5,560	5,560	ISO 17025	XRF (fusion)		
24	5,594	0,023	0,6	5,610	5,578	no accreditation	XRF (fusion)		
25	5,545	0,064	0,3	5,590	5,500	no accreditation	XRF (fusion)		
26	5,435	0,007	-0,3	5,440	5,430	no accreditation	Standardless info only		
27	9,918	0,023	24,0	9,901	9,934	no accreditation	XRF (fusion)		E
28	5,302	0,150	-1,0	5,196	5,408	no accreditation	XRF (fusion)		
29	5,505	0,020	0,1	5,491	5,519	no accreditation	XRF (fusion)		
30	5,520	0,000	0,2	5,520	5,520	no accreditation	XRF (fusion)		
31	5,560	0,000	0,4	5,560	5,560	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 126                      **Reprod. s.d.:** 0,014 % TM  
**Measurand:** BaO                              **Repeat. s.d.:** 0,004 % TM  
**Mean ± U(Mean):** 0,061 ± 0,010 % TM      **Range of tolerance:** 0,033 - 0,090 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 12                      **Sample:** DIN 38402 A45  
**Assigned value:** 0,061 % TM (Empirical value)      **Target s.d.:** 0,014 % TM (Empirical value)



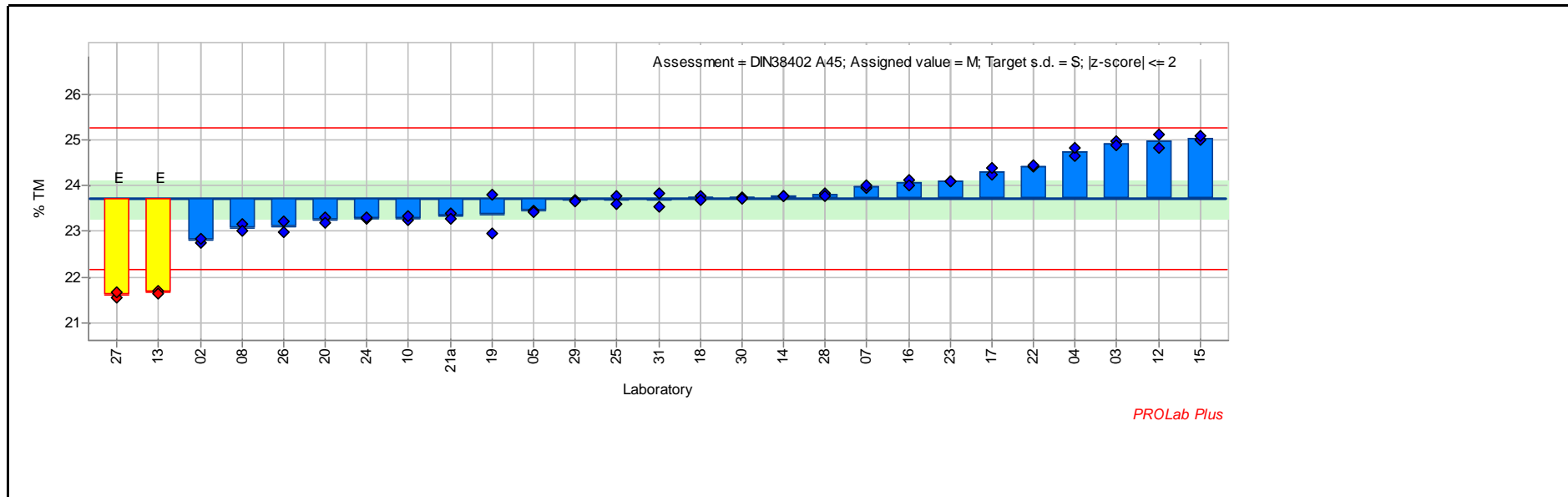
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
04	0,071	0,000	0,7	0,071	0,071	no accreditation	XRF (fusion)		
05	0,063	0,000	0,1	0,063	0,063	ISO 17025	ICP-OES		
07	0,069	0,001	0,5	0,069	0,068	ISO 17025	ICP-OES		
08	0,055	0,007	-0,4	0,050	0,060	no accreditation	XRF (fusion)		
10	0,029	0,000	-2,3	0,029	0,029	ISO 17025	XRF (fusion)		E

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
13	0,050	0,000	-0,8	0,050	0,050	ISO 17025	XRF (fusion)		
15	0,068	0,001	0,4	0,068	0,067	no accreditation	XRF (Pellet) info only		
16	0,070	0,013	0,6	0,061	0,079	ISO 17025	XRF (fusion)		
17	0,068	0,001	0,4	0,068	0,067	ISO 17025	XRF (fusion)		
19	0,021	0,001	-2,8	0,021	0,022	ISO 17025	XRF (fusion)		E
20	0,066	0,002	0,3	0,067	0,064	no accreditation	XRF (Pellet) info only		
23	0,070	0,000	0,6	0,070	0,070	no accreditation	ICP-OES		
24	0,063	0,000	0,1	0,063	0,063	no accreditation	XRF (fusion)		
25	0,079	0,008	1,2	0,084	0,073	no accreditation	XRF (fusion)		
26				<0,002	<0,002	no accreditation	Standardless info only		

RV123

**Sample:** FLX-CRM 126      **Reprod. s.d.:** 0,778 % TM  
**Measurand:** CaO      **Repeat. s.d.:** 0,101 % TM  
**Mean ± U(Mean):** 23,717 ± 0,405 % TM      **Range of tolerance:** 22,162 - 25,273 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value:** 23,717 % TM (Empirical value)      **Target s.d.:** 0,778 % TM (Empirical value)



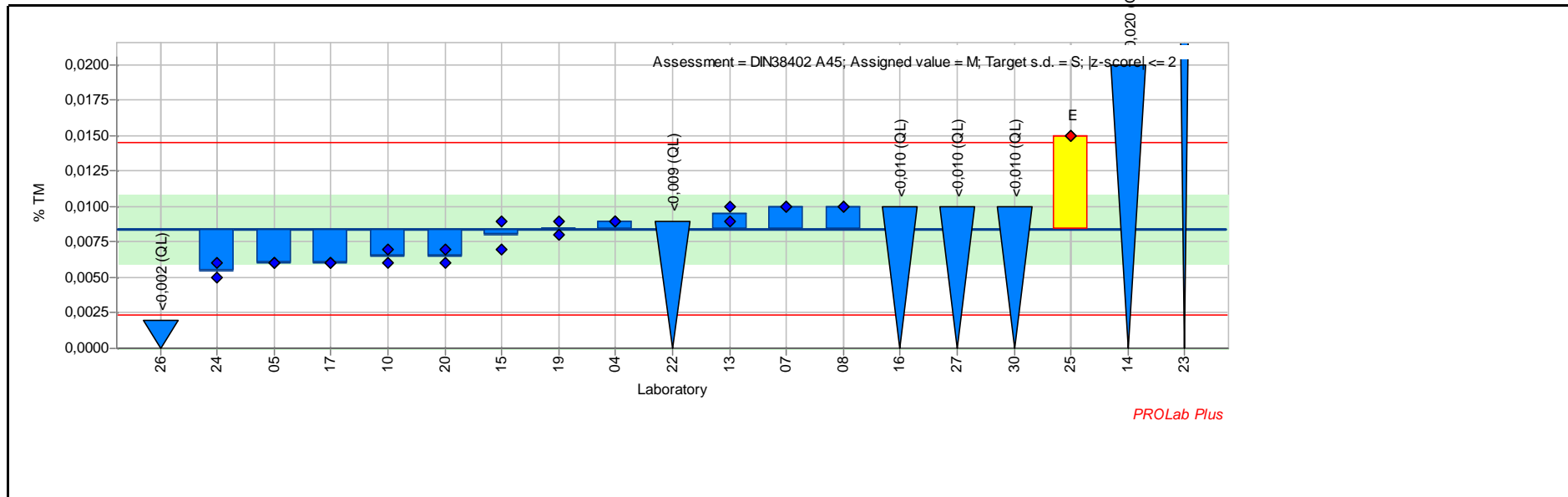
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	22,793	0,069	-1,2	22,744	22,842	no accreditation	XRF (fusion)		
03	24,935	0,049	1,6	24,970	24,900	no accreditation	XRF (fusion)		
04	24,747	0,117	1,3	24,664	24,829	no accreditation	XRF (fusion)		
05	23,442	0,028	-0,4	23,462	23,422	ISO 17025	XRF (fusion)		
07	23,975	0,049	0,3	23,940	24,010	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	23,075	0,106	-0,8	23,150	23,000	no accreditation	XRF (fusion)		
10	23,291	0,080	-0,5	23,235	23,348	ISO 17025	XRF (fusion)		
12	24,983	0,203	1,6	25,127	24,840	ISO 17025	ICP-OES	CaOtotal	
13	21,660	0,057	-2,6	21,700	21,620	ISO 17025	XRF (fusion)		E
14	23,778	0,001	0,1	23,779	23,777	no accreditation	XRF (fusion)		
15	25,050	0,071	1,7	25,000	25,100	no accreditation	XRF (Pellet) info only		
16	24,070	0,099	0,5	24,140	24,000	ISO 17025	XRF (fusion)		
17	24,313	0,111	0,8	24,235	24,392	ISO 17025	XRF (fusion)		
18	23,732	0,074	0,0	23,784	23,680	no accreditation	XRF (fusion)		
19	23,370	0,602	-0,4	23,796	22,944	ISO 17025	XRF (fusion)		
20	23,250	0,071	-0,6	23,300	23,200	no accreditation	XRF (Pellet) info only		
21a	23,332	0,098	-0,5	23,401	23,263	no accreditation	XRF (fusion)		
22	24,429	0,011	0,9	24,421	24,437	no accreditation	XRF (fusion)		
23	24,100	0,000	0,5	24,100	24,100	ISO 17025	XRF (fusion)		
24	23,281	0,023	-0,6	23,264	23,297	no accreditation	XRF (fusion)		
25	23,685	0,120	0,0	23,770	23,600	no accreditation	XRF (fusion)		
26	23,100	0,156	-0,8	22,990	23,210	no accreditation	Standardless info only		
27	21,605	0,093	-2,7	21,539	21,670	no accreditation	XRF (fusion)		E
28	23,800	0,040	0,1	23,828	23,771	no accreditation	XRF (fusion)		
29	23,674	0,035	-0,1	23,698	23,649	no accreditation	XRF (fusion)		
30	23,740	0,028	0,0	23,760	23,720	no accreditation	XRF (fusion)		
31	23,690	0,198	0,0	23,830	23,550	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 126      **Reprod. s.d.:** 0,003 % TM  
**Measurand:** Cr2O3      **Repeat. s.d.:** 0,001 % TM  
**Mean ± U(Mean):** 0,008 ± 0,002 % TM      **Range of tolerance:** 0,002 - 0,014 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 10      **Sample:** DIN 38402 A45  
**Assigned value:** 0,008 % TM (Empirical value)      **Target s.d.:** 0,003 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
04	0,009	0,000	0,2	0,009	0,009	no accreditation	XRF (fusion)		
05	0,006	0,000	-0,8	0,006	0,006	ISO 17025	XRF (fusion)		
07	0,010	0,000	0,5	0,010	0,010	ISO 17025	XRF (fusion)		
08	0,010	0,000	0,5	0,010	0,010	no accreditation	XRF (fusion)		
10	0,007	0,001	-0,6	0,006	0,007	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
13	0,009	0,001	0,4	0,009	0,010	ISO 17025	XRF (fusion)		
14				<0,020	<0,020	no accreditation	XRF (fusion)		
15	0,008	0,001	-0,1	0,007	0,009	no accreditation	XRF (Pellet) info only		
16				<0,010	<0,010	ISO 17025	XRF (fusion)		
17	0,006	0,000	-0,8	0,006	0,006	ISO 17025	XRF (fusion)		
19	0,009	0,001	0,0	0,009	0,008	ISO 17025	XRF (fusion)		
20	0,007	0,001	-0,6	0,007	0,006	no accreditation	XRF (Pellet) info only		
22				<0,009	<0,009	no accreditation	XRF (fusion)		
23				<0,100	<0,100	ISO 17025	XRF (fusion)		
24	0,005	0,001	-1,0	0,005	0,006	no accreditation	XRF (fusion)		
25	0,015	0,000	2,2	0,015	0,015	no accreditation	XRF (fusion)		E
26				<0,002	<0,002	no accreditation	Standardless info only		
27				<0,010	<0,010	no accreditation	XRF (fusion)		
30				<0,010	<0,010	no accreditation	XRF (fusion)		



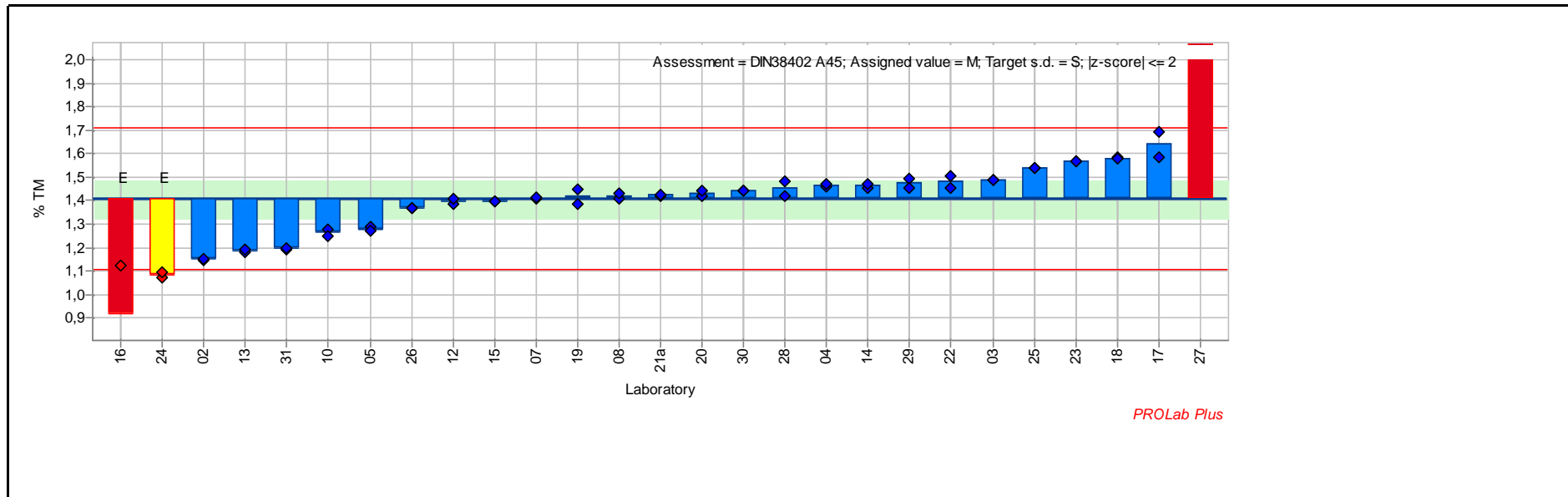


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
12	4,890	0,113	0,6	4,970	4,810	ISO 17025	other	Potentiometry	
13	2,760	0,000	-2,6	2,760	2,760	ISO 17025	XRF (Pellet) info only		E
14	4,623	0,066	0,2	4,577	4,670	no accreditation	XRF (fusion)		
15	5,235	0,007	1,1	5,240	5,230	no accreditation	XRF (Pellet) info only		
16	4,565	0,092	0,1	4,630	4,500	ISO 17025	other	Melting digestion,	
17	3,655	0,704	-1,3	4,152	3,157	ISO 17025	XRF (fusion)		
18	5,028	0,027	0,8	5,009	5,047	no accreditation	XRF (fusion)		
21a	4,215	0,307	-0,4	3,998	4,432	no accreditation	XRF (fusion)		
21b	4,156	0,144	-0,5	4,258	4,055	no accreditation	Ion selective electrode		
22	4,352	0,332	-0,2	4,587	4,117	no accreditation	Ion selective electrode		
24	4,725	0,126	0,3	4,814	4,636	no accreditation	XRF (Pellet) info only		
25	4,400	0,000	-0,2	4,400	4,400	no accreditation	XRF (fusion)		
27	6,462	0,166	2,8	6,344	6,579	no accreditation	XRF (fusion)		E
28	3,644	0,034	-1,3	3,620	3,668	no accreditation	XRF (fusion)		
29	5,040	0,099	0,8	4,970	5,110	no accreditation	Ion selective electrode		
30	2,040	0,141	-3,6	1,940	2,140	no accreditation	other	Potentiometry	E
31	5,300	0,057	1,2	5,340	5,260	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 126                      **Reprod. s.d.:** 0,151 % TM  
**Measurand:** Fe2O3                          **Repeat. s.d.:** 0,018 % TM  
**Mean ± U(Mean):** 1,408 ± 0,080 % TM      **Range of tolerance:** 1,106 - 1,710 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 22                      **Sample:** DIN 38402 A45  
**Assigned value:** 1,408 % TM (Empirical value)      **Target s.d.:** 0,151 % TM (Empirical value)



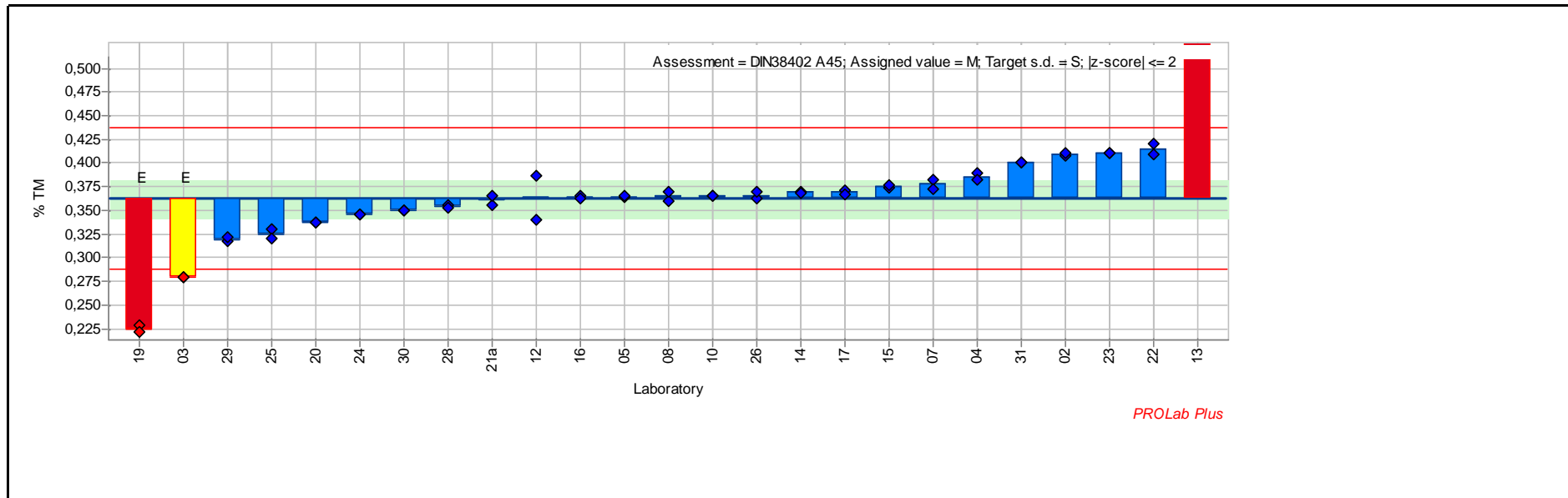
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	1,149	0,001	-1,7	1,148	1,150	no accreditation	XRF (fusion)		
03	1,490	0,000	0,5	1,490	1,490	no accreditation	XRF (fusion)		
04	1,462	0,008	0,4	1,457	1,468	no accreditation	XRF (fusion)		
05	1,277	0,012	-0,9	1,286	1,269	ISO 17025	XRF (fusion)		
07	1,409	0,003	0,0	1,407	1,411	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	1,420	0,014	0,1	1,410	1,430	no accreditation	XRF (fusion)		
10	1,264	0,021	-1,0	1,279	1,250	ISO 17025	XRF (fusion)		
12	1,395	0,017	-0,1	1,383	1,407	ISO 17025	other	AAS +	
13	1,185	0,007	-1,5	1,180	1,190	ISO 17025	XRF (fusion)		
14	1,462	0,009	0,4	1,456	1,469	no accreditation	XRF (fusion)		
15	1,397	0,002	-0,1	1,398	1,395	no accreditation	XRF (Pellet) info only		
16	0,916	0,290	-3,3	0,711	1,121	ISO 17025	XRF (fusion)		E
17	1,640	0,075	1,5	1,587	1,693	ISO 17025	XRF (fusion)		
18	1,582	0,002	1,1	1,583	1,580	no accreditation	XRF (fusion)		
19	1,418	0,045	0,1	1,450	1,386	ISO 17025	XRF (fusion)		
20	1,430	0,014	0,1	1,420	1,440	no accreditation	XRF (Pellet) info only		
21a	1,423	0,002	0,1	1,422	1,425	no accreditation	XRF (fusion)		
22	1,479	0,039	0,5	1,507	1,452	no accreditation	XRF (fusion)		
23	1,570	0,000	1,1	1,570	1,570	ISO 17025	XRF (fusion)		
24	1,083	0,018	-2,2	1,071	1,096	no accreditation	XRF (fusion)		E
25	1,540	0,000	0,9	1,540	1,540	no accreditation	XRF (fusion)		
26	1,370	0,000	-0,3	1,370	1,370	no accreditation	Standardless info only		
27	3,534	0,016	14,1	3,545	3,523	no accreditation	XRF (fusion)		E
28	1,451	0,044	0,3	1,482	1,420	no accreditation	XRF (fusion)		
29	1,475	0,028	0,4	1,495	1,455	no accreditation	XRF (fusion)		
30	1,440	0,000	0,2	1,440	1,440	no accreditation	XRF (fusion)		
31	1,195	0,007	-1,4	1,190	1,200	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 126      **Reprod. s.d.:** 0,037 % TM  
**Measurand:** K2O      **Repeat. s.d.:** 0,005 % TM  
**Mean ± U(Mean):** 0,363 ± 0,020 % TM      **Range of tolerance:** 0,288 - 0,437 % TM (|z-score| ≤ 2,0)      E  
**No. of laboratories:** 21      **Sample:** DIN 38402 A45  
**Assigned value:** 0,363 % TM (Empirical value)      **Target s.d.:** 0,037 % TM (Empirical value)



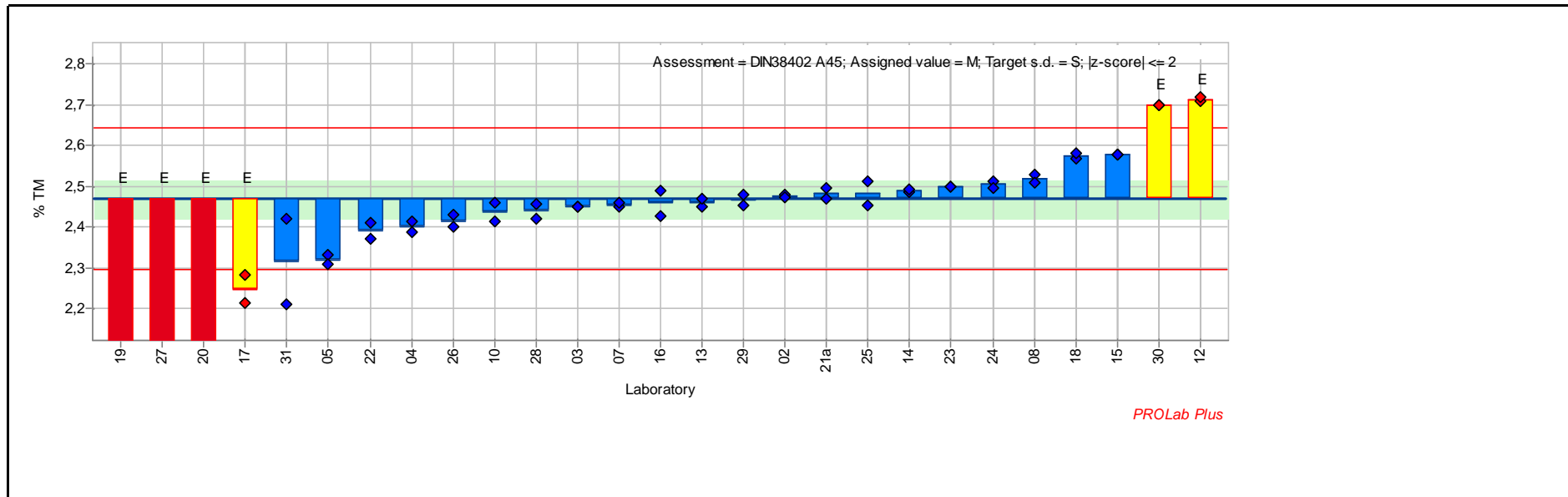
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,409	0,001	1,2	0,408	0,410	no accreditation	XRF (fusion)		
03	0,280	0,000	-2,2	0,280	0,280	no accreditation	XRF (fusion)		E
04	0,386	0,005	0,6	0,389	0,382	no accreditation	XRF (fusion)		
05	0,364	0,001	0,1	0,364	0,365	ISO 17025	ICP-OES		
07	0,378	0,006	0,4	0,382	0,373	ISO 17025	ICP-OES		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,365	0,007	0,1	0,360	0,370	no accreditation	XRF (fusion)		
10	0,365	0,001	0,1	0,365	0,366	ISO 17025	XRF (fusion)		
12	0,364	0,033	0,0	0,387	0,340	ISO 17025	AAS		
13	0,655	0,021	7,8	0,640	0,670	ISO 17025	XRF (fusion)		E
14	0,369	0,001	0,2	0,370	0,368	no accreditation	XRF (fusion)		
15	0,375	0,001	0,3	0,374	0,376	no accreditation	XRF (Pellet) info only		
16	0,364	0,001	0,0	0,365	0,363	ISO 17025	XRF (fusion)		
17	0,369	0,003	0,2	0,371	0,367	ISO 17025	XRF (fusion)		
19	0,225	0,005	-3,7	0,228	0,221	ISO 17025	XRF (fusion)		E
20	0,337	0,000	-0,7	0,337	0,337	no accreditation	XRF (Pellet) info only		
21a	0,360	0,006	-0,1	0,356	0,365	no accreditation	XRF (fusion)		
22	0,414	0,008	1,4	0,420	0,409	no accreditation	ICP-OES		
23	0,410	0,000	1,3	0,410	0,410	ISO 17025	XRF (fusion)		
24	0,346	0,000	-0,4	0,346	0,346	no accreditation	XRF (fusion)		
25	0,325	0,007	-1,0	0,330	0,320	no accreditation	XRF (fusion)		
26	0,366	0,004	0,1	0,363	0,369	no accreditation	Standardless info only		
28	0,354	0,001	-0,2	0,355	0,353	no accreditation	XRF (fusion)		
29	0,320	0,002	-1,2	0,318	0,321	no accreditation	XRF (fusion)		
30	0,350	0,000	-0,3	0,350	0,350	no accreditation	XRF (fusion)		
31	0,400	0,000	1,0	0,400	0,400	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 126      **Reprod. s.d.:** 0,087 % TM  
**Measurand:** MgO      **Repeat. s.d.:** 0,024 % TM  
**Mean ± U(Mean):** 2,470 ± 0,045 % TM      **Range of tolerance:** 2,296 - 2,644 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value:** 2,470 % TM (Empirical value)      **Target s.d.:** 0,087 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	2,478	0,005	0,1	2,481	2,474	no accreditation	XRF (fusion)		
03	2,450	0,000	-0,2	2,450	2,450	no accreditation	XRF (fusion)		
04	2,401	0,019	-0,8	2,387	2,414	no accreditation	XRF (fusion)		
05	2,321	0,014	-1,7	2,331	2,311	ISO 17025	XRF (fusion)		
07	2,455	0,007	-0,2	2,450	2,460	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	2,520	0,014	0,6	2,530	2,510	no accreditation	XRF (fusion)		
10	2,437	0,032	-0,4	2,414	2,459	ISO 17025	XRF (fusion)		
12	2,715	0,008	2,8	2,709	2,720	ISO 17025	ICP-OES		E
13	2,460	0,014	-0,1	2,450	2,470	ISO 17025	XRF (fusion)		
14	2,491	0,004	0,2	2,488	2,494	no accreditation	XRF (fusion)		
15	2,580	0,000	1,3	2,580	2,580	no accreditation	XRF (Pellet) info only		
16	2,459	0,042	-0,1	2,489	2,429	ISO 17025	XRF (fusion)		
17	2,248	0,048	-2,6	2,214	2,282	ISO 17025	XRF (fusion)		E
18	2,575	0,009	1,2	2,569	2,582	no accreditation	XRF (fusion)		
19	1,714	0,045	-8,7	1,746	1,682	ISO 17025	XRF (fusion)		E
20	2,105	0,021	-4,2	2,120	2,090	no accreditation	XRF (Pellet) info only		E
21a	2,483	0,020	0,1	2,469	2,497	no accreditation	XRF (fusion)		
22	2,392	0,027	-0,9	2,373	2,411	no accreditation	XRF (fusion)		
23	2,500	0,000	0,3	2,500	2,500	ISO 17025	XRF (fusion)		
24	2,506	0,011	0,4	2,513	2,498	no accreditation	XRF (fusion)		
25	2,483	0,043	0,2	2,514	2,453	no accreditation	XRF (fusion)		
26	2,415	0,021	-0,6	2,400	2,430	no accreditation	Standardless info only		
27	2,001	0,020	-5,4	1,987	2,015	no accreditation	XRF (fusion)		E
28	2,439	0,025	-0,4	2,422	2,457	no accreditation	XRF (fusion)		
29	2,466	0,019	0,0	2,480	2,453	no accreditation	XRF (fusion)		
30	2,700	0,000	2,6	2,700	2,700	no accreditation	XRF (fusion)		E
31	2,315	0,148	-1,8	2,210	2,420	no accreditation	other	Wet Analysys	





