FLUXANA

Final Proficiency Test Report

RV-128 for Feldspar

FLX-CRM 128, FLX-CRM 129

Bedburg-Hau, 06.07.2016

Coordinator of PT
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Head of Laboratory
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Statistics and Report
Dr. Rainer Schramm

FLX-CRM 128	Mean %		U (95%)	s_R	s_r	Mean - 2*s_R	Mean + 2*s_R
Al_2O_3	20,043		0,094	0,223	0,038	19,598	20,488
BaO	0,007	*	0,003	0,005	0,002	-0,003	0,017
CaO	1,103		0,025	0,057	0,006	0,989	1,217
Fe_2O_3	0,030		0,009	0,017	0,002	-0,005	0,065
K_2O	0,202		0,003	0,008	0,002	0,186	0,218
Na_2O	10,748		0,138	0,318	0,047	10,112	11,384
P_2O_5	0,008		0,003	0,005	0,001	-0,001	0,018
SiO_2	67,811		0,249	0,573	0,066	66,665	68,957
TiO_2	0,017		0,004	0,007	0,001	0,003	0,032
SrO	0,048		0,004	0,008	0,001	0,032	0,065
LOI	0,170		0,029	0,069	0,009	0,032	0,307

FLX-CRM 129	Mean %		U (95%)	s_R	s_r	Mean - 2*s_R	Mean + 2*s_R
Al_2O_3	16,548		0,108	0,255	0,044	16,038	17,059
BaO	0,135		0,008	0,013	0,002	0,11	0,16
CaO	0,371		0,038	0,087	0,005	0,197	0,545
Fe_2O_3	0,104		0,007	0,017	0,004	0,071	0,138
K_2O	10,663		0,079	0,186	0,033	10,291	11,036
Na_2O	2,113		0,033	0,078	0,018	1,958	2,269
P_2O_5	0,07		0,003	0,006	0,001	0,058	0,082
SiO_2	70,037		0,248	0,573	0,089	68,891	71,182
TiO_2	0,036		0,007	0,014	0,001	0,008	0,065
SrO	0,014	*	0,002	0,003	0,001	0,009	0,02
LOI	0,428		0,053	0,104	0,012	0,22	0,635

* less than 10 laboratories

All values are in mass % and are based on dried sample material (1h at 105°C).

Mean	**calculated**
U (95%)	**uncertainty calculated for a confidence interval of 95% (k=2)**
s_R	**Reproducibility standard deviation**
s_r	**Repeatability standard deviation**
Range of tolerance	**Mean ± 2* s_R; all labs within this range show satisfactory performance**

Interpretation of the results

The proficiency test shows good agreement between the participating laboratories. The determined repeatability standard deviation and uncertainty correspond well to the industrial need. The reproducibility standard deviation shows that the laboratories use different calibration standards. For FLX-CRM 128 the minimum numbers of laboratory was not reached for BaO and for FLX-CRM 129 the minimum numbers of laboratory was not reached for SrO. These values can only be considered as informal.

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 31:2015 and ISO Guide 35:2006.

Proficiency test provider / Ordering address for the samples

FLUXANA GmbH & CO.KG
Borschelstr. 3
47551 Bedburg-Hau, Germany
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

Proficiency test items

The materials were delivered by:
Esan Eczacibsi Endüstriyel Mineraller A.S., Turkey

About 30 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 128	Feldspar (high sodium)
FLX-CRM 129	Feldspar (high potassium)

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 were performed.

Metrological traceability

The analytical methods used by the participants must be in accordance with international measurement standards (XRF fusion, 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.

Participant accreditation

It is important to know whether or not the participant laboratory works under ISO 17025 accreditation. Therefore, we will ask this information for each parameter. Which values were determined under accreditation will be shown anonymously in the final report.

Number of participants

The minimum number of participants is 10.

Potential major sources of errors

- The sample must be ignited before the analysis (see sample preparation)

Recommendation for XRF with fusion

This material is moisture sensitive. It has to be dried for minimum 1 hour at 105°C prior use. The drying process must result in a constant weight. Approximately 1.5-2 g of the dried sample is calcined at 950°C until constant mass (typically 1 hour) in a platinum or Al2O3 crucible in a muffle furnace. After cooling and determination of the loss on ignition, 1 g of the calcined sample is mixed with 8 g flux in a platinum/gold (95:5%) crucible and melted in an automatic fusion machine or melted manually in a muffle furnace.

If the automated fusion machines from FLUXANA are used (electric or gas) program A0 is recommended.

Evaluation

According to DIN EN ISO/IEC 17043:2010-05, we will use 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

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). Outliers shown in the evaluation are only based on z-scores and marked with E or B.

Number of measurements

All participants are requested to perform two measurements. This is necessary to perform the repeatability standard deviation for the laboratories. Participants who send only one or more than two values must ask first for permission otherwise they will be excluded.

Publication of the results

All participants will be informed about the results of the PT with a 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 will be published on the FLUXANA website. First a preliminary report will be sent out for verification by the participants. Within one month, the final report will be published.

Laboratory performance

Each participant will receive a performance evaluation report based on z-scores. The diagram shows the relative difference to the assigned values.

Further information

With this PT, a software approach will be used. All participants will receive a special software tool to enter their data. Paper sheets or excel tables will only be accepted in special cases in prior agreement with the organizer. In this way, we want to improve the data quality and avoid any transmission errors.

Participants

Carboox Resende Química Industria e Comercio LTDA	Brasilien
Air Liquide	France
Dorfner Anzaplan	Germany
FLUXANA GmbH & Co.KG	Germany
Forschungsinstitut für Anorganische Werkstoffe	Germany
Helmholtz-Zentrum Dresden-Rossendorf e.V.	Germany
HuK Umweltlabor GmbH	Germany
KI Keramik-Institut GmbH	Germany
Quarzwerke GmbH	Germany
Technische Hochschule Nürnberg Georg Simon Ohm	Germany
Terrachem GmbH	Germany
VDZ GmbH	Germany
Voestalpine Böhler Welding Germany GmbH	Germany
Zentrum für Glas- und Umweltanalytik GmbH	Germany
PPC Cement Group Lab Services	South Africa
FUNDACION ITMA	Spain
IK4-AZTERLAN	Spain
ESAB AB	Sweden
Askale Cement (Gumushane)	Turkey
Bursa Cement	Turkey
Cimentas Cement	Turkey
Cimsa Afyon	Turkey
Erdemir	Turkey
Sisecam	Turkey
Votorantim Cement - Ankara Plant	Turkey
Votorantim Cement - Corum Plant	Turkey
Votorantim Cement - Sivas Plant	Turkey
Votorantim Cement - Yozgat Plant	Turkey

Statistical Evaluation used for this PT

Calculation of Mean m

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

Calculation of reproducibility standard deviation s_R

The reproducibility standard deviation s_R is 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 is also calculated using the Q-method.

Uncertainty of Mean U

The uncertainty of mean U for k=2 (95% confidence level) is 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:

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

Laboratory performance

Laboratory proficiency assessment is based on z-scores.
From all laboratory means µ, the **z-score** z is calculated:

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

m	Mean value of all laboratories (assigned value)
µ	Mean value of individual laboratory
s_R	Reproducibility standard deviation

Assessment of z-scores:

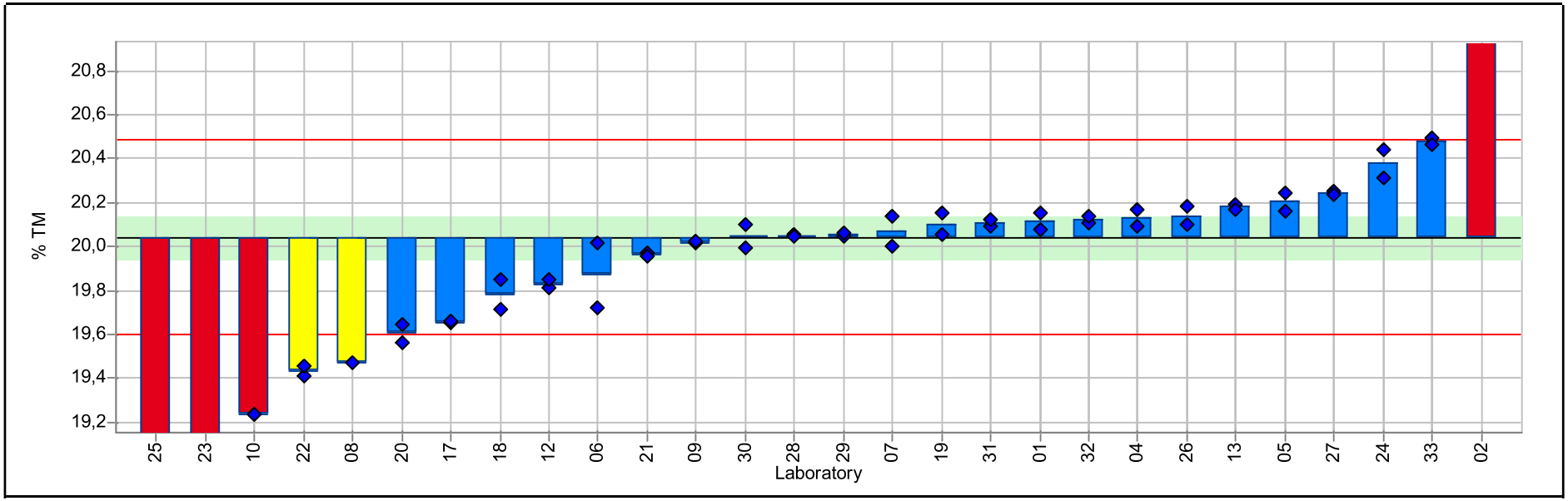
$\|z\|$ <= 2.0	indicates, satisfactory‘ performance = generates no signal
2.0 < $\|z\|$ < 3.0	indicates, questionable‘ performance = generates a warning signal
$\|z\|$ >= 3.0	indicates, unsatisfactory‘ performance = generates an action signal

All laboratory means µ with 3 >= $|z|$ >= 2 were highlighted with a yellow color, z-scores with $|z|$ >= 3 were highlighted with a red color.

RV128 (Feldspar)

Summary results

Sample:	**FLX-CRM 128**	**Reprod. s.d.**	**0,223 % TM**
Measurand:	**Al2O3**	**Repeat. s.d**	**0,038 % TM**
Mean ± U(Mean):	**20,043 ± 0,094 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**22**	**Range of tolerance:**	**19,598 - 20,488 % TM (|z-score| <= 2,000)**
Assigned value	**20,043 % TM (Empirical value)**	**Target s.d.**	**0,223 % TM (Empirical value)**



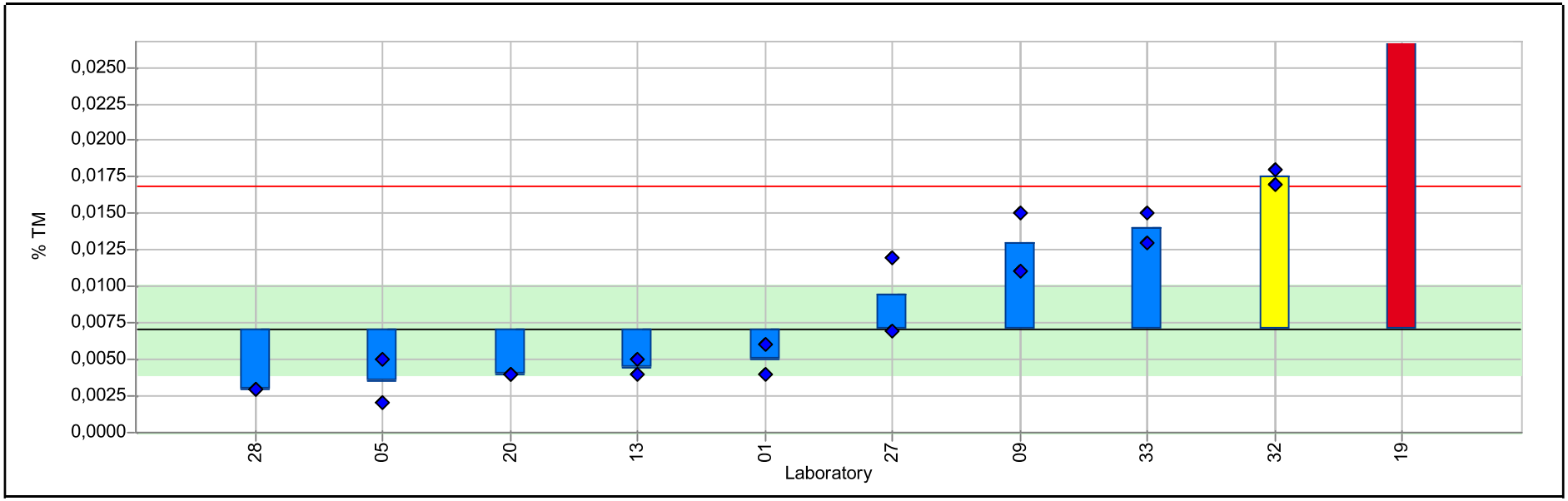
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	20,116	0,052	0,328	20,153	20,079	ISO 17025	XRF (fusion)	
02	21,310	0,014	5,693	21,300	21,320	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
04	20,132	0,054	0,400	20,170	20,094	no accreditation	XRF (fusion)	
05	20,203	0,055	0,719	20,242	20,164	ISO 17025	XRF (fusion)	
06	19,869	0,206	-0,781	20,015	19,723	no accreditation	XRF (fusion)	
07	20,070	0,099	0,122	20,000	20,140	ISO 17025	XRF (fusion)	
08	19,470		-2,574	19,470		no accreditation	XRF (fusion)	
09	20,017	0,005	-0,114	20,014	20,021	ISO 17025	XRF (fusion)	
10	19,233	0,000	-3,639	19,233	19,233	ISO 17025	XRF (fusion)	
12	19,830	0,028	-0,957	19,810	19,850	no accreditation	XRF (fusion)	
13	20,180	0,014	0,616	20,190	20,170	ISO 17025	XRF (fusion)	
17	19,655	0,007	-1,743	19,650	19,660	no accreditation	other	wet analysis
18	19,780	0,099	-1,181	19,710	19,850	no accreditation	XRF (fusion)	
19	20,101	0,068	0,261	20,053	20,149	no accreditation	XRF (fusion)	
20	19,604	0,061	-1,972	19,561	19,647	no accreditation	XRF (fusion)	
21	19,962	0,009	-0,366	19,968	19,955	no accreditation	XRF (fusion)	
22	19,433	0,033	-2,740	19,410	19,456	no accreditation	XRF (fusion)	
23	18,995	0,205	-4,708	18,850	19,140	ISO 17025	XRF (fusion)	
24	20,377	0,093	1,499	20,311	20,442	no accreditation	XRF (fusion)	
25	18,730	0,071	-5,899	18,780	18,680	no accreditation	XRF (fusion)	
26	20,140	0,057	0,436	20,100	20,180	no accreditation	XRF (fusion)	
27	20,246	0,012	0,915	20,255	20,238	ISO 17025	XRF (fusion)	
28	20,050	0,001	0,032	20,051	20,049	ISO 17025	XRF (fusion)	
29	20,055	0,007	0,054	20,050	20,060	ISO 17025	XRF (fusion)	
30	20,048	0,075	0,023	19,995	20,101	ISO 17025	XRF (fusion)	
31	20,105	0,021	0,279	20,090	20,120	no accreditation	XRF (fusion)	
32	20,125	0,021	0,369	20,110	20,140	ISO 17025	XRF (fusion)	
33	20,480	0,020	1,964	20,494	20,466	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 128**	**Reprod. s.d.**	**0,005 % TM**
Measurand:	**BaO**	**Repeat. s.d**	**0,002 % TM**
Mean ± U(Mean):	**0,007 ± 0,003 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**9**	**Range of tolerance:**	**-0,003 - 0,017 % TM (|z-score| <= 2,000)**
Assigned value	**0,007 % TM (Empirical value)**	**Target s.d.**	**0,005 % TM (Empirical value)**



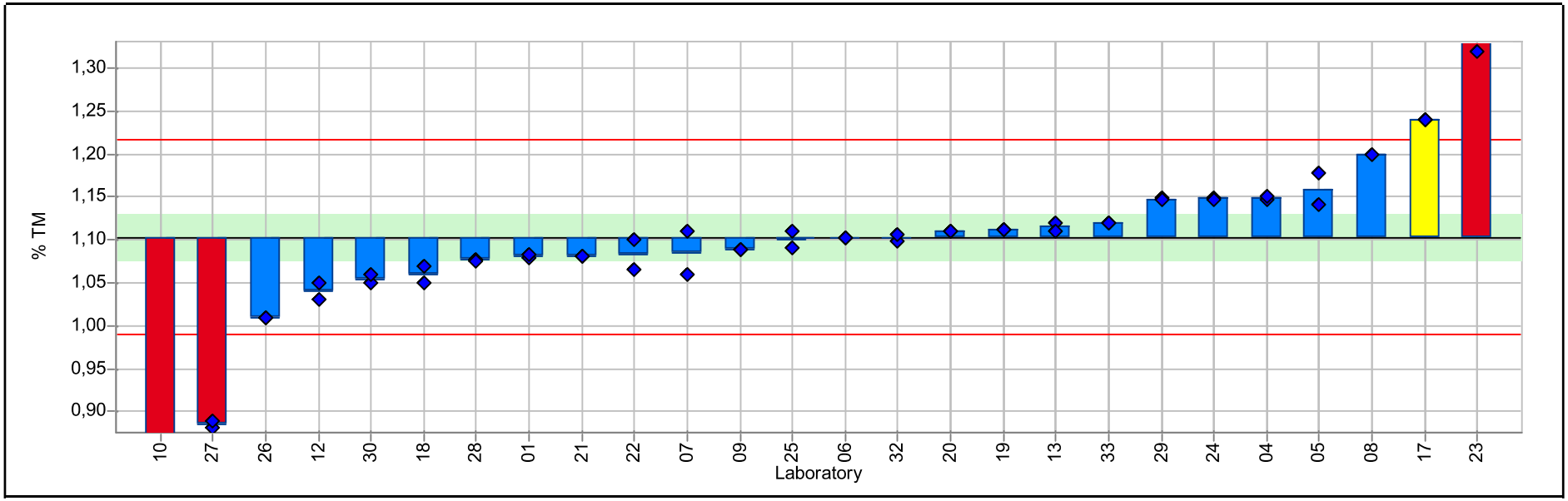
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,005	0,001	-0,418	0,006	0,004	ISO 17025	XRF (fusion)	
05	0,004	0,002	-0,723	0,005	0,002	no accreditation	ICP-OES	
06				<0,010	<0,010	no accreditation	XRF (fusion)	
09	0,013	0,003	1,205	0,015	0,011	ISO 17025	ICP-OES	
13	0,005	0,001	-0,520	0,005	0,004	ISO 17025	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
19	0,029	0,002	4,552	0,028	0,031	no accreditation	XRF (fusion)	
20	0,004	0,000	-0,621	0,004	0,004	no accreditation	XRF (fusion)	
27	0,009	0,004	0,495	0,012	0,007	ISO 17025	XRF (fusion)	
28	0,003	0,000	-0,824	0,003	0,003	ISO 17025	XRF (fusion)	
29				<0,010	<0,010	ISO 17025	XRF (Pellet) info only	
32	0,018	0,001	2,118	0,018	0,017	ISO 17025	Standardless info	
33	0,014	0,001	1,408	0,013	0,015	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 128**	**Reprod. s.d.**	**0,057 % TM**
Measurand:	**CaO**	**Repeat. s.d**	**0,006 % TM**
Mean ± U(Mean):	**1,103 ± 0,025 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**20**	**Range of tolerance:**	**0,989 - 1,217 % TM (|z-score| <= 2,000)**
Assigned value	**1,103 % TM (Empirical value)**	**Target s.d.**	**0,057 % TM (Empirical value)**



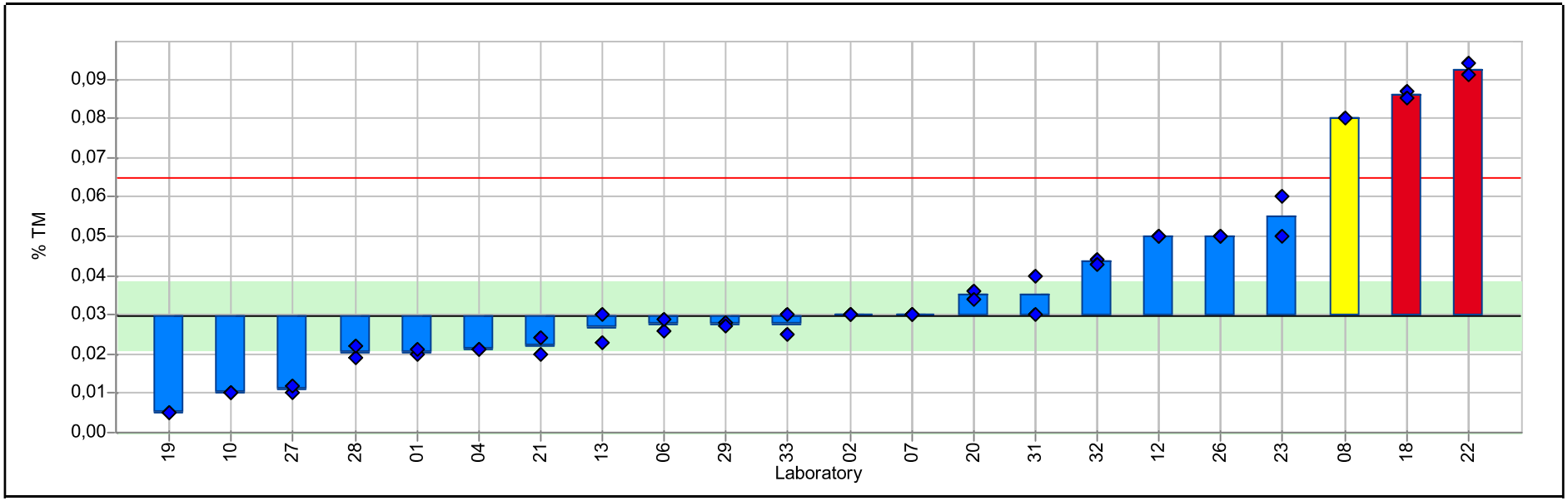
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	1,081	0,004	-0,398	1,078	1,083	ISO 17025	XRF (fusion)	
04	1,148	0,004	0,797	1,146	1,151	no accreditation	XRF (fusion)	
05	1,159	0,027	0,982	1,178	1,140	ISO 17025	XRF (fusion)	
06	1,102	0,000	-0,020	1,102	1,102	no accreditation	XRF (fusion)	
07	1,085	0,035	-0,319	1,060	1,110	ISO 17025	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
08	1,200		1,702	1,200		no accreditation	XRF (fusion)	
09	1,088	0,000	-0,266	1,088	1,088	ISO 17025	XRF (fusion)	
10	0,662	0,000	-7,750	0,662	0,662	ISO 17025	XRF (fusion)	
12	1,040	0,014	-1,109	1,030	1,050	no accreditation	XRF (fusion)	
13	1,115	0,007	0,209	1,120	1,110	ISO 17025	XRF (fusion)	
17	1,240	0,000	2,405	1,240	1,240	no accreditation	other	wet analysis
18	1,060	0,014	-0,758	1,050	1,070	no accreditation	XRF (fusion)	
19	1,111	0,001	0,147	1,111	1,112	no accreditation	XRF (fusion)	
20	1,110	0,001	0,112	1,110	1,109	no accreditation	XRF (fusion)	
21	1,081	0,000	-0,389	1,081	1,081	no accreditation	XRF (fusion)	
22	1,083	0,025	-0,362	1,100	1,065	no accreditation	XRF (fusion)	
23	1,350	0,042	4,337	1,380	1,320	ISO 17025	XRF (fusion)	
24	1,148	0,001	0,788	1,149	1,147	no accreditation	XRF (fusion)	
25	1,100	0,014	-0,055	1,090	1,110	no accreditation	XRF (fusion)	
26	1,010	0,000	-1,636	1,010	1,010	no accreditation	XRF (fusion)	
27	0,885	0,005	-3,823	0,882	0,889	ISO 17025	XRF (fusion)	
28	1,077	0,001	-0,468	1,077	1,076	ISO 17025	XRF (fusion)	
29	1,147	0,001	0,779	1,148	1,147	ISO 17025	XRF (fusion)	
30	1,054	0,006	-0,854	1,050	1,059	ISO 17025	XRF (fusion)	
32	1,103	0,006	-0,011	1,098	1,107	ISO 17025	XRF (fusion)	
33	1,120	0,000	0,296	1,120	1,120	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 128**	**Reprod. s.d.**	**0,017 % TM**
Measurand:	**Fe2O3**	**Repeat. s.d**	**0,002 % TM**
Mean ± U(Mean):	**0,030 ± 0,009 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**16**	**Range of tolerance:**	**-0,005 - 0,065 % TM (|z-score| <= 2,000)**
Assigned value	**0,030 % TM (Empirical value)**	**Target s.d.**	**0,017 % TM (Empirical value)**



