

**INTERLABORATORY COMPARISON
EVALUATION**

**Pharmaceuticals, Industrial Chemicals
and Artificial Sweeteners – AZ2**

Sample dispatch on 19th May 2015

Address: Umweltbundesamt GmbH
Spittelauer Lände 5
1090 Vienna/Austria

Contact: Dipl.-Ing. (FH) Sebastian Köppel

Telephone: +43 (0) 1 31304 4334

E-mail: ringversuche@umweltbundesamt.at

Website: www.umweltbundesamt.at/leistungen
www.imatest.at

Management:
Dr. Sigrid Scharf

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1 Interlaboratory comparison AZ1

1.1 Participants and time schedule

- Number of registrations: 15
- Number of submitted data records: 13
- Dispatch of samples: 19th May 2015
- Closing date for submission of data: 23rd June 2015

To anonymise results, each laboratory was given a laboratory code on a random basis.

1.2 Sampling, sample material and distribution

One waste water and one surface water was selected as sample material. The sampling was carried out on 18th May 2015. The samples were stored at < 4 °C until further processing. The samples were partly spiked with specific substances. The samples were filled into bottles with continuous stirring. The homogeneous mixtures were dispatched on 19th May 2015. Each participant received:

- 2 samples, filled in 1000 ml aluminium bottles.

1.3 Check analysis

While filling the bottles, aliquots of each sample were collected at random moments for check analysis. Testing was performed 8 days after sample dispatch.

In the parameter-oriented evaluation, the results of the check testing are listed in the form of arithmetic means of the detected concentrations as check value $\pm U$. The uncertainties of the check value were calculated as extended uncertainties ($k=2$).

2 Evaluation

The analytical results had to be made available to the organiser not later than 8th April 2014. Any values received at a later date were not considered. A statistical evaluation of interlaboratory comparison data was only carried out if at least 6 valid results per parameter were available.

To evaluate the data, outliers were detected first by using the outlier test method according to Hampel. Values identified as conspicuous by this test method are marked specifically in the parameter-oriented evaluation. Further evaluation was performed in accordance with DIN ISO 5725-2. The adjusted average value (after removal of outliers) for all submitted results was used as a basis for the calculation of recovery rates.

z-Score

z-Scores were calculated on the basis of the following formula:

$$z\text{-score} = \frac{x_i - \bar{X}}{\sigma}$$

In this context,

- x_i is the measurement value of the participating laboratory.
- \bar{X} is the adjusted average value (i.e. after removal of outliers) of the participants' results.
- σ is the reproducibility standard deviation, calculated from the participants' results (after removal of outliers) in the relevant test round.

Interpretation of z-Scores in the parameter-oriented evaluation:

- $|z| < 2$: result: good
- $2 < |z| < 3$ result: questionable
- $|z| > 3$ result: not satisfactory

3 Representation and interpretation of measurement results

The parameter-oriented evaluation shows the measurement values including uncertainty, recovery rate, calculated z-Score and the outliers in tabular form. The results listed in the table are also illustrated in graphical form (see 5 Explanatory notes on the parameter oriented report)

4 Explanatory notes

None.

5 Explanatory notes on the parameter oriented report

Mean \pm CI (99%) *Mean of the participants results, without outliers \pm 99% confidence interval*
 Minimum – Maximum *Minimum and maximum of all submitted results, after removal of outliers*
 Homogeneity \pm U *Mean of homogeneity tests \pm expanded uncertainty (k=2)*
 Stability \pm U *Mean of stability tests \pm expanded uncertainty (k=2)*

Labcode	Result	\pm U	Recovery [%]	z-score	Comments
LC0001	0.015	0.0001	89.7	-0.5	
LC0002	0.0148	0.003	88.5	0.6	
LC0003	-	-	-	-	
LC0004	-	-	-	-	
...					
LC0009	0.100	0.01	597.9	24.2	H

Symbols and abbreviations:

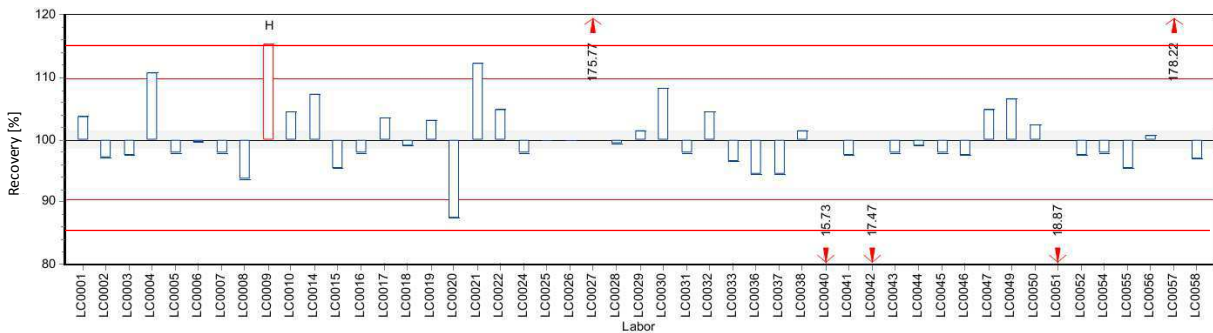
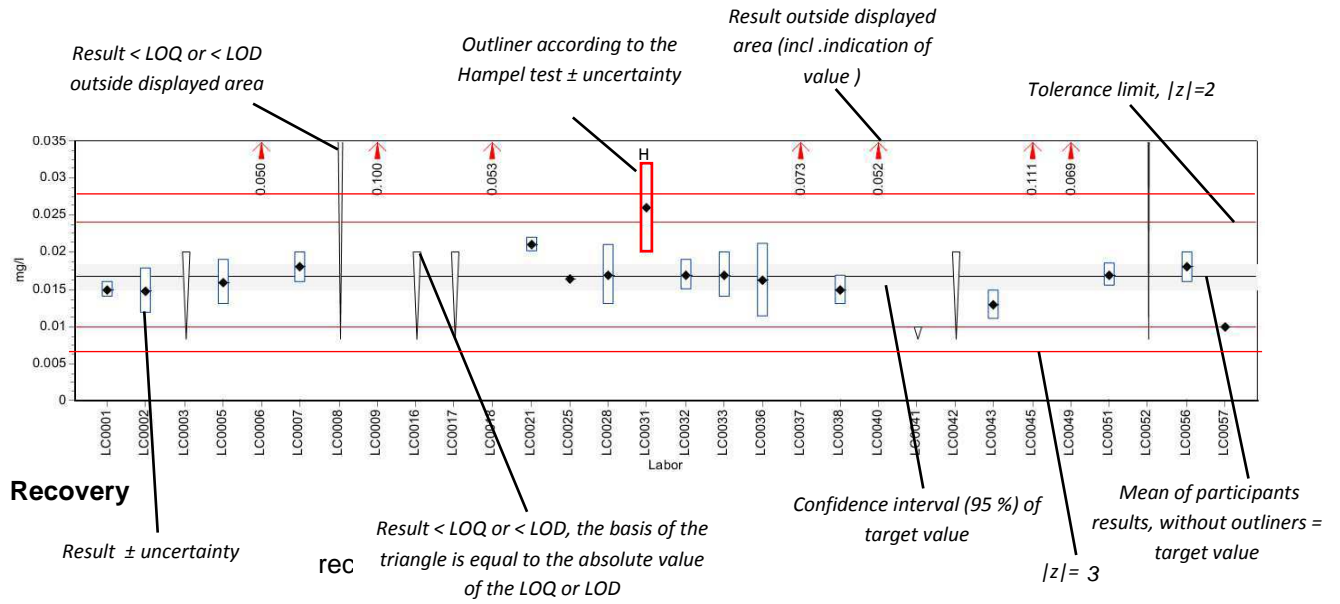
\pm U Results uncertainty as indicated by participant
 - *No data available*

Possible remarks in the column comments:

H Outliner according to Hampel-Test
 FN False negative – For a result < LOQ (level of quantification): The absolute value of the LOQ fulfils the condition of an outliner according to the Hampel test.
 FP False positive – For parameters where no target value is available because of a too low analyte content (n < 6): Result that exceeds the median of the absolute values of the transmitted LOQs by more than 100 %.

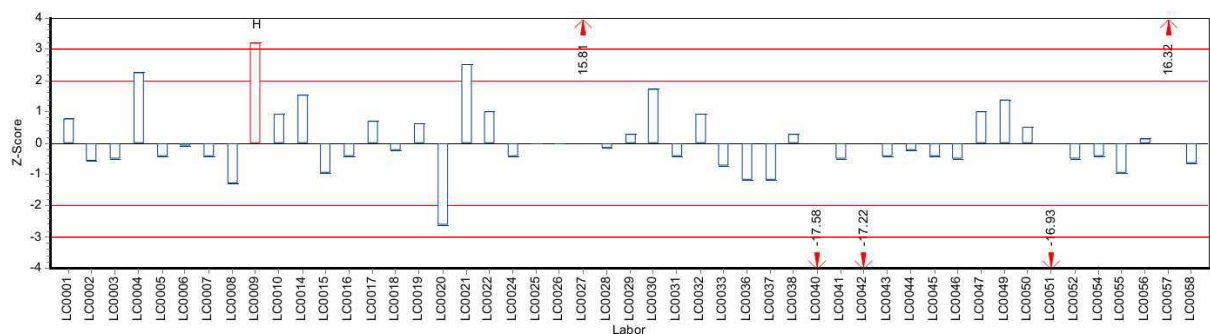
Graphical presentation of results

Results



z-Score

Presentation of results as z-scores.



Summary of results, after removal of outliers: Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

6 Summary of results, after removal of outliers

Parameter	Sample	Unit	Number of results for calculation	Number of outliers	Mean	± CI (99%)	Minimum	Maximum	SD	RSD
Sucralose	AZ2 A	µg/l	6	1	7,64	± 1,81	5,6565	10,1	1,48	19,3
	AZ2 B	µg/l	6	0	0,177	± 0,0789	0,122	0,289	0,0644	36,4
Benzotriazole	AZ2 A	µg/l	10	1	8,04	± 0,67	7,222	9,47	0,706	8,79
	AZ2 B	µg/l	10	1	0,366	± 0,0768	0,29	0,552	0,081	22,1
Carbamazepine	AZ2 A	µg/l	11	0	0,763	± 0,0865	0,629	0,965	0,0956	12,5
	AZ2 B	µg/l	10	1	0,0284	± 0,00428	0,024	0,04	0,00451	15,9
Acesulfame	AZ2 A	µg/l	9	2	2,55	± 0,286	2,04	2,89	0,286	11,2
	AZ2 B	µg/l	10	0	0,268	± 0,0529	0,1461	0,336	0,0557	20,8
Sulfamethoxazole	AZ2 A	µg/l	10	0	0,064	± 0,00321	0,0586	0,07	0,00339	5,29
	AZ2 B	µg/l	10	1	0,0312	± 0,00358	0,0266	0,04	0,00378	12,1
Diclofenac	AZ2 A	µg/l	11	0	2,66	± 0,191	2,396	3,015	0,211	7,92
	AZ2 B	µg/l	9	2	0,179	± 0,0163	0,145	0,201	0,0163	9,14
Sotalol	AZ2 A	µg/l	7	0	0,908	± 0,295	0,498	1,24	0,26	28,6
	AZ2 B	µg/l	1	0	-	± -	0,005	0,005	-	-
Ibuprofen	AZ2 A	µg/l	3	0	-	± -	0,011	0,067	-	-
	AZ2 B	µg/l	5	0	-	± -	0,066	0,093	-	-
Diazepam	AZ2 A	µg/l	1	0	-	± -	0,007	0,007	-	-
	AZ2 B	µg/l	4	0	-	± -	0,1531	0,192	-	-
Metoprolol	AZ2 A	µg/l	8	1	1,13	± 0,172	0,954	1,47	0,162	14,3
	AZ2 B	µg/l	3	0	-	± -	0,007	0,018	-	-

7 Parameter oriented report

Sucralose	10
Benzotriazole	18
Carbamazepine	26
Acesulfame	34
Sulfamethoxazole	42
Diclofenac	50
Sotalol	58
Ibuprofen	64
Diazepam	68
Metoprolol	72

Parameter oriented report

AZ2 A

Sucralose

Unit	µg/l
Mean ± CI (99%)	7,64 ± 1,81
Minimum - Maximum	5,6565 - 10,1
Check value ± U	8,78 ± 0,81

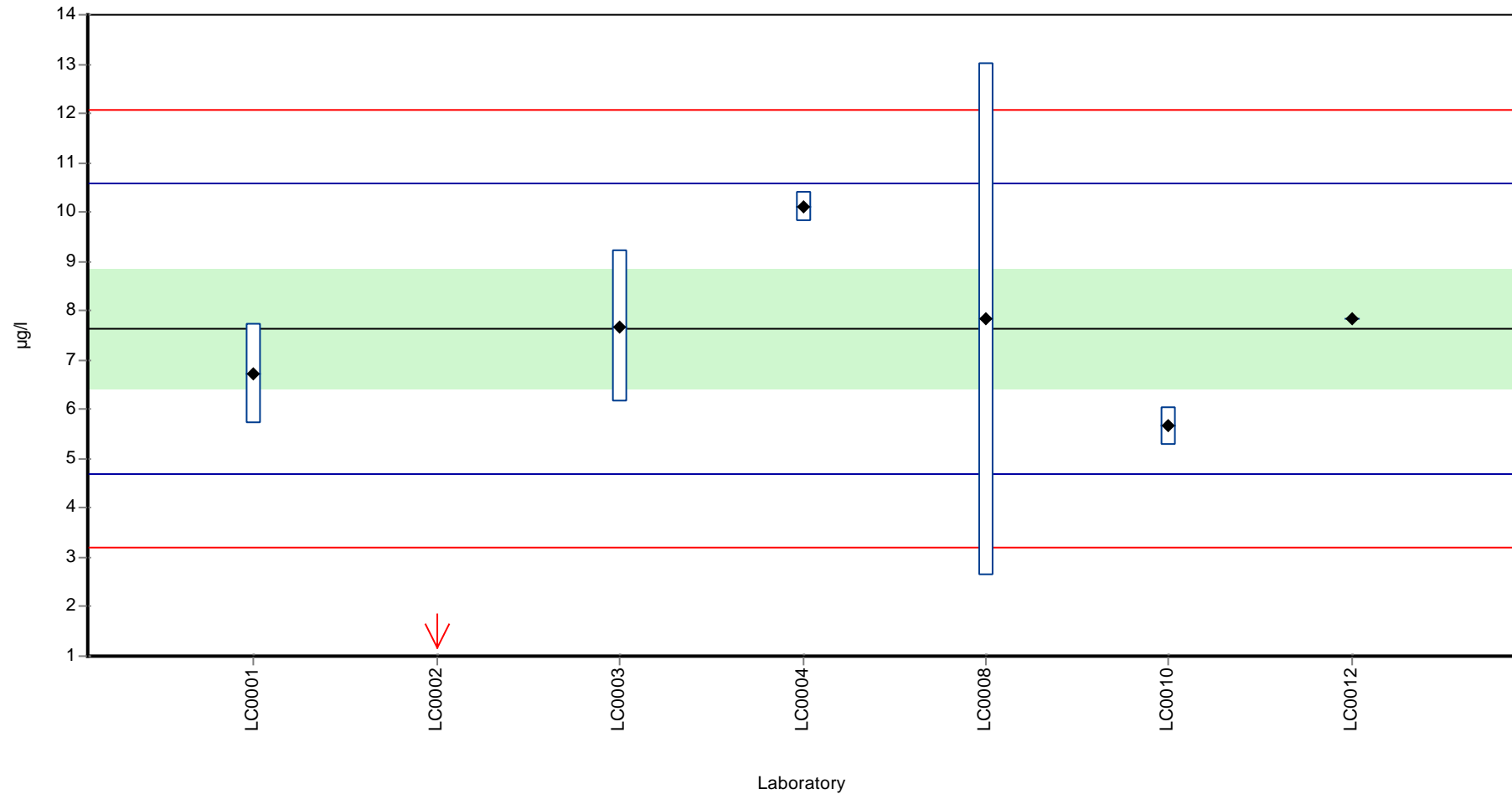
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	6,730	1,010	88,1	-0,6	
LC0002	1,167	0,079	15,3	-4,4	H
LC0003	7,680	1,540	100,5	0,0	
LC0004	10,100	0,300	132,2	1,7	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	-	-	-	-	
LC0008	7,830	5,200	102,5	0,1	
LC0009	-	-	-	-	
LC0010	5,6565	0,399	74,0	-1,3	
LC0011	-	-	-	-	
LC0012	7,850	-	102,7	0,1	
LC0013	-	-	-	-	
LC0014	-	-	-	-	
LC0015	-	-	-	-	

Characteristics of parameter

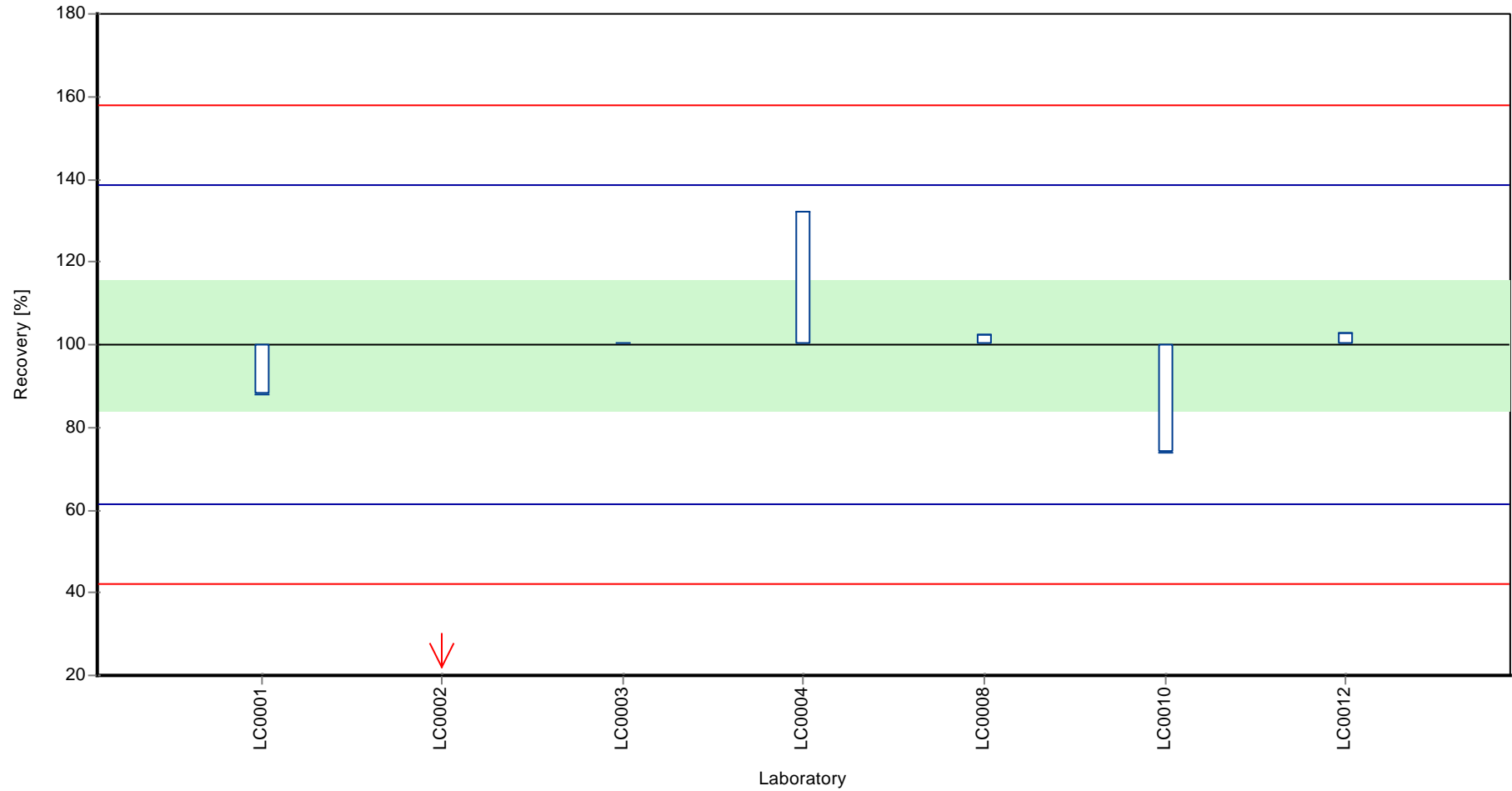
	all results	without outliers	Unit
Mean ± CI (99%)	6,72 ± 3,17	7,64 ± 1,81	µg/l
Minimum	1,17	5,66	µg/l
Maximum	10,1	10,1	µg/l
Standard deviation	2,79	1,48	µg/l
rel. Standard deviation	41,6	19,3	%
n	7	6	-

Graphical presentation of results

Results



Recovery rate

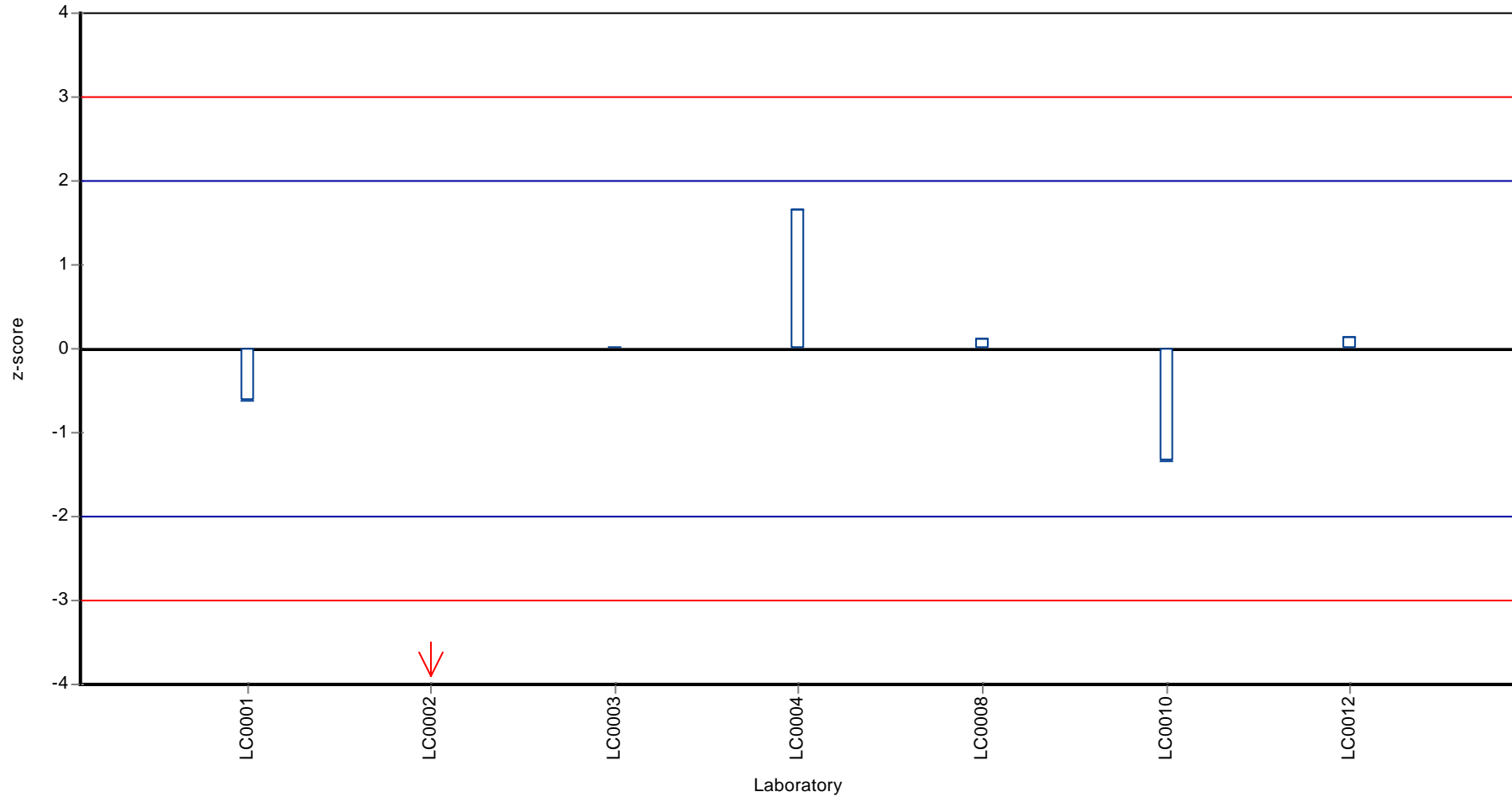


PROLab

Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Sucralose

Z-score



Parameter oriented report

AZ2 B

Sucralose

Unit	µg/l
Mean ± CI (99%)	0,177 ± 0,0789
Minimum - Maximum	0,122 - 0,289
Check value ± U	0,14 ± 0,02

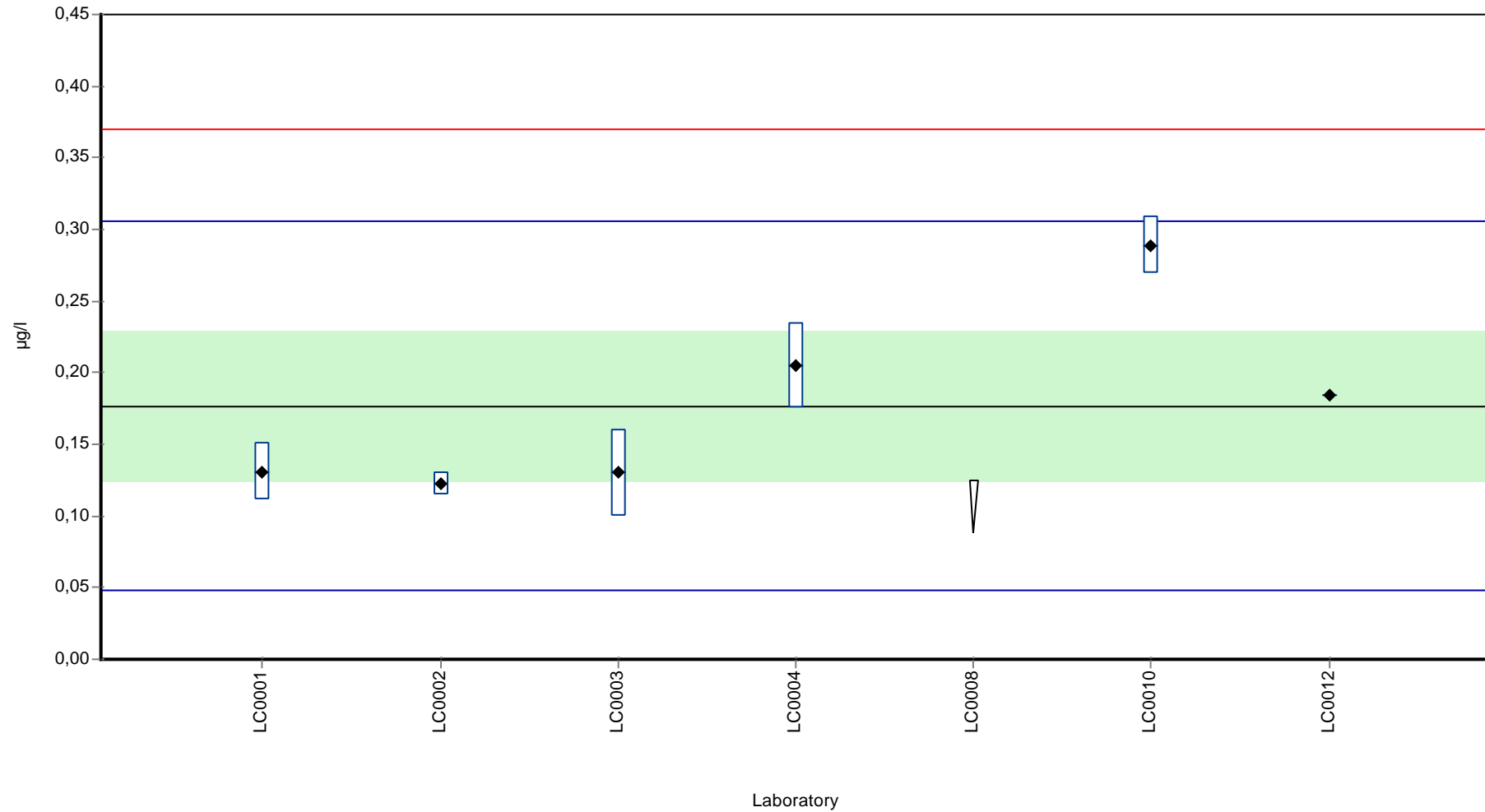
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0,131	0,0197	74,1	-0,7	
LC0002	0,122	0,008	69,0	-0,9	
LC0003	0,130	0,030	73,5	-0,7	
LC0004	0,205	0,030	115,9	0,4	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	-	-	-	-	
LC0008	<0,125 (LOD)	-	-	-	
LC0009	-	-	-	-	
LC0010	0,289	0,0203	163,4	1,7	
LC0011	-	-	-	-	
LC0012	0,184	-	104,1	0,1	
LC0013	-	-	-	-	
LC0014	-	-	-	-	
LC0015	-	-	-	-	

Characteristics of parameter

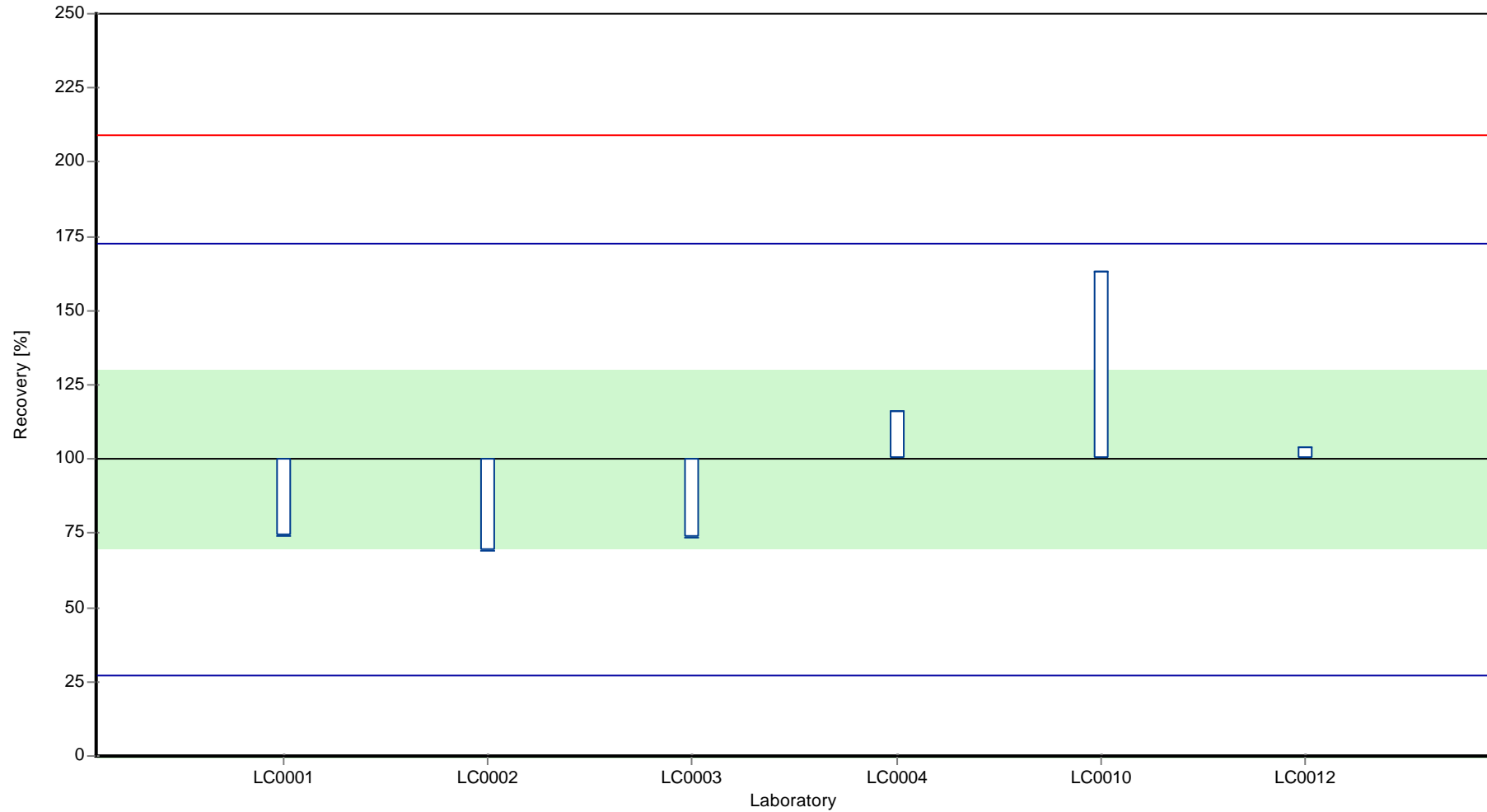
	all results	without outliers	Unit
Mean ± CI (99%)	0,177 ± 0,0789	0,177 ± 0,0789	µg/l
Minimum	0,122	0,122	µg/l
Maximum	0,289	0,289	µg/l
Standard deviation	0,0644	0,0644	µg/l
rel. Standard deviation	36,4	36,4	%
n	6	6	-

Graphical presentation of results

Results



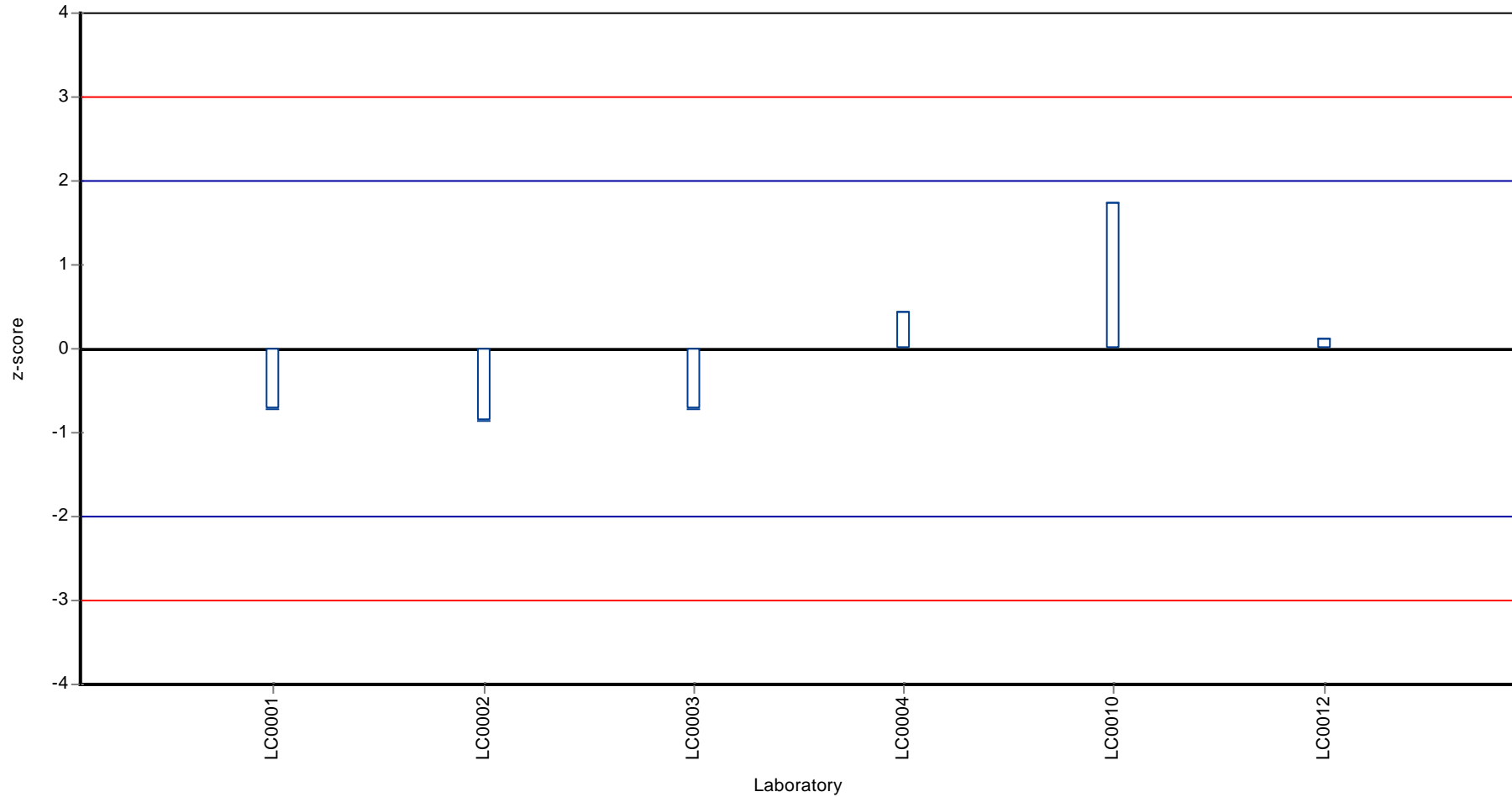
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2B, Parameter: Sucralose

