

EVALUATION OF THE INTERLABORATORY COMPARISON TEST

Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample dispatch on 9th May 2016

Address: Umweltbundesamt GmbH
Spittelauer Lände 5
1090 Vienna/Austria

Contact: Dr. Sandra Kulcsar

Telephone: +43 (0) 1 31304 4334

E-mail: ringversuche@umweltbundesamt.at

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

Management:
Dipl.-Ing. Monika Denner

Table of contents

| | | |
|-----|--|-----|
| 1 | Interlaboratory comparison test: Pharmaceuticals, industrial chemicals and artificial sweeteners – AZ3 | 4 |
| 1.1 | Participants and time schedule | 4 |
| 1.2 | Sampling, sample material and distribution | 4 |
| 1.3 | Control testing | 4 |
| 2 | Evaluation | 5 |
| 3 | Representation and interpretation of measurement results..... | 6 |
| 4 | Explanatory notes | 6 |
| 5 | Annotations on tables and charts | 7 |
| 6 | Summary of results, after removal of outliers | 11 |
| 7 | Parameter oriented report..... | 12 |
| 8 | Laboratory oriented report | 113 |

1 Interlaboratory comparison test: Pharmaceuticals, industrial chemicals and artificial sweeteners – AZ3

1.1 Participants and time schedule

- Number of registrations: 15
- Number of submitted data records: 13
- Dispatch of samples: 9th of May 2016
- Closing date for submission of data: 7th of June 2016

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

1.2 Sampling, sample material and distribution

The sampling of surface water and municipal waste water was carried out on 9th May 2016 (Sample A) and on 8th May 2016 (Sample B), respectively.

The following samples were made available

- Sample AZ3 A – surface water
- Sample AZ3 B – municipal waste water

Both samples were stored at < 4 °C until further processing. The samples were partly spiked with specific substances and were filled into bottles under continuous stirring to achieve homogeneous samples.

The samples were dispatched on 9th of May 2016.

Each participant received:

- 2 samples (each 2000 ml), each filled in 1000 ml Aluminium bottles

1.3 Control testing

During filling the bottles, aliquots of each sample were collected randomly for control testing. Testing was performed close to the time of sample dispatch.

In the parameter-oriented evaluation, the results of the control testing are given in the form of arithmetic means of the detected concentrations as check value $\pm U$.

2 Evaluation

The analytical results had to be made available to the organiser not later than 7th of June 2016. 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. Results < LOQ or < LOD are not taken into account for calculation.

The adjusted average value (after removal of outliers) for all submitted results was used as a basis for the calculation of recovery rates and z-scores.

z-Score

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

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

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.

SD 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 represented graphically (see 5 Explanatory notes on the parameter oriented report)

4 Explanatory notes

As explained in the paragraph evaluation (page 5), the z-Score is calculated using the reproducibility standard deviation, calculated from the participants' results (after removal of outliers) in the relevant test round. As a consequence it might occur that the z-Score between -2 and 2 covers an extraordinary range, due to a high variance of the results.

The recovery rate is calculated for the individual result based on the target value. Therefore, in the case of a high variance of the results, participants should also consider recovery rates as an indicator for the necessity of internal quality assurance measures.

Sample AZ A: For the parameters Diazepam, Ibuprofen, Metoprolol, Sotalol und Sucralose no target value was calculated because of the low analyte content and/or the small number of submitted results.

Sample AZ B: For the parameters Diazepam, Ibuprofen, Sotalol und Sucralose no target value was calculated because of the low analyte content and/or the small number of submitted results.

5 Annotations on tables and charts

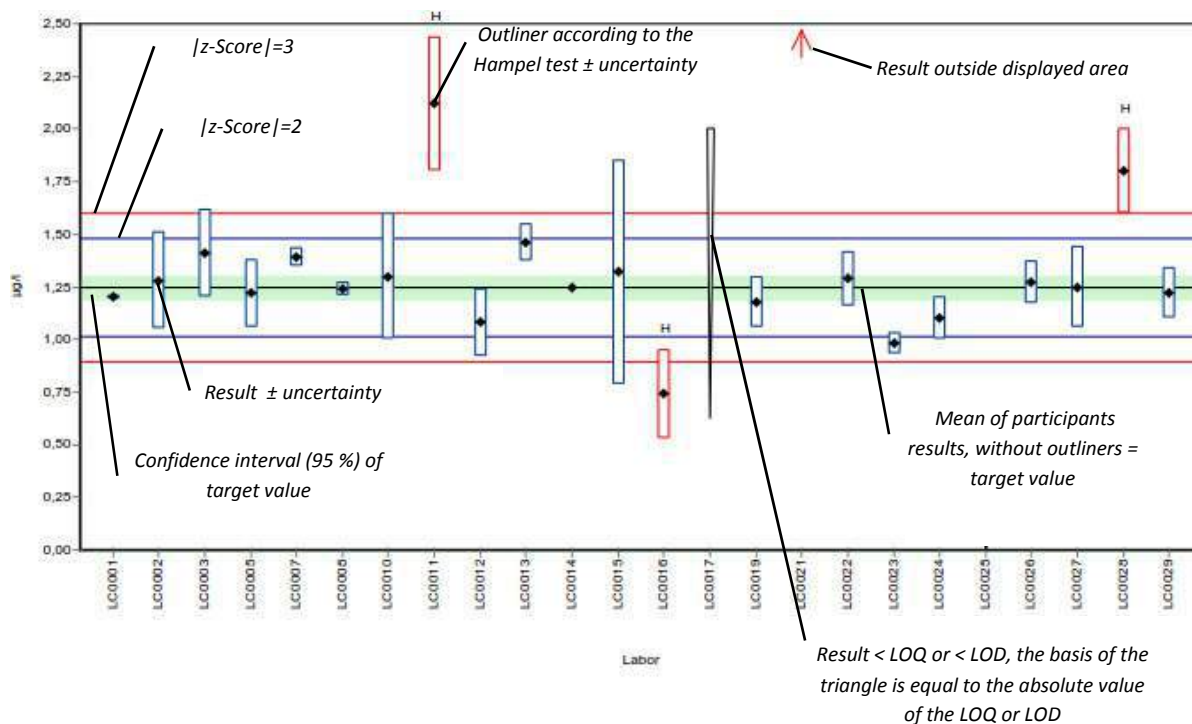
5.1 Information and abbreviations in tables

| | |
|-----------------|---|
| Parameter | Analyte identifier |
| Sample | Sample identifier |
| Unit | Given unit for result and uncertainty (e.g. µg/l) |
| Mean | Mean of the participants results, without outliers (3 significant digits) |
| CI (99 %) | 99% confidence interval (3 significant digits) |
| Minimum | Minimum of all submitted results, after removal of outliers (3 significant digits) |
| Maximum | Maximum of all submitted results, after removal of outliers (3 significant digits) |
| SD | Reproducibility standard deviation, calculated from the participants results, after removal of outliers (3 significant digits) |
| RSD % | Reproducibility standard deviation, calculated from the participants results relative to the target value, given in %, after removal of outliers (2 significant digits) |
| Check value ± U | Mean of check value ± measurement uncertainty (3 significant digits) |
| Labcode | Laboratory identifier (anonymized) |
| Result | Result as indicated by participant (max. 5 decimal places) |
| ± U | Results uncertainty as indicated by participant (max. 5 decimal places) |
| LOQ | Limit of quantification |
| LOD | Limit of detection |
| Recovery | Recovery rate in % based on target value (3 significant digits, max. one decimal place given) |
| z-Score | Deviation of result based on target value depicted as a multiple of the criteria (3 significant digits, max. 2 decimal places given) |
| - | <i>No data available</i> |
| Comments | Comment on the respective result (e.g. H, FN, FP) |
| H | Outlier according to Hampel-Test |
| FN | False negative – for a result < LOQ or result < LOD: The absolute value of the LOQ or LOD fulfils the condition of an outlier 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): |

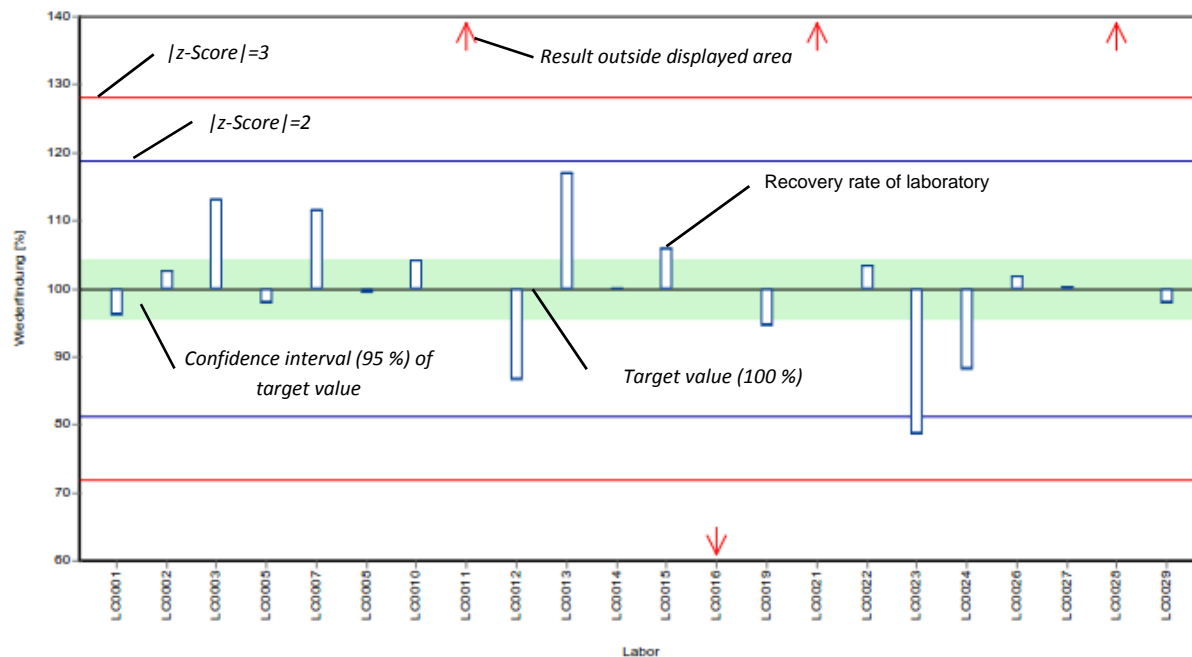
| | |
|-------------------------|--|
| | Result that exceeds the median of the absolute values of the transmitted LOQs or LODs by more than 100 %. |
| Standard deviation | Reproducibility standard deviation, calculated from the participants results (3 significant digits) |
| Rel. standard deviation | Reproducibility standard deviation, calculated from the participants results relative to the target value, given in %, (3 significant digits) |
| n | Number of results |
| Target value | Mean of the participants results, without outliers (3 significant digits) |
| Criteria | Criteria for z-Score calculation. The given value matches the reproducibility standard deviation, calculated from the participants' results, after removal of outliers (3 significant digits). |

5.2 Graphical presentation of results

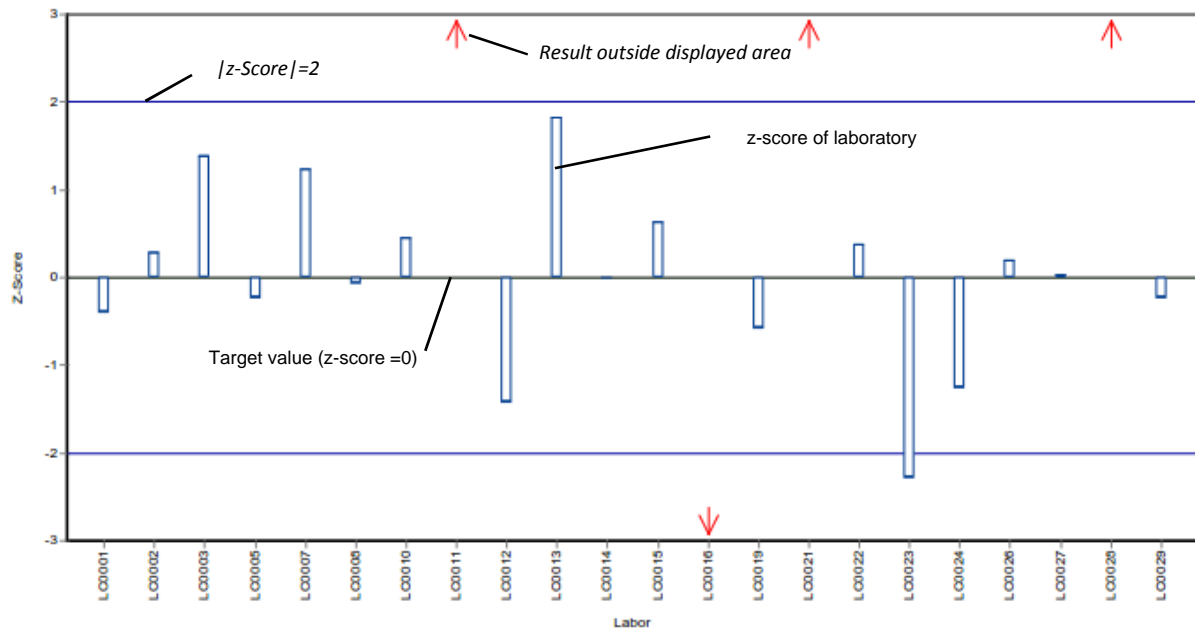
Example chart: Results



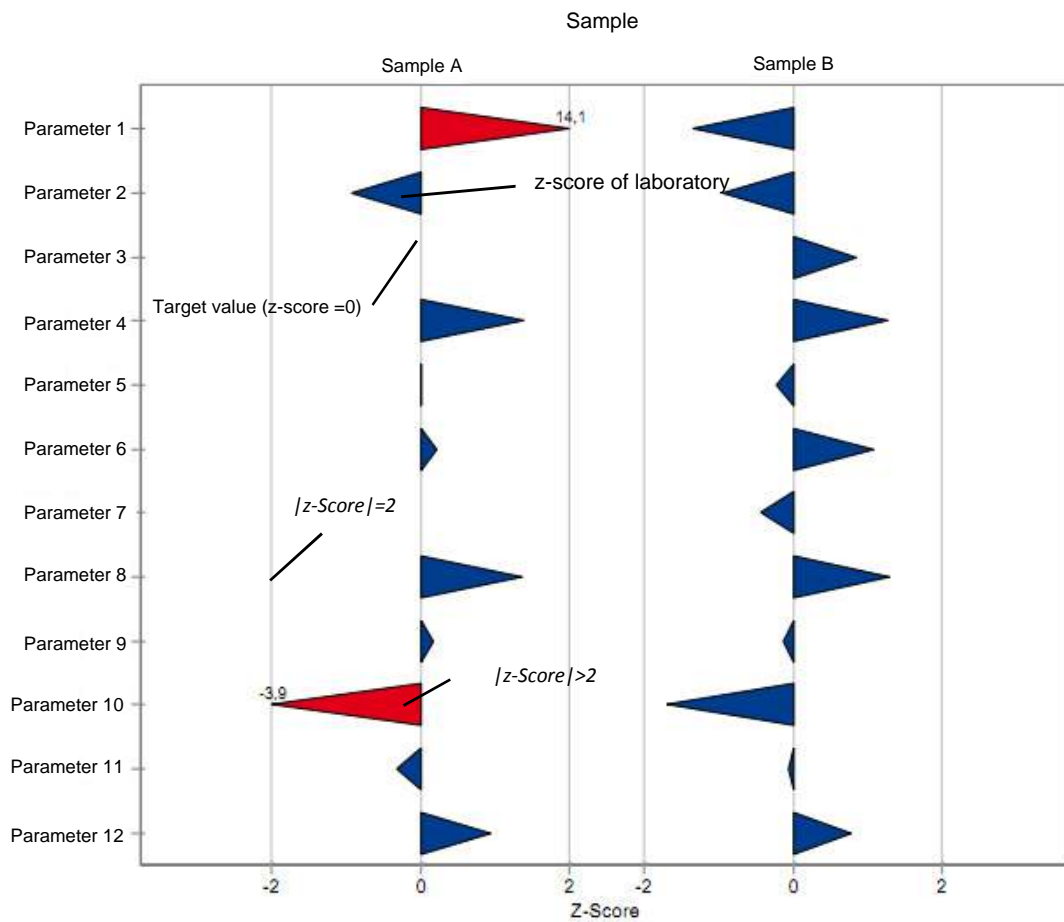
Example chart: Recovery



Example chart: z-score



Example chart: z-score - laboratory oriented report



Summary of results, after removal of outliers: Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

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 % |
|------------------|--------|------|-----------------------------------|--------------------|--------|------------|---------|---------|---------|-------|
| Acesulfame | AZ3 A | µg/l | 8 | 0 | 0.234 | ± 0.0473 | 0.156 | 0.305 | 0.0446 | 19 |
| | AZ3 B | µg/l | 8 | 0 | 1.28 | ± 0.318 | 0.799 | 1.68 | 0.299 | 23 |
| Benzotriazole | AZ3 A | µg/l | 9 | 0 | 0.309 | ± 0.0341 | 0.274 | 0.38 | 0.0341 | 11 |
| | AZ3 B | µg/l | 7 | 1 | 7.47 | ± 0.428 | 6.87 | 7.87 | 0.377 | 5.1 |
| Carbamazepine | AZ3 A | µg/l | 11 | 0 | 0.0245 | ± 0.00413 | 0.015 | 0.031 | 0.00456 | 19 |
| | AZ3 B | µg/l | 10 | 1 | 0.612 | ± 0.0739 | 0.458 | 0.688 | 0.0779 | 13 |
| Diazepam | AZ3 A | µg/l | 2 | 0 | - | ± - | 0.165 | 0.211 | - | - |
| | AZ3 B | µg/l | 0 | 0 | - | ± - | - | - | - | - |
| Diclofenac | AZ3 A | µg/l | 9 | 1 | 0.151 | ± 0.0155 | 0.123 | 0.179 | 0.0155 | 10 |
| | AZ3 B | µg/l | 9 | 0 | 3.24 | ± 0.304 | 2.9 | 3.85 | 0.304 | 9.4 |
| Ibuprofen | AZ3 A | µg/l | 2 | 0 | - | ± - | 0.107 | 0.245 | - | - |
| | AZ3 B | µg/l | 1 | 0 | - | ± - | 1.51 | 1.51 | - | - |
| Metoprolol | AZ3 A | µg/l | 3 | 0 | - | ± - | 0.0099 | 0.019 | - | - |
| | AZ3 B | µg/l | 6 | 0 | 1.34 | ± 0.286 | 1.05 | 1.69 | 0.233 | 17 |
| Sotalol | AZ3 A | µg/l | 0 | 0 | - | ± - | - | - | - | - |
| | AZ3 B | µg/l | 3 | 0 | - | ± - | 0.862 | 1.07 | - | - |
| Sucralose | AZ3 A | µg/l | 4 | 0 | - | ± - | 0.153 | 0.29 | - | - |
| | AZ3 B | µg/l | 5 | 0 | - | ± - | 2.48 | 11.4 | - | - |
| Sulfamethoxazole | AZ3 A | µg/l | 11 | 1 | 0.0468 | ± 0.00311 | 0.041 | 0.052 | 0.00343 | 7.3 |
| | AZ3 B | µg/l | 11 | 1 | 0.0669 | ± 0.0118 | 0.043 | 0.09 | 0.013 | 19 |