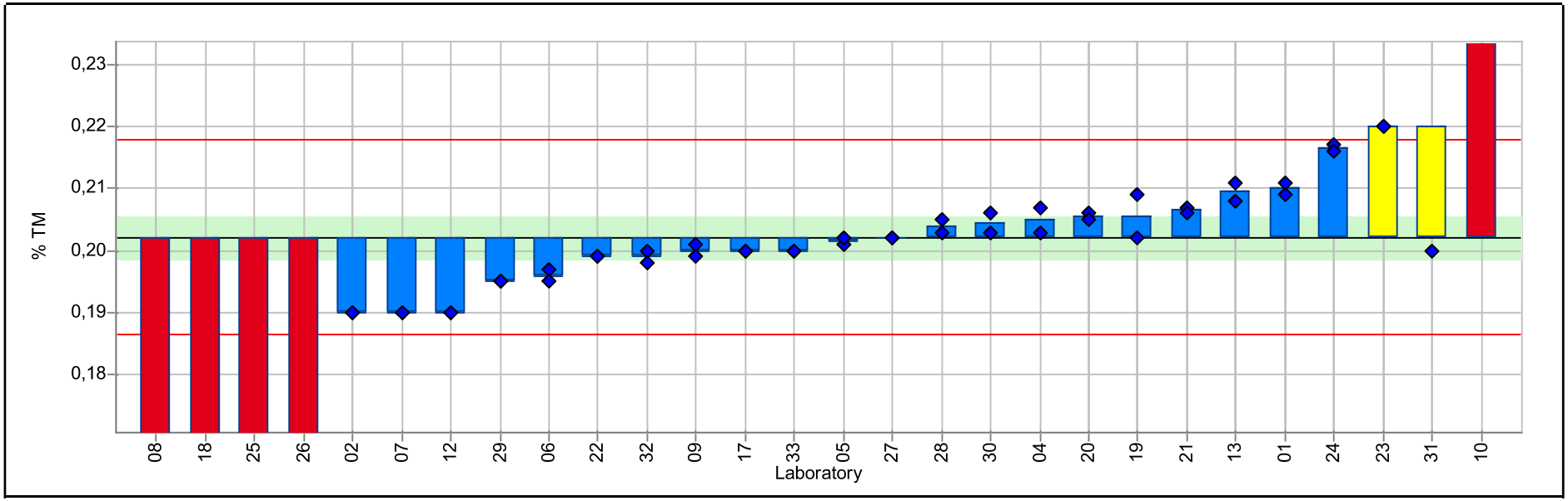
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,021	0,001	-0,526	0,020	0,021	ISO 17025	XRF (fusion)	
02	0,030	0,000	0,018	0,030	0,030	no accreditation	XRF (fusion)	
04	0,021	0,000	-0,497	0,021	0,021	no accreditation	XRF (fusion)	
05				<0,100	<0,100	ISO 17025	XRF (fusion)	
06	0,028	0,002	-0,125	0,026	0,029	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	0,030	0,000	0,018	0,030	0,030	ISO 17025	XRF (fusion)	
08	0,080		2,880	0,080		no accreditation	XRF (fusion)	
09				<0,100	<0,100	ISO 17025	XRF (fusion)	
10	0,010	0,000	-1,127	0,010	0,010	ISO 17025	XRF (fusion)	
12	0,050	0,000	1,163	0,050	0,050	no accreditation	XRF (fusion)	
13	0,026	0,005	-0,182	0,030	0,023	ISO 17025	XRF (fusion)	
18	0,086	0,001	3,224	0,087	0,085	no accreditation	XRF (fusion)	
19	0,005	0,000	-1,413	0,005	0,005	no accreditation	XRF (fusion)	
20	0,035	0,001	0,304	0,036	0,034	no accreditation	XRF (fusion)	
21	0,022	0,003	-0,440	0,020	0,024	no accreditation	XRF (fusion)	
22	0,092	0,002	3,596	0,094	0,091	no accreditation	XRF (fusion)	
23	0,055	0,007	1,449	0,050	0,060	ISO 17025	XRF (fusion)	
26	0,050	0,000	1,163	0,050	0,050	no accreditation	XRF (fusion)	
27	0,011	0,001	-1,070	0,010	0,012	ISO 17025	XRF (fusion)	
28	0,020	0,002	-0,526	0,019	0,022	ISO 17025	XRF (fusion)	
29	0,028	0,001	-0,125	0,028	0,027	ISO 17025	XRF (Pellet) info only	
31	0,035	0,007	0,304	0,030	0,040	no accreditation	XRF (fusion)	
32	0,043	0,001	0,791	0,044	0,043	ISO 17025	XRF (fusion)	
33	0,028	0,004	-0,125	0,030	0,025	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 128**	**Reprod. s.d.**	**0,008 % TM**
Measurand:	**K2O**	**Repeat. s.d**	**0,002 % TM**
Mean ± U(Mean):	**0,202 ± 0,003 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**22**	**Range of tolerance:**	**0,186 - 0,218 % TM (|z-score| <= 2,000)**
Assigned value	**0,202 % TM (Empirical value)**	**Target s.d.**	**0,008 % TM (Empirical value)**



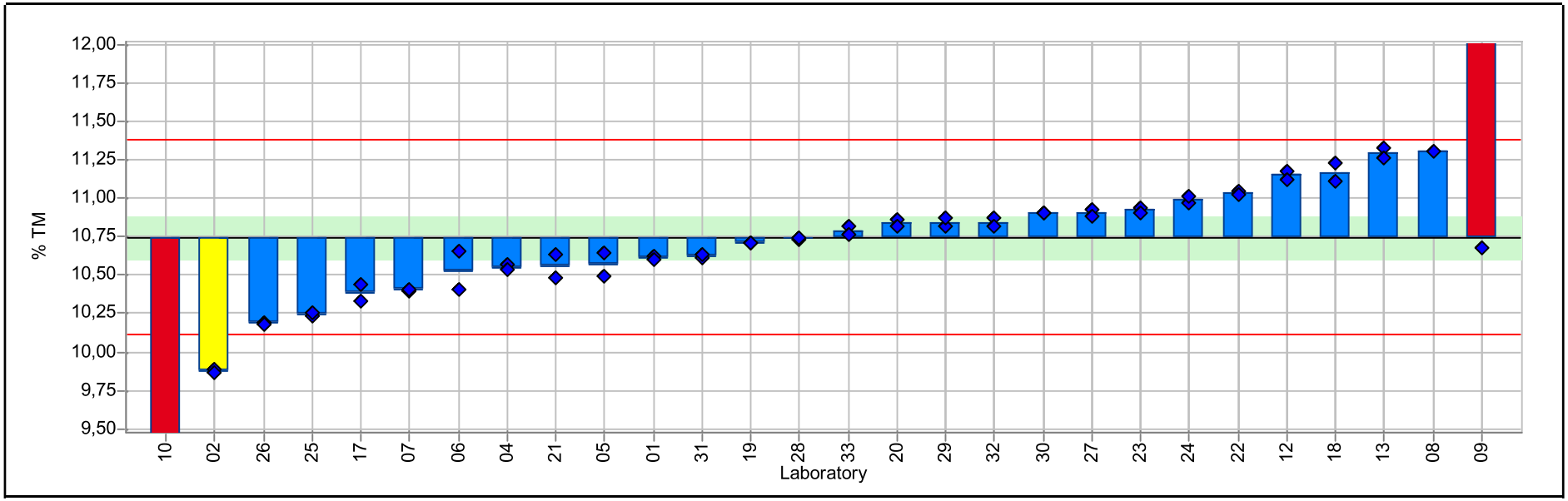
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,210	0,001	0,991	0,209	0,211	ISO 17025	XRF (fusion)	
02	0,190	0,000	-1,550	0,190	0,190	no accreditation	XRF (fusion)	
04	0,205	0,003	0,356	0,207	0,203	no accreditation	XRF (fusion)	
05	0,202	0,001	-0,089	0,201	0,202	ISO 17025	XRF (fusion)	
06	0,196	0,001	-0,788	0,197	0,195	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	0,190	0,000	-1,550	0,190	0,190	ISO 17025	XRF (fusion)	
08	0,160		-5,362	0,160		no accreditation	XRF (fusion)	
09	0,200	0,001	-0,280	0,199	0,201	ISO 17025	XRF (fusion)	
10	0,441	0,000	30,344	0,441	0,441	no accreditation	other	AAS
12	0,190	0,000	-1,550	0,190	0,190	no accreditation	XRF (fusion)	
13	0,209	0,002	0,928	0,211	0,208	ISO 17025	XRF (fusion)	
17	0,200	0,000	-0,280	0,200	0,200	no accreditation	other	wet analysis
18	0,165	0,007	-4,727	0,160	0,170	no accreditation	XRF (fusion)	
19	0,206	0,005	0,419	0,209	0,202	no accreditation	XRF (fusion)	
20	0,205	0,001	0,419	0,206	0,205	no accreditation	XRF (fusion)	
21	0,206	0,001	0,546	0,207	0,206	no accreditation	XRF (fusion)	
22	0,199	0,000	-0,407	0,199	0,199	no accreditation	XRF (fusion)	
23	0,220	0,000	2,262	0,220	0,220	ISO 17025	XRF (fusion)	
24	0,216	0,001	1,817	0,217	0,216	no accreditation	XRF (fusion)	
25	0,165	0,007	-4,727	0,160	0,170	no accreditation	XRF (fusion)	
26	0,170	0,000	-4,092	0,170	0,170	no accreditation	XRF (fusion)	
27	0,202	0,000	-0,025	0,202	0,202	ISO 17025	XRF (fusion)	
28	0,204	0,001	0,229	0,205	0,203	ISO 17025	XRF (fusion)	
29	0,195	0,000	-0,915	0,195	0,195	ISO 17025	XRF (fusion)	
30	0,205	0,002	0,292	0,206	0,203	ISO 17025	XRF (fusion)	
31	0,220	0,028	2,262	0,200	0,240	no accreditation	XRF (fusion)	
32	0,199	0,001	-0,407	0,200	0,198	ISO 17025	XRF (fusion)	
33	0,200	0,000	-0,280	0,200	0,200	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 128**	**Reprod. s.d.**	**0,318 % TM**
Measurand:	**Na2O**	**Repeat. s.d**	**0,047 % TM**
Mean ± U(Mean):	**10,748 ± 0,138 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**21**	**Range of tolerance:**	**10,112 - 11,384 % TM (|z-score| <= 2,000)**
Assigned value	**10,748 % TM (Empirical value)**	**Target s.d.**	**0,318 % TM (Empirical value)**



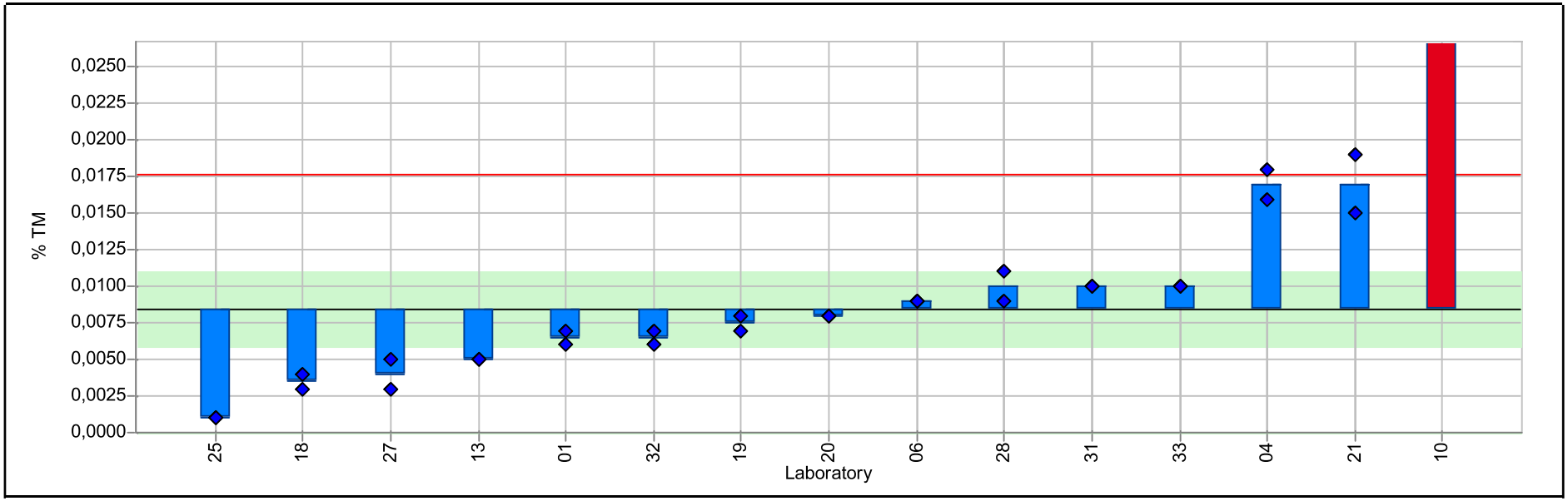
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	10,613	0,015	-0,426	10,623	10,602	ISO 17025	XRF (fusion)	
02	9,880	0,014	-2,728	9,890	9,870	no accreditation	XRF (fusion)	
04	10,553	0,016	-0,615	10,564	10,541	no accreditation	XRF (fusion)	
05	10,570	0,109	-0,560	10,493	10,647	ISO 17025	ICP-OES	
06	10,531	0,175	-0,684	10,407	10,654	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	10,405	0,007	-1,078	10,400	10,410	ISO 17025	XRF (fusion)	
08	11,310		1,766	11,310		no accreditation	XRF (fusion)	
09	13,669	4,230	9,180	16,660	10,678	ISO 17025	XRF (fusion)	
10	8,975	0,000	-5,573	8,975	8,975	no accreditation	other	AAS
12	11,150	0,042	1,263	11,180	11,120	no accreditation	XRF (fusion)	
13	11,295	0,049	1,719	11,330	11,260	ISO 17025	XRF (fusion)	
17	10,385	0,078	-1,141	10,330	10,440	no accreditation	other	wet analysis
18	11,170	0,085	1,326	11,110	11,230	no accreditation	XRF (Pellet) info only	
19	10,712	0,002	-0,115	10,710	10,713	no accreditation	XRF (fusion)	
20	10,838	0,032	0,284	10,861	10,816	no accreditation	XRF (fusion)	
21	10,556	0,110	-0,604	10,478	10,634	no accreditation	XRF (fusion)	
22	11,040	0,016	0,918	11,051	11,029	no accreditation	XRF (fusion)	
23	10,925	0,021	0,556	10,940	10,910	ISO 17025	XRF (fusion)	
24	10,991	0,036	0,765	10,966	11,017	no accreditation	XRF (fusion)	
25	10,240	0,014	-1,597	10,230	10,250	no accreditation	XRF (fusion)	
26	10,185	0,007	-1,770	10,190	10,180	no accreditation	XRF (fusion)	
27	10,907	0,028	0,500	10,927	10,887	ISO 17025	XRF (fusion)	
28	10,739	0,011	-0,028	10,731	10,747	ISO 17025	XRF (fusion)	
29	10,845	0,035	0,305	10,820	10,870	ISO 17025	XRF (fusion)	
30	10,906	0,002	0,498	10,908	10,905	ISO 17025	XRF (fusion)	
31	10,620	0,014	-0,402	10,610	10,630	no accreditation	XRF (fusion)	
32	10,845	0,035	0,305	10,870	10,820	ISO 17025	XRF (fusion)	
33	10,790	0,042	0,132	10,820	10,760	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 128**	**Reprod. s.d.**	**0,005 % TM**
Measurand:	**P2O5**	**Repeat. s.d**	**0,001 % TM**
Mean ± U(Mean):	**0,008 ± 0,003 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**12**	**Range of tolerance:**	**-0,001 - 0,018 % TM (|z-score| <= 2,000)**
Assigned value	**0,008 % TM (Empirical value)**	**Target s.d.**	**0,005 % TM (Empirical value)**



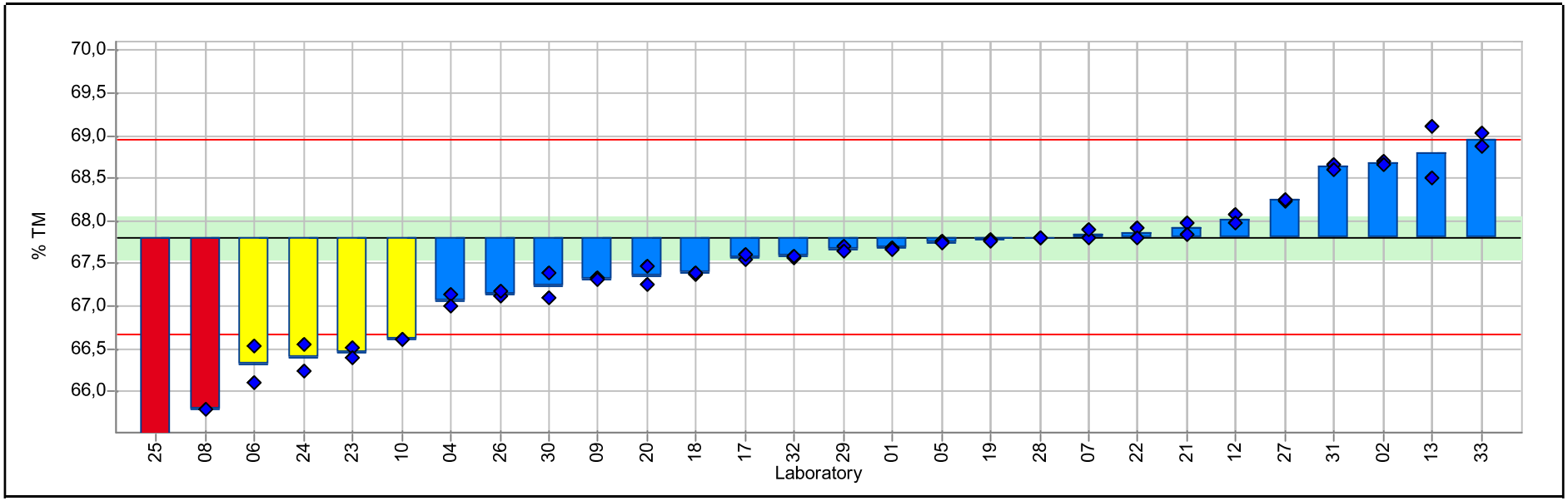
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,007	0,001	-0,431	0,006	0,007	ISO 17025	XRF (fusion)	
04	0,017	0,001	1,865	0,016	0,018	no accreditation	XRF (fusion)	
05				<0,100	<0,100	ISO 17025	XRF (fusion)	
06	0,009	0,000	0,116	0,009	0,009	no accreditation	XRF (fusion)	
09				<0,100	<0,100	ISO 17025	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
10	0,030	0,000	4,708	0,030	0,030	ISO 17025	XRF (fusion)	
13	0,005	0,000	-0,759	0,005	0,005	ISO 17025	XRF (fusion)	
18	0,004	0,001	-1,087	0,003	0,004	no accreditation	XRF (fusion)	
19	0,007	0,001	-0,213	0,007	0,008	no accreditation	XRF (fusion)	
20	0,008	0,000	-0,103	0,008	0,008	no accreditation	XRF (fusion)	
21	0,017	0,003	1,865	0,019	0,015	no accreditation	XRF (fusion)	
25	0,001	0,000	-1,634	0,001	0,001	no accreditation	XRF (fusion)	
27	0,004	0,001	-0,978	0,005	0,003	ISO 17025	XRF (fusion)	
28	0,010	0,001	0,334	0,009	0,011	ISO 17025	XRF (fusion)	
29				<0,010	<0,010	ISO 17025	XRF (fusion)	
31	0,010	0,000	0,334	0,010	0,010	no accreditation	XRF (fusion)	
32	0,007	0,001	-0,431	0,006	0,007	ISO 17025	XRF (fusion)	
33	0,010	0,000	0,334	0,010	0,010	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 128**	**Reprod. s.d.**	**0,573 % TM**
Measurand:	**SiO2**	**Repeat. s.d**	**0,066 % TM**
Mean ± U(Mean):	**67,811 ± 0,249 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**21**	**Range of tolerance:**	**66,665 - 68,957 % TM (|z-score| <= 2,000)**
Assigned value	**67,811 % TM (Empirical value)**	**Target s.d.**	**0,573 % TM (Empirical value)**



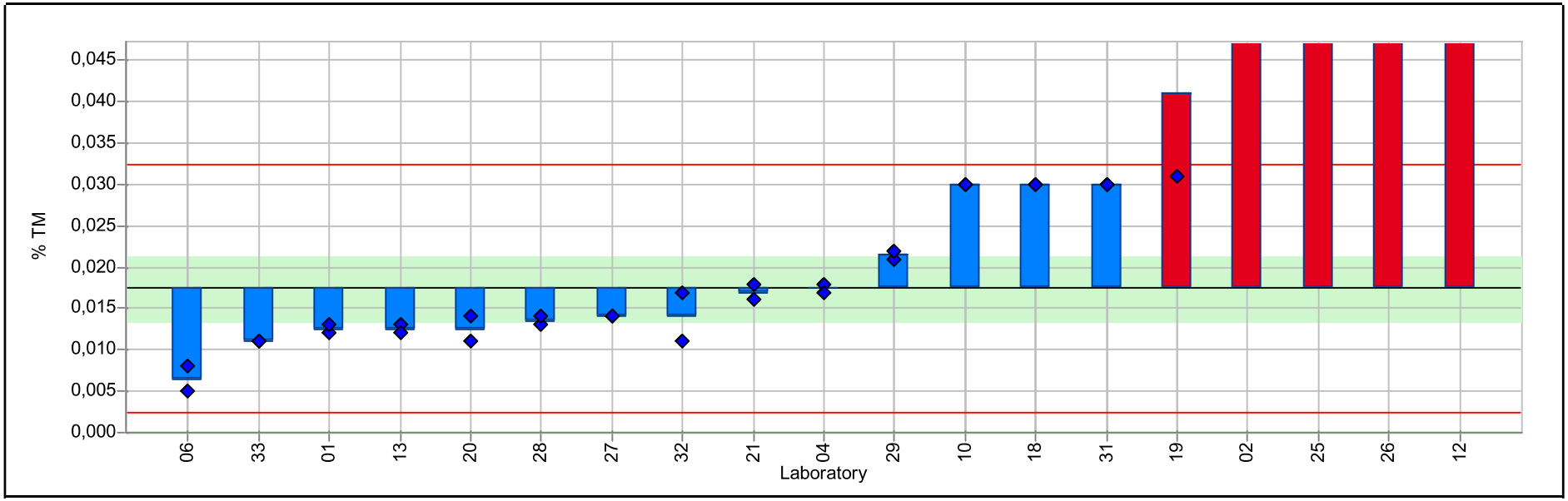
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	67,677	0,014	-0,233	67,687	67,667	ISO 17025	XRF (fusion)	
02	68,675	0,021	1,508	68,690	68,660	no accreditation	XRF (fusion)	
04	67,067	0,089	-1,298	67,130	67,004	no accreditation	XRF (fusion)	
05	67,751	0,018	-0,104	67,764	67,738	ISO 17025	XRF (fusion)	
06	66,323	0,308	-2,597	66,105	66,540	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	67,845	0,064	0,060	67,800	67,890	ISO 17025	XRF (fusion)	
08	65,790		-3,527	65,790		no accreditation	XRF (fusion)	
09	67,321	0,018	-0,855	67,334	67,308	ISO 17025	XRF (fusion)	
10	66,613	0,000	-2,090	66,613	66,613	ISO 17025	XRF (fusion)	
12	68,025	0,078	0,374	68,080	67,970	no accreditation	XRF (fusion)	
13	68,800	0,424	1,726	69,100	68,500	ISO 17025	XRF (fusion)	
17	67,575	0,035	-0,412	67,550	67,600	no accreditation	other	wet analysis
18	67,385	0,007	-0,743	67,380	67,390	no accreditation	XRF (fusion)	
19	67,778	0,011	-0,058	67,785	67,770	no accreditation	XRF (fusion)	
20	67,361	0,143	-0,785	67,260	67,462	no accreditation	XRF (fusion)	
21	67,916	0,098	0,184	67,985	67,847	no accreditation	XRF (fusion)	
22	67,852	0,083	0,073	67,911	67,794	no accreditation	XRF (fusion)	
23	66,455	0,092	-2,366	66,520	66,390	ISO 17025	XRF (fusion)	
24	66,398	0,221	-2,466	66,242	66,554	no accreditation	XRF (fusion)	
25	64,900	0,028	-5,080	64,920	64,880	no accreditation	XRF (fusion)	
26	67,145	0,035	-1,162	67,120	67,170	no accreditation	XRF (fusion)	
27	68,245	0,019	0,759	68,232	68,259	ISO 17025	XRF (fusion)	
28	67,808	0,004	-0,006	67,805	67,810	ISO 17025	XRF (fusion)	
29	67,665	0,042	-0,254	67,695	67,636	ISO 17025	XRF (Pellet) info only	
30	67,243	0,210	-0,990	67,095	67,392	ISO 17025	XRF (fusion)	
31	68,635	0,035	1,438	68,660	68,610	no accreditation	XRF (fusion)	
32	67,580	0,014	-0,403	67,570	67,590	ISO 17025	XRF (fusion)	
33	68,947	0,111	1,984	69,026	68,869	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 128**	**Reprod. s.d.**	**0,007 % TM**
Measurand:	**TiO2**	**Repeat. s.d**	**0,001 % TM**
Mean ± U(Mean):	**0,017 ± 0,004 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**14**	**Range of tolerance:**	**0,003 - 0,032 % TM (|z-score| <= 2,000)**
Assigned value	**0,017 % TM (Empirical value)**	**Target s.d.**	**0,007 % TM (Empirical value)**



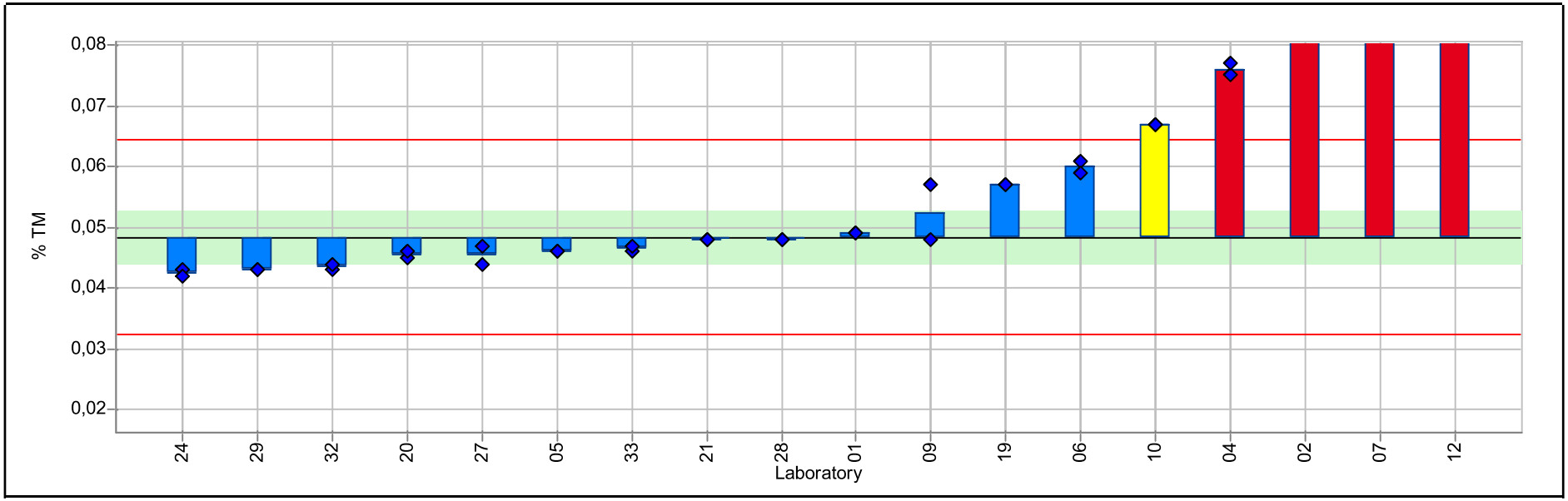
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,013	0,001	-0,661	0,012	0,013	ISO 17025	XRF (fusion)	
02	0,080	0,000	8,385	0,080	0,080	no accreditation	XRF (fusion)	
04	0,018	0,001	0,009	0,018	0,017	no accreditation	XRF (fusion)	
05				<0,100	<0,100	ISO 17025	XRF (fusion)	
06	0,007	0,002	-1,465	0,005	0,008	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
09				<0,100	<0,100	ISO 17025	XRF (fusion)	
10	0,030	0,000	1,684	0,030	0,030	ISO 17025	XRF (fusion)	
12	0,100	0,000	11,065	0,100	0,100	no accreditation	XRF (fusion)	
13	0,013	0,001	-0,661	0,013	0,012	ISO 17025	XRF (fusion)	
18	0,030	0,000	1,684	0,030	0,030	no accreditation	XRF (fusion)	
19	0,041	0,014	3,158	0,031	0,051	no accreditation	XRF (fusion)	
20	0,013	0,002	-0,661	0,014	0,011	no accreditation	XRF (fusion)	
21	0,017	0,001	-0,058	0,016	0,018	no accreditation	XRF (fusion)	
25	0,090	0,000	9,725	0,090	0,090	no accreditation	XRF (fusion)	
26	0,090	0,000	9,725	0,090	0,090	no accreditation	XRF (fusion)	
27	0,014	0,000	-0,460	0,014	0,014	ISO 17025	XRF (fusion)	
28	0,013	0,001	-0,527	0,013	0,014	ISO 17025	XRF (fusion)	
29	0,021	0,001	0,545	0,021	0,022	ISO 17025	XRF (Pellet) info only	
31	0,030	0,000	1,684	0,030	0,030	no accreditation	XRF (fusion)	
32	0,014	0,004	-0,460	0,017	0,011	ISO 17025	XRF (fusion)	
33	0,011	0,000	-0,862	0,011	0,011	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 128**	**Reprod. s.d.**	**0,008 % TM**
Measurand:	**SrO**	**Repeat. s.d**	**0,001 % TM**
Mean ± U(Mean):	**0,048 ± 0,004 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**14**	**Range of tolerance:**	**0,032 - 0,065 % TM (|z-score| <= 2,000)**
Assigned value	**0,048 % TM (Empirical value)**	**Target s.d.**	**0,008 % TM (Empirical value)**