Z-score



Parameter oriented report

AZ2 A

Benzotriazole

Unit	µg/l
Mean ± CI (99%)	8,04 ± 0,67
Minimum - Maximum	7,222 - 9,47
Check value ± U	7,52 ± 0,3

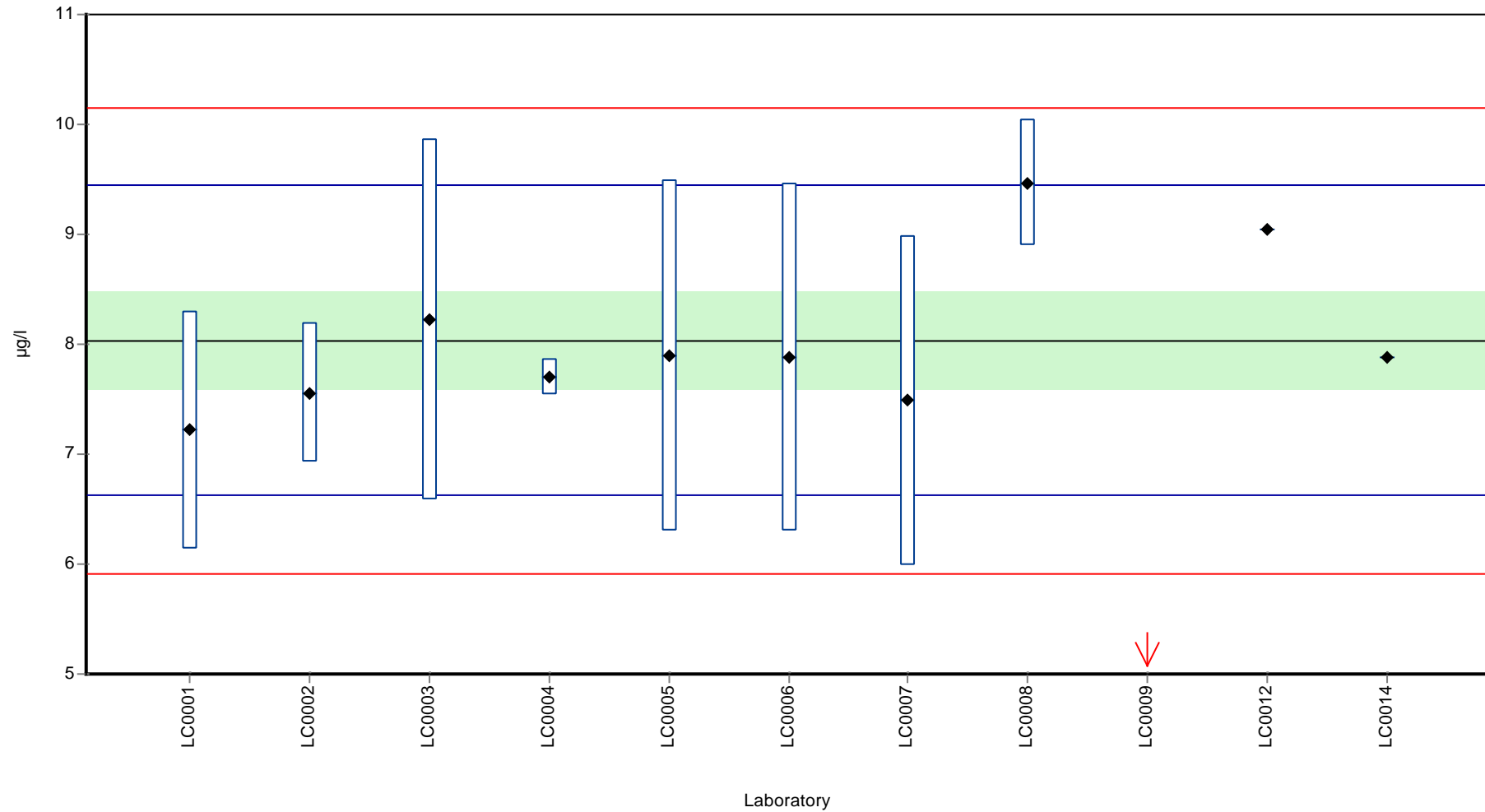
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	7,222	1,083	89,9	-1,2	
LC0002	7,559	0,635	94,1	-0,7	
LC0003	8,220	1,640	102,3	0,3	
LC0004	7,700	0,170	95,8	-0,5	
LC0005	7,900	1,600	98,3	-0,2	
LC0006	7,880	1,580	98,0	-0,2	
LC0007	7,486	1,500	93,1	-0,8	
LC0008	9,470	0,570	117,8	2,0	
LC0009	4,530	-	56,4	-5,0	H
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	9,050	-	112,6	1,4	
LC0013	-	-	-	-	
LC0014	7,881	-	98,1	-0,2	
LC0015	-	-	-	-	

Characteristics of parameter

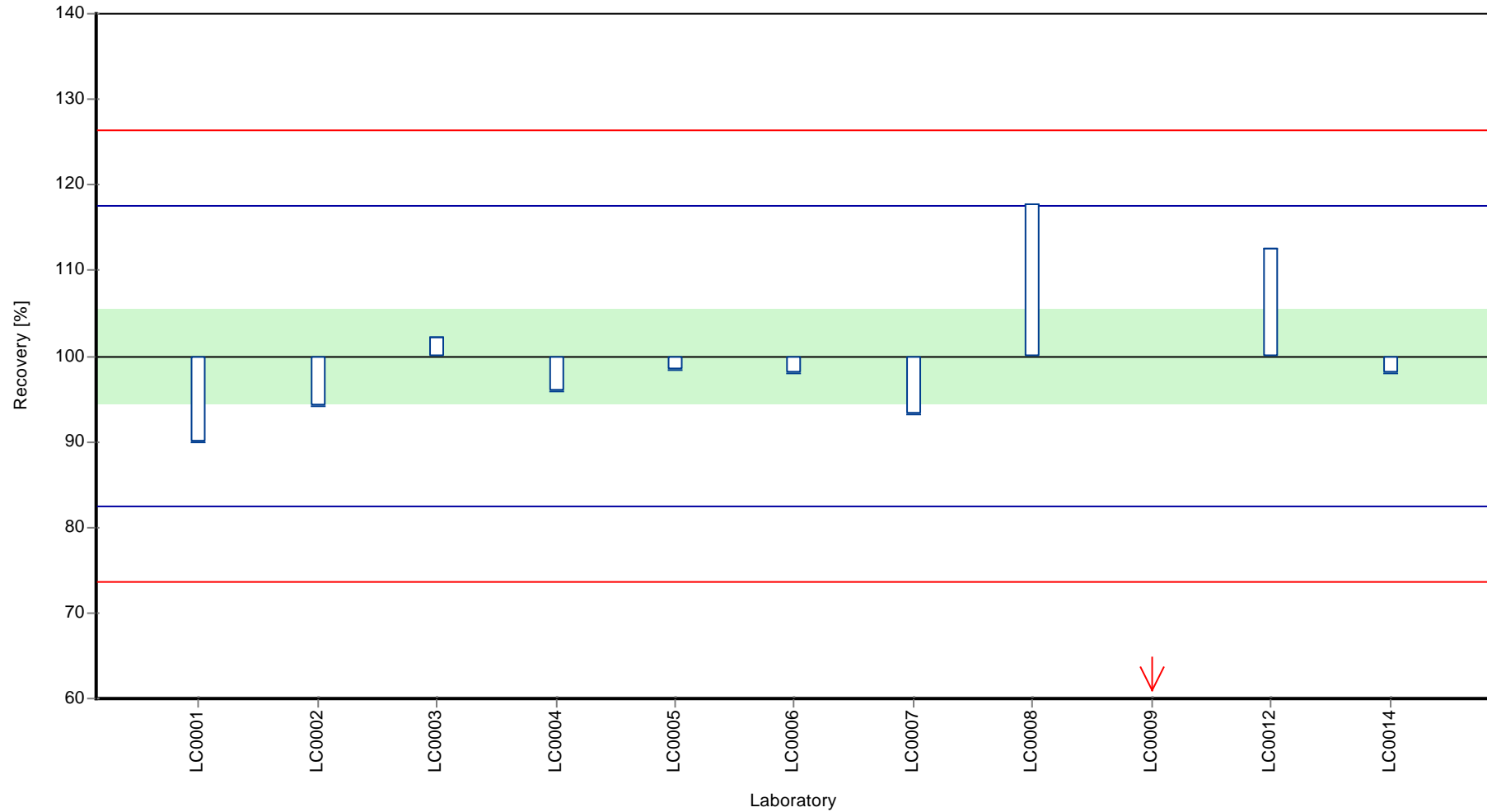
	all results	without outliers	Unit
Mean ± CI (99%)	7,72 ± 1,13	8,04 ± 0,67	µg/l
Minimum	4,53	7,22	µg/l
Maximum	9,47	9,47	µg/l
Standard deviation	1,25	0,706	µg/l
rel. Standard deviation	16,2	8,79	%
n	11	10	-

Graphical presentation of results

Results



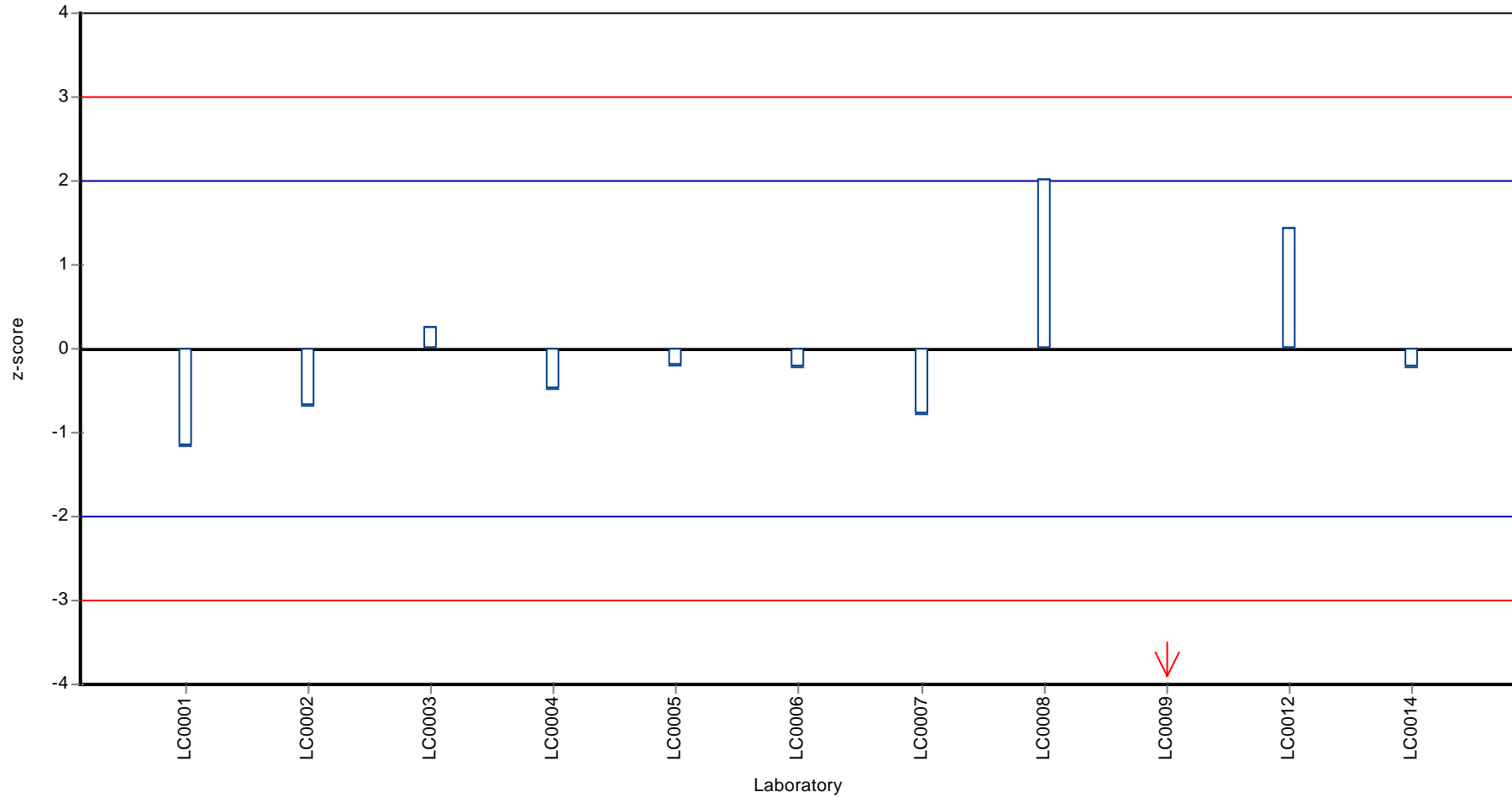
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Benzotriazole

Z-score



Parameter oriented report

AZ2 B

Benzotriazole

Unit	µg/l
Mean ± CI (99%)	0,366 ± 0,0768
Minimum - Maximum	0,29 - 0,552
Check value ± U	0,32 ± 0,03

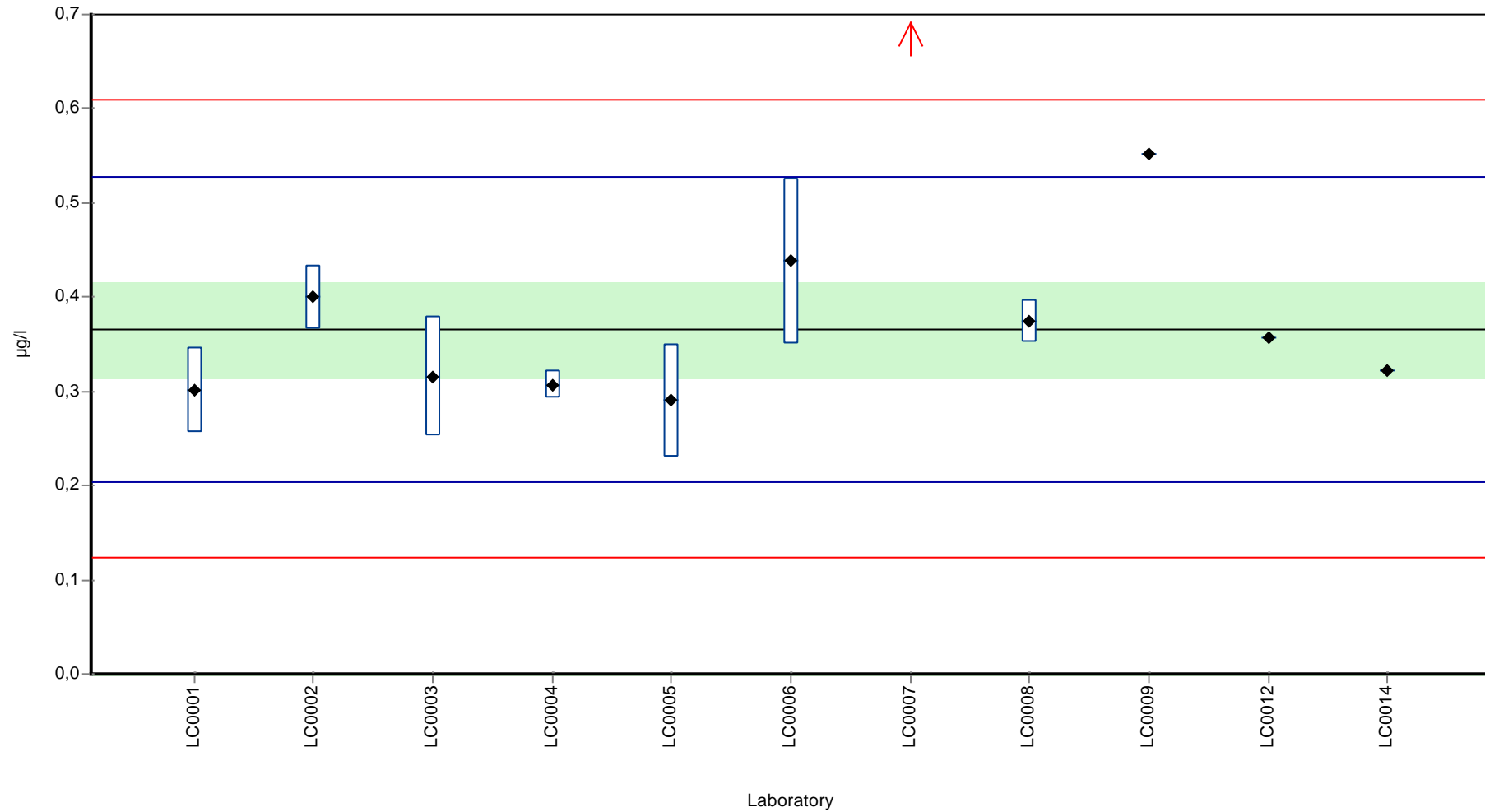
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0,301	0,0452	82,3	-0,8	
LC0002	0,400	0,034	109,4	0,4	
LC0003	0,316	0,063	86,4	-0,6	
LC0004	0,307	0,015	83,9	-0,7	
LC0005	0,290	0,060	79,3	-0,9	
LC0006	0,438	0,088	119,8	0,9	
LC0007	0,840	0,170	229,7	5,9	H
LC0008	0,374	0,023	102,3	0,1	
LC0009	0,552	-	150,9	2,3	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	0,357	-	97,6	-0,1	
LC0013	-	-	-	-	
LC0014	0,322	-	88,1	-0,5	
LC0015	-	-	-	-	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	0,409 ± 0,147	0,366 ± 0,0768	µg/l
Minimum	0,29	0,29	µg/l
Maximum	0,84	0,552	µg/l
Standard deviation	0,162	0,081	µg/l
rel. Standard deviation	39,7	22,1	%
n	11	10	-

Graphical presentation of results

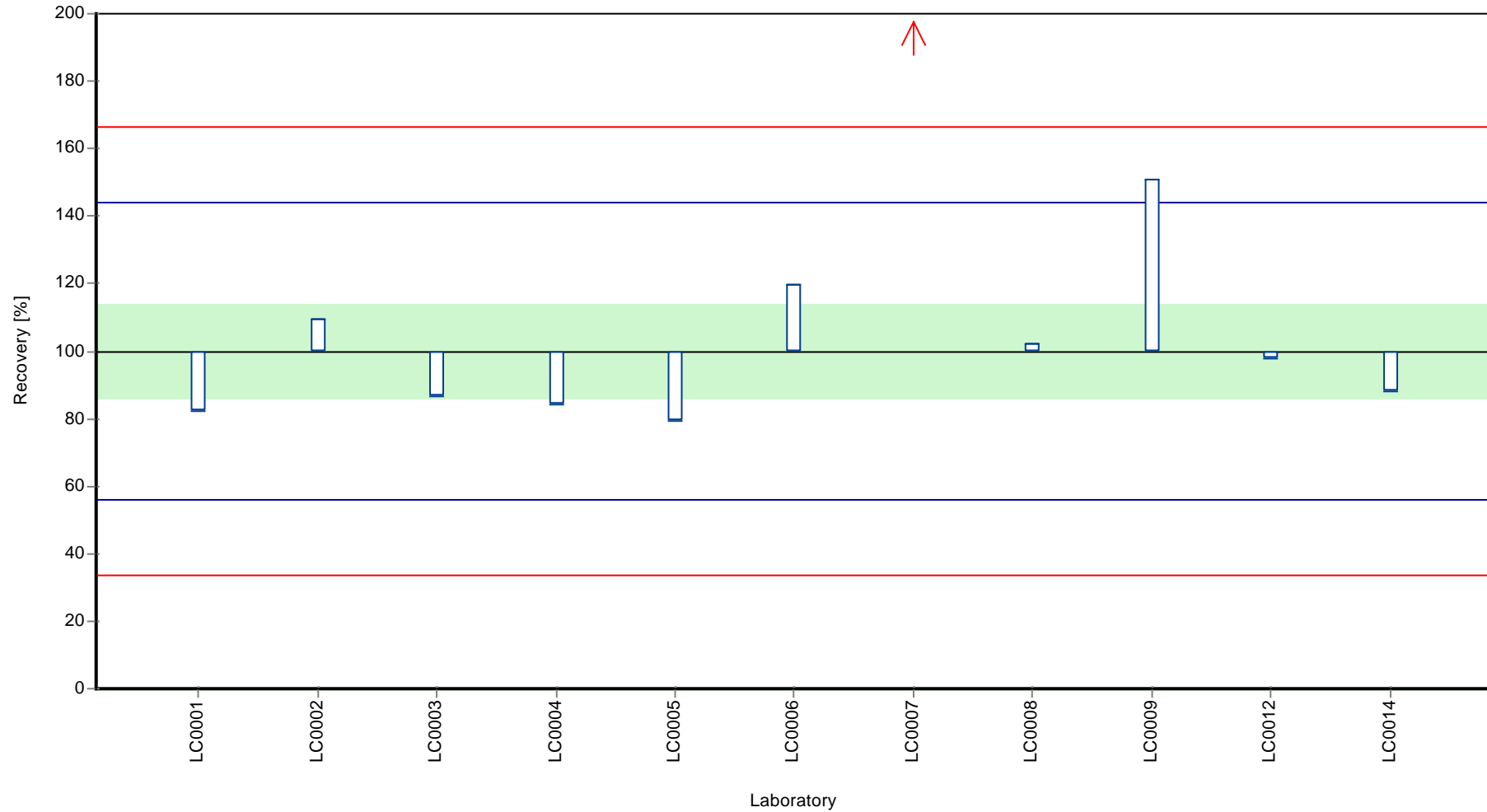
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2B, Parameter: Benzotriazole

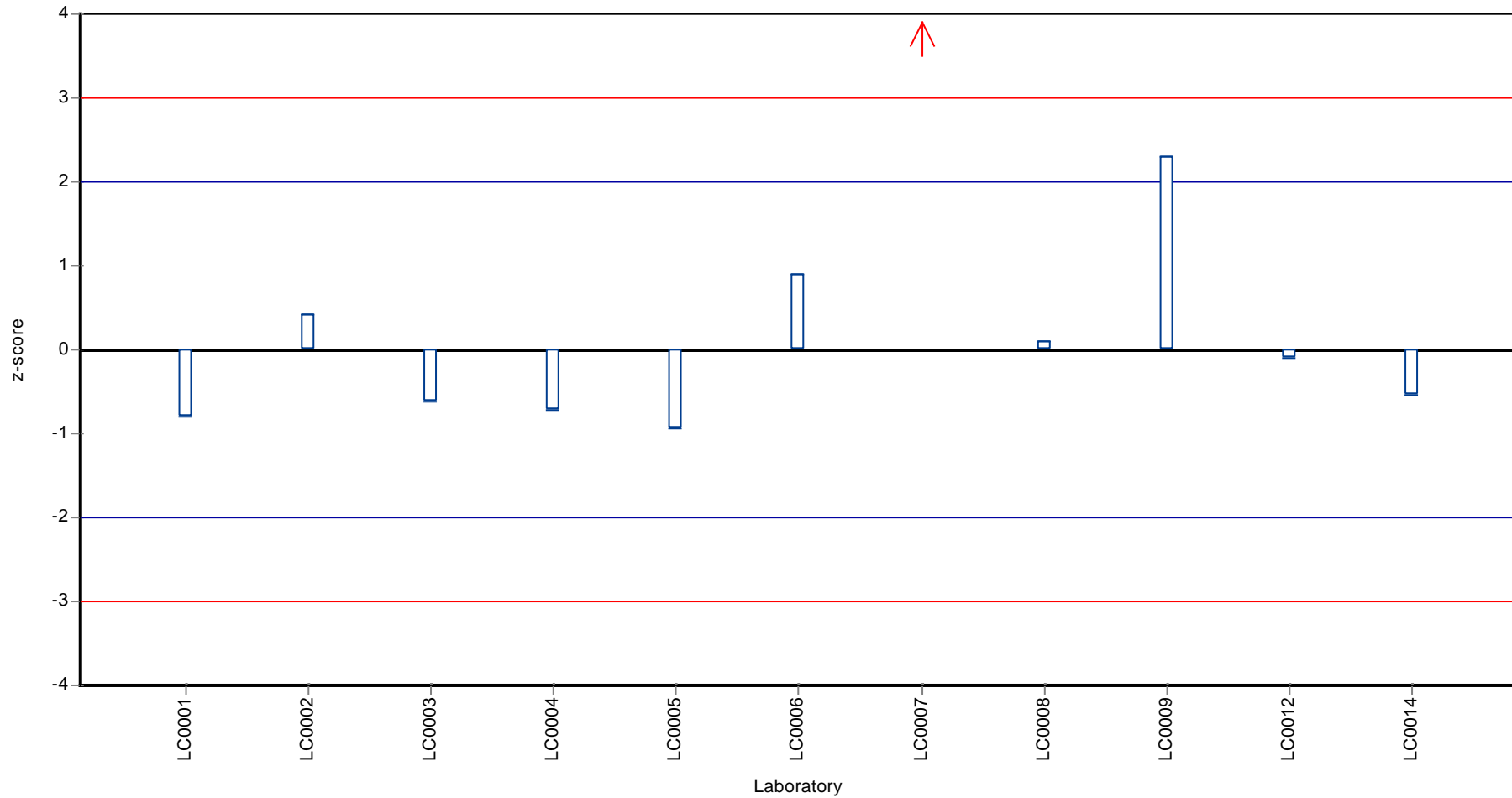
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2B, Parameter: Benzotriazole

Z-score



Parameter oriented report

AZ2 A

Carbamazepine

Unit	µg/l
Mean ± CI (99%)	0,763 ± 0,0865
Minimum - Maximum	0,629 - 0,965
Check value ± U	0,82 ± 0,07

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0,690	0,104	90,4	-0,8	
LC0002	0,965	0,092	126,4	2,1	
LC0003	0,693	0,139	90,8	-0,7	
LC0004	0,775	0,050	101,5	0,1	
LC0005	0,700	0,100	91,7	-0,7	
LC0006	0,797	0,159	104,4	0,4	
LC0007	0,832	0,170	109,0	0,7	
LC0008	0,860	0,060	112,7	1,0	
LC0009	0,629	-	82,4	-1,4	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	0,713	-	93,4	-0,5	
LC0013	-	-	-	-	
LC0014	0,7415	-	97,2	-0,2	
LC0015	-	-	-	-	

Characteristics of parameter

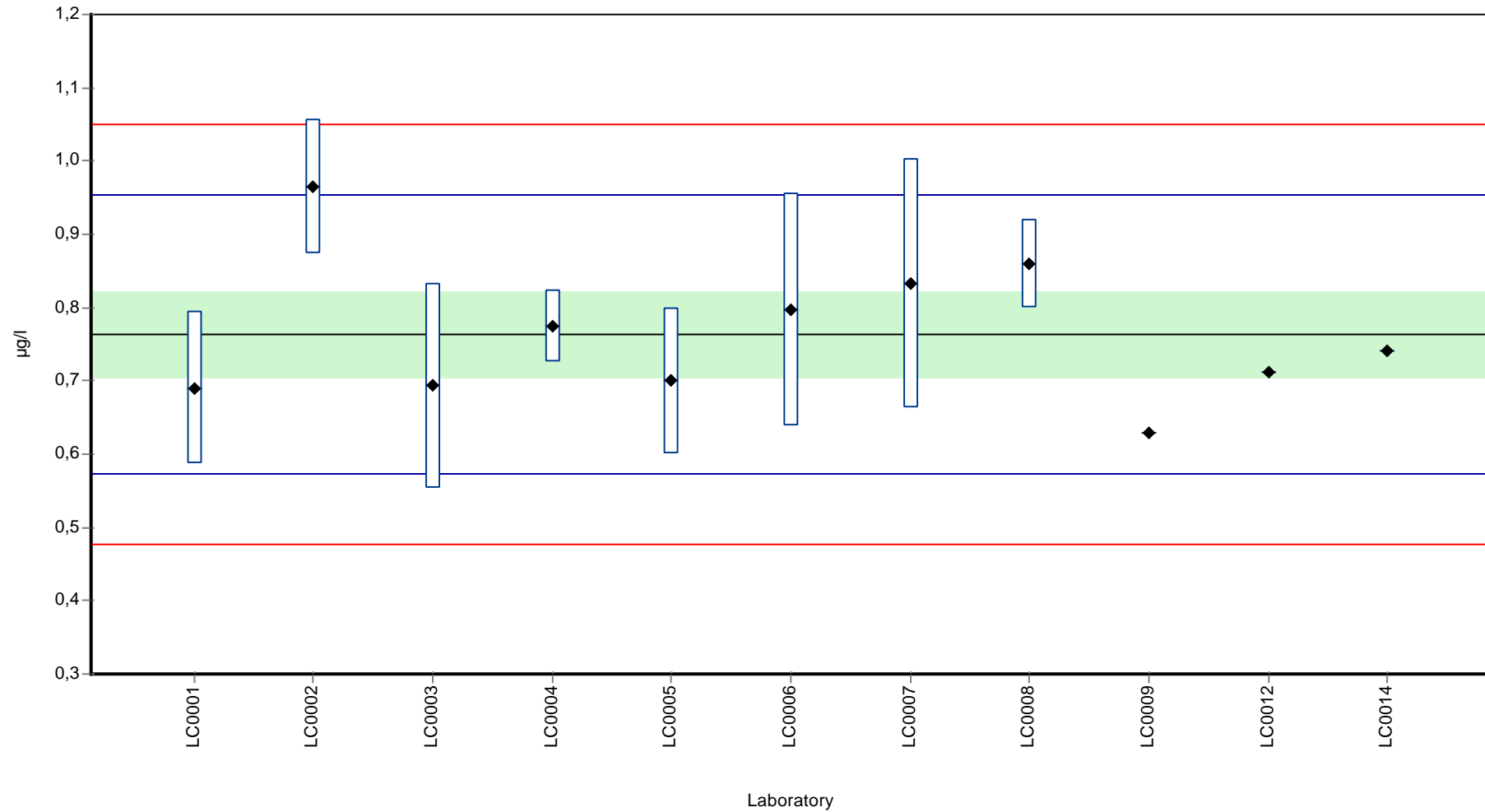
	all results	without outliers	Unit
Mean ± CI (99%)	0,763 ± 0,0865	0,763 ± 0,0865	µg/l
Minimum	0,629	0,629	µg/l
Maximum	0,965	0,965	µg/l
Standard deviation	0,0956	0,0956	µg/l
rel. Standard deviation	12,5	12,5	%
n	11	11	-

Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Carbamazepine

Graphical presentation of results

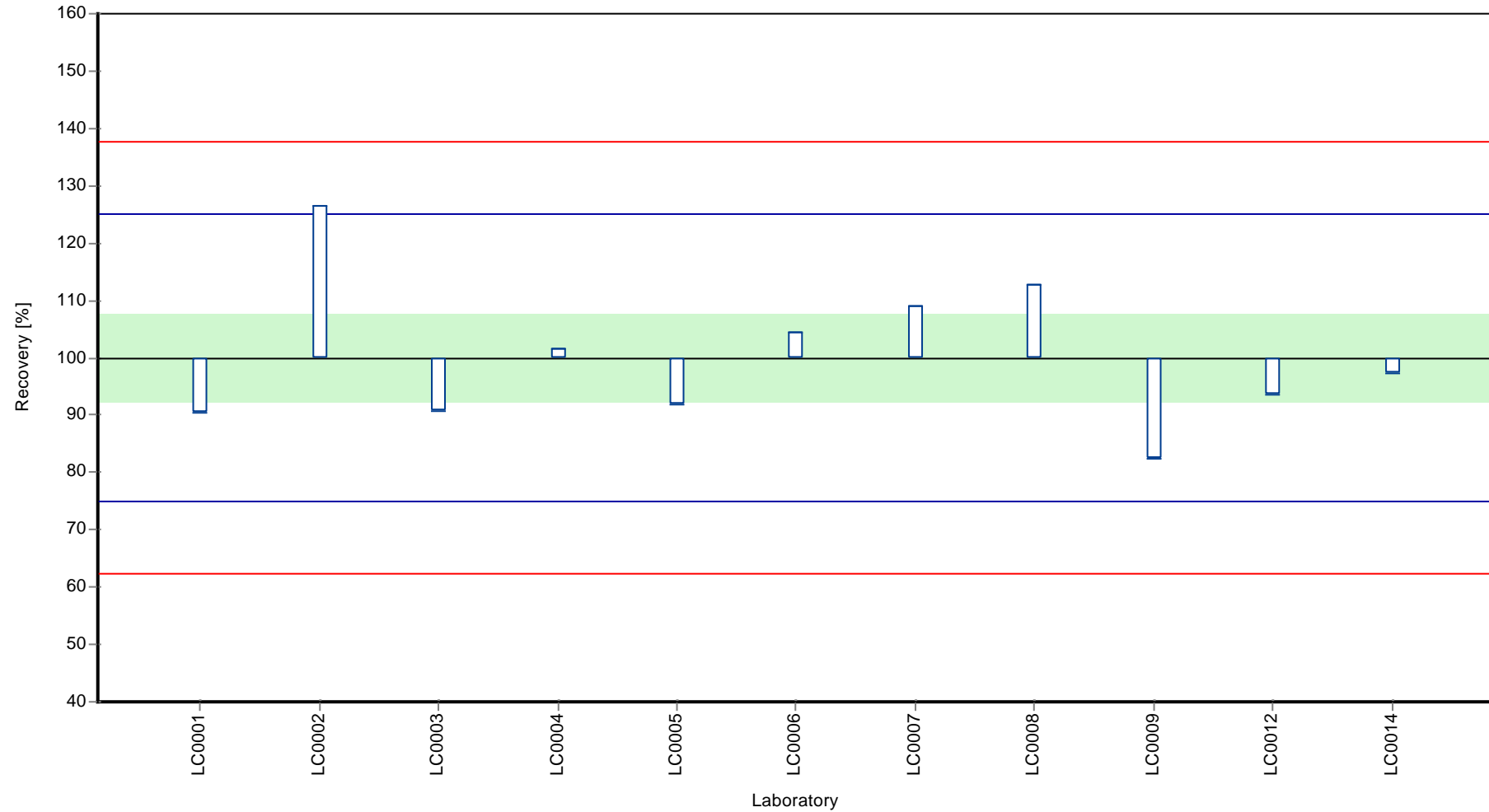
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Carbamazepine