7 Parameter oriented report

| | |
|----------------------|----|
| Acesulfame | 13 |
| Benzotriazole | 21 |
| Carbamazepine | 29 |
| Diazepam | 37 |
| Diclofenac | 41 |
| Ibuprofen | 49 |
| Metoprolol | 53 |
| Sotalol | 59 |
| Sucralose | 63 |
| Sulfamethoxazol..... | 67 |

Parameter oriented report

AZ3 A

Acesulfame

| | |
|------------------------|----------------|
| Unit | µg/l |
| Mean ± CI (99%) | 0.234 ± 0.0473 |
| Minimum - Maximum | 0.156 - 0.305 |
| Control test value ± U | 0.265 ± 0.0189 |

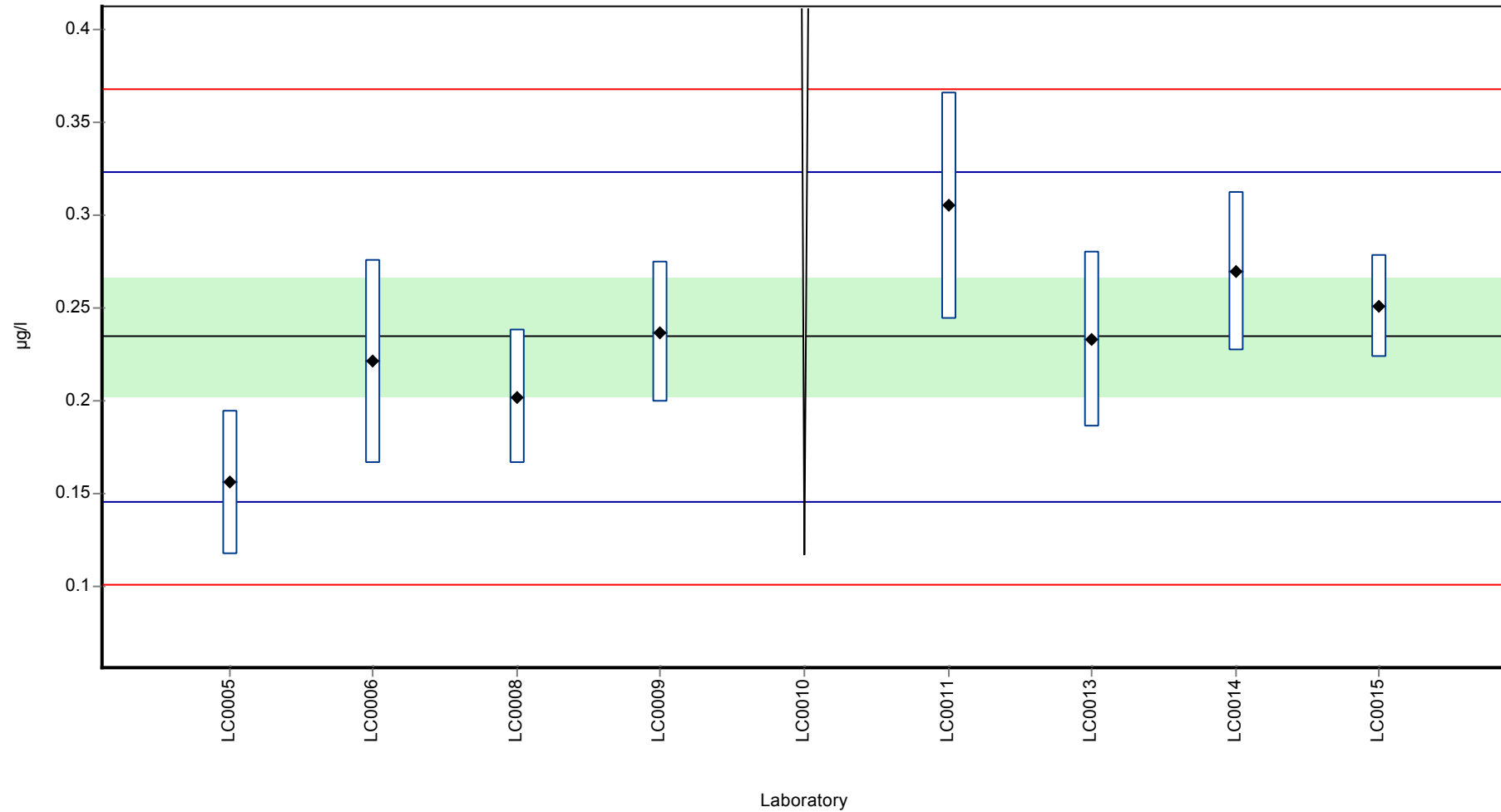
| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|-------------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | - | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | 0.156 | 0.039 | 66.6 | -1.76 | |
| LC0006 | 0.221 | 0.055 | 94.3 | -0.3 | |
| LC0007 | - | - | - | - | |
| LC0008 | 0.202 | 0.036 | 86.2 | -0.73 | |
| LC0009 | 0.237 | 0.038 | 101 | 0.06 | |
| LC0010 | < 0.5 (LOQ) | - | - | - | |
| LC0011 | 0.305 | 0.061 | 130 | 1.58 | |
| LC0012 | - | - | - | - | |
| LC0013 | 0.233 | 0.047 | 99.4 | -0.03 | |
| LC0014 | 0.27 | 0.043 | 115 | 0.8 | |
| LC0015 | 0.251 | 0.028 | 107 | 0.37 | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|----------------|------------------|------|
| Mean ± CI (99%) | 0.234 ± 0.0473 | 0.234 ± 0.0473 | µg/l |
| Minimum | 0.156 | 0.156 | µg/l |
| Maximum | 0.305 | 0.305 | µg/l |
| Standard deviation | 0.0446 | 0.0446 | µg/l |
| rel. Standard deviation | 19 | 19 | % |
| n | 8 | 8 | - |

Graphical presentation of results

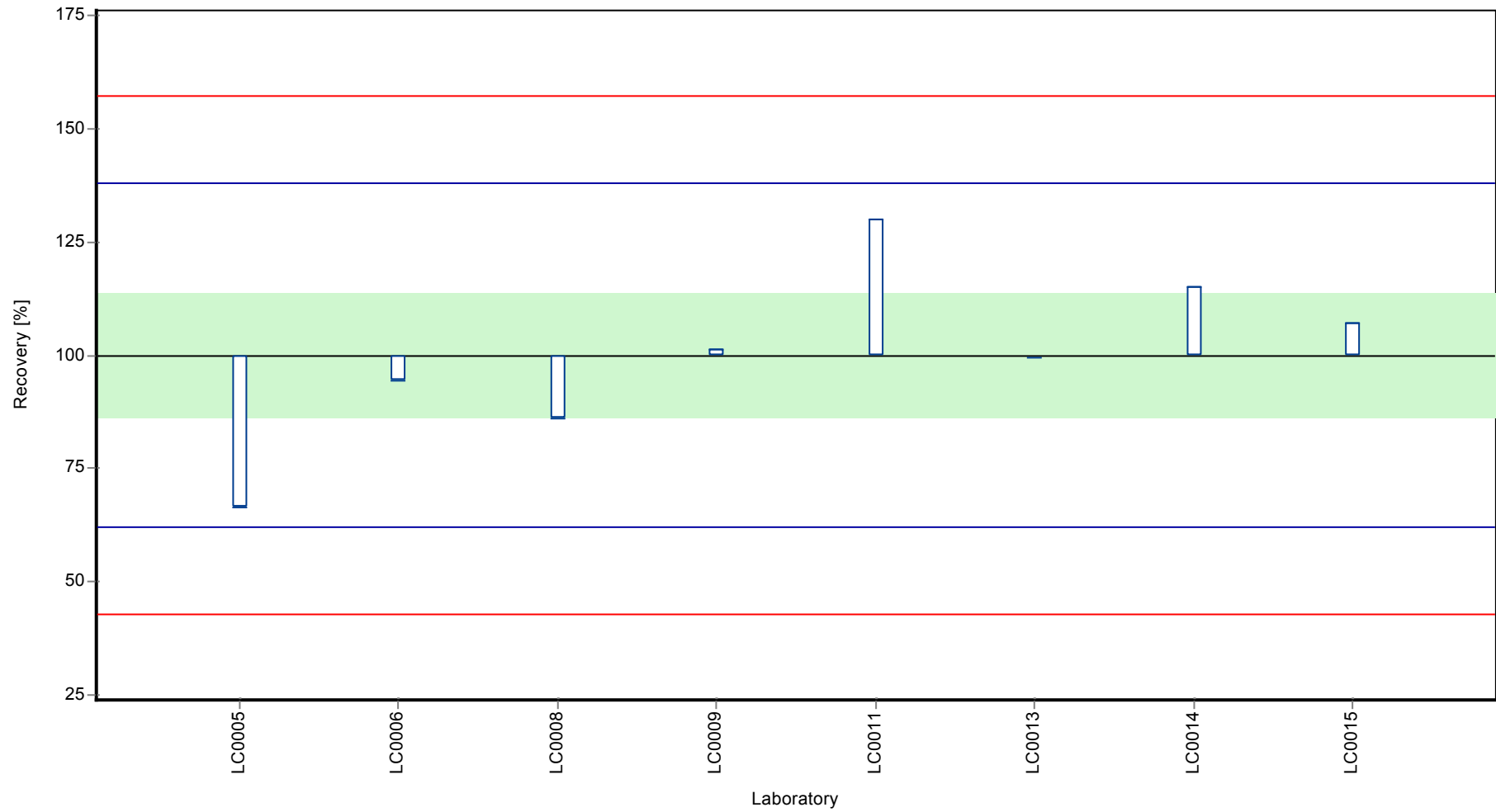
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3A, Parameter: Acesulfame

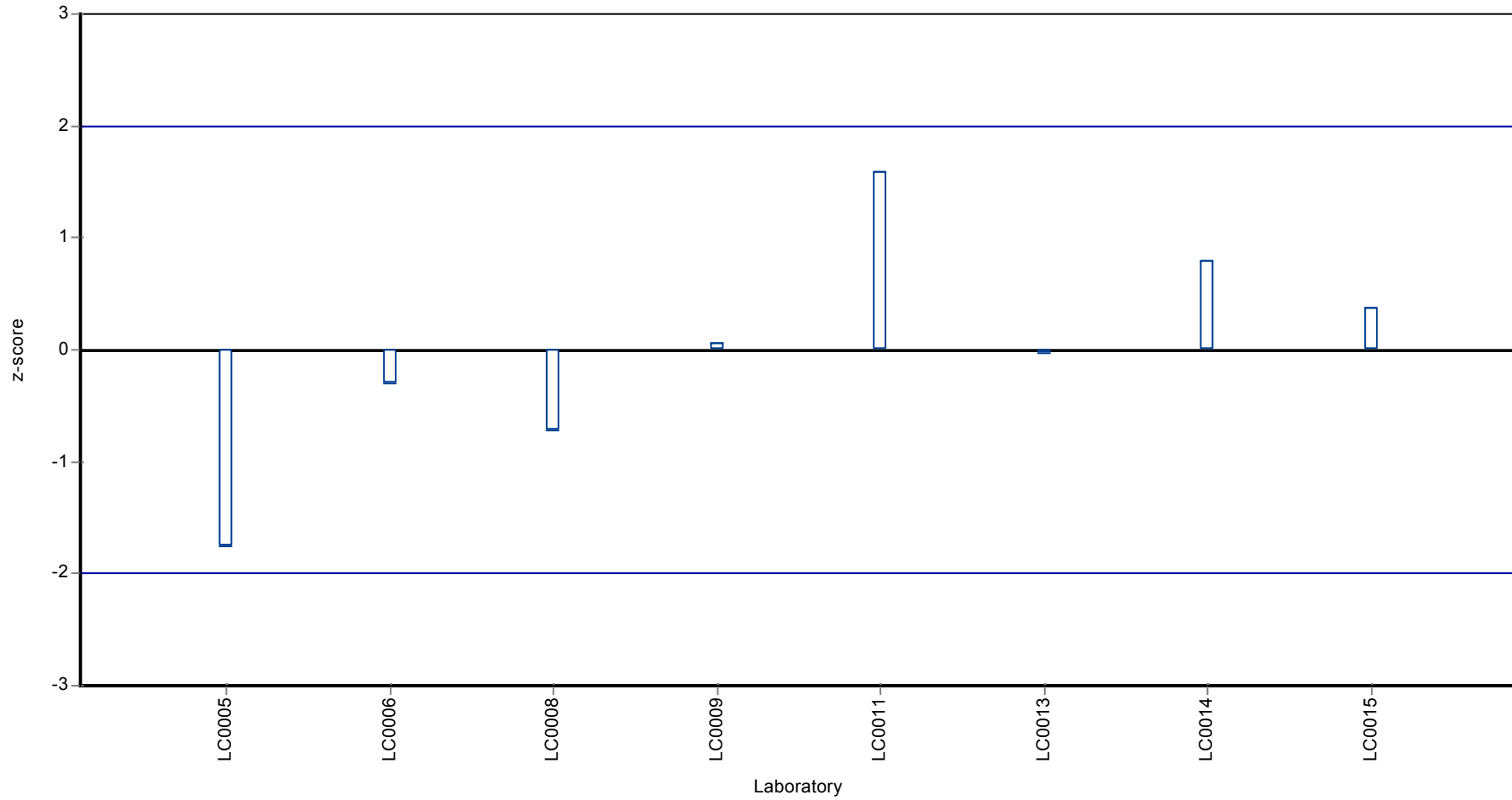
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3A, Parameter: Acesulfame

Z-score



Parameter oriented report

AZ3 B

Acesulfame

| | |
|------------------------|---------------|
| Unit | µg/l |
| Mean ± CI (99%) | 1.28 ± 0.318 |
| Minimum - Maximum | 0.799 - 1.68 |
| Control test value ± U | 1.47 ± 0.0315 |

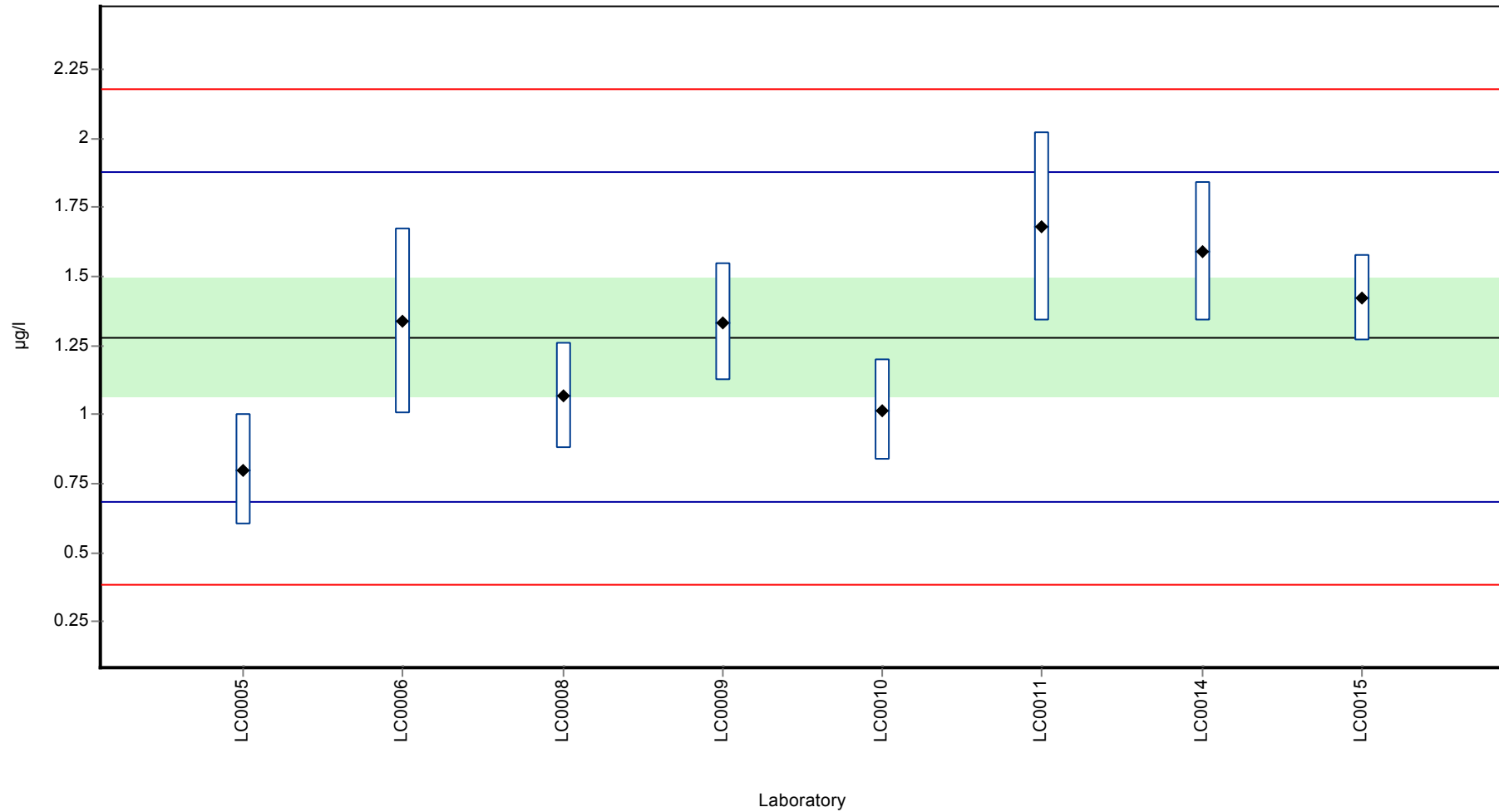
| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | - | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | 0.799 | 0.2 | 62.4 | -1.61 | |
| LC0006 | 1.338 | 0.335 | 104 | 0.19 | |
| LC0007 | - | - | - | - | |
| LC0008 | 1.069 | 0.192 | 83.5 | -0.71 | |
| LC0009 | 1.334 | 0.213 | 104 | 0.18 | |
| LC0010 | 1.016 | 0.183 | 79.3 | -0.88 | |
| LC0011 | 1.68 | 0.34 | 131 | 1.33 | |
| LC0012 | - | - | - | - | |
| LC0013 | - | - | - | - | |
| LC0014 | 1.59 | 0.254 | 124 | 1.03 | |
| LC0015 | 1.419 | 0.156 | 111 | 0.46 | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|--------------|------------------|------|
| Mean ± CI (99%) | 1.28 ± 0.318 | 1.28 ± 0.318 | µg/l |
| Minimum | 0.799 | 0.799 | µg/l |
| Maximum | 1.68 | 1.68 | µg/l |
| Standard deviation | 0.299 | 0.299 | µg/l |
| rel. Standard deviation | 23.4 | 23.4 | % |
| n | 8 | 8 | - |