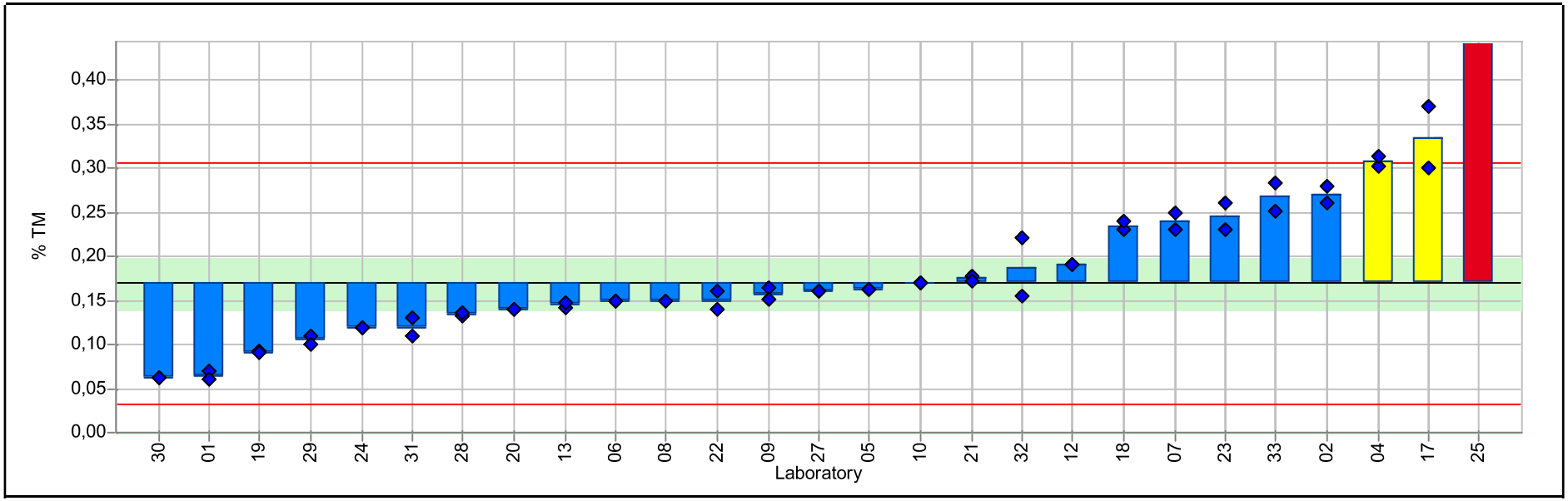
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,049	0,000	0,073	0,049	0,049	ISO 17025	XRF (fusion)	
02	0,110	0,000	7,652	0,110	0,110	no accreditation	XRF (fusion)	
04	0,076	0,001	3,428	0,075	0,077	no accreditation	XRF (fusion)	
05	0,046	0,000	-0,300	0,046	0,046	no accreditation	ICP-OES	
06	0,060	0,001	1,440	0,061	0,059	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	0,172	0,003	15,355	0,170	0,174	ISO 17025	XRF (fusion)	
09	0,053	0,006	0,508	0,048	0,057	ISO 17025	ICP-OES	
10	0,067	0,000	2,309	0,067	0,067	ISO 17025	XRF (fusion)	
12	0,190	0,000	17,592	0,190	0,190	no accreditation	XRF (fusion)	
19	0,057	0,000	1,067	0,057	0,057	no accreditation	XRF (fusion)	
20	0,045	0,001	-0,362	0,045	0,046	no accreditation	XRF (fusion)	
21	0,048	0,000	-0,051	0,048	0,048	no accreditation	Standardless info	
24	0,042	0,001	-0,735	0,043	0,042	no accreditation	XRF (fusion)	
27	0,045	0,002	-0,362	0,047	0,044	ISO 17025	XRF (fusion)	
28	0,048	0,000	-0,051	0,048	0,048	ISO 17025	XRF (fusion)	
29	0,043	0,000	-0,673	0,043	0,043	ISO 17025	XRF (fusion)	
32	0,043	0,001	-0,610	0,043	0,044	ISO 17025	Standardless info	
33	0,046	0,001	-0,238	0,046	0,047	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 128**	**Reprod. s.d.**	**0,069 % TM**
Measurand:	**Loss on Ignition**	**Repeat. s.d**	**0,009 % TM**
Mean ± U(Mean):	**0,170 ± 0,029 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**22**	**Range of tolerance:**	**0,032 - 0,307 % TM (|z-score| <= 2,000)**
Assigned value	**0,170 % TM (Empirical value)**	**Target s.d.**	**0,069 % TM (Empirical value)**



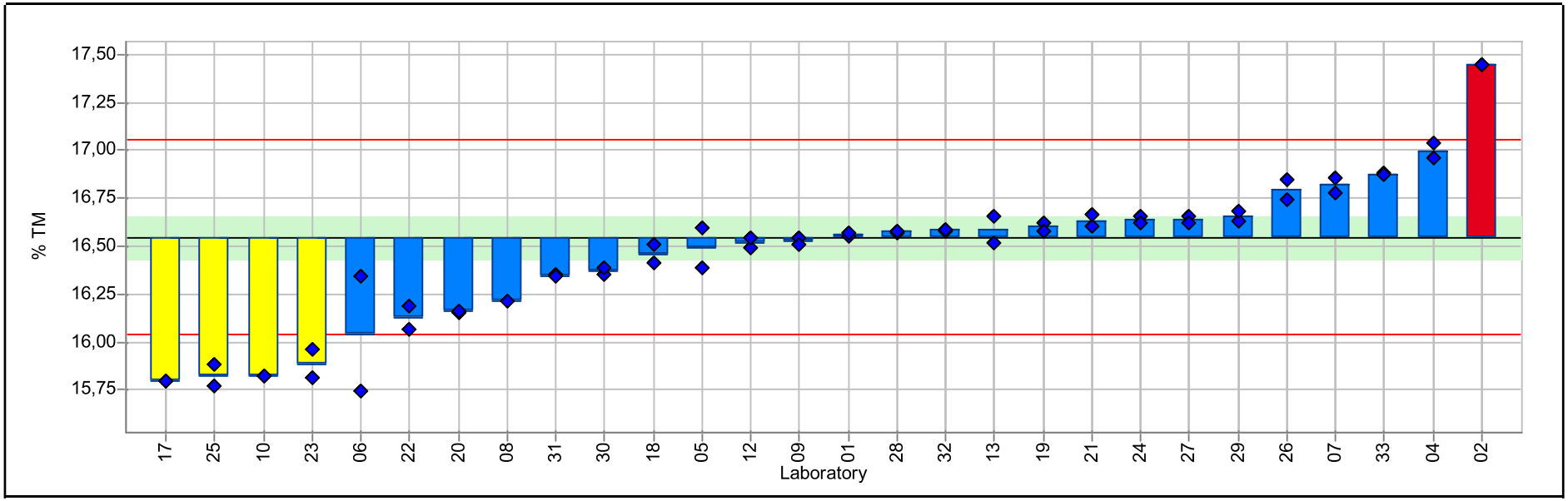
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,065	0,007	-1,523	0,070	0,060	ISO 17025	1h@950°C	
02	0,270	0,014	1,463	0,260	0,280	no accreditation	1h@950°C	
04	0,308	0,007	2,017	0,303	0,313	no accreditation	1h@950°C	
05	0,163	0,000	-0,096	0,163	0,163	ISO 17025	1h@950°C	
06	0,150	0,000	-0,285	0,150	0,150	no accreditation	1h@950°C	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	0,240	0,014	1,026	0,250	0,230	ISO 17025	1h@950°C	
08	0,150		-0,285	0,150		no accreditation	1h@950°C	
09	0,158	0,009	-0,176	0,164	0,151	ISO 17025	1h@950°C	
10	0,170	0,000	0,006	0,170	0,170	ISO 17025	1h@950°C	
12	0,190	0,000	0,298	0,190	0,190	no accreditation	1h@950°C	
13	0,145	0,004	-0,358	0,142	0,148	ISO 17025	1h@950°C	
17	0,335	0,049	2,410	0,300	0,370	no accreditation	1h@950°C	
18	0,235	0,007	0,953	0,230	0,240	no accreditation	1h@950°C	
19	0,091	0,001	-1,144	0,092	0,090	no accreditation	1h@950°C	
20	0,140	0,000	-0,431	0,140	0,140	no accreditation	1h@950°C	
21	0,175	0,004	0,079	0,178	0,172	no accreditation	1h@950°C	
22	0,150	0,014	-0,285	0,160	0,140	no accreditation	1h@950°C	
23	0,245	0,021	1,099	0,230	0,260	ISO 17025	1h@950°C	
24	0,120	0,000	-0,722	0,120	0,120	no accreditation	1h@950°C	
25	0,610	0,000	6,417	0,610	0,610	no accreditation	1h@950°C	
27	0,160	0,000	-0,139	0,160	0,160	ISO 17025	1h@950°C	
28	0,135	0,003	-0,503	0,133	0,137	ISO 17025	1h@950°C	
29	0,105	0,007	-0,940	0,110	0,100	ISO 17025	1h@950°C	
30	0,062	0,000	-1,567	0,062	0,062	ISO 17025	1h@950°C	
31	0,120	0,014	-0,722	0,130	0,110	no accreditation	1h@950°C	
32	0,188	0,047	0,269	0,155	0,221	ISO 17025	1h@950°C	
33	0,267	0,022	1,427	0,252	0,283	no accreditation	1h@950°C	

RV128 (Feldspar)

Sample:	**FLX-CRM 129**	**Reprod. s.d.**	**0,255 % TM**
Measurand:	**Al2O3**	**Repeat. s.d**	**0,044 % TM**
Mean ± U(Mean):	**16,548 ± 0,108 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**22**	**Range of tolerance:**	**16,038 - 17,059 % TM (|z-score| <= 2,000)**
Assigned value	**16,548 % TM (Empirical value)**	**Target s.d.**	**0,255 % TM (Empirical value)**



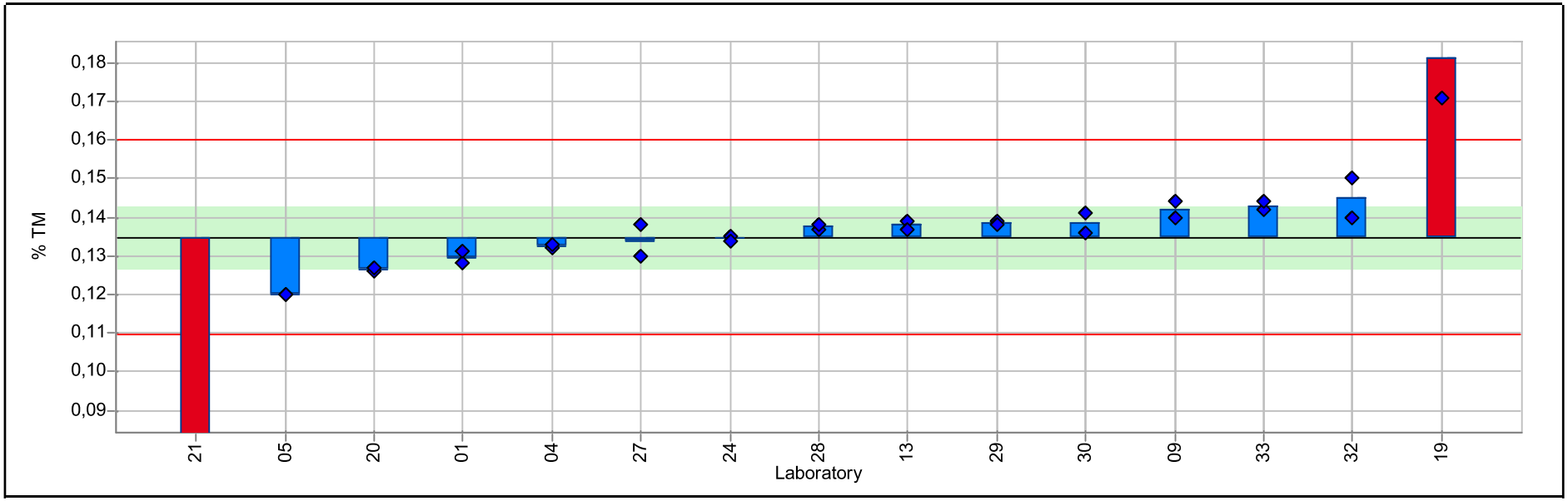
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	16,560	0,008	0,046	16,554	16,566	ISO 17025	XRF (fusion)	
02	17,450	0,000	3,534	17,450	17,450	no accreditation	XRF (fusion)	
04	16,998	0,054	1,763	16,960	17,036	no accreditation	XRF (fusion)	
05	16,488	0,147	-0,236	16,592	16,384	ISO 17025	XRF (fusion)	
06	16,043	0,420	-1,979	15,746	16,340	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	16,820	0,057	1,065	16,780	16,860	ISO 17025	XRF (fusion)	
08	16,210		-1,325	16,210		no accreditation	XRF (fusion)	
09	16,529	0,026	-0,073	16,548	16,511	ISO 17025	XRF (fusion)	
10	15,827	0,000	-2,826	15,827	15,827	ISO 17025	XRF (fusion)	
12	16,515	0,035	-0,130	16,490	16,540	no accreditation	XRF (fusion)	
13	16,590	0,099	0,164	16,660	16,520	ISO 17025	XRF (fusion)	
17	15,800	0,000	-2,932	15,800	15,800	no accreditation	other	wet analysis
18	16,460	0,071	-0,345	16,410	16,510	no accreditation	XRF (fusion)	
19	16,602	0,033	0,211	16,625	16,579	no accreditation	XRF (fusion)	
20	16,158	0,004	-1,529	16,155	16,161	no accreditation	XRF (fusion)	
21	16,633	0,045	0,333	16,601	16,665	no accreditation	XRF (fusion)	
22	16,124	0,086	-1,660	16,064	16,185	no accreditation	XRF (fusion)	
23	15,885	0,106	-2,598	15,810	15,960	ISO 17025	XRF (fusion)	
24	16,641	0,028	0,364	16,661	16,621	no accreditation	XRF (fusion)	
25	15,825	0,078	-2,834	15,880	15,770	no accreditation	XRF (fusion)	
26	16,795	0,078	0,967	16,740	16,850	no accreditation	XRF (fusion)	
27	16,642	0,027	0,368	16,661	16,623	ISO 17025	XRF (fusion)	
28	16,575	0,011	0,103	16,567	16,582	ISO 17025	XRF (fusion)	
29	16,655	0,035	0,419	16,630	16,680	ISO 17025	XRF (fusion)	
30	16,367	0,025	-0,710	16,349	16,385	ISO 17025	XRF (fusion)	
31	16,345	0,007	-0,796	16,350	16,340	no accreditation	XRF (fusion)	
32	16,585	0,007	0,144	16,580	16,590	ISO 17025	XRF (fusion)	
33	16,878	0,010	1,293	16,885	16,871	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 129**	**Reprod. s.d.**	**0,013 % TM**
Measurand:	**BaO**	**Repeat. s.d**	**0,002 % TM**
Mean ± U(Mean):	**0,135 ± 0,008 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**10**	**Range of tolerance:**	**0,110 - 0,160 % TM (|z-score| <= 2,000)**
Assigned value	**0,135 % TM (Empirical value)**	**Target s.d.**	**0,013 % TM (Empirical value)**



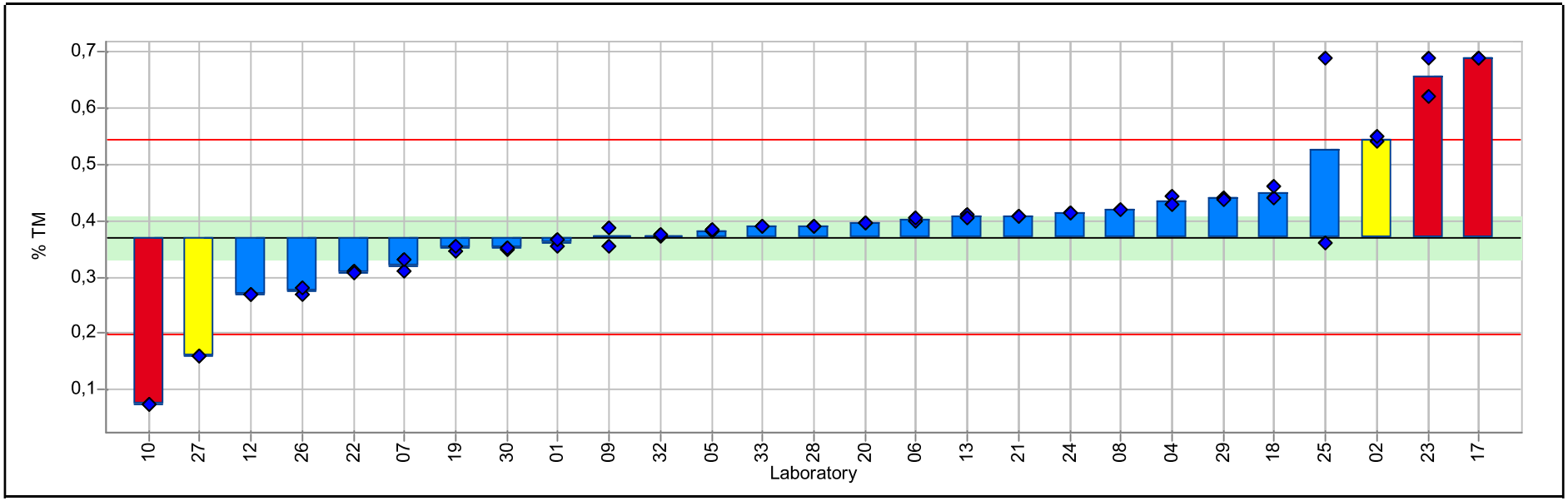
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,130	0,002	-0,424	0,128	0,131	ISO 17025	XRF (fusion)	
04	0,133	0,001	-0,187	0,132	0,133	no accreditation	XRF (fusion)	
05	0,120	0,000	-1,175	0,120	0,120	no accreditation	ICP-OES	
06				<0,010	<0,010	no accreditation	XRF (fusion)	
09	0,142	0,003	0,563	0,140	0,144	ISO 17025	ICP-OES	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
13	0,138	0,001	0,247	0,139	0,137	ISO 17025	XRF (fusion)	
19	0,181	0,014	3,644	0,191	0,171	no accreditation	XRF (fusion)	
20	0,127	0,001	-0,661	0,126	0,127	no accreditation	XRF (fusion)	
21	0,036	0,002	-7,850	0,037	0,034	no accreditation	Standardless info	
24	0,135	0,001	-0,029	0,135	0,134	no accreditation	XRF (fusion)	
27	0,134	0,006	-0,069	0,138	0,130	ISO 17025	XRF (fusion)	
28	0,138	0,001	0,208	0,137	0,138	ISO 17025	XRF (fusion)	
29	0,139	0,001	0,287	0,139	0,138	ISO 17025	XRF (Pellet) info only	
30	0,139	0,004	0,287	0,136	0,141	ISO 17025	XRF (fusion)	
32	0,145	0,007	0,800	0,150	0,140	ISO 17025	Standardless info	
33	0,143	0,001	0,642	0,142	0,144	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 129**	**Reprod. s.d.**	**0,087 % TM**
Measurand:	**CaO**	**Repeat. s.d**	**0,005 % TM**
Mean ± U(Mean):	**0,371 ± 0,038 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**21**	**Range of tolerance:**	**0,197 - 0,545 % TM (|z-score| <= 2,000)**
Assigned value	**0,371 % TM (Empirical value)**	**Target s.d.**	**0,087 % TM (Empirical value)**



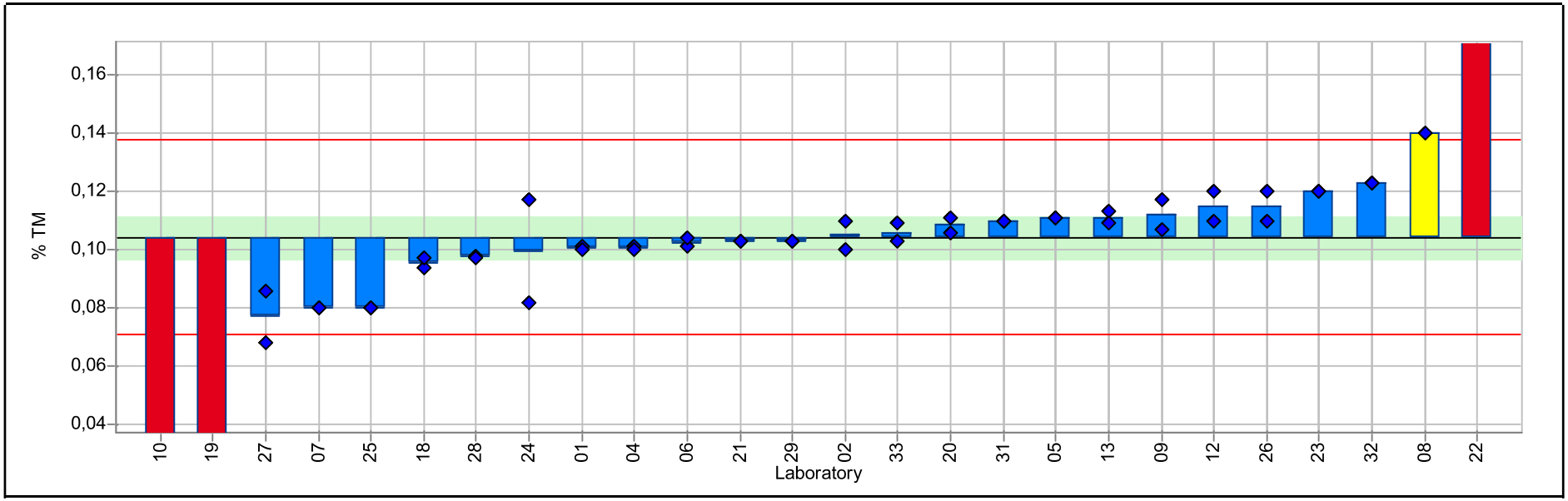
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,361	0,008	-0,109	0,356	0,367	ISO 17025	XRF (fusion)	
02	0,545	0,007	2,004	0,540	0,550	no accreditation	XRF (fusion)	
04	0,435	0,009	0,743	0,442	0,429	no accreditation	XRF (fusion)	
05	0,383	0,001	0,133	0,382	0,383	ISO 17025	XRF (fusion)	
06	0,402	0,004	0,357	0,399	0,405	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	0,320	0,014	-0,587	0,310	0,330	ISO 17025	XRF (fusion)	
08	0,420		0,565	0,420		no accreditation	XRF (fusion)	
09	0,371	0,023	0,000	0,355	0,387	ISO 17025	XRF (fusion)	
10	0,075	0,000	-3,408	0,075	0,075	ISO 17025	XRF (fusion)	
12	0,270	0,000	-1,163	0,270	0,270	no accreditation	XRF (fusion)	
13	0,407	0,004	0,421	0,410	0,405	ISO 17025	XRF (fusion)	
17	0,690	0,000	3,674	0,690	0,690	no accreditation	other	wet analysis
18	0,450	0,014	0,910	0,440	0,460	no accreditation	XRF (fusion)	
19	0,351	0,006	-0,230	0,347	0,355	no accreditation	XRF (fusion)	
20	0,397	0,001	0,294	0,397	0,396	no accreditation	XRF (fusion)	
21	0,409	0,000	0,438	0,409	0,409	no accreditation	XRF (fusion)	
22	0,308	0,001	-0,725	0,309	0,307	no accreditation	XRF (fusion)	
23	0,655	0,049	3,271	0,690	0,620	ISO 17025	XRF (fusion)	
24	0,414	0,001	0,496	0,415	0,413	no accreditation	XRF (fusion)	
25	0,525	0,233	1,774	0,360	0,690	no accreditation	XRF (fusion)	
26	0,275	0,007	-1,105	0,270	0,280	no accreditation	XRF (fusion)	
27	0,160	0,001	-2,435	0,160	0,159	ISO 17025	XRF (fusion)	
28	0,391	0,001	0,225	0,391	0,390	ISO 17025	XRF (fusion)	
29	0,439	0,001	0,783	0,440	0,438	ISO 17025	XRF (fusion)	
30	0,351	0,001	-0,230	0,350	0,352	ISO 17025	XRF (fusion)	
32	0,372	0,002	0,018	0,371	0,374	ISO 17025	XRF (fusion)	
33	0,390	0,000	0,219	0,390	0,390	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 129**	**Reprod. s.d.**	**0,017 % TM**
Measurand:	**Fe2O3**	**Repeat. s.d**	**0,004 % TM**
Mean ± U(Mean):	**0,104 ± 0,007 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**20**	**Range of tolerance:**	**0,071 - 0,138 % TM (|z-score| <= 2,000)**
Assigned value	**0,104 % TM (Empirical value)**	**Target s.d.**	**0,017 % TM (Empirical value)**