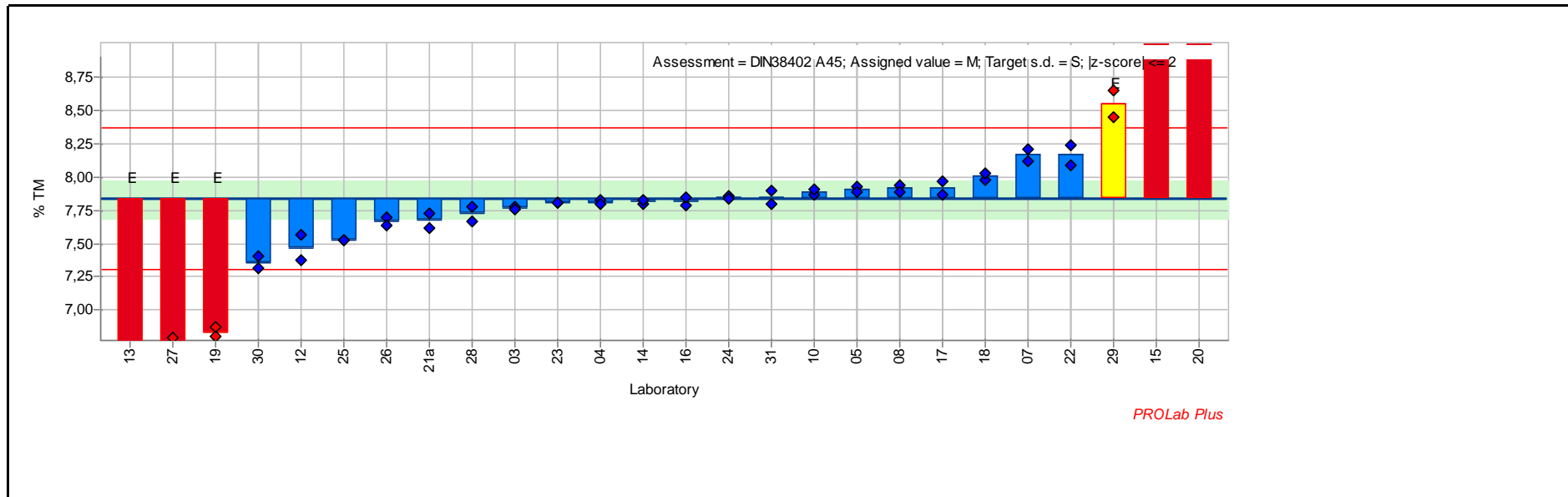
## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,086	0,001	0,2	0,087	0,085	ISO 17025	XRF (fusion)		
13	0,065	0,007	-0,9	0,060	0,070	ISO 17025	XRF (fusion)		
14	0,080	0,001	-0,1	0,081	0,079	no accreditation	XRF (fusion)		
15	0,077	0,002	-0,2	0,076	0,079	no accreditation	XRF (Pellet) info only		
16	0,093	0,001	0,6	0,094	0,092	ISO 17025	XRF (fusion)		
17	0,150	0,006	3,5	0,146	0,154	ISO 17025	XRF (fusion)		E
18	0,104	0,003	1,1	0,106	0,102	no accreditation	XRF (fusion)		
19	0,064	0,001	-1,0	0,063	0,064	ISO 17025	XRF (fusion)		
20	0,086	0,002	0,2	0,088	0,085	no accreditation	XRF (Pellet) info only		
21a	0,095	0,003	0,7	0,097	0,093	no accreditation	XRF (fusion)		
22	0,054	0,000	-1,4	0,054	0,054	no accreditation	XRF (fusion)		
23				<0,100	<0,100	ISO 17025	XRF (fusion)		
24	0,076	0,001	-0,3	0,077	0,076	no accreditation	XRF (fusion)		
25	0,074	0,000	-0,4	0,074	0,074	no accreditation	XRF (fusion)		
26	0,064	0,002	-1,0	0,062	0,065	no accreditation	Standardless info only		
27	0,078	0,003	-0,2	0,080	0,076	no accreditation	XRF (fusion)		
28	0,090	0,001	0,4	0,091	0,089	no accreditation	XRF (fusion)		
29	0,122	0,001	2,0	0,123	0,121	no accreditation	XRF (fusion)		E
30	0,080	0,000	-0,1	0,080	0,080	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 126      **Reprod. s.d.:** 0,266 % TM  
**Measurand:** Na2O      **Repeat. s.d.:** 0,075 % TM  
**Mean ± U(Mean):** 7,837 ± 0,145 % TM      **Range of tolerance:** 7,304 - 8,369 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 21      **Sample:** DIN 38402 A45  
**Assigned value:** 7,837 % TM (Empirical value)      **Target s.d.:** 0,266 % TM (Empirical value)

E



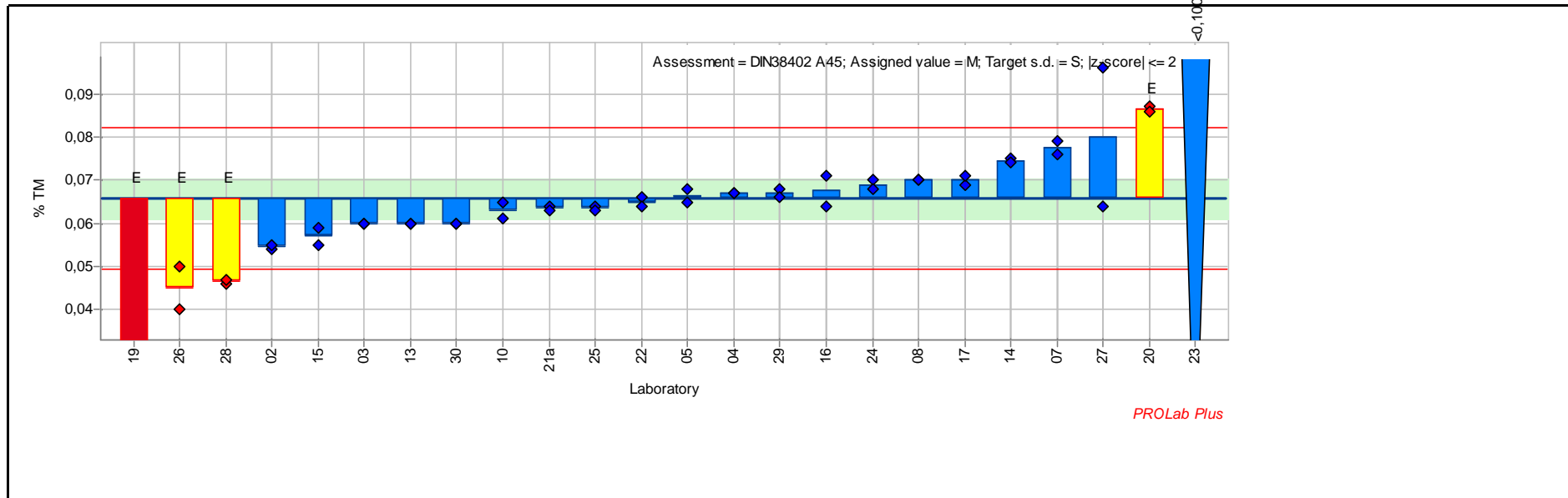
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	7,770	0,014	-0,3	7,780	7,760	no accreditation	XRF (fusion)		
04	7,810	0,025	-0,1	7,828	7,792	no accreditation	XRF (fusion)		
05	7,904	0,028	0,3	7,924	7,884	ISO 17025	ICP-OES		
07	8,163	0,060	1,2	8,206	8,121	ISO 17025	ICP-OES		
08	7,915	0,035	0,3	7,940	7,890	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	7,887	0,034	0,2	7,863	7,911	ISO 17025	XRF (fusion)		
12	7,467	0,134	-1,4	7,372	7,562	ISO 17025	AAS		
13	6,345	0,106	-5,6	6,270	6,420	ISO 17025	XRF (fusion)		E
14	7,812	0,024	-0,1	7,795	7,829	no accreditation	XRF (fusion)		
15	10,300	0,000	9,2	10,300	10,300	no accreditation	XRF (Pellet) info only		E
16	7,815	0,041	-0,1	7,786	7,844	ISO 17025	XRF (fusion)		
17	7,918	0,066	0,3	7,871	7,964	ISO 17025	XRF (fusion)		
18	8,005	0,035	0,6	7,980	8,030	no accreditation	XRF (fusion)		
19	6,835	0,047	-3,8	6,868	6,801	ISO 17025	XRF (fusion)		E
20	14,800	0,000	26,1	14,800	14,800	no accreditation	XRF (Pellet) info only		E
21a	7,673	0,076	-0,6	7,619	7,727	no accreditation	AAS		
22	8,163	0,112	1,2	8,084	8,243	no accreditation	ICP-OES		
23	7,810	0,000	-0,1	7,810	7,810	ISO 17025	XRF (fusion)		
24	7,846	0,020	0,0	7,860	7,832	no accreditation	XRF (fusion)		
25	7,530	0,000	-1,2	7,530	7,530	no accreditation	XRF (Pellet) info only		
26	7,670	0,042	-0,6	7,700	7,640	no accreditation	Standardless info only		
27	6,733	0,083	-4,1	6,792	6,674	no accreditation	XRF (fusion)		E
28	7,722	0,079	-0,4	7,666	7,778	no accreditation	XRF (fusion)		
29	8,552	0,141	2,7	8,452	8,651	no accreditation	XRF (fusion)		E
30	7,355	0,064	-1,8	7,400	7,310	no accreditation	XRF (fusion)		
31	7,850	0,071	0,0	7,900	7,800	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 126      **Reprod. s.d.:** 0,008 % TM  
**Measurand:** P2O5      **Repeat. s.d.:** 0,002 % TM  
**Mean ± U(Mean):** 0,066 ± 0,005 % TM      **Range of tolerance:** 0,049 - 0,082 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 20      **Sample:** DIN 38402 A45  
**Assigned value:** 0,066 % TM (Empirical value)      **Target s.d.:** 0,008 % TM (Empirical value)



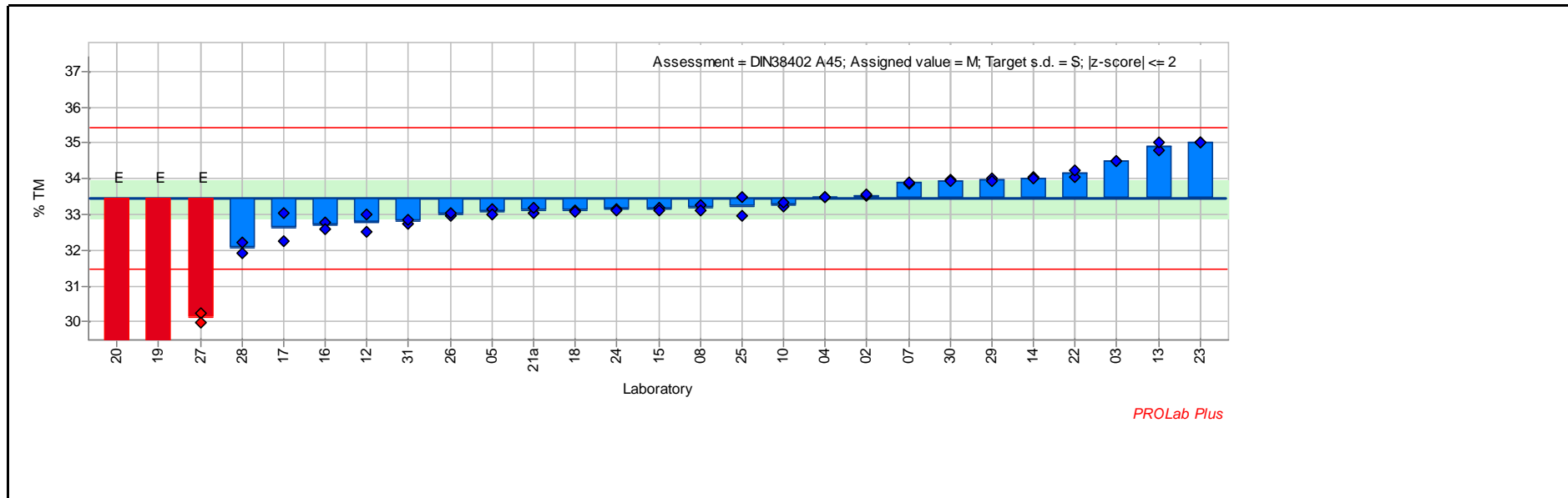
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,054	0,001	-1,4	0,054	0,055	no accreditation	XRF (fusion)		
03	0,060	0,000	-0,7	0,060	0,060	no accreditation	XRF (fusion)		
04	0,067	0,000	0,1	0,067	0,067	no accreditation	XRF (fusion)		
05	0,067	0,002	0,1	0,065	0,068	ISO 17025	XRF (fusion)		
07	0,077	0,002	1,4	0,079	0,076	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,070	0,000	0,5	0,070	0,070	no accreditation	XRF (fusion)		
10	0,063	0,003	-0,3	0,061	0,065	ISO 17025	XRF (fusion)		
13	0,060	0,000	-0,7	0,060	0,060	ISO 17025	XRF (fusion)		
14	0,074	0,001	1,1	0,075	0,074	no accreditation	XRF (fusion)		
15	0,057	0,003	-1,1	0,055	0,059	no accreditation	XRF (Pellet) info only		
16	0,068	0,005	0,2	0,071	0,064	ISO 17025	XRF (fusion)		
17	0,070	0,001	0,5	0,069	0,071	ISO 17025	XRF (fusion)		
19	0,024	0,001	-5,2	0,024	0,023	ISO 17025	XRF (fusion)		E
20	0,086	0,001	2,5	0,087	0,086	no accreditation	XRF (Pellet) info only		E
21a	0,064	0,001	-0,3	0,064	0,063	no accreditation	XRF (fusion)		
22	0,065	0,001	-0,1	0,066	0,064	no accreditation	XRF (fusion)		
23				<0,100	<0,100	ISO 17025	XRF (fusion)		
24	0,069	0,001	0,4	0,070	0,068	no accreditation	XRF (fusion)		
25	0,064	0,001	-0,3	0,064	0,063	no accreditation	XRF (fusion)		
26	0,045	0,007	-2,5	0,040	0,050	no accreditation	Standardless info only		E
27	0,080	0,023	1,7	0,096	0,064	no accreditation	XRF (fusion)		
28	0,046	0,001	-2,4	0,046	0,047	no accreditation	XRF (fusion)		E
29	0,067	0,001	0,1	0,068	0,066	no accreditation	XRF (fusion)		
30	0,060	0,000	-0,7	0,060	0,060	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 126      **Reprod. s.d.:** 0,989 % TM  
**Measurand:** SiO2      **Repeat. s.d.:** 0,140 % TM  
**Mean ± U(Mean):** 33,451 ± 0,516 % TM      **Range of tolerance:** 31,473 - 35,429 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value:** 33,451 % TM (Empirical value)      **Target s.d.:** 0,989 % TM (Empirical value)



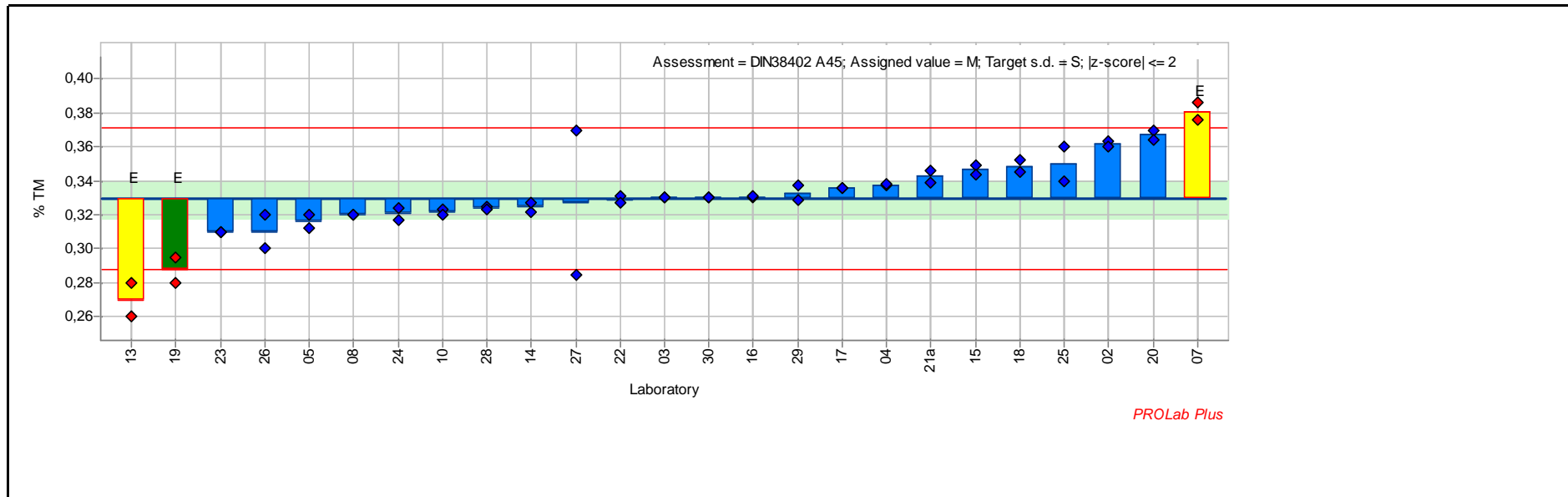
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	33,535	0,036	0,1	33,509	33,560	no accreditation	XRF (fusion)		
03	34,485	0,007	1,0	34,480	34,490	no accreditation	XRF (fusion)		
04	33,483	0,011	0,0	33,476	33,491	no accreditation	XRF (fusion)		
05	33,088	0,099	-0,4	33,158	33,018	ISO 17025	XRF (fusion)		
07	33,885	0,035	0,4	33,860	33,910	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	33,200	0,099	-0,3	33,270	33,130	no accreditation	XRF (fusion)		
10	33,276	0,091	-0,2	33,212	33,341	ISO 17025	XRF (fusion)		
12	32,770	0,356	-0,7	33,022	32,518	ISO 17025	ICP-OES		
13	34,900	0,170	1,5	34,780	35,020	ISO 17025	XRF (fusion)		
14	34,022	0,030	0,6	34,043	34,000	no accreditation	XRF (fusion)		
15	33,150	0,071	-0,3	33,200	33,100	no accreditation	XRF (Pellet) info only		
16	32,691	0,135	-0,8	32,786	32,595	ISO 17025	XRF (fusion)		
17	32,636	0,553	-0,8	32,245	33,027	ISO 17025	XRF (fusion)		
18	33,112	0,025	-0,3	33,130	33,095	no accreditation	XRF (fusion)		
19	28,365	0,584	-5,1	28,778	27,952	ISO 17025	XRF (fusion)		E
20	27,450	0,212	-6,1	27,600	27,300	no accreditation	XRF (Pellet) info only		E
21a	33,108	0,120	-0,3	33,023	33,192	no accreditation	XRF (fusion)		
22	34,153	0,127	0,7	34,063	34,242	no accreditation	XRF (fusion)		
23	35,000	0,000	1,6	35,000	35,000	ISO 17025	XRF (fusion)		
24	33,136	0,045	-0,3	33,168	33,105	no accreditation	XRF (fusion)		
25	33,220	0,354	-0,2	33,470	32,970	no accreditation	XRF (fusion)		
26	32,995	0,064	-0,5	32,950	33,040	no accreditation	Standardless info only		
27	30,125	0,187	-3,4	30,257	29,993	no accreditation	XRF (fusion)		E
28	32,062	0,200	-1,4	32,203	31,920	no accreditation	XRF (fusion)		
29	33,965	0,045	0,5	33,997	33,933	no accreditation	XRF (fusion)		
30	33,940	0,028	0,5	33,960	33,920	no accreditation	XRF (fusion)		
31	32,800	0,085	-0,7	32,740	32,860	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 126      **Reprod. s.d.:** 0,021 % TM  
**Measurand:** TiO2      **Repeat. s.d.:** 0,006 % TM  
**Mean ± U(Mean):** 0,330 ± 0,011 % TM      **Range of tolerance:** 0,288 - 0,371 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 22      **Sample:** DIN 38402 A45  
**Assigned value:** 0,330 % TM (Empirical value)      **Target s.d.:** 0,021 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,361	0,002	1,5	0,363	0,360	no accreditation	XRF (fusion)		
03	0,330	0,000	0,0	0,330	0,330	no accreditation	XRF (fusion)		
04	0,338	0,001	0,4	0,337	0,338	no accreditation	XRF (fusion)		
05	0,316	0,006	-0,6	0,312	0,320	ISO 17025	XRF (fusion)		
07	0,381	0,007	2,5	0,376	0,386	ISO 17025	XRF (fusion)		E



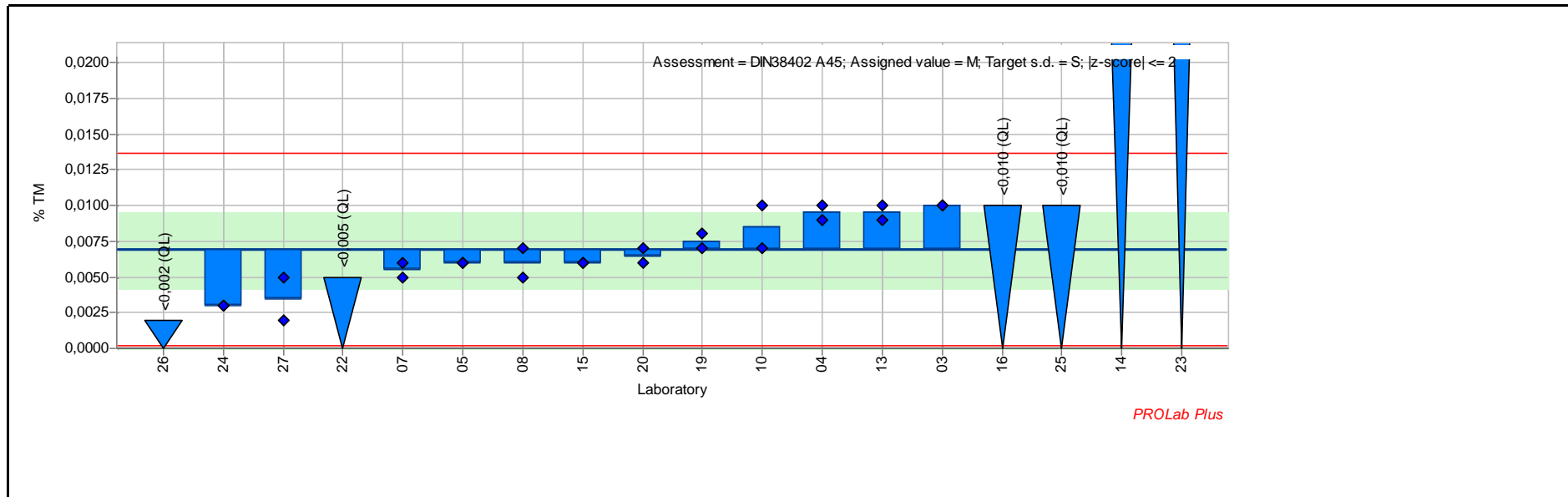
## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,320	0,000	-0,5	0,320	0,320	no accreditation	XRF (fusion)		
10	0,322	0,002	-0,4	0,323	0,320	ISO 17025	XRF (fusion)		
13	0,270	0,014	-2,9	0,280	0,260	ISO 17025	XRF (fusion)		E
14	0,325	0,004	-0,2	0,322	0,327	no accreditation	XRF (fusion)		
15	0,346	0,004	0,8	0,349	0,344	no accreditation	XRF (Pellet) info only		
16	0,331	0,001	0,0	0,330	0,331	ISO 17025	XRF (fusion)		
17	0,336	0,000	0,3	0,336	0,336	ISO 17025	XRF (fusion)		
18	0,348	0,005	0,9	0,345	0,352	no accreditation	XRF (fusion)		
19	0,287	0,011	-2,0	0,295	0,280	ISO 17025	XRF (fusion)		E
20	0,367	0,004	1,8	0,370	0,364	no accreditation	XRF (Pellet) info only		
21a	0,343	0,005	0,6	0,339	0,346	no accreditation	XRF (fusion)		
22	0,329	0,003	0,0	0,331	0,327	no accreditation	XRF (fusion)		
23	0,310	0,000	-0,9	0,310	0,310	ISO 17025	XRF (fusion)		
24	0,321	0,005	-0,4	0,324	0,317	no accreditation	XRF (fusion)		
25	0,350	0,014	1,0	0,360	0,340	no accreditation	XRF (fusion)		
26	0,310	0,014	-0,9	0,320	0,300	no accreditation	Standardless info only		
27	0,328	0,060	-0,1	0,370	0,285	no accreditation	XRF (fusion)		
28	0,324	0,001	-0,3	0,325	0,323	no accreditation	XRF (fusion)		
29	0,333	0,006	0,2	0,329	0,337	no accreditation	XRF (fusion)		
30	0,330	0,000	0,0	0,330	0,330	no accreditation	XRF (fusion)		

RV123

<0,040 (QL)

**Sample:** FLX-CRM 126      **Reprod. s.d.:** 0,003 % TM  
**Measurand:** ZnO      **Repeat. s.d.:** 0,001 % TM  
**Mean ± U(Mean):** 0,007 ± 0,003 % TM      **Range of tolerance:** 0,000 - 0,014 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 10      **Sample:** DIN 38402 A45  
**Assigned value:** 0,007 % TM (Empirical value)      **Target s.d.:** 0,003 % TM (Empirical value)



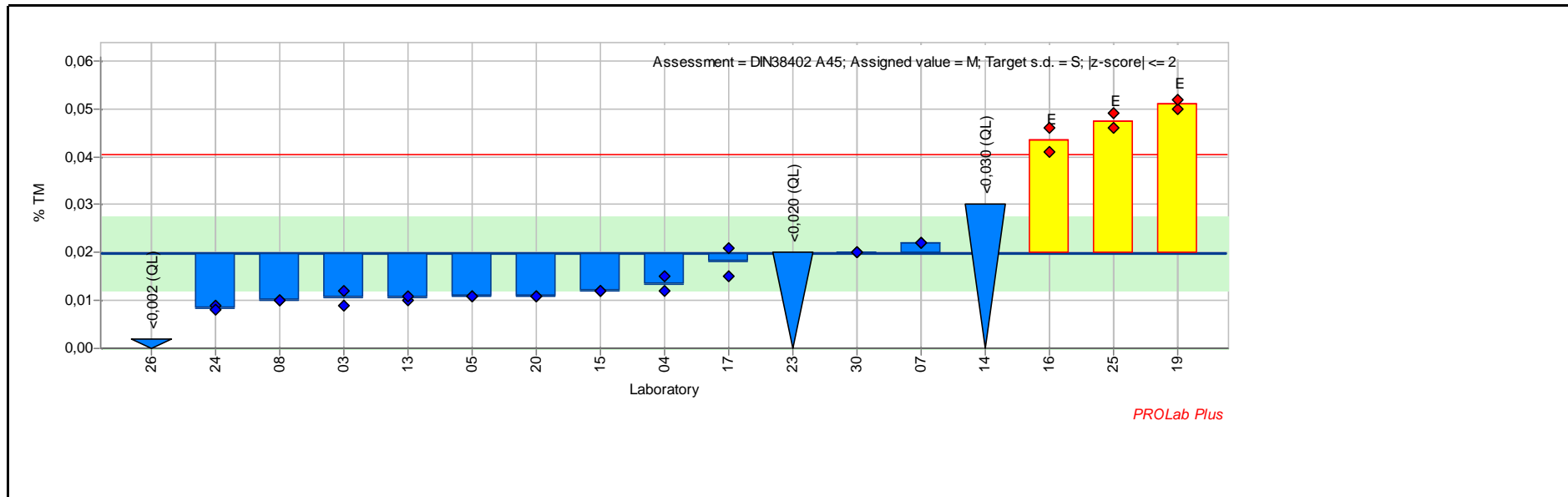
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,010	0,000	0,9	0,010	0,010	no accreditation	XRF (fusion)		
04	0,009	0,001	0,8	0,009	0,010	no accreditation	XRF (fusion)		
05	0,006	0,000	-0,3	0,006	0,006	ISO 17025	ICP-OES		
07	0,005	0,001	-0,4	0,006	0,005	ISO 17025	ICP-OES		
08	0,006	0,001	-0,3	0,005	0,007	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,009	0,002	0,5	0,010	0,007	ISO 17025	XRF (fusion)		
13	0,009	0,001	0,8	0,009	0,010	ISO 17025	XRF (fusion)		
14				<0,040	<0,040	no accreditation	XRF (fusion)		
15	0,006	0,000	-0,3	0,006	0,006	no accreditation	XRF (Pellet) info only		
16				<0,010	<0,010	ISO 17025	XRF (fusion)		
19	0,007	0,001	0,2	0,007	0,008	ISO 17025	XRF (fusion)		
20	0,007	0,001	-0,1	0,006	0,007	no accreditation	XRF (Pellet) info only		
22				<0,005	<0,005	no accreditation	XRF (Pellet) info only		
23				<0,050	<0,050	no accreditation	ICP-OES		
24	0,003	0,000	-1,2	0,003	0,003	no accreditation	XRF (fusion)		
25				<0,010	<0,010	no accreditation	Standardless info only	Uniquant	
26				<0,002	<0,002	no accreditation	Standardless info only		
27	0,004	0,002	-1,0	0,002	0,005	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 126      **Reprod. s.d.:** 0,010 % TM  
**Measurand:** ZrO2      **Repeat. s.d.:** 0,002 % TM  
**Mean ± U(Mean):** 0,020 ± 0,008 % TM      **Range of tolerance:** -0,001 - 0,040 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 11      **Sample:** DIN 38402 A45  
**Assigned value:** 0,020 % TM (Empirical value)      **Target s.d.:** 0,010 % TM (Empirical value)