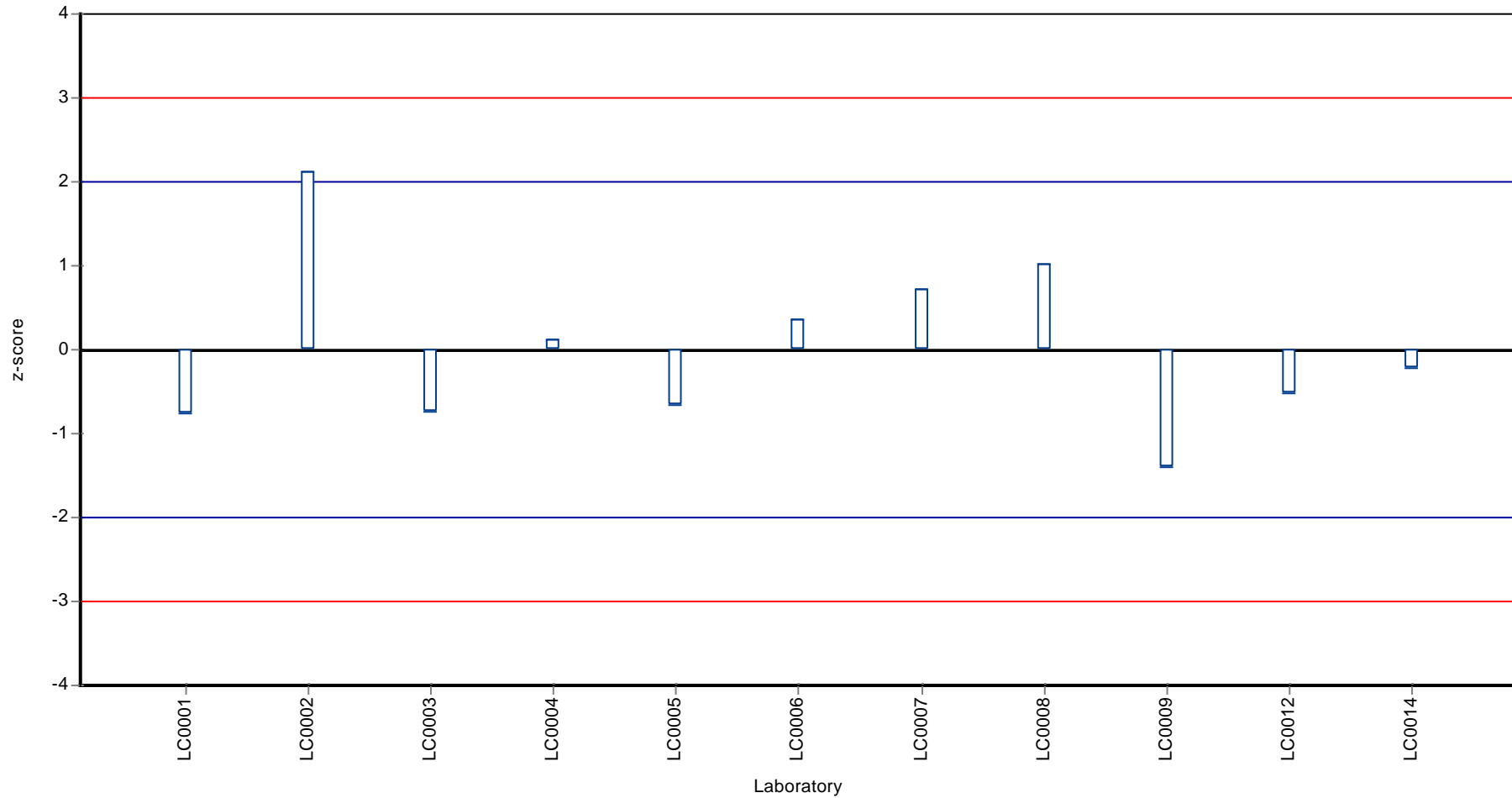
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Carbamazepine

Z-score



Parameter oriented report

AZ2 B

Carbamazepine

Unit	µg/l
Mean ± CI (99%)	0,0284 ± 0,00428
Minimum - Maximum	0,024 - 0,04
Check value ± U	0,03 ± 0,001

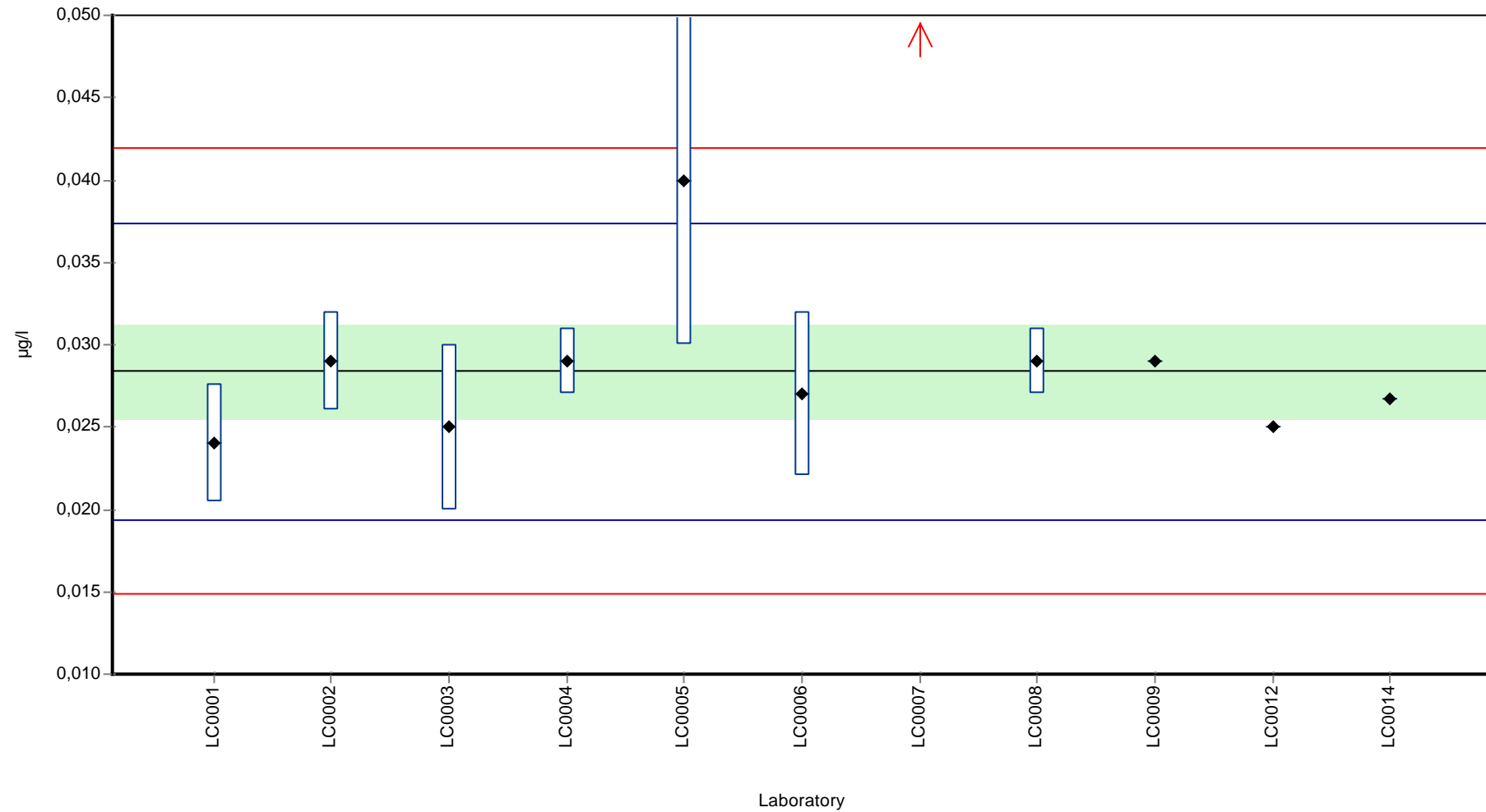
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0,024	0,0036	84,6	-1,0	
LC0002	0,029	0,003	102,2	0,1	
LC0003	0,025	0,005	88,1	-0,7	
LC0004	0,029	0,002	102,2	0,1	
LC0005	0,040	0,010	141,0	2,6	
LC0006	0,027	0,005	95,2	-0,3	
LC0007	0,066	0,013	232,6	8,3	H
LC0008	0,029	0,002	102,2	0,1	
LC0009	0,029	-	102,2	0,1	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	0,025	-	88,1	-0,7	
LC0013	-	-	-	-	
LC0014	0,0267	-	94,1	-0,4	
LC0015	-	-	-	-	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	0,0318 ± 0,011	0,0284 ± 0,00428	µg/l
Minimum	0,024	0,024	µg/l
Maximum	0,066	0,04	µg/l
Standard deviation	0,0121	0,00451	µg/l
rel. Standard deviation	38,1	15,9	%
n	11	10	-

Graphical presentation of results

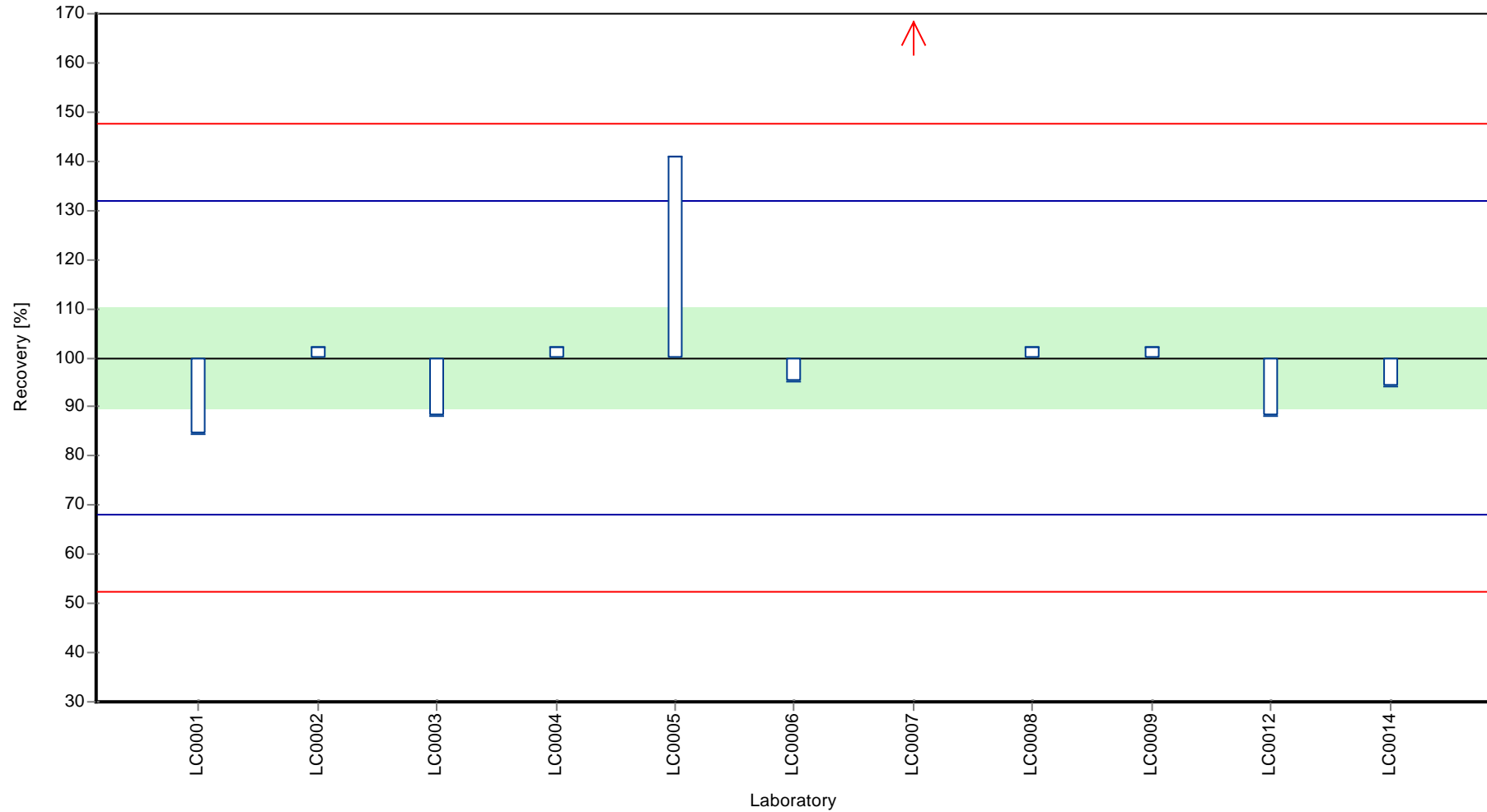
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2B, Parameter: Carbamazepine

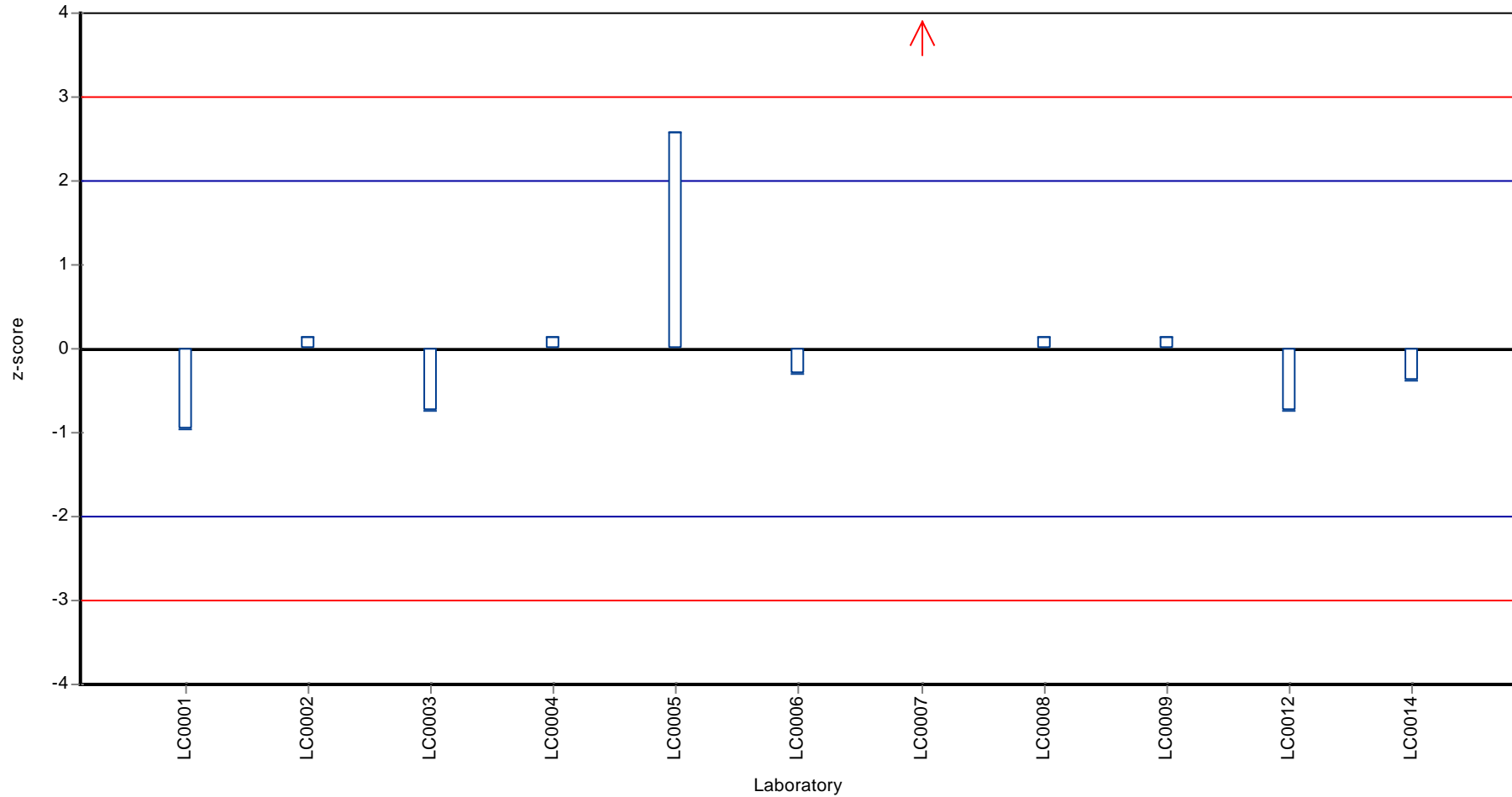
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2B, Parameter: Carbamazepine

Z-score



Parameter oriented report

AZ2 A

Acesulfame

Unit	µg/l
Mean ± CI (99%)	2,55 ± 0,286
Minimum - Maximum	2,04 - 2,89
Check value ± U	2,42 ± 0,09

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	2,476	0,371	97,1	-0,3	
LC0002	-	-	-	-	
LC0003	2,490	0,498	97,7	-0,2	
LC0004	2,040	0,020	80,0	-1,8	
LC0005	-	-	-	-	
LC0006	2,740	0,820	107,5	0,7	
LC0007	2,395	0,480	93,9	-0,5	
LC0008	2,890	0,460	113,4	1,2	
LC0009	0,762	-	29,9	-6,2	H
LC0010	0,5113	0,019	20,1	-7,1	H
LC0011	2,880	0,317	113,0	1,2	
LC0012	2,740	-	107,5	0,7	
LC0013	-	-	-	-	
LC0014	2,293	-	89,9	-0,9	
LC0015	-	-	-	-	

Characteristics of parameter

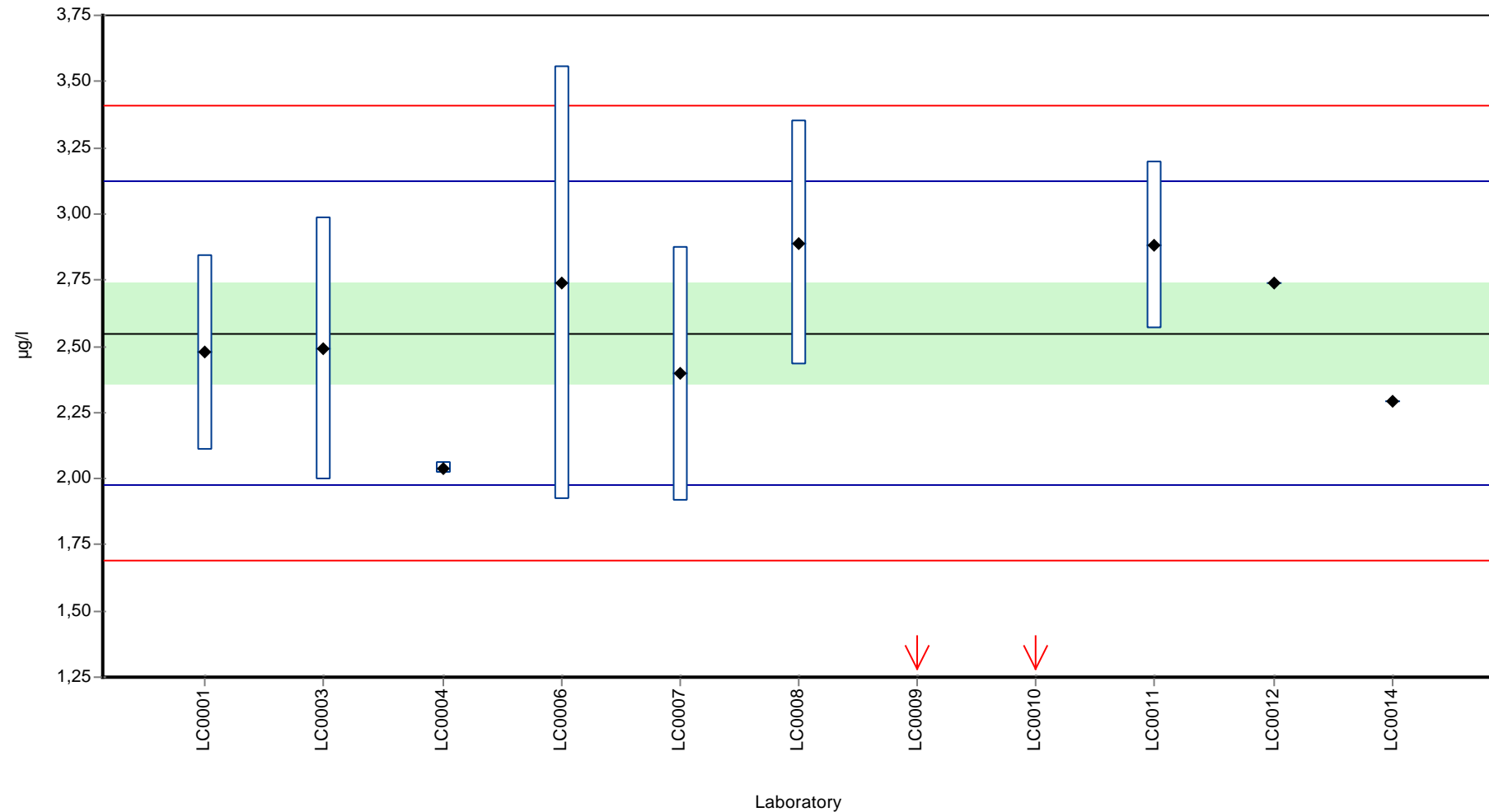
	all results	without outliers	Unit
Mean ± CI (99%)	2,2 ± 0,739	2,55 ± 0,286	µg/l
Minimum	0,511	2,04	µg/l
Maximum	2,89	2,89	µg/l
Standard deviation	0,817	0,286	µg/l
rel. Standard deviation	37,1	11,2	%
n	11	9	-

Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Acesulfame

Graphical presentation of results

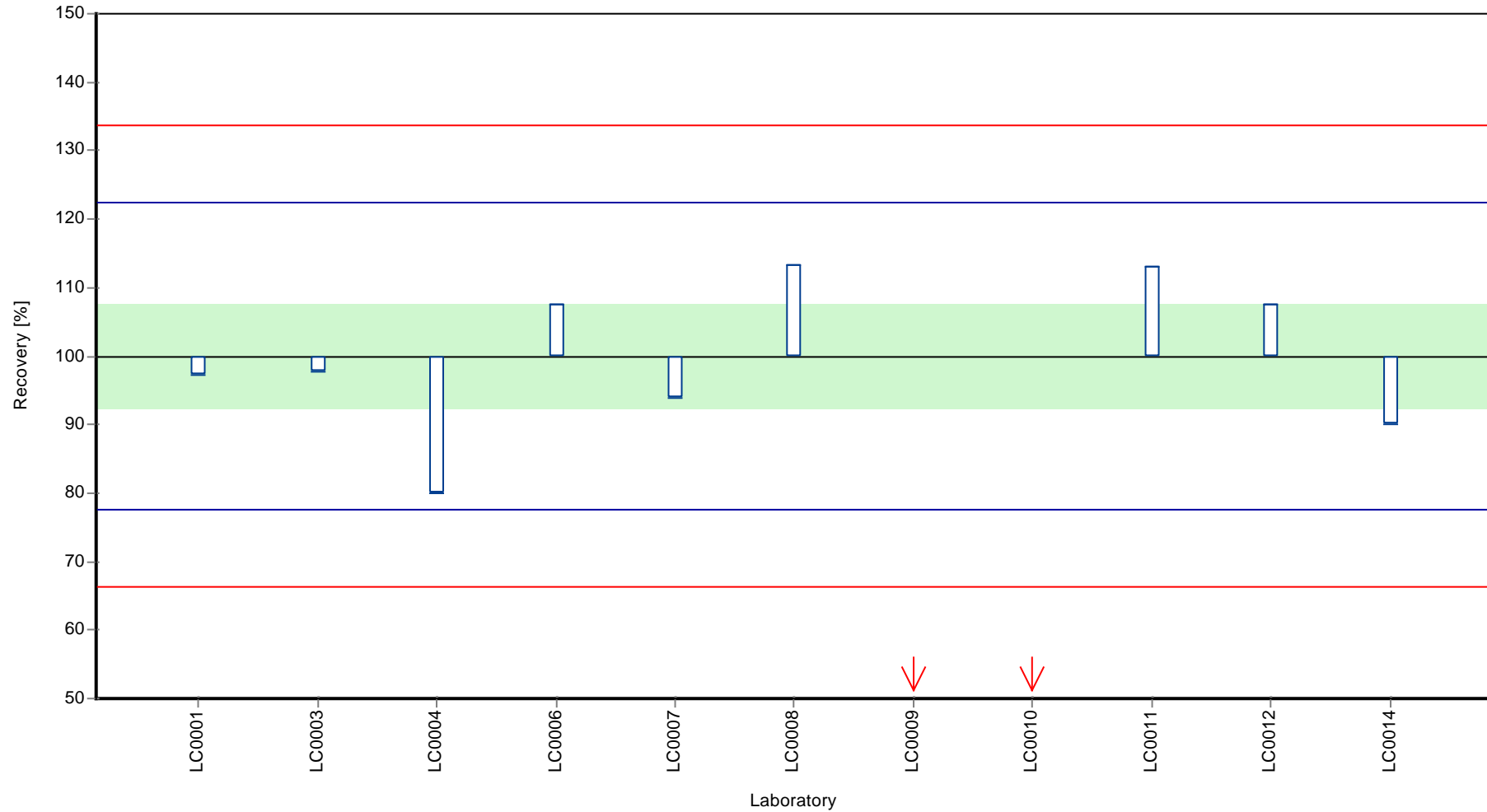
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Acesulfame

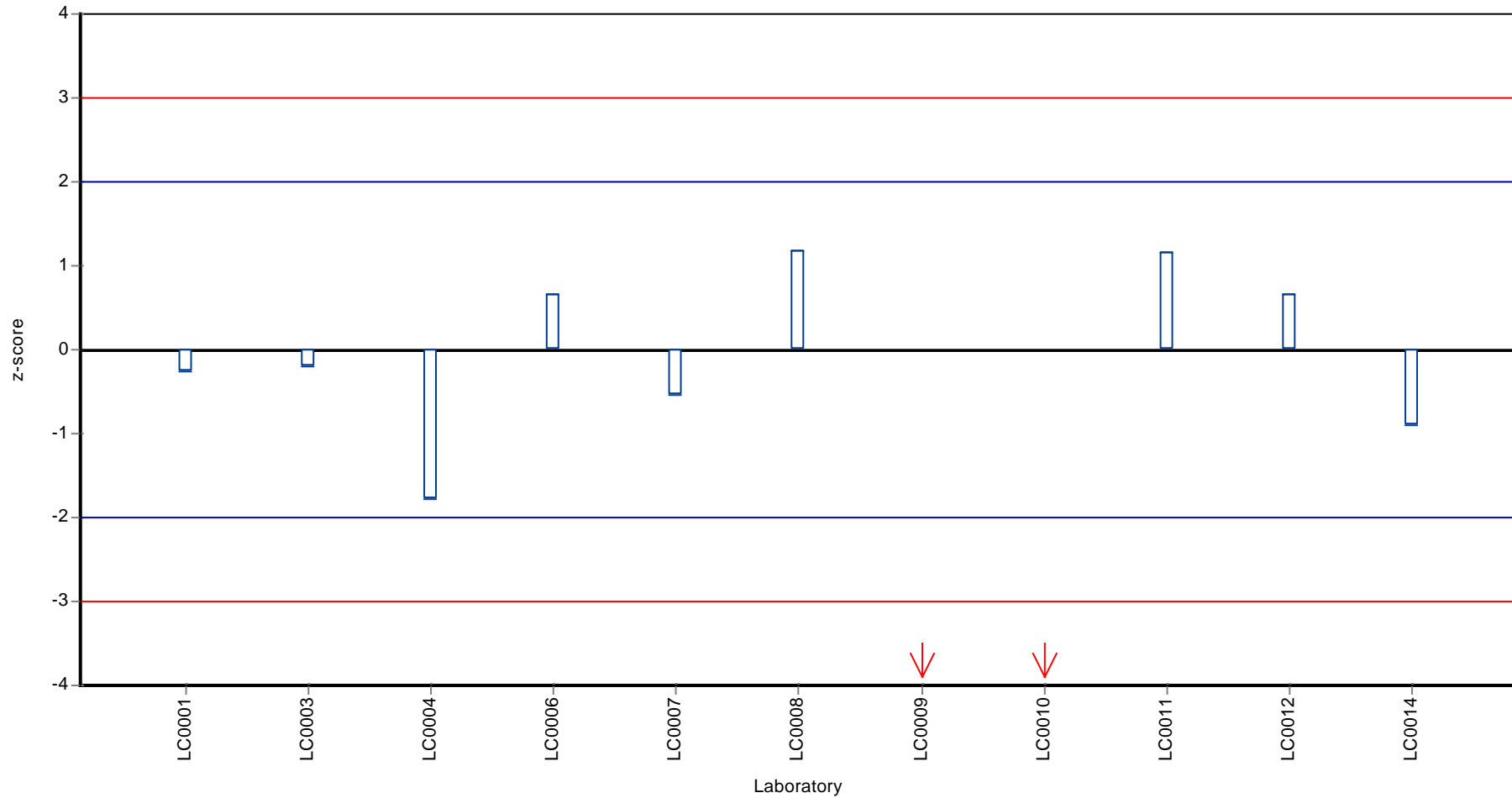
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Acesulfame

Z-score



Parameter oriented report

AZ2 B

Acesulfame

Unit	µg/l
Mean ± CI (99%)	0,268 ± 0,0529
Minimum - Maximum	0,1461 - 0,336
Check value ± U	0,32 ± 0,02

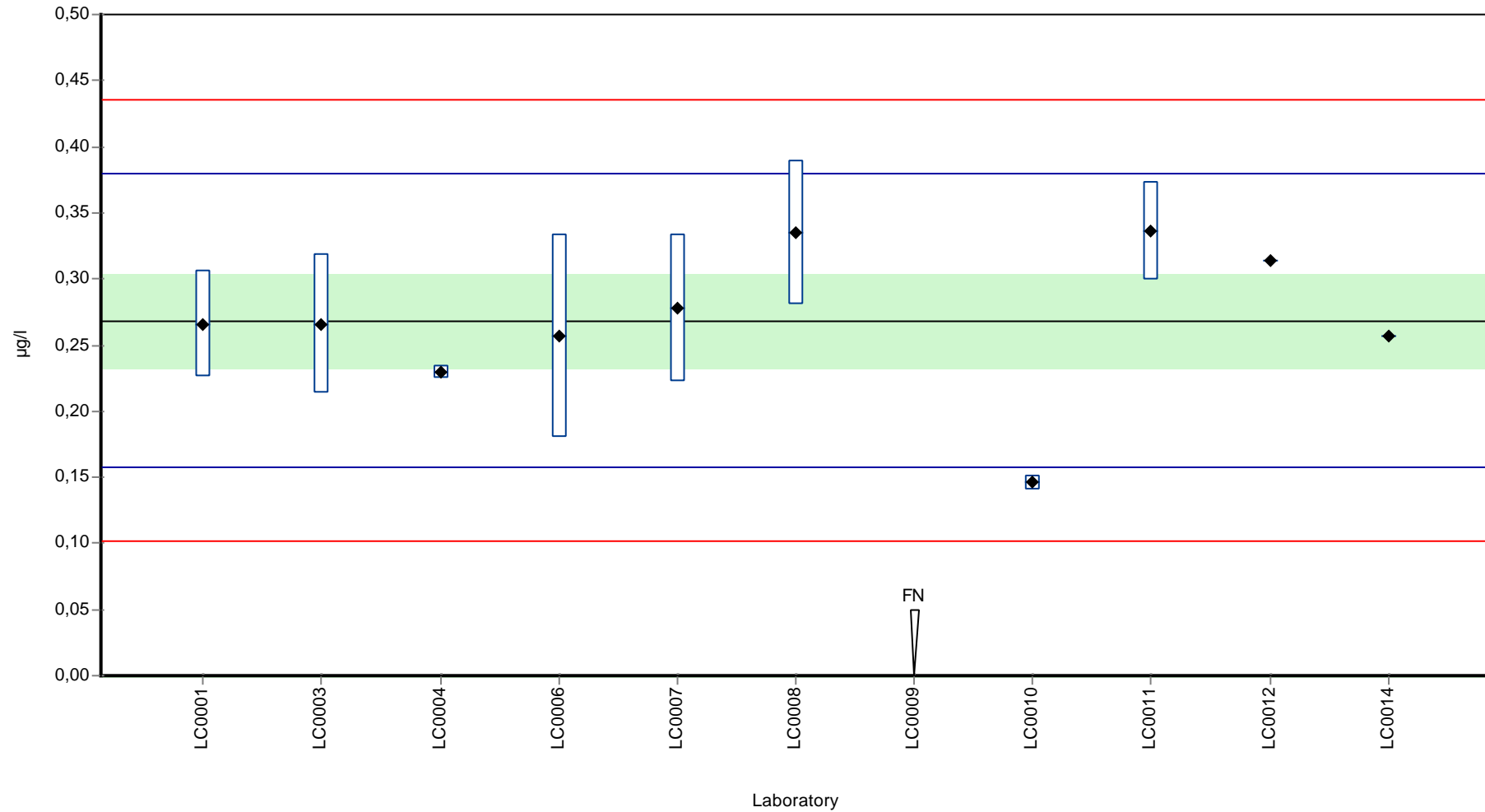
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0,266	0,0399	99,1	0,0	
LC0002	-	-	-	-	
LC0003	0,266	0,053	99,1	0,0	
LC0004	0,229	0,005	85,3	-0,7	
LC0005	-	-	-	-	
LC0006	0,257	0,077	95,7	-0,2	
LC0007	0,278	0,056	103,6	0,2	
LC0008	0,335	0,054	124,8	1,2	
LC0009	< 0,05 (LOQ)	-	-	-	FN
LC0010	0,1461	0,0054	54,4	-2,2	
LC0011	0,336	0,037	125,2	1,2	
LC0012	0,314	-	117,0	0,8	
LC0013	-	-	-	-	
LC0014	0,2574	-	95,9	-0,2	
LC0015	-	-	-	-	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	0,268 ± 0,0529	0,268 ± 0,0529	µg/l
Minimum	0,146	0,146	µg/l
Maximum	0,336	0,336	µg/l
Standard deviation	0,0557	0,0557	µg/l
rel. Standard deviation	20,8	20,8	%
n	10	10	-