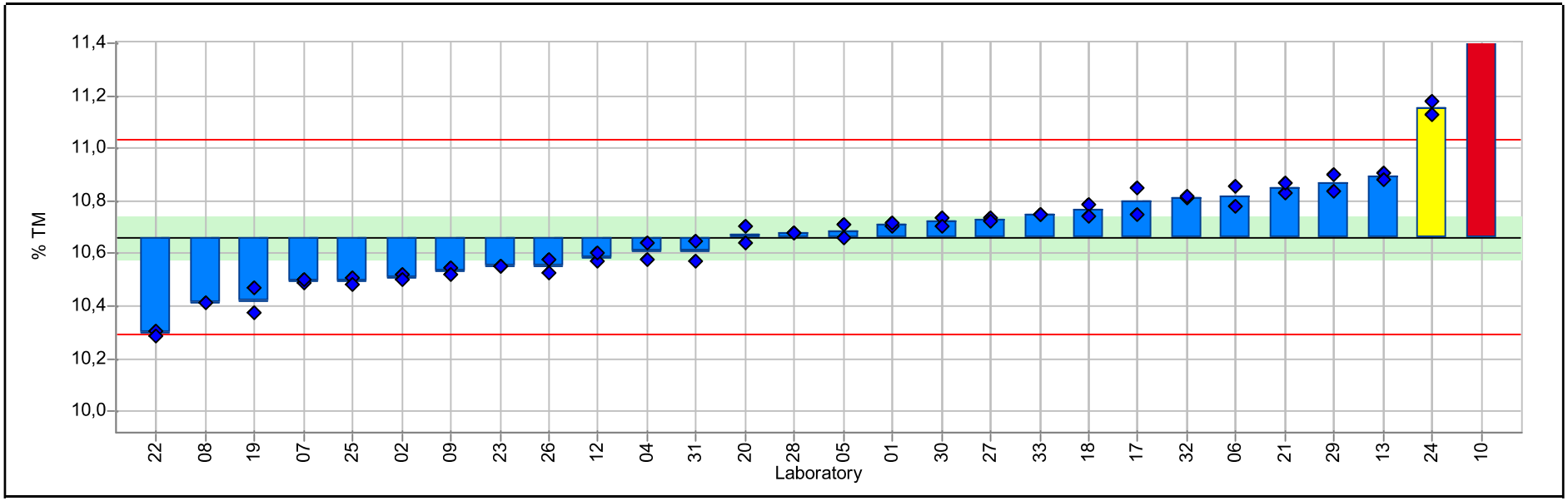
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,101	0,001	-0,228	0,101	0,100	ISO 17025	XRF (fusion)	
02	0,105	0,007	0,040	0,100	0,110	no accreditation	XRF (fusion)	
04	0,101	0,001	-0,228	0,101	0,100	no accreditation	XRF (fusion)	
05	0,111	0,000	0,397	0,111	0,111	ISO 17025	XRF (fusion)	
06	0,103	0,002	-0,109	0,101	0,104	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	0,080	0,000	-1,447	0,080	0,080	ISO 17025	XRF (fusion)	
08	0,140		2,121	0,140		no accreditation	XRF (fusion)	
09	0,112	0,007	0,456	0,117	0,107	ISO 17025	XRF (fusion)	
10	0,010	0,000	-5,609	0,010	0,010	ISO 17025	XRF (fusion)	
12	0,115	0,007	0,634	0,110	0,120	no accreditation	XRF (fusion)	
13	0,111	0,003	0,397	0,113	0,109	ISO 17025	XRF (fusion)	
18	0,096	0,002	-0,525	0,094	0,097	no accreditation	XRF (fusion)	
19	0,020	0,000	-5,014	0,020	0,020	no accreditation	XRF (fusion)	
20	0,108	0,004	0,248	0,106	0,111	no accreditation	XRF (fusion)	
21	0,103	0,000	-0,079	0,103	0,103	no accreditation	XRF (fusion)	
22	0,179	0,006	4,440	0,183	0,175	no accreditation	XRF (fusion)	
23	0,120	0,000	0,932	0,120	0,120	ISO 17025	XRF (fusion)	
24	0,100	0,025	-0,287	0,082	0,117	no accreditation	XRF (fusion)	
25	0,080	0,000	-1,447	0,080	0,080	no accreditation	XRF (fusion)	
26	0,115	0,007	0,634	0,120	0,110	no accreditation	XRF (fusion)	
27	0,077	0,013	-1,625	0,086	0,068	ISO 17025	XRF (fusion)	
28	0,098	0,001	-0,406	0,098	0,097	ISO 17025	XRF (fusion)	
29	0,103	0,000	-0,079	0,103	0,103	ISO 17025	XRF (Pellet) info only	
31	0,110	0,000	0,337	0,110	0,110	no accreditation	XRF (fusion)	
32	0,123	0,000	1,110	0,123	0,123	ISO 17025	XRF (fusion)	
33	0,106	0,004	0,099	0,109	0,103	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 129**	**Reprod. s.d.**	**0,186 % TM**
Measurand:	**K2O**	**Repeat. s.d**	**0,033 % TM**
Mean ± U(Mean):	**10,663 ± 0,079 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**22**	**Range of tolerance:**	**10,291 - 11,036 % TM (|z-score| <= 2,000)**
Assigned value	**10,663 % TM (Empirical value)**	**Target s.d.**	**0,186 % TM (Empirical value)**



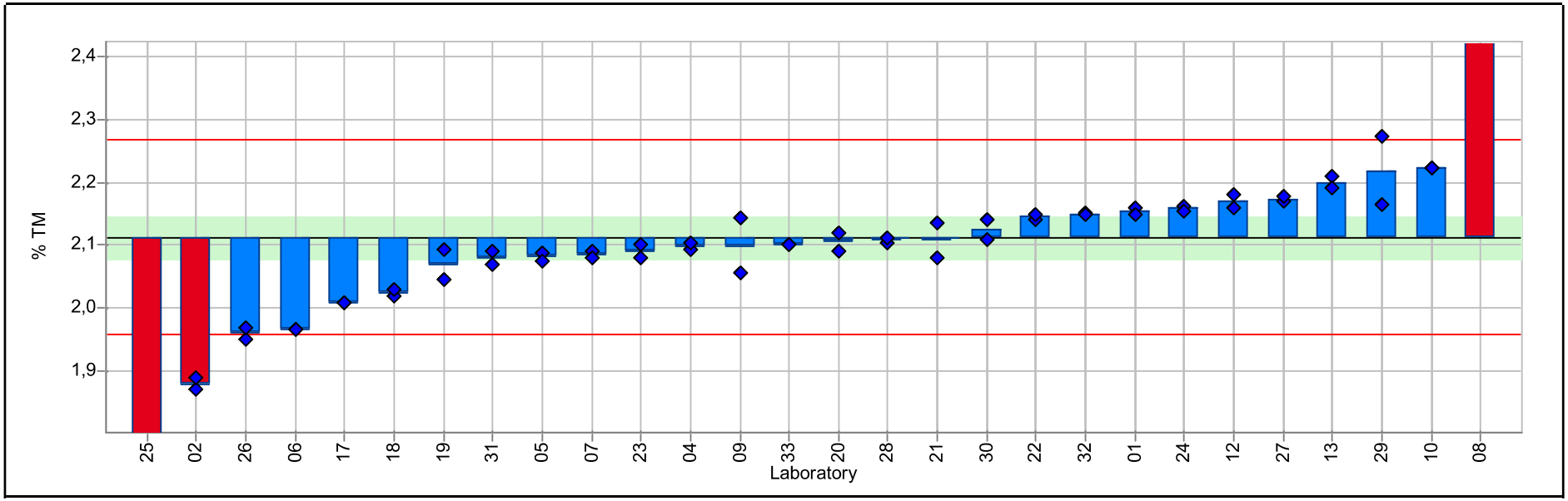
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	10,710	0,007	0,251	10,705	10,715	ISO 17025	XRF (fusion)	
02	10,510	0,014	-0,824	10,520	10,500	no accreditation	XRF (fusion)	
04	10,610	0,045	-0,286	10,578	10,642	no accreditation	XRF (fusion)	
05	10,689	0,036	0,135	10,663	10,714	ISO 17025	XRF (fusion)	
06	10,817	0,055	0,826	10,778	10,856	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	10,495	0,007	-0,904	10,490	10,500	ISO 17025	XRF (fusion)	
08	10,410		-1,361	10,410		no accreditation	XRF (fusion)	
09	10,532	0,018	-0,706	10,545	10,519	ISO 17025	XRF (fusion)	
10	11,920	0,000	6,752	11,920	11,920	no accreditation	other	AAS
12	10,585	0,021	-0,421	10,570	10,600	no accreditation	XRF (fusion)	
13	10,895	0,021	1,245	10,910	10,880	ISO 17025	XRF (fusion)	
17	10,800	0,071	0,734	10,750	10,850	no accreditation	other	wet analysis
18	10,765	0,035	0,546	10,790	10,740	no accreditation	XRF (fusion)	
19	10,422	0,071	-1,297	10,372	10,472	no accreditation	XRF (fusion)	
20	10,674	0,047	0,055	10,707	10,640	no accreditation	XRF (fusion)	
21	10,851	0,026	1,011	10,833	10,870	no accreditation	XRF (fusion)	
22	10,297	0,013	-1,965	10,307	10,288	no accreditation	XRF (fusion)	
23	10,550	0,000	-0,609	10,550	10,550	ISO 17025	XRF (fusion)	
24	11,154	0,033	2,636	11,177	11,131	no accreditation	XRF (fusion)	
25	10,495	0,021	-0,904	10,510	10,480	no accreditation	XRF (fusion)	
26	10,555	0,035	-0,582	10,530	10,580	no accreditation	XRF (fusion)	
27	10,730	0,007	0,358	10,735	10,725	ISO 17025	XRF (fusion)	
28	10,680	0,003	0,090	10,678	10,682	ISO 17025	XRF (fusion)	
29	10,868	0,045	1,100	10,900	10,836	ISO 17025	XRF (fusion)	
30	10,720	0,021	0,307	10,735	10,706	ISO 17025	XRF (fusion)	
31	10,610	0,057	-0,286	10,570	10,650	no accreditation	XRF (fusion)	
32	10,815	0,007	0,815	10,810	10,820	ISO 17025	XRF (fusion)	
33	10,750	0,000	0,466	10,750	10,750	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 129**	**Reprod. s.d.**	**0,078 % TM**
Measurand:	**Na2O**	**Repeat. s.d**	**0,018 % TM**
Mean ± U(Mean):	**2,113 ± 0,033 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**21**	**Range of tolerance:**	**1,958 - 2,269 % TM (|z-score| <= 2,000)**
Assigned value	**2,113 % TM (Empirical value)**	**Target s.d.**	**0,078 % TM (Empirical value)**



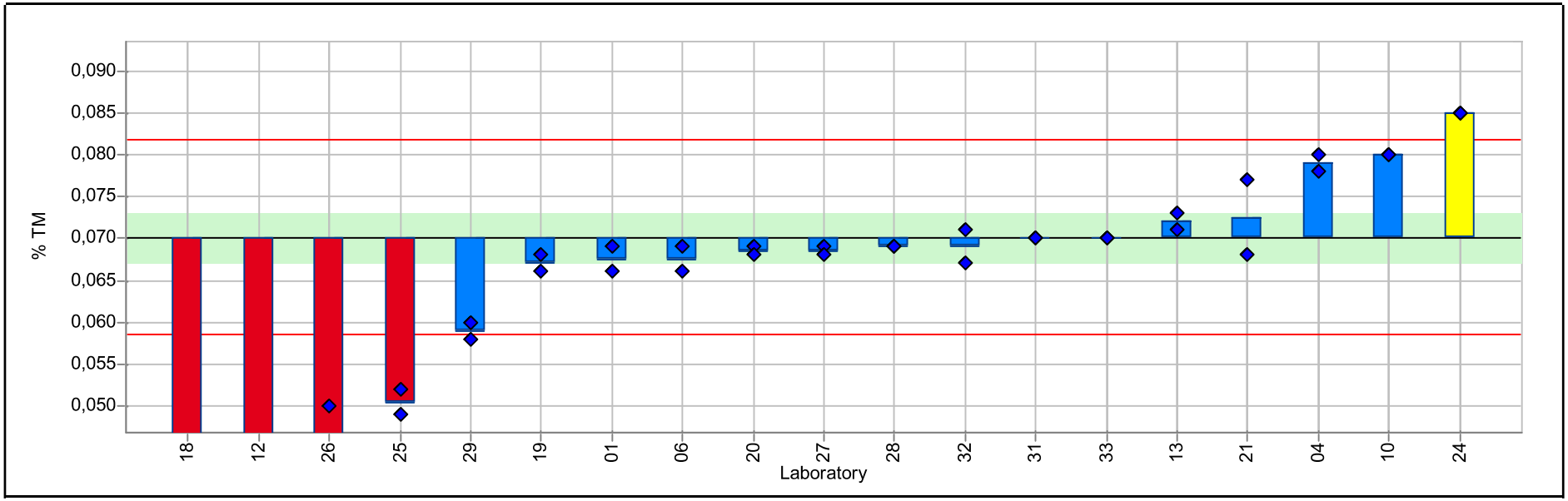
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	2,154	0,006	0,531	2,159	2,150	ISO 17025	XRF (fusion)	
02	1,880	0,014	-3,000	1,870	1,890	no accreditation	XRF (fusion)	
04	2,098	0,007	-0,196	2,093	2,103	no accreditation	XRF (fusion)	
05	2,082	0,010	-0,401	2,089	2,075	ISO 17025	ICP-OES	
06	1,966	0,001	-1,887	1,967	1,966	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	2,085	0,007	-0,363	2,090	2,080	ISO 17025	XRF (fusion)	
08	2,560		5,748	2,560		no accreditation	XRF (fusion)	
09	2,099	0,062	-0,176	2,056	2,143	ISO 17025	XRF (fusion)	
10	2,224	0,000	1,425	2,224	2,224	no accreditation	other	AAS
12	2,170	0,014	0,731	2,160	2,180	no accreditation	XRF (fusion)	
13	2,200	0,014	1,117	2,210	2,190	ISO 17025	XRF (fusion)	
17	2,010	0,000	-1,328	2,010	2,010	no accreditation	other	wet analysis
18	2,025	0,007	-1,135	2,020	2,030	no accreditation	XRF (Pellet) info only	
19	2,071	0,033	-0,549	2,094	2,047	no accreditation	XRF (fusion)	
20	2,106	0,021	-0,093	2,121	2,091	no accreditation	XRF (fusion)	
21	2,109	0,039	-0,060	2,081	2,136	no accreditation	XRF (fusion)	
22	2,146	0,006	0,422	2,142	2,150	no accreditation	XRF (fusion)	
23	2,090	0,014	-0,298	2,080	2,100	ISO 17025	XRF (fusion)	
24	2,159	0,006	0,589	2,163	2,155	no accreditation	XRF (fusion)	
25	1,750	0,028	-4,673	1,730	1,770	no accreditation	XRF (fusion)	
26	1,960	0,014	-1,971	1,950	1,970	no accreditation	XRF (fusion)	
27	2,173	0,006	0,776	2,169	2,178	ISO 17025	XRF (fusion)	
28	2,108	0,004	-0,067	2,105	2,111	ISO 17025	XRF (fusion)	
29	2,219	0,075	1,361	2,166	2,272	ISO 17025	XRF (fusion)	
30	2,125	0,022	0,145	2,140	2,109	ISO 17025	XRF (fusion)	
31	2,080	0,014	-0,427	2,070	2,090	no accreditation	XRF (fusion)	
32	2,149	0,002	0,467	2,151	2,148	ISO 17025	XRF (fusion)	
33	2,100	0,000	-0,170	2,100	2,100	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 129**	**Reprod. s.d.**	**0,006 % TM**
Measurand:	**P2O5**	**Repeat. s.d**	**0,001 % TM**
Mean ± U(Mean):	**0,070 ± 0,003 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**16**	**Range of tolerance:**	**0,058 - 0,082 % TM (|z-score| <= 2,000)**
Assigned value	**0,070 % TM (Empirical value)**	**Target s.d.**	**0,006 % TM (Empirical value)**



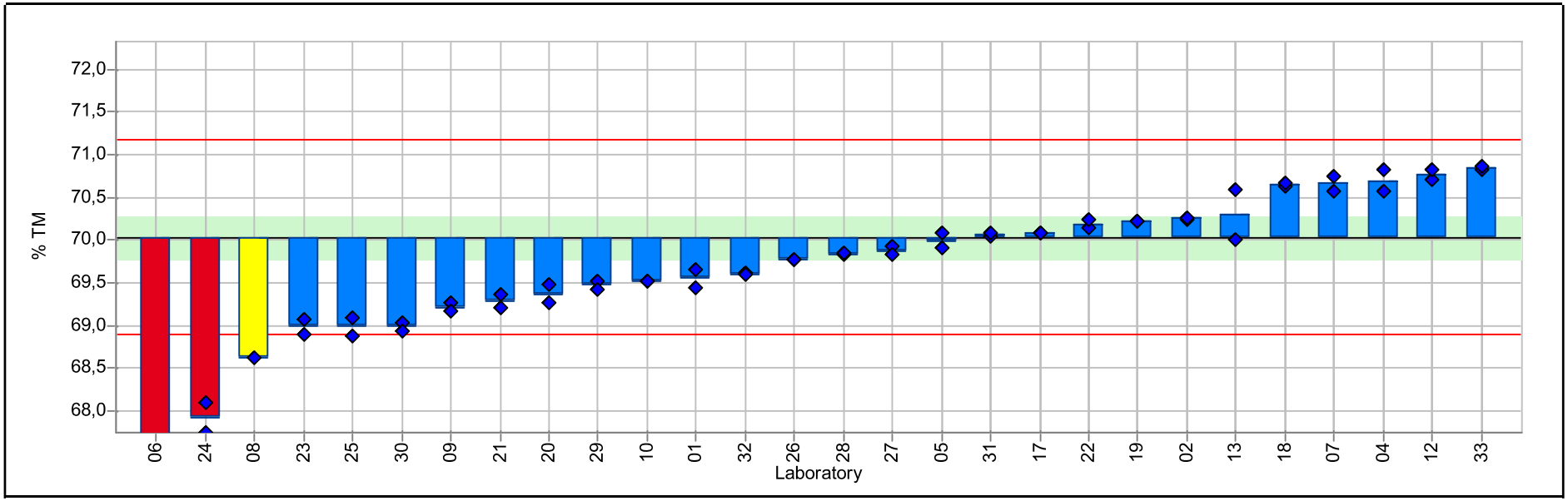
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,068	0,002	-0,457	0,066	0,069	ISO 17025	XRF (fusion)	
04	0,079	0,001	1,514	0,078	0,080	no accreditation	XRF (fusion)	
05				<0,100	<0,100	ISO 17025	XRF (fusion)	
06	0,068	0,002	-0,457	0,066	0,069	no accreditation	XRF (fusion)	
09				<0,100	<0,100	ISO 17025	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
10	0,080	0,000	1,686	0,080	0,080	ISO 17025	XRF (fusion)	
12	0,020	0,000	-8,600	0,020	0,020	no accreditation	XRF (fusion)	
13	0,072	0,001	0,314	0,073	0,071	ISO 17025	XRF (fusion)	
18	0,013	0,001	-9,886	0,013	0,012	no accreditation	XRF (fusion)	
19	0,067	0,001	-0,543	0,066	0,068	no accreditation	XRF (fusion)	
20	0,069	0,001	-0,286	0,069	0,068	no accreditation	XRF (fusion)	
21	0,073	0,006	0,400	0,068	0,077	no accreditation	XRF (fusion)	
24	0,085	0,000	2,543	0,085	0,085	no accreditation	XRF (fusion)	
25	0,051	0,002	-3,371	0,052	0,049	no accreditation	XRF (fusion)	
26	0,045	0,007	-4,314	0,050	0,040	no accreditation	XRF (fusion)	
27	0,069	0,001	-0,286	0,069	0,068	ISO 17025	XRF (fusion)	
28	0,069	0,000	-0,200	0,069	0,069	ISO 17025	XRF (fusion)	
29	0,059	0,001	-1,914	0,058	0,060	ISO 17025	XRF (fusion)	
31	0,070	0,000	-0,029	0,070	0,070	no accreditation	XRF (fusion)	
32	0,069	0,003	-0,200	0,067	0,071	ISO 17025	XRF (fusion)	
33	0,070	0,000	-0,029	0,070	0,070	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 129**	**Reprod. s.d.**	**0,573 % TM**
Measurand:	**SiO2**	**Repeat. s.d**	**0,089 % TM**
Mean ± U(Mean):	**70,037 ± 0,248 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**21**	**Range of tolerance:**	**68,891 - 71,182 % TM (|z-score| <= 2,000)**
Assigned value	**70,037 % TM (Empirical value)**	**Target s.d.**	**0,573 % TM (Empirical value)**



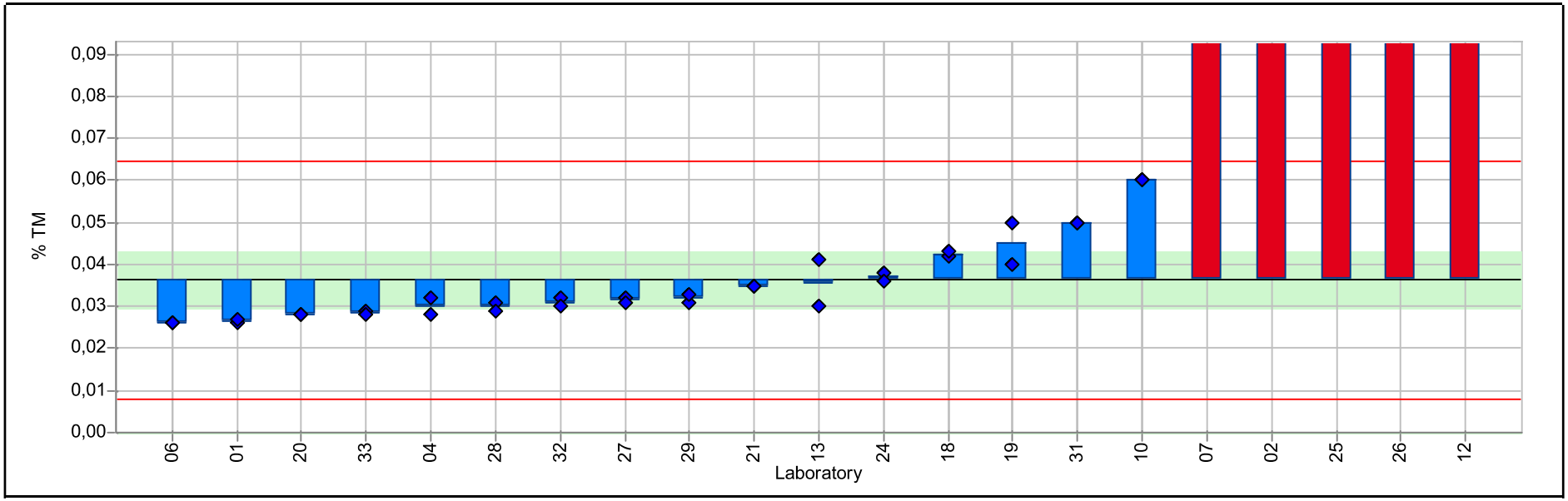
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	69,556	0,151	-0,839	69,663	69,450	ISO 17025	XRF (fusion)	
02	70,255	0,007	0,381	70,250	70,260	no accreditation	XRF (fusion)	
04	70,691	0,178	1,142	70,817	70,565	no accreditation	XRF (fusion)	
05	69,991	0,120	-0,080	69,906	70,076	ISO 17025	XRF (fusion)	
06	66,234	0,136	-6,639	66,138	66,331	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	70,665	0,120	1,097	70,580	70,750	ISO 17025	XRF (fusion)	
08	68,620		-2,474	68,620		no accreditation	XRF (fusion)	
09	69,216	0,067	-1,432	69,264	69,169	ISO 17025	XRF (fusion)	
10	69,518	0,000	-0,906	69,518	69,518	ISO 17025	XRF (fusion)	
12	70,765	0,092	1,271	70,700	70,830	no accreditation	XRF (fusion)	
13	70,300	0,424	0,459	70,600	70,000	ISO 17025	XRF (fusion)	
17	70,085	0,007	0,084	70,090	70,080	no accreditation	other	wet analysis
18	70,650	0,028	1,071	70,630	70,670	no accreditation	XRF (fusion)	
19	70,218	0,005	0,315	70,221	70,214	no accreditation	XRF (fusion)	
20	69,373	0,145	-1,160	69,475	69,270	no accreditation	XRF (fusion)	
21	69,290	0,115	-1,304	69,371	69,209	no accreditation	XRF (fusion)	
22	70,189	0,068	0,266	70,141	70,237	no accreditation	XRF (fusion)	
23	68,985	0,134	-1,837	68,890	69,080	ISO 17025	XRF (fusion)	
24	67,922	0,241	-3,693	68,092	67,751	no accreditation	XRF (fusion)	
25	68,985	0,148	-1,837	69,090	68,880	no accreditation	XRF (fusion)	
26	69,780	0,000	-0,448	69,780	69,780	no accreditation	XRF (fusion)	
27	69,880	0,064	-0,274	69,925	69,835	ISO 17025	XRF (fusion)	
28	69,834	0,013	-0,354	69,825	69,843	ISO 17025	XRF (fusion)	
29	69,474	0,066	-0,984	69,520	69,427	ISO 17025	XRF (Pellet) info only	
30	68,989	0,069	-1,830	69,038	68,940	ISO 17025	XRF (fusion)	
31	70,070	0,028	0,058	70,050	70,090	no accreditation	XRF (fusion)	
32	69,605	0,007	-0,754	69,610	69,600	ISO 17025	XRF (fusion)	
33	70,843	0,018	1,408	70,830	70,856	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 129**	**Reprod. s.d.**	**0,014 % TM**
Measurand:	**TiO2**	**Repeat. s.d**	**0,001 % TM**
Mean ± U(Mean):	**0,036 ± 0,007 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**17**	**Range of tolerance:**	**0,008 - 0,065 % TM (|z-score| <= 2,000)**
Assigned value	**0,036 % TM (Empirical value)**	**Target s.d.**	**0,014 % TM (Empirical value)**