Graphical presentation of results

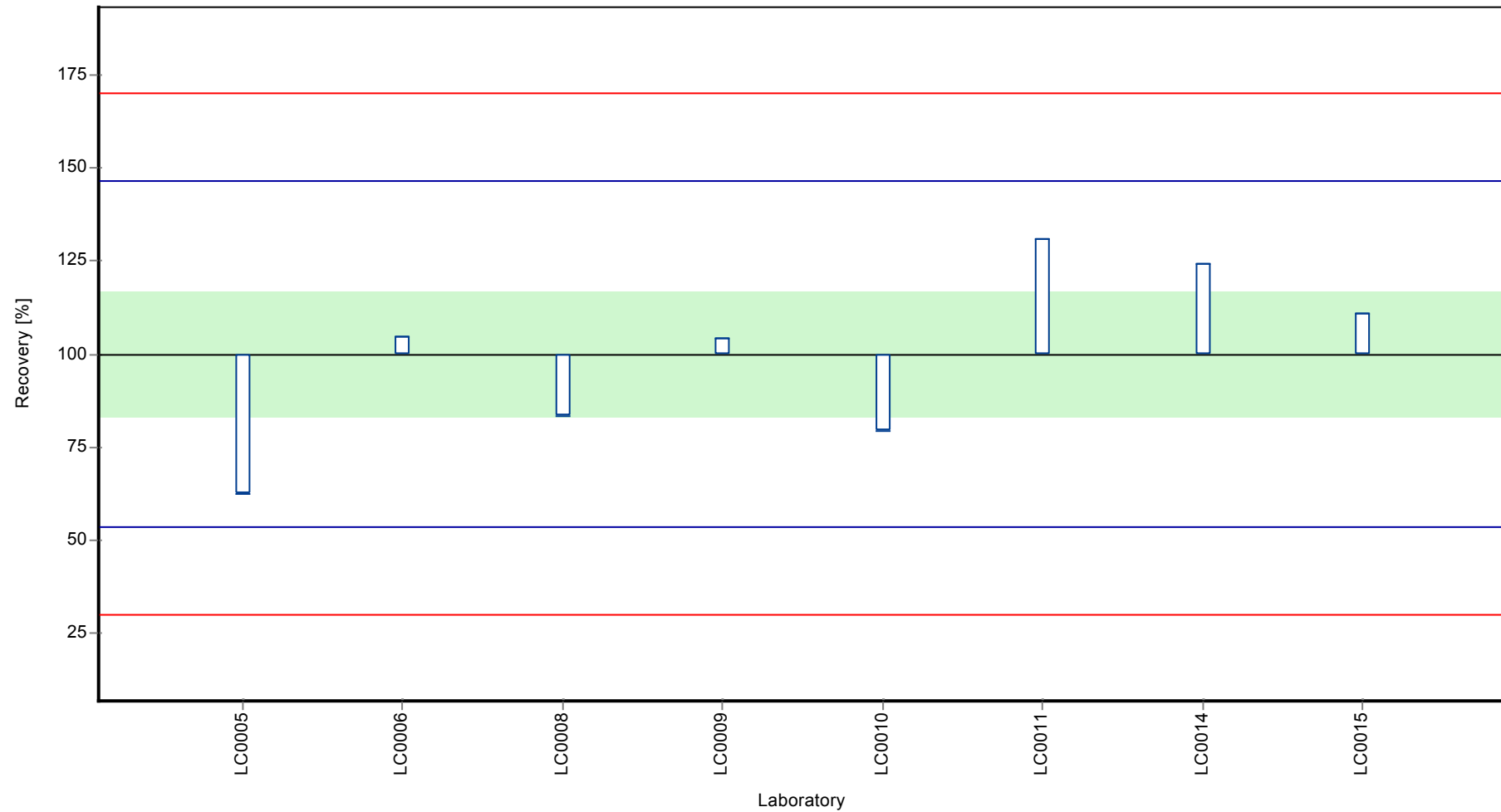
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3B, Parameter: Acesulfame

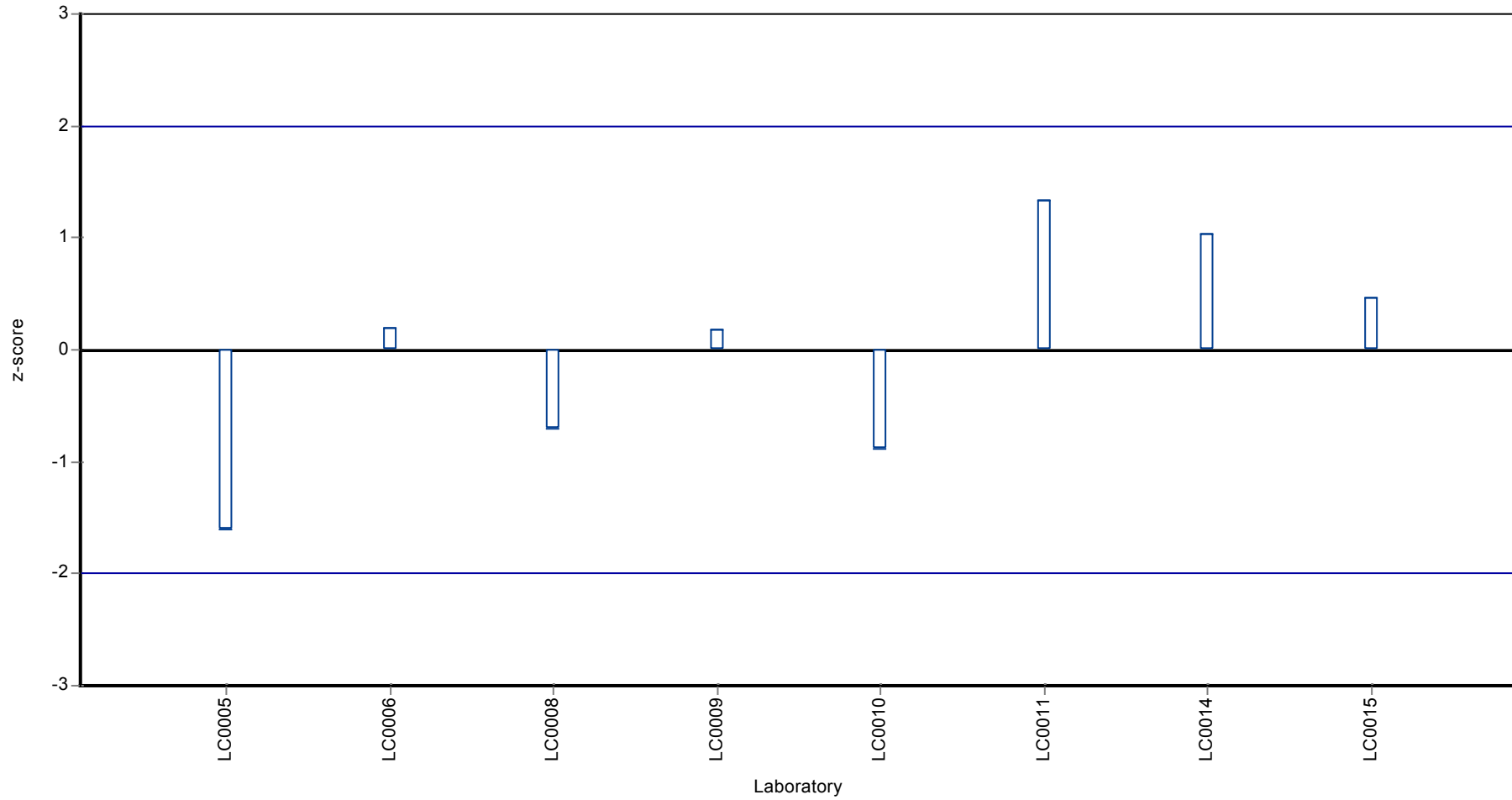
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3B, Parameter: Acesulfame

Z-score



Parameter oriented report

AZ3 A

Benzotriazole

| | |
|------------------------|----------------|
| Unit | µg/l |
| Mean ± CI (99%) | 0.309 ± 0.0341 |
| Minimum - Maximum | 0.274 - 0.38 |
| Control test value ± U | 0.304 ± 0.0222 |

| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | - | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | 0.28 | 0.07 | 90.5 | -0.86 | |
| LC0006 | 0.326 | 0.081 | 105 | 0.49 | |
| LC0007 | - | - | - | - | |
| LC0008 | 0.296 | 0.053 | 95.7 | -0.39 | |
| LC0009 | 0.331 | 0.066 | 107 | 0.64 | |
| LC0010 | 0.275 | 0.023 | 88.9 | -1 | |
| LC0011 | 0.303 | 0.061 | 98 | -0.18 | |
| LC0012 | - | - | - | - | |
| LC0013 | 0.274 | 0.082 | 88.6 | -1.03 | |
| LC0014 | 0.38 | 0.038 | 123 | 2.07 | |
| LC0015 | 0.318 | - | 103 | 0.26 | |

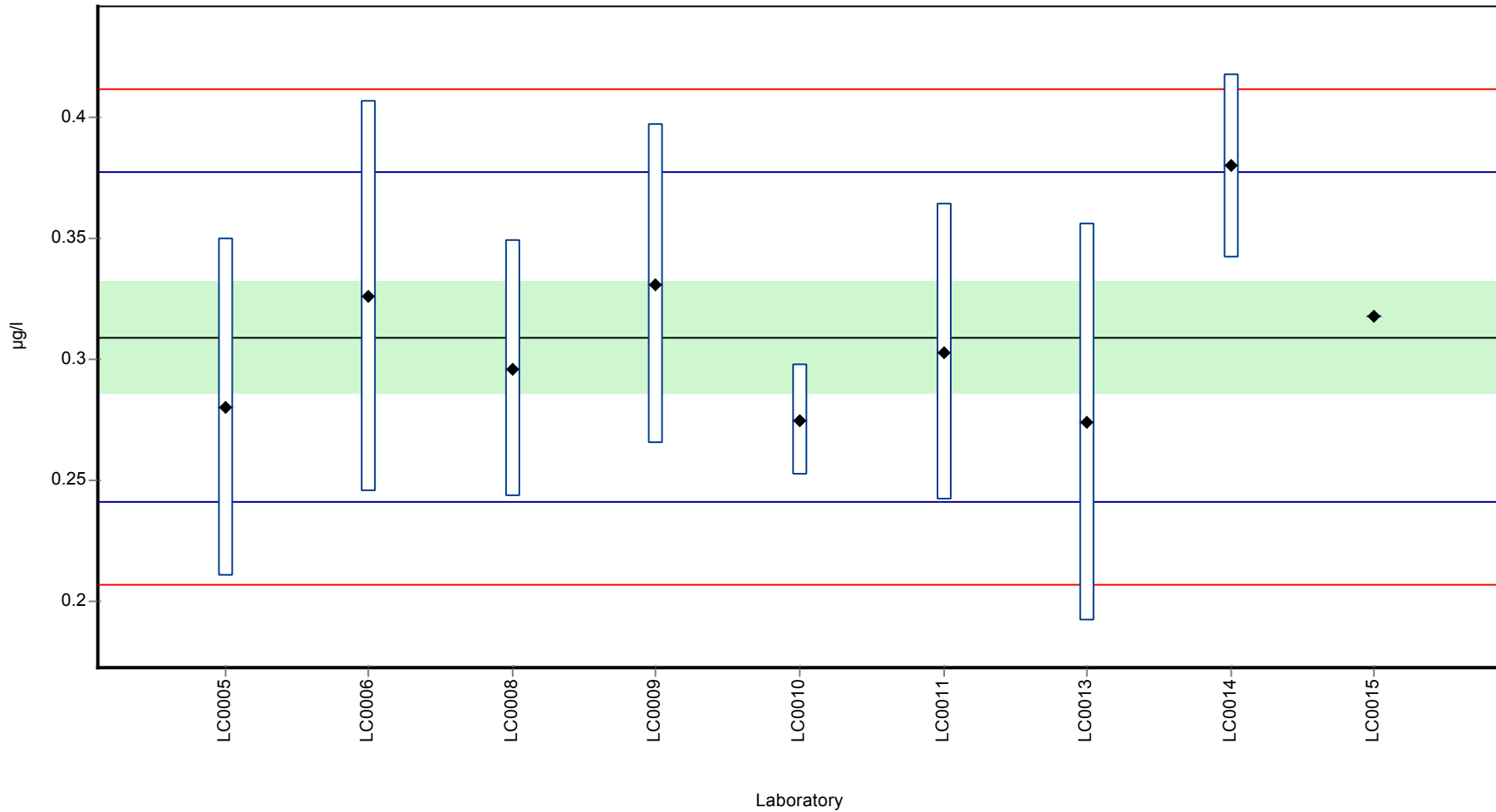
Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|----------------|------------------|------|
| Mean ± CI (99%) | 0.309 ± 0.0341 | 0.309 ± 0.0341 | µg/l |
| Minimum | 0.274 | 0.274 | µg/l |
| Maximum | 0.38 | 0.38 | µg/l |
| Standard deviation | 0.0341 | 0.0341 | µg/l |
| rel. Standard deviation | 11 | 11 | % |
| n | 9 | 9 | - |

Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3A, Parameter: Benzotriazole

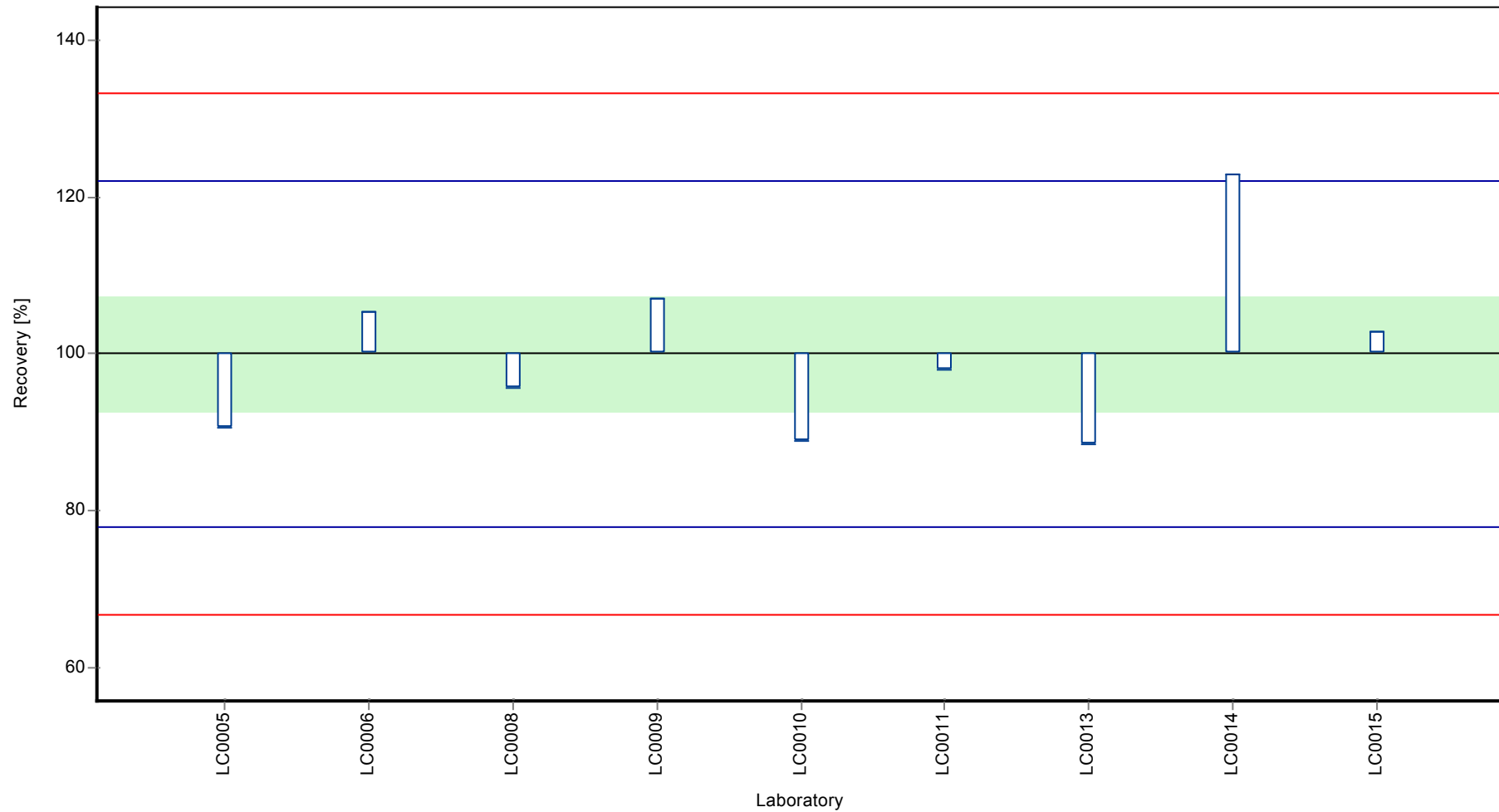
Graphical presentation of results
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3A, Parameter: Benzotriazole