Graphical presentation of results

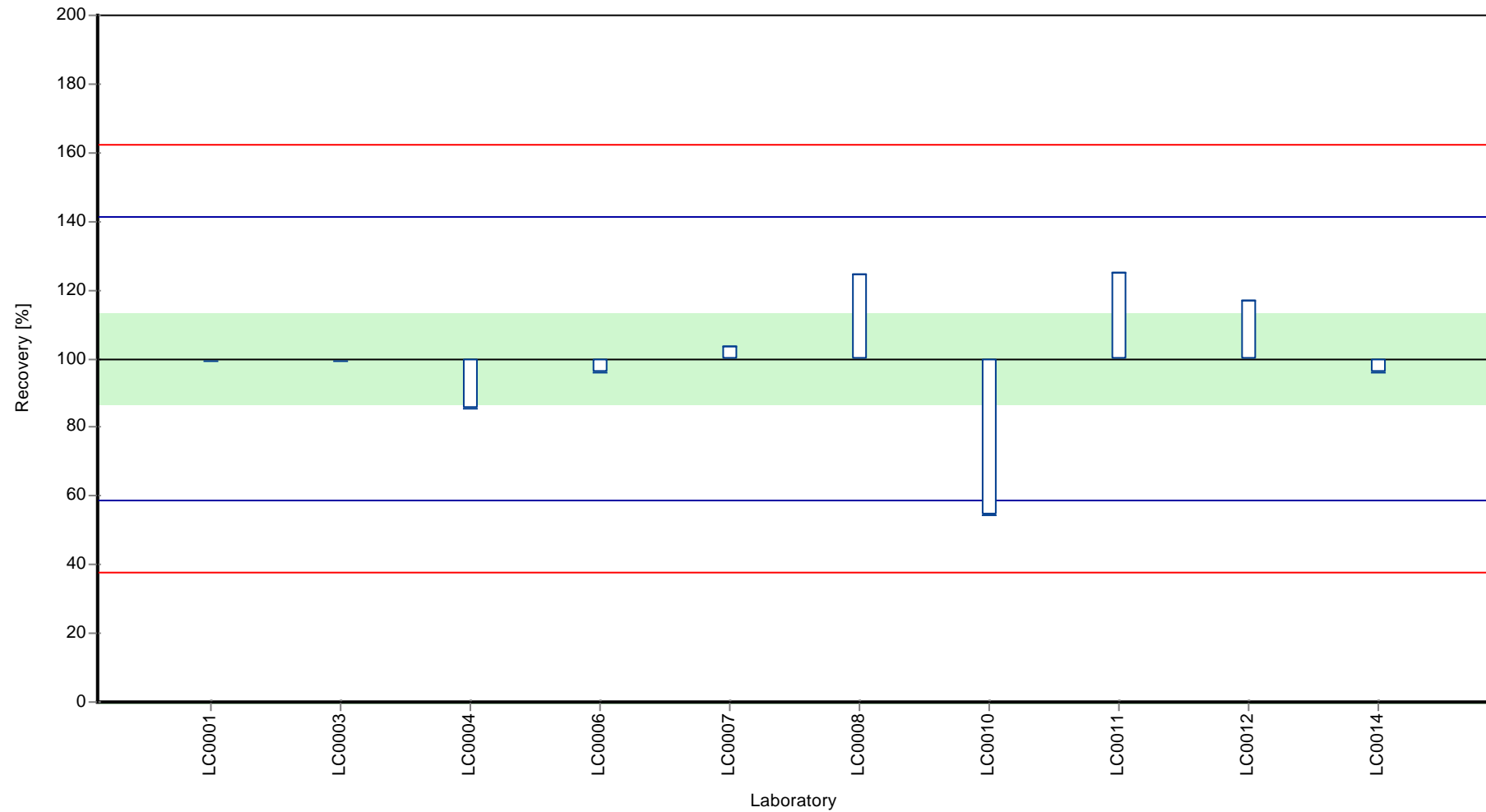
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2B, Parameter: Acesulfame

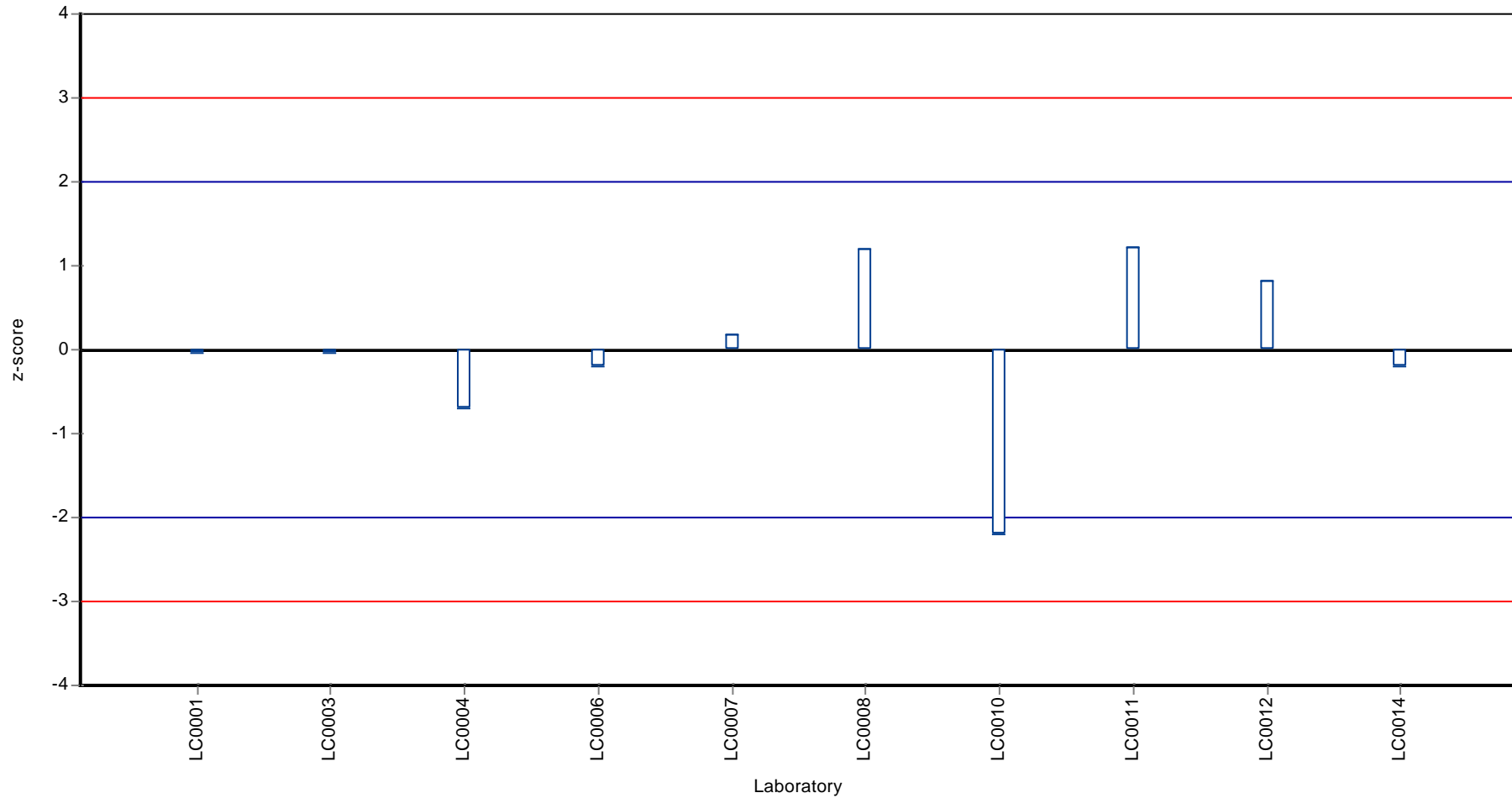
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2B, Parameter: Acesulfame

Z-score



Parameter oriented report

AZ2 A

Sulfamethoxazole

Unit	µg/l
Mean ± CI (99%)	0,064 ± 0,00321
Minimum - Maximum	0,0586 - 0,07
Check value ± U	0,06 ± 0,02

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0,0586	0,0088	91,6	-1,6	
LC0002	0,061	0,004	95,3	-0,9	
LC0003	0,063	0,013	98,5	-0,3	
LC0004	0,065	0,050	101,6	0,3	
LC0005	< 0,2 (LOQ)	-	-	-	
LC0006	0,064	0,013	100,0	0,0	
LC0007	0,066	0,013	103,1	0,6	
LC0008	0,070	0,004	109,4	1,8	
LC0009	< 0,02 (LOQ)	-	-	-	FN
LC0010	0,0619	0,002	96,7	-0,6	
LC0011	-	-	-	-	
LC0012	0,068	-	106,3	1,2	
LC0013	-	-	-	-	
LC0014	0,0624	-	97,5	-0,5	
LC0015	-	-	-	-	

Characteristics of parameter

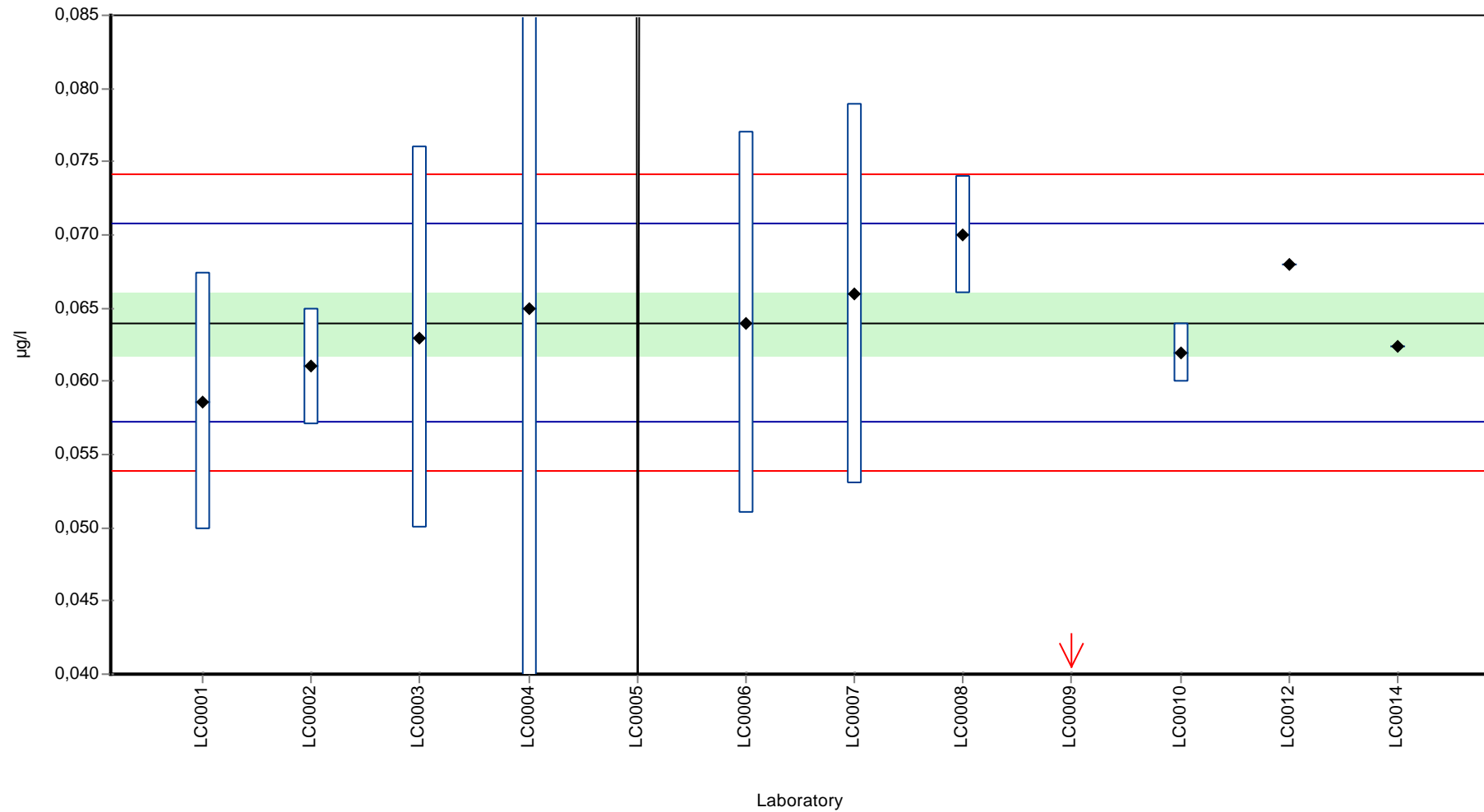
	all results	without outliers	Unit
Mean ± CI (99%)	0,064 ± 0,00321	0,064 ± 0,00321	µg/l
Minimum	0,0586	0,0586	µg/l
Maximum	0,07	0,07	µg/l
Standard deviation	0,00339	0,00339	µg/l
rel. Standard deviation	5,29	5,29	%
n	10	10	-

Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Sulfamethoxazole

Graphical presentation of results

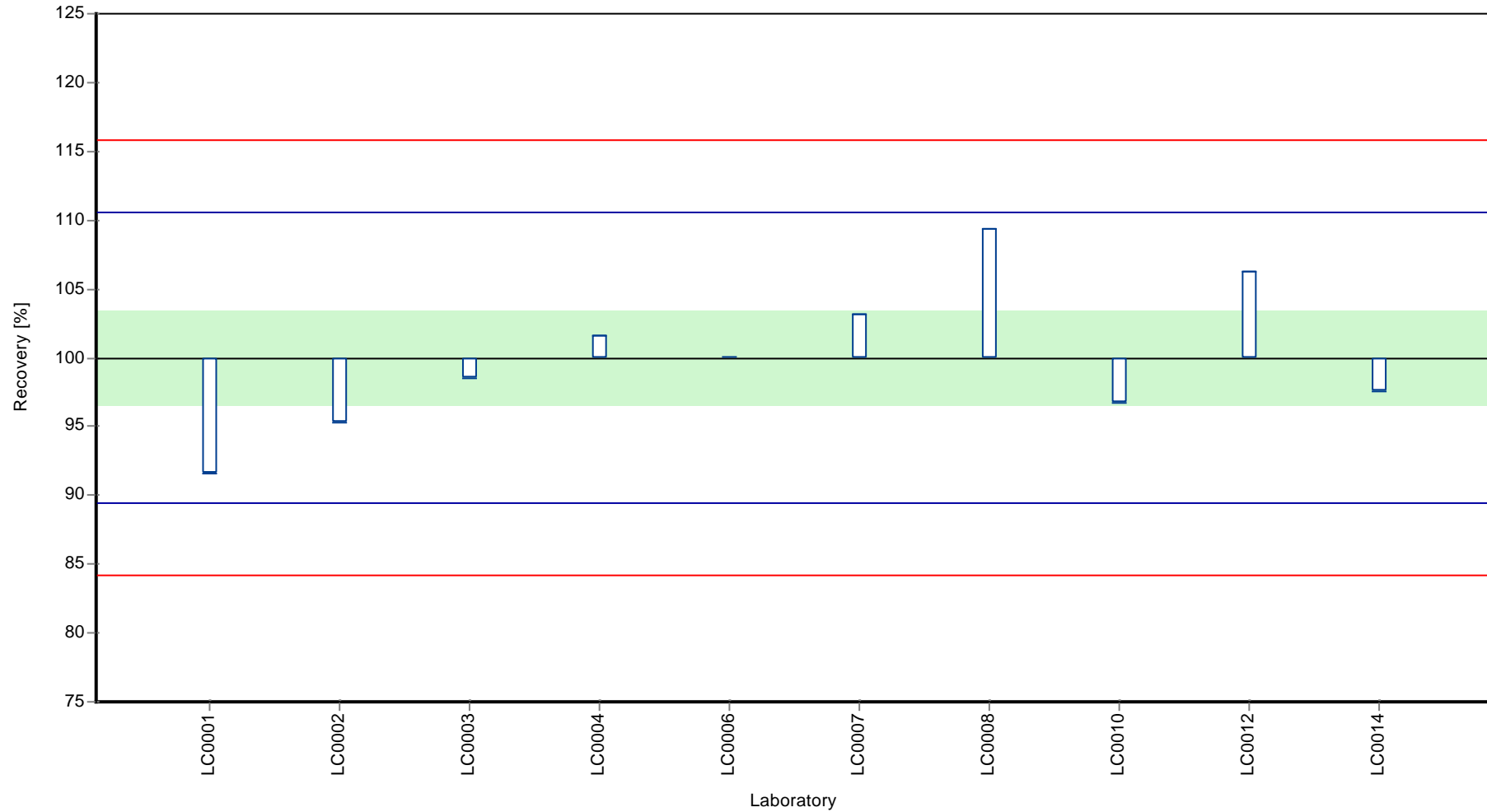
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Sulfamethoxazole

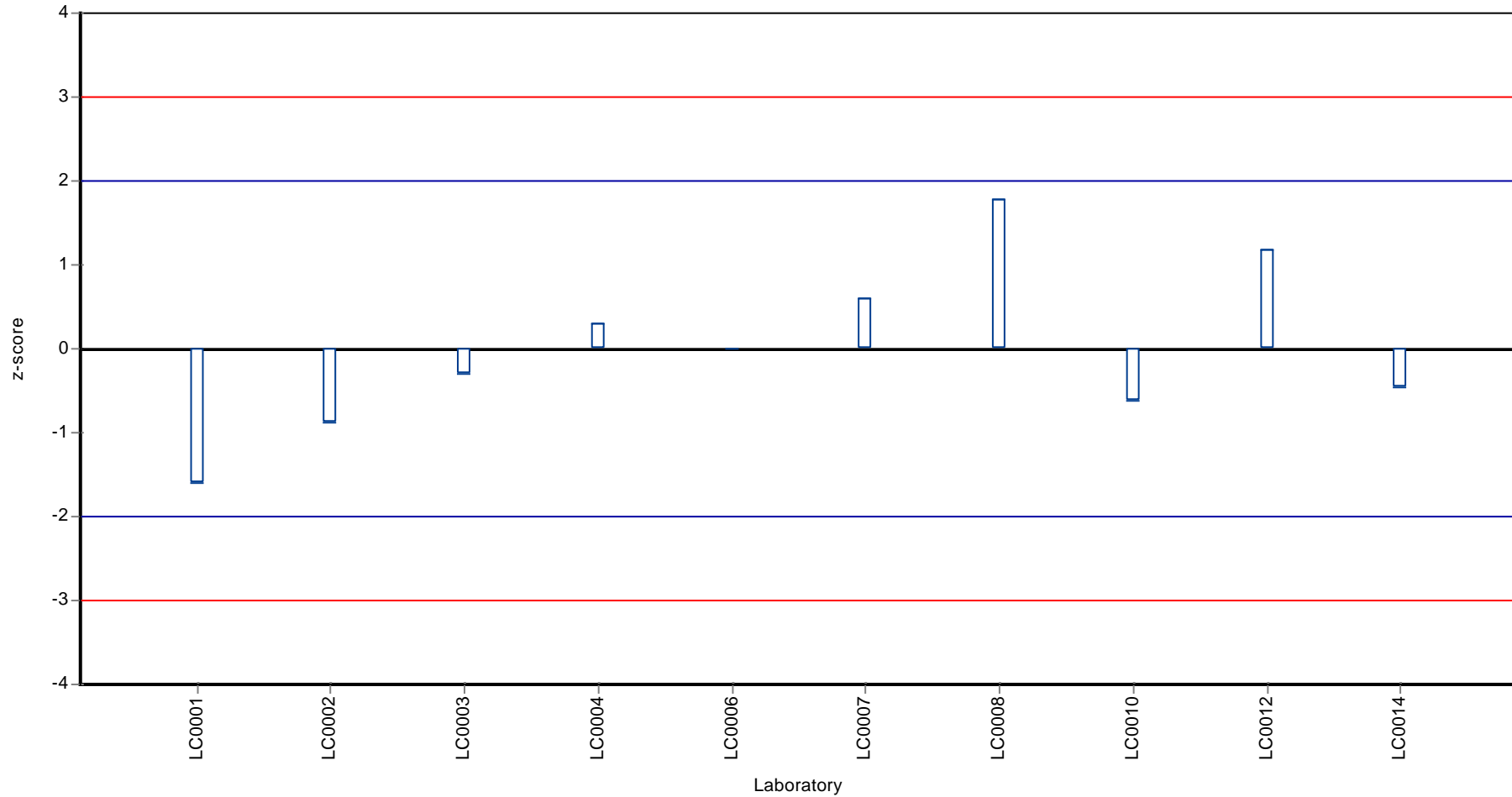
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Sulfamethoxazole

Z-score



Parameter oriented report

AZ2 B

Sulfamethoxazole

Unit	µg/l
Mean ± CI (99%)	0,0312 ± 0,00358
Minimum - Maximum	0,0266 - 0,04
Check value ± U	0,03 ± 0,005

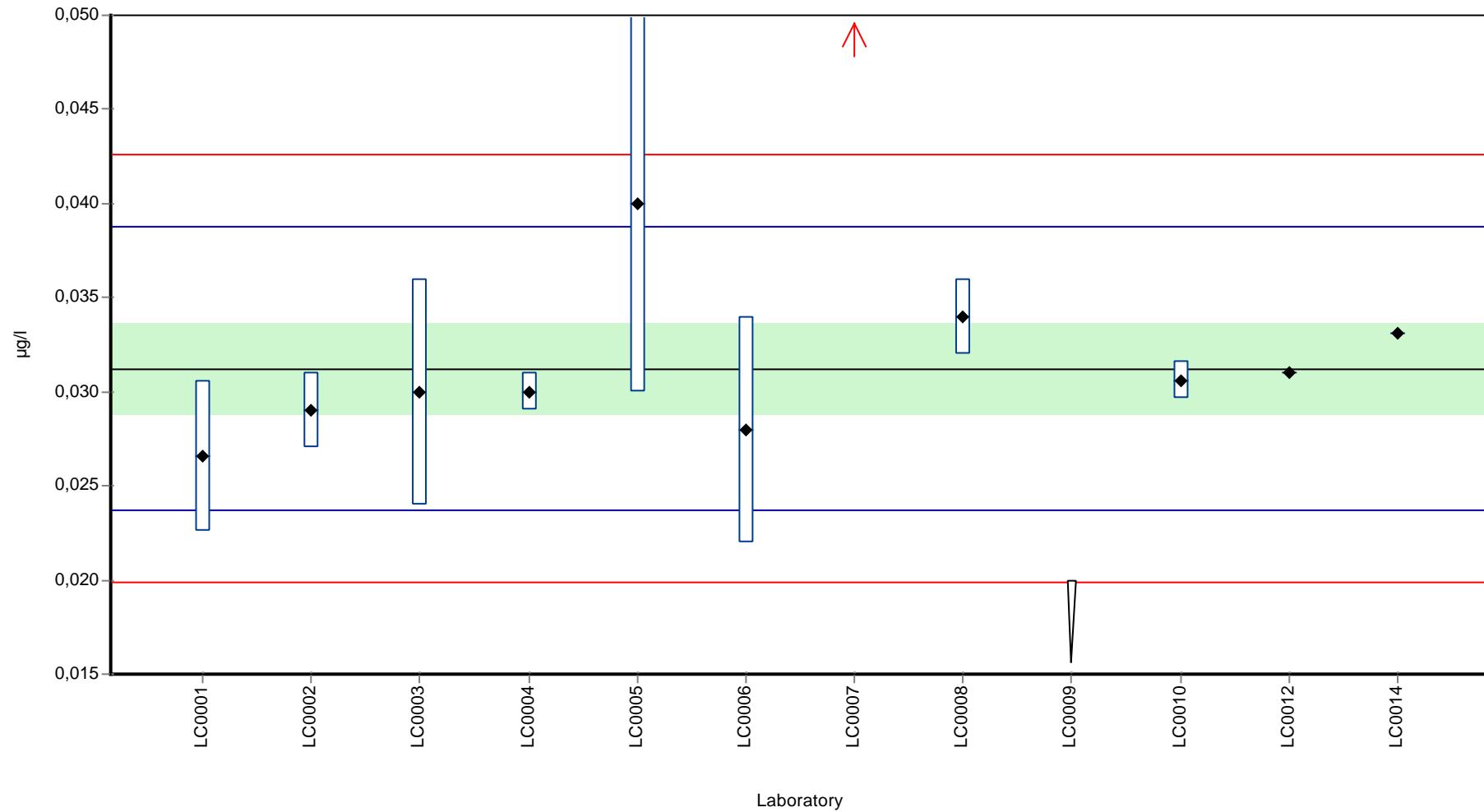
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0,0266	0,004	85,2	-1,2	
LC0002	0,029	0,002	92,9	-0,6	
LC0003	0,030	0,006	96,1	-0,3	
LC0004	0,030	0,001	96,1	-0,3	
LC0005	0,040	0,010	128,1	2,3	
LC0006	0,028	0,006	89,7	-0,9	
LC0007	0,068	0,013	217,7	9,7	H
LC0008	0,034	0,002	108,9	0,7	
LC0009	< 0,02 (LOQ)	-	-	-	
LC0010	0,0306	0,001	98,0	-0,2	
LC0011	-	-	-	-	
LC0012	0,031	-	99,3	-0,1	
LC0013	-	-	-	-	
LC0014	0,0331	-	106,0	0,5	
LC0015	-	-	-	-	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	0,0346 ± 0,0105	0,0312 ± 0,00358	µg/l
Minimum	0,0266	0,0266	µg/l
Maximum	0,068	0,04	µg/l
Standard deviation	0,0117	0,00378	µg/l
rel. Standard deviation	33,7	12,1	%
n	11	10	-

Graphical presentation of results

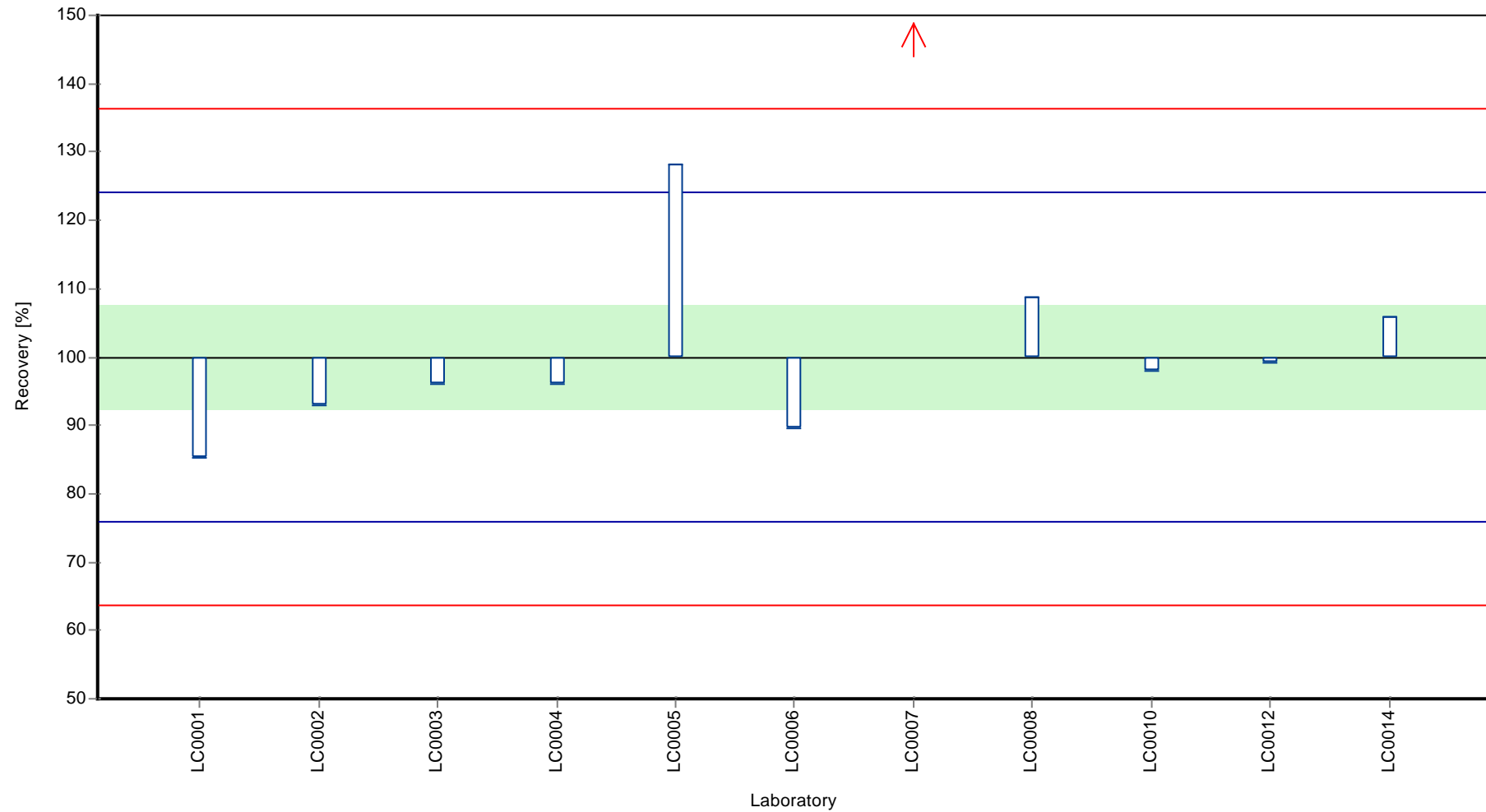
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2B, Parameter: Sulfamethoxazole

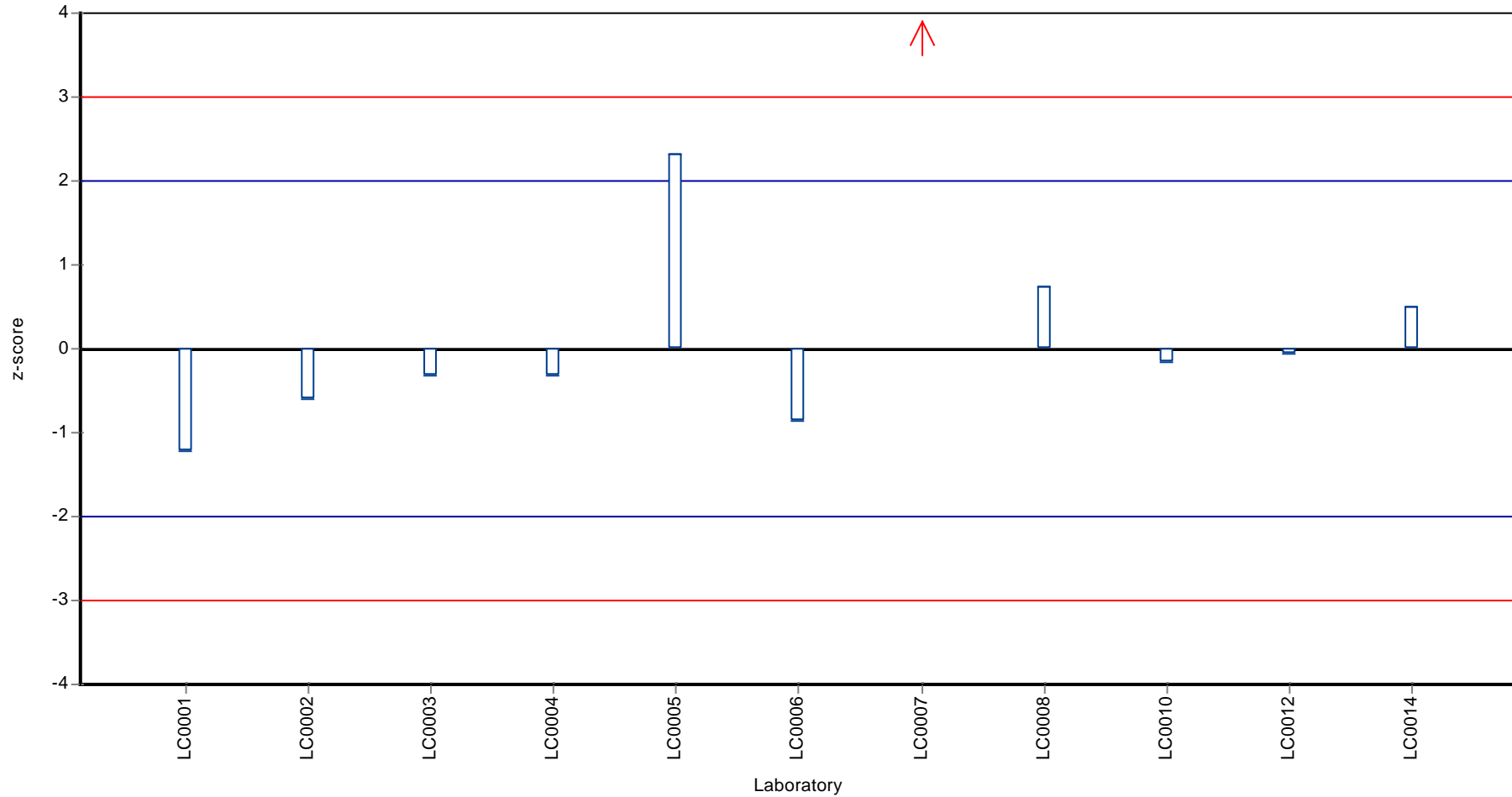
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2B, Parameter: Sulfamethoxazole

Z-score



Parameter oriented report

AZ2 A

Diclofenac

Unit	µg/l
Mean ± CI (99%)	2,66 ± 0,191
Minimum - Maximum	2,396 - 3,015
Check value ± U	2,74 ± 0,11

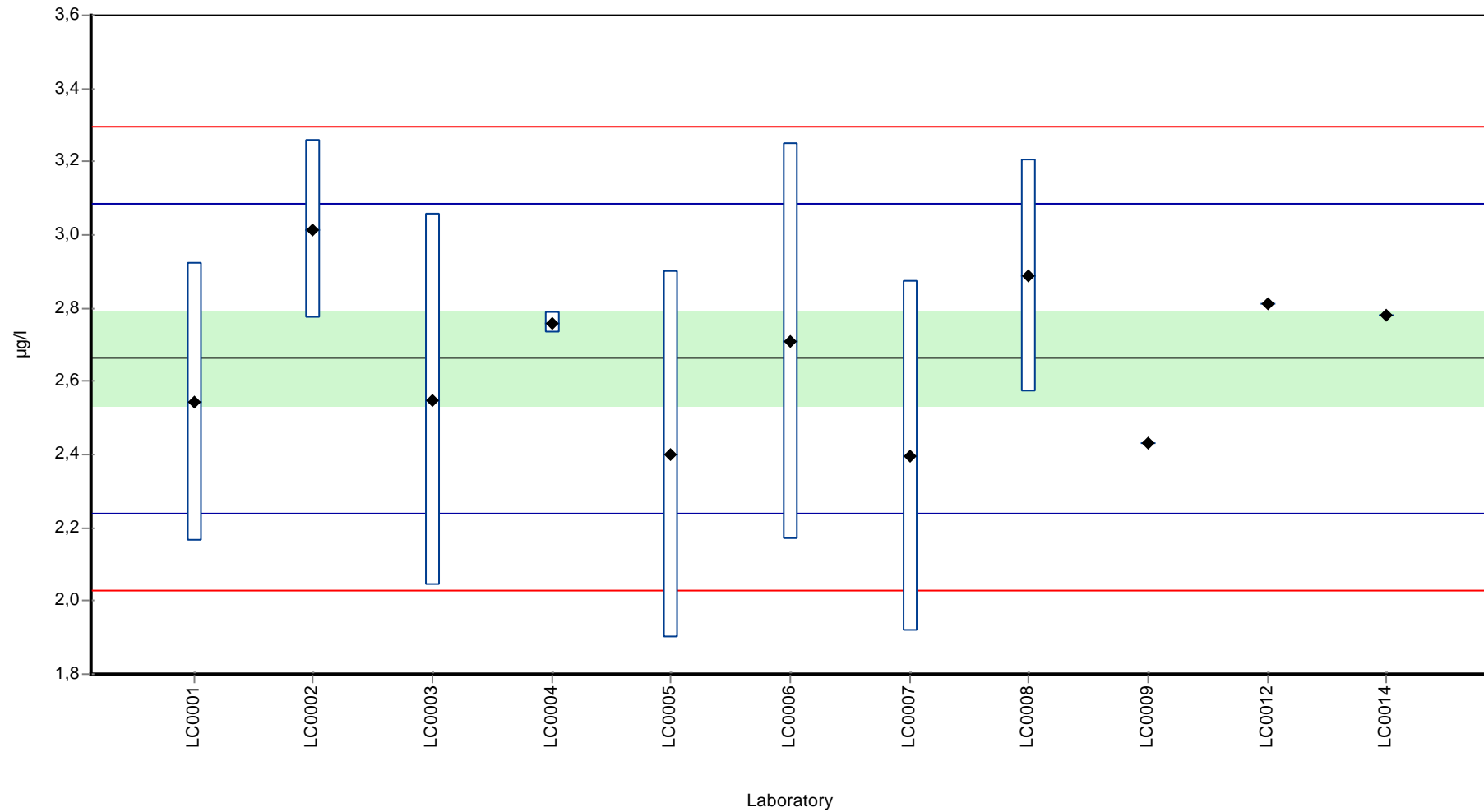
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	2,544	0,382	95,6	-0,6	
LC0002	3,015	0,245	113,2	1,7	
LC0003	2,550	0,510	95,8	-0,5	
LC0004	2,760	0,030	103,7	0,5	
LC0005	2,400	0,500	90,1	-1,2	
LC0006	2,710	0,542	101,8	0,2	
LC0007	2,396	0,480	90,0	-1,3	
LC0008	2,890	0,318	108,6	1,1	
LC0009	2,430	-	91,3	-1,1	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	2,810	-	105,5	0,7	
LC0013	-	-	-	-	
LC0014	2,780	-	104,4	0,6	
LC0015	-	-	-	-	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	2,66 ± 0,191	2,66 ± 0,191	µg/l
Minimum	2,4	2,4	µg/l
Maximum	3,02	3,02	µg/l
Standard deviation	0,211	0,211	µg/l
rel. Standard deviation	7,92	7,92	%
n	11	11	-