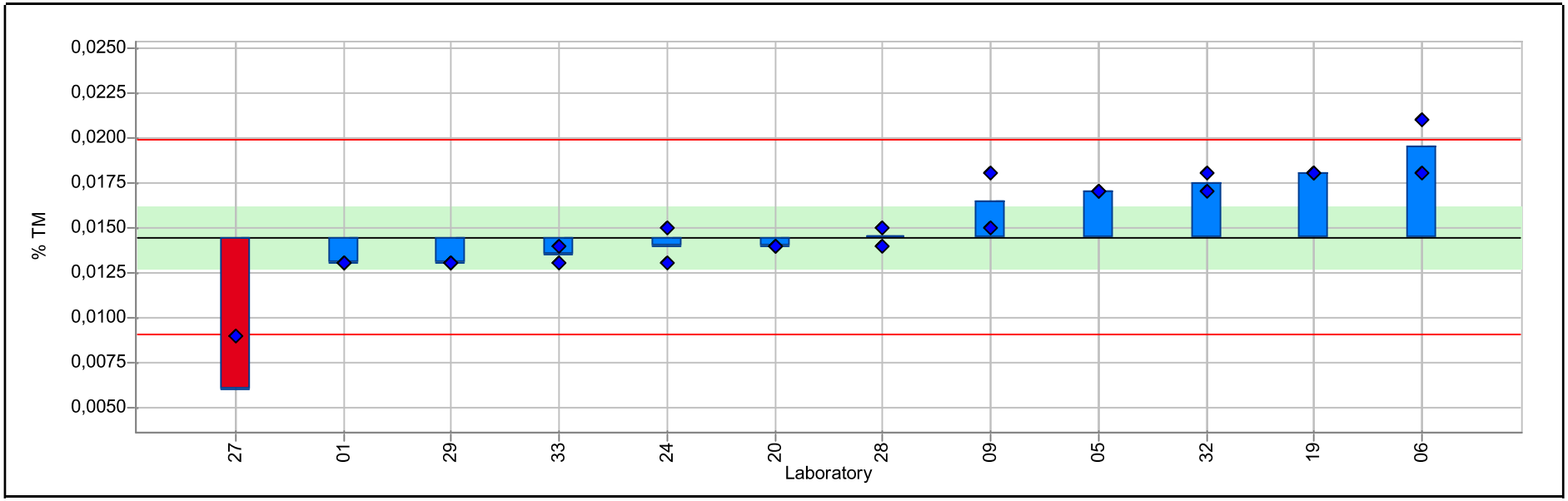
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,026	0,001	-0,697	0,026	0,027	ISO 17025	XRF (fusion)	
02	0,100	0,000	4,496	0,100	0,100	no accreditation	XRF (fusion)	
04	0,030	0,003	-0,450	0,032	0,028	no accreditation	XRF (fusion)	
05				<0,100	<0,100	ISO 17025	XRF (fusion)	
06	0,026	0,000	-0,733	0,026	0,026	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
07	0,099	0,001	4,390	0,098	0,099	ISO 17025	XRF (fusion)	
09				<0,100	<0,100	ISO 17025	XRF (fusion)	
10	0,060	0,000	1,670	0,060	0,060	ISO 17025	XRF (fusion)	
12	0,110	0,000	5,202	0,110	0,110	no accreditation	XRF (fusion)	
13	0,036	0,008	-0,061	0,041	0,030	ISO 17025	XRF (fusion)	
18	0,042	0,001	0,433	0,042	0,043	no accreditation	XRF (fusion)	
19	0,045	0,007	0,610	0,040	0,050	no accreditation	XRF (fusion)	
20	0,028	0,000	-0,591	0,028	0,028	no accreditation	XRF (fusion)	
21	0,035	0,000	-0,097	0,035	0,035	no accreditation	XRF (fusion)	
24	0,037	0,001	0,045	0,038	0,036	no accreditation	XRF (fusion)	
25	0,100	0,000	4,496	0,100	0,100	no accreditation	XRF (fusion)	
26	0,100	0,000	4,496	0,100	0,100	no accreditation	XRF (fusion)	
27	0,032	0,001	-0,344	0,032	0,031	ISO 17025	XRF (fusion)	
28	0,030	0,001	-0,450	0,031	0,029	ISO 17025	XRF (fusion)	
29	0,032	0,001	-0,309	0,031	0,033	ISO 17025	XRF (Pellet) info only	
31	0,050	0,000	0,963	0,050	0,050	no accreditation	XRF (fusion)	
32	0,031	0,001	-0,379	0,032	0,030	ISO 17025	XRF (fusion)	
33	0,029	0,001	-0,556	0,029	0,028	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 129**	**Reprod. s.d.**	**0,003 % TM**
Measurand:	**SrO**	**Repeat. s.d**	**0,001 % TM**
Mean ± U(Mean):	**0,014 ± 0,002 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**9**	**Range of tolerance:**	**0,009 - 0,020 % TM (|z-score| <= 2,000)**
Assigned value	**0,014 % TM (Empirical value)**	**Target s.d.**	**0,003 % TM (Empirical value)**



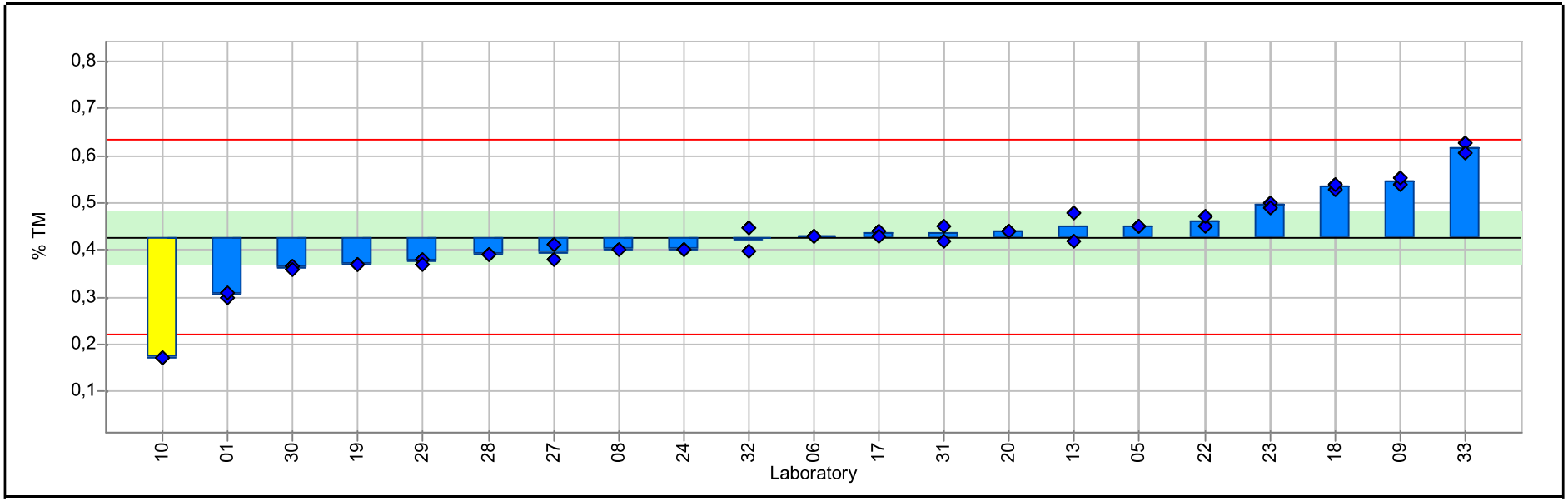
Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,013	0,000	-0,540	0,013	0,013	ISO 17025	XRF (fusion)	
05	0,017	0,000	0,932	0,017	0,017	no accreditation	ICP-OES	
06	0,020	0,002	1,852	0,018	0,021	no accreditation	XRF (fusion)	
09	0,017	0,002	0,748	0,015	0,018	ISO 17025	ICP-OES	
19	0,018	0,000	1,300	0,018	0,018	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
20	0,014	0,000	-0,172	0,014	0,014	no accreditation	XRF (fusion)	
24	0,014	0,001	-0,172	0,015	0,013	no accreditation	XRF (fusion)	
27	0,006	0,004	-3,116	0,009	0,003	ISO 17025	XRF (fusion)	
28	0,014	0,001	0,012	0,015	0,014	ISO 17025	XRF (fusion)	
29	0,013	0,000	-0,540	0,013	0,013	ISO 17025	XRF (fusion)	
32	0,018	0,001	1,116	0,018	0,017	ISO 17025	Standardless info	
33	0,013	0,001	-0,356	0,014	0,013	no accreditation	XRF (fusion)	

RV128 (Feldspar)

Sample:	**FLX-CRM 129**	**Reprod. s.d.**	**0,104 % TM**
Measurand:	**Loss on Ignition**	**Repeat. s.d**	**0,012 % TM**
Mean ± U(Mean):	**0,428 ± 0,053 % TM**	**Statistical method**	**Q/Hampel**
No. of laboratories:	**15**	**Range of tolerance:**	**0,220 - 0,635 % TM (|z-score| <= 2,000)**
Assigned value	**0,428 % TM (Empirical value)**	**Target s.d.**	**0,104 % TM (Empirical value)**



Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
01	0,305	0,007	-1,181	0,300	0,310	ISO 17025	1h@950°C	
05	0,452	0,000	0,235	0,452	0,452	ISO 17025	1h@950°C	
06	0,430	0,000	0,023	0,430	0,430	no accreditation	1h@950°C	
08	0,400		-0,266	0,400		no accreditation	1h@950°C	
09	0,546	0,011	1,137	0,538	0,553	ISO 17025	1h@950°C	

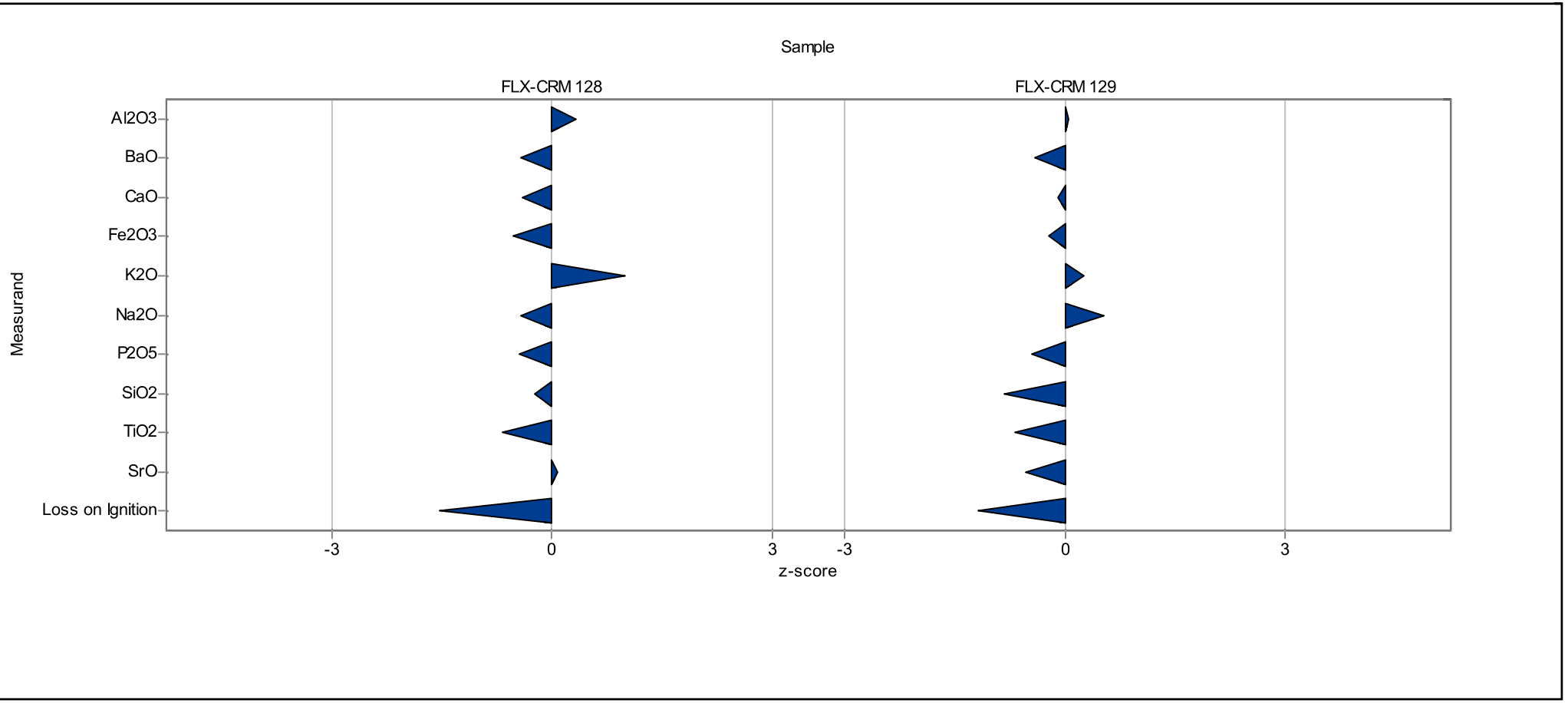
RV128 (Feldspar)

Lab code	Lab mean	s.d.	z-score	Conc. 1	Conc. 2	Accreditation	Analytical method	Comment
10	0,170	0,000	-2,482	0,170	0,170		1h@950°C	
13	0,450	0,042	0,216	0,480	0,420		1h@950°C	
17	0,435	0,007	0,072	0,440	0,430	no accreditation	1h@950°C	
18	0,535	0,007	1,035	0,530	0,540	no accreditation	1h@950°C	
19	0,370	0,000	-0,555	0,370	0,370	no accreditation	1h@950°C	
20	0,440	0,000	0,120	0,440	0,440	no accreditation	1h@950°C	
22	0,460	0,014	0,312	0,450	0,470	no accreditation	1h@950°C	
23	0,495	0,007	0,650	0,500	0,490	ISO 17025	1h@950°C	
24	0,400	0,000	-0,266	0,400	0,400	no accreditation	1h@950°C	
27	0,395	0,021	-0,314	0,410	0,380	ISO 17025	1h@950°C	
28	0,390	0,001	-0,367	0,389	0,390	ISO 17025	1h@950°C	
29	0,375	0,007	-0,507	0,380	0,370	ISO 17025	1h@950°C	
30	0,362	0,004	-0,627	0,365	0,360	ISO 17025	1h@950°C	
31	0,435	0,021	0,072	0,450	0,420	no accreditation	1h@950°C	
32	0,421	0,035	-0,059	0,446	0,397	ISO 17025	1h@950°C	
33	0,615	0,015	1,811	0,626	0,605	no accreditation	1h@950°C	

RV128 (Feldspar)

Laboratory chart of z-score

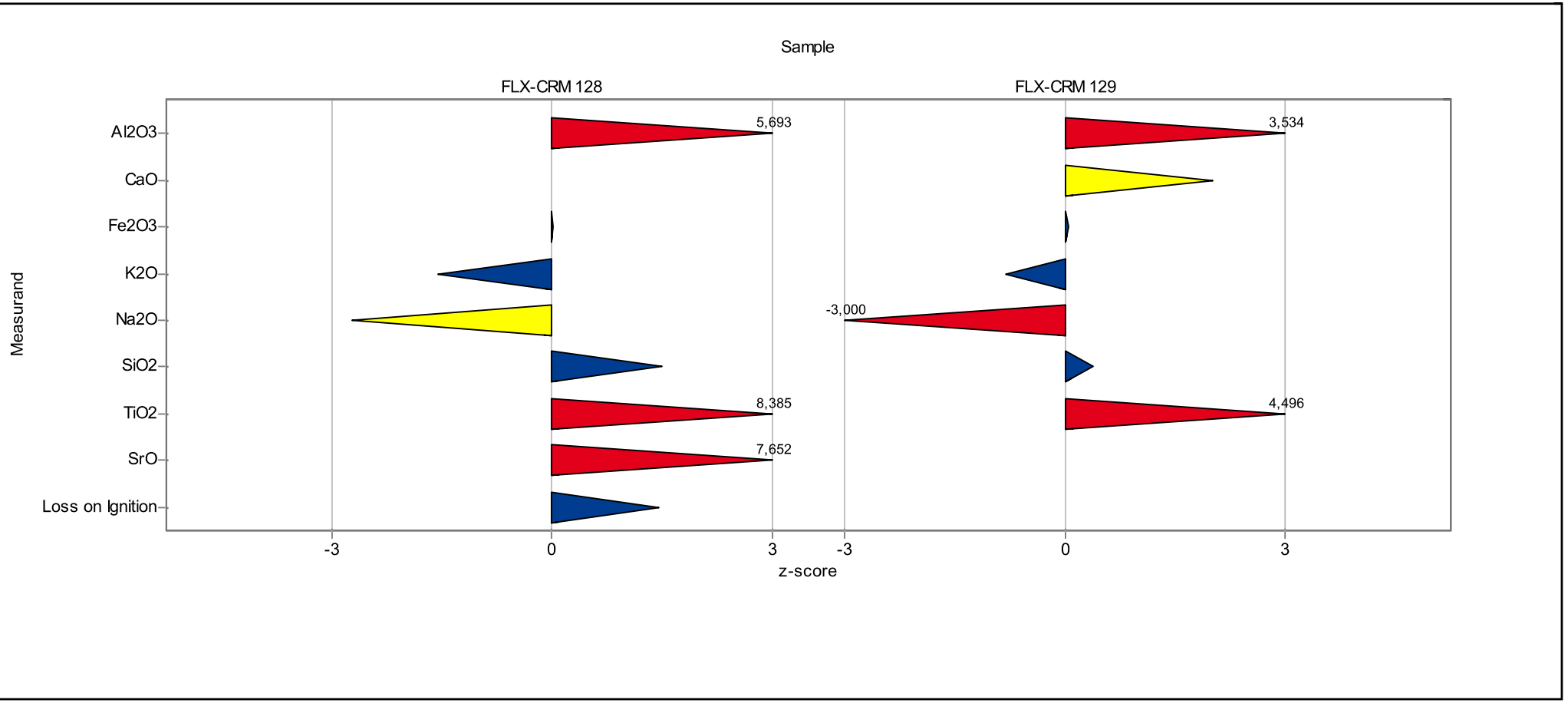
Laboratory: 01



RV128 (Feldspar)

Laboratory chart of z-score

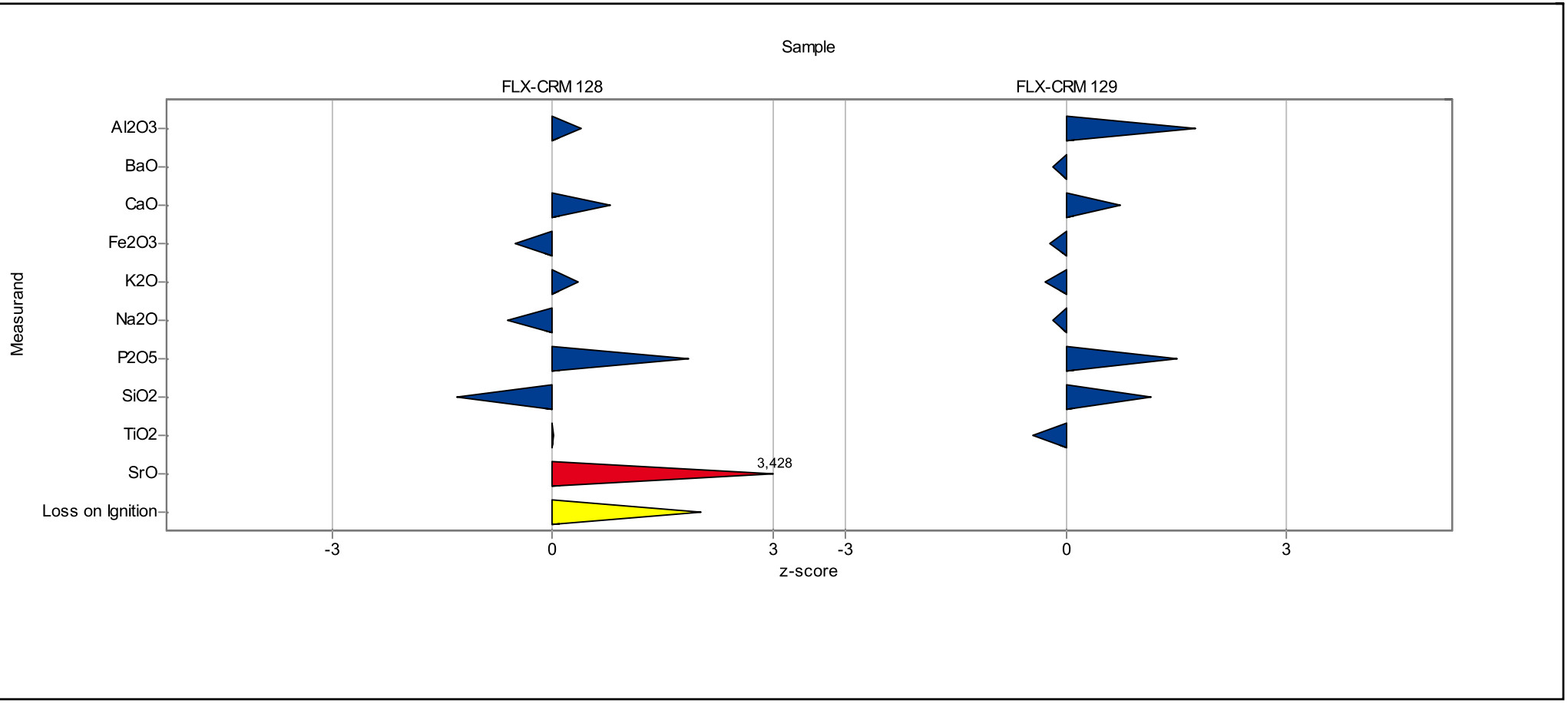
Laboratory: 02



RV128 (Feldspar)

Laboratory chart of z-score

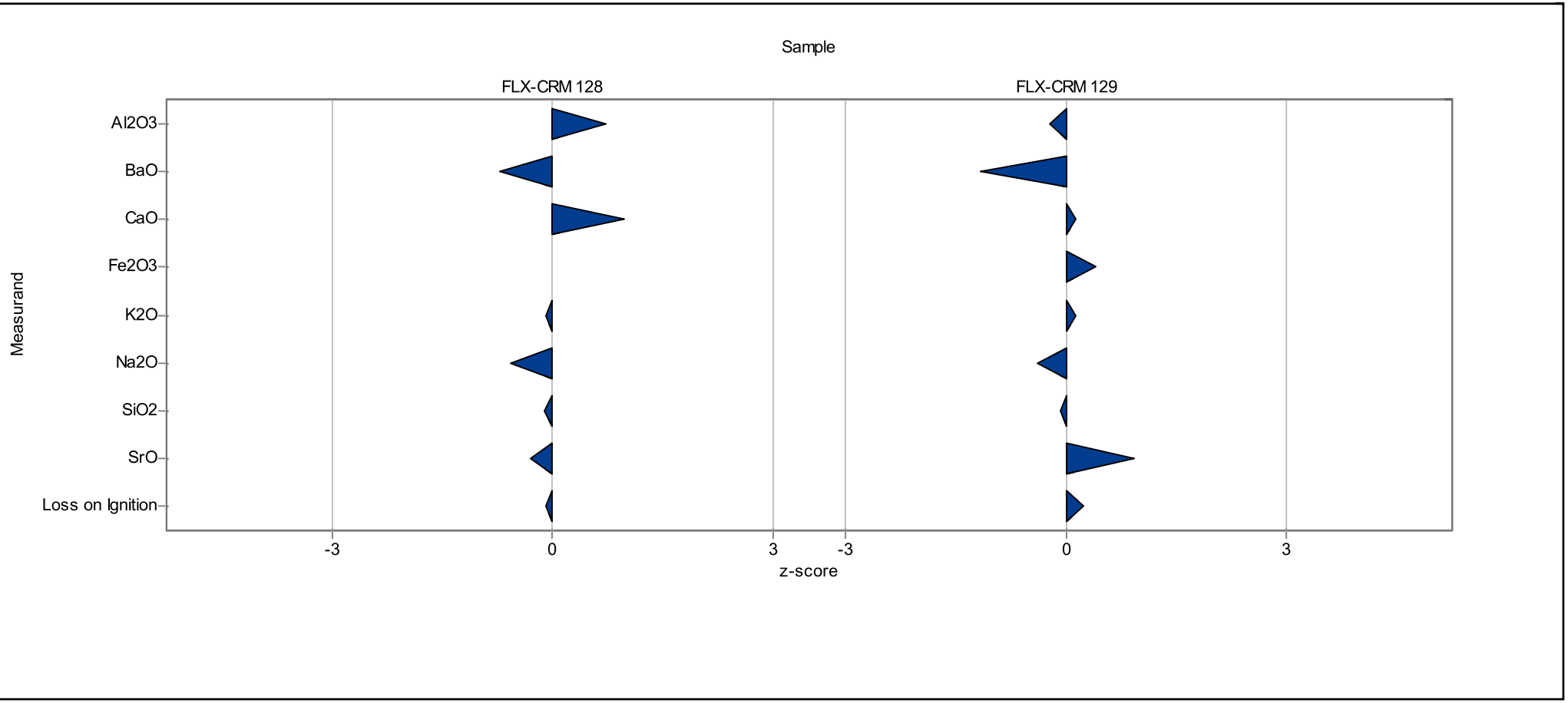
Laboratory: 04



RV128 (Feldspar)