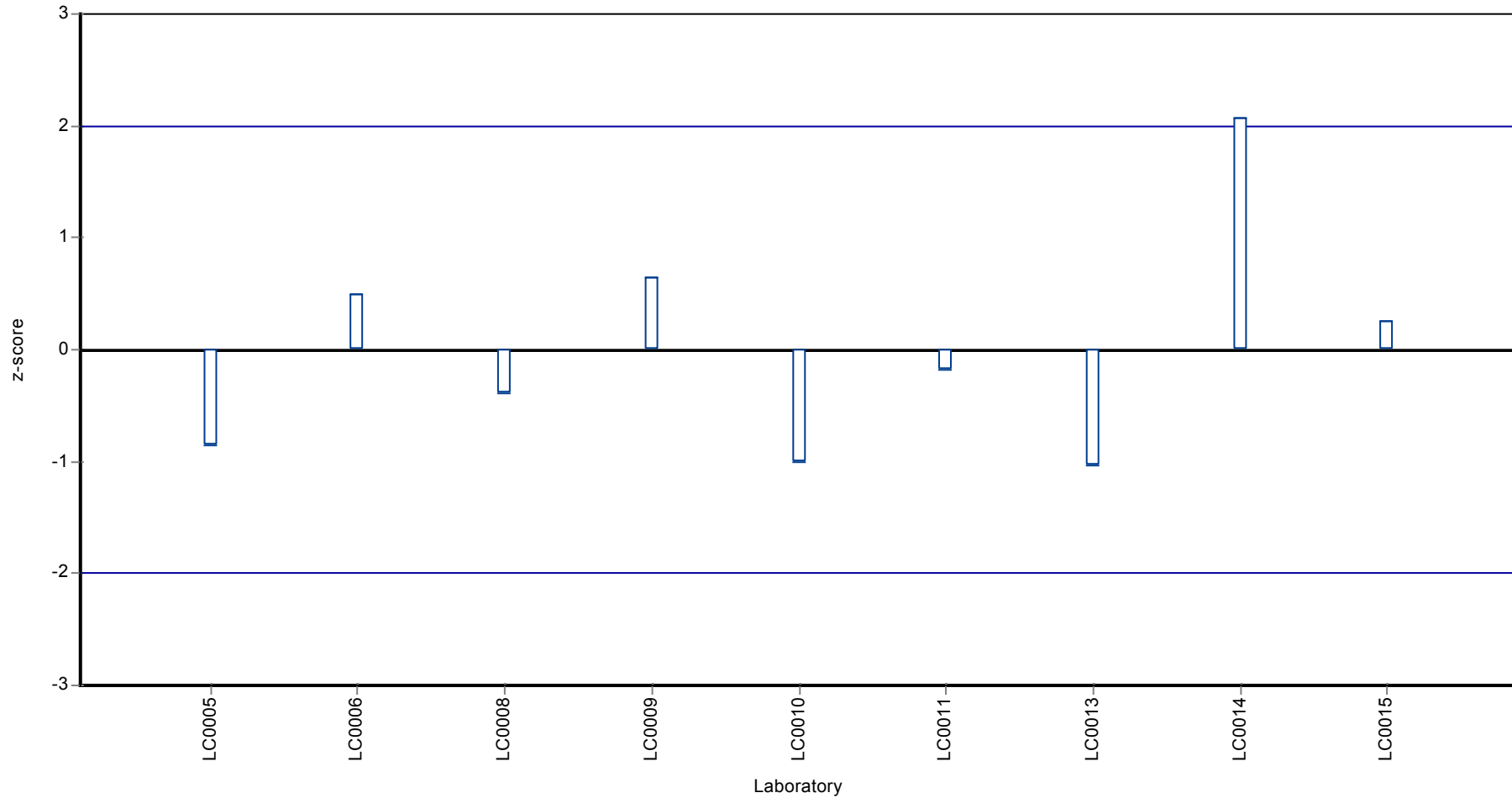
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3A, Parameter: Benzotriazole

Z-score



Parameter oriented report

AZ3 B

Benzotriazole

| | |
|------------------------|--------------|
| Unit | µg/l |
| Mean ± CI (99%) | 7.47 ± 0.428 |
| Minimum - Maximum | 6.87 - 7.87 |
| Control test value ± U | 7.02 ± 0.262 |

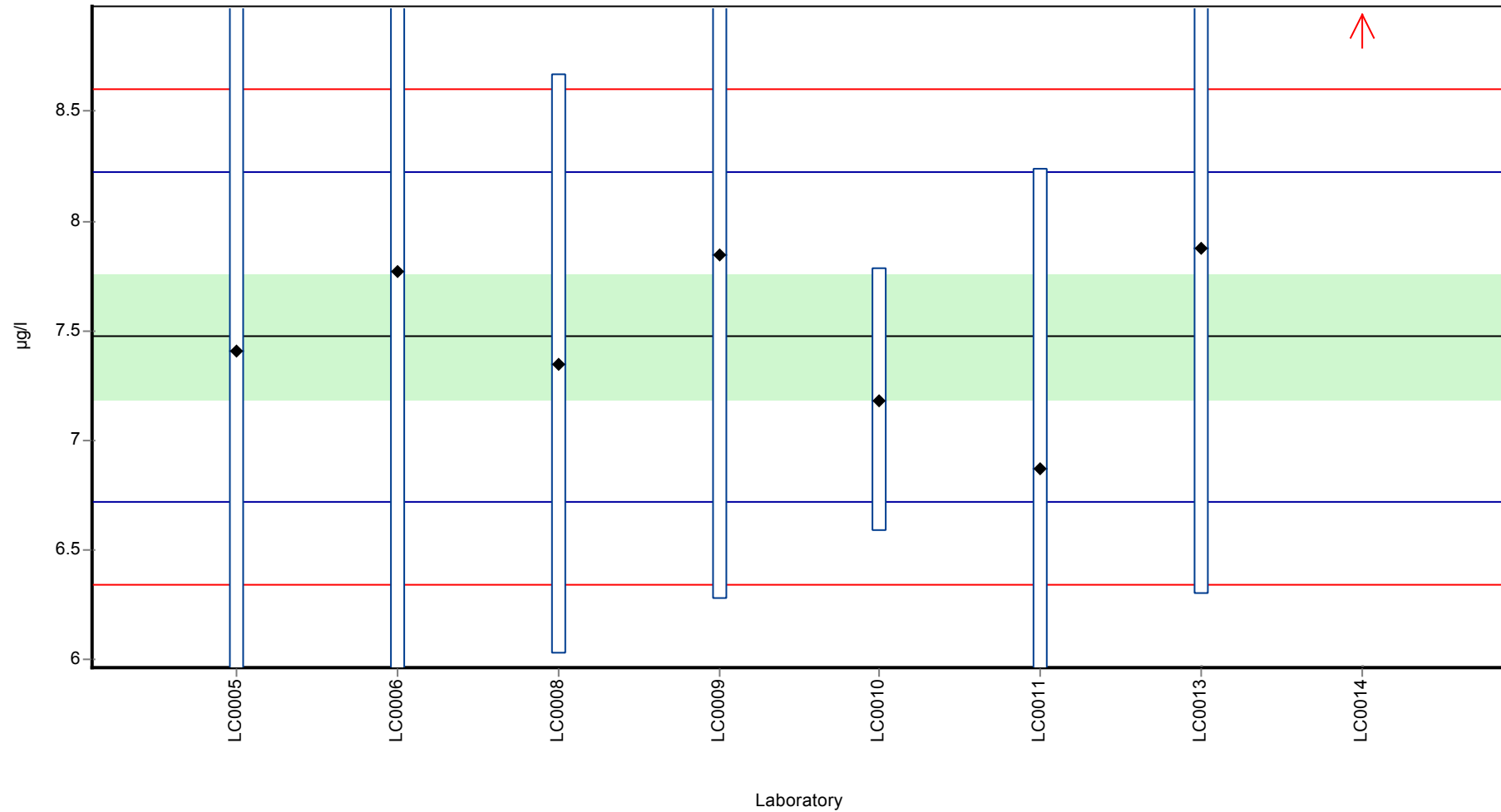
| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | - | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | 7.41 | 1.85 | 99.2 | -0.16 | |
| LC0006 | 7.771 | 1.943 | 104 | 0.8 | |
| LC0007 | - | - | - | - | |
| LC0008 | 7.347 | 1.322 | 98.3 | -0.33 | |
| LC0009 | 7.844 | 1.569 | 105 | 0.99 | |
| LC0010 | 7.181 | 0.603 | 96.1 | -0.77 | |
| LC0011 | 6.87 | 1.37 | 92 | -1.59 | |
| LC0012 | - | - | - | - | |
| LC0013 | 7.872 | 1.574 | 105 | 1.06 | |
| LC0014 | 9.4 | 0.94 | 126 | 5.11 | H |
| LC0015 | - | - | - | - | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|--------------|------------------|------|
| Mean ± CI (99%) | 7.71 ± 0.813 | 7.47 ± 0.428 | µg/l |
| Minimum | 6.87 | 6.87 | µg/l |
| Maximum | 9.4 | 7.87 | µg/l |
| Standard deviation | 0.766 | 0.377 | µg/l |
| rel. Standard deviation | 9.94 | 5.05 | % |
| n | 8 | 7 | - |

Graphical presentation of results

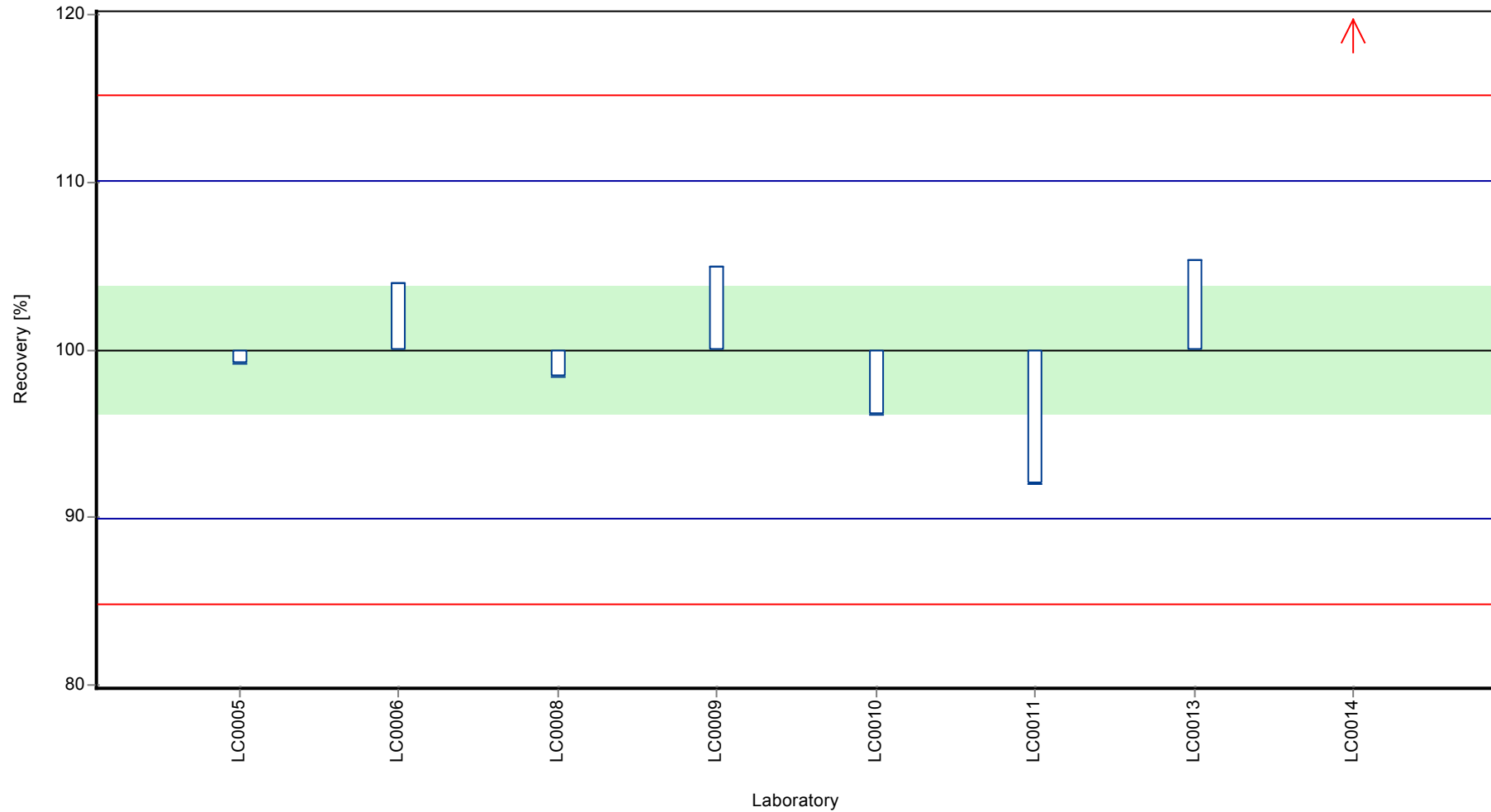
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3B, Parameter: Benzotriazole

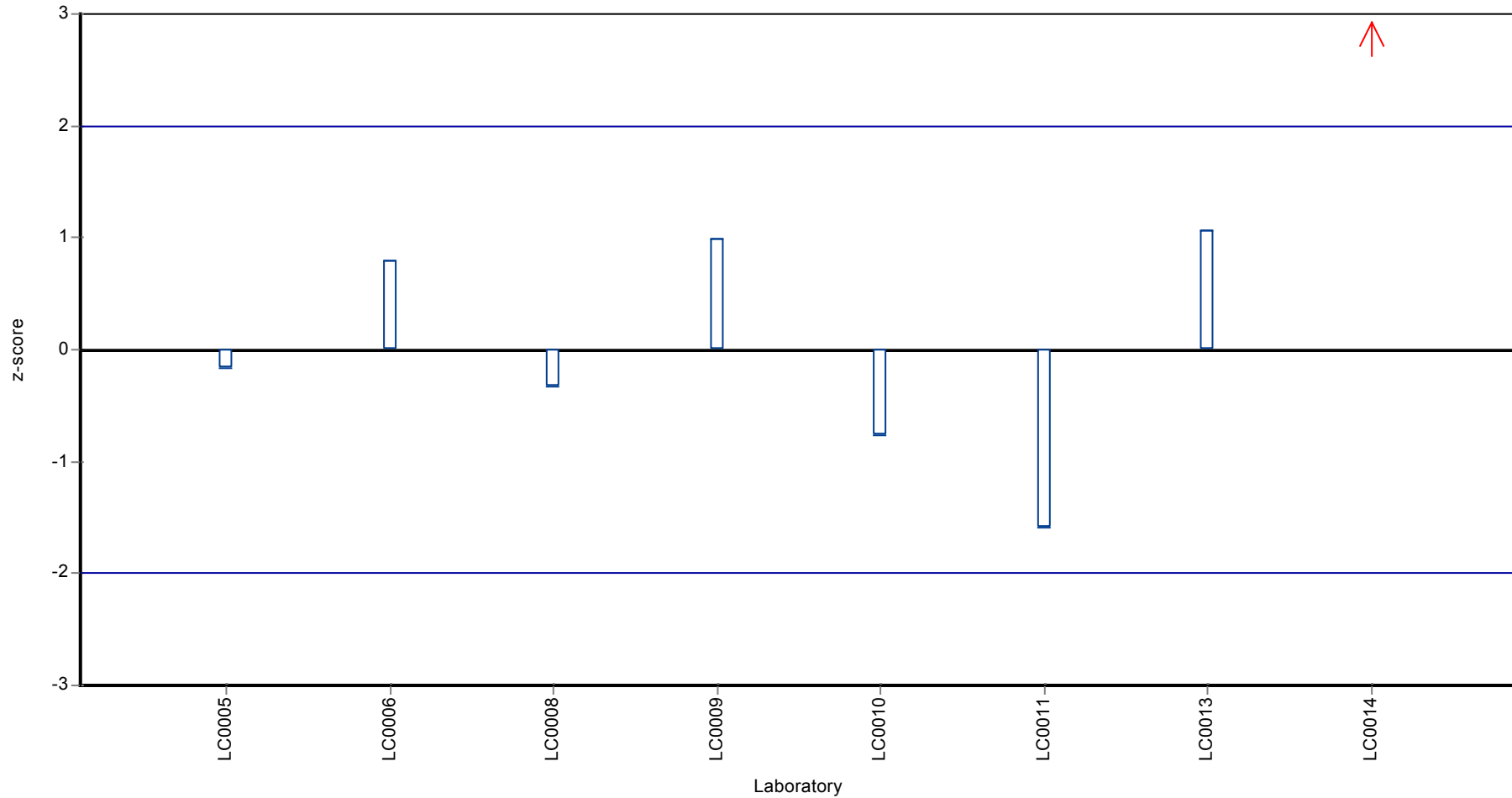
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3B, Parameter: Benzotriazole