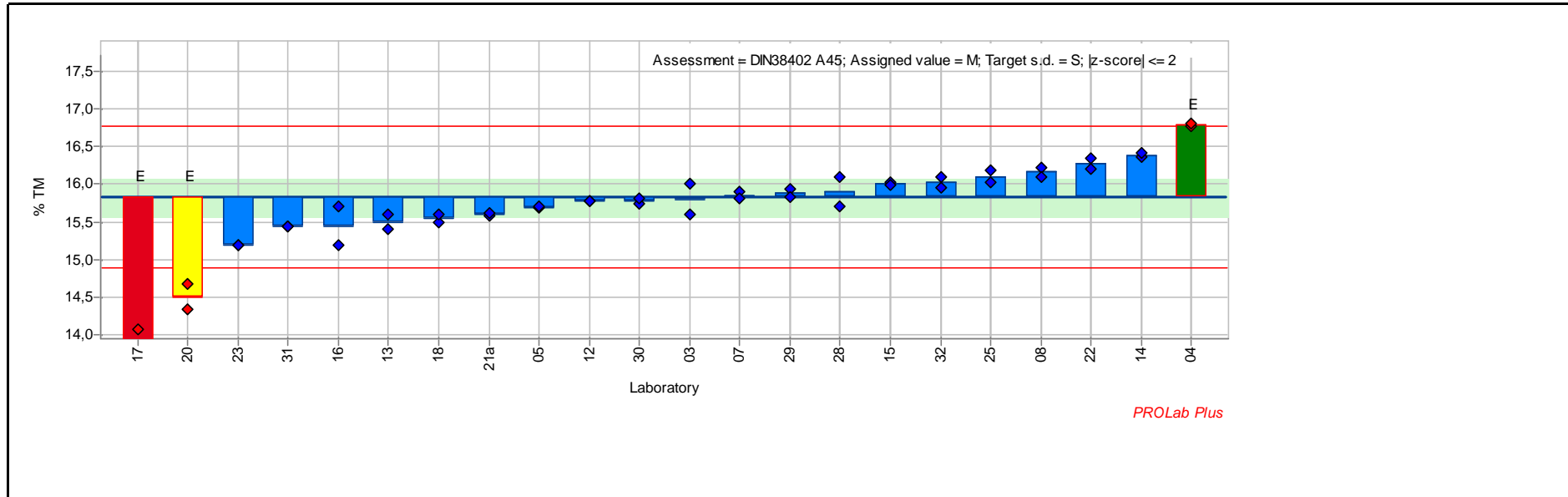
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,010	0,002	-0,9	0,009	0,012	no accreditation	Standardless info only		
04	0,013	0,002	-0,6	0,015	0,012	no accreditation	XRF (fusion)		
05	0,011	0,000	-0,9	0,011	0,011	ISO 17025	ICP-OES		
07	0,022	0,000	0,2	0,022	0,022	ISO 17025	ICP-OES		
08	0,010	0,000	-1,0	0,010	0,010	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
13	0,010	0,001	-0,9	0,010	0,011	ISO 17025	XRF (fusion)		
14				<0,030	<0,030	no accreditation	XRF (fusion)		
15	0,012	0,000	-0,8	0,012	0,012	no accreditation	XRF (Pellet) info only		
16	0,043	0,004	2,3	0,041	0,046	ISO 17025	XRF (fusion)		E
17	0,018	0,004	-0,2	0,015	0,021	ISO 17025	XRF (fusion)		
19	0,051	0,001	3,0	0,050	0,052	ISO 17025	XRF (fusion)		E
20	0,011	0,000	-0,9	0,011	0,011	no accreditation	XRF (Pellet) info only		
23				<0,020	<0,020	no accreditation	ICP-OES		
24	0,009	0,001	-1,1	0,009	0,008	no accreditation	XRF (fusion)		
25	0,048	0,002	2,7	0,049	0,046	no accreditation	XRF (fusion)		E
26				<0,002	<0,002	no accreditation	Standardless info only		
30	0,020	0,000	0,0	0,020	0,020	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 126 **Reprod. s.d.:** 0,469 % TM  
**Measurand:** Ctotal **Repeat. s.d.:** 0,110 % TM  
**Mean ± U(Mean):** 15,831 ± 0,256 % TM **Range of tolerance:** 14,893 - 16,770 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 21 **Sample:** DIN 38402 A45  
**Assigned value:** 15,831 % TM (Empirical value) **Target s.d.:** 0,469 % TM (Empirical value)



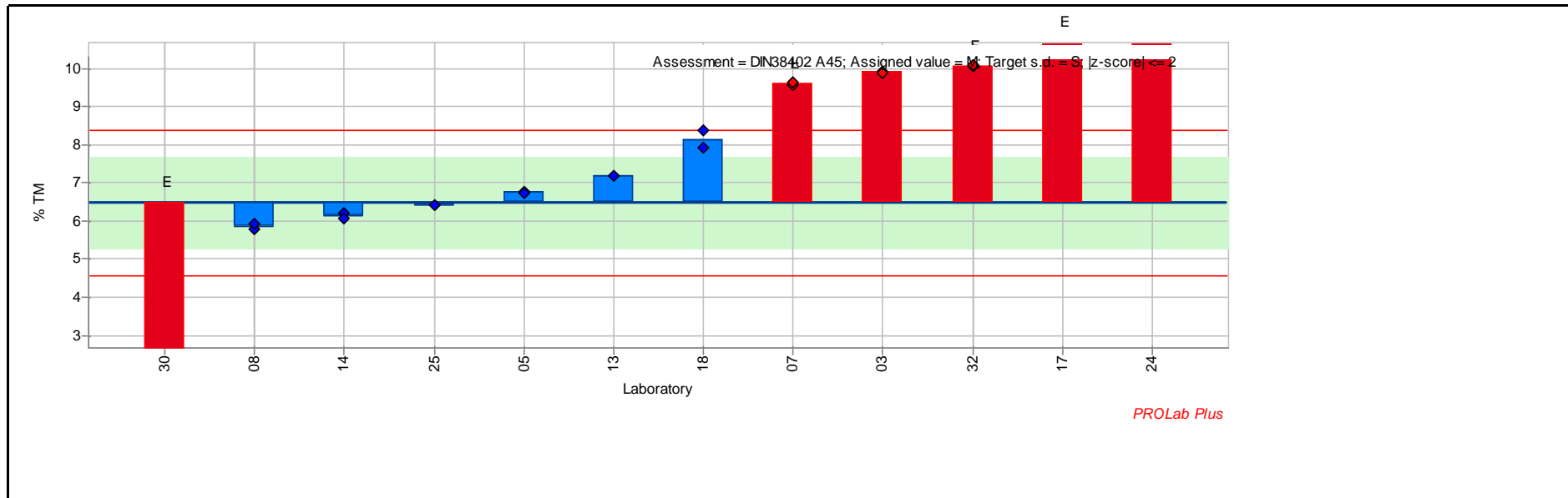
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	15,800	0,283	-0,1	16,000	15,600	no accreditation	combustion		
04	16,789	0,017	2,0	16,777	16,801	no accreditation	combustion		E
05	15,693	0,014	-0,3	15,683	15,703	ISO 17025	combustion		
07	15,855	0,064	0,1	15,900	15,810	ISO 17025	combustion		
08	16,160	0,085	0,7	16,220	16,100	no accreditation	combustion		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
12	15,776	0,001	-0,1	15,776	15,777	ISO 17025	combustion		
13	15,500	0,141	-0,7	15,400	15,600	ISO 17025	combustion		
14	16,388	0,035	1,2	16,363	16,413	no accreditation	combustion		
15	16,010	0,027	0,4	16,029	15,991	no accreditation	combustion		
16	15,450	0,354	-0,8	15,200	15,700	ISO 17025	combustion		
17	13,593	0,688	-4,8	14,080	13,107	ISO 17025	combustion		E
18	15,550	0,071	-0,6	15,500	15,600	no accreditation	combustion		
20	14,510	0,240	-2,8	14,680	14,340	no accreditation	combustion	DIN EN 13137	E
21a	15,600	0,014	-0,5	15,590	15,610	no accreditation	combustion		
22	16,277	0,107	1,0	16,201	16,353	no accreditation	combustion		
23	15,200	0,000	-1,3	15,200	15,200	ISO 17025	combustion		
25	16,105	0,113	0,6	16,185	16,025	no accreditation	combustion		
28	15,900	0,283	0,1	16,100	15,700	no accreditation	combustion		
29	15,891	0,072	0,1	15,942	15,840	no accreditation	combustion		
30	15,780	0,042	-0,1	15,750	15,810	no accreditation	combustion		
31	15,445	0,007	-0,8	15,450	15,440	no accreditation	other	Wet Analysys	
32	16,027	0,107	0,4	16,103	15,951	no accreditation	combustion		

RV123

**Sample:** FLX-CRM 126      **Reprod. s.d.:** 0,954 % TM  
**Measurand:** CO2      **Repeat. s.d.:** 0,136 % TM  
**Mean ± U(Mean):** 6,487 ± 1,193 % TM      **Range of tolerance:** 4,578 - 8,395 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 4      **Sample:** DIN 38402 A45  
**Assigned value:** 6,487 % TM (Empirical value)      **Target s.d.:** 0,954 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	9,915	0,021	3,6	9,930	9,900	no accreditation	other	inert gas	E
05	6,760	0,031	0,3	6,782	6,738	ISO 17025	combustion	acid	
07	9,594	0,040	3,3	9,566	9,622	ISO 17025	combustion		E
08	5,865	0,092	-0,7	5,800	5,930	no accreditation	combustion	acid	
13	7,190		0,7	7,190		ISO 17025	combustion	acid	

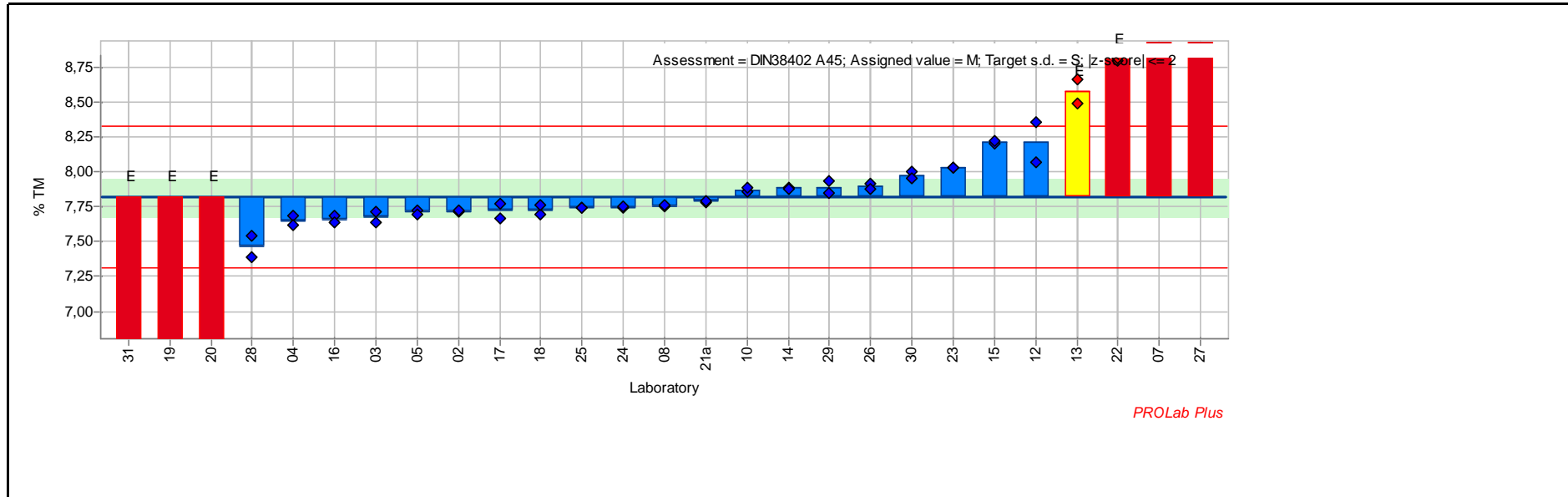


**RV123**

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
14	6,131	0,093	-0,4	6,197	6,065	no accreditation	combustion	acid	
17	10,691	0,083	4,4	10,750	10,633	no accreditation	combustion	Leco RC 612	E
18	8,145	0,318	1,7	8,370	7,920	no accreditation	other	loss of weight	
24	22,451	0,134	16,7	22,356	22,545	no accreditation	combustion	LOI in a muffel	E
25	6,400		-0,1	6,400		no accreditation	combustion		
30	2,525	0,049	-4,2	2,560	2,490	no accreditation	combustion		E
32	10,075	0,033	3,8	10,051	10,098	no accreditation	combustion		E

RV123

**Sample:** FLX-CRM 127      **Reprod. s.d.:** 0,253 % TM  
**Measurand:** Al2O3      **Repeat. s.d.:** 0,048 % TM  
**Mean ± U(Mean):** 7,818 ± 0,132 % TM      **Range of tolerance:** 7,311 - 8,325 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value:** 7,818 % TM (Empirical value)      **Target s.d.:** 0,253 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	7,717	0,001	-0,4	7,717	7,718	no accreditation	XRF (fusion)		
03	7,675	0,049	-0,6	7,710	7,640	no accreditation	XRF (fusion)		
04	7,650	0,042	-0,7	7,680	7,620	no accreditation	XRF (fusion)		
05	7,710	0,022	-0,4	7,726	7,695	ISO 17025	XRF (fusion)		
07	9,150	0,071	5,3	9,200	9,100	ISO 17025	XRF (fusion)		E

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	7,755	0,007	-0,2	7,750	7,760	no accreditation	XRF (fusion)		
10	7,870	0,021	0,2	7,855	7,884	ISO 17025	XRF (fusion)		
12	8,212	0,201	1,6	8,354	8,070	ISO 17025	ICP-OES		
13	8,575	0,120	3,0	8,660	8,490	ISO 17025	XRF (fusion)		E
14	7,881	0,006	0,2	7,885	7,877	no accreditation	XRF (fusion)		
15	8,210	0,014	1,5	8,200	8,220	no accreditation	XRF (Pellet) info only		
16	7,659	0,034	-0,6	7,683	7,635	ISO 17025	XRF (fusion)		
17	7,720	0,071	-0,4	7,770	7,669	ISO 17025	XRF (fusion)		
18	7,726	0,047	-0,4	7,693	7,759	no accreditation	XRF (fusion)		
19	5,992	0,098	-7,2	6,061	5,923	ISO 17025	XRF (fusion)		E
20	6,475	0,007	-5,3	6,470	6,480	no accreditation	XRF (Pellet) info only		E
21a	7,785	0,008	-0,1	7,779	7,791	no accreditation	XRF (fusion)		
22	8,804	0,011	3,9	8,796	8,812	no accreditation	XRF (fusion)		E
23	8,030	0,000	0,8	8,030	8,030	ISO 17025	XRF (fusion)		
24	7,746	0,010	-0,3	7,739	7,753	no accreditation	XRF (fusion)		
25	7,740	0,000	-0,3	7,740	7,740	no accreditation	XRF (fusion)		
26	7,895	0,021	0,3	7,910	7,880	no accreditation	Standardless info only		
27	16,834	0,036	35,6	16,808	16,859	no accreditation	XRF (fusion)		E
28	7,466	0,106	-1,4	7,391	7,541	no accreditation	XRF (fusion)		
29	7,887	0,064	0,3	7,842	7,933	no accreditation	XRF (fusion)		
30	7,975	0,035	0,6	8,000	7,950	no accreditation	XRF (fusion)		
31	5,060	0,000	-10,9	5,060	5,060	no accreditation	other	Wet Analysys	E

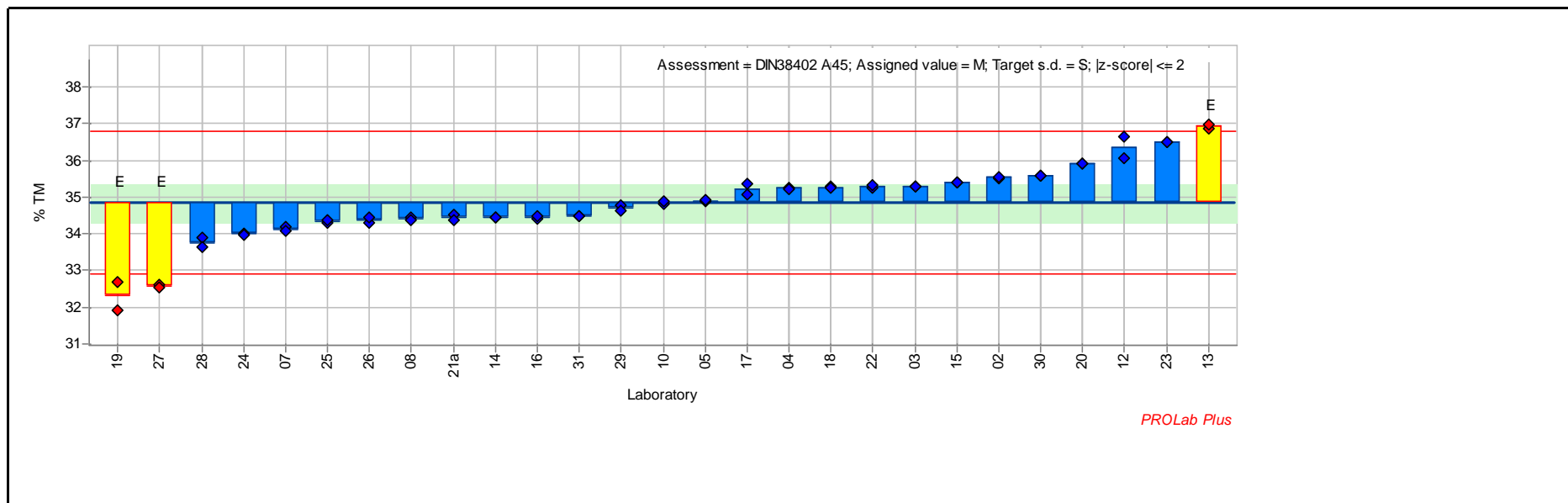


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,266	0,011	-0,9	0,274	0,258	ISO 17025	XRF (fusion)		
13	0,270	0,000	-0,8	0,270	0,270	ISO 17025	XRF (fusion)		
15	0,296	0,004	-0,1	0,299	0,293	no accreditation	XRF (Pellet) info only		
16	0,319	0,016	0,5	0,307	0,330	ISO 17025	XRF (fusion)		
17	0,322	0,004	0,6	0,319	0,324	ISO 17025	XRF (fusion)		
19	0,178	0,003	-3,3	0,180	0,176	ISO 17025	XRF (fusion)		E
20	0,329	0,004	0,7	0,331	0,326	no accreditation	XRF (Pellet) info only		
23	0,320	0,000	0,5	0,320	0,320	no accreditation	ICP-OES		
24	0,271	0,006	-0,8	0,275	0,267	no accreditation	XRF (fusion)		
25	0,339	0,006	1,0	0,334	0,343	no accreditation	XRF (fusion)		
26	0,315	0,007	0,4	0,320	0,310	no accreditation	Standardless info only		

RV123

**Sample:** FLX-CRM 127      **Reprod. s.d.:** 0,973 % TM  
**Measurand:** CaO      **Repeat. s.d.:** 0,071 % TM  
**Mean ± U(Mean):** 34,849 ± 0,507 % TM      **Range of tolerance:** 32,904 - 36,795 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value:** 34,849 % TM (Empirical value)      **Target s.d.:** 0,973 % TM (Empirical value)



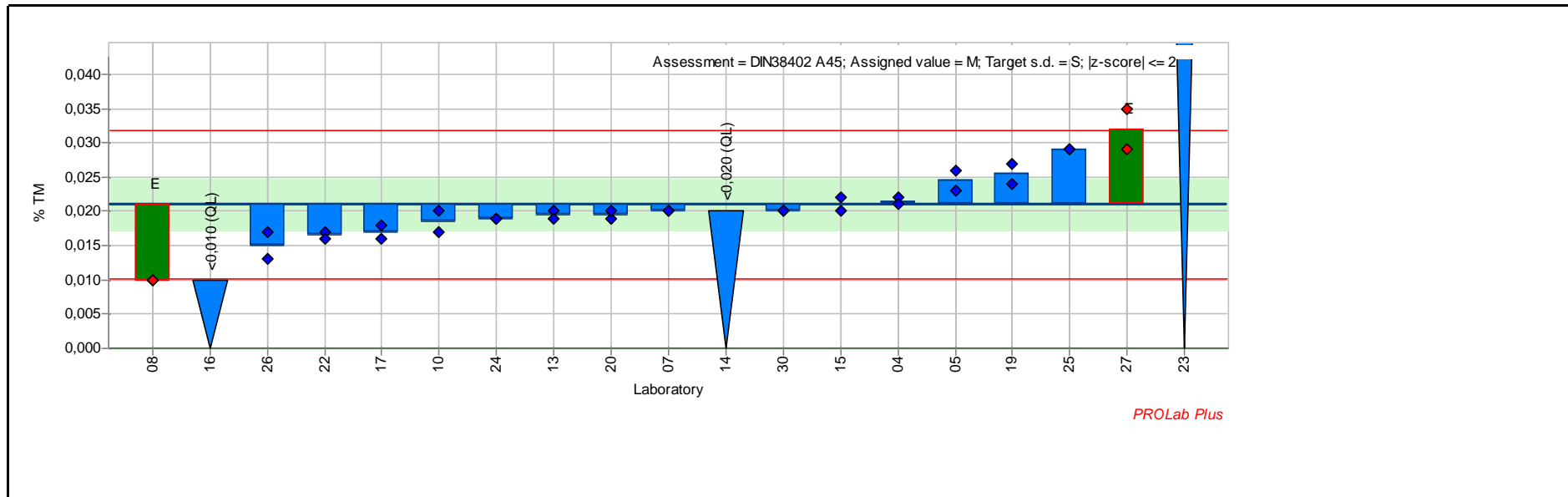
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	35,534	0,037	0,7	35,507	35,560	no accreditation	XRF (fusion)		
03	35,290	0,014	0,5	35,280	35,300	no accreditation	XRF (fusion)		
04	35,241	0,018	0,4	35,254	35,228	no accreditation	XRF (fusion)		
05	34,890	0,021	0,0	34,875	34,905	ISO 17025	XRF (fusion)		
07	34,130	0,071	-0,7	34,180	34,080	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	34,405	0,049	-0,5	34,440	34,370	no accreditation	XRF (fusion)		
10	34,843	0,042	0,0	34,813	34,872	ISO 17025	XRF (fusion)		
12	36,353	0,414	1,5	36,645	36,060	ISO 17025	ICP-OES	CaOtotal	
13	36,935	0,078	2,1	36,880	36,990	ISO 17025	XRF (fusion)		E
14	34,446	0,004	-0,4	34,443	34,449	no accreditation	XRF (fusion)		
15	35,400	0,000	0,6	35,400	35,400	no accreditation	XRF (Pellet) info only		
16	34,447	0,042	-0,4	34,417	34,476	ISO 17025	XRF (fusion)		
17	35,234	0,207	0,4	35,088	35,381	ISO 17025	XRF (fusion)		
18	35,259	0,023	0,4	35,275	35,243	no accreditation	XRF (fusion)		
19	32,302	0,544	-2,6	32,687	31,918	ISO 17025	XRF (fusion)		E
20	35,900	0,000	1,1	35,900	35,900	no accreditation	XRF (Pellet) info only		
21a	34,440	0,092	-0,4	34,505	34,375	no accreditation	XRF (fusion)		
22	35,280	0,052	0,4	35,243	35,317	no accreditation	XRF (fusion)		
23	36,500	0,000	1,7	36,500	36,500	ISO 17025	XRF (fusion)		
24	33,987	0,040	-0,9	34,015	33,959	no accreditation	XRF (fusion)		
25	34,345	0,064	-0,5	34,300	34,390	no accreditation	XRF (fusion)		
26	34,370	0,113	-0,5	34,290	34,450	no accreditation	Standardless info only		
27	32,563	0,052	-2,4	32,599	32,526	no accreditation	XRF (fusion)		E
28	33,766	0,190	-1,1	33,900	33,631	no accreditation	XRF (fusion)		
29	34,701	0,082	-0,2	34,759	34,643	no accreditation	XRF (fusion)		
30	35,595	0,007	0,8	35,590	35,600	no accreditation	XRF (fusion)		
31	34,480	0,000	-0,4	34,480	34,480	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 127      **Reprod. s.d.:** 0,005 % TM  
**Measurand:** Cr2O3      **Repeat. s.d.:** 0,002 % TM  
**Mean ± U(Mean):** 0,021 ± 0,004 % TM      **Range of tolerance:** 0,010 - 0,032 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 13      **Sample:** DIN 38402 A45  
**Assigned value:** 0,021 % TM (Empirical value)      **Target s.d.:** 0,005 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
04	0,021	0,001	0,1	0,022	0,021	no accreditation	XRF (fusion)		
05	0,025	0,002	0,7	0,026	0,023	ISO 17025	XRF (fusion)		
07	0,020	0,000	-0,2	0,020	0,020	ISO 17025	XRF (fusion)		
08	0,010	0,000	-2,0	0,010	0,010	no accreditation	XRF (fusion)		E
10	0,019	0,002	-0,5	0,020	0,017	ISO 17025	XRF (fusion)		



## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
13	0,020	0,001	-0,3	0,020	0,019	ISO 17025	XRF (fusion)		
14				<0,020	<0,020	no accreditation	XRF (fusion)		
15	0,021	0,001	0,0	0,020	0,022	no accreditation	XRF (Pellet) info only		
16				<0,010	<0,010	ISO 17025	XRF (fusion)		
17	0,017	0,001	-0,7	0,016	0,018	ISO 17025	XRF (fusion)		
19	0,026	0,002	0,8	0,027	0,024	ISO 17025	XRF (fusion)		
20	0,020	0,001	-0,3	0,019	0,020	no accreditation	XRF (Pellet) info only		
22	0,017	0,001	-0,8	0,017	0,016	no accreditation	XRF (fusion)		
23				<0,100	<0,100	ISO 17025	XRF (fusion)		
24	0,019	0,000	-0,4	0,019	0,019	no accreditation	XRF (fusion)		
25	0,029	0,000	1,5	0,029	0,029	no accreditation	XRF (fusion)		
26	0,015	0,003	-1,1	0,017	0,013	no accreditation	Standardless info only		
27	0,032	0,004	2,0	0,035	0,029	no accreditation	XRF (fusion)		E
30	0,020	0,000	-0,2	0,020	0,020	no accreditation	XRF (fusion)		