Laboratory chart of z-score

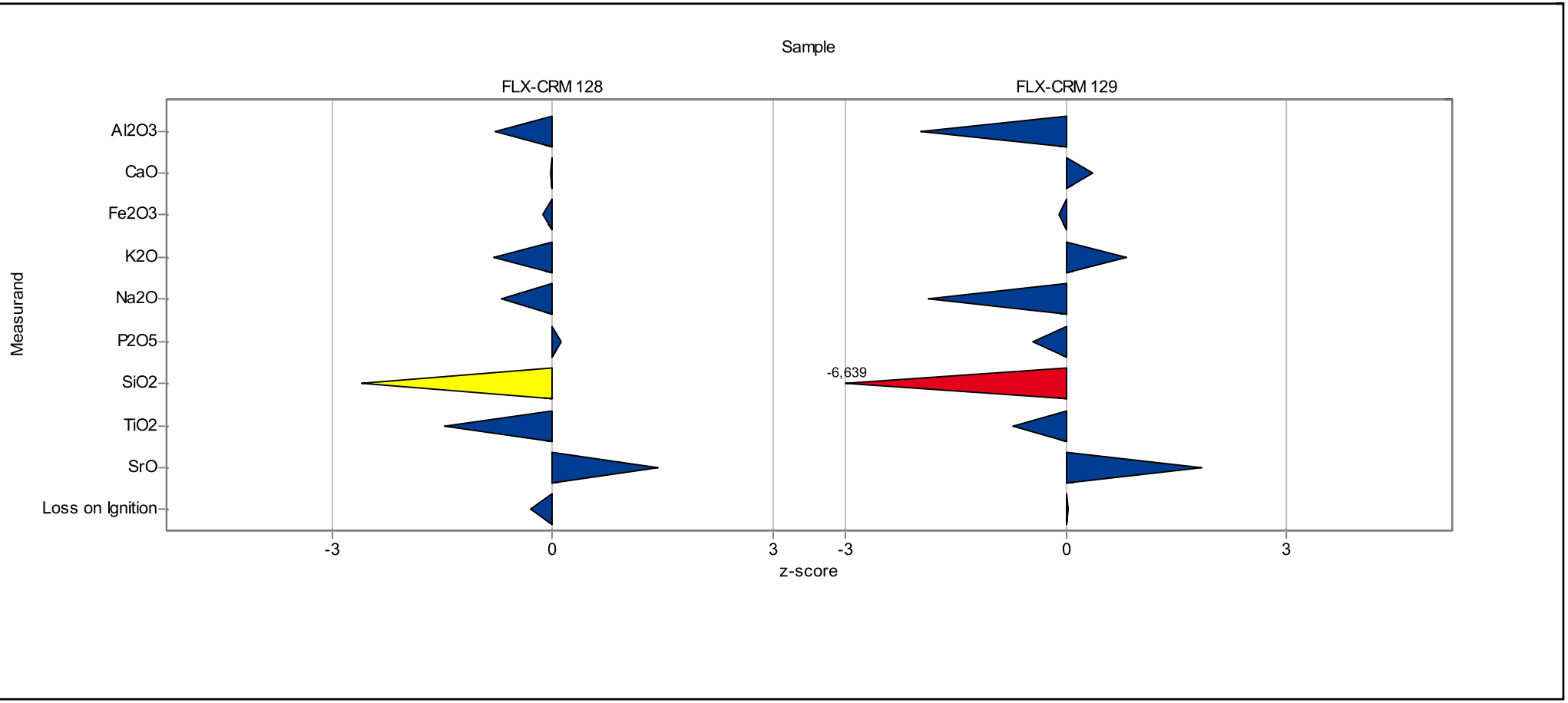
Laboratory: 05



RV128 (Feldspar)

Laboratory chart of z-score

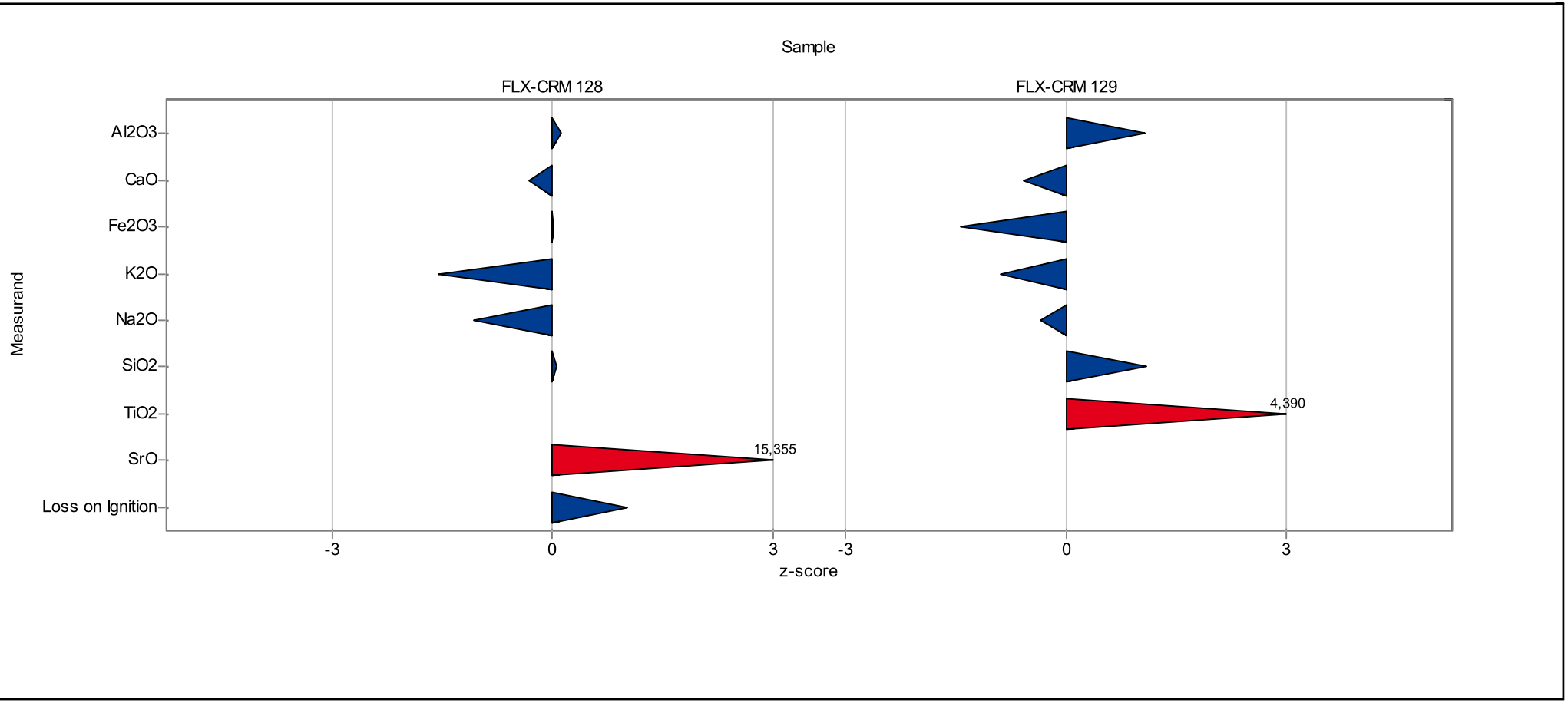
Laboratory: 06



RV128 (Feldspar)

Laboratory chart of z-score

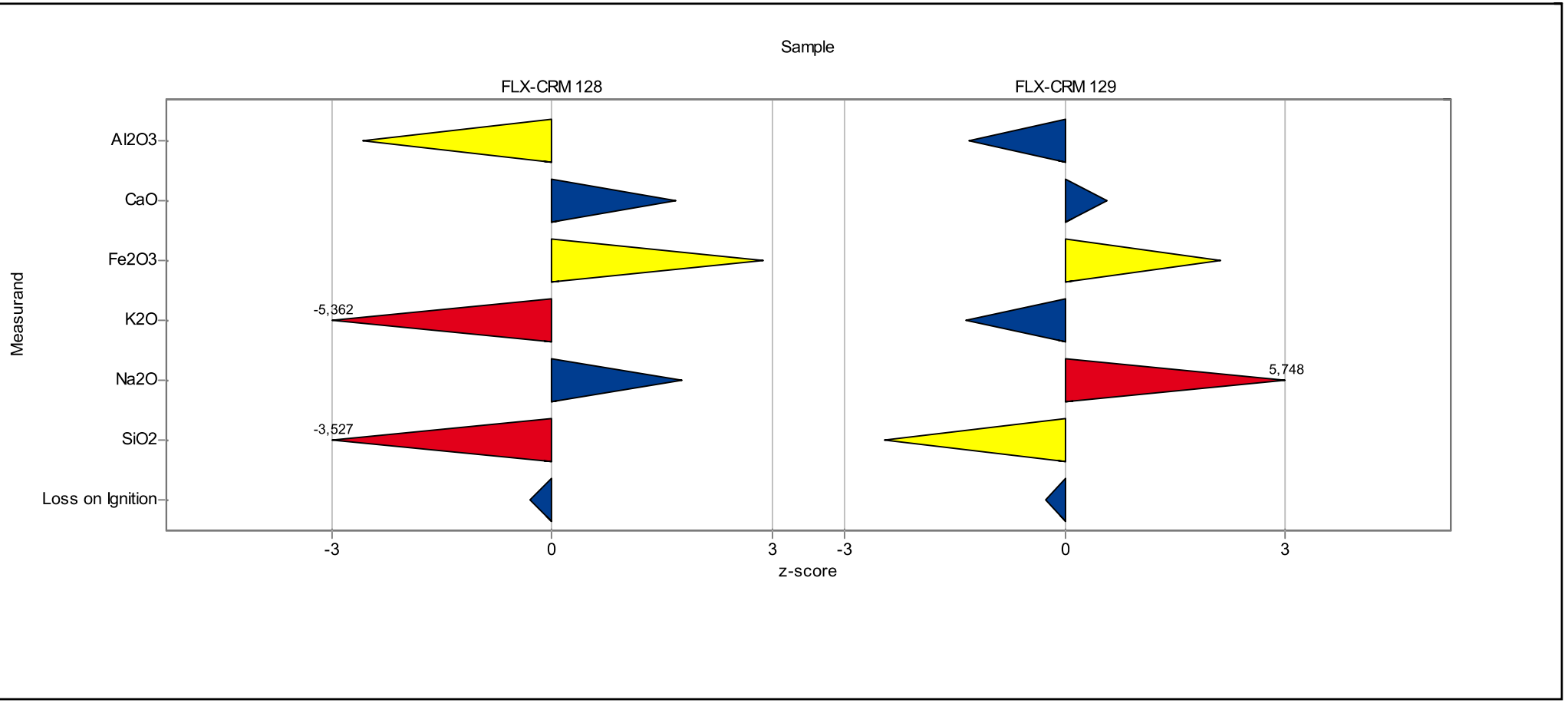
Laboratory: 07



RV128 (Feldspar)

Laboratory chart of z-score

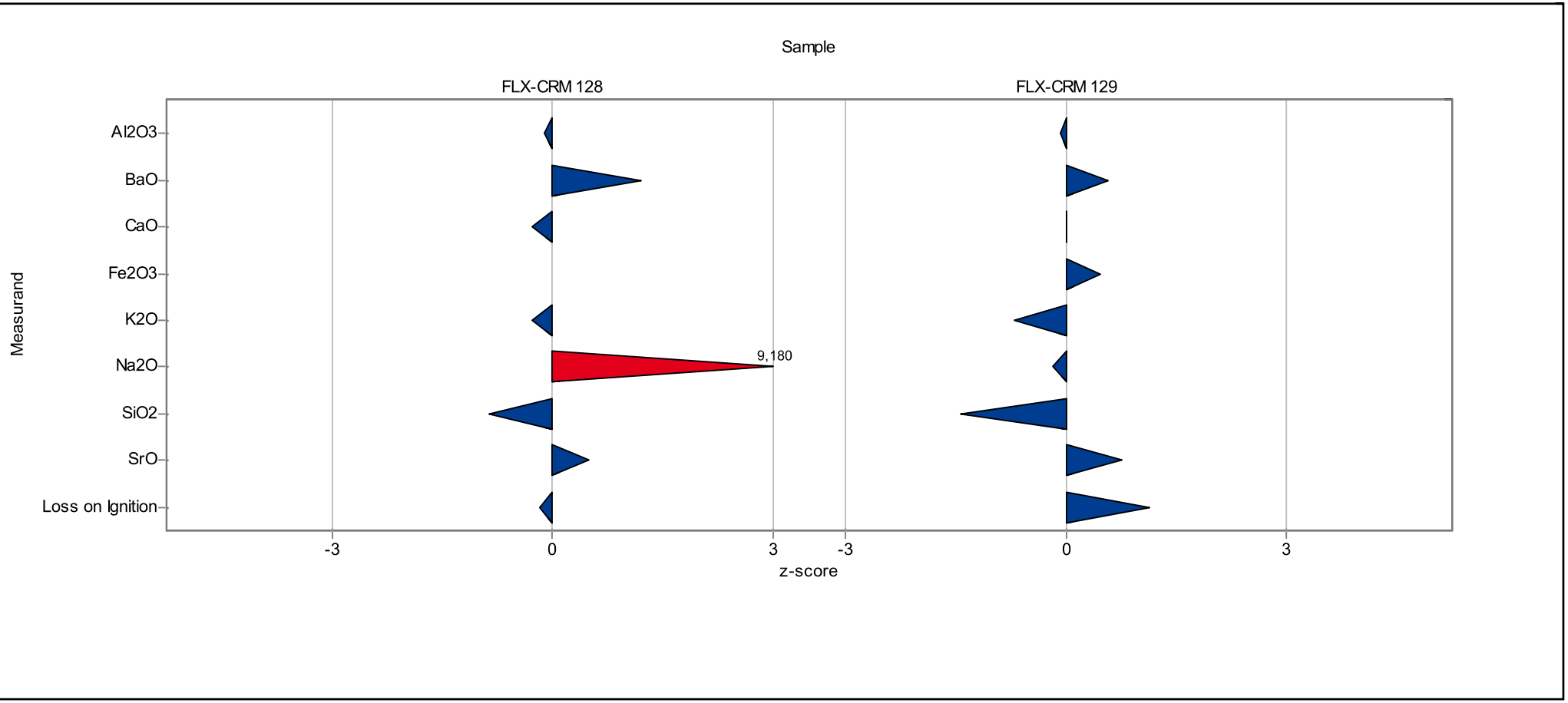
Laboratory: 08



RV128 (Feldspar)

Laboratory chart of z-score

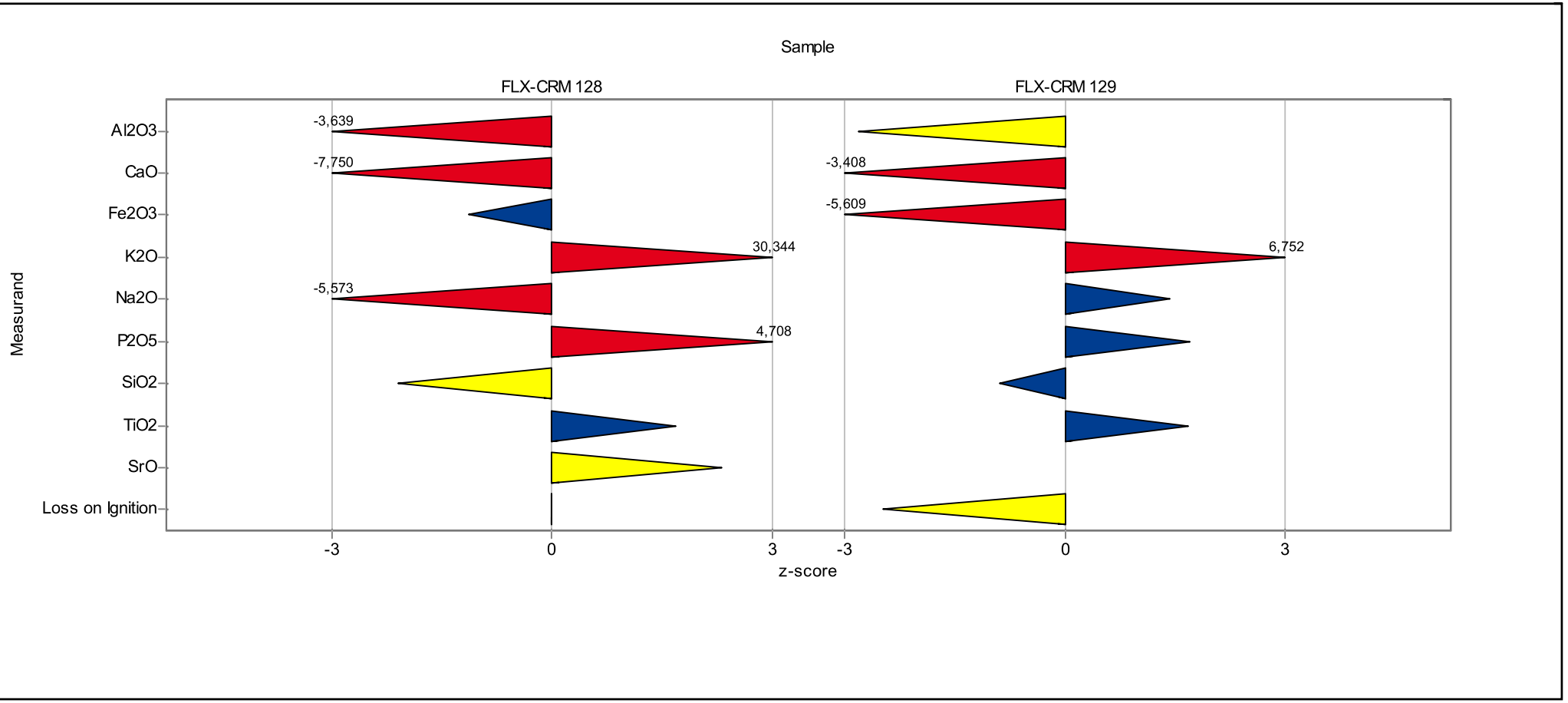
Laboratory: 09



RV128 (Feldspar)

Laboratory chart of z-score

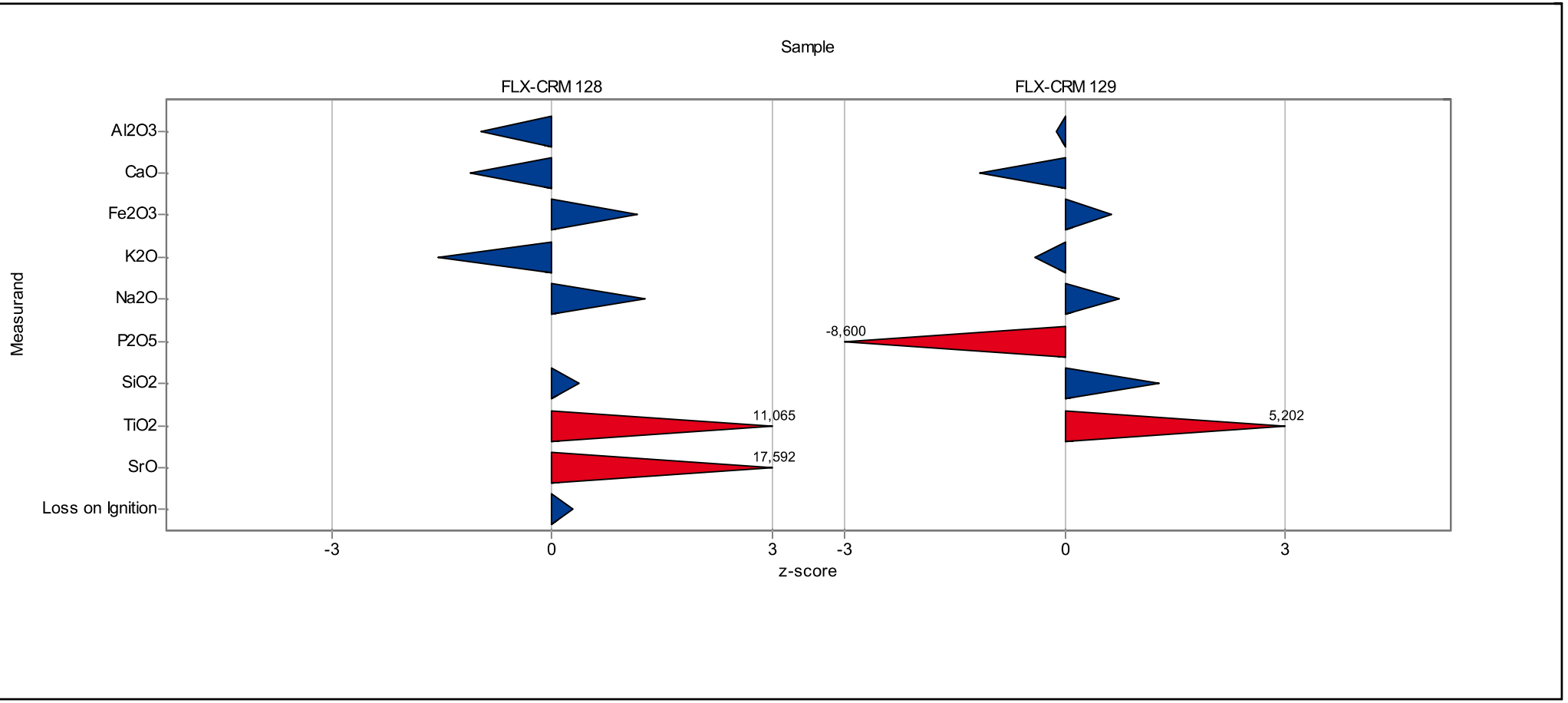
Laboratory: 10



RV128 (Feldspar)

Laboratory chart of z-score

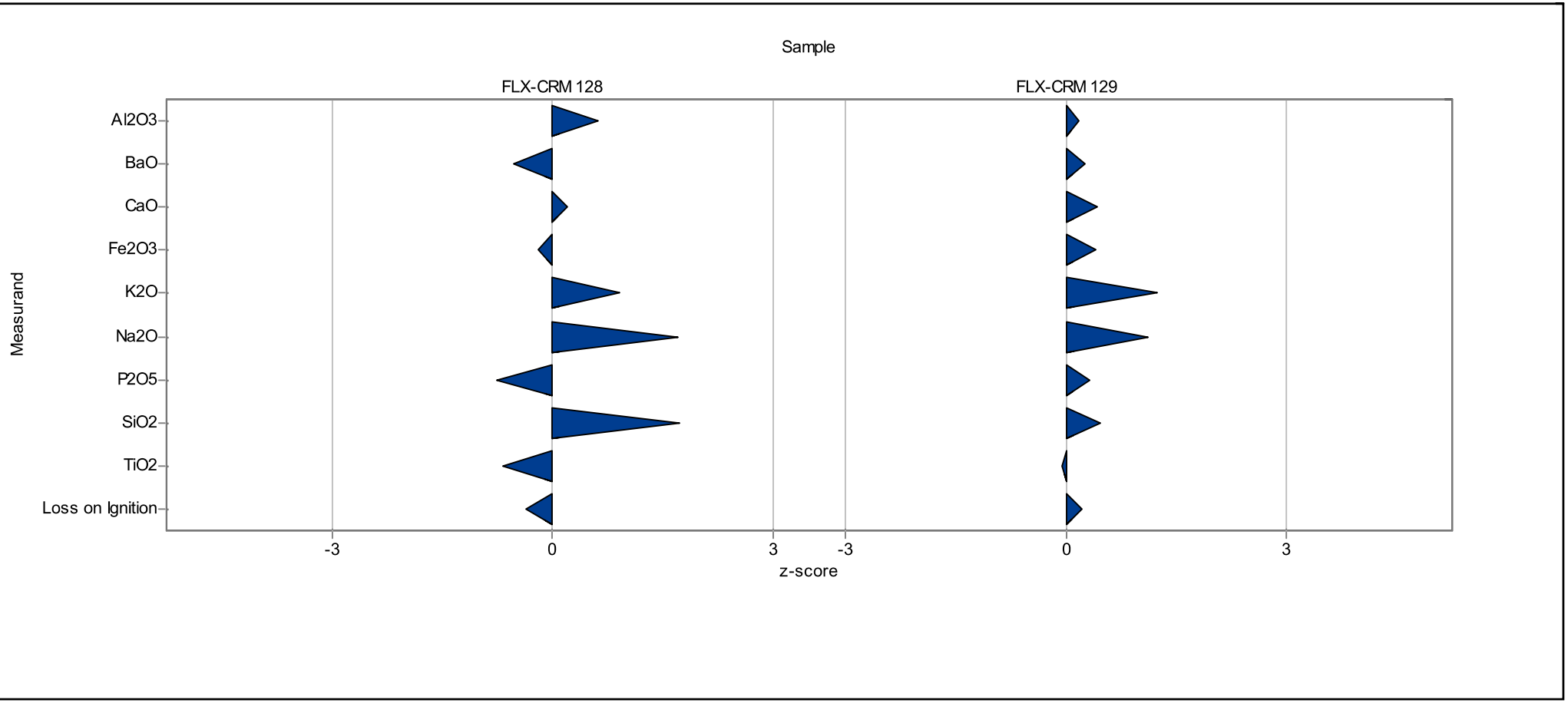
Laboratory: 12



RV128 (Feldspar)

Laboratory chart of z-score

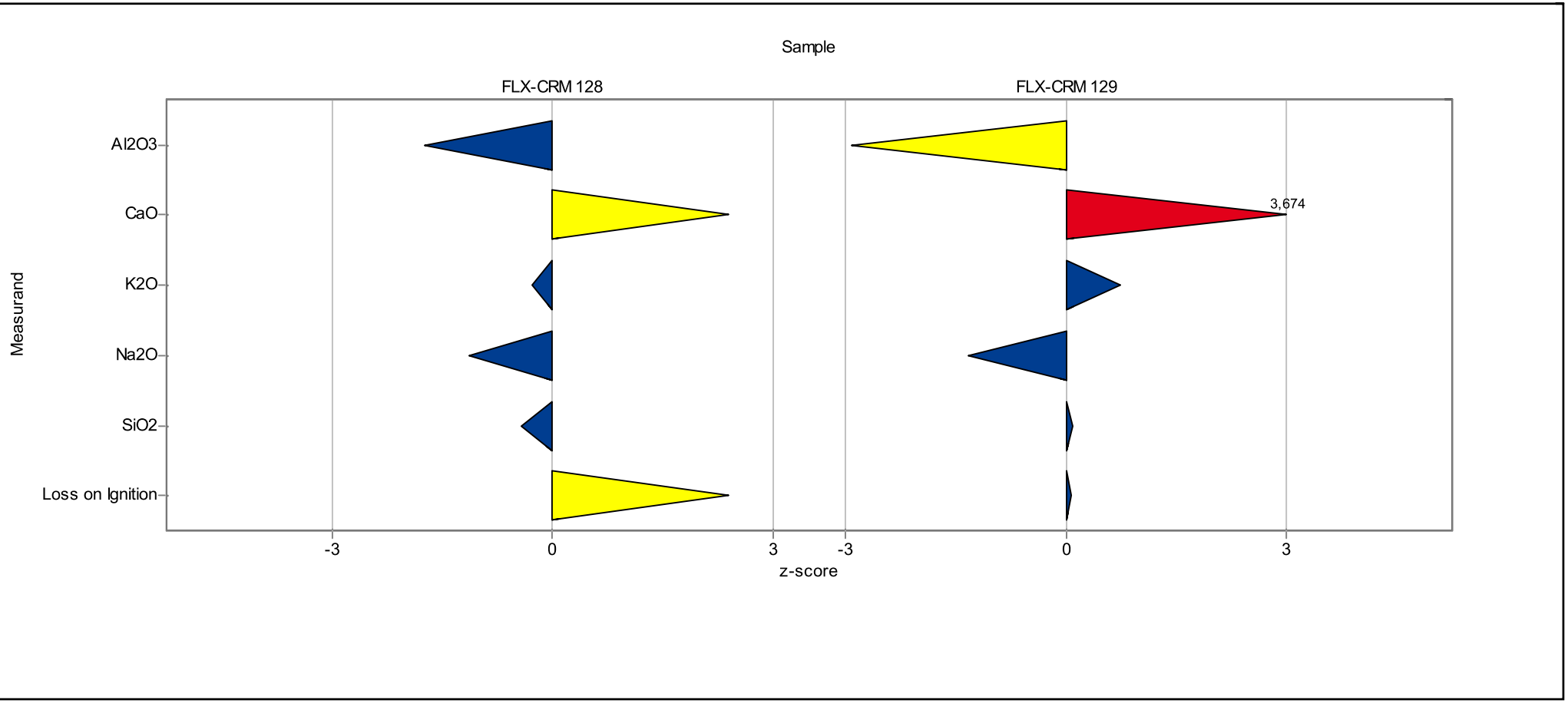
Laboratory: 13



RV128 (Feldspar)