Z-score



Parameter oriented report

AZ3 A

Carbamazepine

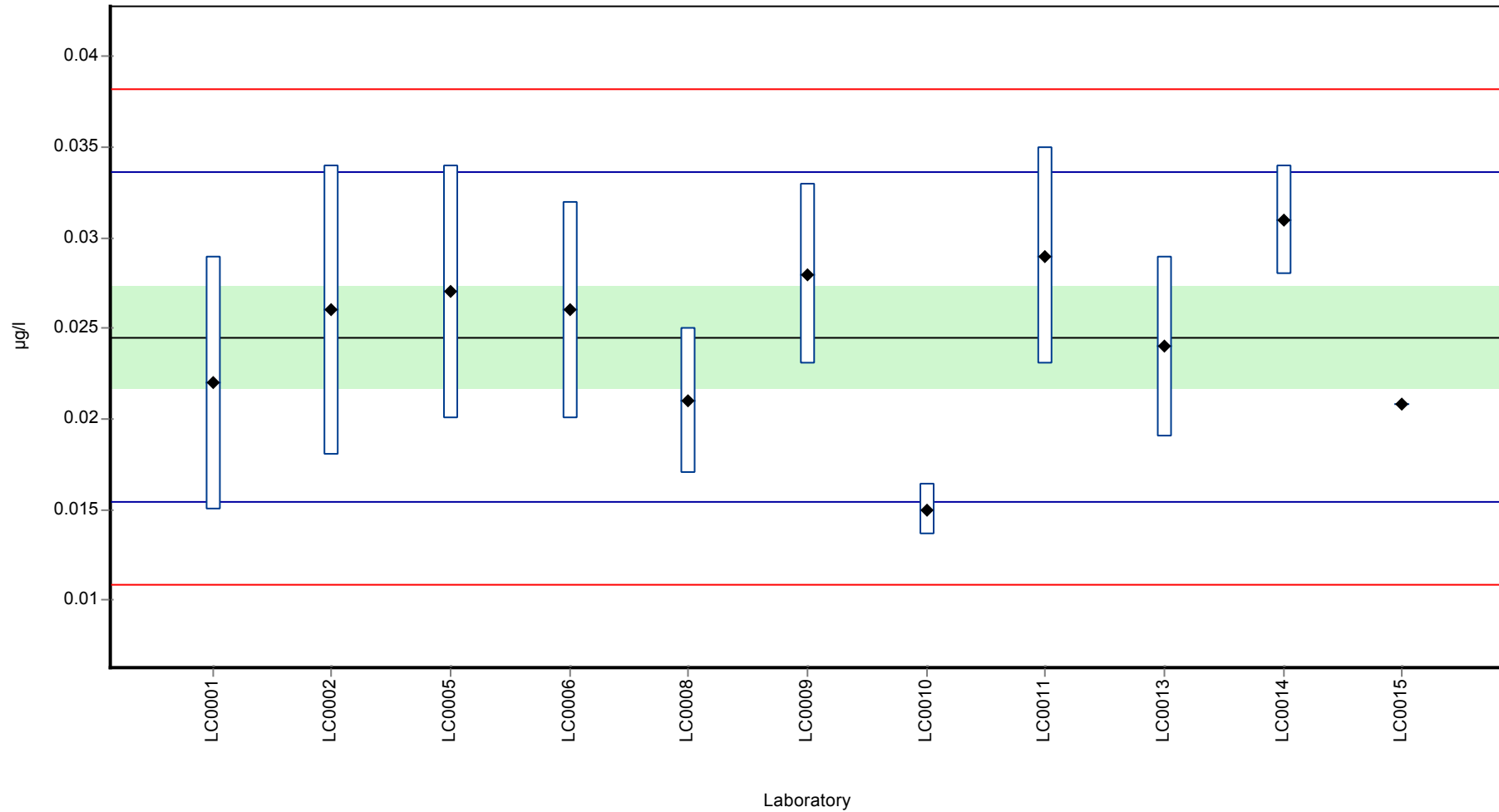
| | |
|------------------------|------------------|
| Unit | µg/l |
| Mean ± CI (99%) | 0.0245 ± 0.00413 |
| Minimum - Maximum | 0.015 - 0.031 |
| Control test value ± U | 0.0291 ± 0.0016 |

| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|--------|--------------|---------|----------|
| LC0001 | 0.022 | 0.007 | 89.7 | -0.55 | |
| LC0002 | 0.026 | 0.008 | 106 | 0.32 | |
| LC0003 | - | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | 0.027 | 0.007 | 110 | 0.54 | |
| LC0006 | 0.026 | 0.006 | 106 | 0.32 | |
| LC0007 | - | - | - | - | |
| LC0008 | 0.021 | 0.004 | 85.6 | -0.77 | |
| LC0009 | 0.028 | 0.005 | 114 | 0.76 | |
| LC0010 | 0.015 | 0.0014 | 61.2 | -2.09 | |
| LC0011 | 0.029 | 0.006 | 118 | 0.98 | |
| LC0012 | - | - | - | - | |
| LC0013 | 0.024 | 0.005 | 97.9 | -0.12 | |
| LC0014 | 0.031 | 0.003 | 126 | 1.42 | |
| LC0015 | 0.0208 | - | 84.8 | -0.82 | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|------------------|------------------|------|
| Mean ± CI (99%) | 0.0245 ± 0.00413 | 0.0245 ± 0.00413 | µg/l |
| Minimum | 0.015 | 0.015 | µg/l |
| Maximum | 0.031 | 0.031 | µg/l |
| Standard deviation | 0.00456 | 0.00456 | µg/l |
| rel. Standard deviation | 18.6 | 18.6 | % |
| n | 11 | 11 | - |

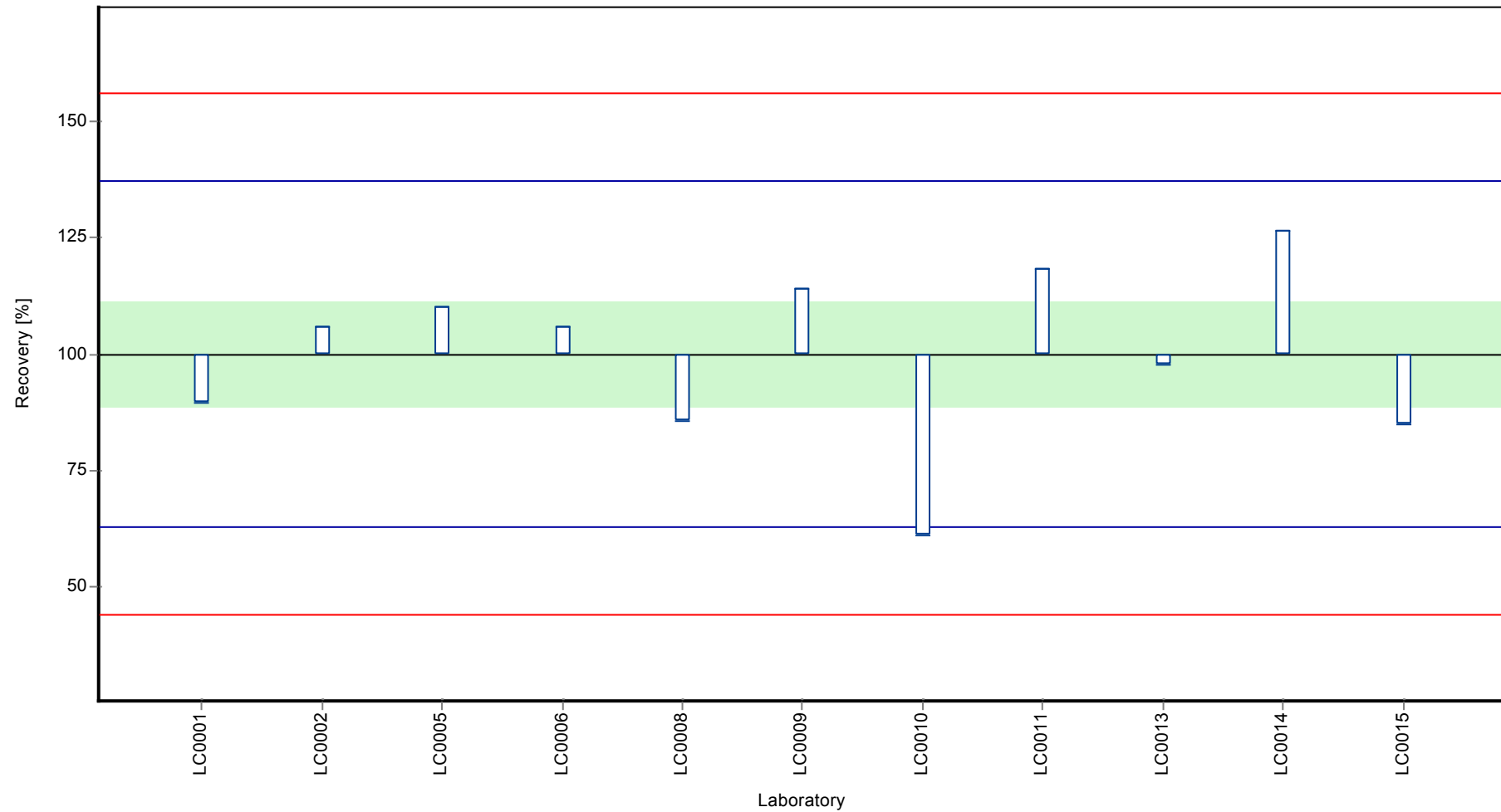
Graphical presentation of results
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3A, Parameter: Carbamazepine

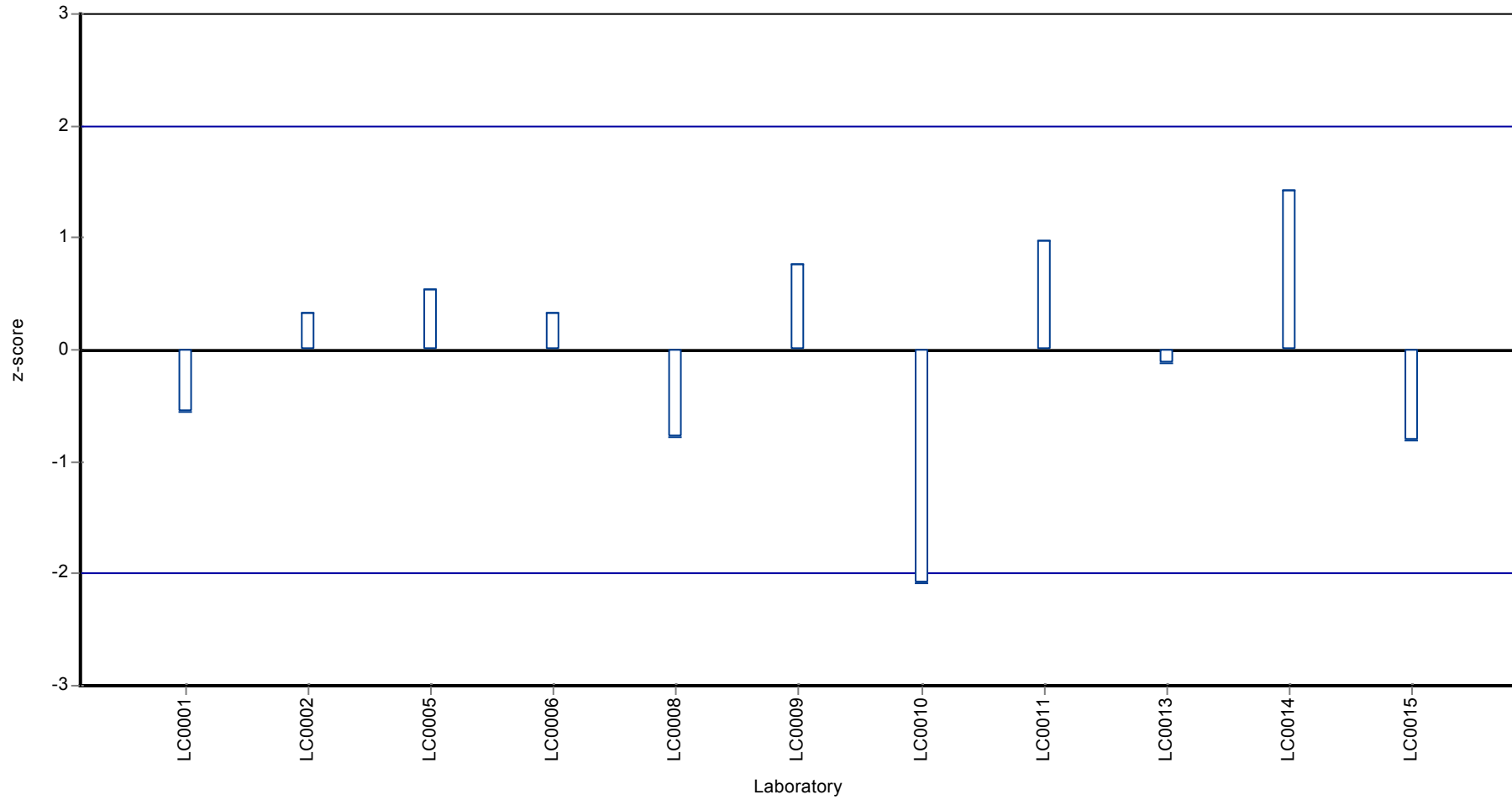
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3A, Parameter: Carbamazepine

Z-score



Parameter oriented report

AZ3 B

Carbamazepine

| | |
|------------------------|----------------|
| Unit | µg/l |
| Mean ± CI (99%) | 0.612 ± 0.0739 |
| Minimum - Maximum | 0.458 - 0.688 |
| Control test value ± U | 0.716 ± 0.0205 |

| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|--------|--------------|---------|----------|
| LC0001 | 0.6 | 0.18 | 98.1 | -0.15 | |
| LC0002 | 0.458 | 0.134 | 74.9 | -1.97 | |
| LC0003 | - | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | 0.635 | 0.159 | 104 | 0.3 | |
| LC0006 | 0.688 | 0.172 | 112 | 0.98 | |
| LC0007 | - | - | - | - | |
| LC0008 | 0.528 | 0.095 | 86.3 | -1.07 | |
| LC0009 | 0.682 | 0.109 | 111 | 0.9 | |
| LC0010 | 0.544 | 0.0522 | 88.9 | -0.87 | |
| LC0011 | 0.676 | 0.135 | 111 | 0.83 | |
| LC0012 | - | - | - | - | |
| LC0013 | 0.667 | 0.133 | 109 | 0.71 | |
| LC0014 | 0.069 | 0.007 | 11.3 | -6.97 | H |
| LC0015 | 0.639 | - | 104 | 0.35 | |

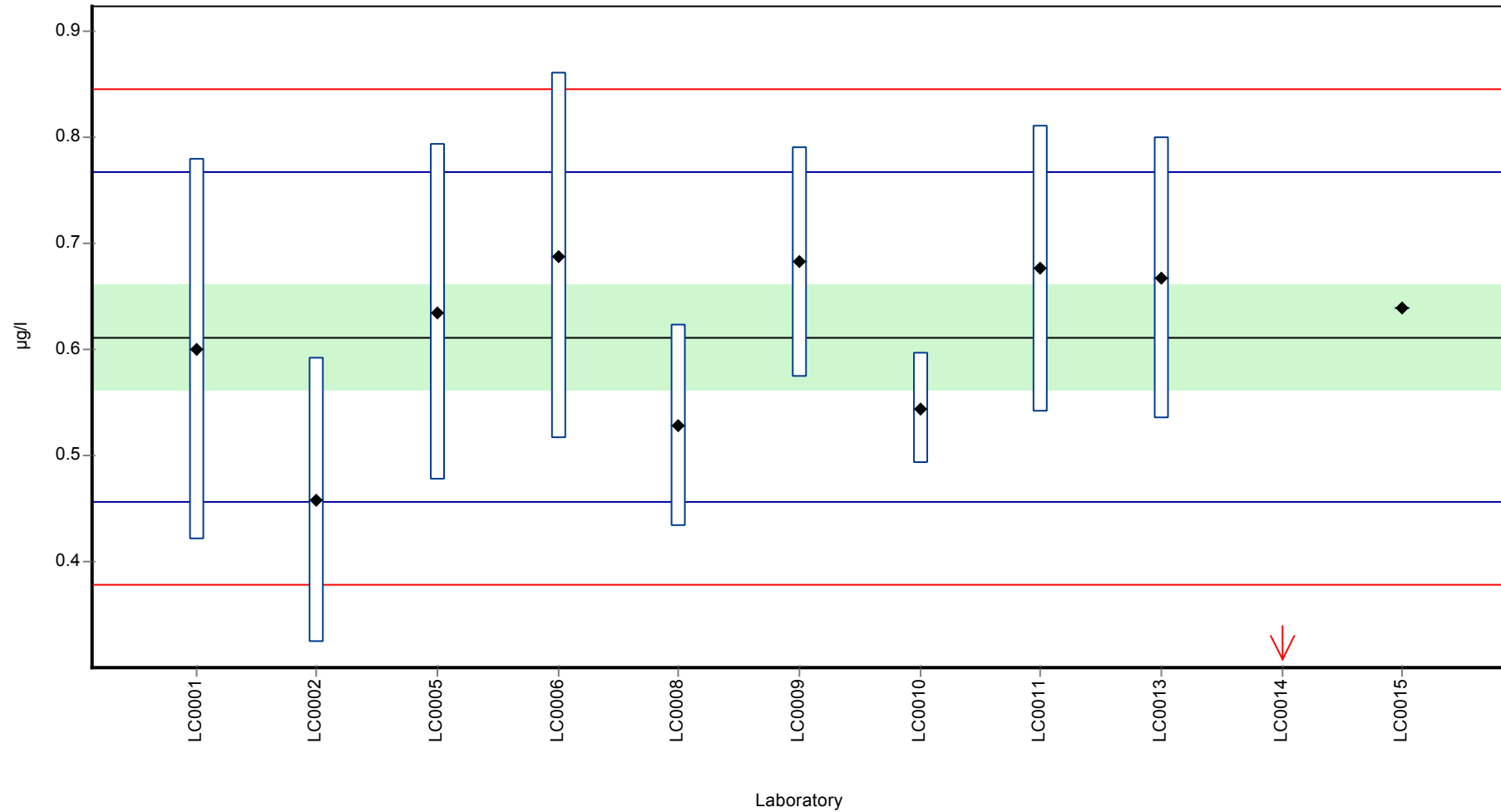
Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|---------------|------------------|------|
| Mean ± CI (99%) | 0.562 ± 0.162 | 0.612 ± 0.0739 | µg/l |
| Minimum | 0.069 | 0.458 | µg/l |
| Maximum | 0.688 | 0.688 | µg/l |
| Standard deviation | 0.18 | 0.0779 | µg/l |
| rel. Standard deviation | 31.9 | 12.7 | % |
| n | 11 | 10 | - |