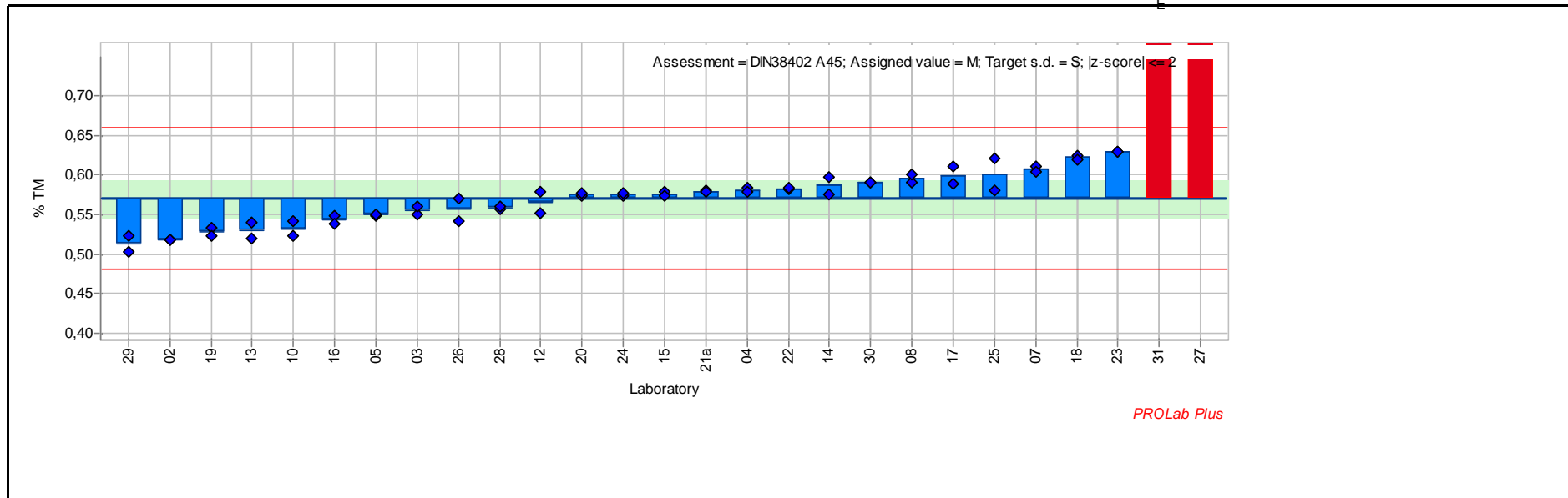


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
12	9,105	0,078	0,9	9,160	9,050	ISO 17025	other	Potentiometry	
13	6,720	0,000	-3,9	6,720	6,720	ISO 17025	XRF (Pellet) info only		E
14	8,541	0,149	-0,3	8,647	8,436	no accreditation	XRF (fusion)		
15	7,815	0,092	-1,7	7,750	7,880	no accreditation	XRF (Pellet) info only		
16	8,460	0,035	-0,4	8,435	8,485	ISO 17025	other	Melting digestion,	
17	9,418	0,151	1,5	9,311	9,525	ISO 17025	XRF (fusion)		
18	9,306	0,185	1,3	9,175	9,437	no accreditation	XRF (fusion)		
21a	7,975	0,068	-1,4	7,927	8,023	no accreditation	XRF (fusion)		
21b	7,713	0,185	-1,9	7,844	7,583	no accreditation	Ion selective electrode		
22	8,562	0,343	-0,2	8,319	8,804	no accreditation	Ion selective electrode		
24	6,282	0,005	-4,7	6,279	6,286	no accreditation	XRF (Pellet) info only		E
25	8,450	0,071	-0,4	8,400	8,500	no accreditation	XRF (fusion)		
27	8,381	0,164	-0,6	8,265	8,497	no accreditation	XRF (fusion)		
28	8,625	0,017	-0,1	8,613	8,637	no accreditation	XRF (fusion)		
29	8,775	0,021	0,2	8,790	8,760	no accreditation	Ion selective electrode		
30	2,405	0,021	-12,4	2,390	2,420	no accreditation	other	Potentiometry	E
31	9,560	0,170	1,8	9,680	9,440	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 127      **Reprod. s.d.:** 0,045 % TM  
**Measurand:** Fe2O3      **Repeat. s.d.:** 0,008 % TM  
**Mean ± U(Mean):** 0,570 ± 0,024 % TM      **Range of tolerance:** 0,481 - 0,660 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 22      **Sample:** DIN 38402 A45  
**Assigned value:** 0,570 % TM (Empirical value)      **Target s.d.:** 0,045 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,518	0,000	-1,2	0,518	0,518	no accreditation	XRF (fusion)		
03	0,555	0,007	-0,3	0,550	0,560	no accreditation	XRF (fusion)		
04	0,581	0,004	0,2	0,584	0,578	no accreditation	XRF (fusion)		
05	0,550	0,001	-0,5	0,549	0,550	ISO 17025	XRF (fusion)		
07	0,607	0,004	0,8	0,610	0,604	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,595	0,007	0,6	0,590	0,600	no accreditation	XRF (fusion)		
10	0,532	0,013	-0,9	0,523	0,541	ISO 17025	XRF (fusion)		
12	0,566	0,019	-0,1	0,552	0,579	ISO 17025	other	AAS +	
13	0,530	0,014	-0,9	0,540	0,520	ISO 17025	XRF (fusion)		
14	0,587	0,016	0,4	0,598	0,576	no accreditation	XRF (fusion)		
15	0,576	0,004	0,1	0,579	0,573	no accreditation	XRF (Pellet) info only		
16	0,543	0,007	-0,6	0,548	0,538	ISO 17025	XRF (fusion)		
17	0,599	0,016	0,7	0,588	0,611	ISO 17025	XRF (fusion)		
18	0,622	0,004	1,2	0,625	0,619	no accreditation	XRF (fusion)		
19	0,528	0,007	-0,9	0,533	0,523	ISO 17025	XRF (fusion)		
20	0,575	0,002	0,1	0,574	0,577	no accreditation	XRF (Pellet) info only		
21a	0,579	0,001	0,2	0,580	0,579	no accreditation	XRF (fusion)		
22	0,583	0,001	0,3	0,582	0,583	no accreditation	XRF (fusion)		
23	0,630	0,000	1,3	0,630	0,630	ISO 17025	XRF (fusion)		
24	0,575	0,002	0,1	0,574	0,577	no accreditation	XRF (fusion)		
25	0,600	0,028	0,7	0,620	0,580	no accreditation	XRF (fusion)		
26	0,556	0,020	-0,3	0,570	0,542	no accreditation	Standardless info only		
27	1,485	0,013	20,5	1,476	1,494	no accreditation	XRF (fusion)		E
28	0,558	0,003	-0,3	0,556	0,560	no accreditation	XRF (fusion)		
29	0,512	0,015	-1,3	0,523	0,502	no accreditation	XRF (fusion)		
30	0,590	0,000	0,4	0,590	0,590	no accreditation	XRF (fusion)		
31	0,790	0,000	4,9	0,790	0,790	no accreditation	other	Wet Analysys	E



## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,085	0,001	0,0	0,085	0,086	ISO 17025	XRF (fusion)		
12	0,126	0,006	3,3	0,130	0,121	ISO 17025	AAS		E
13	0,090	0,014	0,4	0,080	0,100	ISO 17025	XRF (fusion)		
14	0,084	0,002	-0,1	0,086	0,083	no accreditation	XRF (fusion)		
15	0,078	0,000	-0,6	0,078	0,078	no accreditation	XRF (Pellet) info only		
16	0,073	0,004	-1,0	0,071	0,076	ISO 17025	XRF (fusion)		
17	0,081	0,001	-0,4	0,080	0,081	ISO 17025	XRF (fusion)		
19	0,009	0,001	-6,3	0,009	0,008	ISO 17025	XRF (fusion)		E
20	0,085	0,000	0,0	0,085	0,085	no accreditation	XRF (Pellet) info only		
21a	0,085	0,000	0,0	0,085	0,085	no accreditation	XRF (fusion)		
22	0,092	0,003	0,5	0,090	0,094	no accreditation	ICP-OES		
23	0,120	0,000	2,8	0,120	0,120	ISO 17025	XRF (fusion)		E
24	0,072	0,002	-1,1	0,070	0,073	no accreditation	XRF (fusion)		
25	0,030	0,000	-4,5	0,030	0,030	no accreditation	XRF (fusion)		E
26	0,082	0,005	-0,2	0,086	0,079	no accreditation	Standardless info only		
28	0,076	0,001	-0,7	0,076	0,077	no accreditation	XRF (fusion)		
29	0,082	0,002	-0,3	0,080	0,083	no accreditation	XRF (fusion)		
30	0,080	0,000	-0,4	0,080	0,080	no accreditation	XRF (fusion)		
31	0,100	0,000	1,2	0,100	0,100	no accreditation	other	Wet Analysys	



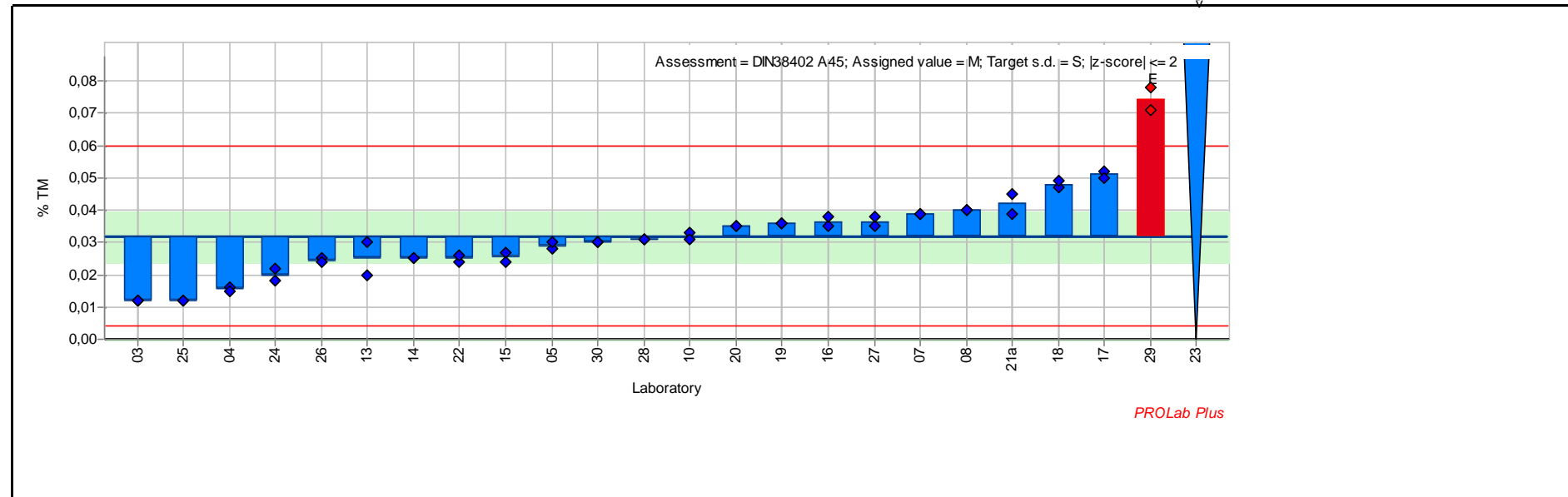


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	2,625	0,021	0,3	2,610	2,640	no accreditation	XRF (fusion)		
10	2,607	0,008	0,1	2,612	2,601	ISO 17025	XRF (fusion)		
12	2,838	0,012	1,9	2,847	2,830	ISO 17025	ICP-OES		
13	2,775	0,035	1,4	2,800	2,750	ISO 17025	XRF (fusion)		
14	2,572	0,001	-0,1	2,572	2,573	no accreditation	XRF (fusion)		
15	2,805	0,007	1,7	2,810	2,800	no accreditation	XRF (Pellet) info only		
16	2,545	0,019	-0,4	2,531	2,558	ISO 17025	XRF (fusion)		
17	2,415	0,040	-1,4	2,387	2,444	ISO 17025	XRF (fusion)		
18	2,703	0,023	0,9	2,687	2,719	no accreditation	XRF (fusion)		
19	1,664	0,042	-7,2	1,694	1,635	ISO 17025	XRF (fusion)		E
20	2,430	0,000	-1,2	2,430	2,430	no accreditation	XRF (Pellet) info only		
21a	2,601	0,017	0,1	2,589	2,613	no accreditation	XRF (fusion)		
22	2,369	0,036	-1,7	2,395	2,344	no accreditation	XRF (fusion)		
23	2,680	0,000	0,7	2,680	2,680	ISO 17025	XRF (fusion)		
24	2,524	0,004	-0,5	2,521	2,527	no accreditation	XRF (fusion)		
25	2,587	0,004	0,0	2,589	2,584	no accreditation	XRF (fusion)		
26	2,530	0,000	-0,5	2,530	2,530	no accreditation	Standardless info only		
27	2,517	0,000	-0,6	2,517	2,517	no accreditation	XRF (fusion)		
28	2,540	0,011	-0,4	2,533	2,548	no accreditation	XRF (fusion)		
29	2,563	0,015	-0,2	2,552	2,573	no accreditation	XRF (fusion)		
30	2,950	0,000	2,8	2,950	2,950	no accreditation	XRF (fusion)		E
31	3,020	0,000	3,3	3,020	3,020	no accreditation	other	Wet Analysys	E

RV123

**Sample:** FLX-CRM 127      **Reprod. s.d.:** 0,014 % TM  
**Measurand:** MnO2      **Repeat. s.d.:** 0,002 % TM  
**Mean ± U(Mean):** 0,032 ± 0,008 % TM      **Range of tolerance:** 0,004 - 0,060 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 20      **Sample:** DIN 38402 A45  
**Assigned value:** 0,032 % TM (Empirical value)      **Target s.d.:** 0,014 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,012	0,000	-1,4	0,012	0,012	no accreditation	XRF (fusion)		
04	0,015	0,001	-1,2	0,016	0,015	no accreditation	XRF (fusion)		
05	0,029	0,001	-0,2	0,028	0,030	ISO 17025	XRF (fusion)		
07	0,039	0,000	0,5	0,039	0,039	ISO 17025	XRF (fusion)		
08	0,040	0,000	0,6	0,040	0,040	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,032	0,001	0,0	0,033	0,031	ISO 17025	XRF (fusion)		
13	0,025	0,007	-0,5	0,030	0,020	ISO 17025	XRF (fusion)		
14	0,025	0,000	-0,5	0,025	0,025	no accreditation	XRF (fusion)		
15	0,026	0,002	-0,5	0,027	0,024	no accreditation	XRF (Pellet) info only		
16	0,037	0,002	0,3	0,035	0,038	ISO 17025	XRF (fusion)		
17	0,051	0,001	1,4	0,052	0,050	ISO 17025	XRF (fusion)		
18	0,048	0,001	1,2	0,047	0,049	no accreditation	XRF (fusion)		
19	0,036	0,000	0,3	0,036	0,036	ISO 17025	XRF (fusion)		
20	0,035	0,000	0,2	0,035	0,035	no accreditation	XRF (Pellet) info only		
21a	0,042	0,004	0,7	0,045	0,039	no accreditation	XRF (fusion)		
22	0,025	0,001	-0,5	0,024	0,026	no accreditation	XRF (fusion)		
23				<0,100	<0,100	ISO 17025	XRF (fusion)		
24	0,020	0,003	-0,9	0,022	0,018	no accreditation	XRF (fusion)		
25	0,012	0,000	-1,4	0,012	0,012	no accreditation	XRF (fusion)		
26	0,025	0,001	-0,5	0,025	0,024	no accreditation	Standardless info only		
27	0,037	0,002	0,3	0,035	0,038	no accreditation	XRF (fusion)		
28	0,031	0,000	-0,1	0,031	0,031	no accreditation	XRF (fusion)		
29	0,074	0,005	3,1	0,078	0,071	no accreditation	XRF (fusion)		E
30	0,030	0,000	-0,1	0,030	0,030	no accreditation	XRF (fusion)		



## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	10,605	0,006	0,4	10,601	10,609	ISO 17025	XRF (fusion)		
12	10,140	0,132	-0,8	10,047	10,234	ISO 17025	AAS		
13	8,735	0,049	-4,5	8,700	8,770	ISO 17025	XRF (fusion)		E
14	10,152	0,021	-0,8	10,167	10,138	no accreditation	XRF (fusion)		
15	10,200	0,000	-0,7	10,200	10,200	no accreditation	XRF (Pellet) info only		
16	10,339	0,037	-0,3	10,365	10,313	ISO 17025	XRF (fusion)		
17	10,325	0,006	-0,3	10,321	10,330	ISO 17025	XRF (fusion)		
18	10,594	0,006	0,4	10,598	10,590	no accreditation	XRF (fusion)		
19	8,521	0,222	-5,0	8,678	8,364	ISO 17025	XRF (fusion)		E
20	10,050	0,071	-1,1	10,100	10,000	no accreditation	XRF (Pellet) info only		
21a	10,258	0,129	-0,5	10,167	10,350	no accreditation	AAS		
22	10,802	0,359	0,9	10,549	11,056	no accreditation	ICP-OES		
23	10,500	0,000	0,1	10,500	10,500	ISO 17025	XRF (fusion)		
24	10,422	0,029	-0,1	10,442	10,401	no accreditation	XRF (fusion)		
25	5,549	0,000	-12,8	5,549	5,549	no accreditation	XRF (fusion)		E
26	10,350	0,071	-0,3	10,400	10,300	no accreditation	Standardless info only		
27	11,261	0,038	2,1	11,234	11,288	no accreditation	XRF (fusion)		E
28	10,049	0,013	-1,1	10,058	10,040	no accreditation	XRF (fusion)		
29	11,293	0,090	2,2	11,229	11,356	no accreditation	XRF (fusion)		E
30	10,015	0,078	-1,1	9,960	10,070	no accreditation	XRF (fusion)		
31	10,250	0,071	-0,5	10,200	10,300	no accreditation	other	Wet Analysys	

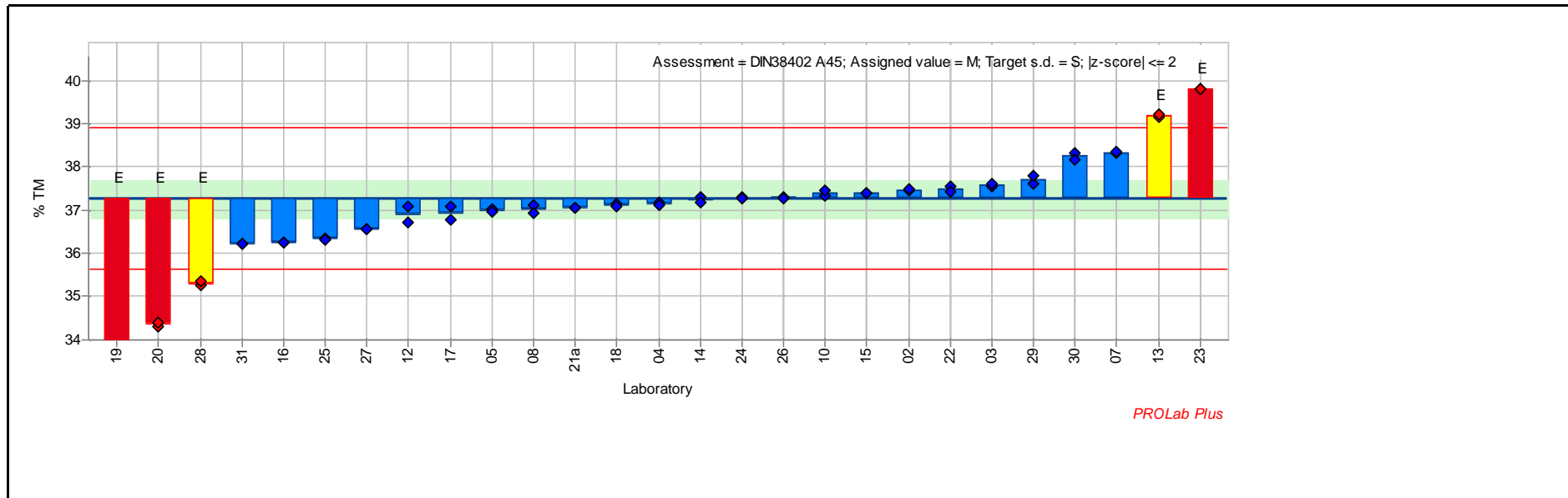


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,040	0,000	0,5	0,040	0,040	no accreditation	XRF (fusion)		
10	0,039	0,000	0,3	0,039	0,039	ISO 17025	XRF (fusion)		
13	0,035	0,007	-0,4	0,040	0,030	ISO 17025	XRF (fusion)		
14	0,045	0,000	1,4	0,045	0,045	no accreditation	XRF (fusion)		
15	0,028	0,000	-1,6	0,028	0,028	no accreditation	XRF (Pellet) info only		
16	0,033	0,006	-0,8	0,028	0,037	ISO 17025	XRF (fusion)		
17	0,040	0,001	0,5	0,039	0,041	ISO 17025	XRF (fusion)		
19	0,011	0,000	-4,6	0,011	0,011	ISO 17025	XRF (fusion)		E
20	0,103	0,002	11,6	0,102	0,105	no accreditation	XRF (Pellet) info only		E
21a	0,038	0,000	0,2	0,038	0,038	no accreditation	XRF (fusion)		
22	0,037	0,001	0,0	0,036	0,038	no accreditation	XRF (fusion)		
23				<0,100	<0,100	ISO 17025	XRF (fusion)		
24	0,043	0,001	1,1	0,044	0,043	no accreditation	XRF (fusion)		
25	0,034	0,001	-0,6	0,033	0,034	no accreditation	XRF (fusion)		
26	0,030	0,000	-1,2	0,030	0,030	no accreditation	Standardless info only		
27	0,032	0,007	-0,9	0,037	0,027	no accreditation	XRF (fusion)		
28	0,026	0,001	-1,8	0,027	0,026	no accreditation	XRF (fusion)		
29	0,042	0,002	1,0	0,044	0,041	no accreditation	XRF (fusion)		
30	0,040	0,000	0,5	0,040	0,040	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 127      **Reprod. s.d.:** 0,821 % TM  
**Measurand:** SiO2      **Repeat. s.d.:** 0,070 % TM  
**Mean ± U(Mean):** 37,268 ± 0,428 % TM      **Range of tolerance:** 35,627 - 38,909 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 23      **Sample:** DIN 38402 A45  
**Assigned value:** 37,268 % TM (Empirical value)      **Target s.d.:** 0,821 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	37,468	0,013	0,2	37,459	37,477	no accreditation	XRF (fusion)		
03	37,585	0,035	0,4	37,560	37,610	no accreditation	XRF (fusion)		
04	37,133	0,042	-0,2	37,163	37,103	no accreditation	XRF (fusion)		
05	36,986	0,057	-0,3	37,026	36,946	ISO 17025	XRF (fusion)		
07	38,330	0,014	1,3	38,320	38,340	ISO 17025	XRF (fusion)		

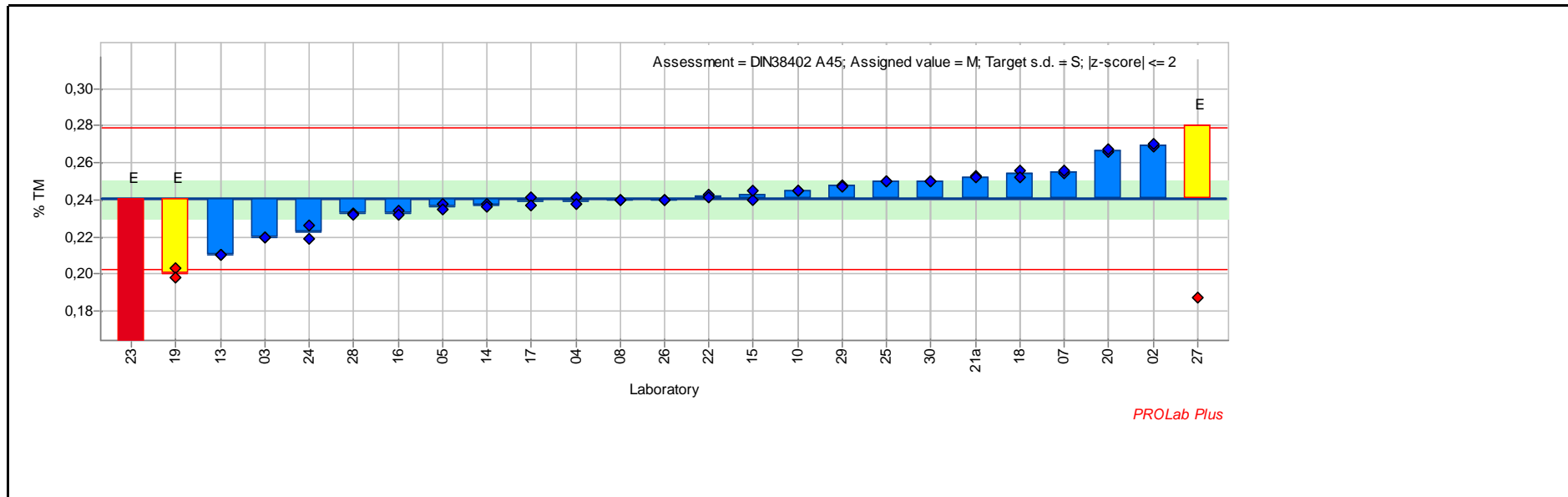


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	37,010	0,127	-0,3	37,100	36,920	no accreditation	XRF (fusion)		
10	37,391	0,069	0,1	37,342	37,440	ISO 17025	XRF (fusion)		
12	36,904	0,260	-0,4	36,720	37,088	ISO 17025	ICP-OES		
13	39,190	0,042	2,3	39,160	39,220	ISO 17025	XRF (fusion)		E
14	37,242	0,074	0,0	37,294	37,190	no accreditation	XRF (fusion)		
15	37,400	0,000	0,2	37,400	37,400	no accreditation	XRF (Pellet) info only		
16	36,233	0,001	-1,3	36,233	36,232	ISO 17025	XRF (fusion)		
17	36,924	0,224	-0,4	36,765	37,082	ISO 17025	XRF (fusion)		
18	37,104	0,037	-0,2	37,130	37,078	no accreditation	XRF (fusion)		
19	29,696	0,453	-9,2	30,016	29,376	ISO 17025	XRF (fusion)		E
20	34,350	0,071	-3,6	34,300	34,400	no accreditation	XRF (Pellet) info only		E
21a	37,038	0,001	-0,3	37,039	37,037	no accreditation	XRF (fusion)		
22	37,484	0,074	0,3	37,537	37,432	no accreditation	XRF (fusion)		
23	39,800	0,000	3,1	39,800	39,800	ISO 17025	XRF (fusion)		E
24	37,283	0,025	0,0	37,301	37,265	no accreditation	XRF (fusion)		
25	36,325	0,021	-1,1	36,340	36,310	no accreditation	XRF (fusion)		
26	37,285	0,035	0,0	37,310	37,260	no accreditation	Standardless info only		
27	36,547	0,003	-0,9	36,545	36,549	no accreditation	XRF (fusion)		
28	35,301	0,066	-2,4	35,254	35,348	no accreditation	XRF (fusion)		E
29	37,706	0,132	0,5	37,613	37,800	no accreditation	XRF (fusion)		
30	38,245	0,106	1,2	38,320	38,170	no accreditation	XRF (fusion)		
31	36,220	0,000	-1,3	36,220	36,220	no accreditation	other	Wet Analysys	

RV123

**Sample:** FLX-CRM 127      **Reprod. s.d.:** 0,019 % TM  
**Measurand:** TiO2      **Repeat. s.d.:** 0,002 % TM  
**Mean ± U(Mean):** 0,241 ± 0,010 % TM      **Range of tolerance:** 0,202 - 0,279 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 22      **Sample:** DIN 38402 A45  
**Assigned value:** 0,241 % TM (Empirical value)      **Target s.d.:** 0,019 % TM (Empirical value)