Laboratory chart of z-score

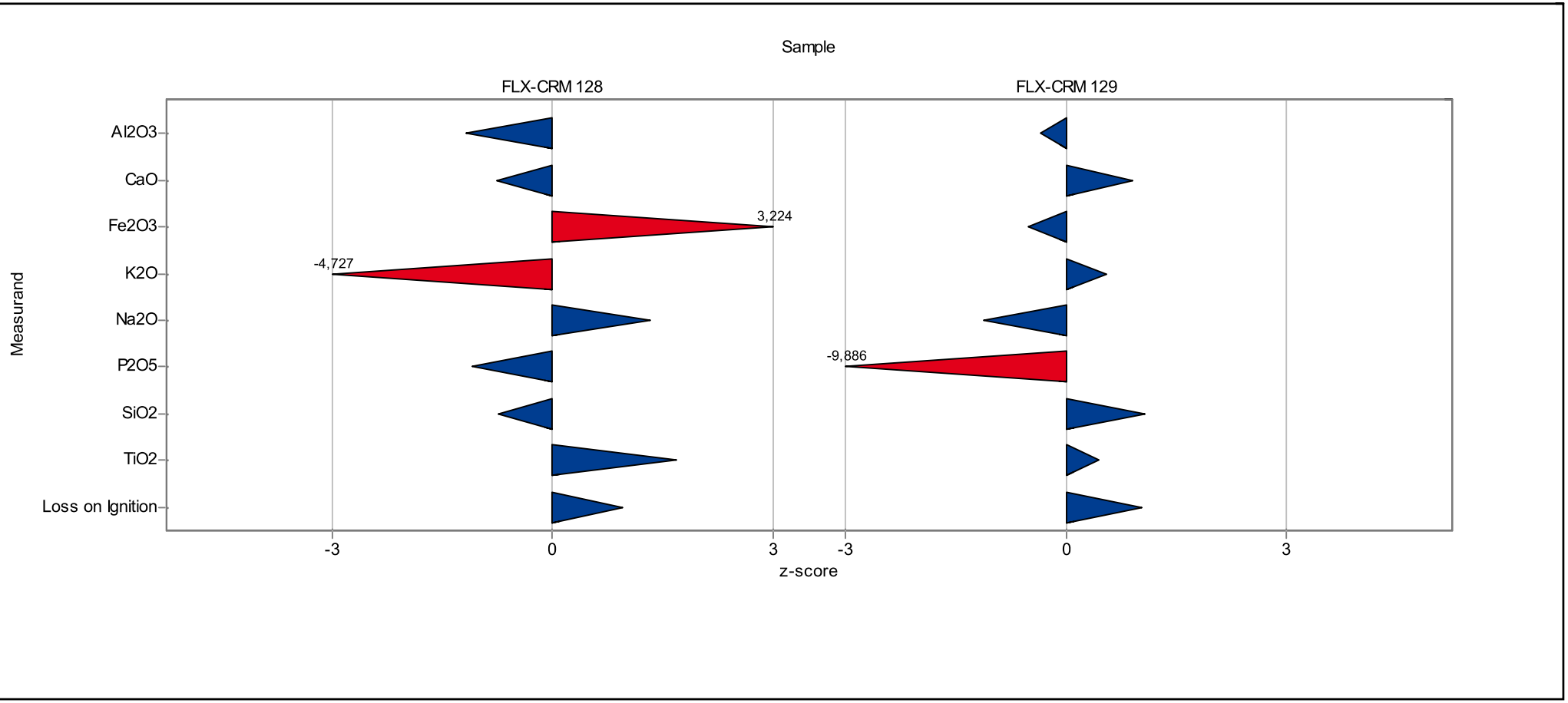
Laboratory: 17



RV128 (Feldspar)

Laboratory chart of z-score

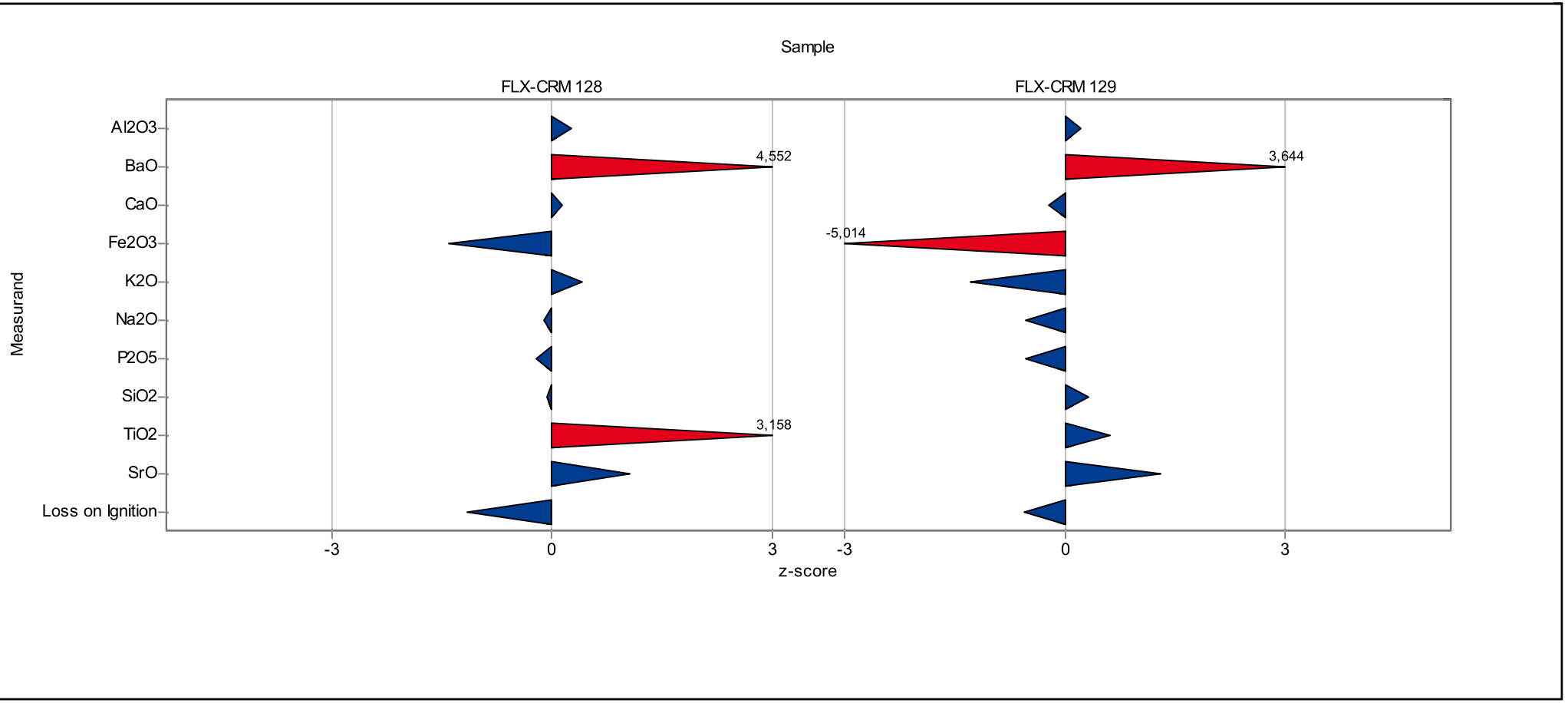
Laboratory: 18



RV128 (Feldspar)

Laboratory chart of z-score

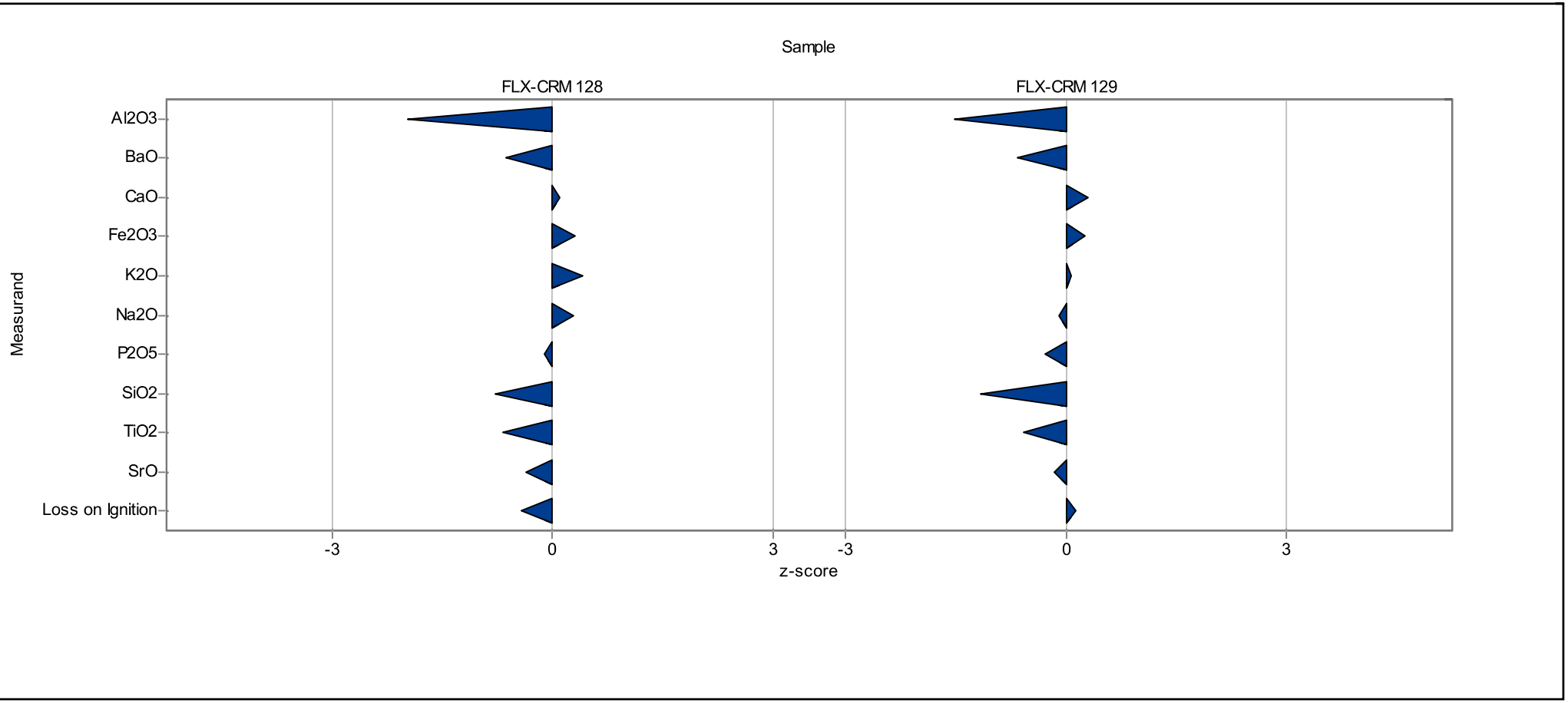
Laboratory: 19



RV128 (Feldspar)

Laboratory chart of z-score

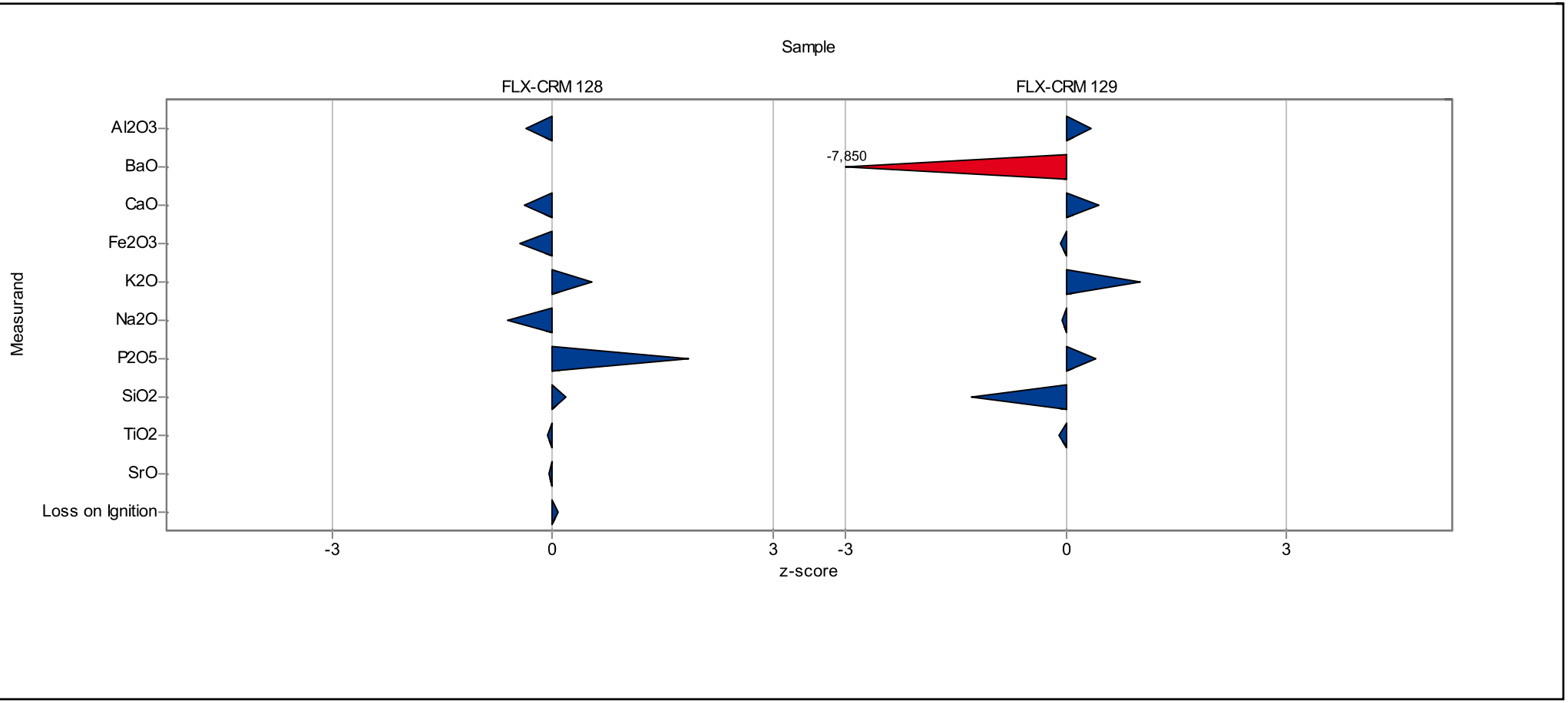
Laboratory: 20



RV128 (Feldspar)

Laboratory chart of z-score

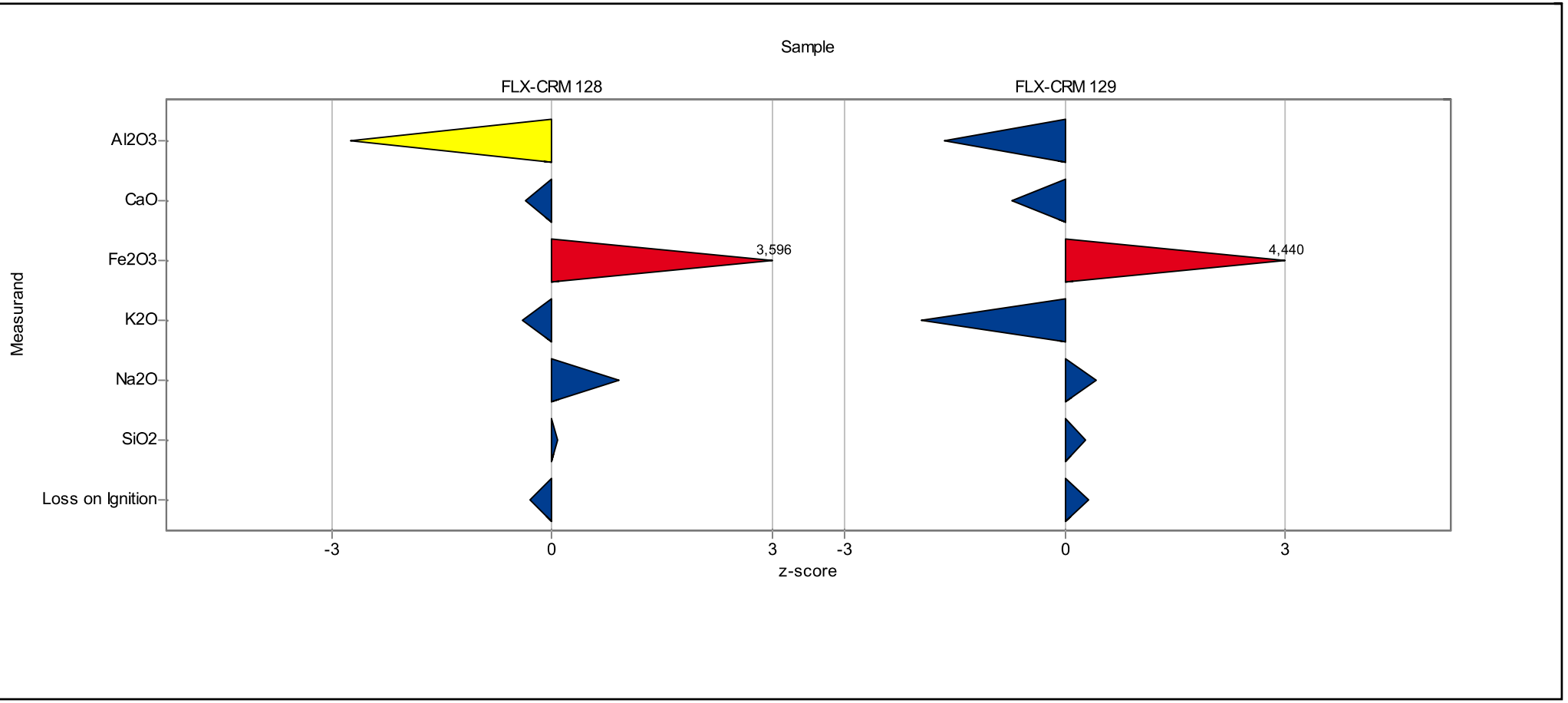
Laboratory: 21



RV128 (Feldspar)

Laboratory chart of z-score

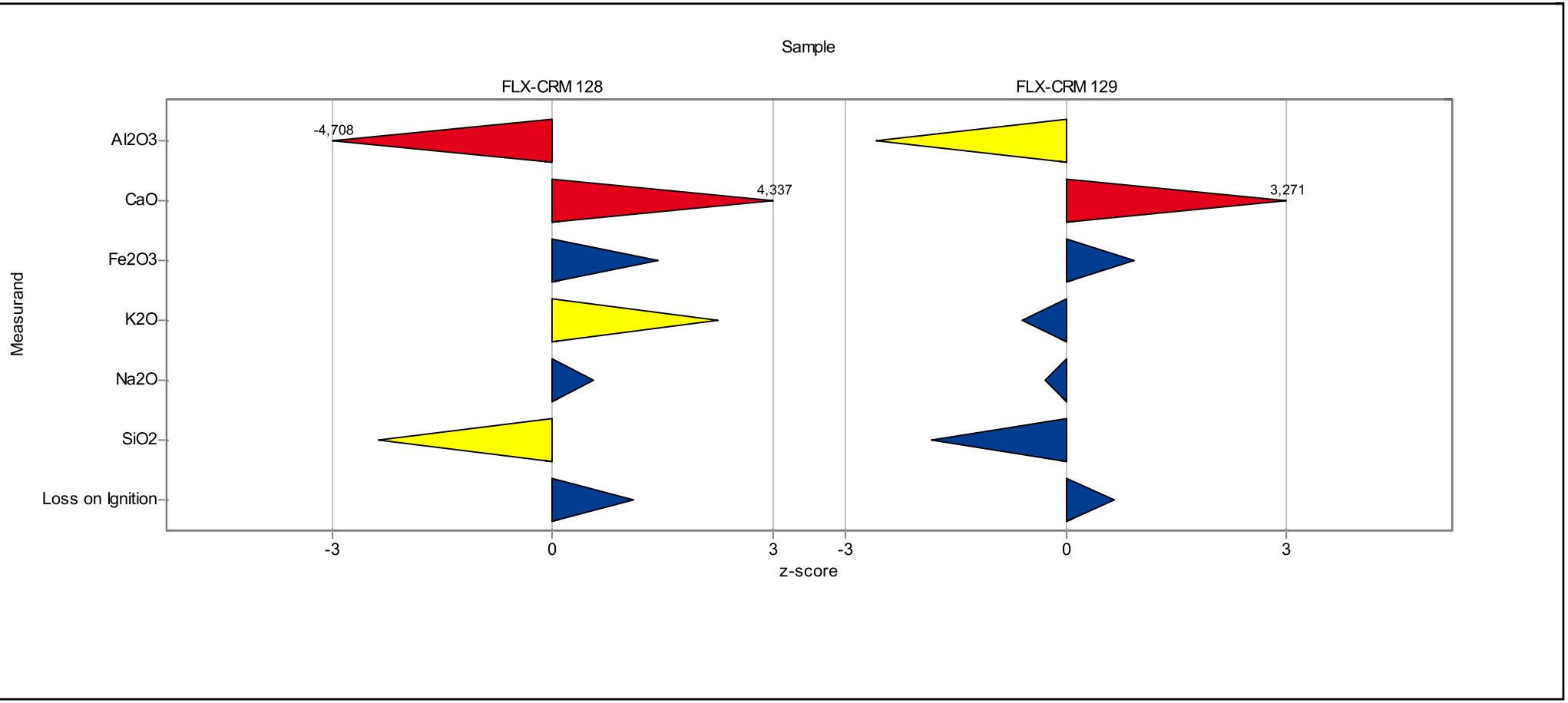
Laboratory: 22



RV128 (Feldspar)

Laboratory chart of z-score

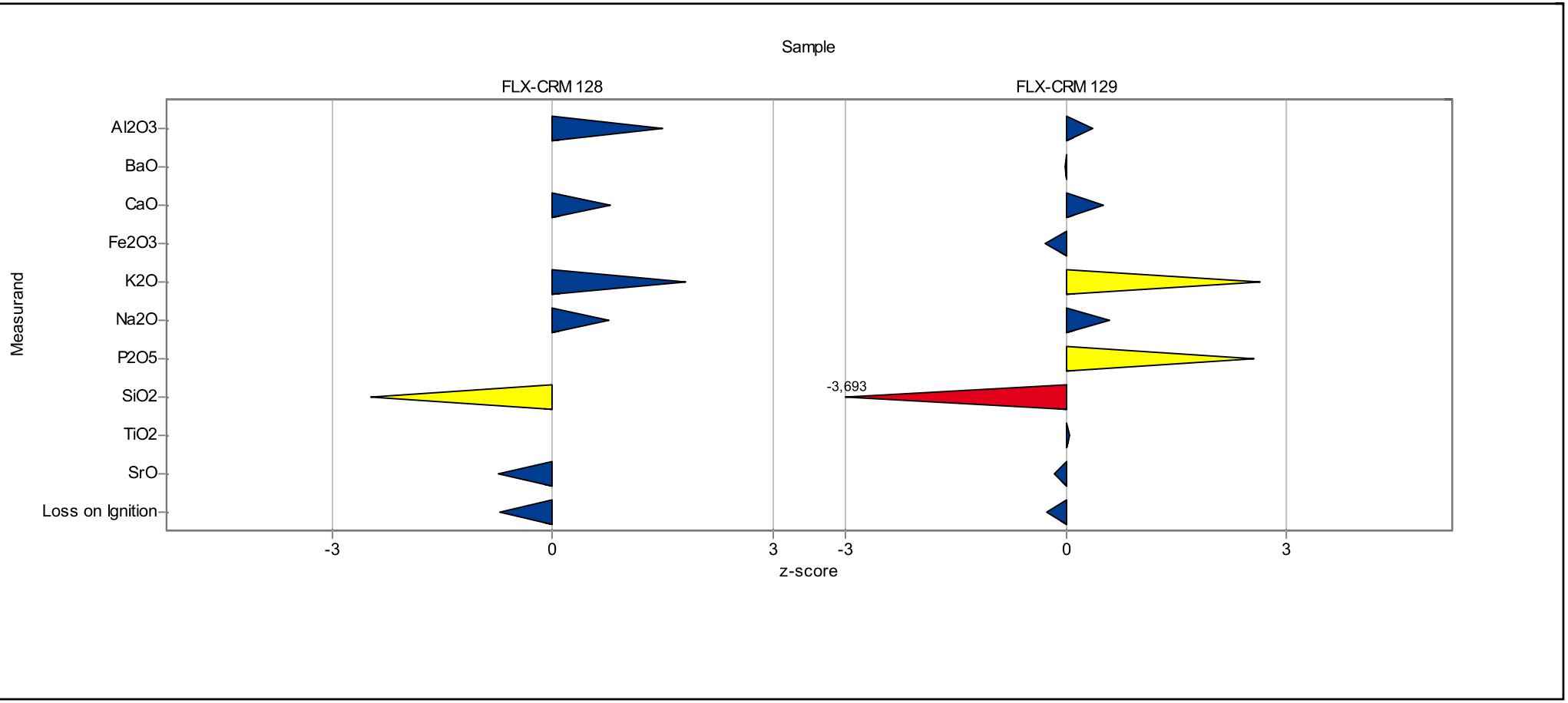
Laboratory: 23



RV128 (Feldspar)