Graphical presentation of results

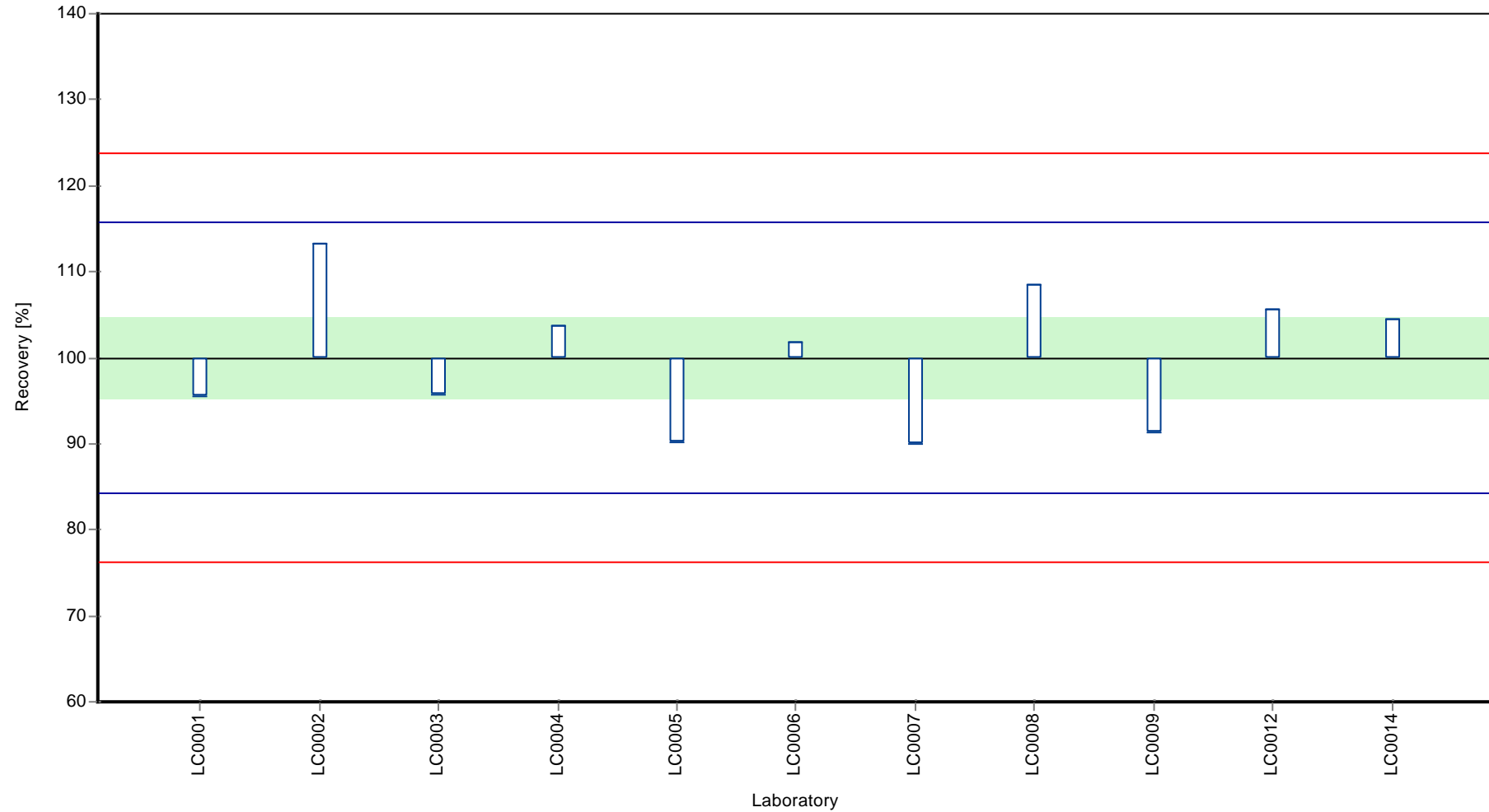
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Diclofenac

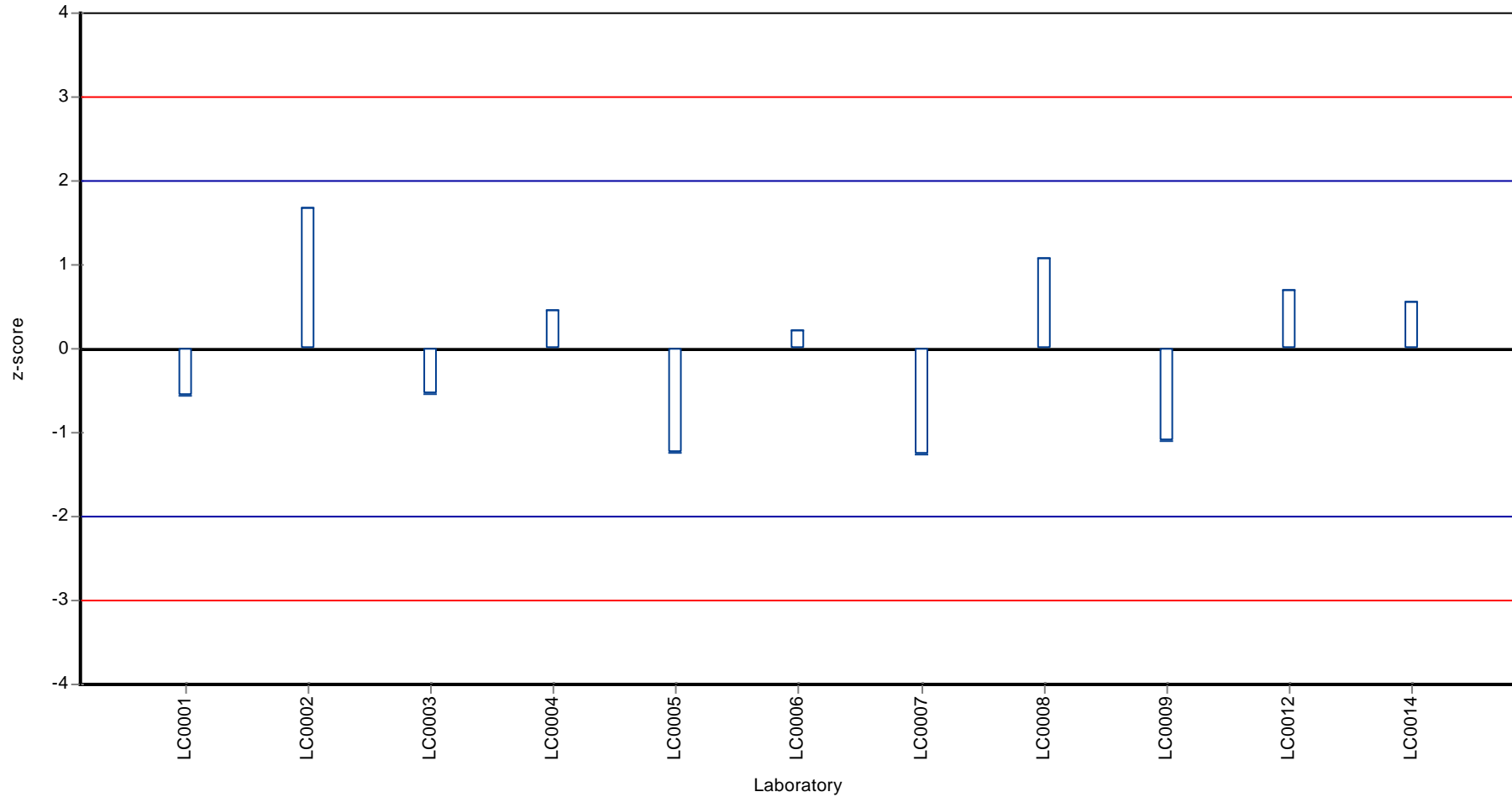
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Diclofenac

Z-score



Parameter oriented report

AZ2 B

Diclofenac

Unit	µg/l
Mean ± CI (99%)	0,179 ± 0,0163
Minimum - Maximum	0,145 - 0,201
Check value ± U	0,15 ± 0,05

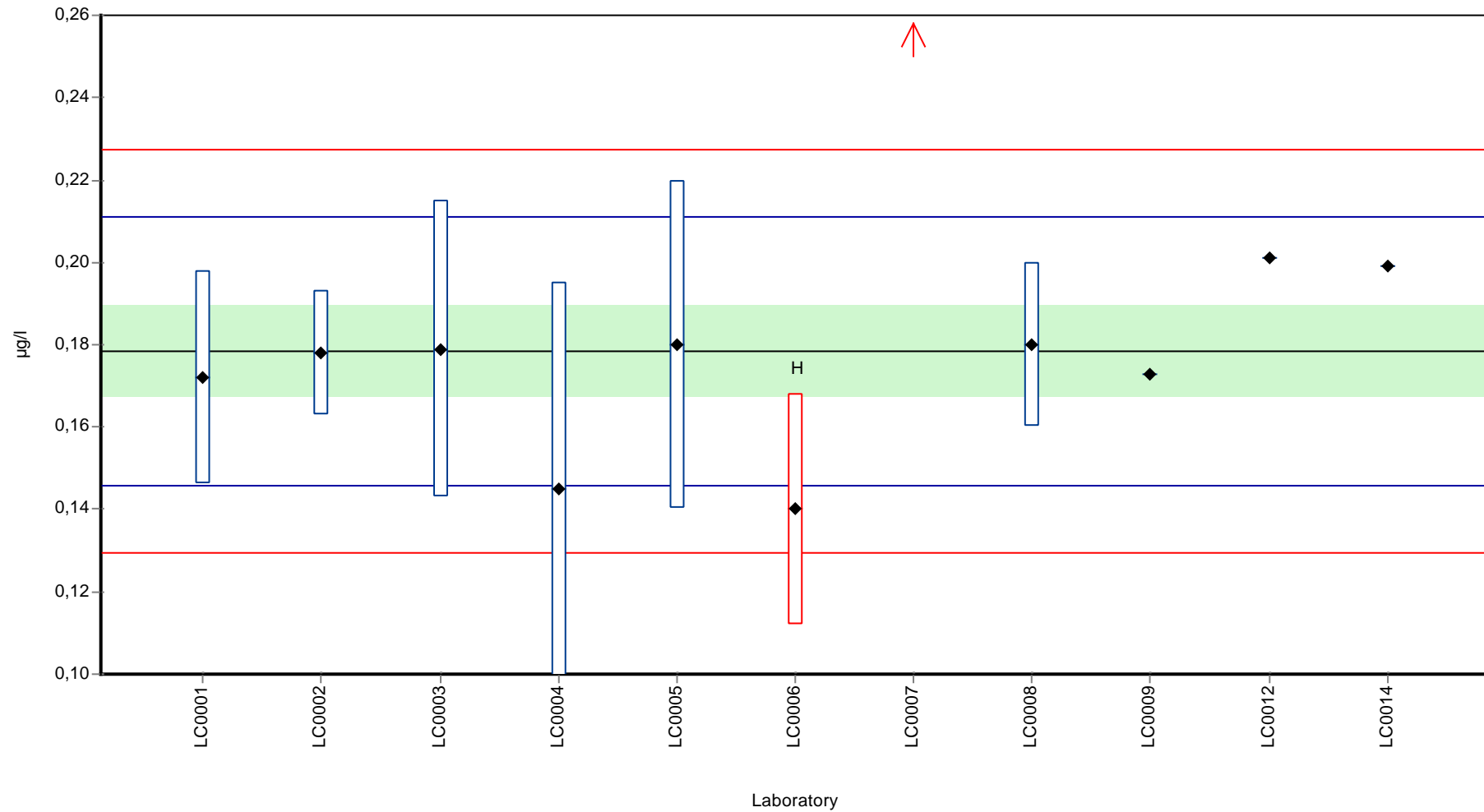
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0,172	0,0258	96,3	-0,4	
LC0002	0,178	0,015	99,7	0,0	
LC0003	0,179	0,036	100,2	0,0	
LC0004	0,145	0,050	81,2	-2,1	
LC0005	0,180	0,040	100,8	0,1	
LC0006	0,140	0,028	78,4	-2,4	H
LC0007	0,445	0,089	249,2	16,3	H
LC0008	0,180	0,020	100,8	0,1	
LC0009	0,173	-	96,9	-0,3	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	0,201	-	112,6	1,4	
LC0013	-	-	-	-	
LC0014	0,1991	-	111,5	1,3	
LC0015	-	-	-	-	

Characteristics of parameter

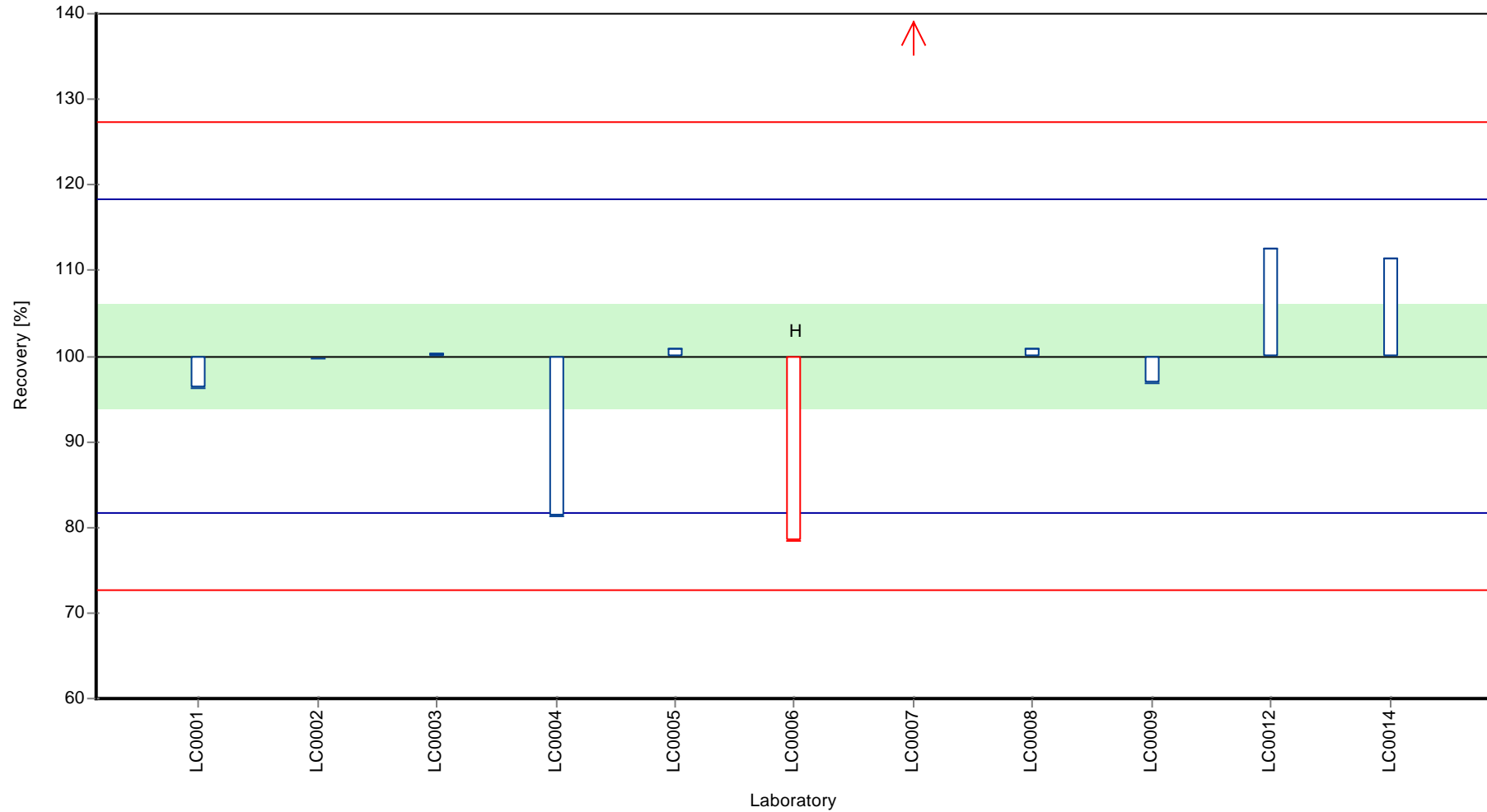
	all results	without outliers	Unit
Mean ± CI (99%)	0,199 ± 0,0756	0,179 ± 0,0163	µg/l
Minimum	0,14	0,145	µg/l
Maximum	0,445	0,201	µg/l
Standard deviation	0,0836	0,0163	µg/l
rel. Standard deviation	41,9	9,14	%
n	11	9	-

Graphical presentation of results

Results



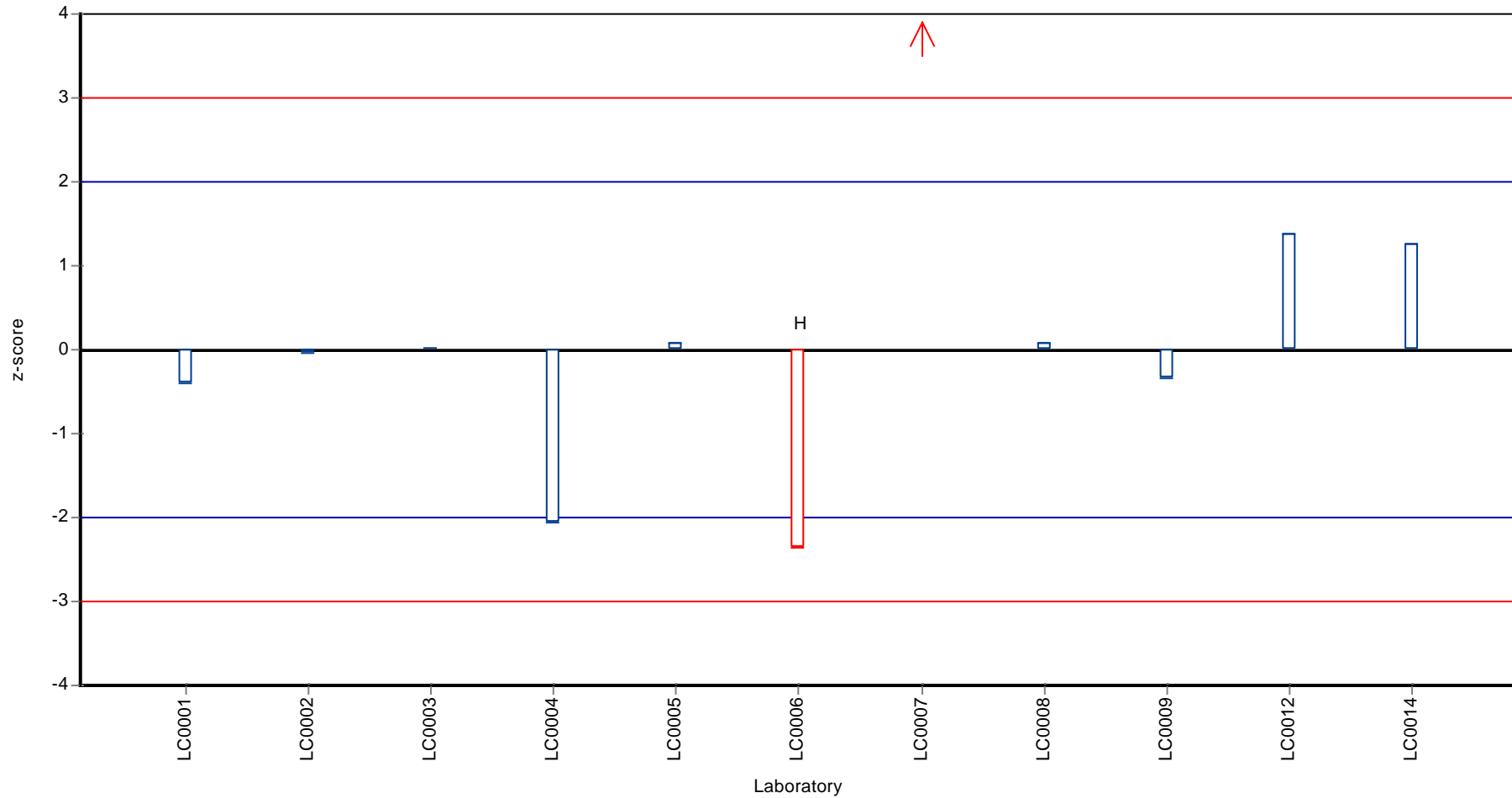
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2B, Parameter: Diclofenac

Z-score



Parameter oriented report

AZ2 A

Sotalol

Unit	µg/l
Mean ± CI (99%)	0,908 ± 0,295
Minimum - Maximum	0,498 - 1,24
Check value ± U	0,98 ± 0,02

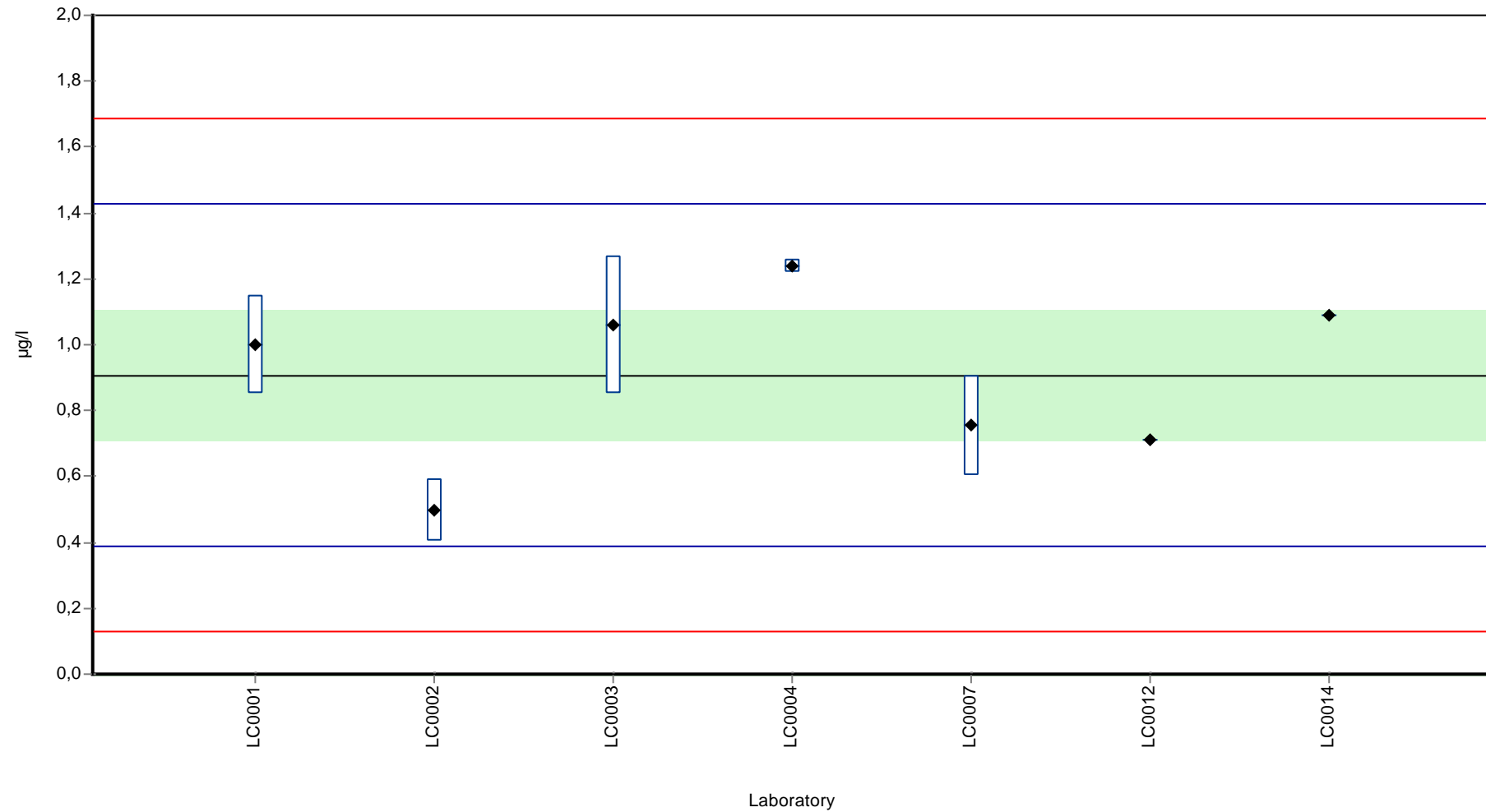
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0,999	0,150	110,0	0,4	
LC0002	0,498	0,094	54,9	-1,6	
LC0003	1,060	0,210	116,8	0,6	
LC0004	1,240	0,020	136,6	1,3	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	0,754	0,150	83,1	-0,6	
LC0008	-	-	-	-	
LC0009	-	-	-	-	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	0,712	-	78,4	-0,8	
LC0013	-	-	-	-	
LC0014	1,0915	-	120,2	0,7	
LC0015	-	-	-	-	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	0,908 ± 0,295	0,908 ± 0,295	µg/l
Minimum	0,498	0,498	µg/l
Maximum	1,24	1,24	µg/l
Standard deviation	0,26	0,26	µg/l
rel. Standard deviation	28,6	28,6	%
n	7	7	-

Graphical presentation of results

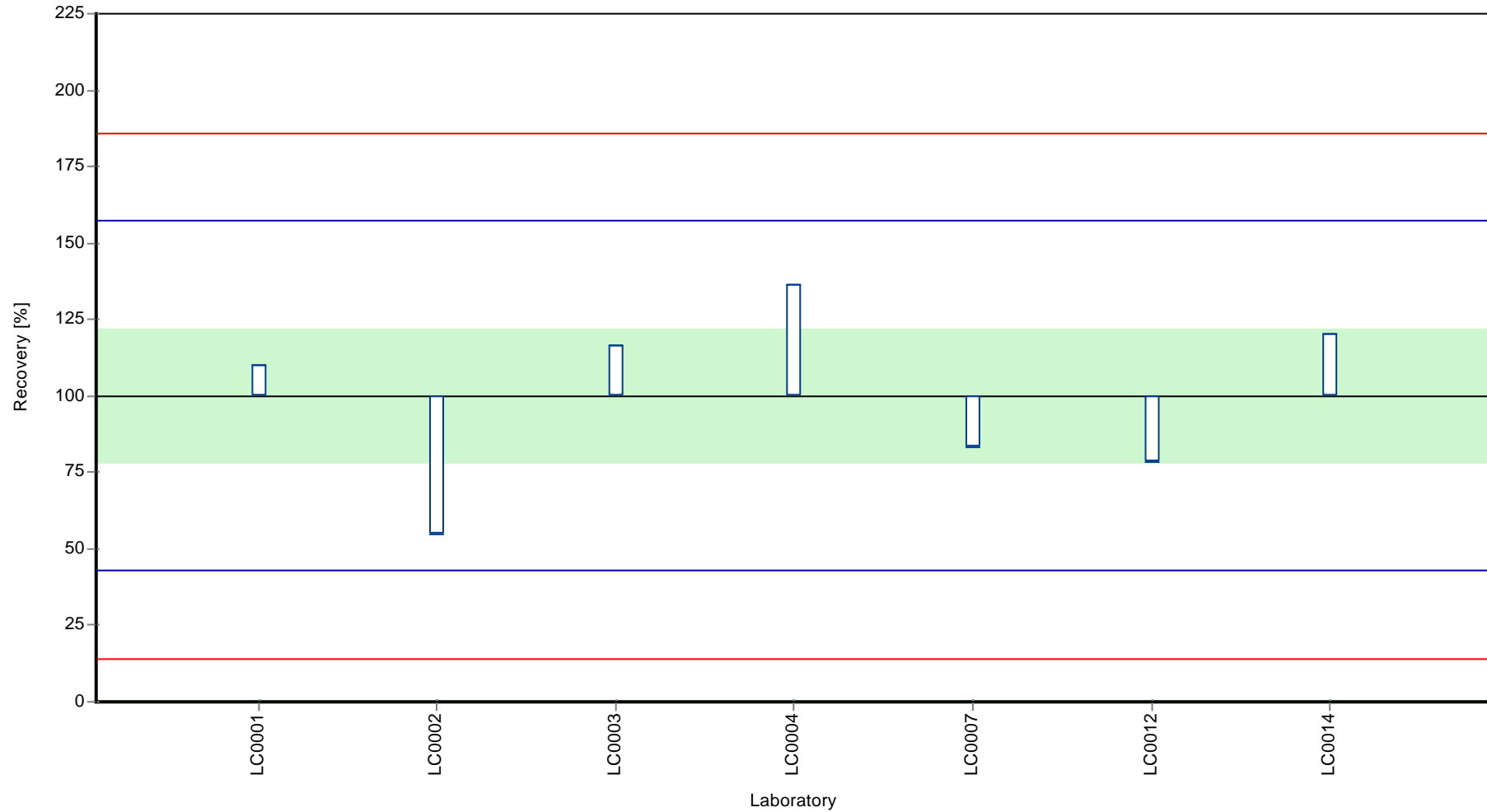
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Sotalol

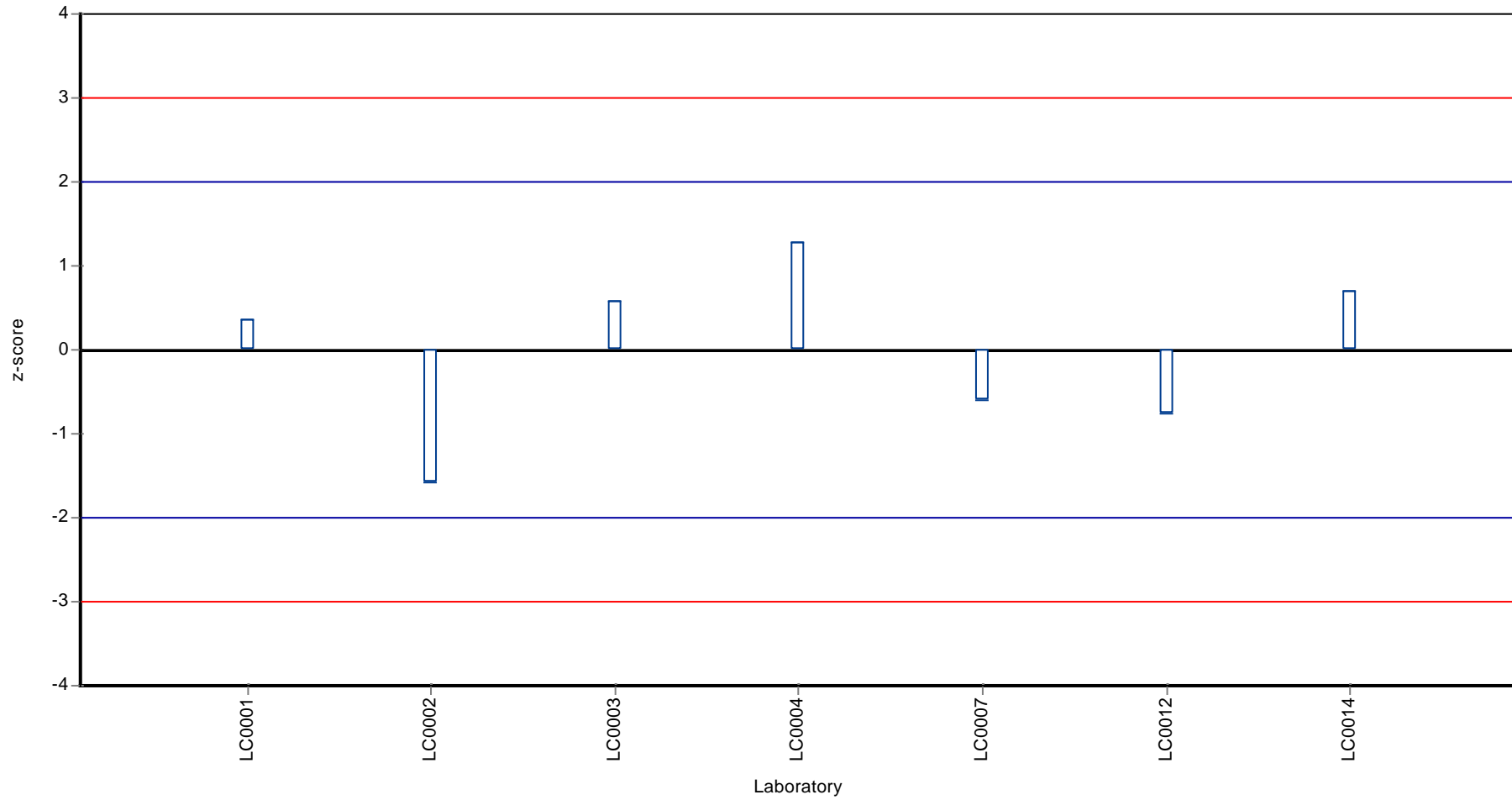
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Sotalol

Z-score



Parameter oriented report

AZ2 B

Sotalol

Unit	µg/l
Mean ± CI (99%)	-
Minimum - Maximum	0,005 - 0,005
Check value ± U	< 0.013 (LOD)