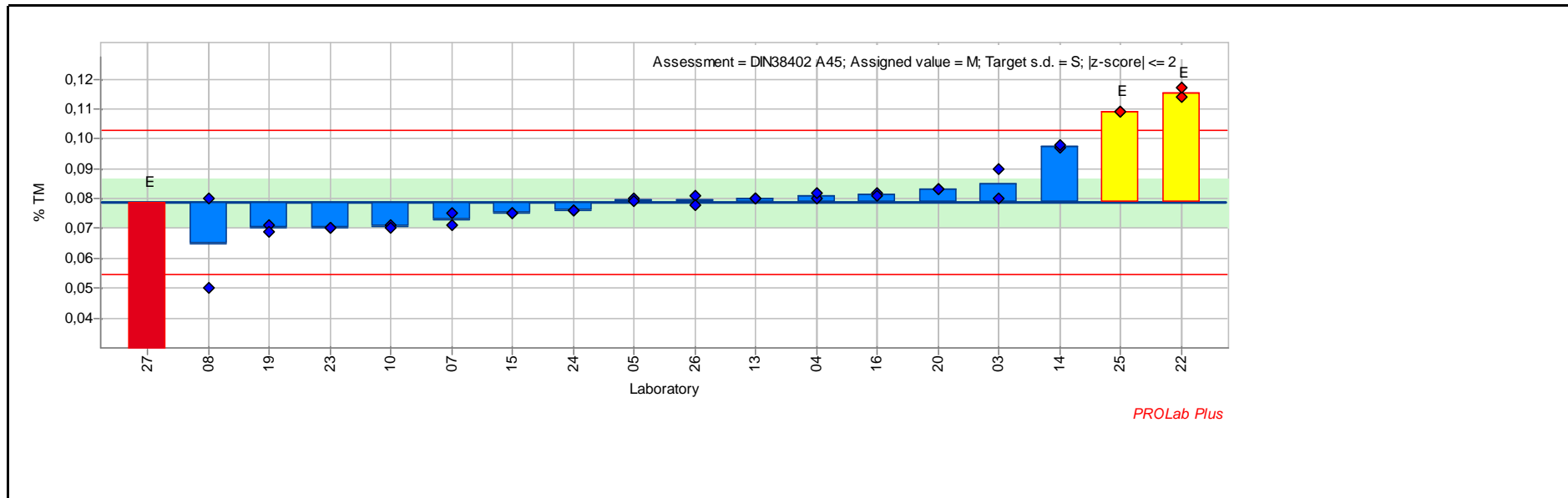
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
02	0,270	0,001	1,5	0,269	0,270	no accreditation	XRF (fusion)		
03	0,220	0,000	-1,1	0,220	0,220	no accreditation	XRF (fusion)		
04	0,239	0,002	-0,1	0,241	0,238	no accreditation	XRF (fusion)		
05	0,236	0,002	-0,2	0,238	0,235	ISO 17025	XRF (fusion)		
07	0,255	0,001	0,8	0,254	0,256	ISO 17025	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
08	0,240	0,000	0,0	0,240	0,240	no accreditation	XRF (fusion)		
10	0,245	0,000	0,2	0,245	0,245	ISO 17025	XRF (fusion)		
13	0,210	0,000	-1,6	0,210	0,210	ISO 17025	XRF (fusion)		
14	0,237	0,001	-0,2	0,238	0,236	no accreditation	XRF (fusion)		
15	0,242	0,004	0,1	0,240	0,245	no accreditation	XRF (Pellet) info only		
16	0,233	0,001	-0,4	0,234	0,232	ISO 17025	XRF (fusion)		
17	0,239	0,003	-0,1	0,241	0,237	ISO 17025	XRF (fusion)		
18	0,254	0,003	0,7	0,256	0,252	no accreditation	XRF (fusion)		
19	0,201	0,004	-2,1	0,203	0,198	ISO 17025	XRF (fusion)		E
20	0,267	0,001	1,4	0,266	0,267	no accreditation	XRF (Pellet) info only		
21a	0,253	0,001	0,6	0,253	0,252	no accreditation	XRF (fusion)		
22	0,242	0,001	0,1	0,243	0,241	no accreditation	XRF (fusion)		
23	0,160	0,000	-4,2	0,160	0,160	ISO 17025	XRF (fusion)		E
24	0,223	0,005	-0,9	0,226	0,219	no accreditation	XRF (fusion)		
25	0,250	0,000	0,5	0,250	0,250	no accreditation	XRF (fusion)		
26	0,240	0,000	0,0	0,240	0,240	no accreditation	Standardless info only		
27	0,280	0,132	2,1	0,187	0,374	no accreditation	XRF (fusion)		E
28	0,233	0,001	-0,4	0,233	0,232	no accreditation	XRF (fusion)		
29	0,247	0,001	0,4	0,248	0,247	no accreditation	XRF (fusion)		
30	0,250	0,000	0,5	0,250	0,250	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 127                      **Reprod. s.d.:** 0,012 % TM  
**Measurand:** ZnO                              **Repeat. s.d.:** 0,002 % TM  
**Mean ± U(Mean):** 0,079 ± 0,008 % TM                      **Range of tolerance:** 0,054 - 0,103 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 14                      **Sample:** DIN 38402 A45  
**Assigned value:** 0,079 % TM (Empirical value)                      **Target s.d.:** 0,012 % TM (Empirical value)



PROLab Plus

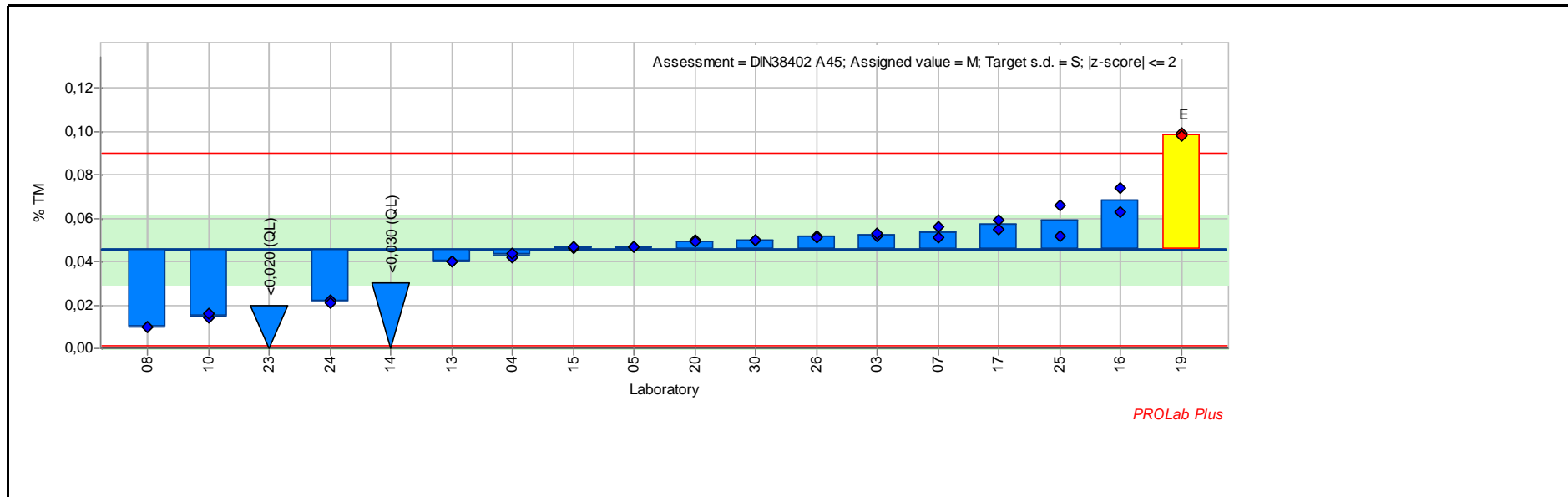
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,085	0,007	0,5	0,080	0,090	no accreditation	XRF (fusion)		
04	0,081	0,001	0,2	0,080	0,082	no accreditation	XRF (fusion)		
05	0,080	0,001	0,1	0,080	0,079	ISO 17025	ICP-OES		
07	0,073	0,003	-0,5	0,071	0,075	ISO 17025	ICP-OES		
08	0,065	0,021	-1,1	0,050	0,080	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,071	0,001	-0,7	0,071	0,070	ISO 17025	XRF (fusion)		
13	0,080	0,000	0,1	0,080	0,080	ISO 17025	XRF (fusion)		
14	0,098	0,001	1,5	0,097	0,098	no accreditation	XRF (fusion)		
15	0,075	0,000	-0,3	0,075	0,075	no accreditation	XRF (Pellet) info only		
16	0,082	0,001	0,2	0,082	0,081	ISO 17025	XRF (fusion)		
19	0,070	0,001	-0,7	0,071	0,069	ISO 17025	XRF (fusion)		
20	0,083	0,000	0,4	0,083	0,083	no accreditation	XRF (Pellet) info only		
22	0,116	0,002	3,0	0,114	0,117	no accreditation	XRF (fusion)		E
23	0,070	0,000	-0,7	0,070	0,070	no accreditation	ICP-OES		
24	0,076	0,000	-0,2	0,076	0,076	no accreditation	XRF (fusion)		
25	0,109	0,000	2,5	0,109	0,109	no accreditation	Standardless info only	Uniquant	E
26	0,080	0,002	0,1	0,081	0,078	no accreditation	Standardless info only		
27	0,026	0,000	-4,3	0,026	0,026	no accreditation	XRF (fusion)		E

RV123

**Sample:** FLX-CRM 127      **Reprod. s.d.:** 0,022 % TM  
**Measurand:** ZrO2      **Repeat. s.d.:** 0,002 % TM  
**Mean ± U(Mean):** 0,045 ± 0,016 % TM      **Range of tolerance:** 0,001 - 0,090 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 12      **Sample:** DIN 38402 A45  
**Assigned value:** 0,045 % TM (Empirical value)      **Target s.d.:** 0,022 % TM (Empirical value)



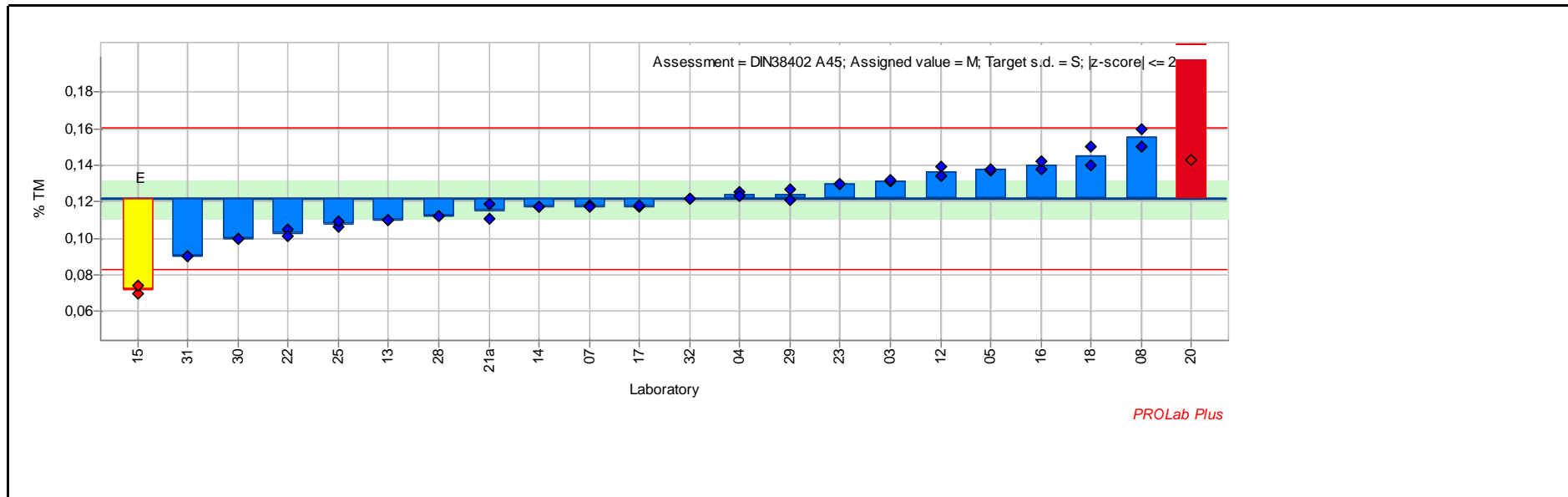
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,052	0,001	0,3	0,052	0,053	no accreditation	Standardless info only		
04	0,043	0,001	-0,1	0,042	0,044	no accreditation	XRF (fusion)		
05	0,047	0,000	0,1	0,047	0,047	ISO 17025	ICP-OES		
07	0,053	0,004	0,4	0,051	0,056	ISO 17025	ICP-OES		
08	0,010	0,000	-1,6	0,010	0,010	no accreditation	XRF (fusion)		

## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
10	0,015	0,001	-1,4	0,014	0,016	ISO 17025	XRF (fusion)		
13	0,040	0,000	-0,2	0,040	0,040	ISO 17025	XRF (fusion)		
14				<0,030	<0,030	no accreditation	XRF (fusion)		
15	0,046	0,001	0,0	0,046	0,047	no accreditation	XRF (Pellet) info only		
16	0,069	0,008	1,0	0,063	0,074	ISO 17025	XRF (fusion)		
17	0,057	0,003	0,5	0,059	0,055	ISO 17025	XRF (fusion)		
19	0,099	0,001	2,4	0,099	0,098	ISO 17025	XRF (fusion)		E
20	0,050	0,001	0,2	0,050	0,049	no accreditation	XRF (Pellet) info only		
23				<0,020	<0,020	no accreditation	ICP-OES		
24	0,021	0,001	-1,1	0,022	0,021	no accreditation	XRF (fusion)		
25	0,059	0,010	0,6	0,052	0,066	no accreditation	XRF (fusion)		
26	0,051	0,001	0,3	0,052	0,051	no accreditation	Standardless info only		
30	0,050	0,000	0,2	0,050	0,050	no accreditation	XRF (fusion)		

RV123

**Sample:** FLX-CRM 127      **Reprod. s.d.:** 0,019 % TM  
**Measurand:** Ctotal      **Repeat. s.d.:** 0,003 % TM  
**Mean ± U(Mean):** 0,122 ± 0,011 % TM      **Range of tolerance:** 0,083 - 0,160 % TM (|z-score| <= 2,0)  
**No. of laboratories:** 21      **Sample:** DIN 38402 A45  
**Assigned value:** 0,122 % TM (Empirical value)      **Target s.d.:** 0,019 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	0,132	0,001	0,5	0,131	0,132	no accreditation	combustion		
04	0,124	0,001	0,1	0,125	0,123	no accreditation	combustion		
05	0,138	0,001	0,8	0,137	0,138	ISO 17025	combustion		
07	0,117	0,001	-0,2	0,118	0,117	ISO 17025	combustion		
08	0,155	0,007	1,7	0,160	0,150	no accreditation	combustion		

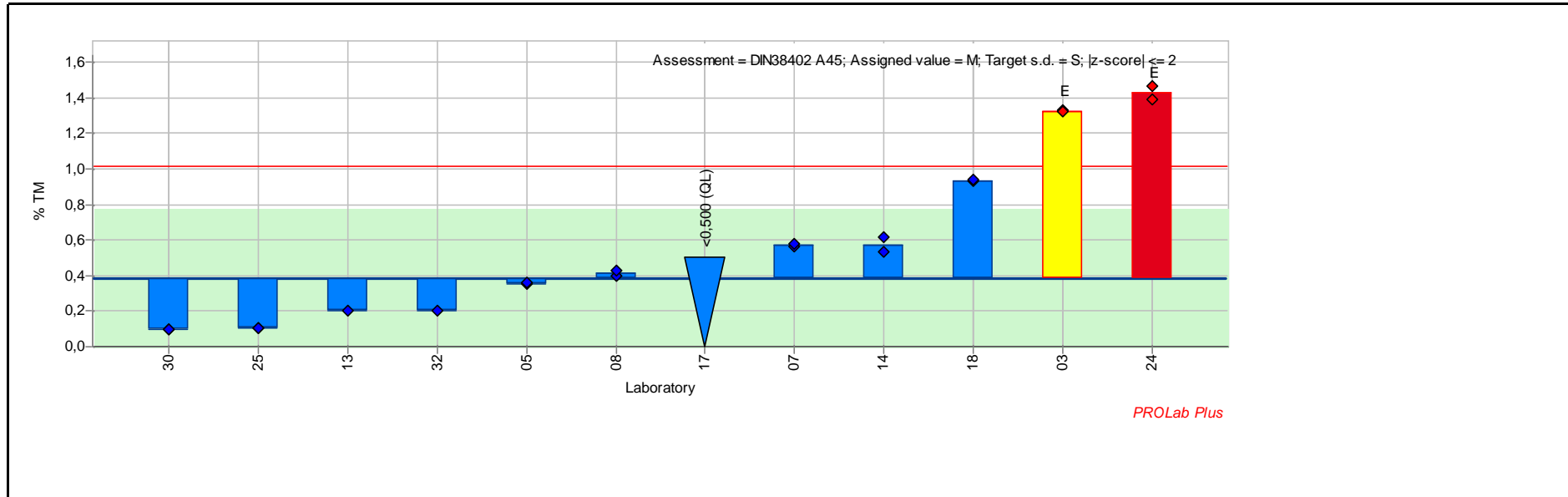


## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
12	0,137	0,004	0,8	0,139	0,134	ISO 17025	combustion		
13	0,110	0,000	-0,6	0,110	0,110	ISO 17025	combustion		
14	0,117	0,000	-0,2	0,117	0,117	no accreditation	combustion		
15	0,072	0,003	-2,6	0,070	0,074	no accreditation	combustion		E
16	0,140	0,003	0,9	0,138	0,142	ISO 17025	combustion		
17	0,117	0,001	-0,2	0,117	0,118	ISO 17025	combustion		
18	0,145	0,007	1,2	0,150	0,140	no accreditation	combustion		
20	0,801	0,931	35,0	1,460	0,143	no accreditation	combustion	DIN EN 13137	E
21a	0,115	0,006	-0,3	0,119	0,111	no accreditation	combustion		
22	0,103	0,003	-1,0	0,105	0,101	no accreditation	combustion		
23	0,130	0,000	0,4	0,130	0,130	ISO 17025	combustion		
25	0,107	0,002	-0,7	0,106	0,109	no accreditation	combustion		
28	0,112	0,000	-0,5	0,112	0,112	no accreditation	combustion		
29	0,124	0,004	0,1	0,127	0,121	no accreditation	combustion		
30	0,100	0,000	-1,1	0,100	0,100	no accreditation	combustion		
31	0,090	0,000	-1,6	0,090	0,090	no accreditation	other	Wet Analysys	
32	0,122	0,000	0,0	0,122	0,122	no accreditation	combustion		

RV123

**Sample:** FLX-CRM 127      **Reprod. s.d.:** 0,313 % TM  
**Measurand:** CO2      **Repeat. s.d.:** 0,031 % TM  
**Mean ± U(Mean):** 0,386 ± 0,391 % TM      **Range of tolerance:** -0,240 - 1,012 % TM (|z-score| ≤ 2,0)  
**No. of laboratories:** 4      **Sample:** DIN 38402 A45  
**Assigned value:** 0,386 % TM (Empirical value)      **Target s.d.:** 0,313 % TM (Empirical value)



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
03	1,325	0,007	3,0	1,330	1,320	no accreditation	other	inert gas	E
05	0,355	0,004	-0,1	0,353	0,358	ISO 17025	combustion	acid	
07	0,571	0,006	0,6	0,567	0,576	ISO 17025	combustion		
08	0,415	0,021	0,1	0,400	0,430	no accreditation	combustion	acid	
13	0,200		-0,6	0,200		ISO 17025	combustion	acid	

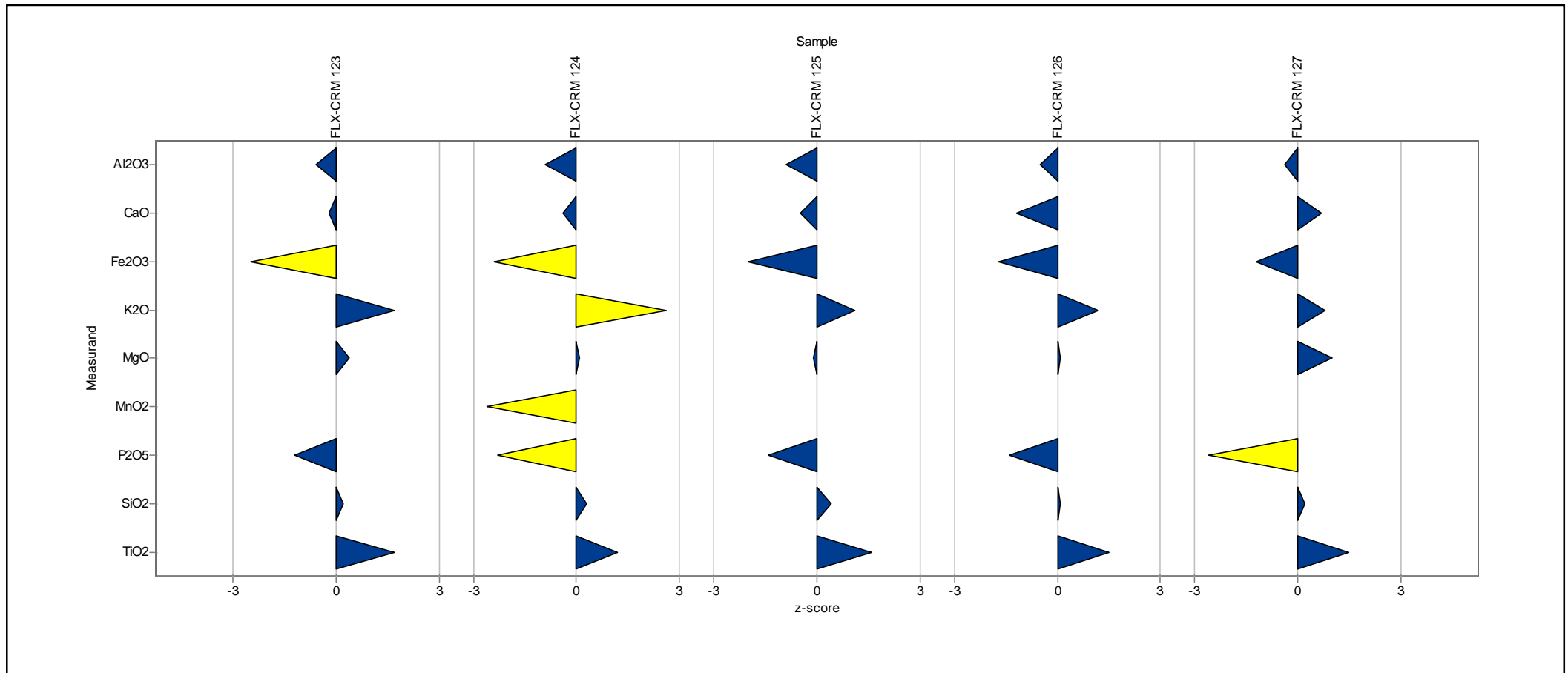
## RV123

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment	Outlier
14	0,574	0,055	0,6	0,535	0,613	no accreditation	combustion	acid	
17				<0,500	<0,500	no accreditation	combustion	Leco RC 612	
18	0,935	0,007	1,8	0,930	0,940	no accreditation	other	loss of weight	
24	1,429	0,052	3,3	1,393	1,466	no accreditation	combustion	LOI in a muffel	E
25	0,108	0,000	-0,9	0,108	0,108	no accreditation	combustion		
30	0,100	0,000	-0,9	0,100	0,100	no accreditation	combustion		
32	0,204		-0,6	0,204		no accreditation	combustion		