Laboratory chart of z-score

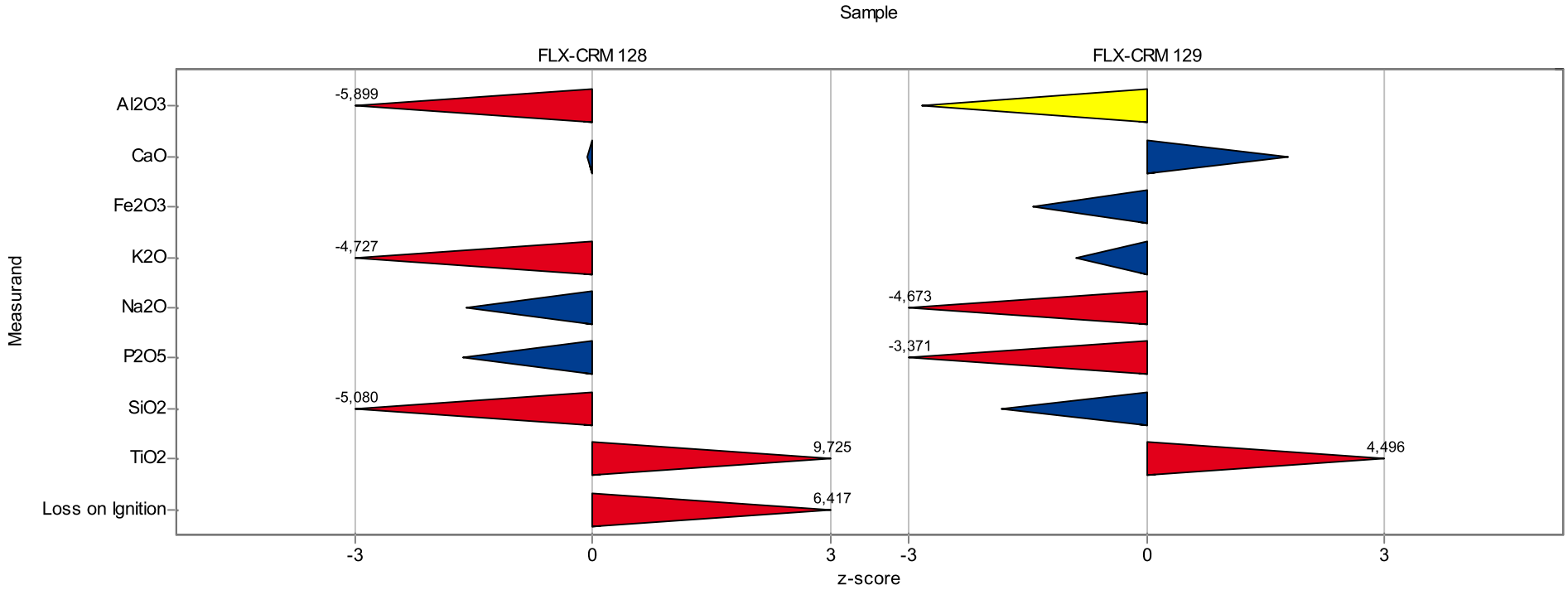
Laboratory: 24



RV128 (Feldspar)

Laboratory chart of z-score

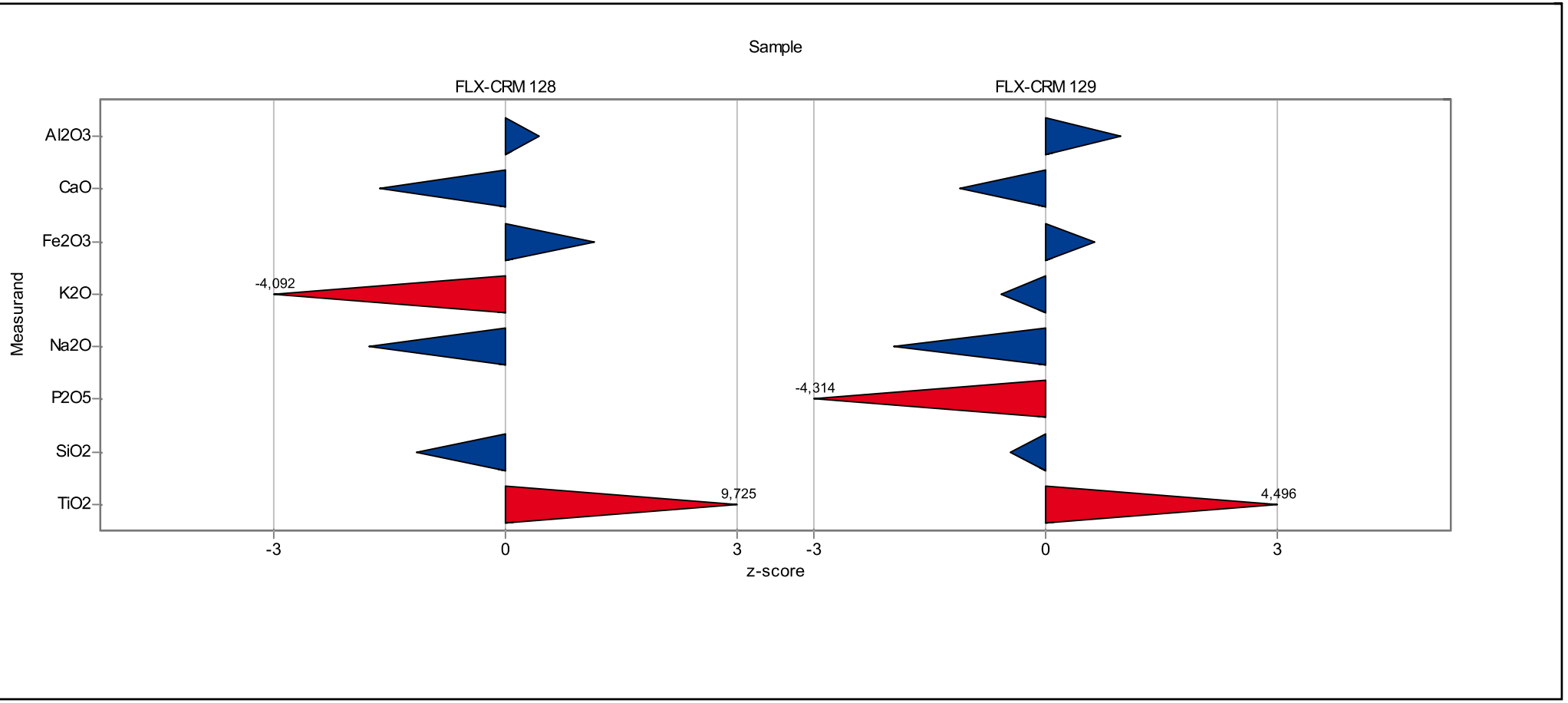
Laboratory: 25



RV128 (Feldspar)

Laboratory chart of z-score

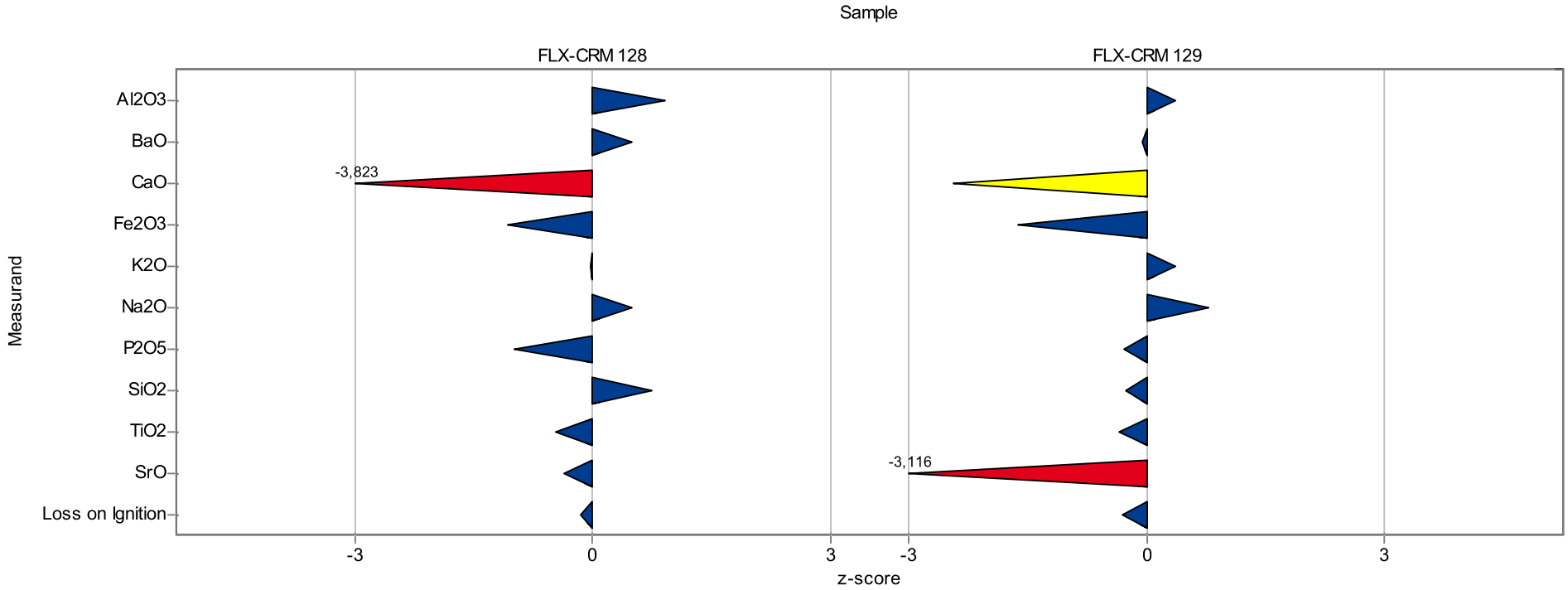
Laboratory: 26



RV128 (Feldspar)

Laboratory chart of z-score

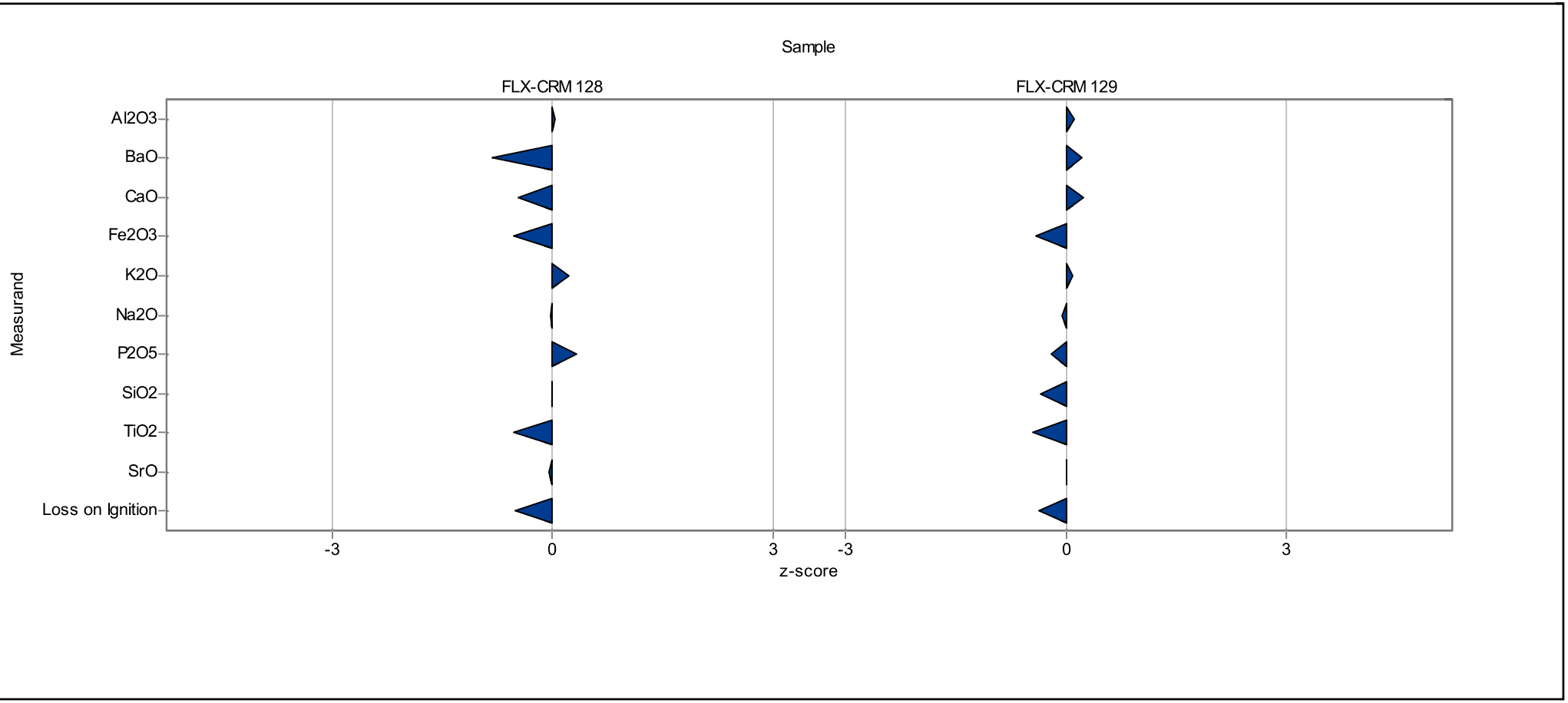
Laboratory: 27



RV128 (Feldspar)

Laboratory chart of z-score

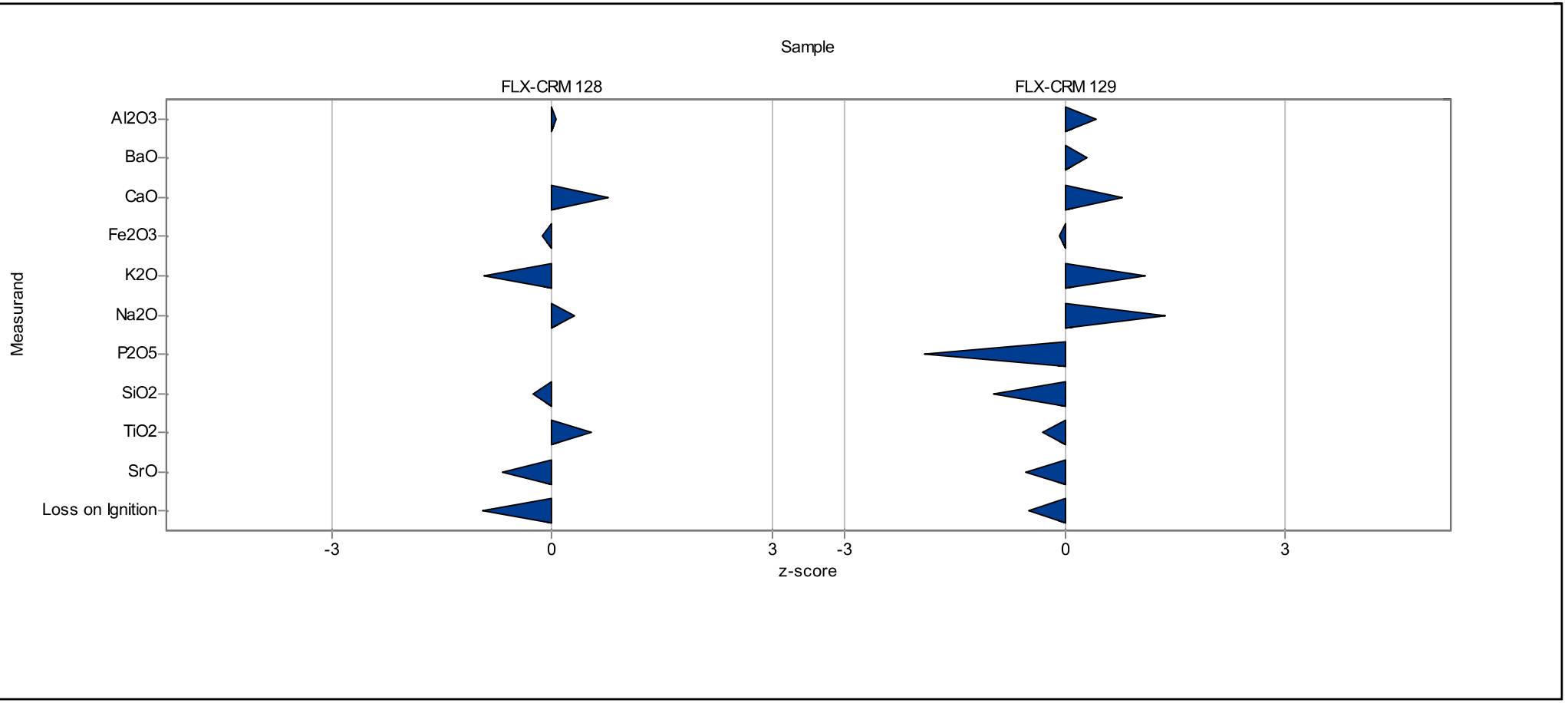
Laboratory: 28



RV128 (Feldspar)

Laboratory chart of z-score

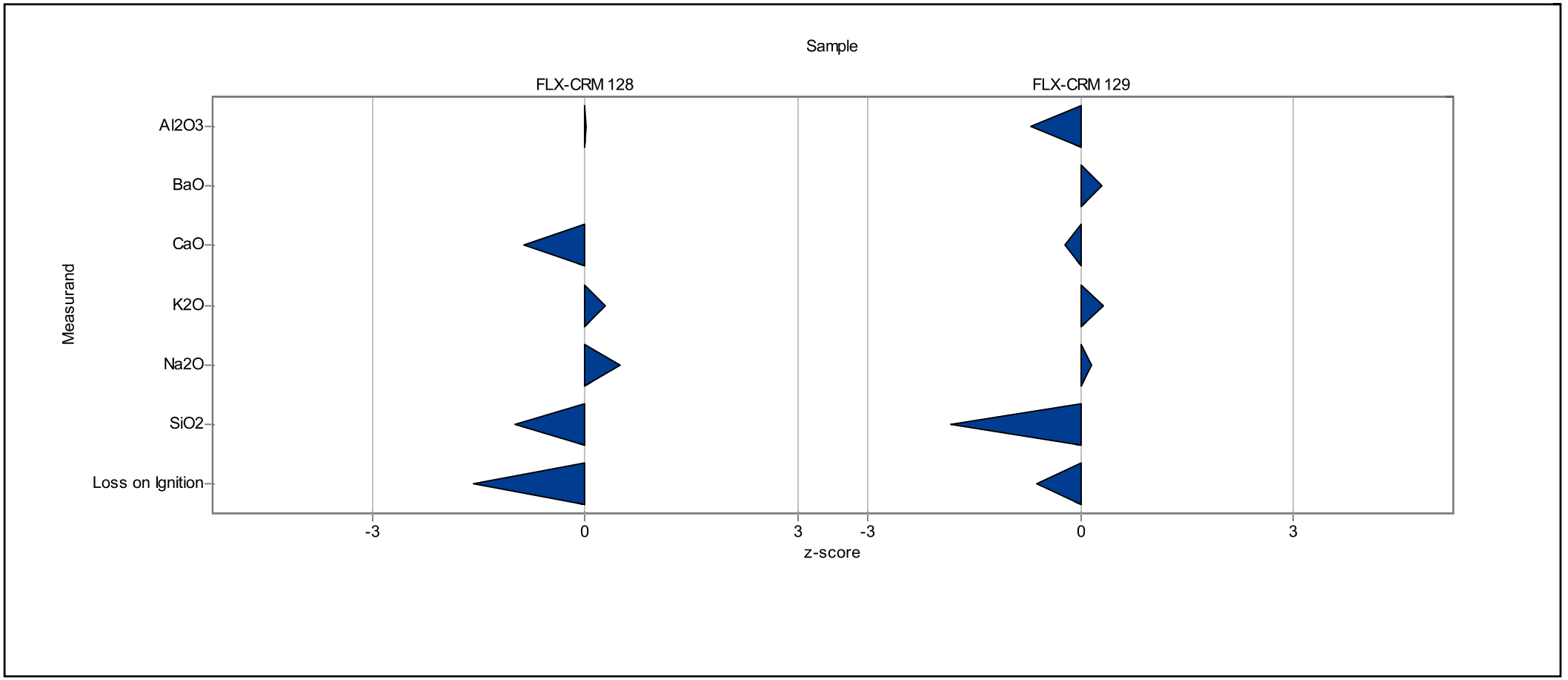
Laboratory: 29



RV128 (Feldspar)

Laboratory chart of z-score

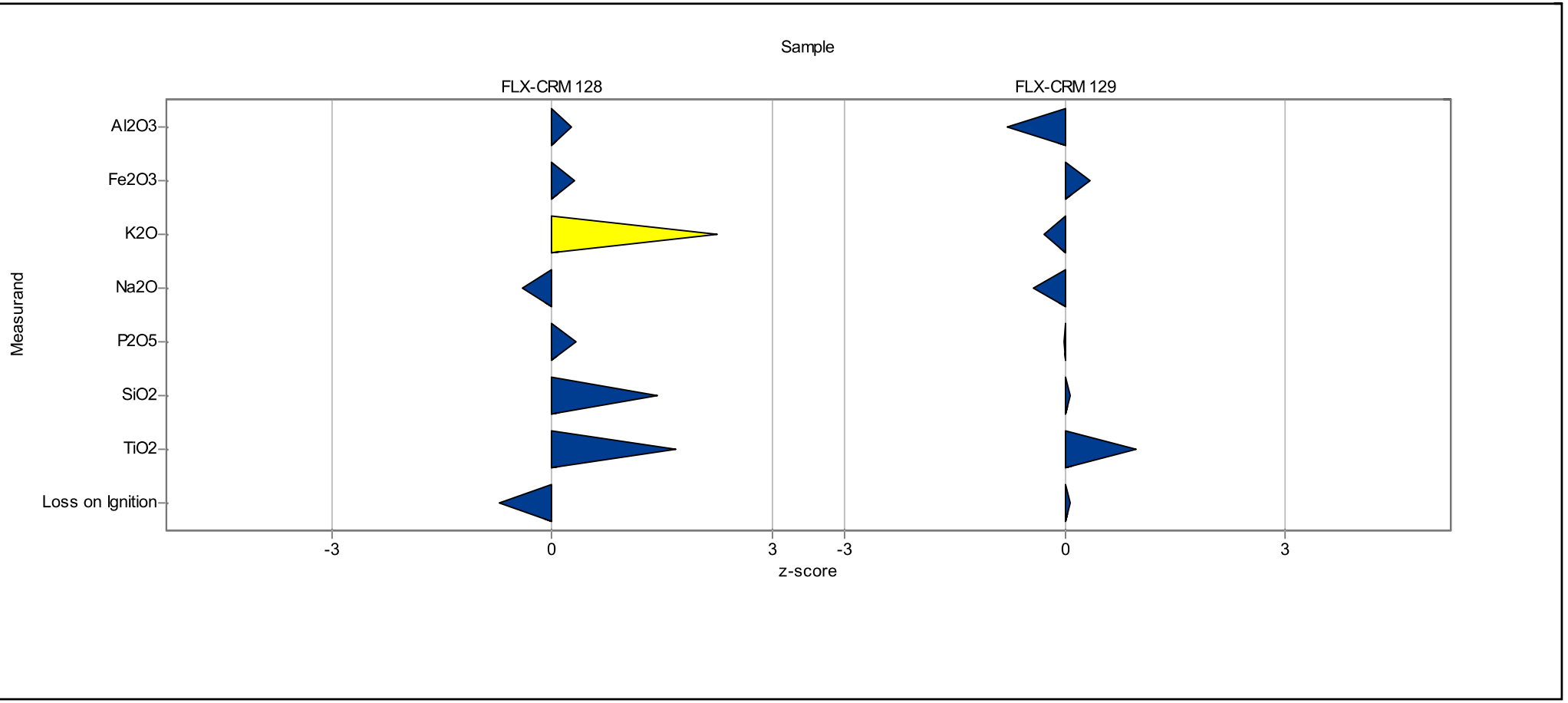
Laboratory: 30



RV128 (Feldspar)

Laboratory chart of z-score

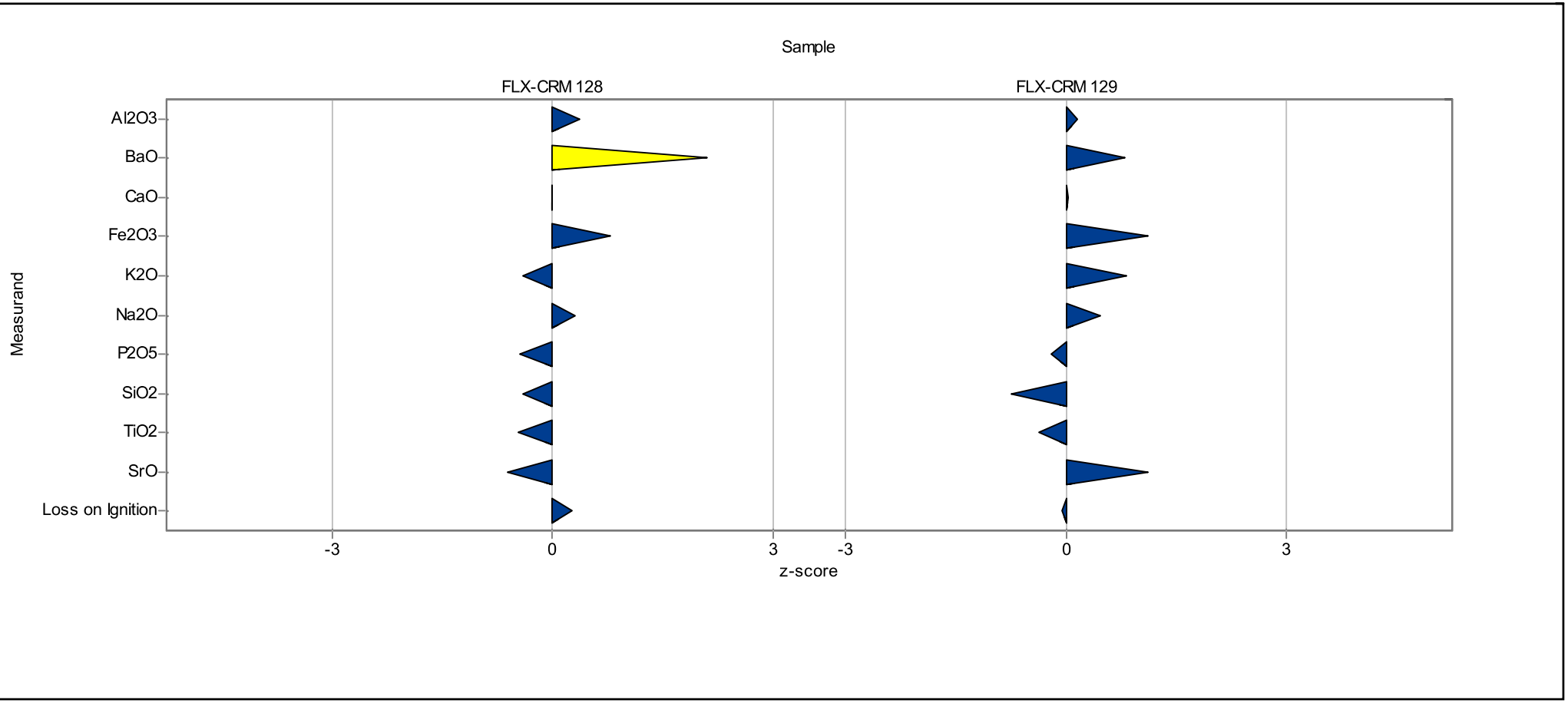
Laboratory: 31



RV128 (Feldspar)

Laboratory chart of z-score

Laboratory: 32



RV128 (Feldspar)

Laboratory chart of z-score

Laboratory: 33