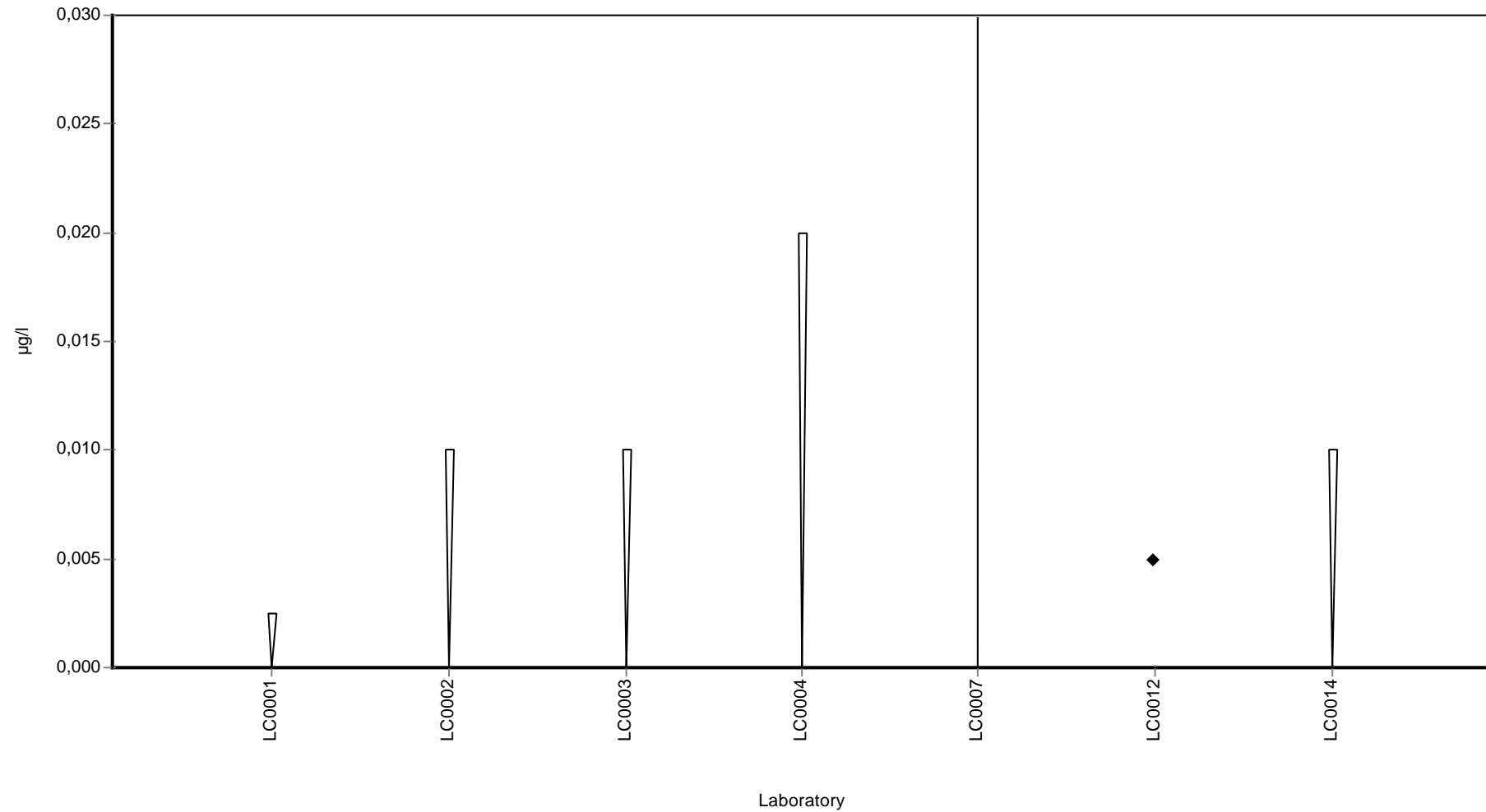
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	< 0,0025 (LOQ)	-	-	-	
LC0002	< 0,01 (LOQ)	-	-	-	
LC0003	< 0,01 (LOQ)	-	-	-	
LC0004	< 0,02 (LOQ)	-	-	-	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	< 10 (LOQ)	-	-	-	
LC0008	-	-	-	-	
LC0009	-	-	-	-	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	0,005	-	-	-	
LC0013	-	-	-	-	
LC0014	< 0,01 (LOQ)	-	-	-	
LC0015	-	-	-	-	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	0,005	-	µg/l
Minimum	0,005	0,005	µg/l
Maximum	0,005	0,005	µg/l
Standard deviation	-	-	µg/l
rel. Standard deviation	-	-	%
n	1	1	-

Graphical presentation of results

Results



Parameter oriented report

AZ2 A

Ibuprofen

Unit	µg/l
Mean ± CI (99%)	-
Minimum - Maximum	0,011 - 0,067
Check value ± U	< 0.013 (LOD)

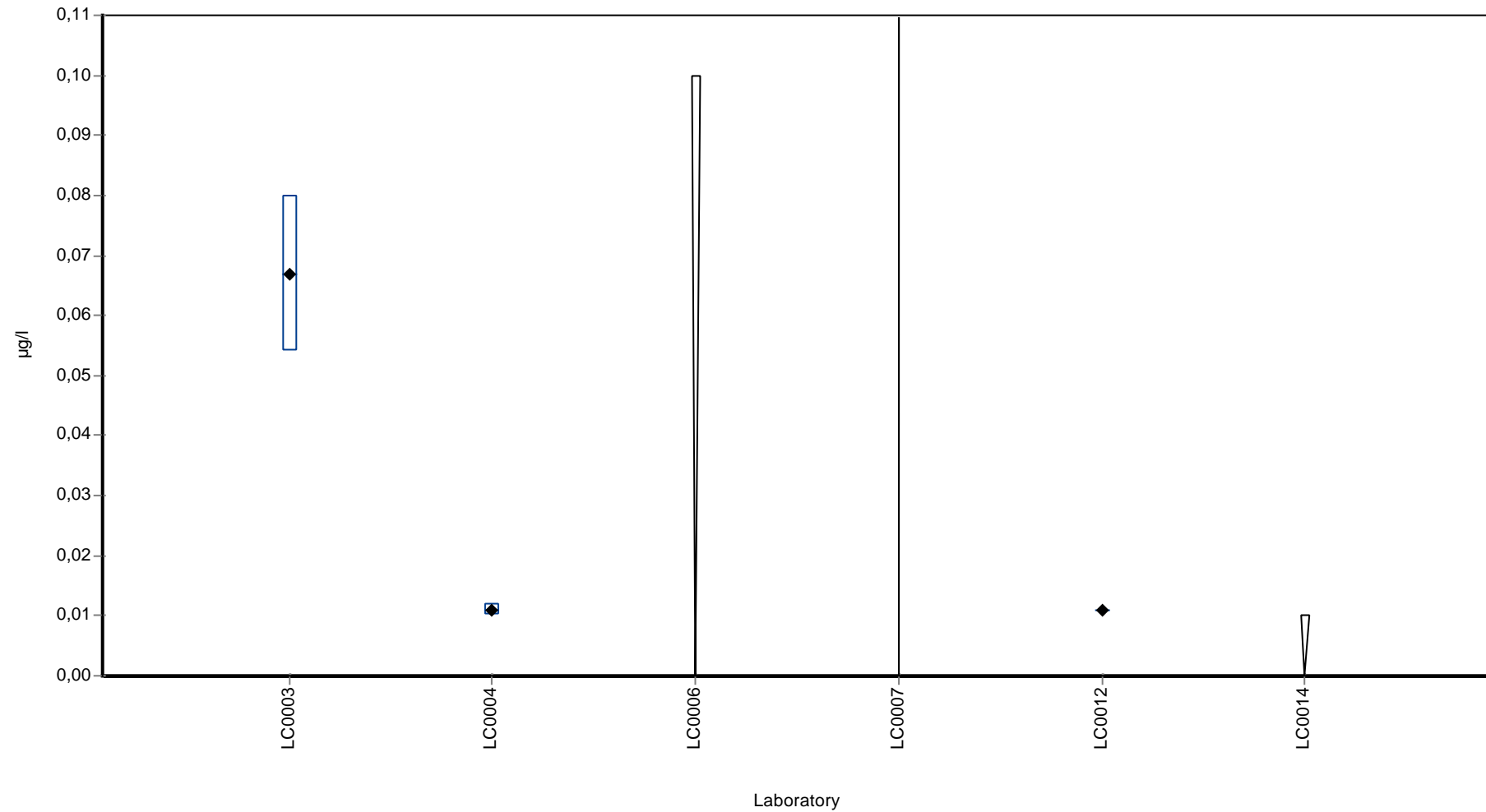
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	-	-	-	-	
LC0002	-	-	-	-	
LC0003	0,067	0,013	-	-	
LC0004	0,011	0,001	-	-	
LC0005	-	-	-	-	
LC0006	< 0,1 (LOQ)	-	-	-	
LC0007	< 20 (LOQ)	-	-	-	
LC0008	-	-	-	-	
LC0009	-	-	-	-	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	0,011	-	-	-	
LC0013	-	-	-	-	
LC0014	< 0,01 (LOQ)	-	-	-	
LC0015	-	-	-	-	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	0,0297 ± 0,056	-	µg/l
Minimum	0,011	0,011	µg/l
Maximum	0,067	0,067	µg/l
Standard deviation	0,0323	-	µg/l
rel. Standard deviation	109	-	%
n	3	3	-

Graphical presentation of results

Results



Parameter oriented report

AZ2 B

Ibuprofen

Unit	µg/l
Mean ± CI (99%)	-
Minimum - Maximum	0,066 - 0,093
Check value ± U	0,06 ± 0,01

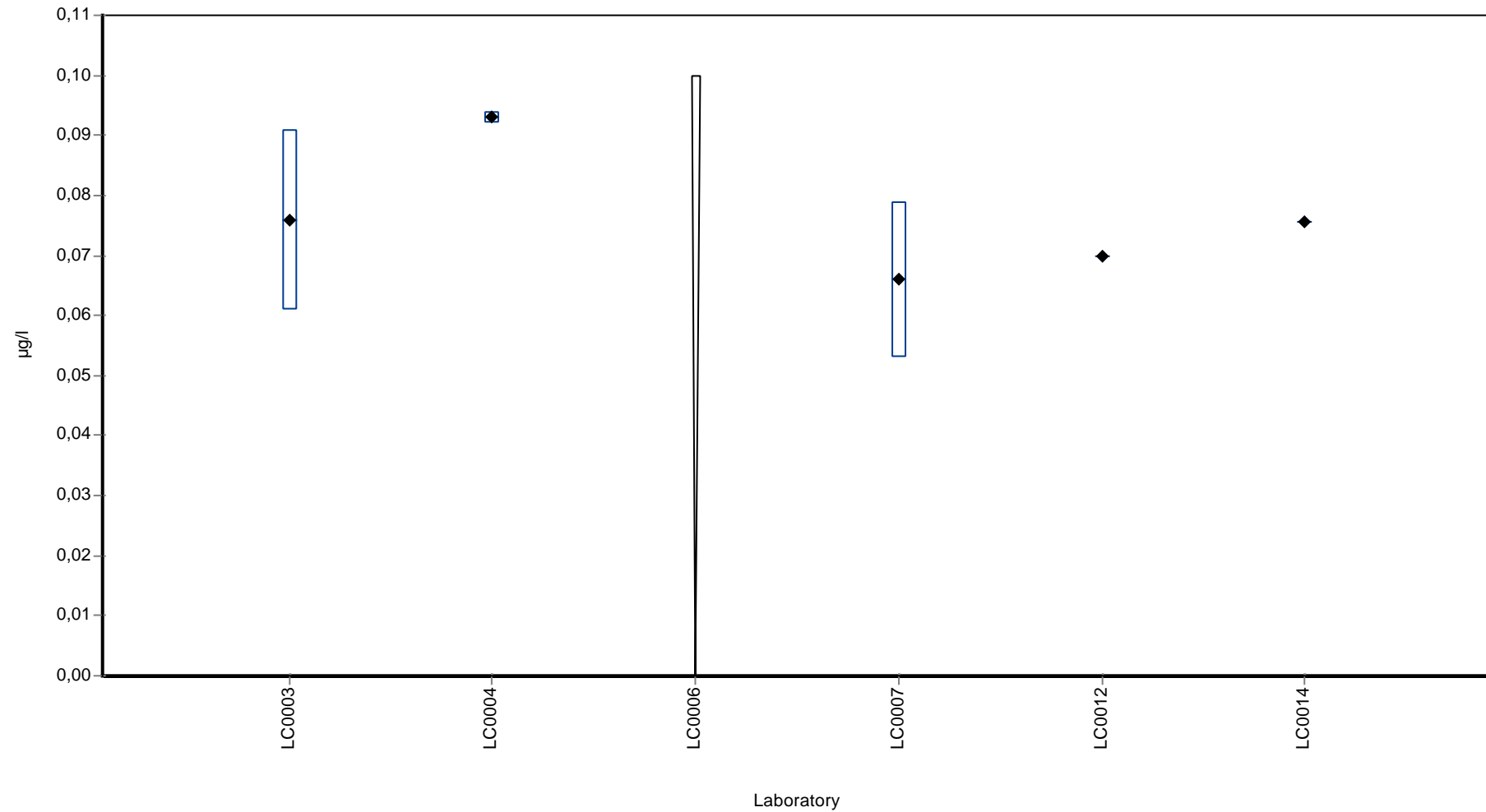
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	-	-	-	-	
LC0002	-	-	-	-	
LC0003	0,076	0,015	-	-	
LC0004	0,093	0,001	-	-	
LC0005	-	-	-	-	
LC0006	< 0,1 (LOQ)	-	-	-	
LC0007	0,066	0,013	-	-	
LC0008	-	-	-	-	
LC0009	-	-	-	-	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	0,070	-	-	-	
LC0013	-	-	-	-	
LC0014	0,0757	-	-	-	
LC0015	-	-	-	-	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	0,0761 ± 0,0138	-	µg/l
Minimum	0,066	0,066	µg/l
Maximum	0,093	0,093	µg/l
Standard deviation	0,0103	-	µg/l
rel. Standard deviation	13,5	-	%
n	5	5	-

Graphical presentation of results

Results



Parameter oriented report

AZ2 A

Diazepam

Unit	µg/l
Mean ± CI (99%)	-
Minimum - Maximum	0,007 - 0,007
Check value ± U	< 0.013 (LOD)

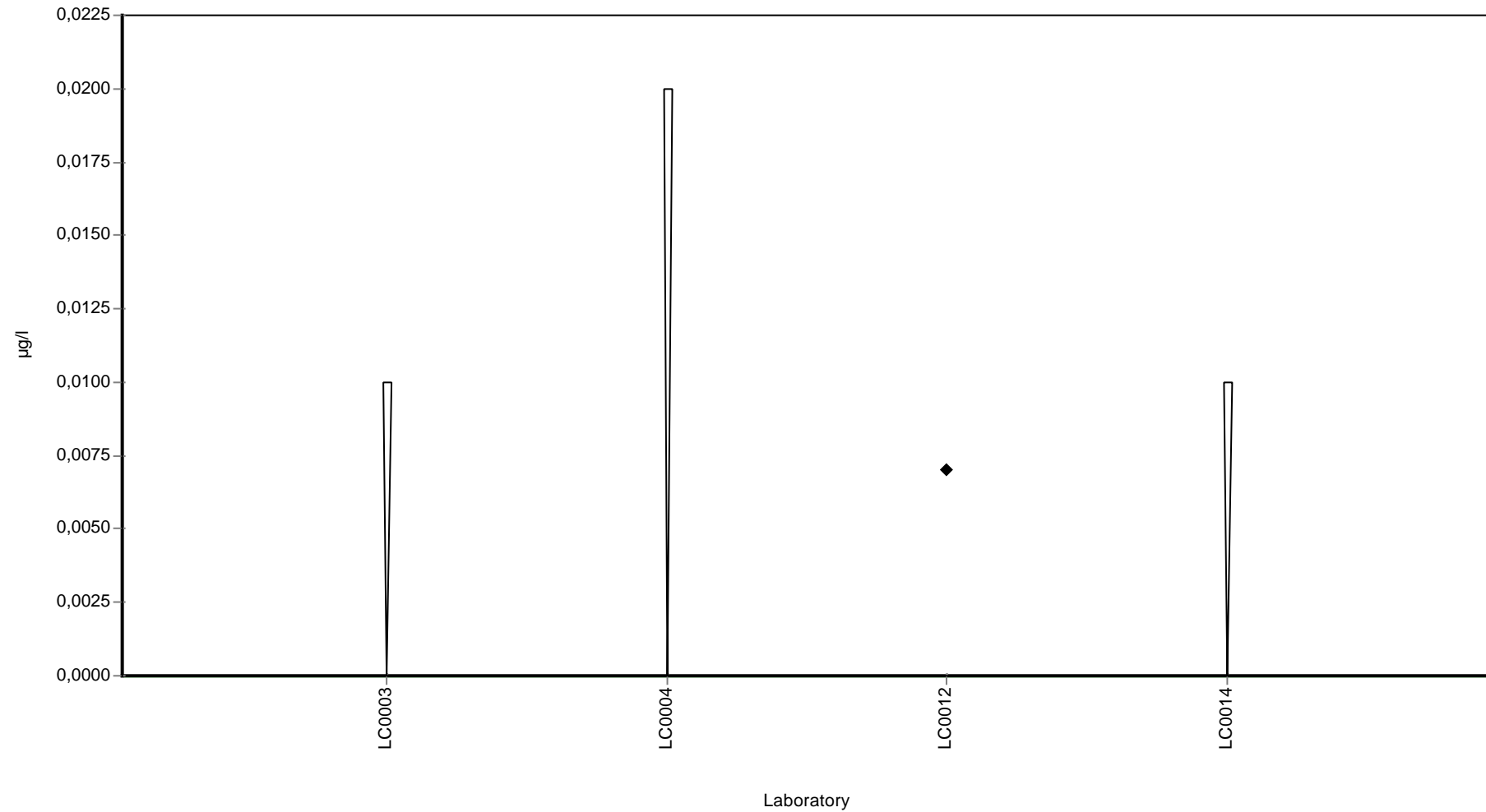
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	-	-	-	-	
LC0002	-	-	-	-	
LC0003	< 0,01 (LOQ)	-	-	-	
LC0004	< 0,02 (LOQ)	-	-	-	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	-	-	-	-	
LC0008	-	-	-	-	
LC0009	-	-	-	-	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	0,007	-	-	-	
LC0013	-	-	-	-	
LC0014	< 0,01 (LOQ)	-	-	-	
LC0015	-	-	-	-	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	0,007	-	µg/l
Minimum	0,007	0,007	µg/l
Maximum	0,007	0,007	µg/l
Standard deviation	-	-	µg/l
rel. Standard deviation	-	-	%
n	1	1	-

Graphical presentation of results

Results



Parameter oriented report

AZ2 B

Diazepam

Unit	µg/l
Mean ± CI (99%)	-
Minimum - Maximum	0,1531 - 0,192
Check value ± U	0,15 ± 0,01

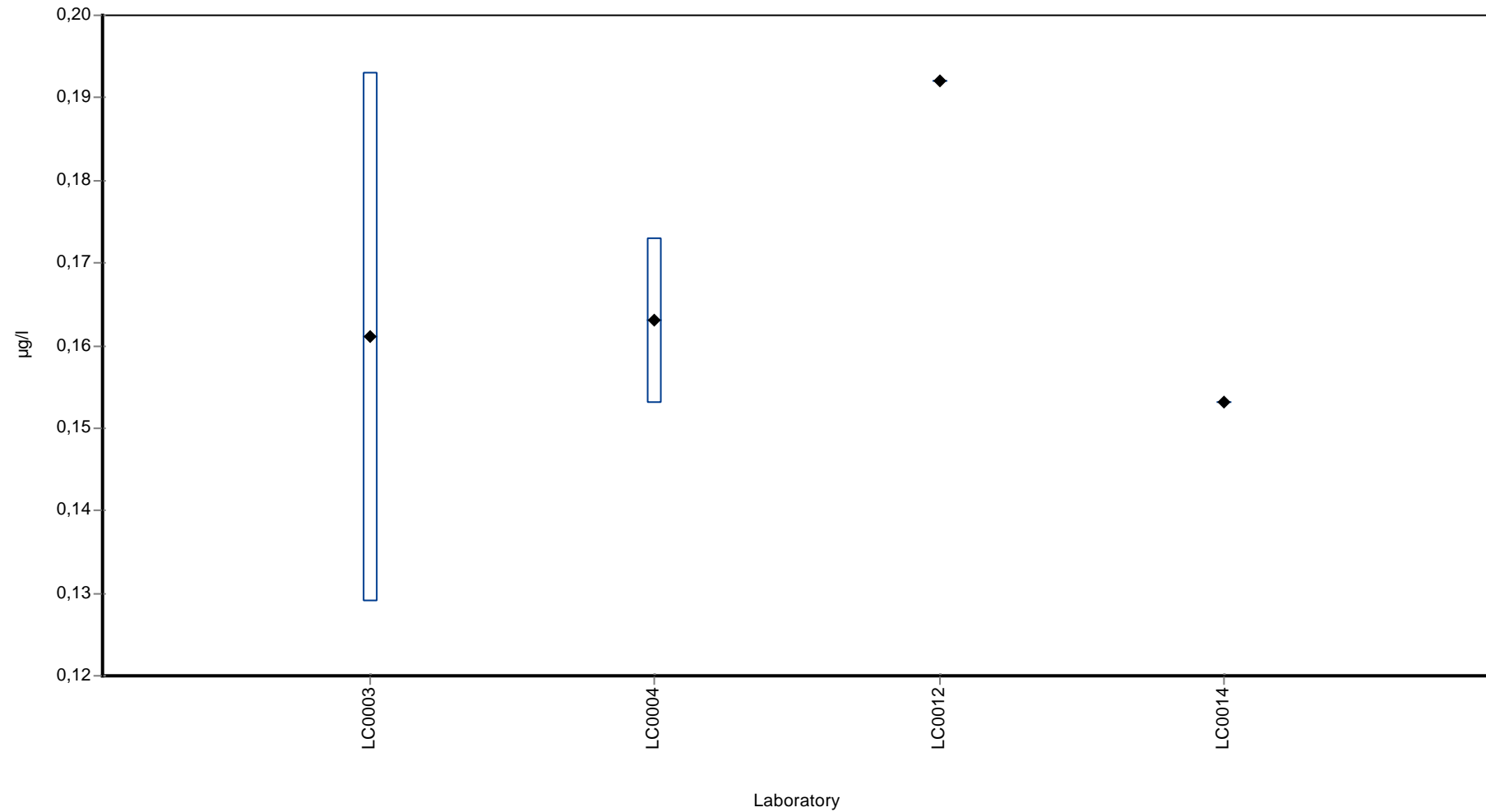
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	-	-	-	-	
LC0002	-	-	-	-	
LC0003	0,161	0,032	-	-	
LC0004	0,163	0,010	-	-	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	-	-	-	-	
LC0008	-	-	-	-	
LC0009	-	-	-	-	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	0,192	-	-	-	
LC0013	-	-	-	-	
LC0014	0,1531	-	-	-	
LC0015	-	-	-	-	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	0,167 ± 0,0255	-	µg/l
Minimum	0,153	0,153	µg/l
Maximum	0,192	0,192	µg/l
Standard deviation	0,017	-	µg/l
rel. Standard deviation	10,2	-	%
n	4	4	-

Graphical presentation of results

Results



Parameter oriented report

AZ2 A

Metoprolol

Unit	µg/l
Mean ± CI (99%)	1,13 ± 0,172
Minimum - Maximum	0,954 - 1,47
Check value ± U	0,99 ± 0,03

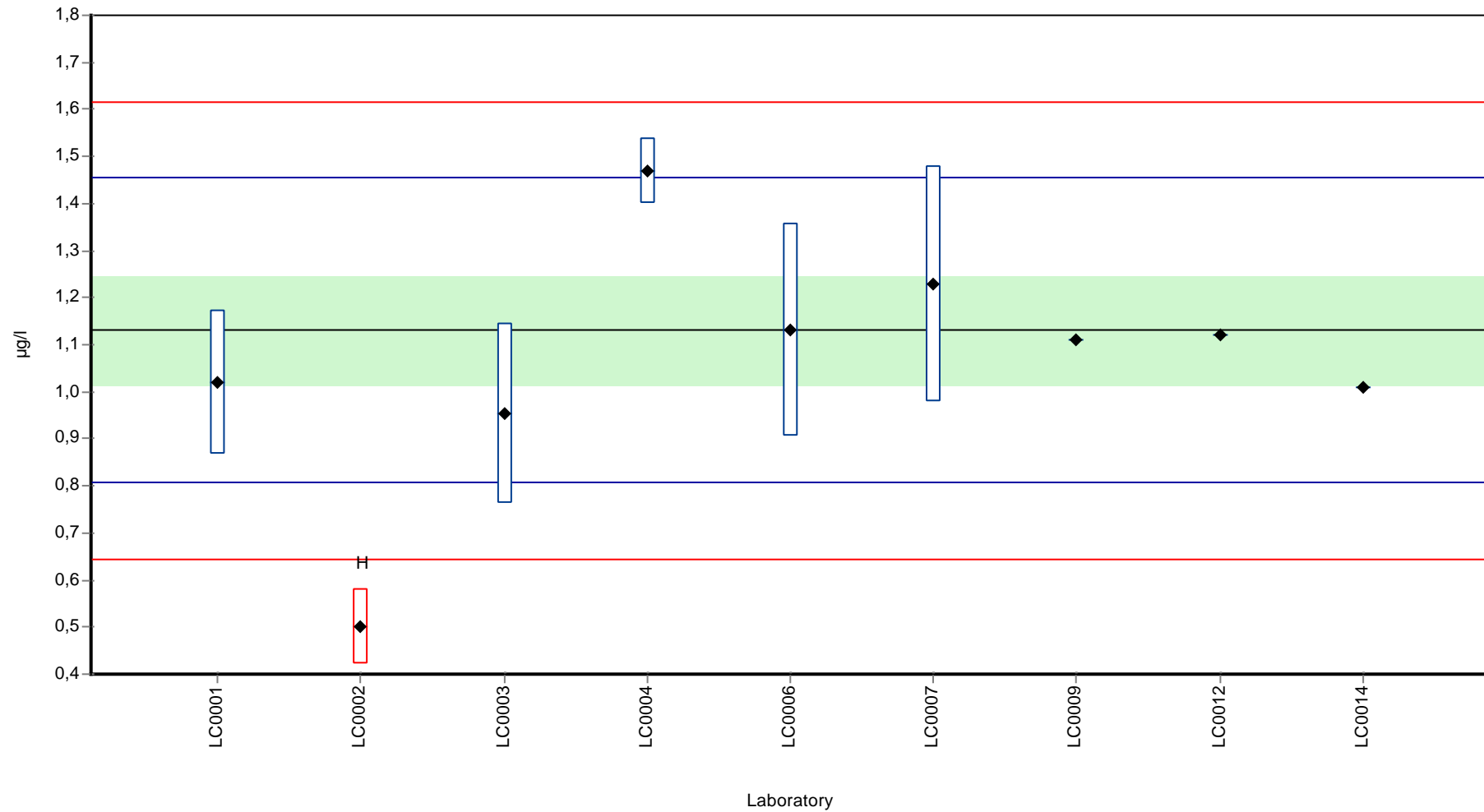
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	1,019	0,153	90,2	-0,7	
LC0002	0,501	0,081	44,3	-3,9	H
LC0003	0,954	0,191	84,4	-1,1	
LC0004	1,470	0,070	130,1	2,1	
LC0005	-	-	-	-	
LC0006	1,130	0,226	100,0	0,0	
LC0007	1,229	0,250	108,8	0,6	
LC0008	-	-	-	-	
LC0009	1,110	-	98,2	-0,1	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	1,120	-	99,1	-0,1	
LC0013	-	-	-	-	
LC0014	1,0088	-	89,3	-0,7	
LC0015	-	-	-	-	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	1,06 ± 0,259	1,13 ± 0,172	µg/l
Minimum	0,501	0,954	µg/l
Maximum	1,47	1,47	µg/l
Standard deviation	0,259	0,162	µg/l
rel. Standard deviation	24,4	14,3	%
n	9	8	-

Graphical presentation of results

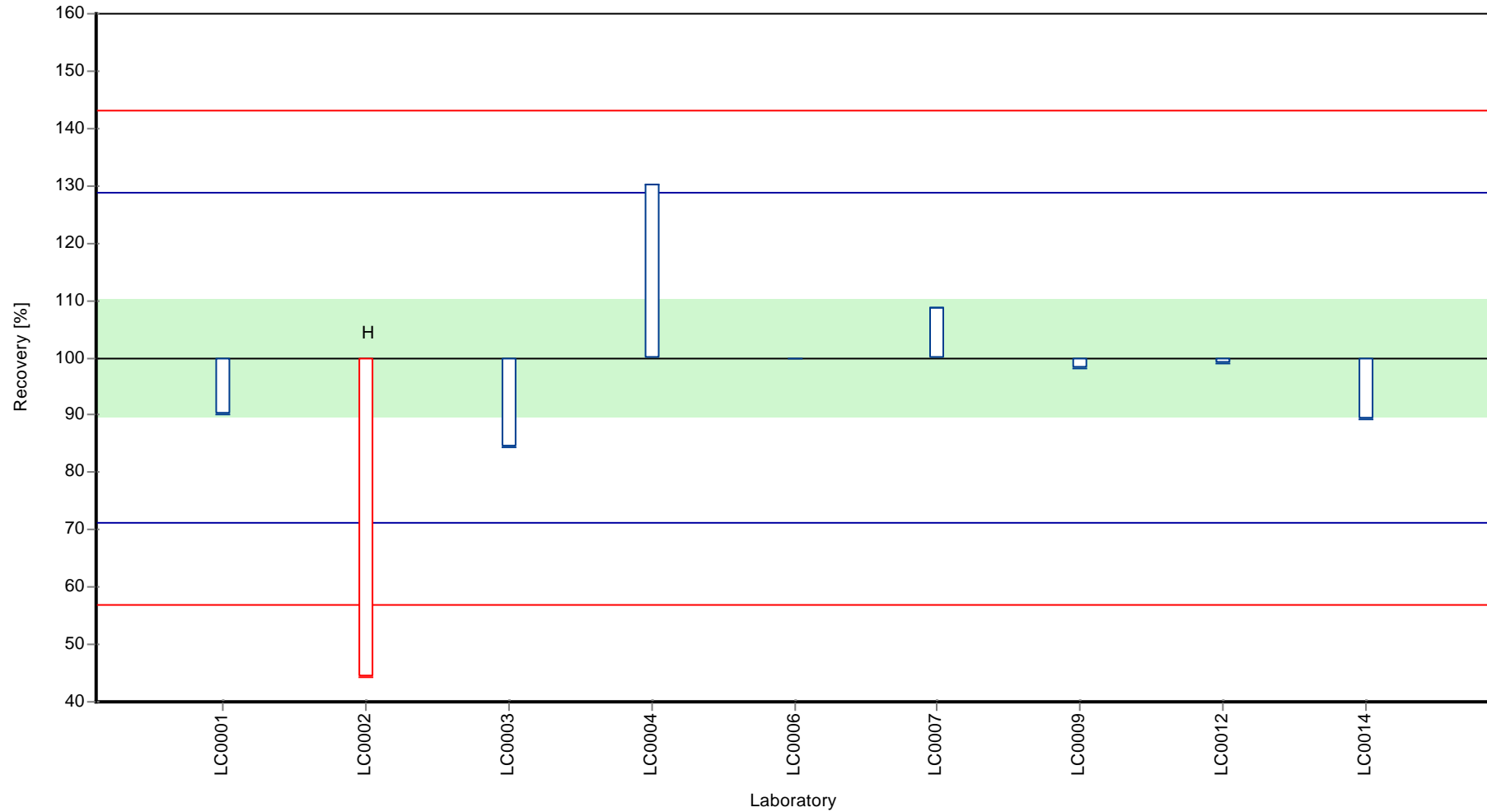
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Metoprolol

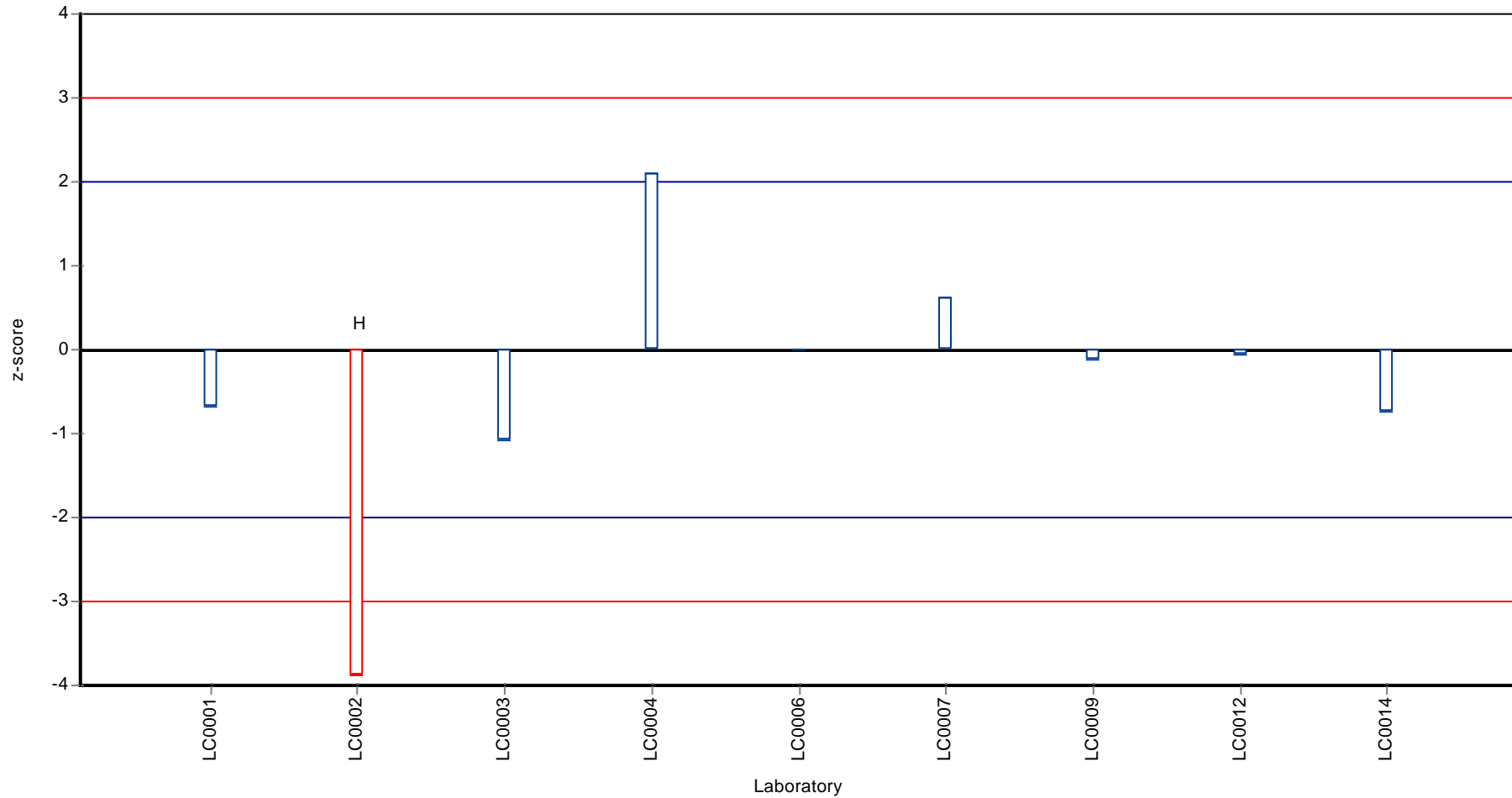
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2A, Parameter: Metoprolol

Z-score



Parameter oriented report

AZ2 B

Metoprolol

Unit	µg/l
Mean ± CI (99%)	-
Minimum - Maximum	0,007 - 0,018
Check value ± U	< 0.013 (LOD)

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0,0086	0,0013	-	-	
LC0002	< 0,01 (LOQ)	-	-	-	
LC0003	< 0,01 (LOQ)	-	-	-	
LC0004	0,018	0,010	-	-	
LC0005	-	-	-	-	
LC0006	< 0,01 (LOQ)	-	-	-	
LC0007	< 10 (LOQ)	-	-	-	
LC0008	-	-	-	-	
LC0009	< 0,01 (LOQ)	-	-	-	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	0,007	-	-	-	
LC0013	-	-	-	-	
LC0014	< 0,01 (LOQ)	-	-	-	
LC0015	-	-	-	-	

Characteristics of parameter

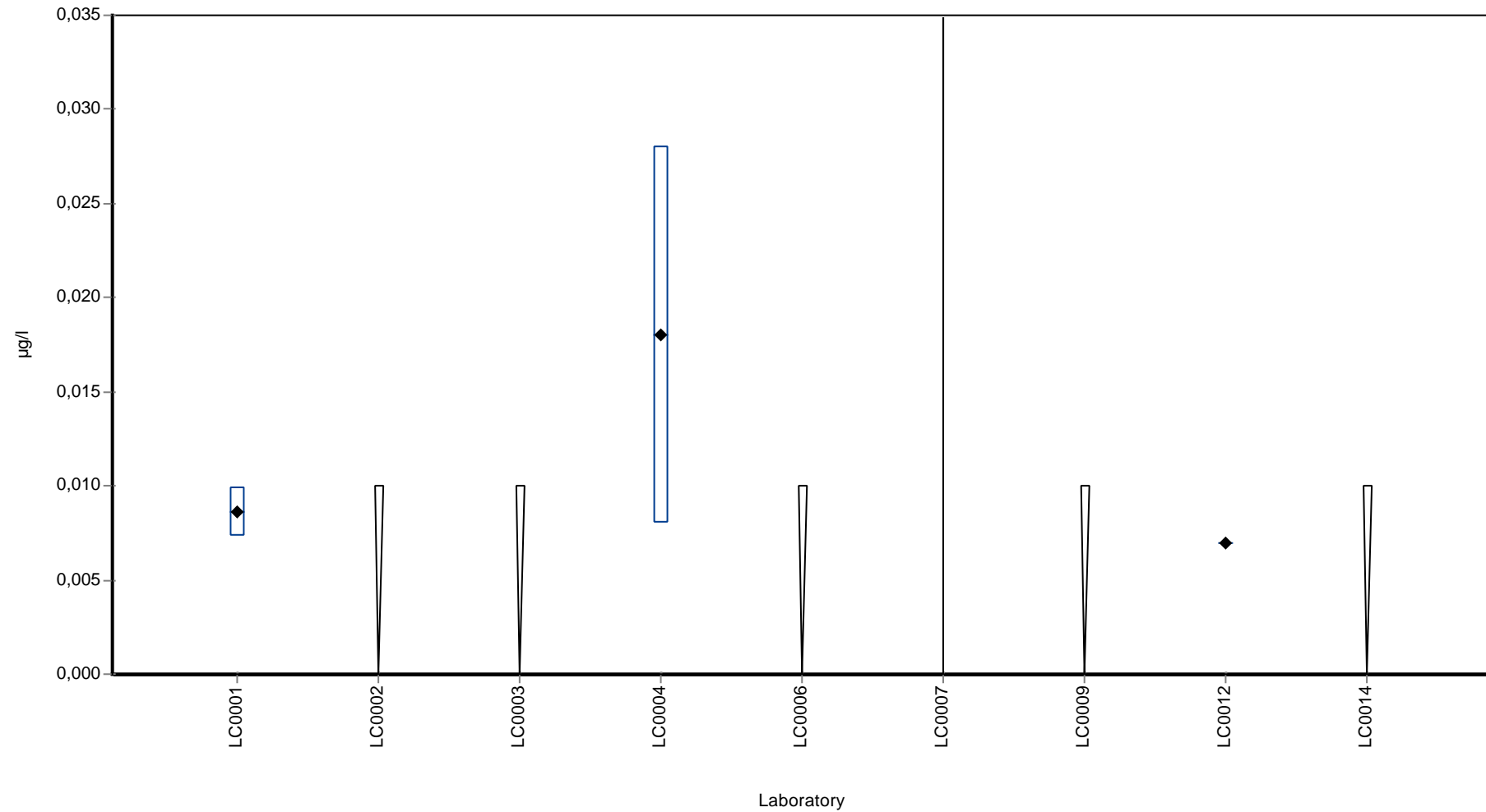
	all results	without outliers	Unit
Mean ± CI (99%)	0,0112 ± 0,0103	-	µg/l
Minimum	0,007	0,007	µg/l
Maximum	0,018	0,018	µg/l
Standard deviation	0,00594	-	µg/l
rel. Standard deviation	53,1	-	%
n	3	3	-

Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ2

Sample: AZ2B, Parameter: Metoprolol

Graphical presentation of results

Results



8 Laboratory oriented report

The laboratory oriented report is sorted by laboratory code.