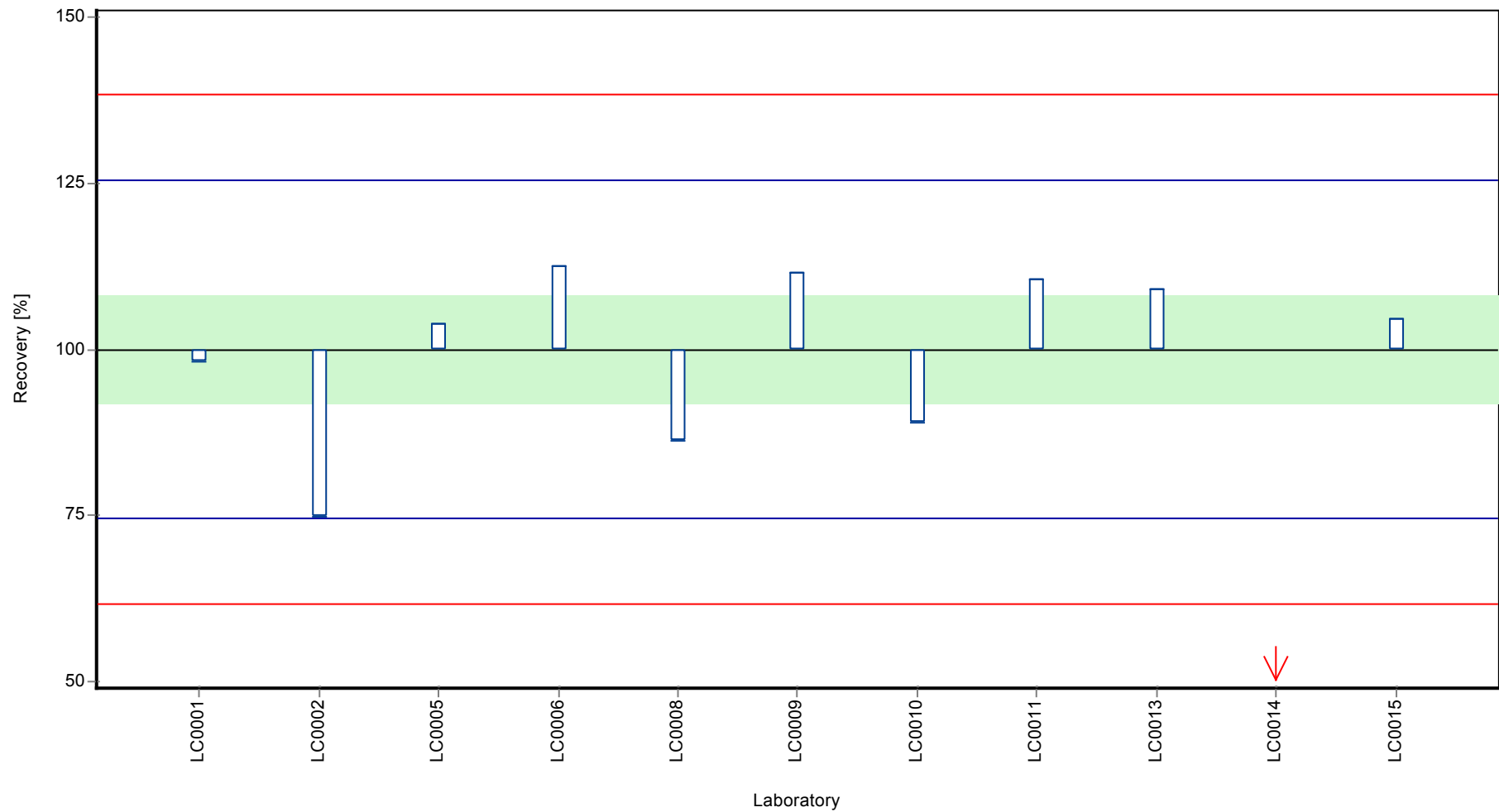
Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3B, Parameter: Carbamazepine

Graphical presentation of results
Results



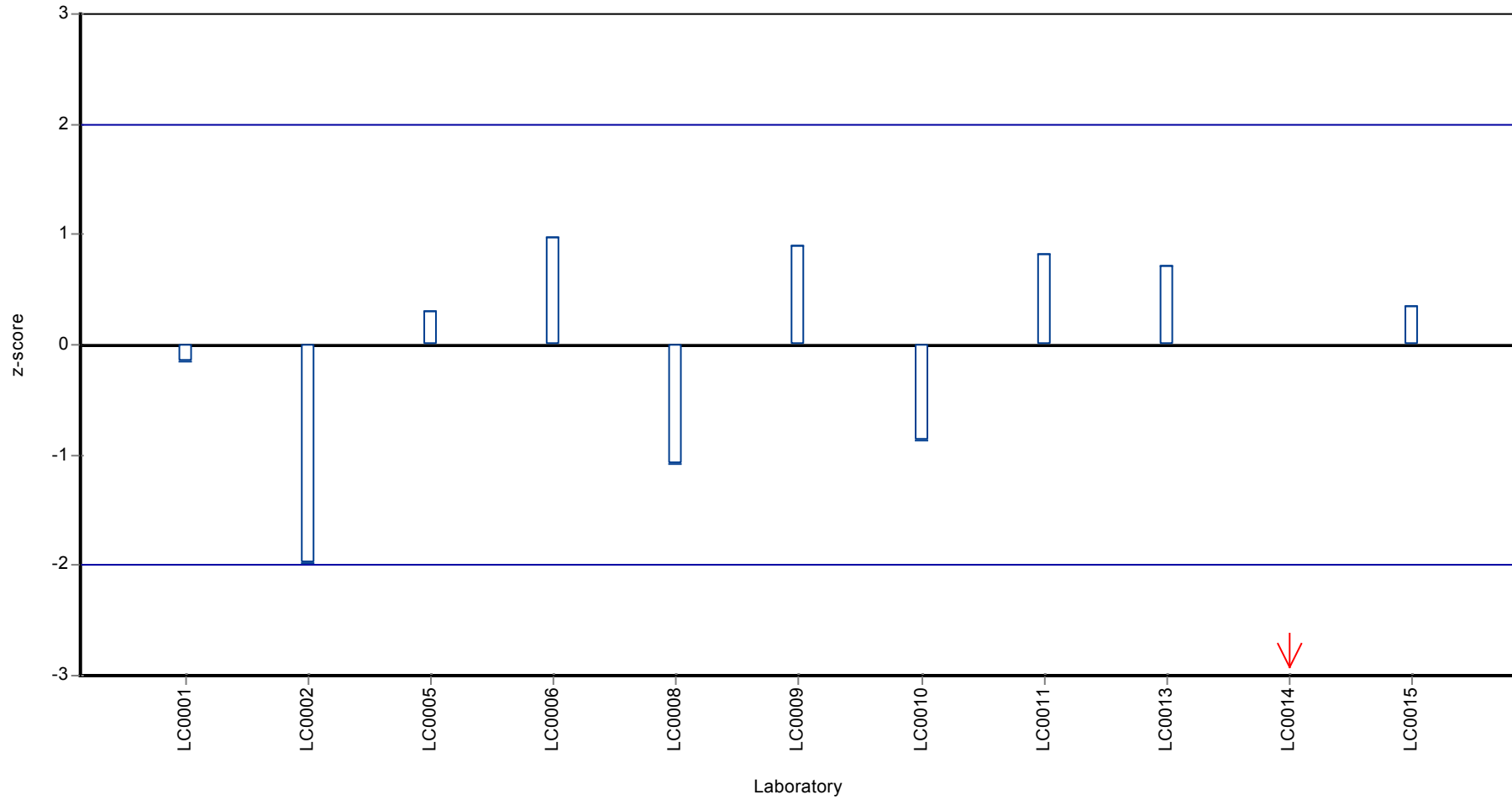
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3B, Parameter: Carbamazepine

Z-score



Parameter oriented report

AZ3 A

Diazepam

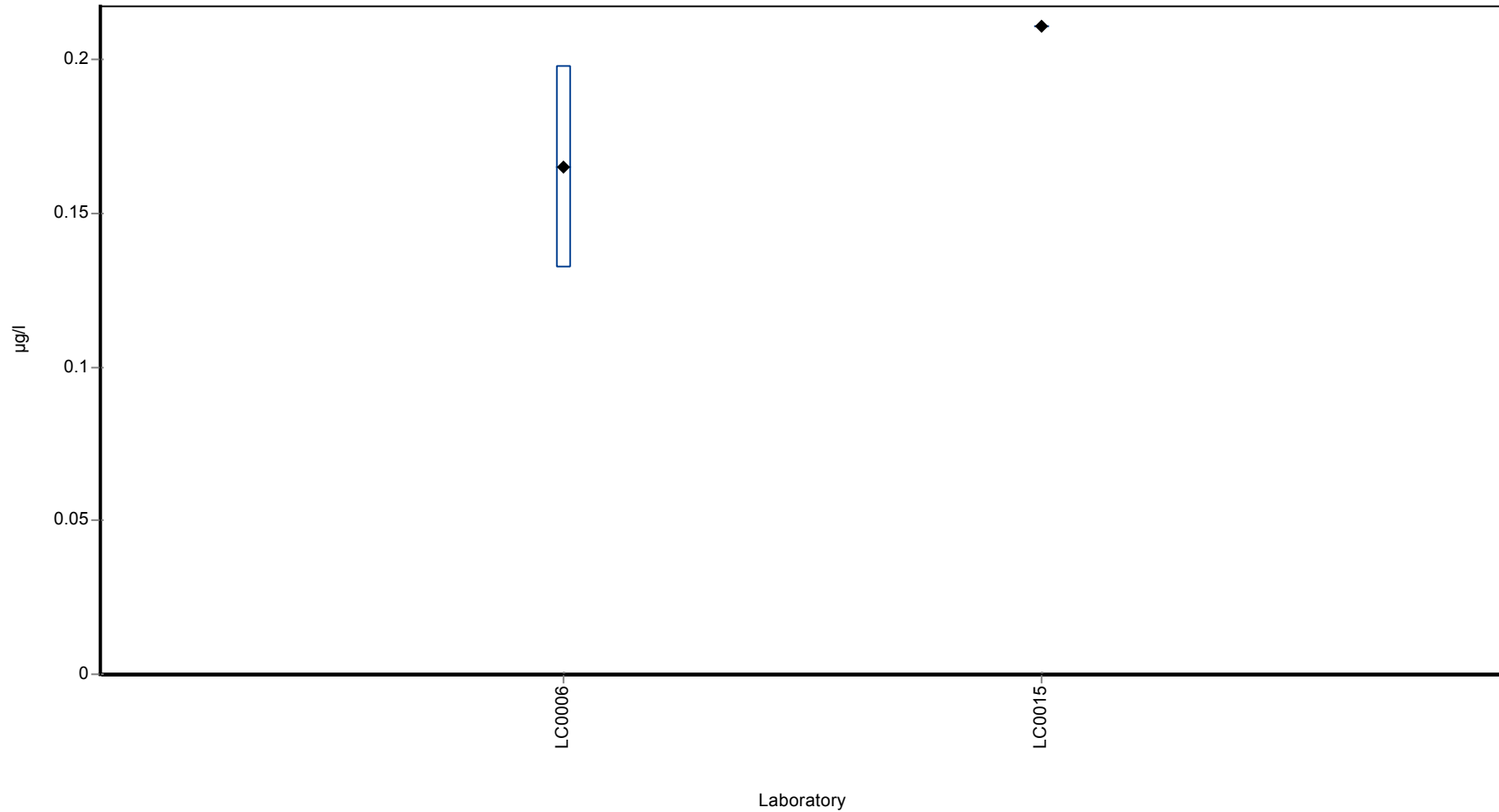
| | |
|------------------------|----------------|
| Unit | µg/l |
| Mean ± CI (99%) | - |
| Minimum - Maximum | 0.165 - 0.211 |
| Control test value ± U | 0.208 ± 0.0255 |

| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | - | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | - | - | - | - | |
| LC0006 | 0.165 | 0.033 | - | - | |
| LC0007 | - | - | - | - | |
| LC0008 | - | - | - | - | |
| LC0009 | - | - | - | - | |
| LC0010 | - | - | - | - | |
| LC0011 | - | - | - | - | |
| LC0012 | - | - | - | - | |
| LC0013 | - | - | - | - | |
| LC0014 | - | - | - | - | |
| LC0015 | 0.211 | - | - | - | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|---------------|------------------|------|
| Mean ± CI (99%) | 0.188 ± 0.069 | - | µg/l |
| Minimum | 0.165 | 0.165 | µg/l |
| Maximum | 0.211 | 0.211 | µg/l |
| Standard deviation | 0.0325 | - | µg/l |
| rel. Standard deviation | 17.3 | - | % |
| n | 2 | 2 | - |

Graphical presentation of results
Results



Parameter oriented report

AZ3 B

Diazepam

| | |
|------------------------|---------------|
| Unit | µg/l |
| Mean ± CI (99%) | - |
| Minimum - Maximum | - |
| Control test value ± U | < 0.025 (LOD) |

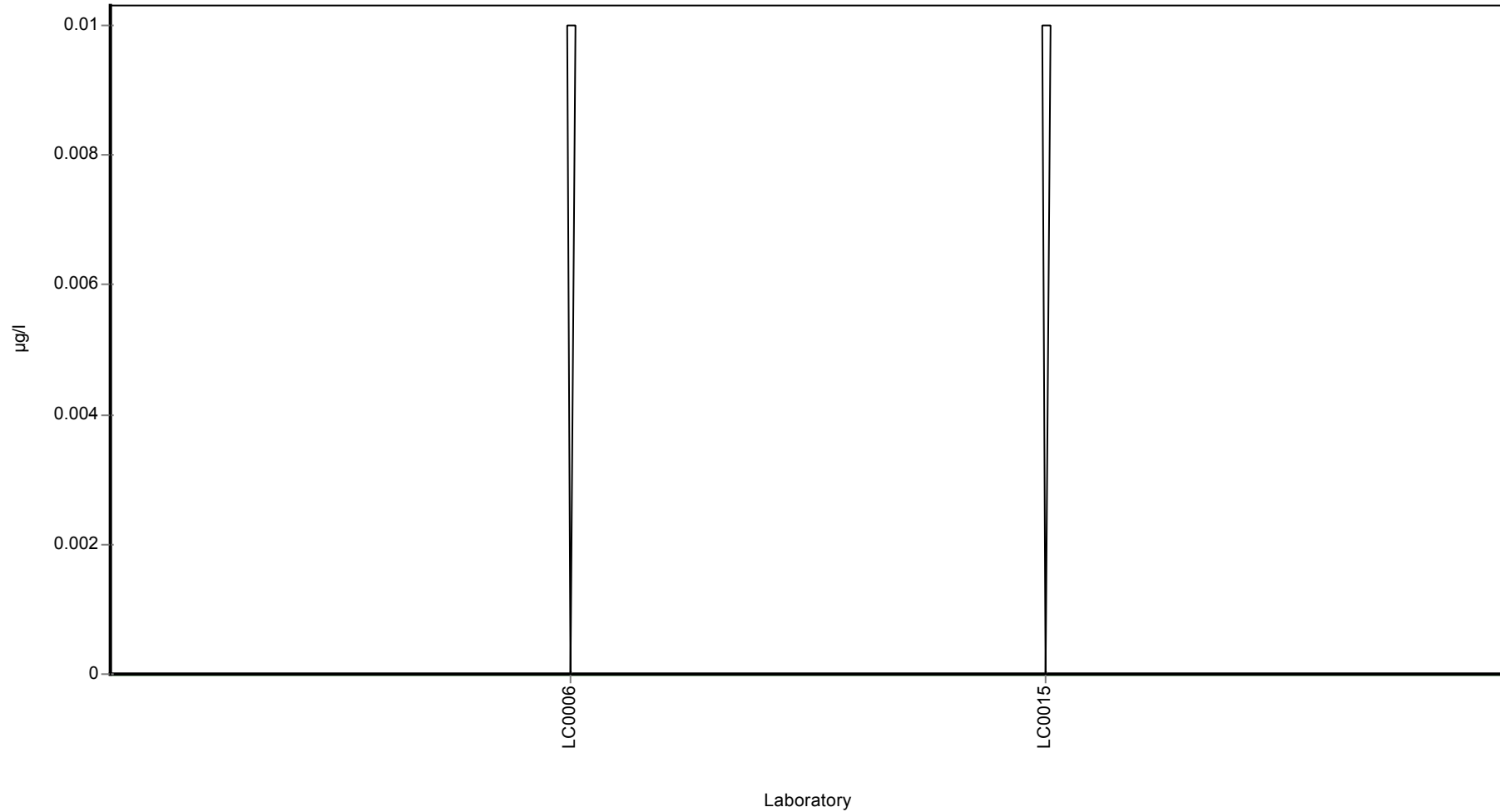
| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------------|-----|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | - | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | - | - | - | - | |
| LC0006 | < 0.01 (LOQ) | - | - | - | |
| LC0007 | - | - | - | - | |
| LC0008 | - | - | - | - | |
| LC0009 | - | - | - | - | |
| LC0010 | - | - | - | - | |
| LC0011 | - | - | - | - | |
| LC0012 | - | - | - | - | |
| LC0013 | - | - | - | - | |
| LC0014 | - | - | - | - | |
| LC0015 | < 0.01 (LOQ) | - | - | - | |