RV123

## Laboratory chart of z-scores

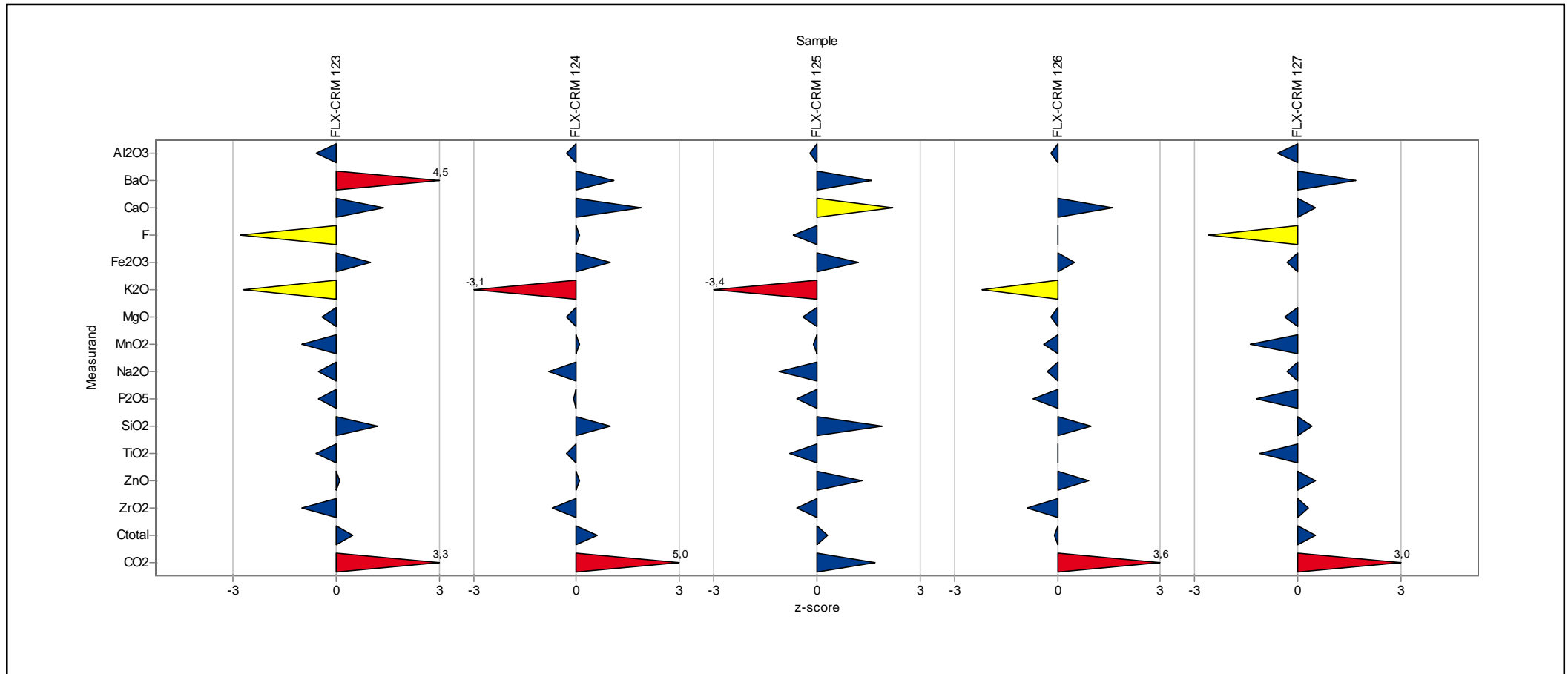
Laboratory: 02



RV123

# Laboratory chart of z-scores

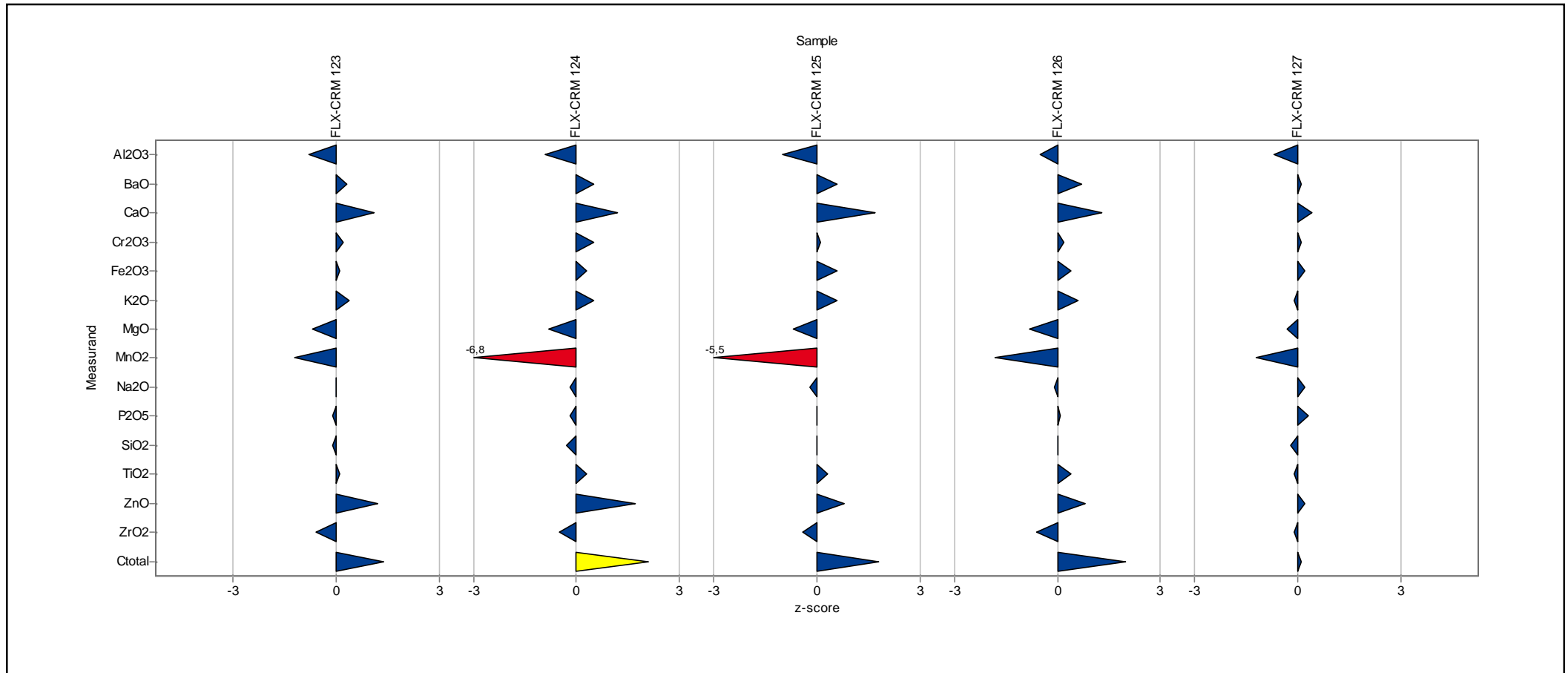
Laboratory: 03



RV123

## Laboratory chart of z-scores

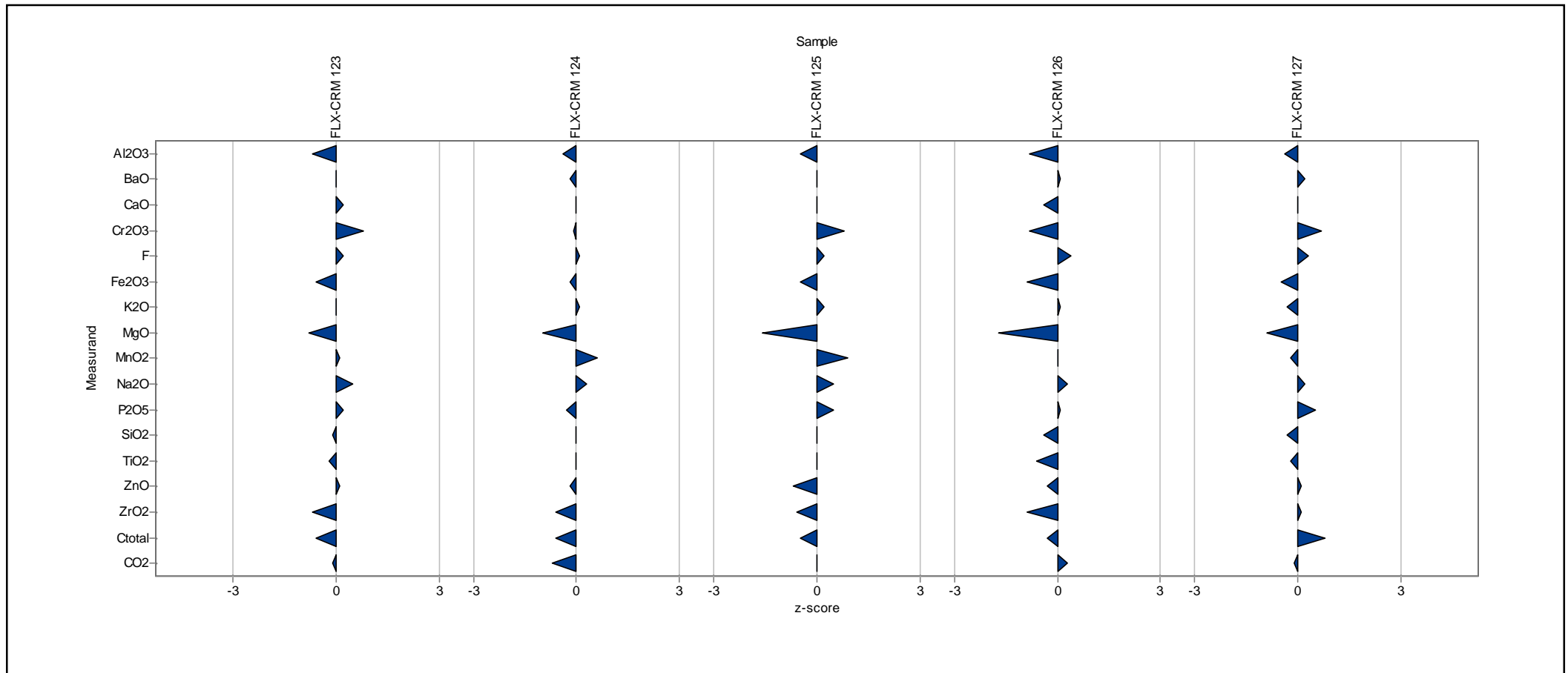
Laboratory: 04



RV123

## Laboratory chart of z-scores

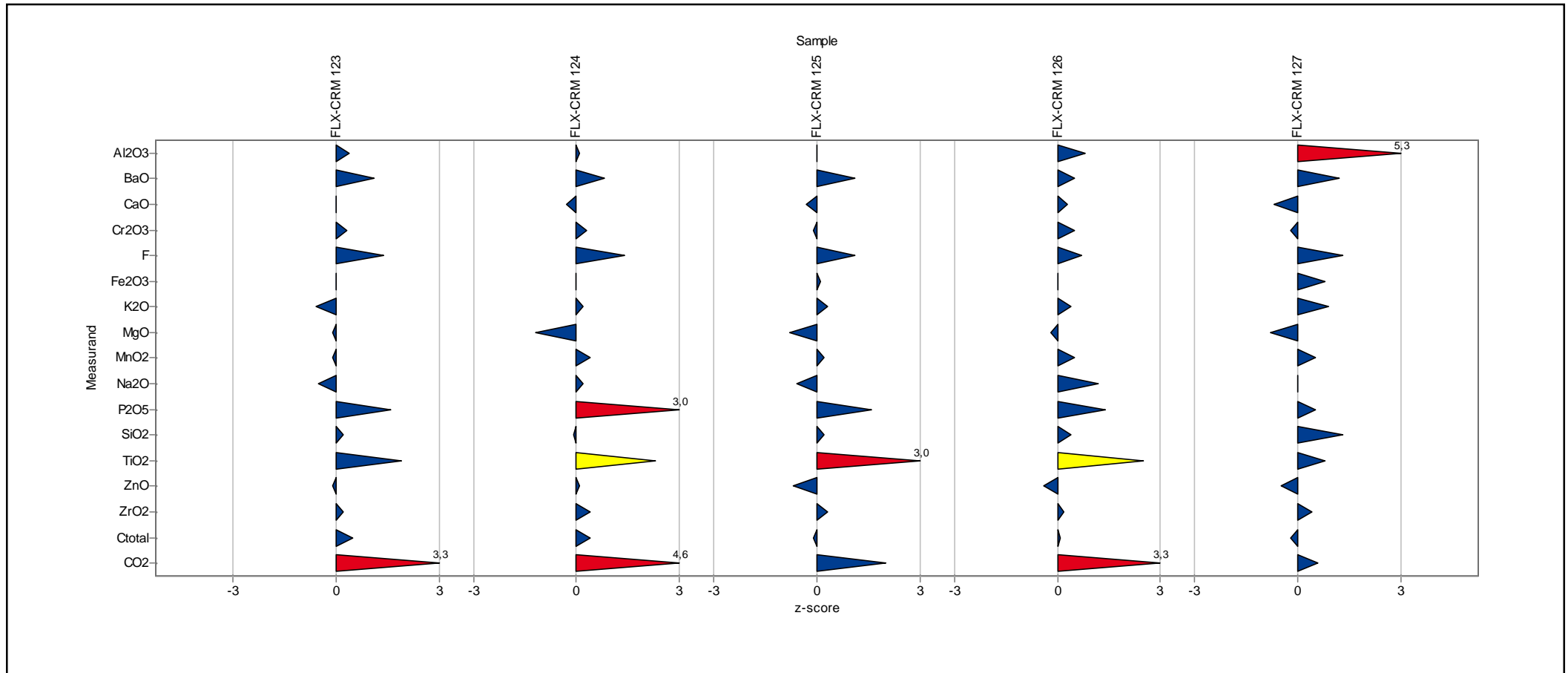
Laboratory: 05



RV123

## Laboratory chart of z-scores

Laboratory: 07

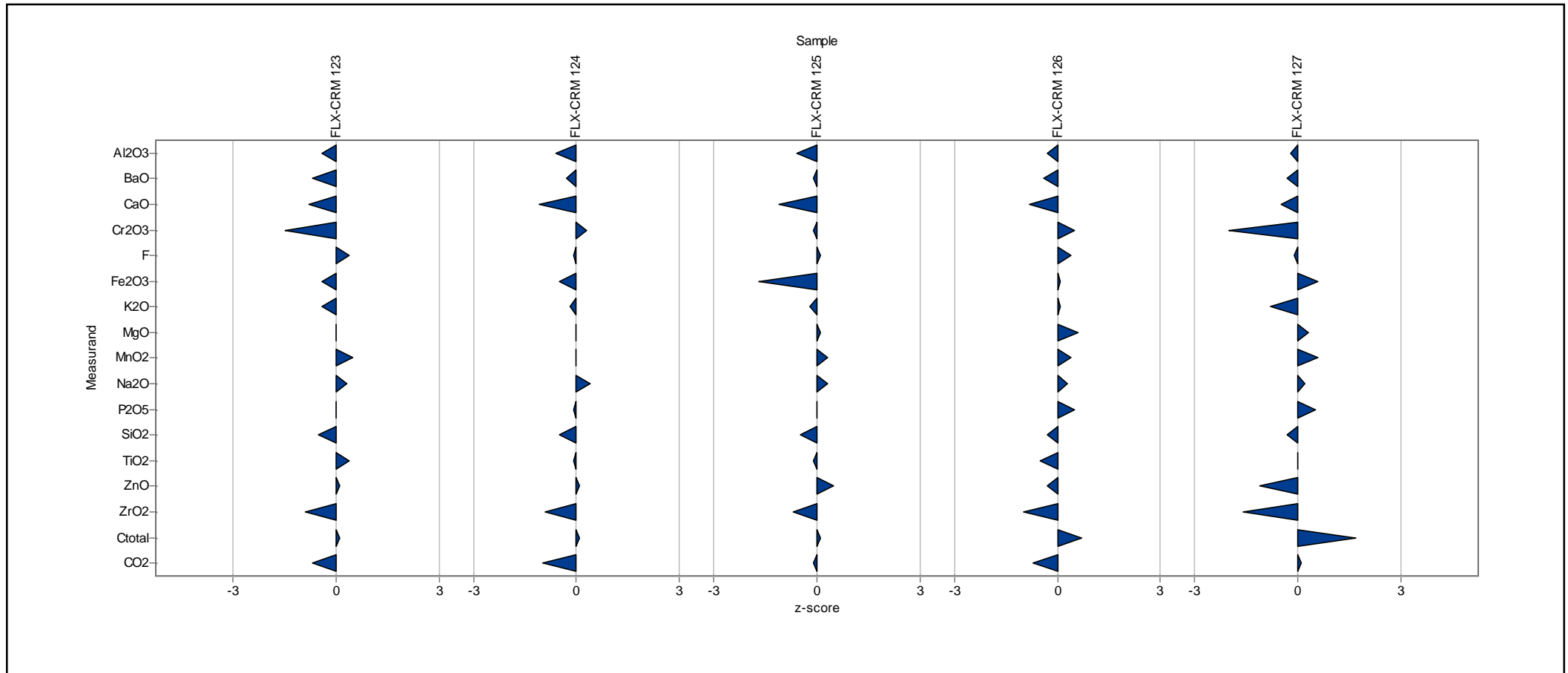




RV123

## Laboratory chart of z-scores

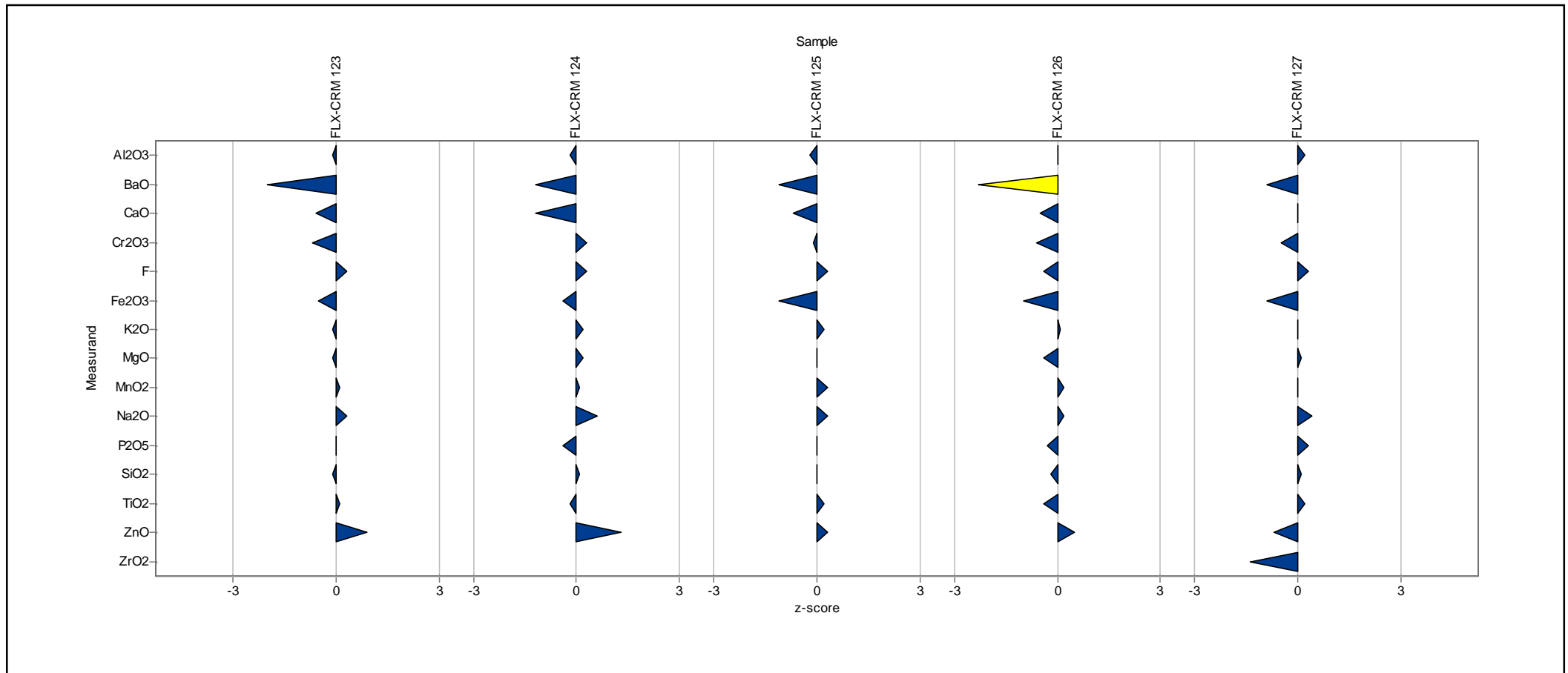
Laboratory: 08



RV123

## Laboratory chart of z-scores

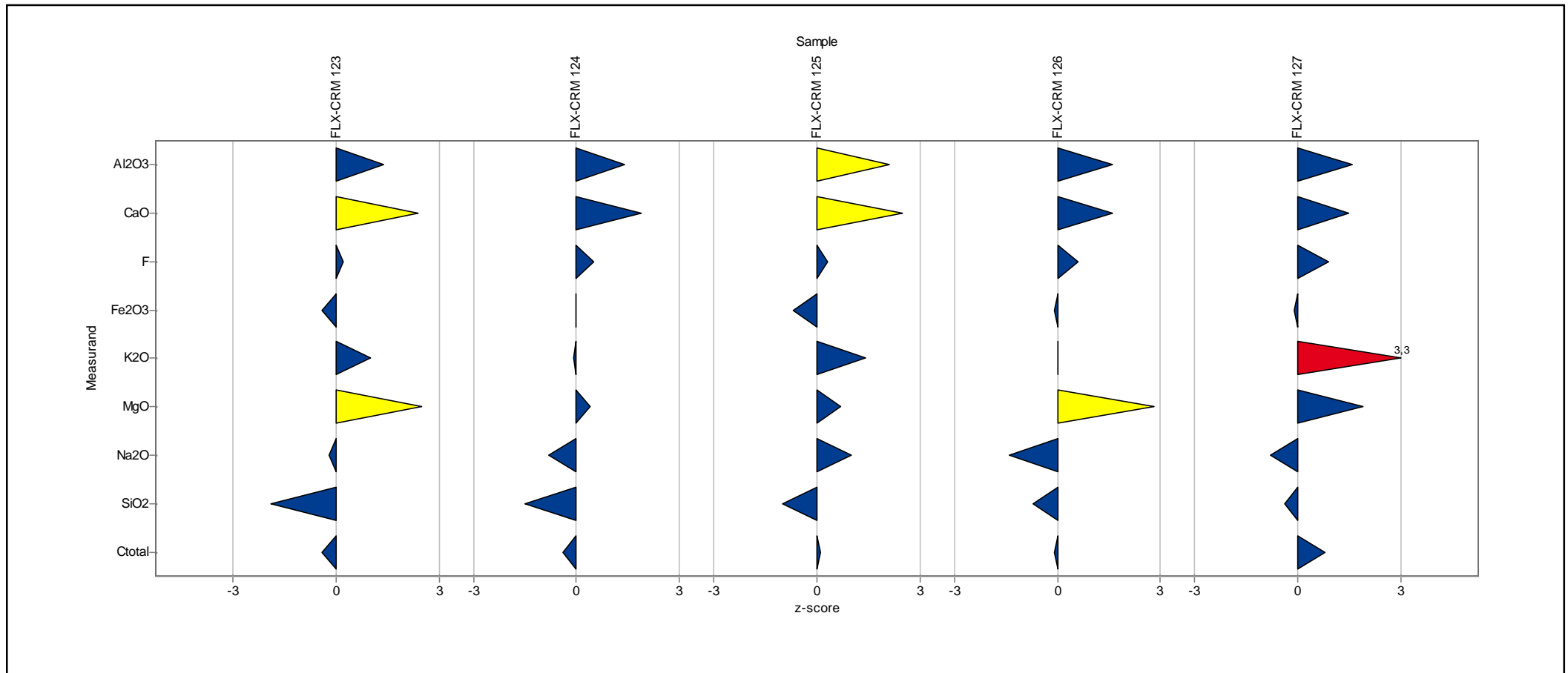
Laboratory: 10



RV123

## Laboratory chart of z-scores

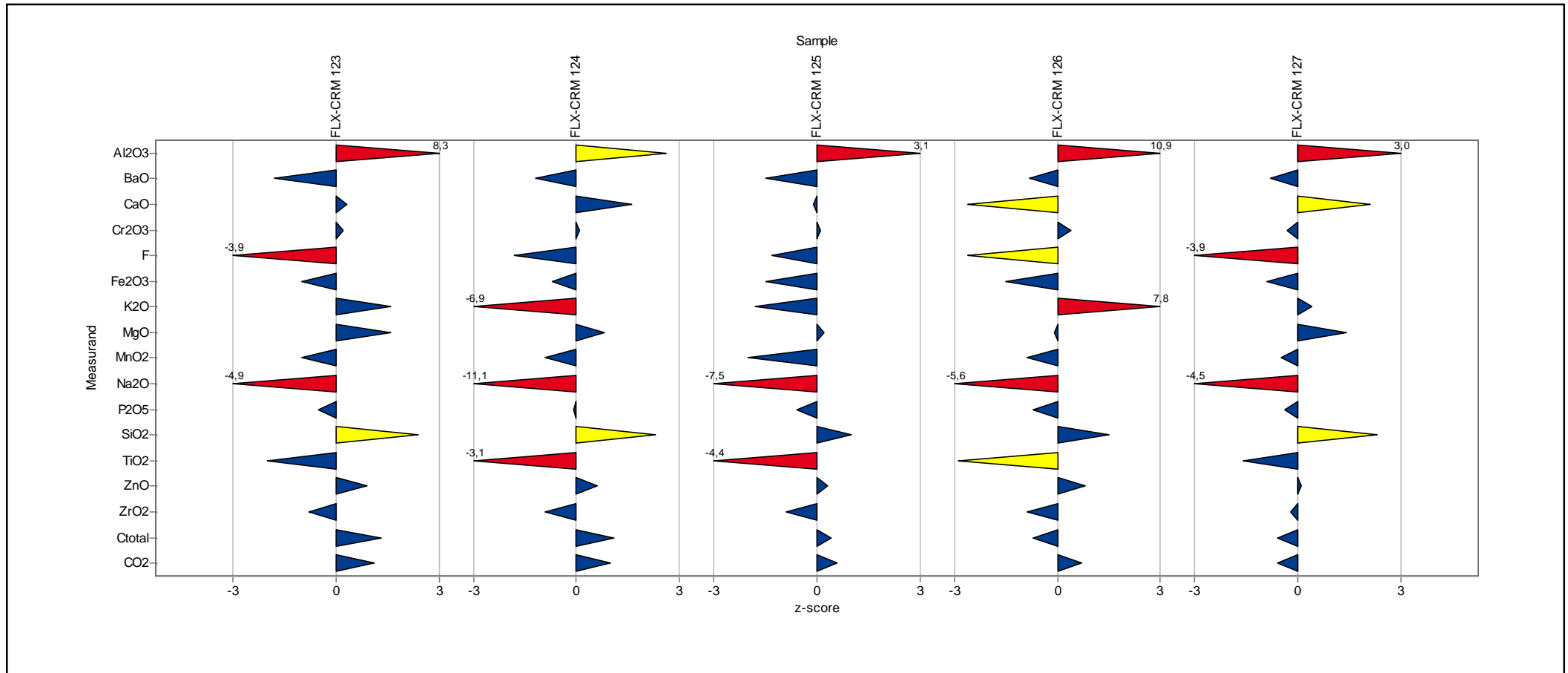
Laboratory: 12



RV123

# Laboratory chart of z-scores

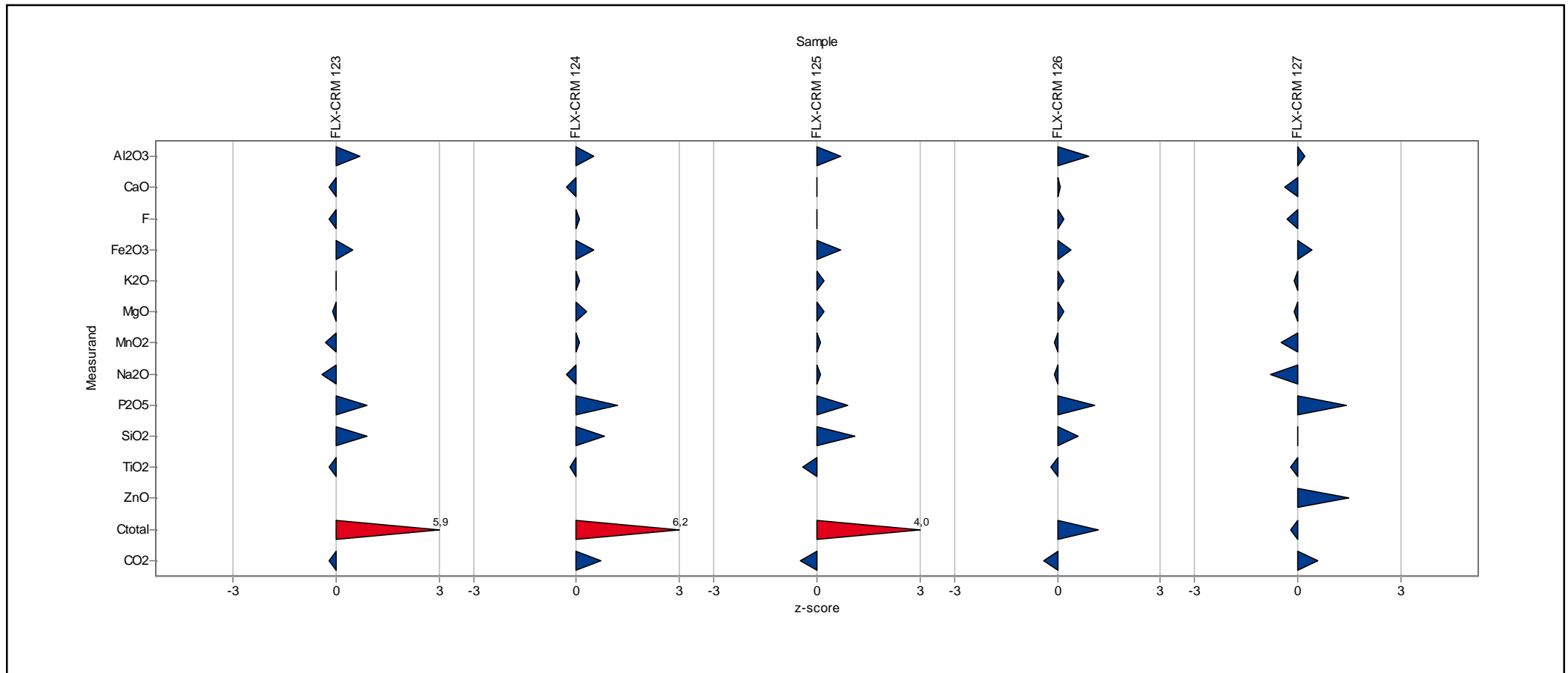
Laboratory: 13



RV123