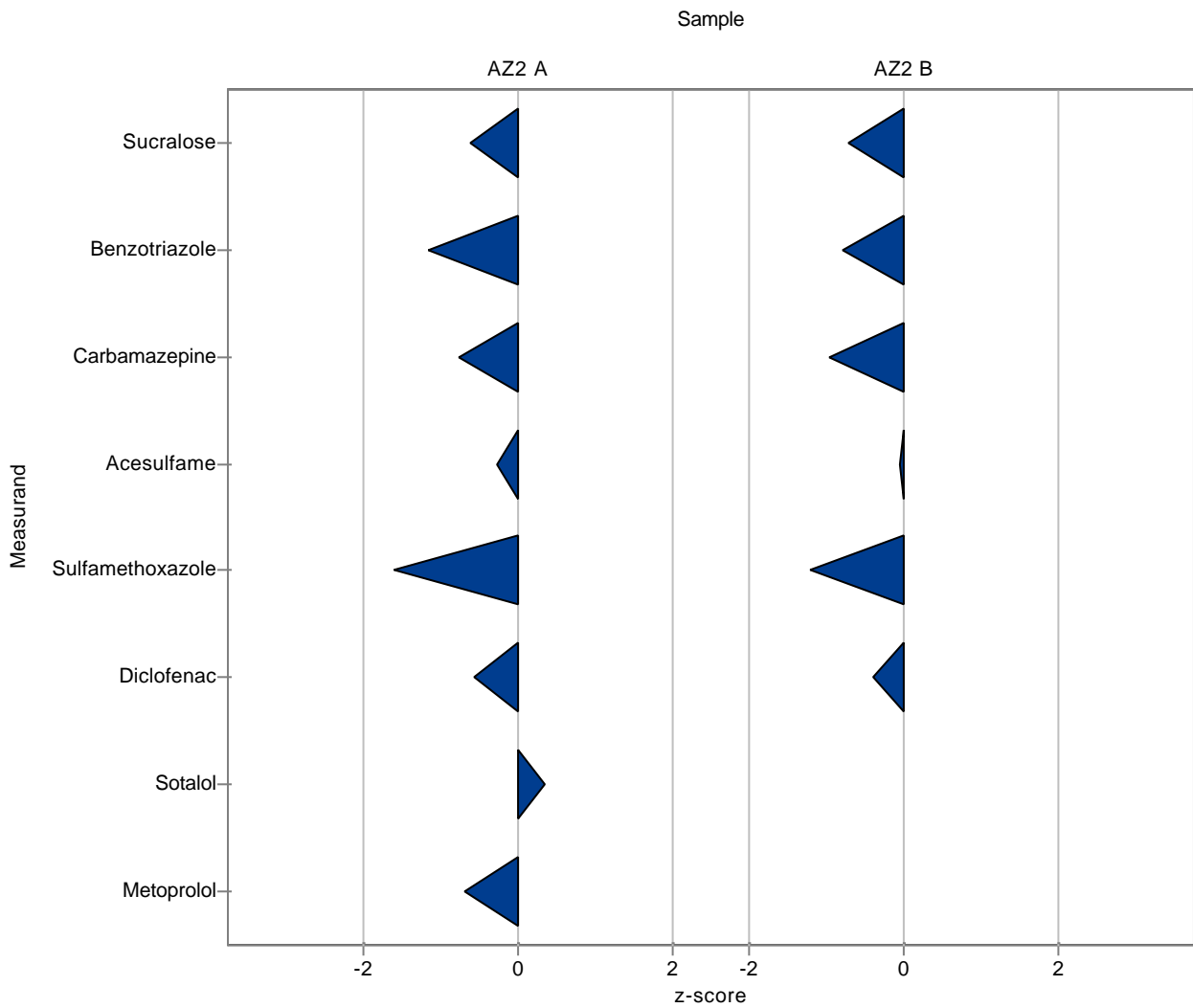
The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64	± 1,81	6,73	1,01	1,48	88,1	-0,62
Benzotriazole	µg/l	8,04	± 0,67	7,222	1,083	0,706	89,9	-1,15
Carbamazepine	µg/l	0,763	± 0,0865	0,69	0,104	0,0956	90,4	-0,77
Acesulfame	µg/l	2,55	± 0,286	2,476	0,371	0,286	97,1	-0,26
Sulfamethoxazole	µg/l	0,064	± 0,00321	0,0586	0,00879	0,00339	91,6	-1,59
Diclofenac	µg/l	2,66	± 0,191	2,544	0,382	0,211	95,6	-0,56
Sotalol	µg/l	0,908	± 0,295	0,999	0,15	0,26	110,0	0,35
Ibuprofen	µg/l	-	± -	-	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	1,13	± 0,172	1,019	0,153	0,162	90,2	-0,69

Sample: AZ2B

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177	± 0,0789	0,131	0,0197	0,0644	74,1	-0,71
Benzotriazole	µg/l	0,366	± 0,0768	0,301	0,0452	0,081	82,3	-0,80
Carbamazepine	µg/l	0,0284	± 0,00428	0,024	0,0036	0,00451	84,6	-0,97
Acesulfame	µg/l	0,268	± 0,0529	0,266	0,0399	0,0557	99,1	-0,04
Sulfamethoxazole	µg/l	0,0312	± 0,00358	0,0266	0,00399	0,00378	85,2	-1,23
Diclofenac	µg/l	0,179	± 0,0163	0,172	0,0258	0,0163	96,3	-0,40
Sotalol	µg/l	-	± -	<0,0025	-	-	-	-
Ibuprofen	µg/l	-	± -	-	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	-	± -	0,0086	0,00129	-	-	-



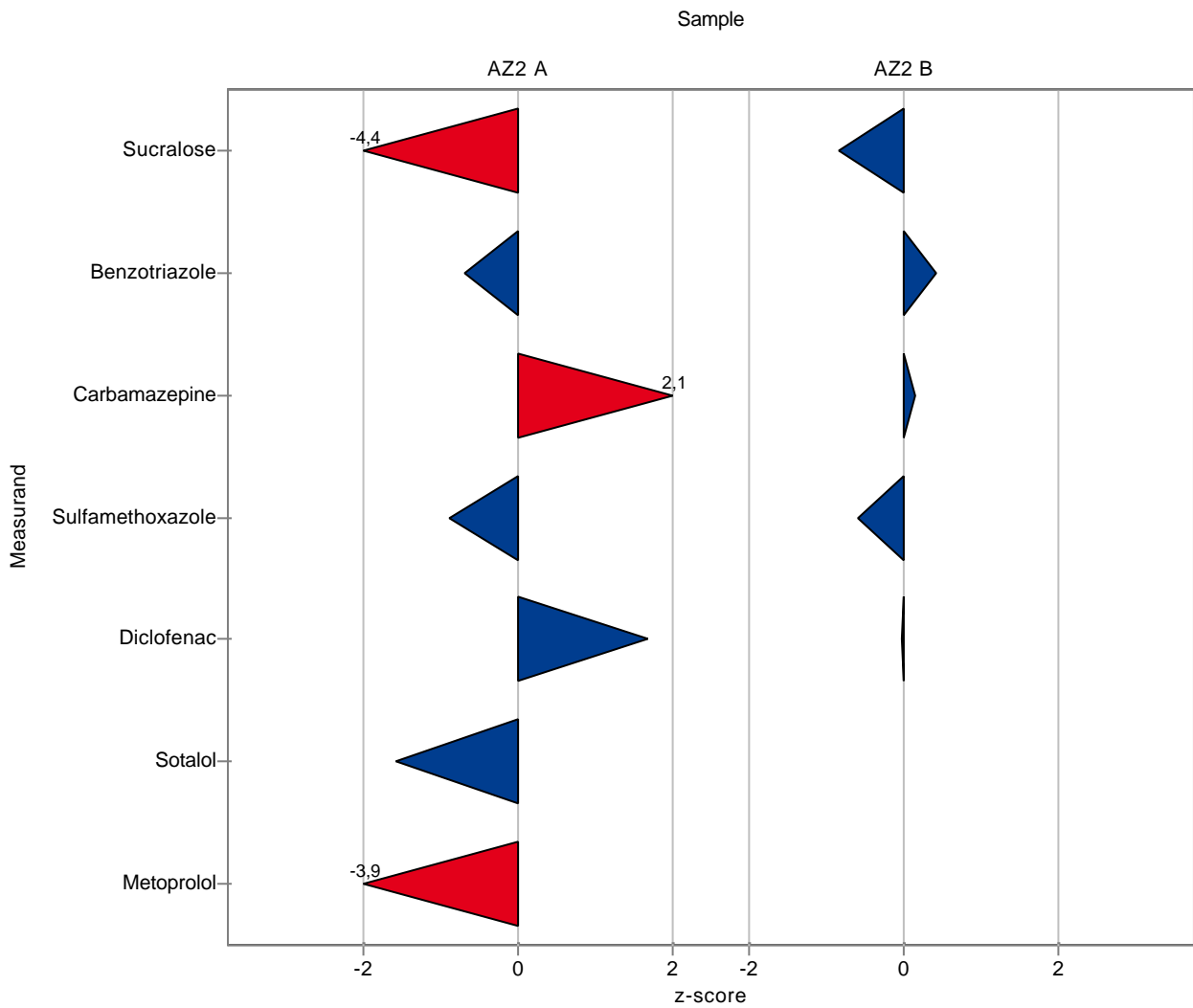
The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64	± 1,81	1,167	0,079	1,48	15,3	-4,39
Benzotriazole	µg/l	8,04	± 0,67	7,559	0,635	0,706	94,1	-0,68
Carbamazepine	µg/l	0,763	± 0,0865	0,965	0,092	0,0956	126,4	2,11
Acesulfame	µg/l	2,55	± 0,286	-	-	0,286	-	-
Sulfamethoxazole	µg/l	0,064	± 0,00321	0,061	0,004	0,00339	95,3	-0,88
Diclofenac	µg/l	2,66	± 0,191	3,015	0,245	0,211	113,2	1,67
Sotalol	µg/l	0,908	± 0,295	0,498	0,094	0,26	54,9	-1,58
Ibuprofen	µg/l	-	± -	-	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	1,13	± 0,172	0,501	0,081	0,162	44,3	-3,88

Sample: AZ2B

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177	± 0,0789	0,122	0,008	0,0644	69,0	-0,85
Benzotriazole	µg/l	0,366	± 0,0768	0,4	0,034	0,081	109,4	0,42
Carbamazepine	µg/l	0,0284	± 0,00428	0,029	0,003	0,00451	102,2	0,14
Acesulfame	µg/l	0,268	± 0,0529	-	-	0,0557	-	-
Sulfamethoxazole	µg/l	0,0312	± 0,00358	0,029	0,002	0,00378	92,9	-0,59
Diclofenac	µg/l	0,179	± 0,0163	0,178	0,015	0,0163	99,7	-0,03
Sotalol	µg/l	-	± -	<0,01 (LOQ)	-	-	-	-
Ibuprofen	µg/l	-	± -	-	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	-	± -	<0,01 (LOQ)	-	-	-	-



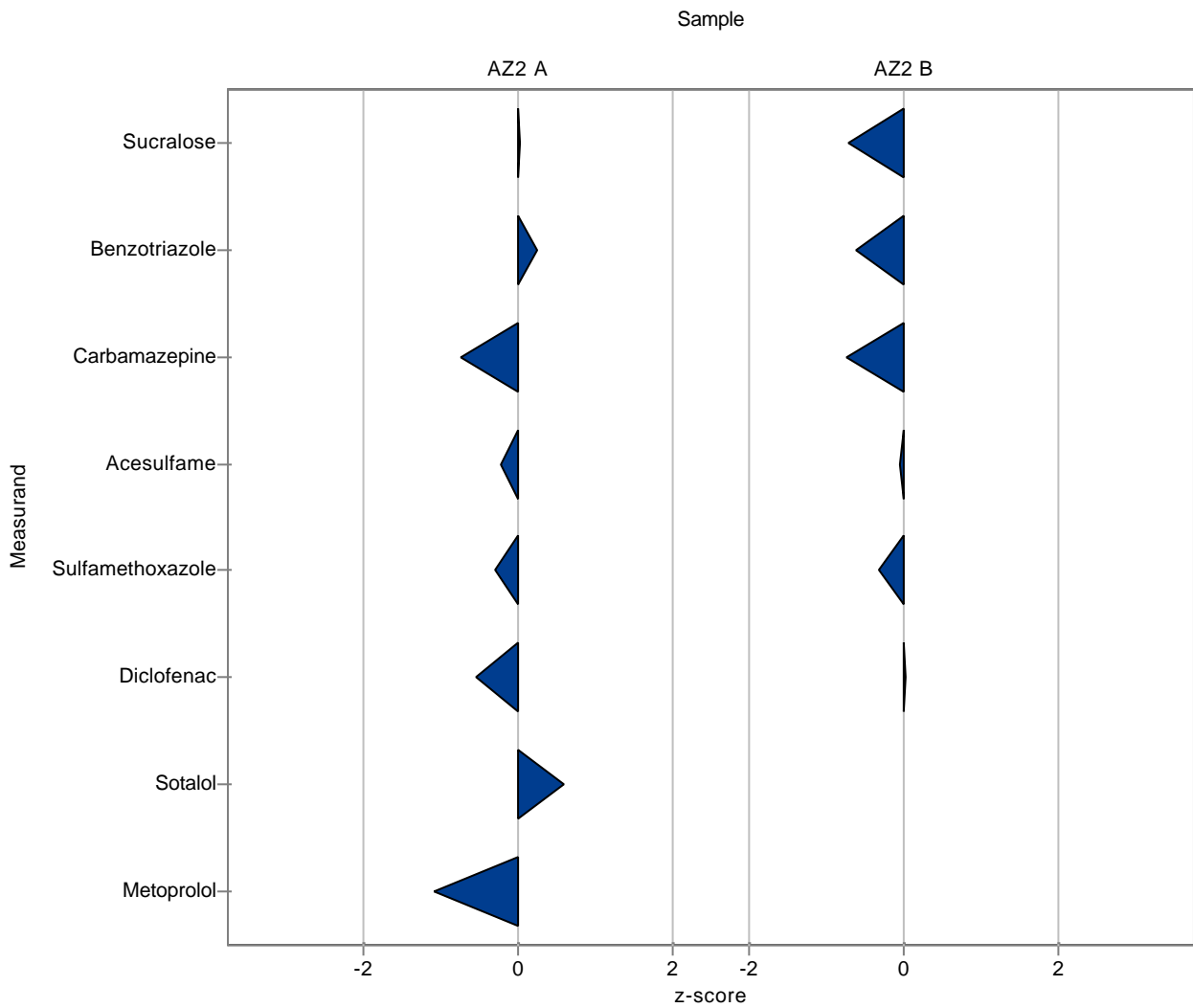
The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64	± 1,81	7,68	1,54	1,48	100,5	0,03
Benzotriazole	µg/l	8,04	± 0,67	8,22	1,64	0,706	102,3	0,26
Carbamazepine	µg/l	0,763	± 0,0865	0,693	0,139	0,0956	90,8	-0,73
Acesulfame	µg/l	2,55	± 0,286	2,49	0,498	0,286	97,7	-0,21
Sulfamethoxazole	µg/l	0,064	± 0,00321	0,063	0,013	0,00339	98,5	-0,29
Diclofenac	µg/l	2,66	± 0,191	2,55	0,51	0,211	95,8	-0,53
Sotalol	µg/l	0,908	± 0,295	1,06	0,21	0,26	116,8	0,59
Ibuprofen	µg/l	-	± -	0,067	0,013	-	-	-
Diazepam	µg/l	-	± -	<0,01 (LOQ)	-	-	-	-
Metoprolol	µg/l	1,13	± 0,172	0,954	0,191	0,162	84,4	-1,09

Sample: AZ2B

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177	± 0,0789	0,13	0,03	0,0644	73,5	-0,73
Benzotriazole	µg/l	0,366	± 0,0768	0,316	0,063	0,081	86,4	-0,61
Carbamazepine	µg/l	0,0284	± 0,00428	0,025	0,005	0,00451	88,1	-0,75
Acesulfame	µg/l	0,268	± 0,0529	0,266	0,053	0,0557	99,1	-0,04
Sulfamethoxazole	µg/l	0,0312	± 0,00358	0,03	0,006	0,00378	96,1	-0,33
Diclofenac	µg/l	0,179	± 0,0163	0,179	0,036	0,0163	100,2	0,03
Sotalol	µg/l	-	± -	<0,01 (LOQ)	-	-	-	-
Ibuprofen	µg/l	-	± -	0,076	0,015	-	-	-
Diazepam	µg/l	-	± -	0,161	0,032	-	-	-
Metoprolol	µg/l	-	± -	<0,01 (LOQ)	-	-	-	-



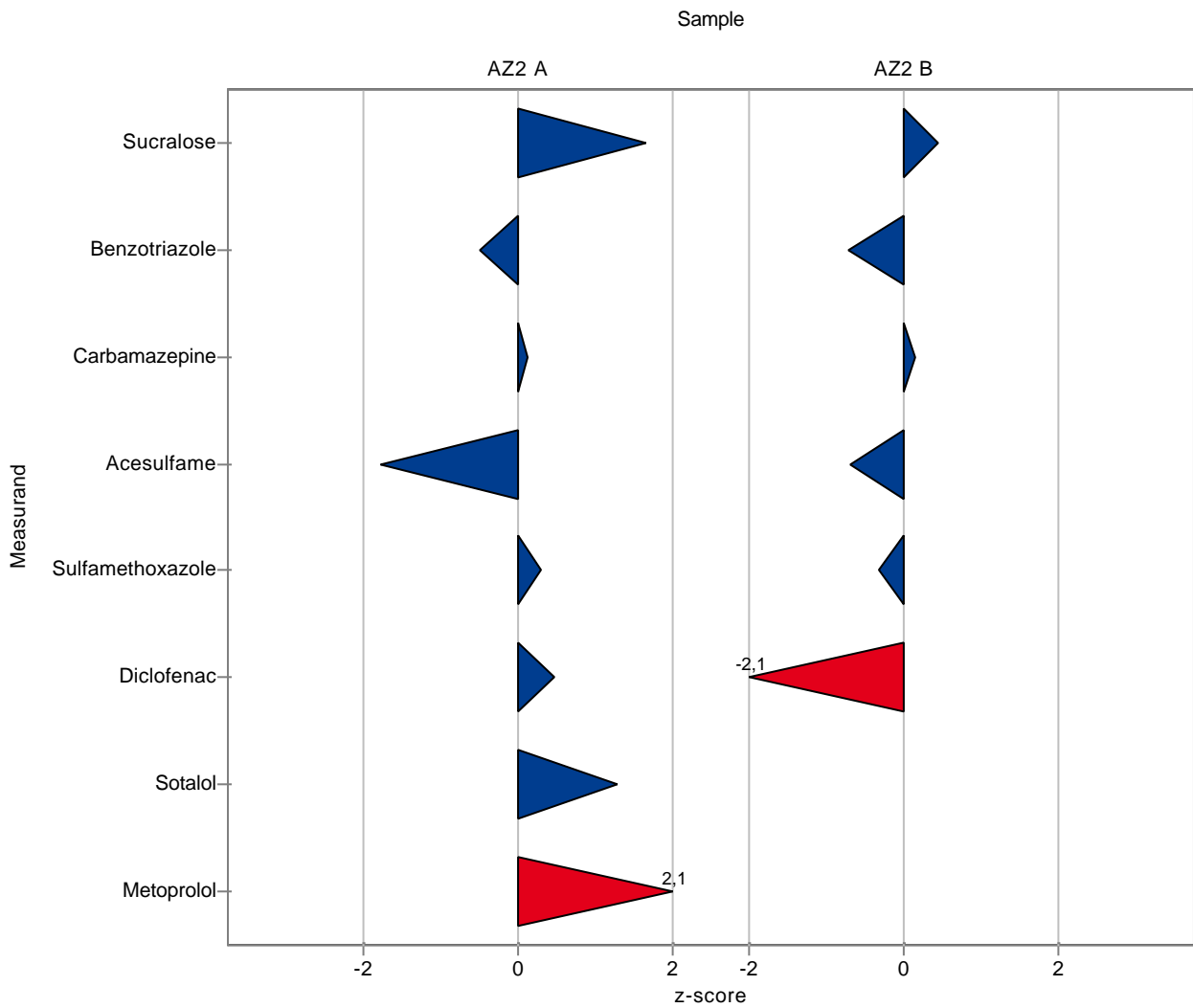
The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64	± 1,81	10,1	0,3	1,48	132,2	1,67
Benzotriazole	µg/l	8,04	± 0,67	7,7	0,17	0,706	95,8	-0,48
Carbamazepine	µg/l	0,763	± 0,0865	0,775	0,05	0,0956	101,5	0,12
Acesulfame	µg/l	2,55	± 0,286	2,04	0,02	0,286	80,0	-1,78
Sulfamethoxazole	µg/l	0,064	± 0,00321	0,065	0,05	0,00339	101,6	0,30
Diclofenac	µg/l	2,66	± 0,191	2,76	0,03	0,211	103,7	0,46
Sotalol	µg/l	0,908	± 0,295	1,24	0,02	0,26	136,6	1,28
Ibuprofen	µg/l	-	± -	0,011	0,001	-	-	-
Diazepam	µg/l	-	± -	<0,02 (LOQ)	-	-	-	-
Metoprolol	µg/l	1,13	± 0,172	1,47	0,07	0,162	130,1	2,10

Sample: AZ2B

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177	± 0,0789	0,205	0,03	0,0644	115,9	0,44
Benzotriazole	µg/l	0,366	± 0,0768	0,307	0,015	0,081	83,9	-0,73
Carbamazepine	µg/l	0,0284	± 0,00428	0,029	0,002	0,00451	102,2	0,14
Acesulfame	µg/l	0,268	± 0,0529	0,229	0,005	0,0557	85,3	-0,71
Sulfamethoxazole	µg/l	0,0312	± 0,00358	0,03	0,001	0,00378	96,1	-0,33
Diclofenac	µg/l	0,179	± 0,0163	0,145	0,05	0,0163	81,2	-2,06
Sotalol	µg/l	-	± -	<0,02 (LOQ)	-	-	-	-
Ibuprofen	µg/l	-	± -	0,093	0,001	-	-	-
Diazepam	µg/l	-	± -	0,163	0,01	-	-	-
Metoprolol	µg/l	-	± -	0,018	0,01	-	-	-



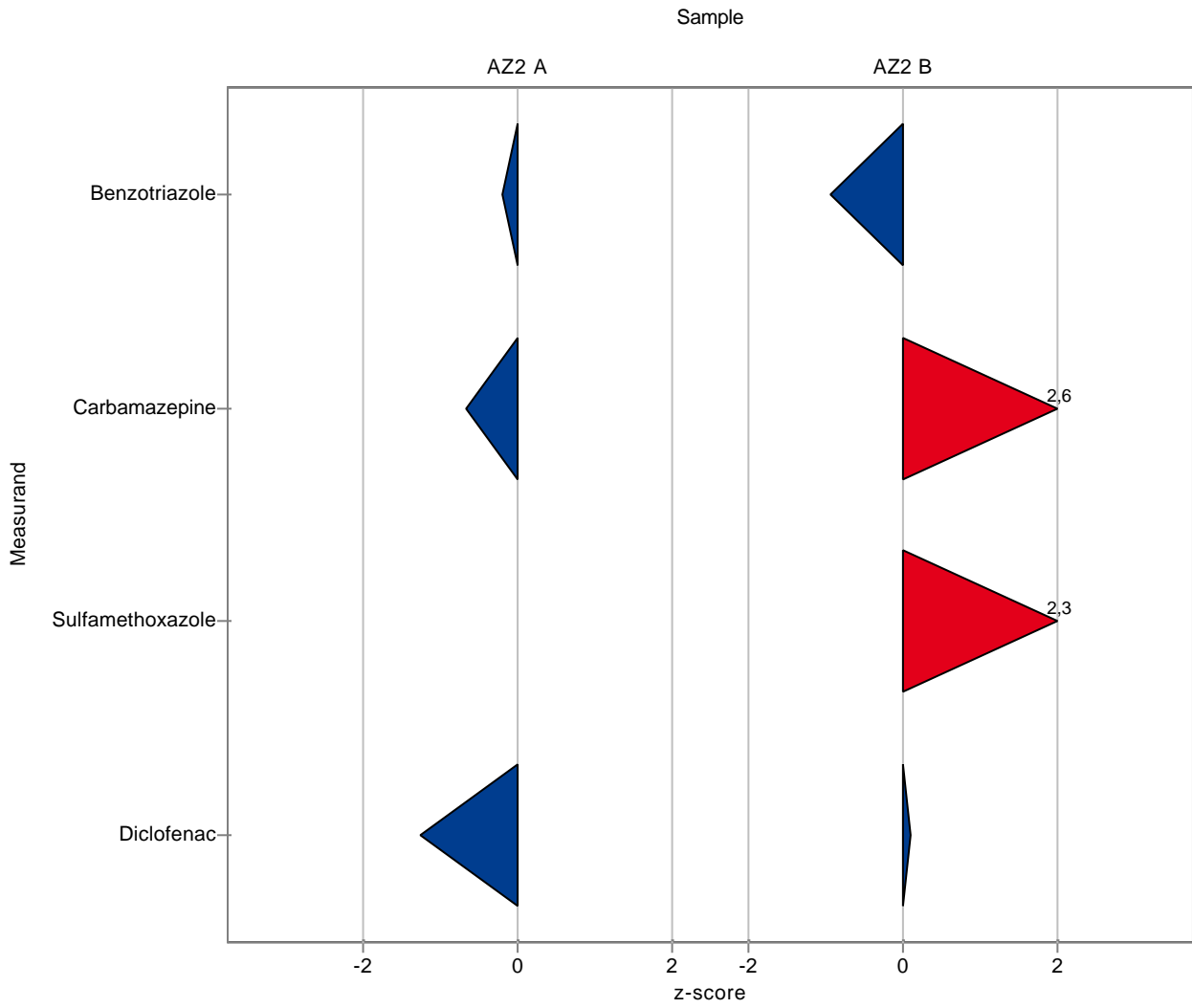
The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64	± 1,81	-	-	1,48	-	-
Benzotriazole	µg/l	8,04	± 0,67	7,9	1,6	0,706	98,3	-0,19
Carbamazepine	µg/l	0,763	± 0,0865	0,7	0,1	0,0956	91,7	-0,66
Acesulfame	µg/l	2,55	± 0,286	-	-	0,286	-	-
Sulfamethoxazole	µg/l	0,064	± 0,00321	<0,2 (LOQ)	-	0,00339	-	-
Diclofenac	µg/l	2,66	± 0,191	2,4	0,5	0,211	90,1	-1,24
Sotalol	µg/l	0,908	± 0,295	-	-	0,26	-	-
Ibuprofen	µg/l	-	± -	-	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	1,13	± 0,172	-	-	0,162	-	-

Sample: AZ2B

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177	± 0,0789	-	-	0,0644	-	-
Benzotriazole	µg/l	0,366	± 0,0768	0,29	0,06	0,081	79,3	-0,93
Carbamazepine	µg/l	0,0284	± 0,00428	0,04	0,01	0,00451	141,0	2,58
Acesulfame	µg/l	0,268	± 0,0529	-	-	0,0557	-	-
Sulfamethoxazole	µg/l	0,0312	± 0,00358	0,04	0,01	0,00378	128,1	2,32
Diclofenac	µg/l	0,179	± 0,0163	0,18	0,04	0,0163	100,8	0,09
Sotalol	µg/l	-	± -	-	-	-	-	-
Ibuprofen	µg/l	-	± -	-	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	-	± -	-	-	-	-	-



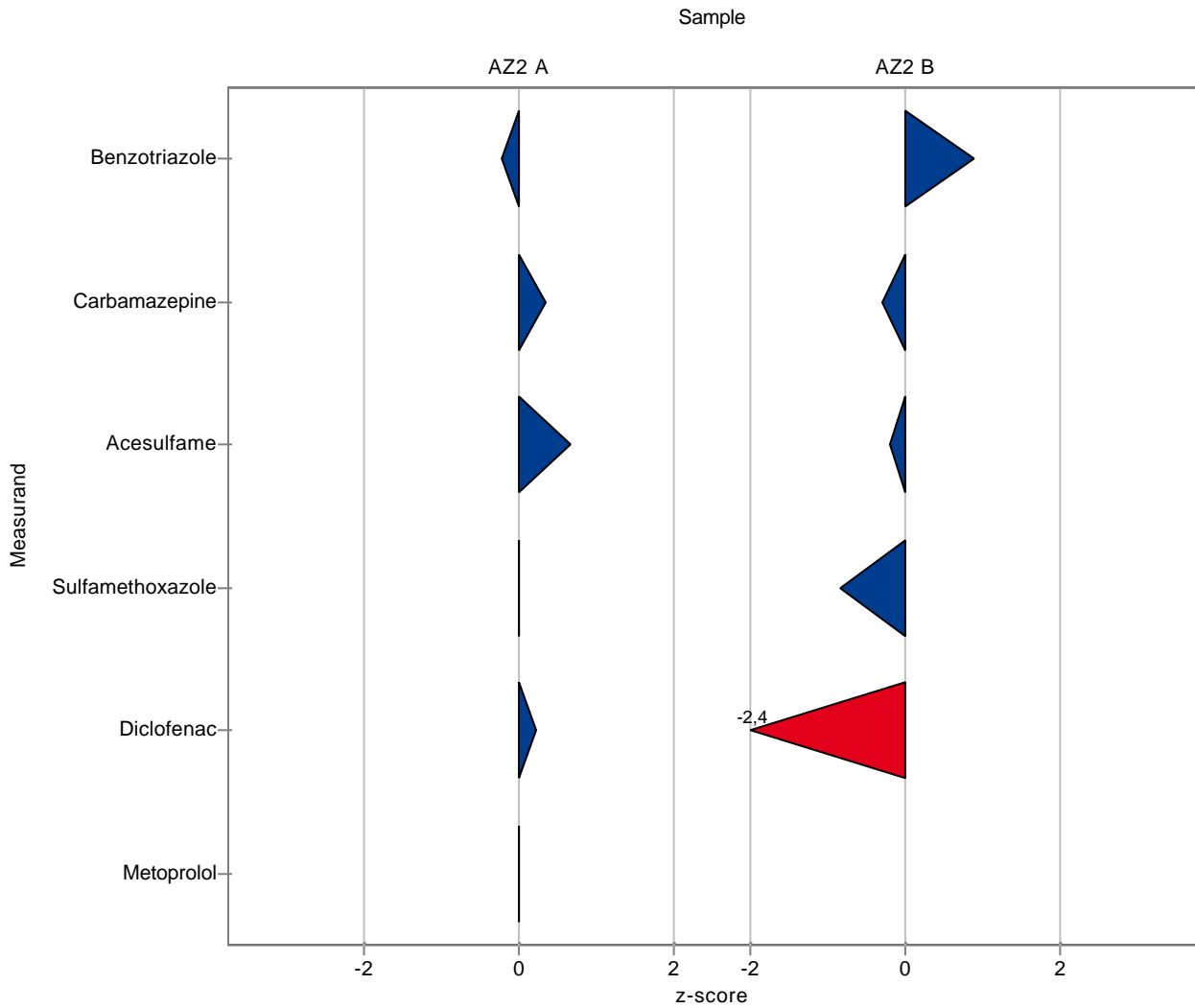
The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64	± 1,81	-	-	1,48	-	-
Benzotriazole	µg/l	8,04	± 0,67	7,88	1,58	0,706	98,0	-0,22
Carbamazepine	µg/l	0,763	± 0,0865	0,797	0,159	0,0956	104,4	0,35
Acesulfame	µg/l	2,55	± 0,286	2,74	0,82	0,286	107,5	0,67
Sulfamethoxazole	µg/l	0,064	± 0,00321	0,064	0,013	0,00339	100,0	0,00
Diclofenac	µg/l	2,66	± 0,191	2,71	0,542	0,211	101,8	0,23
Sotalol	µg/l	0,908	± 0,295	-	-	0,26	-	-
Ibuprofen	µg/l	-	± -	<0,1 (LOQ)	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	1,13	± 0,172	1,13	0,226	0,162	100,0	0,00