Characteristics of parameter

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

Graphical presentation of results

Results



Parameter oriented report

AZ3 A

Diclofenac

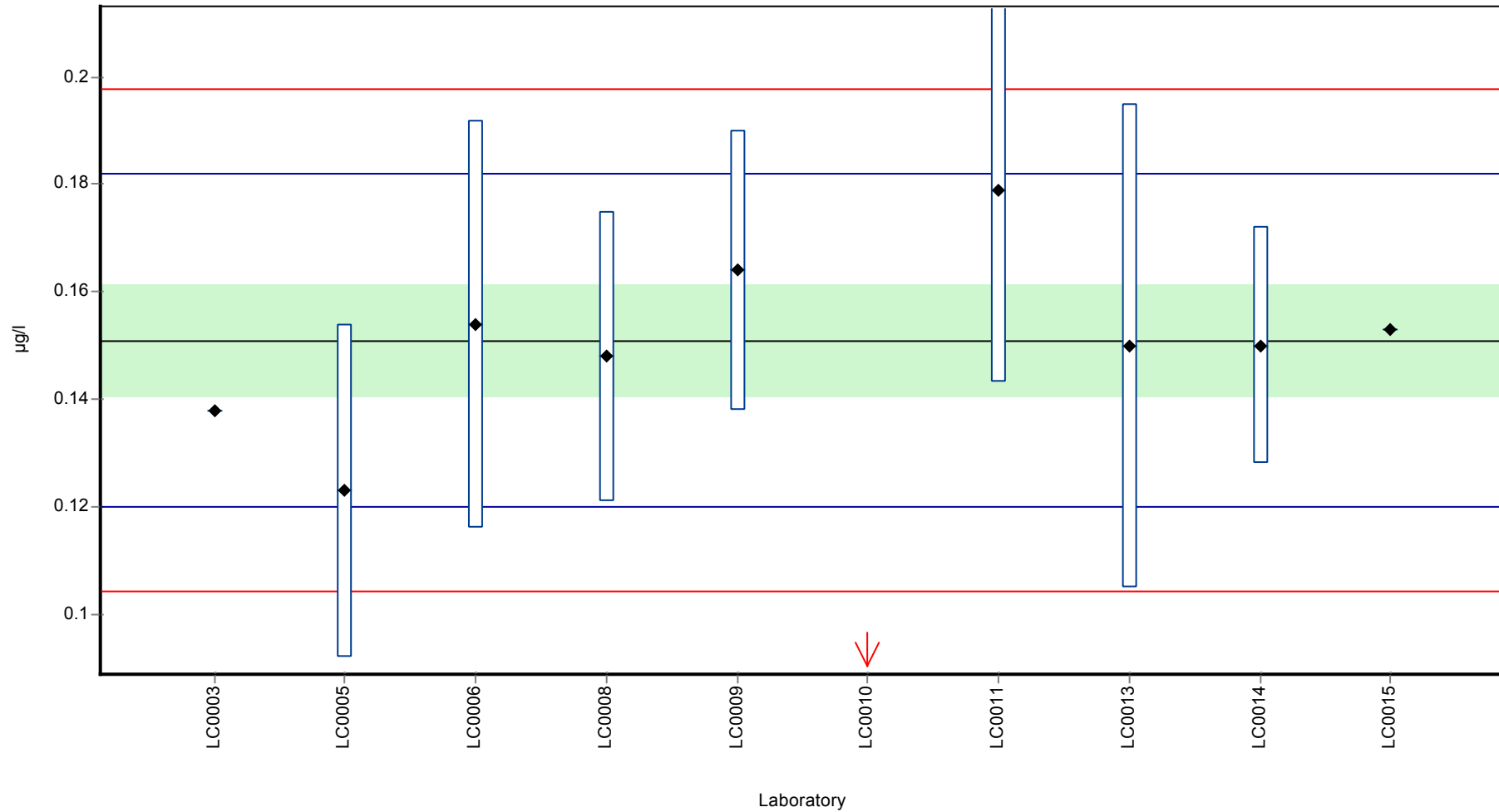
| | |
|------------------------|----------------|
| Unit | µg/l |
| Mean ± CI (99%) | 0.151 ± 0.0155 |
| Minimum - Maximum | 0.123 - 0.179 |
| Control test value ± U | 0.148 ± 0.0179 |

| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|--------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | 0.138 | - | 91.4 | -0.84 | |
| LC0004 | - | - | - | - | |
| LC0005 | 0.123 | 0.031 | 81.5 | -1.8 | |
| LC0006 | 0.154 | 0.038 | 102 | 0.19 | |
| LC0007 | - | - | - | - | |
| LC0008 | 0.148 | 0.027 | 98 | -0.19 | |
| LC0009 | 0.164 | 0.026 | 109 | 0.84 | |
| LC0010 | 0.077 | 0.0065 | 51 | -4.76 | H |
| LC0011 | 0.179 | 0.036 | 119 | 1.8 | |
| LC0012 | - | - | - | - | |
| LC0013 | 0.15 | 0.045 | 99.3 | -0.06 | |
| LC0014 | 0.15 | 0.022 | 99.3 | -0.06 | |
| LC0015 | 0.153 | - | 101 | 0.13 | |

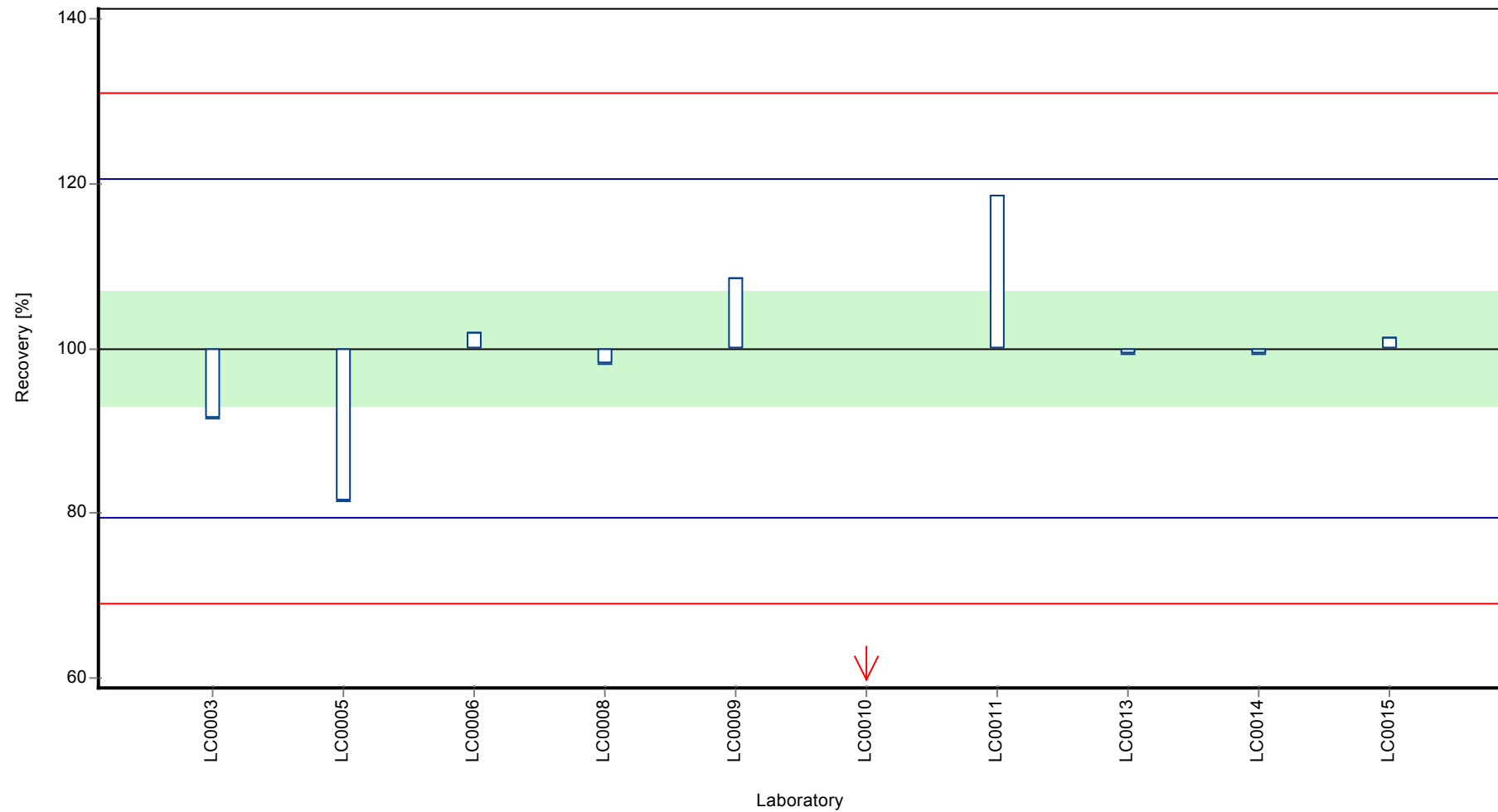
Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|----------------|------------------|------|
| Mean ± CI (99%) | 0.144 ± 0.0262 | 0.151 ± 0.0155 | µg/l |
| Minimum | 0.077 | 0.123 | µg/l |
| Maximum | 0.179 | 0.179 | µg/l |
| Standard deviation | 0.0276 | 0.0155 | µg/l |
| rel. Standard deviation | 19.2 | 10.3 | % |
| n | 10 | 9 | - |

Graphical presentation of results
Results



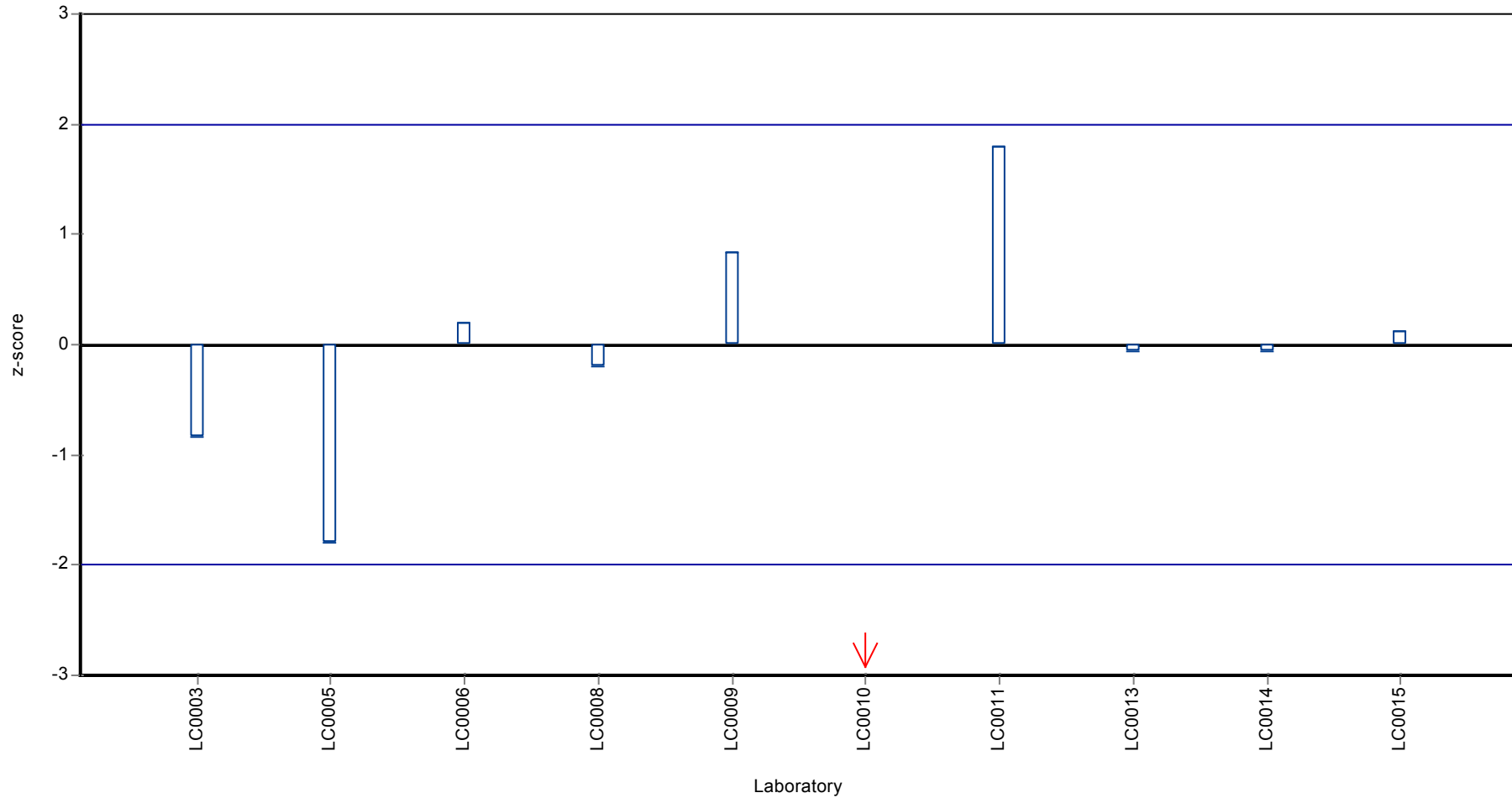
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3A, Parameter: Diclofenac

Z-score



Parameter oriented report

AZ3 B

Diclofenac

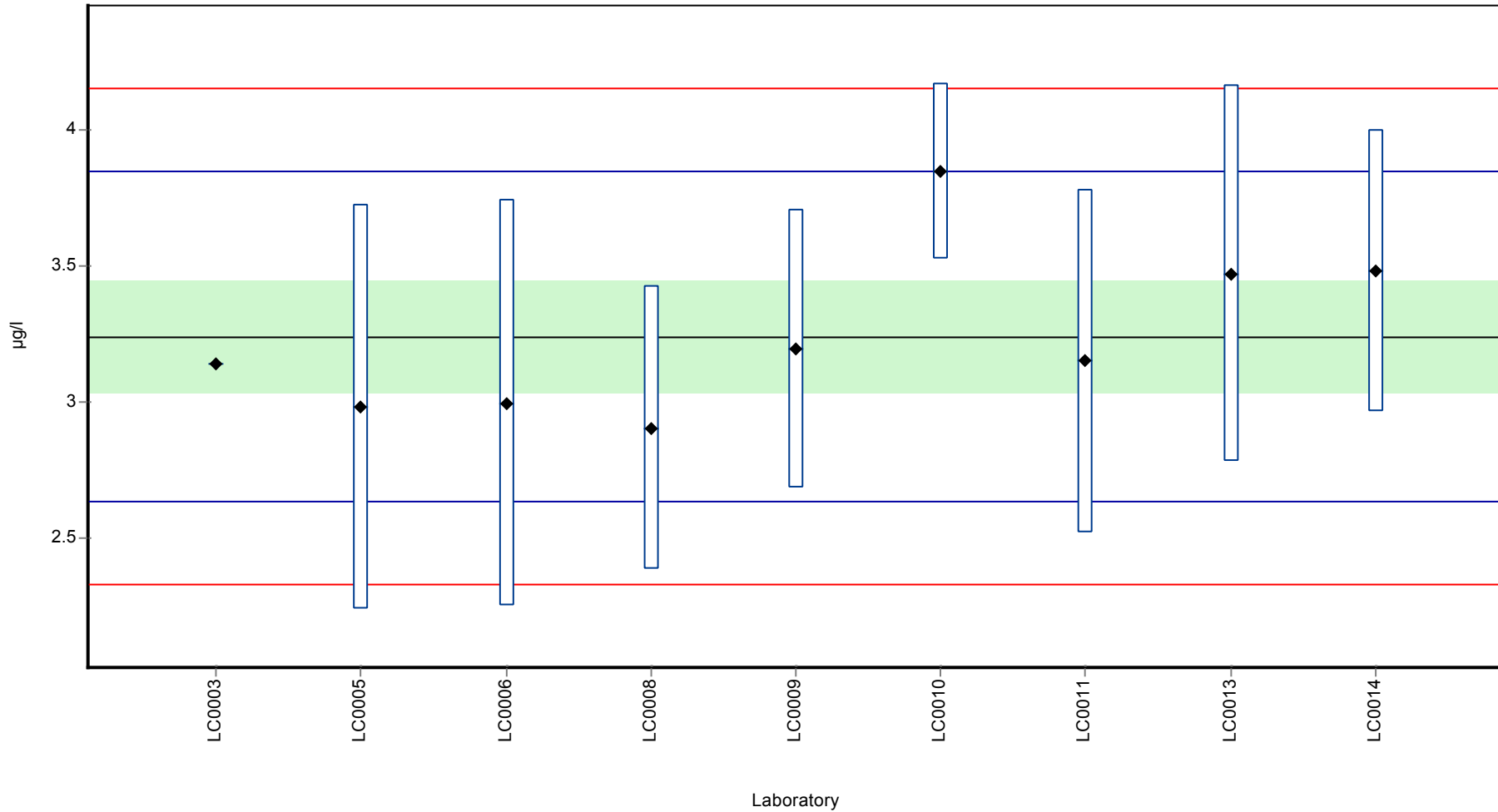
| | |
|------------------------|--------------|
| Unit | µg/l |
| Mean ± CI (99%) | 3.24 ± 0.304 |
| Minimum - Maximum | 2.9 - 3.85 |
| Control test value ± U | 3.14 ± 0.16 |

| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | 3.14 | - | 96.9 | -0.33 | |
| LC0004 | - | - | - | - | |
| LC0005 | 2.98 | 0.745 | 92 | -0.85 | |
| LC0006 | 2.995 | 0.749 | 92.4 | -0.81 | |
| LC0007 | - | - | - | - | |
| LC0008 | 2.902 | 0.522 | 89.6 | -1.11 | |
| LC0009 | 3.195 | 0.511 | 98.6 | -0.15 | |
| LC0010 | 3.846 | 0.323 | 119 | 1.99 | |
| LC0011 | 3.15 | 0.63 | 97.2 | -0.3 | |
| LC0012 | - | - | - | - | |
| LC0013 | 3.471 | 0.694 | 107 | 0.76 | |
| LC0014 | 3.48 | 0.52 | 107 | 0.79 | |
| LC0015 | - | - | - | - | |