## Laboratory chart of z-scores

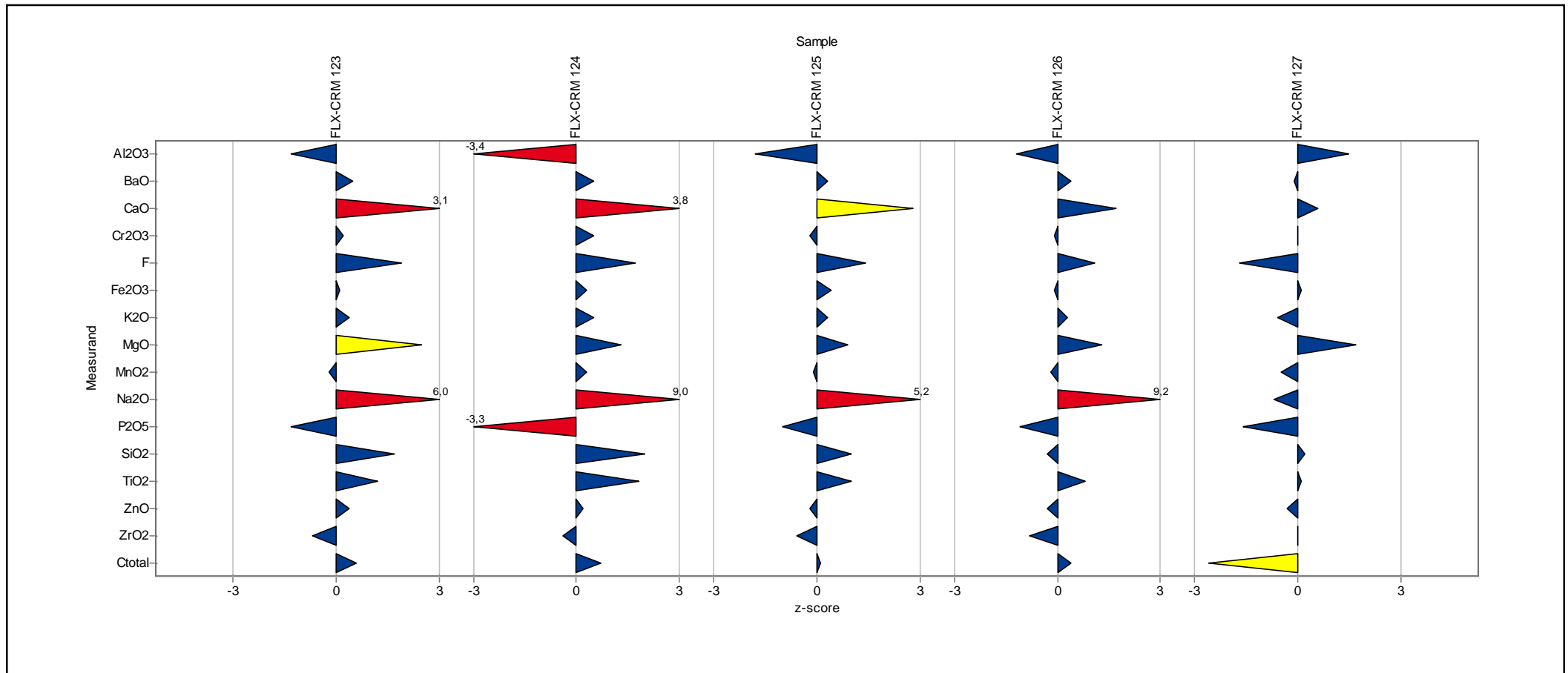
Laboratory: 14



RV123

## Laboratory chart of z-scores

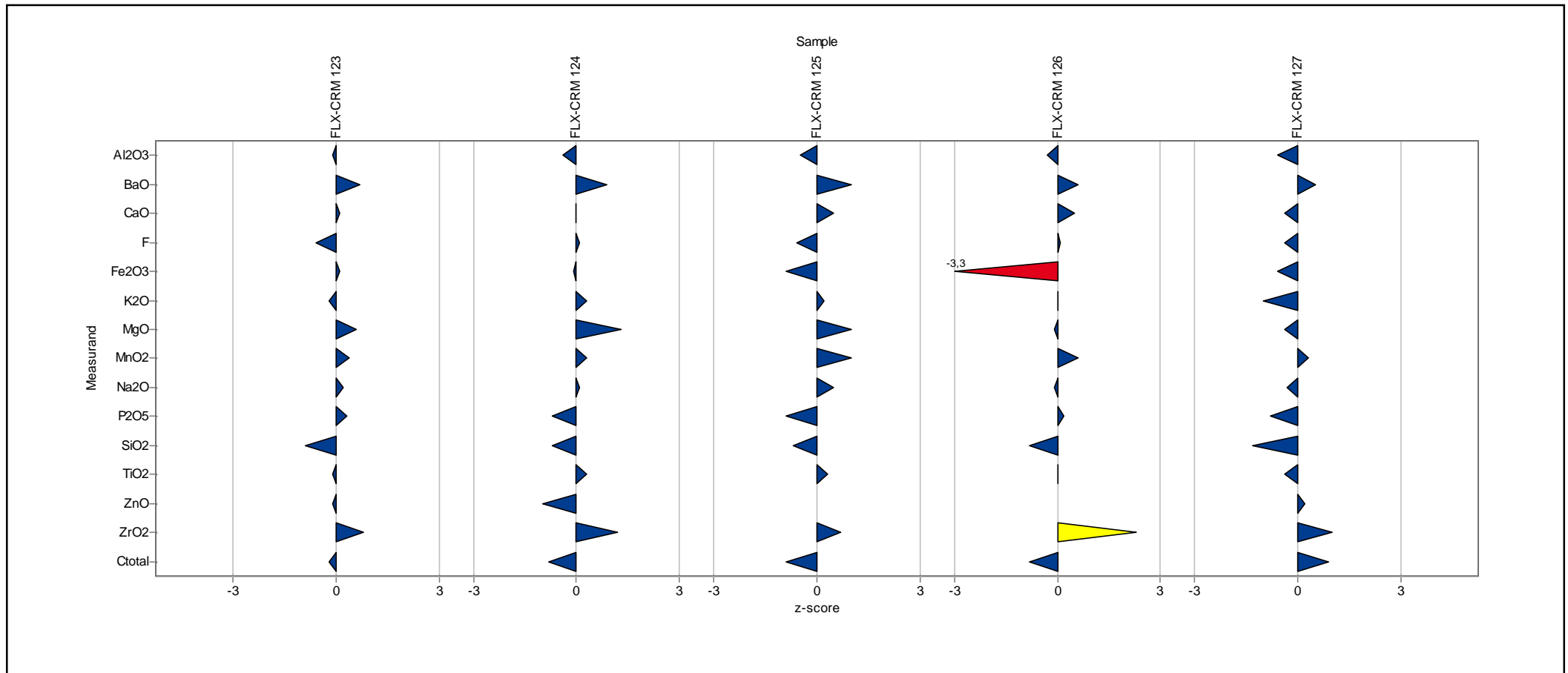
Laboratory: 15



RV123

## Laboratory chart of z-scores

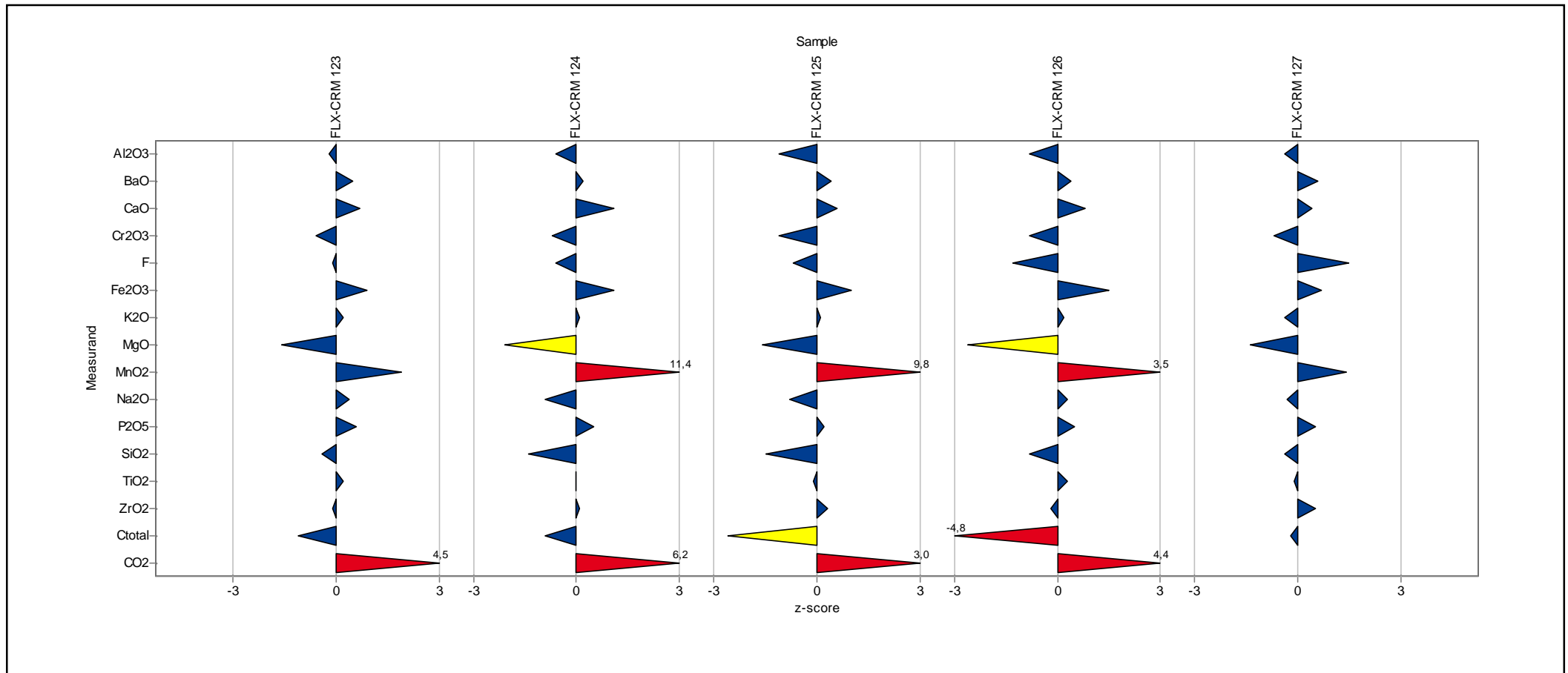
Laboratory: 16



RV123

# Laboratory chart of z-scores

Laboratory: 17

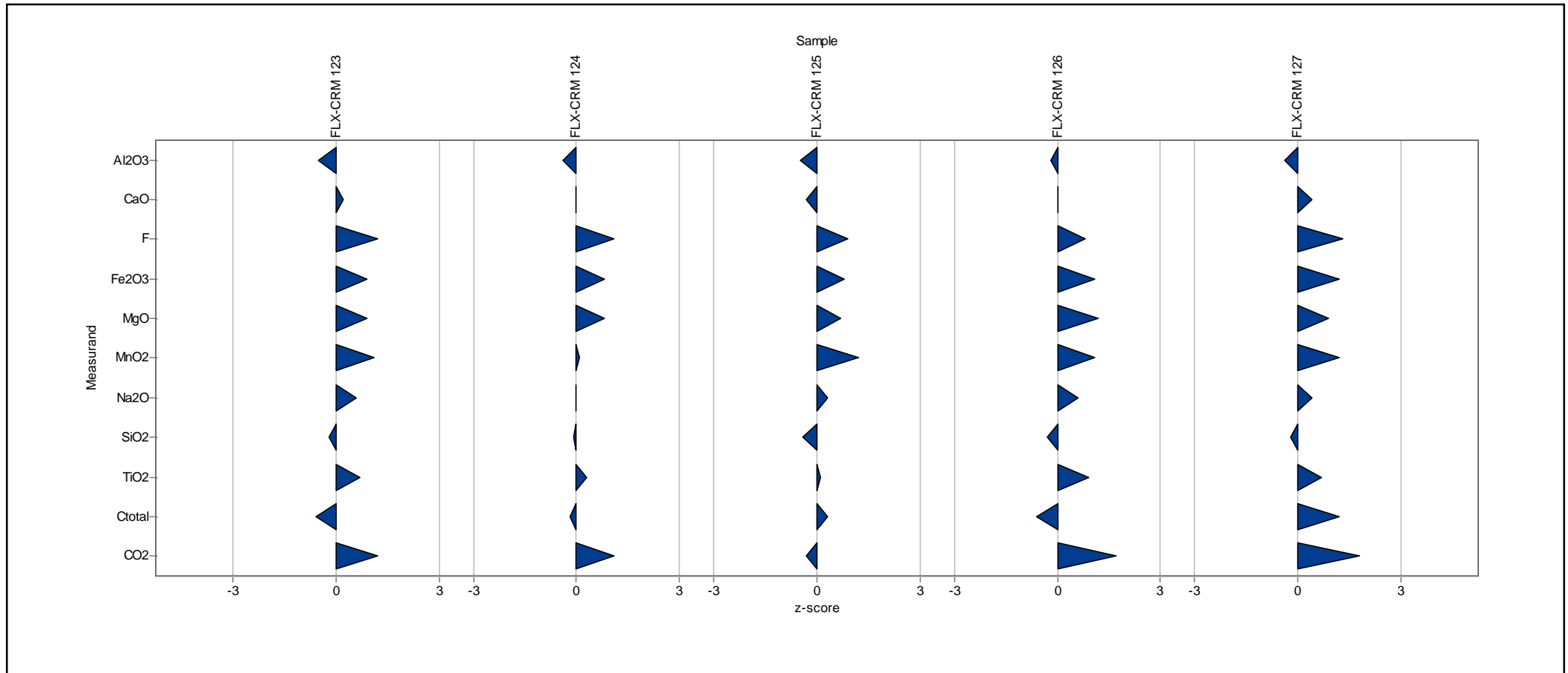




RV123

## Laboratory chart of z-scores

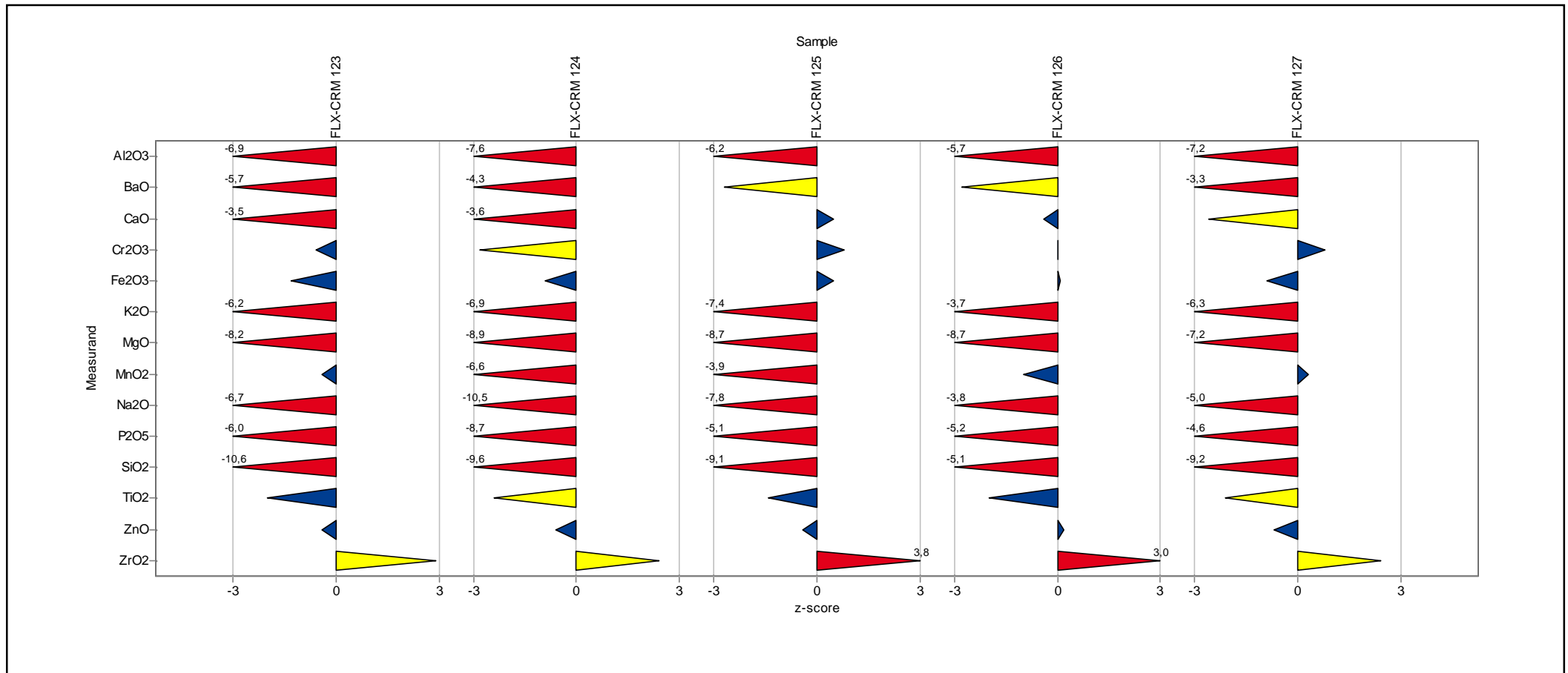
Laboratory: 18



RV123

# Laboratory chart of z-scores

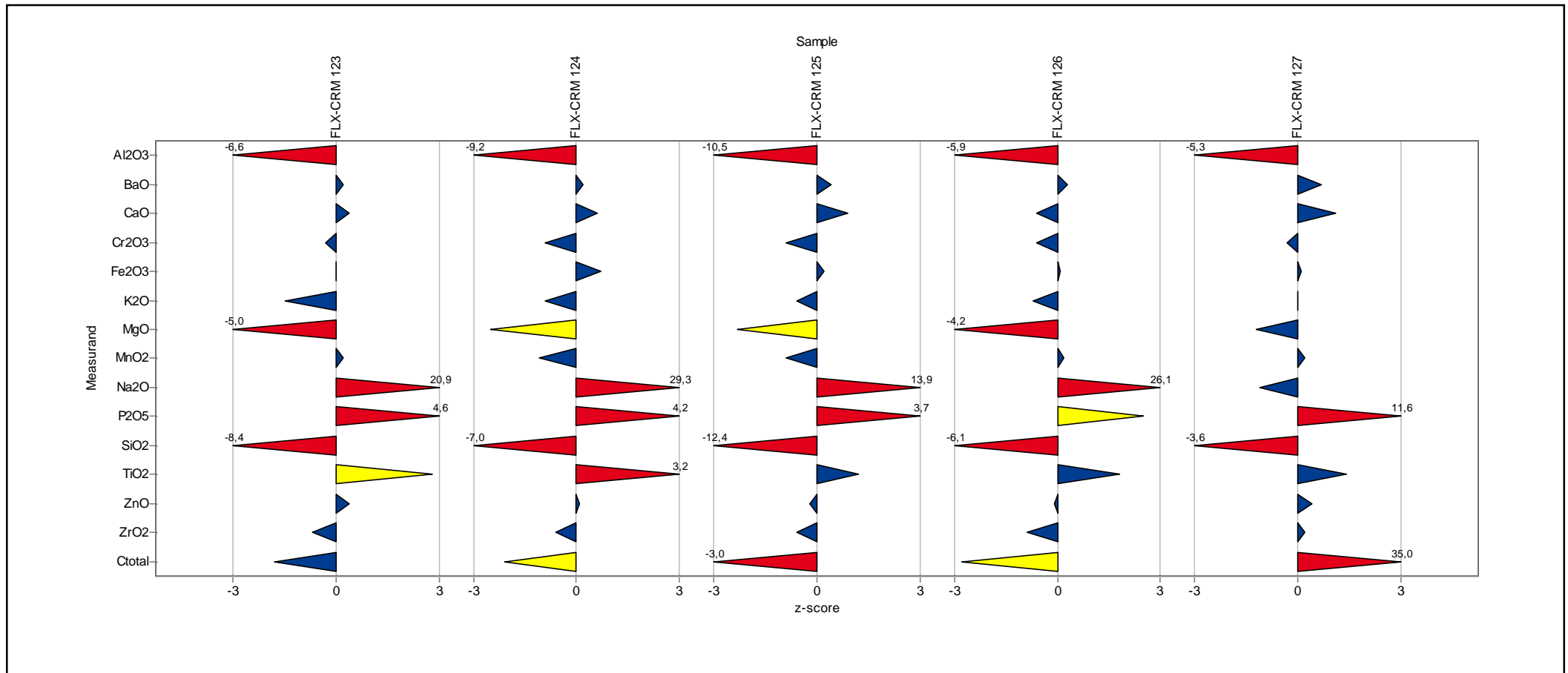
Laboratory: 19



RV123

# Laboratory chart of z-scores

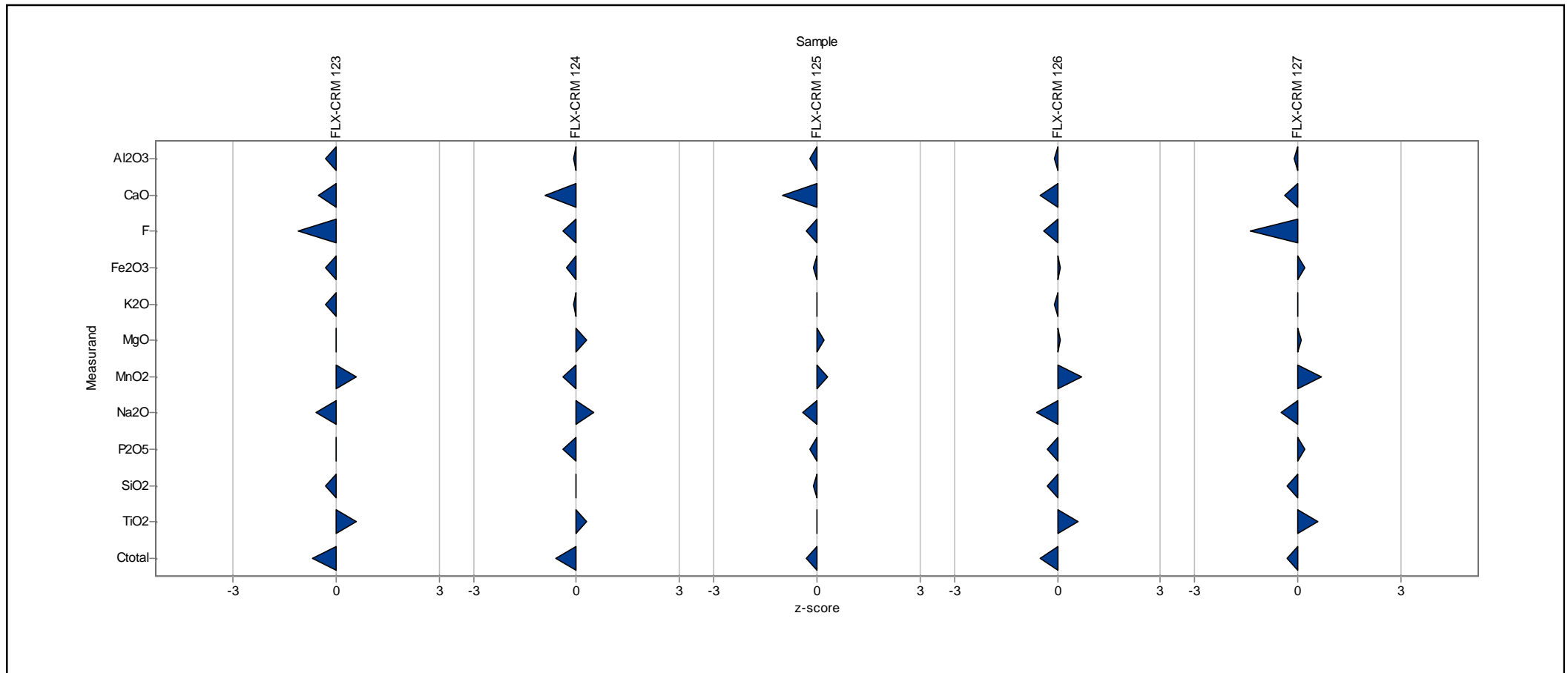
Laboratory: 20



RV123

## Laboratory chart of z-scores

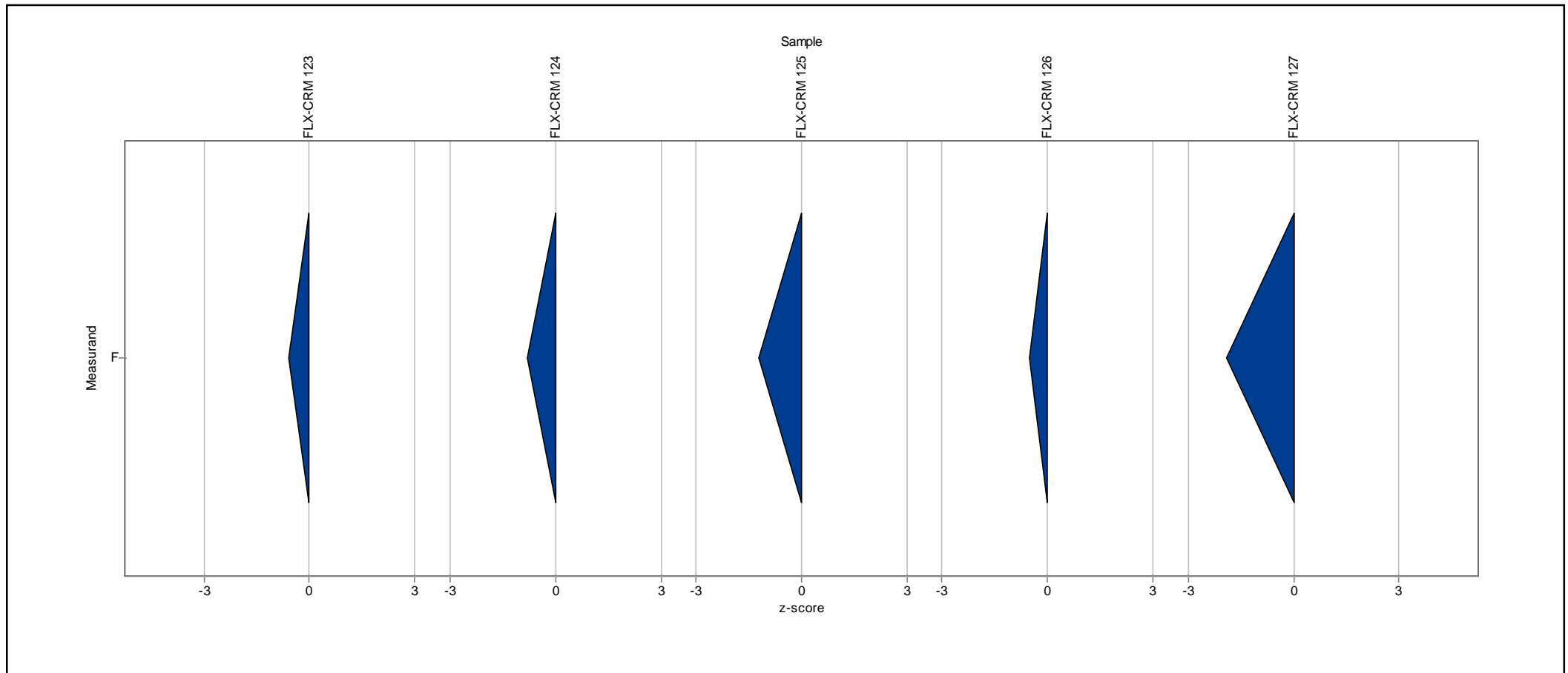
Laboratory: 21a



RV123

## Laboratory chart of z-scores

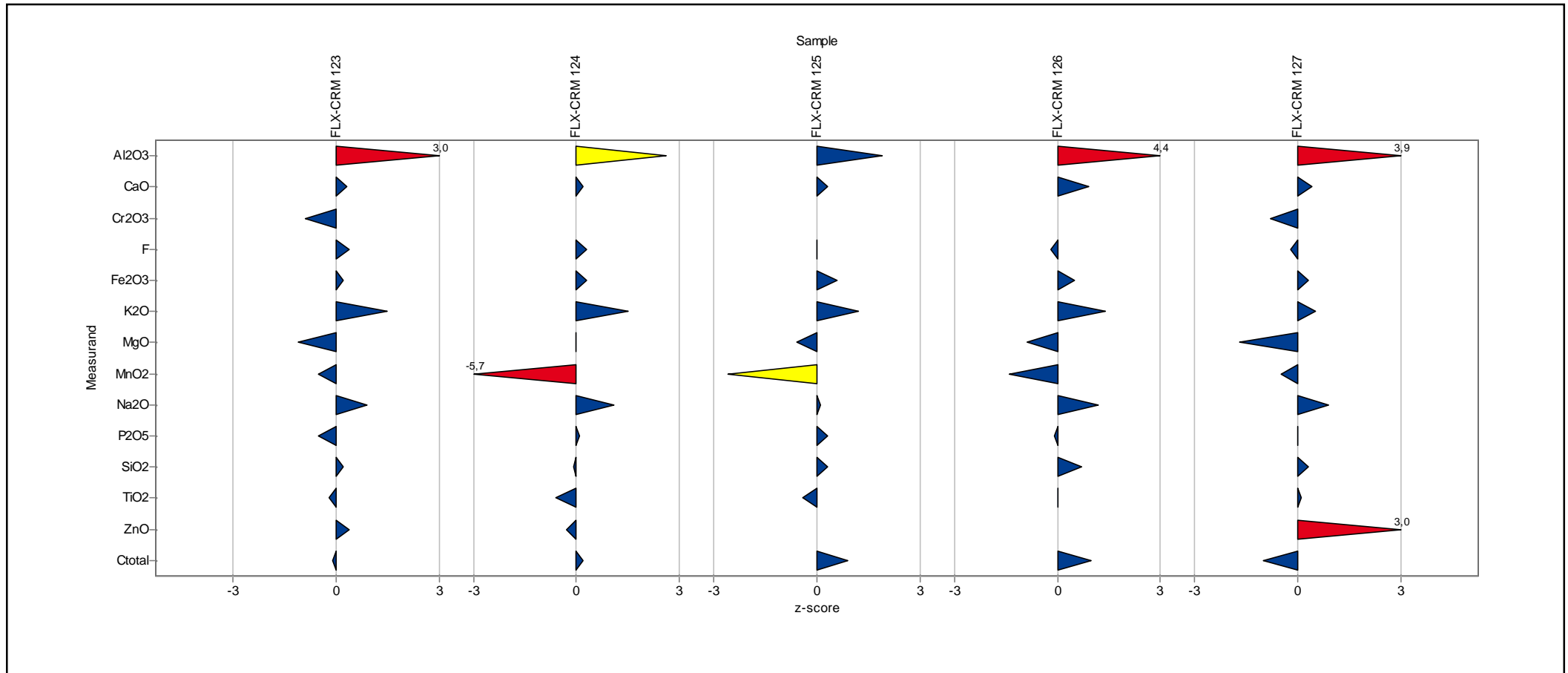
Laboratory: 21b



RV123

## Laboratory chart of z-scores

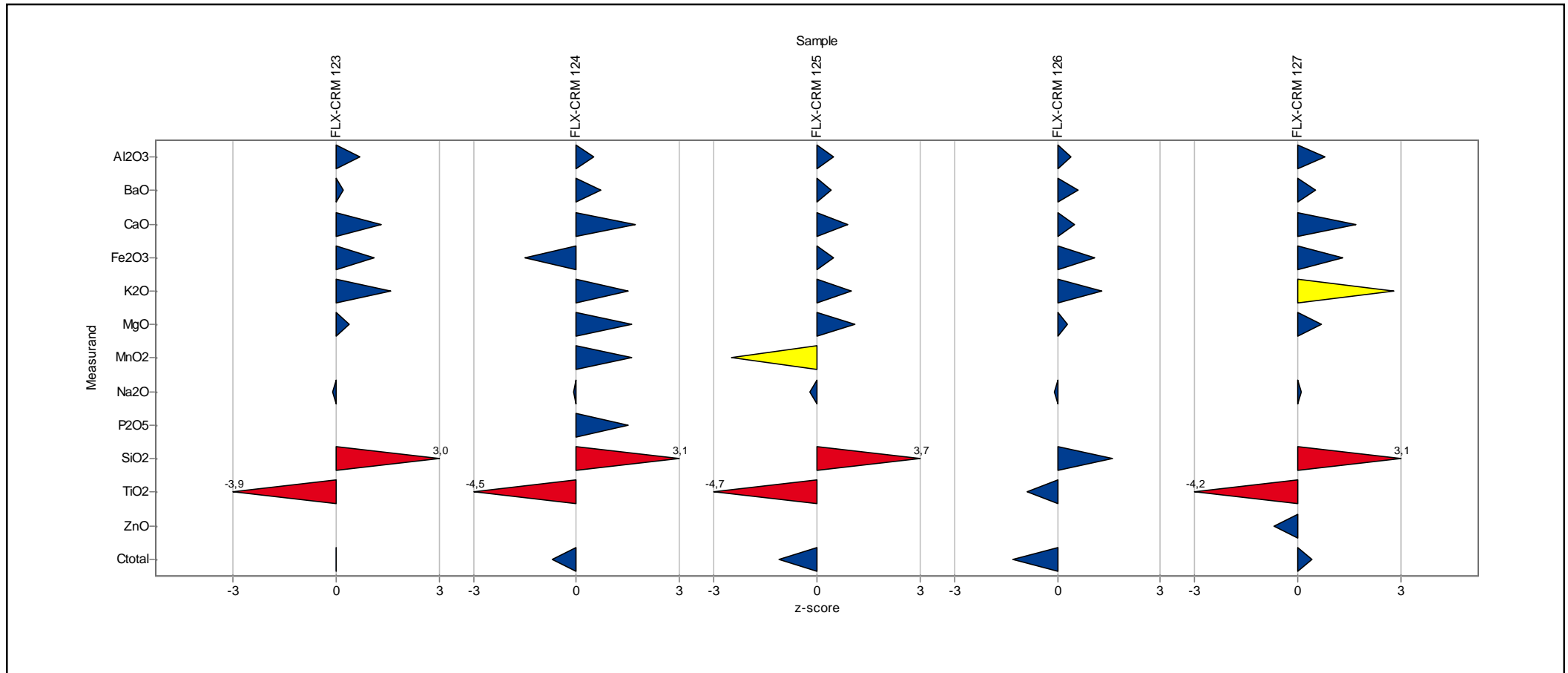