Sample: AZ2B

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177	± 0,0789	-	-	0,0644	-	-
Benzotriazole	µg/l	0,366	± 0,0768	0,438	0,088	0,081	119,8	0,89
Carbamazepine	µg/l	0,0284	± 0,00428	0,027	0,005	0,00451	95,2	-0,30
Acesulfame	µg/l	0,268	± 0,0529	0,257	0,077	0,0557	95,7	-0,21
Sulfamethoxazole	µg/l	0,0312	± 0,00358	0,028	0,006	0,00378	89,7	-0,86
Diclofenac	µg/l	0,179	± 0,0163	0,14	0,028	0,0163	78,4	-2,36
Sotalol	µg/l	-	± -	-	-	-	-	-
Ibuprofen	µg/l	-	± -	<0,1 (LOQ)	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	-	± -	<0,01 (LOQ)	-	-	-	-



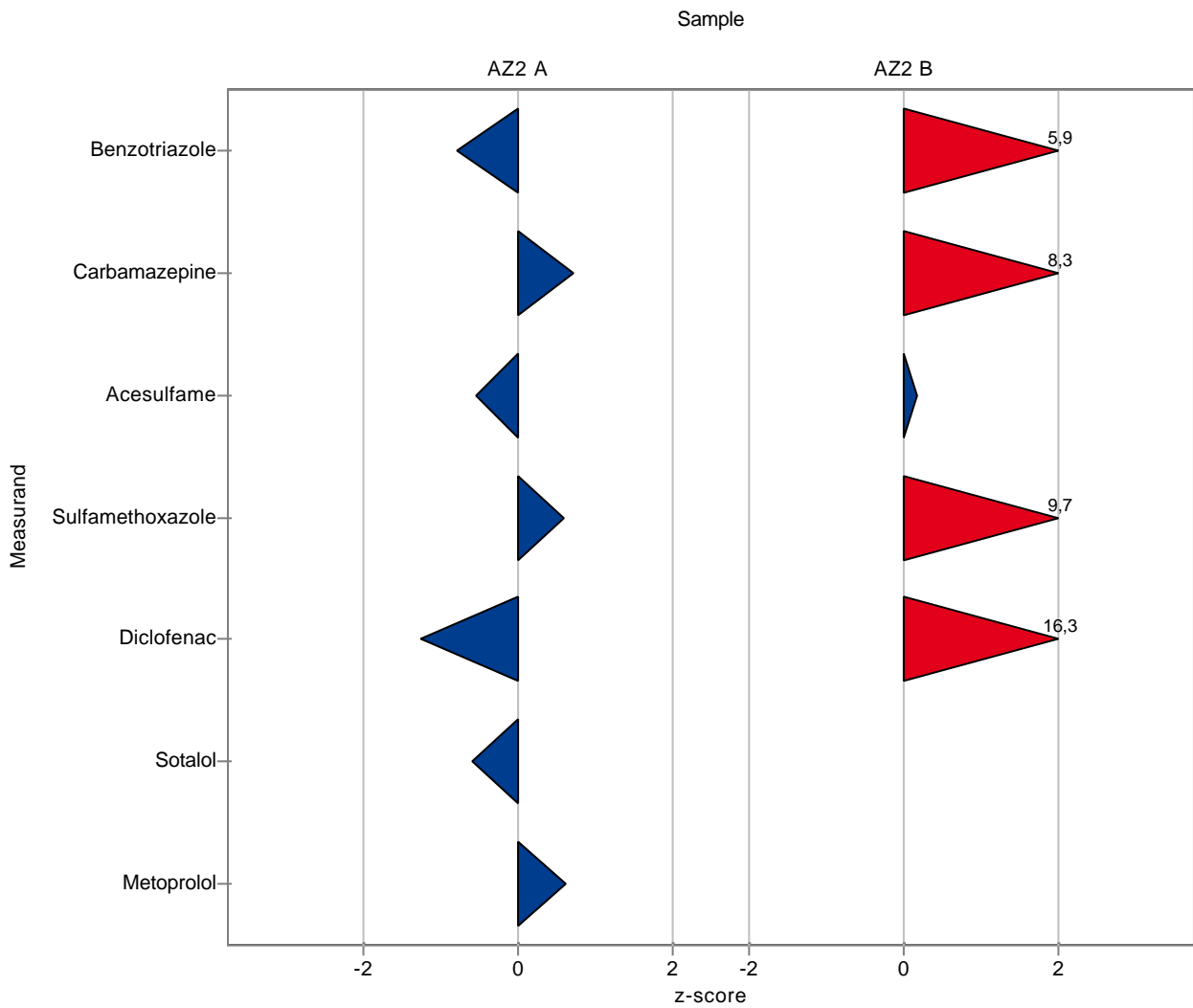
The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64	± 1,81	-	-	1,48	-	-
Benzotriazole	µg/l	8,04	± 0,67	7,486	1,5	0,706	93,1	-0,78
Carbamazepine	µg/l	0,763	± 0,0865	0,832	0,17	0,0956	109,0	0,72
Acesulfame	µg/l	2,55	± 0,286	2,395	0,48	0,286	93,9	-0,54
Sulfamethoxazole	µg/l	0,064	± 0,00321	0,066	0,013	0,00339	103,1	0,59
Diclofenac	µg/l	2,66	± 0,191	2,396	0,48	0,211	90,0	-1,26
Sotalol	µg/l	0,908	± 0,295	0,754	0,15	0,26	83,1	-0,59
Ibuprofen	µg/l	-	± -	<20 (LOQ)	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	1,13	± 0,172	1,229	0,25	0,162	108,8	0,61

Sample: AZ2B

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177	± 0,0789	-	-	0,0644	-	-
Benzotriazole	µg/l	0,366	± 0,0768	0,84	0,17	0,081	229,7	5,86
Carbamazepine	µg/l	0,0284	± 0,00428	0,066	0,013	0,00451	232,6	8,34
Acesulfame	µg/l	0,268	± 0,0529	0,278	0,056	0,0557	103,6	0,17
Sulfamethoxazole	µg/l	0,0312	± 0,00358	0,068	0,013	0,00378	217,7	9,73
Diclofenac	µg/l	0,179	± 0,0163	0,445	0,089	0,0163	249,2	16,33
Sotalol	µg/l	-	± -	<10 (LOQ)	-	-	-	-
Ibuprofen	µg/l	-	± -	0,066	0,013	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	-	± -	<10 (LOQ)	-	-	-	-



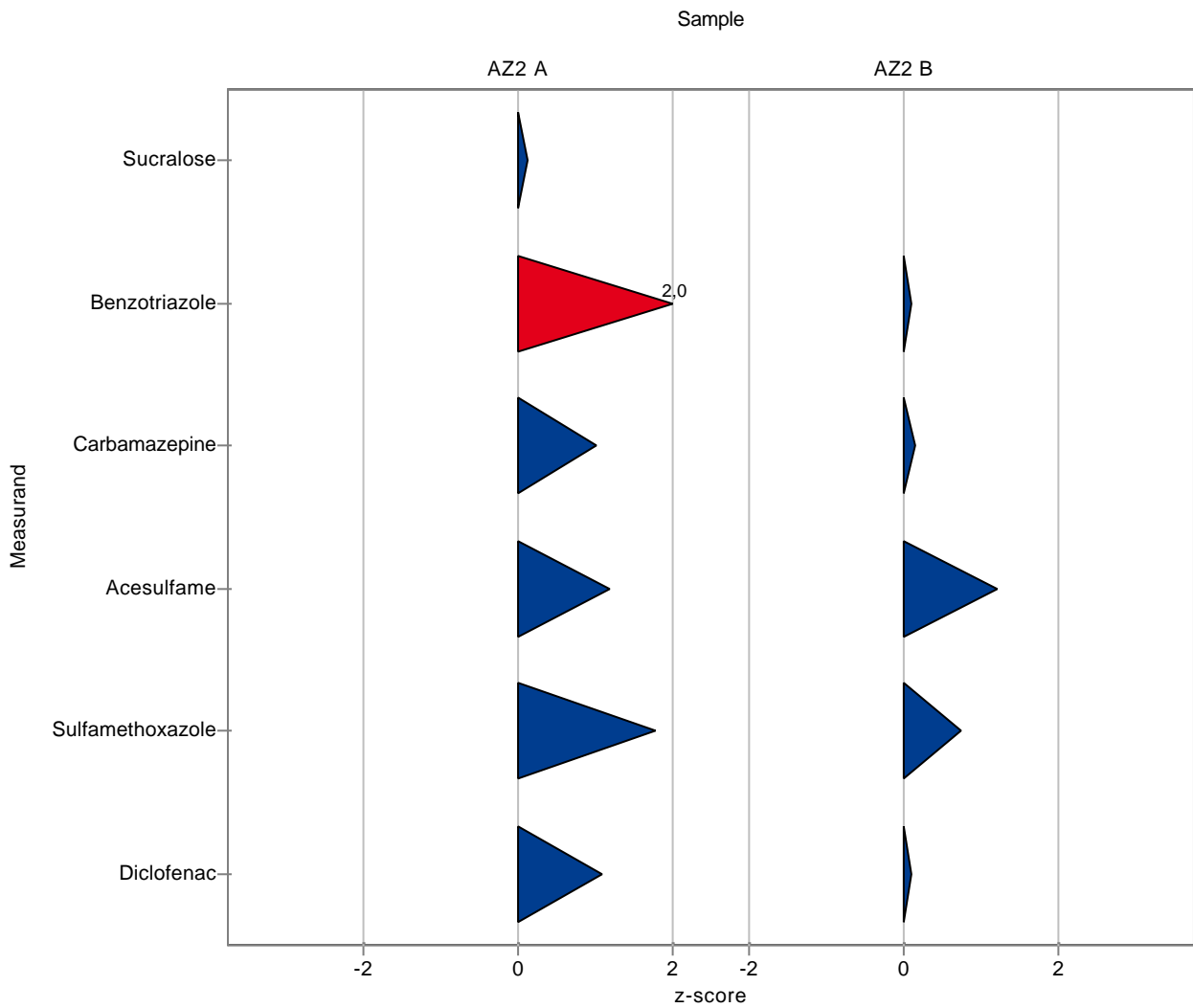
The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64	± 1,81	7,83	5,2	1,48	102,5	0,13
Benzotriazole	µg/l	8,04	± 0,67	9,47	0,57	0,706	117,8	2,03
Carbamazepine	µg/l	0,763	± 0,0865	0,86	0,06	0,0956	112,7	1,01
Acesulfame	µg/l	2,55	± 0,286	2,89	0,46	0,286	113,4	1,19
Sulfamethoxazole	µg/l	0,064	± 0,00321	0,07	0,004	0,00339	109,4	1,78
Diclofenac	µg/l	2,66	± 0,191	2,89	0,318	0,211	108,6	1,08
Sotalol	µg/l	0,908	± 0,295	-	-	0,26	-	-
Ibuprofen	µg/l	-	± -	-	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	1,13	± 0,172	-	-	0,162	-	-

Sample: AZ2B

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177	± 0,0789	<0,125 (LOD)	-	0,0644	-	-
Benzotriazole	µg/l	0,366	± 0,0768	0,374	0,023	0,081	102,3	0,10
Carbamazepine	µg/l	0,0284	± 0,00428	0,029	0,002	0,00451	102,2	0,14
Acesulfame	µg/l	0,268	± 0,0529	0,335	0,054	0,0557	124,8	1,19
Sulfamethoxazole	µg/l	0,0312	± 0,00358	0,034	0,002	0,00378	108,9	0,73
Diclofenac	µg/l	0,179	± 0,0163	0,18	0,02	0,0163	100,8	0,09
Sotalol	µg/l	-	± -	-	-	-	-	-
Ibuprofen	µg/l	-	± -	-	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	-	± -	-	-	-	-	-



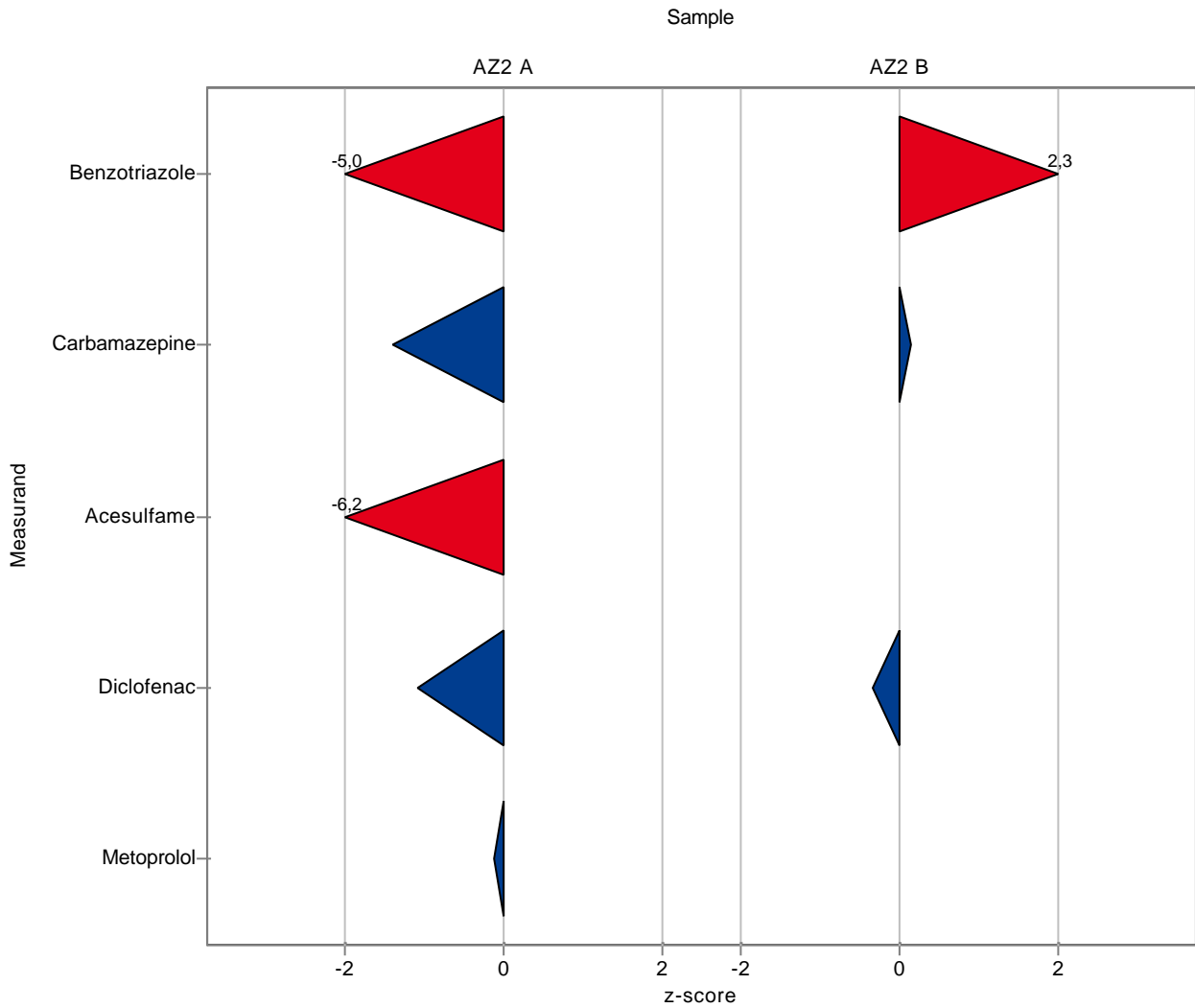
The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64	± 1,81	-	-	1,48	-	-
Benzotriazole	µg/l	8,04	± 0,67	4,53	-	0,706	56,4	-4,96
Carbamazepine	µg/l	0,763	± 0,0865	0,629	-	0,0956	82,4	-1,40
Acesulfame	µg/l	2,55	± 0,286	0,762	-	0,286	29,9	-6,24
Sulfamethoxazole	µg/l	0,064	± 0,00321	<0,02 (LOQ)	-	0,00339	-	-
Diclofenac	µg/l	2,66	± 0,191	2,43	-	0,211	91,3	-1,10
Sotalol	µg/l	0,908	± 0,295	-	-	0,26	-	-
Ibuprofen	µg/l	-	± -	-	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	1,13	± 0,172	1,11	-	0,162	98,2	-0,12

Sample: AZ2B

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177	± 0,0789	-	-	0,0644	-	-
Benzotriazole	µg/l	0,366	± 0,0768	0,552	-	0,081	150,9	2,30
Carbamazepine	µg/l	0,0284	± 0,00428	0,029	-	0,00451	102,2	0,14
Acesulfame	µg/l	0,268	± 0,0529	<0,05 (LOQ)	-	0,0557	-	-
Sulfamethoxazole	µg/l	0,0312	± 0,00358	<0,02 (LOQ)	-	0,00378	-	-
Diclofenac	µg/l	0,179	± 0,0163	0,173	-	0,0163	96,9	-0,34
Sotalol	µg/l	-	± -	-	-	-	-	-
Ibuprofen	µg/l	-	± -	-	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	-	± -	<0,01 (LOQ)	-	-	-	-



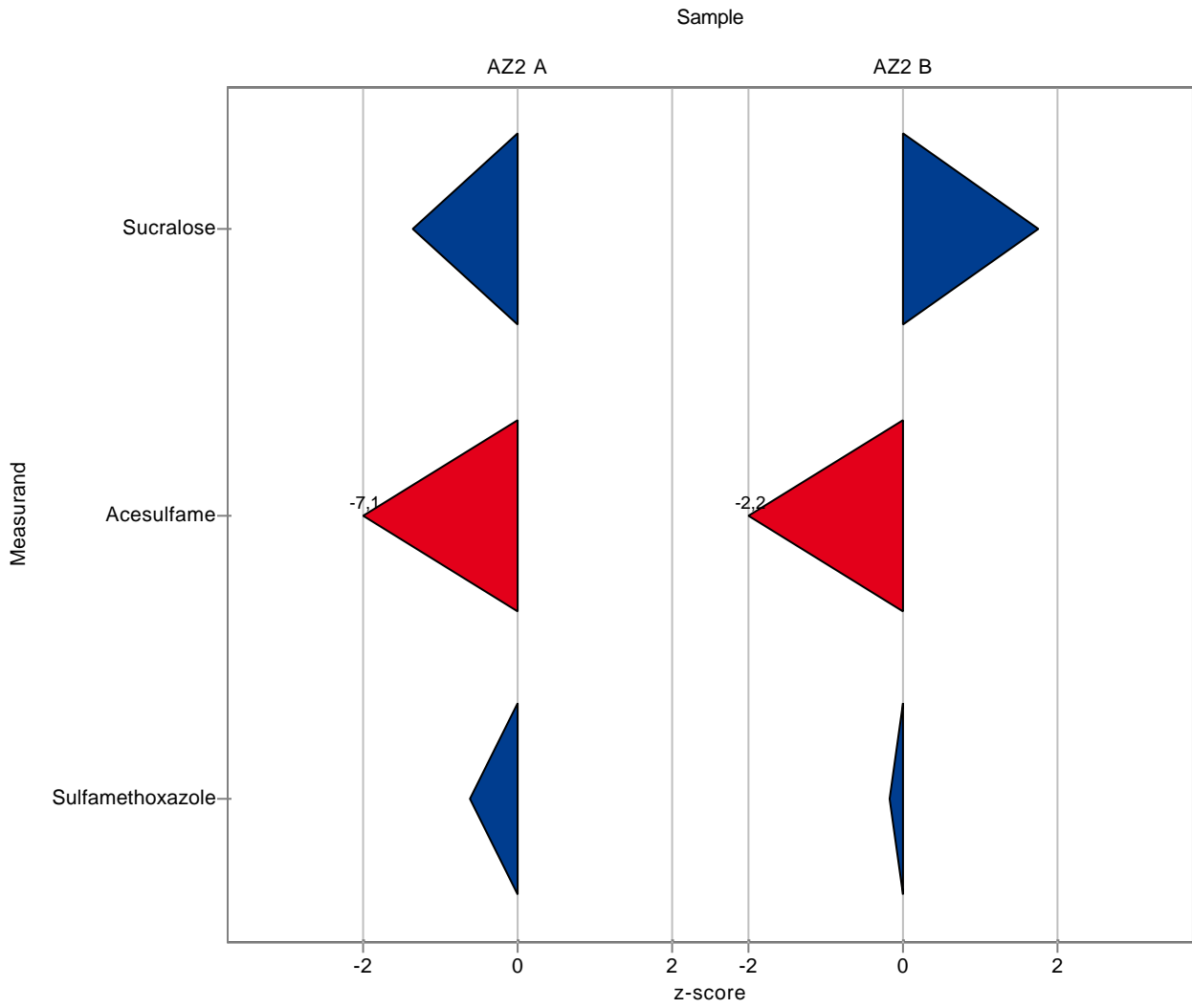
The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64	± 1,81	5,6565	0,399	1,48	74,0	-1,34
Benzotriazole	µg/l	8,04	± 0,67	-	-	0,706	-	-
Carbamazepine	µg/l	0,763	± 0,0865	-	-	0,0956	-	-
Acesulfame	µg/l	2,55	± 0,286	0,5113	0,019	0,286	20,1	-7,12
Sulfamethoxazole	µg/l	0,064	± 0,00321	0,0619	0,002	0,00339	96,7	-0,62
Diclofenac	µg/l	2,66	± 0,191	-	-	0,211	-	-
Sotalol	µg/l	0,908	± 0,295	-	-	0,26	-	-
Ibuprofen	µg/l	-	± -	-	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	1,13	± 0,172	-	-	0,162	-	-

Sample: AZ2B

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177	± 0,0789	0,289	0,0203	0,0644	163,4	1,74
Benzotriazole	µg/l	0,366	± 0,0768	-	-	0,081	-	-
Carbamazepine	µg/l	0,0284	± 0,00428	-	-	0,00451	-	-
Acesulfame	µg/l	0,268	± 0,0529	0,1461	0,0054	0,0557	54,4	-2,20
Sulfamethoxazole	µg/l	0,0312	± 0,00358	0,0306	0,001	0,00378	98,0	-0,17
Diclofenac	µg/l	0,179	± 0,0163	-	-	0,0163	-	-
Sotalol	µg/l	-	± -	-	-	-	-	-
Ibuprofen	µg/l	-	± -	-	-	-	-	-
Diazepam	µg/l	-	± -	-	-	-	-	-
Metoprolol	µg/l	-	± -	-	-	-	-	-



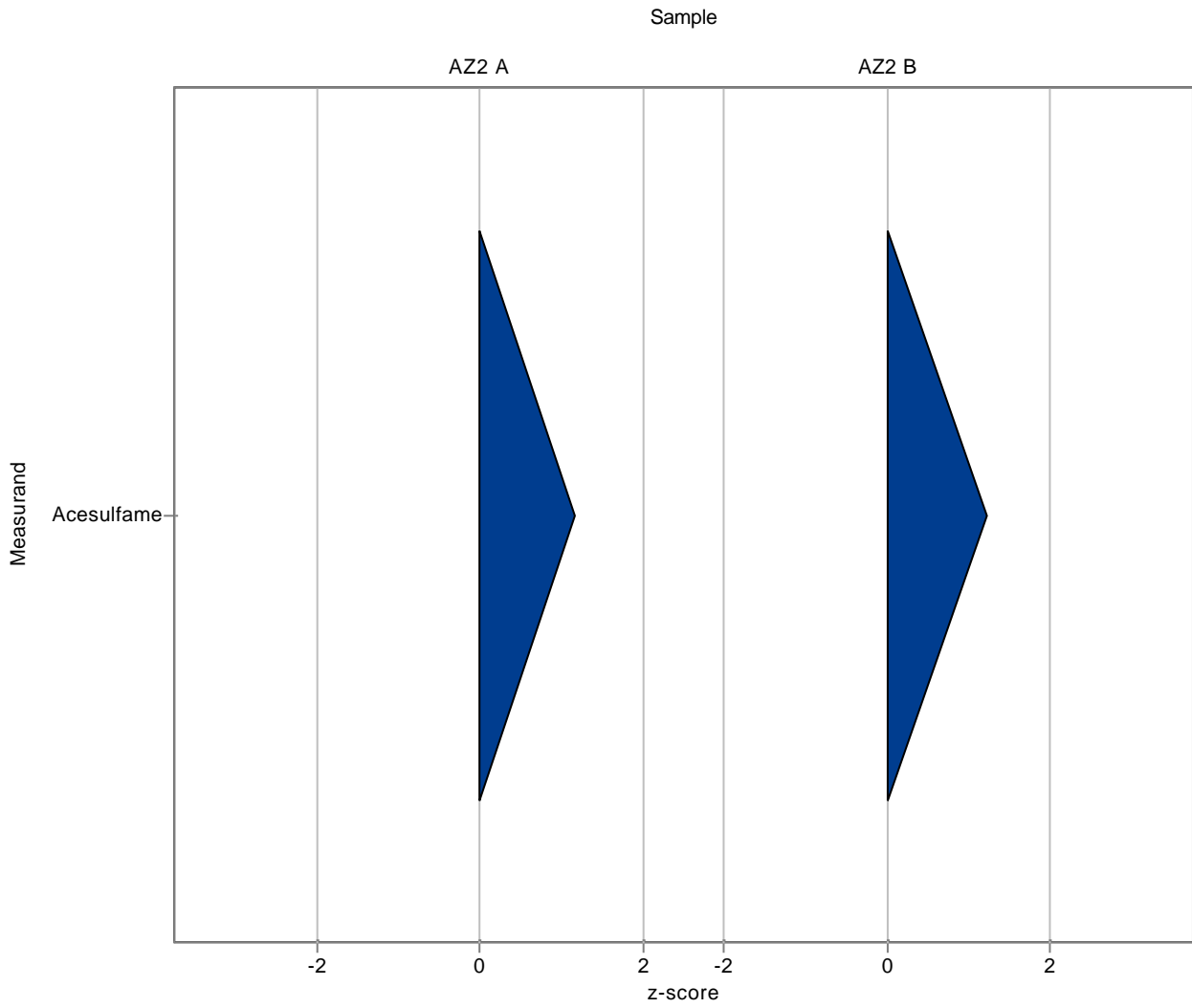
The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target ± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64 ± 1,81	-	-	1,48	-	-
Benzotriazole	µg/l	8,04 ± 0,67	-	-	0,706	-	-
Carbamazepine	µg/l	0,763 ± 0,0865	-	-	0,0956	-	-
Acesulfame	µg/l	2,55 ± 0,286	2,88	0,317	0,286	113,0	1,15
Sulfamethoxazole	µg/l	0,064 ± 0,00321	-	-	0,00339	-	-
Diclofenac	µg/l	2,66 ± 0,191	-	-	0,211	-	-
Sotalol	µg/l	0,908 ± 0,295	-	-	0,26	-	-
Ibuprofen	µg/l	- ± -	-	-	-	-	-
Diazepam	µg/l	- ± -	-	-	-	-	-
Metoprolol	µg/l	1,13 ± 0,172	-	-	0,162	-	-

Sample: AZ2B

Parameter	Unit	Target ± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177 ± 0,0789	-	-	0,0644	-	-
Benzotriazole	µg/l	0,366 ± 0,0768	-	-	0,081	-	-
Carbamazepine	µg/l	0,0284 ± 0,00428	-	-	0,00451	-	-
Acesulfame	µg/l	0,268 ± 0,0529	0,336	0,037	0,0557	125,2	1,21
Sulfamethoxazole	µg/l	0,0312 ± 0,00358	-	-	0,00378	-	-
Diclofenac	µg/l	0,179 ± 0,0163	-	-	0,0163	-	-
Sotalol	µg/l	- ± -	-	-	-	-	-
Ibuprofen	µg/l	- ± -	-	-	-	-	-
Diazepam	µg/l	- ± -	-	-	-	-	-
Metoprolol	µg/l	- ± -	-	-	-	-	-



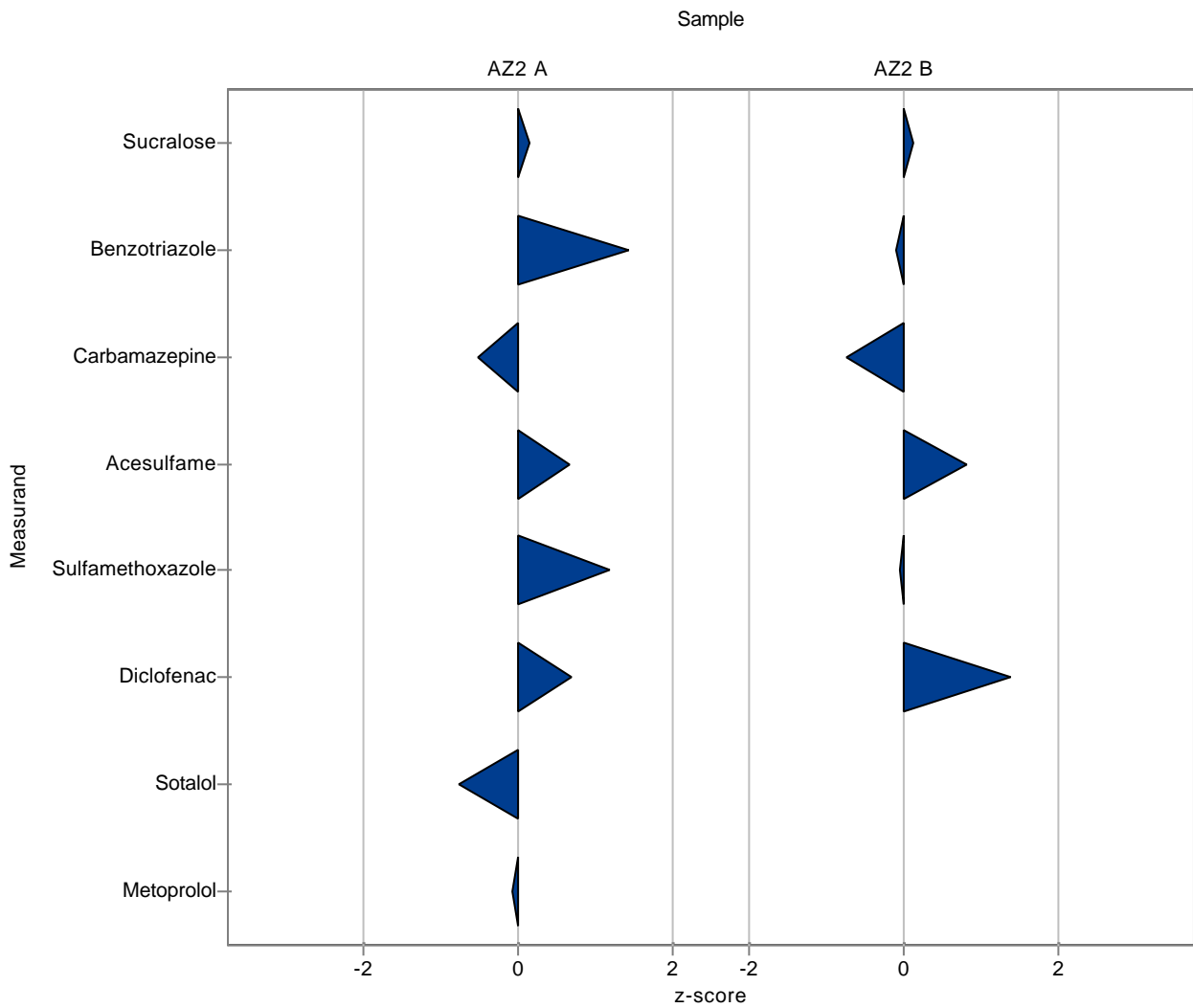
The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64	± 1,81	7,85	-	1,48	102,7	0,14
Benzotriazole	µg/l	8,04	± 0,67	9,05	-	0,706	112,6	1,43
Carbamazepine	µg/l	0,763	± 0,0865	0,713	-	0,0956	93,4	-0,53
Acesulfame	µg/l	2,55	± 0,286	2,74	-	0,286	107,5	0,67
Sulfamethoxazole	µg/l	0,064	± 0,00321	0,068	-	0,00339	106,3	1,18
Diclofenac	µg/l	2,66	± 0,191	2,81	-	0,211	105,5	0,70
Sotalol	µg/l	0,908	± 0,295	0,712	-	0,26	78,4	-0,75
Ibuprofen	µg/l	-	± -	0,011	-	-	-	-
Diazepam	µg/l	-	± -	0,007	-	-	-	-
Metoprolol	µg/l	1,13	± 0,172	1,12	-	0,162	99,1	-0,06

Sample: AZ2B

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177	± 0,0789	0,184	-	0,0644	104,1	0,11
Benzotriazole	µg/l	0,366	± 0,0768	0,357	-	0,081	97,6	-0,11
Carbamazepine	µg/l	0,0284	± 0,00428	0,025	-	0,00451	88,1	-0,75
Acesulfame	µg/l	0,268	± 0,0529	0,314	-	0,0557	117,0	0,82
Sulfamethoxazole	µg/l	0,0312	± 0,00358	0,031	-	0,00378	99,3	-0,06
Diclofenac	µg/l	0,179	± 0,0163	0,201	-	0,0163	112,6	1,37
Sotalol	µg/l	-	± -	0,005	-	-	-	-
Ibuprofen	µg/l	-	± -	0,07	-	-	-	-
Diazepam	µg/l	-	± -	0,192	-	-	-	-
Metoprolol	µg/l	-	± -	0,007	-	-	-	-



The following results were achieved:

Sample: AZ2A

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	7,64	± 1,81	-	-	1,48	-	-
Benzotriazole	µg/l	8,04	± 0,67	7,881	-	0,706	98,1	-0,22
Carbamazepine	µg/l	0,763	± 0,0865	0,7415	-	0,0956	97,2	-0,23
Acesulfame	µg/l	2,55	± 0,286	2,293	-	0,286	89,9	-0,90
Sulfamethoxazole	µg/l	0,064	± 0,00321	0,0624	-	0,00339	97,5	-0,47
Diclofenac	µg/l	2,66	± 0,191	2,78	-	0,211	104,4	0,56
Sotalol	µg/l	0,908	± 0,295	1,0915	-	0,26	120,2	0,71
Ibuprofen	µg/l	-	± -	<0,01 (LOQ)	-	-	-	-
Diazepam	µg/l	-	± -	<0,01 (LOQ)	-	-	-	-
Metoprolol	µg/l	1,13	± 0,172	1,0088	-	0,162	89,3	-0,75

Sample: AZ2B

Parameter	Unit	Target	± CI(99%)	Result	± U	Criteria	Recovery	z-score
Sucralose	µg/l	0,177	± 0,0789	-	-	0,0644	-	-
Benzotriazole	µg/l	0,366	± 0,0768	0,322	-	0,081	88,1	-0,54
Carbamazepine	µg/l	0,0284	± 0,00428	0,0267	-	0,00451	94,1	-0,37
Acesulfame	µg/l	0,268	± 0,0529	0,2574	-	0,0557	95,9	-0,20
Sulfamethoxazole	µg/l	0,0312	± 0,00358	0,0331	-	0,00378	106,0	0,50
Diclofenac	µg/l	0,179	± 0,0163	0,1991	-	0,0163	111,5	1,26
Sotalol	µg/l	-	± -	<0,01 (LOQ)	-	-	-	-
Ibuprofen	µg/l	-	± -	0,0757	-	-	-	-
Diazepam	µg/l	-	± -	0,1531	-	-	-	-
Metoprolol	µg/l	-	± -	<0,01 (LOQ)	-	-	-	-