Laboratory: 22



RV123

# Laboratory chart of z-scores

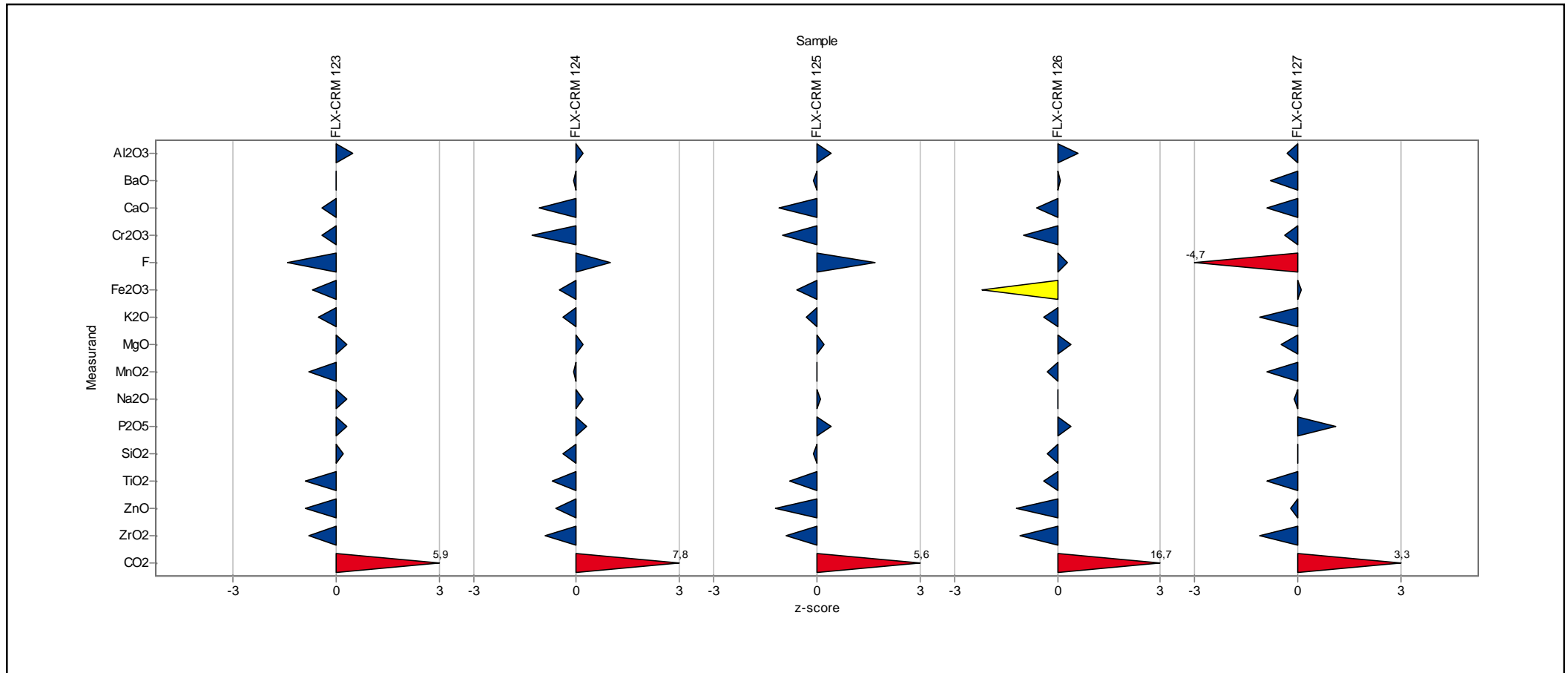
Laboratory: 23



RV123

## Laboratory chart of z-scores

Laboratory: 24

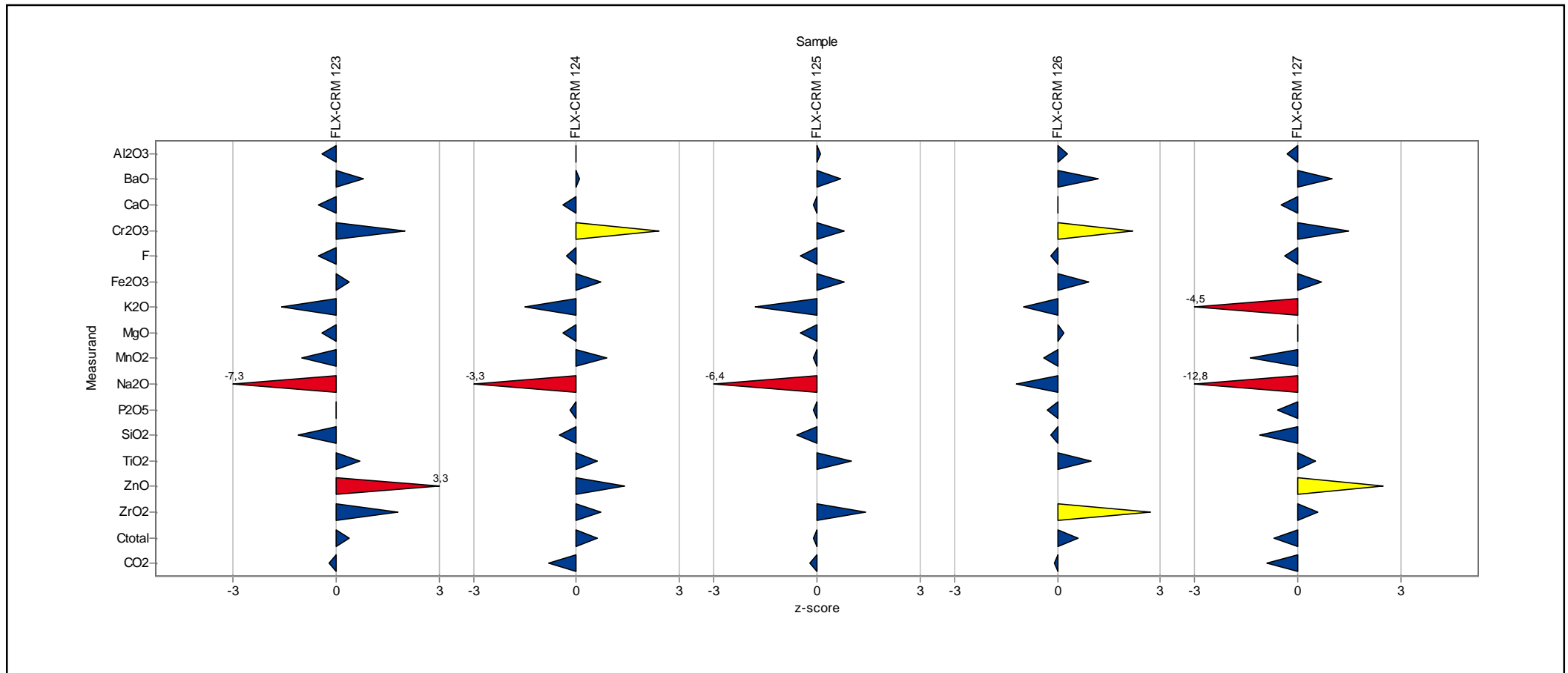




RV123

## Laboratory chart of z-scores

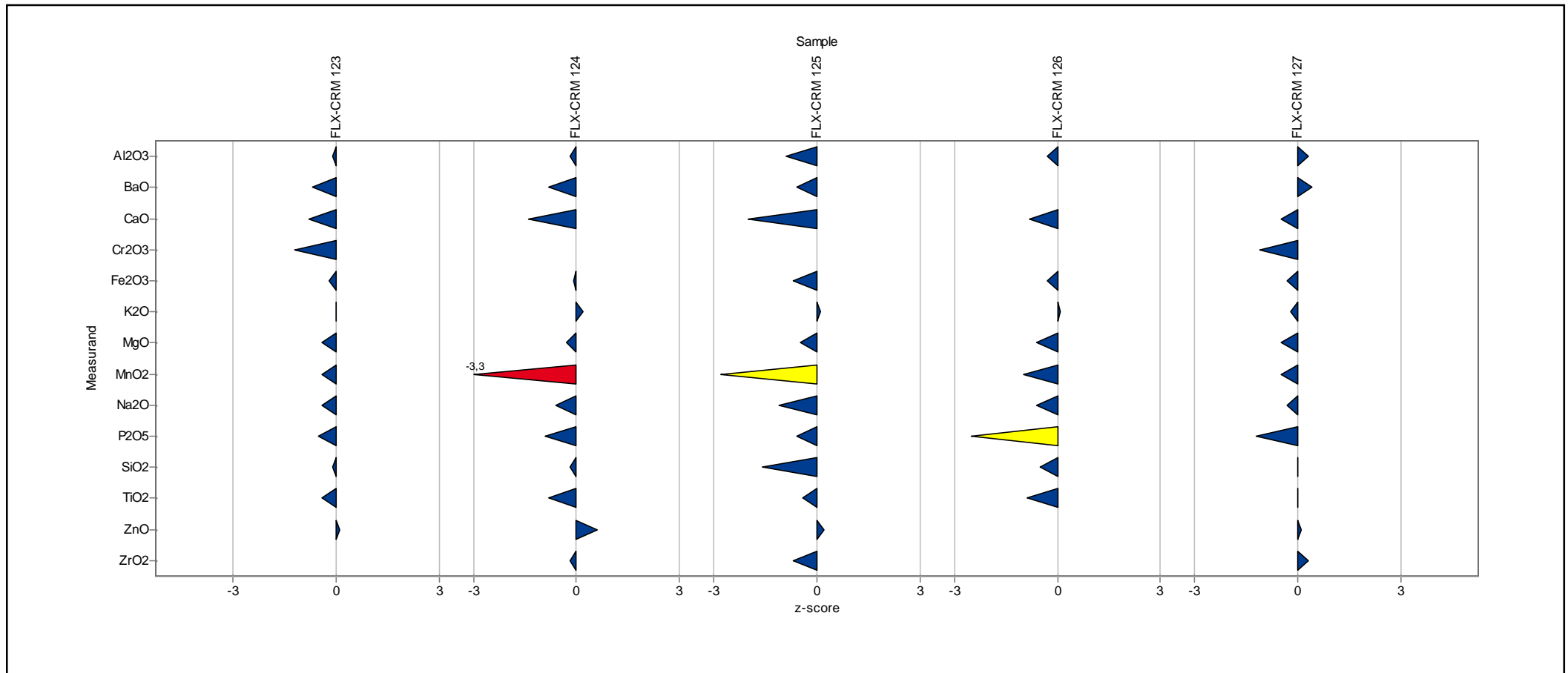
Laboratory: 25



RV123

## Laboratory chart of z-scores

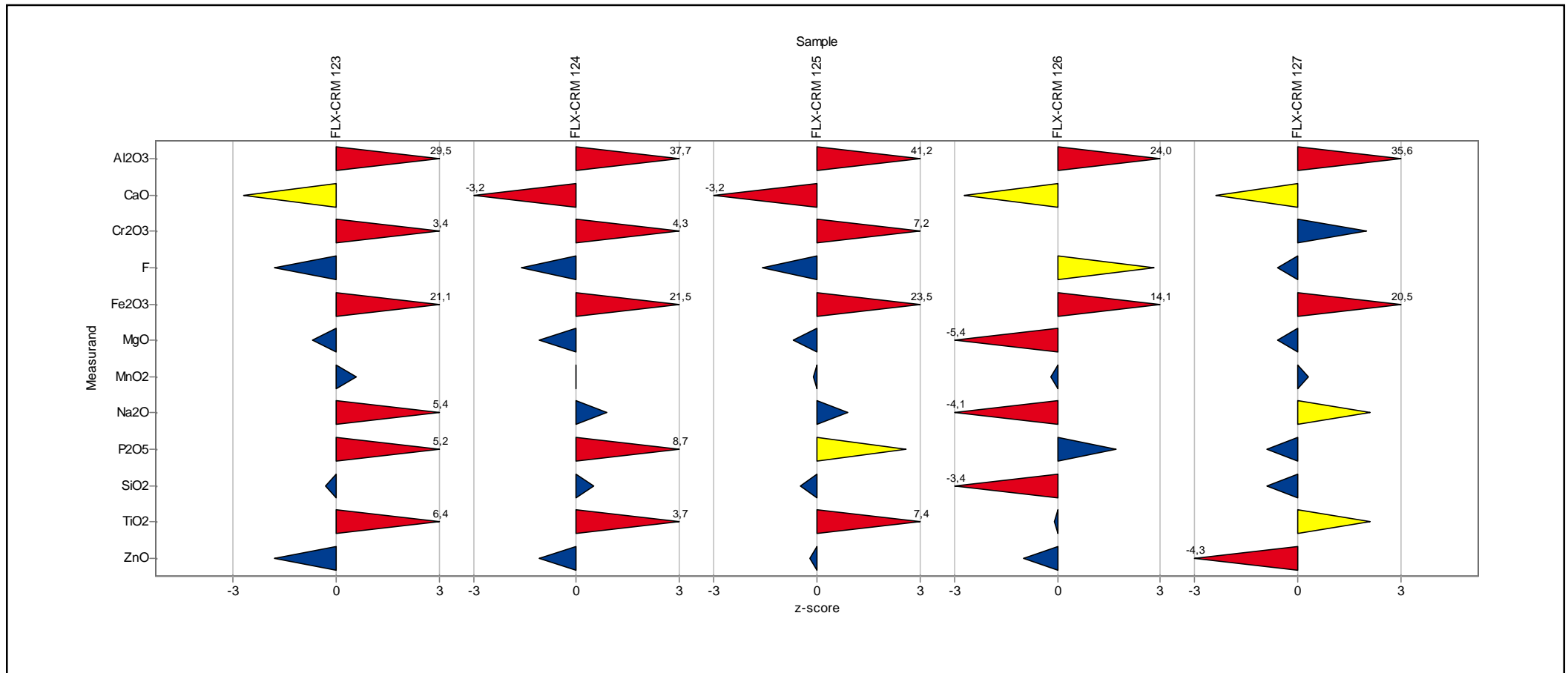
Laboratory: 26



RV123

# Laboratory chart of z-scores

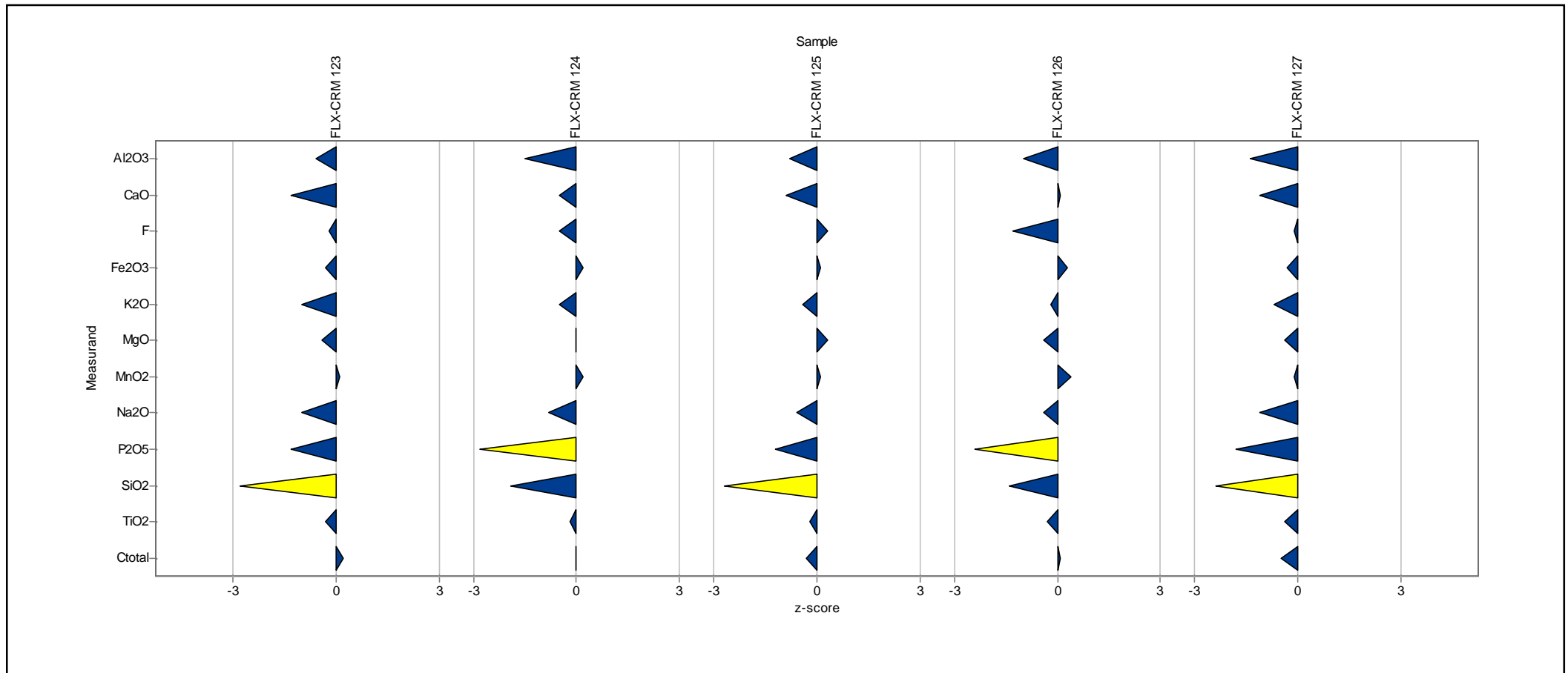
Laboratory: 27



RV123

## Laboratory chart of z-scores

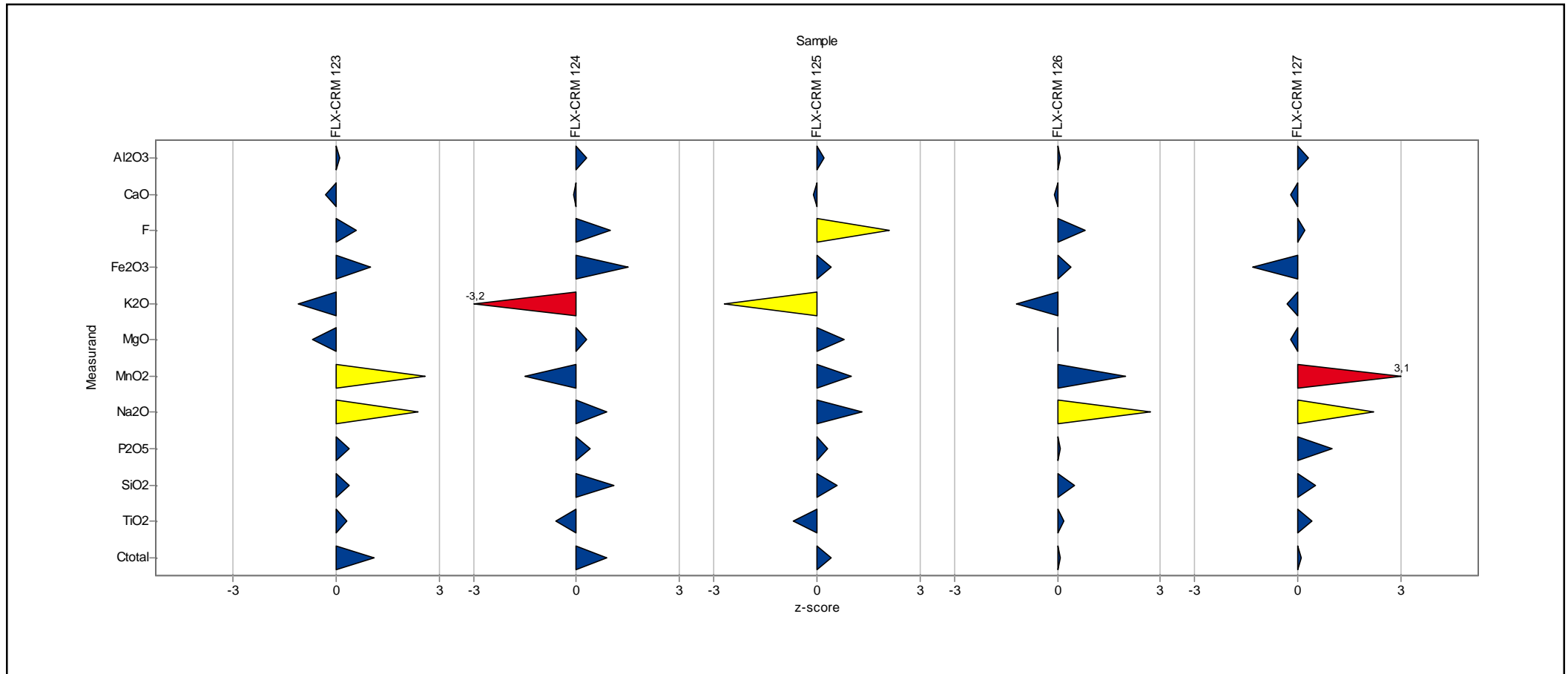
Laboratory: 28



RV123

# Laboratory chart of z-scores

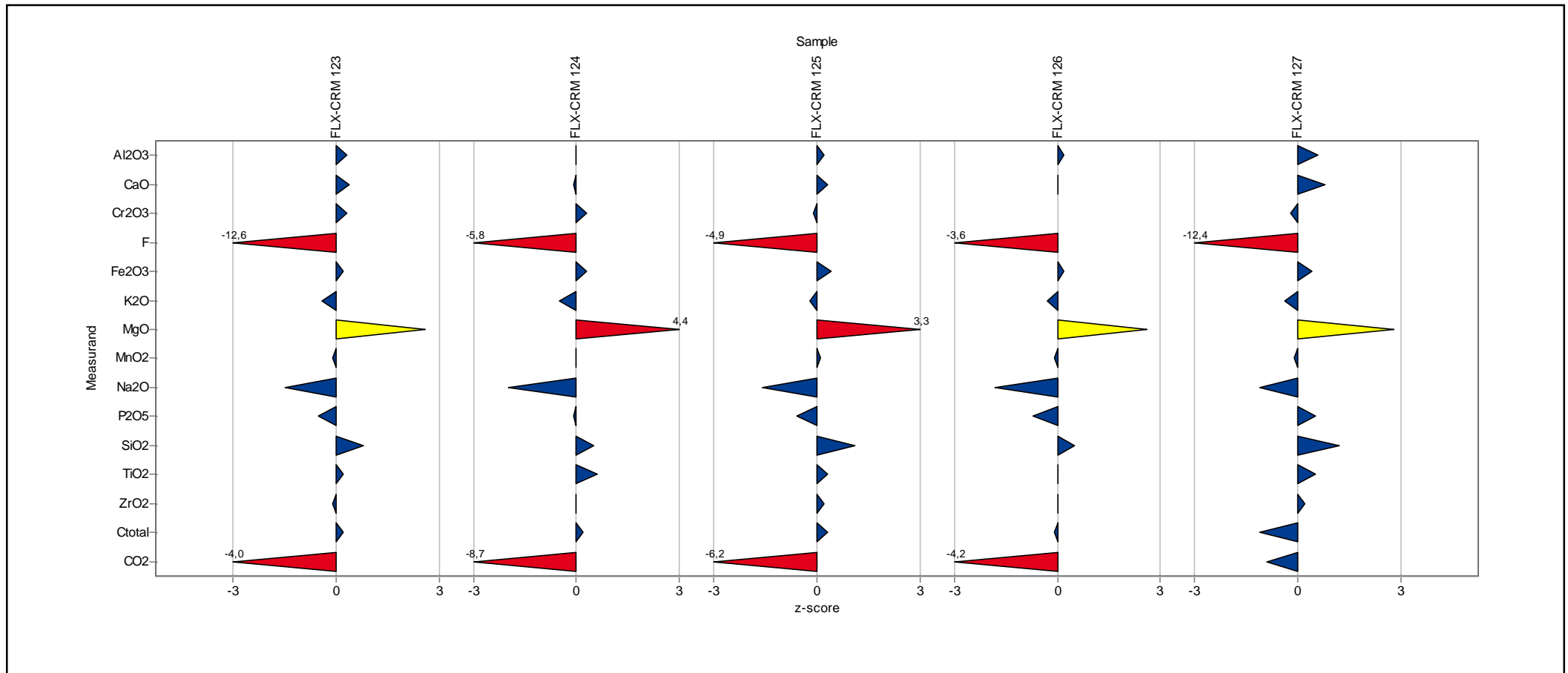
Laboratory: 29



RV123

# Laboratory chart of z-scores

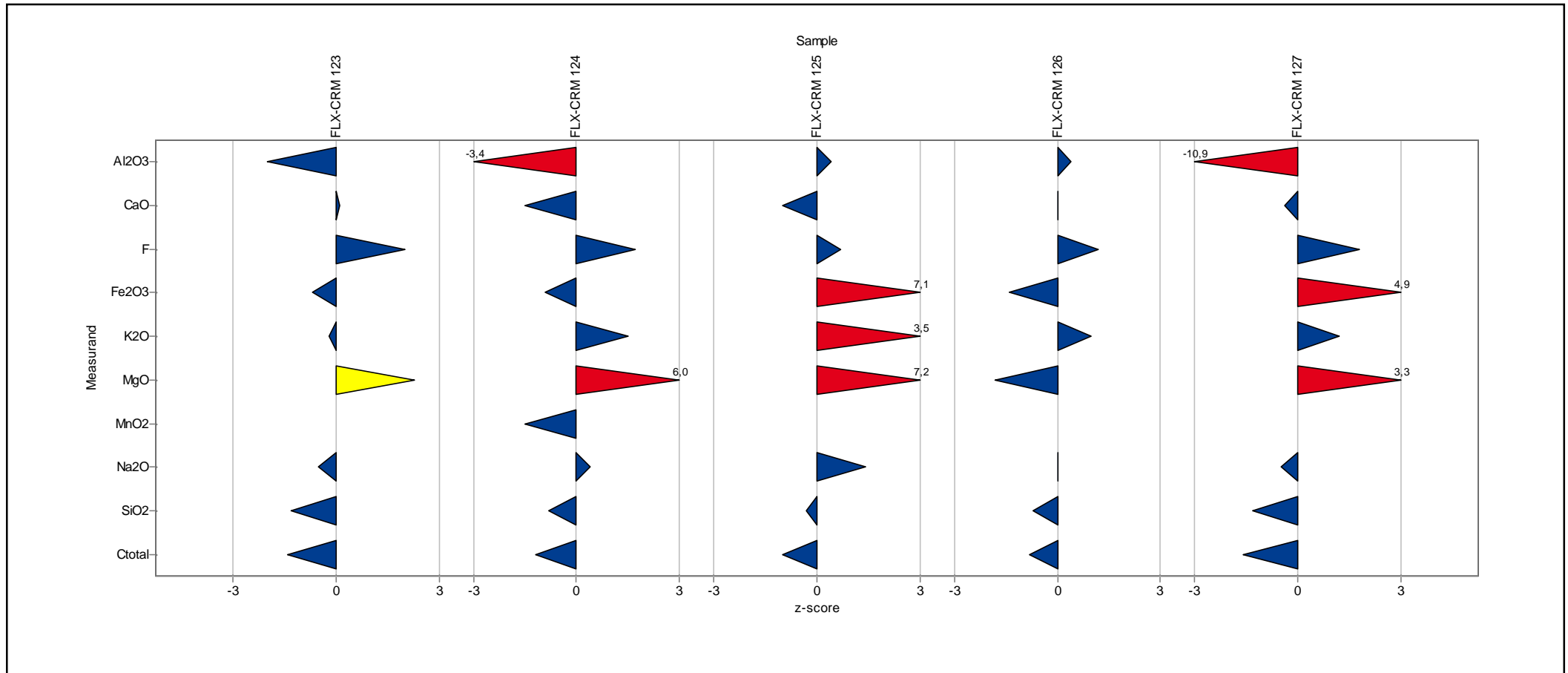
Laboratory: 30



RV123

## Laboratory chart of z-scores

Laboratory: 31



RV123

## Laboratory chart of z-scores

Laboratory: 32