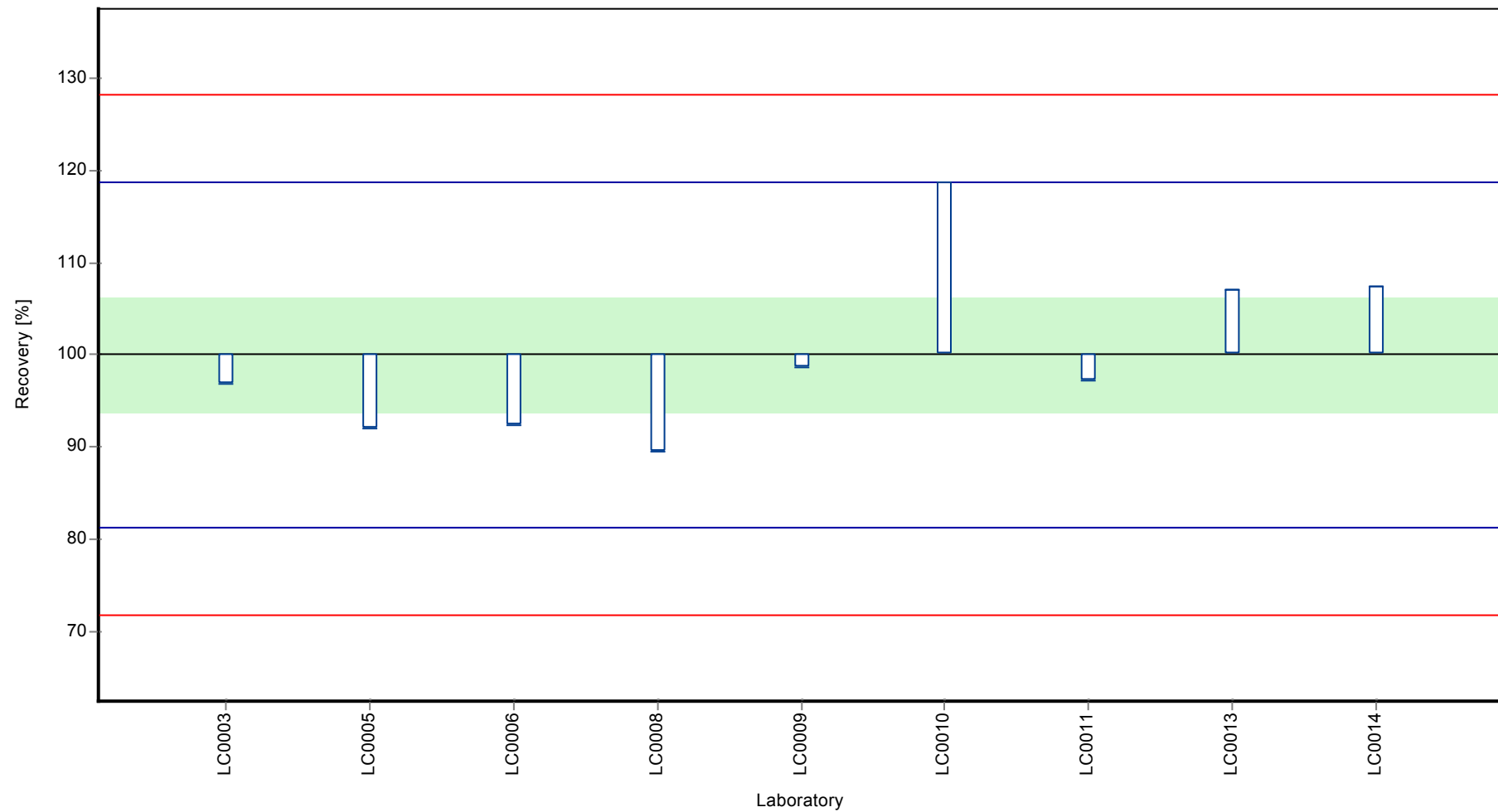
Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|--------------|------------------|------|
| Mean ± CI (99%) | 3.24 ± 0.304 | 3.24 ± 0.304 | µg/l |
| Minimum | 2.9 | 2.9 | µg/l |
| Maximum | 3.85 | 3.85 | µg/l |
| Standard deviation | 0.304 | 0.304 | µg/l |
| rel. Standard deviation | 9.39 | 9.39 | % |
| n | 9 | 9 | - |

Graphical presentation of results
Results



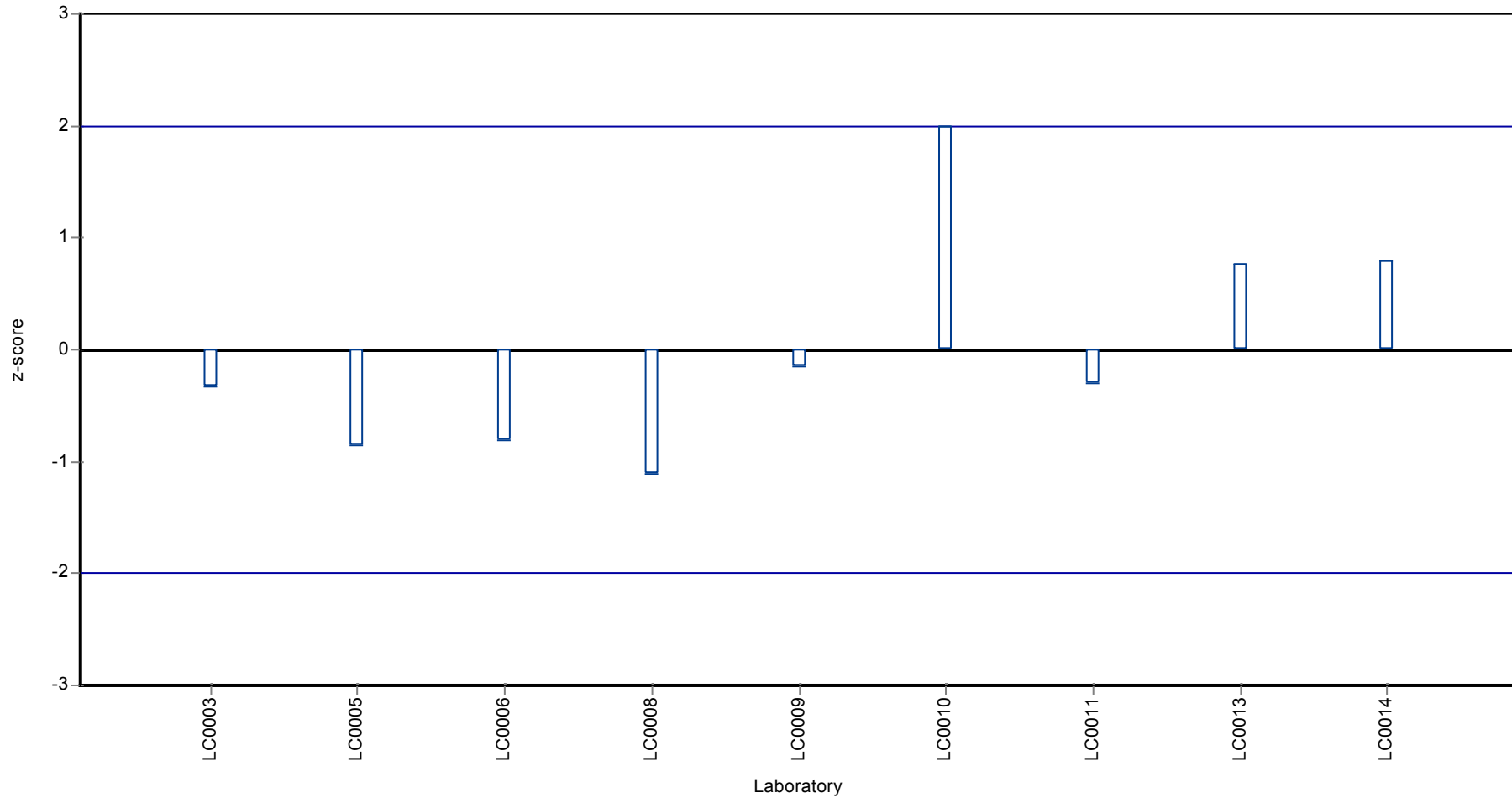
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3B, Parameter: Diclofenac

Z-score



Parameter oriented report

AZ3 A

Ibuprofen

| | |
|------------------------|---------------|
| Unit | µg/l |
| Mean ± CI (99%) | - |
| Minimum - Maximum | 0.107 - 0.245 |
| Control test value ± U | 0.135 ± 0.018 |

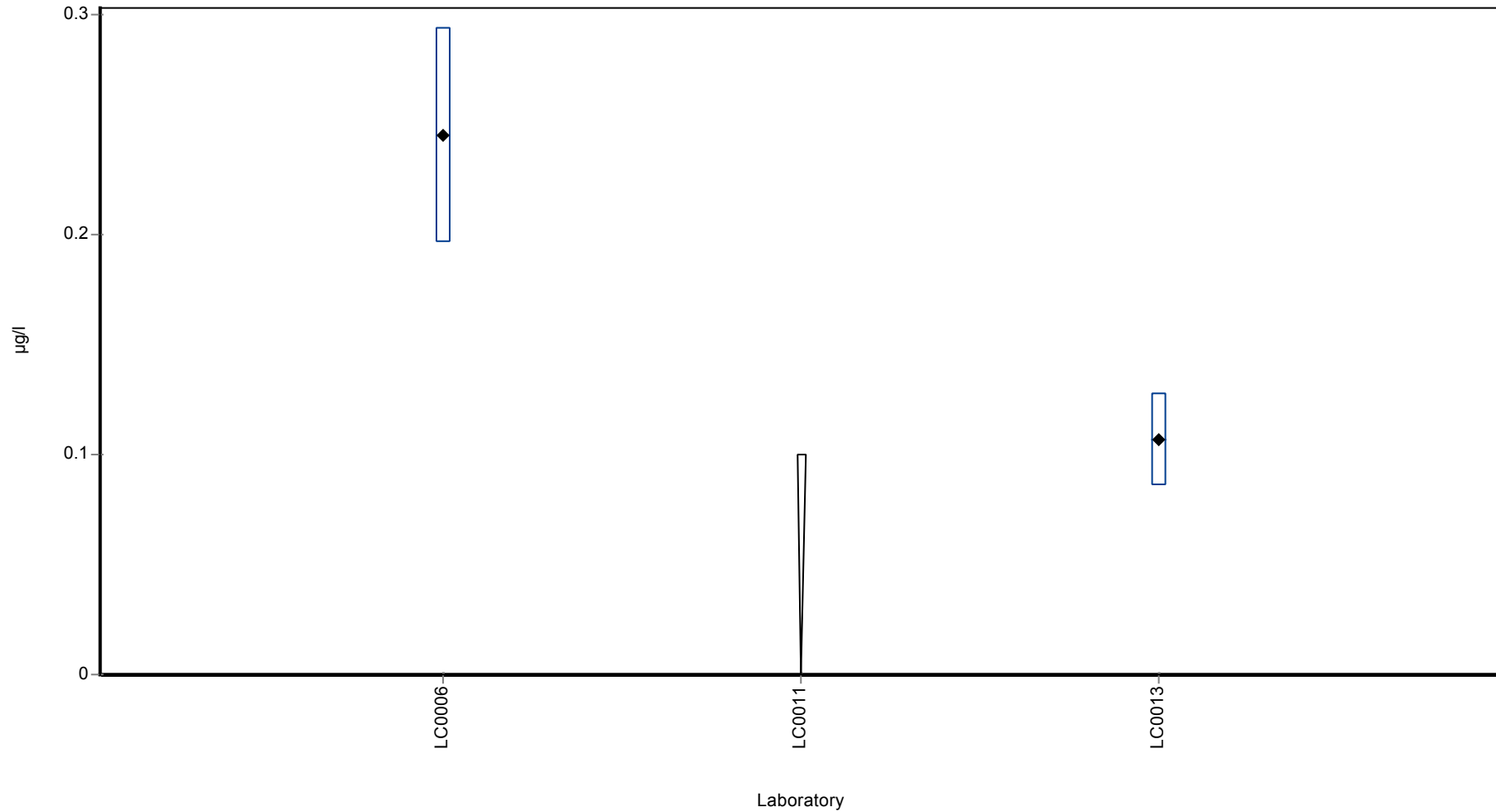
| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|-------------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | - | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | - | - | - | - | |
| LC0006 | 0.245 | 0.049 | - | - | |
| LC0007 | - | - | - | - | |
| LC0008 | - | - | - | - | |
| LC0009 | - | - | - | - | |
| LC0010 | - | - | - | - | |
| LC0011 | < 0.1 (LOQ) | - | - | - | |
| LC0012 | - | - | - | - | |
| LC0013 | 0.107 | 0.021 | - | - | |
| LC0014 | - | - | - | - | |
| LC0015 | - | - | - | - | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|---------------|------------------|------|
| Mean ± CI (99%) | 0.176 ± 0.207 | - | µg/l |
| Minimum | 0.107 | 0.107 | µg/l |
| Maximum | 0.245 | 0.245 | µg/l |
| Standard deviation | 0.0976 | - | µg/l |
| rel. Standard deviation | 55.4 | - | % |
| n | 2 | 2 | - |

Graphical presentation of results

Results



Parameter oriented report

AZ3 B

Ibuprofen

| | |
|------------------------|---------------|
| Unit | µg/l |
| Mean ± CI (99%) | - |
| Minimum - Maximum | 1.51 - 1.51 |
| Control test value ± U | < 0.025 (LOD) |

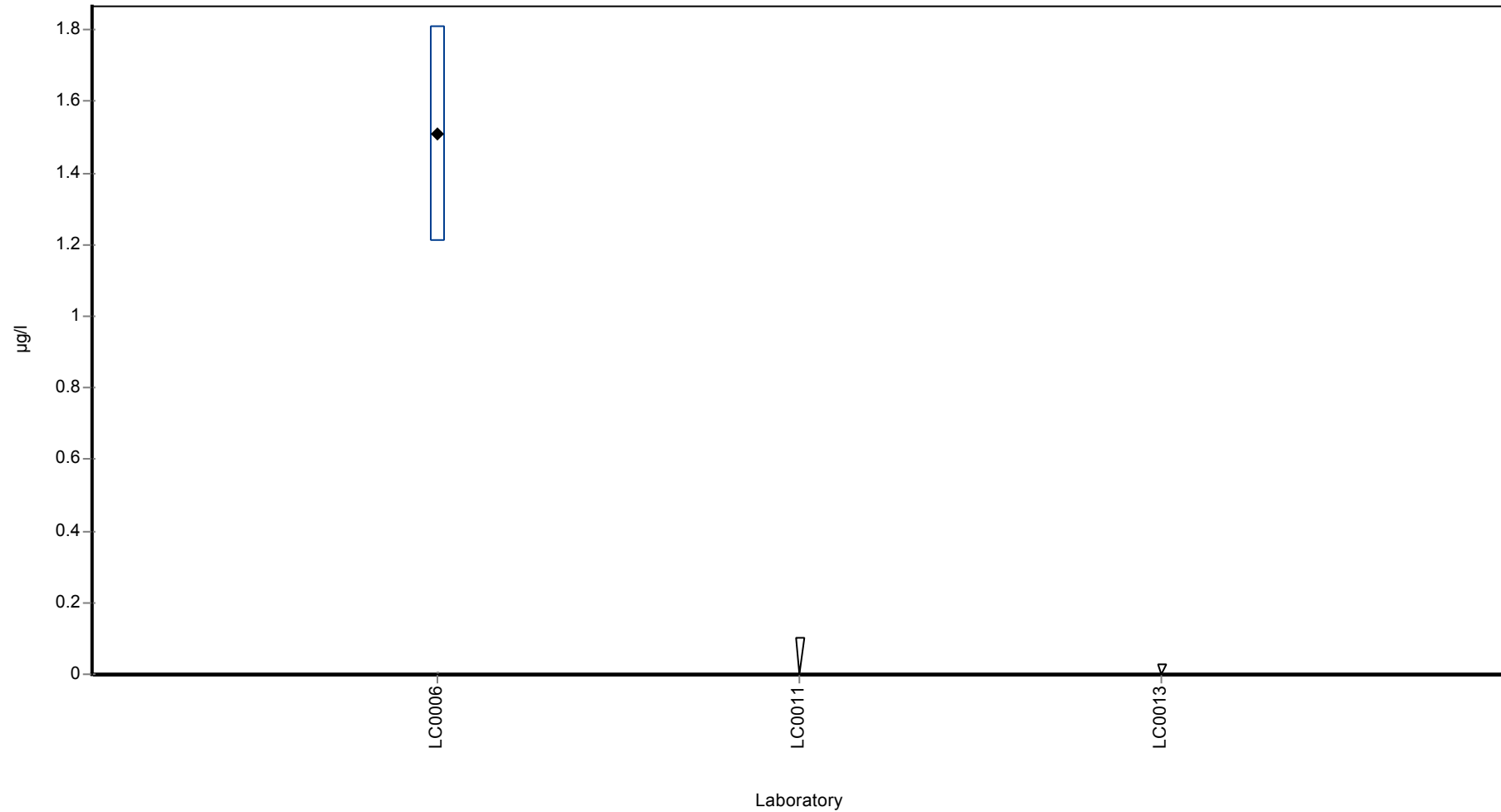
| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | - | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | - | - | - | - | |
| LC0006 | 1.508 | 0.302 | - | - | |
| LC0007 | - | - | - | - | |
| LC0008 | - | - | - | - | |
| LC0009 | - | - | - | - | |
| LC0010 | - | - | - | - | |
| LC0011 | < 0.1 (LOQ) | - | - | - | |
| LC0012 | - | - | - | - | |
| LC0013 | < 0.03 (LOQ) | - | - | - | |
| LC0014 | - | - | - | - | |
| LC0015 | - | - | - | - | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|-------------|------------------|------|
| Mean ± CI (99%) | 1.51 | - | µg/l |
| Minimum | 1.51 | 1.51 | µg/l |
| Maximum | 1.51 | 1.51 | µg/l |
| Standard deviation | - | - | µg/l |
| rel. Standard deviation | - | - | % |
| n | 1 | 1 | - |

Graphical presentation of results

Results



Parameter oriented report

AZ3 A

Metoprolol

| | |
|------------------------|----------------|
| Unit | µg/l |
| Mean ± CI (99%) | - |
| Minimum - Maximum | 0.0099 - 0.019 |
| Control test value ± U | < 0.025 (LOD) |

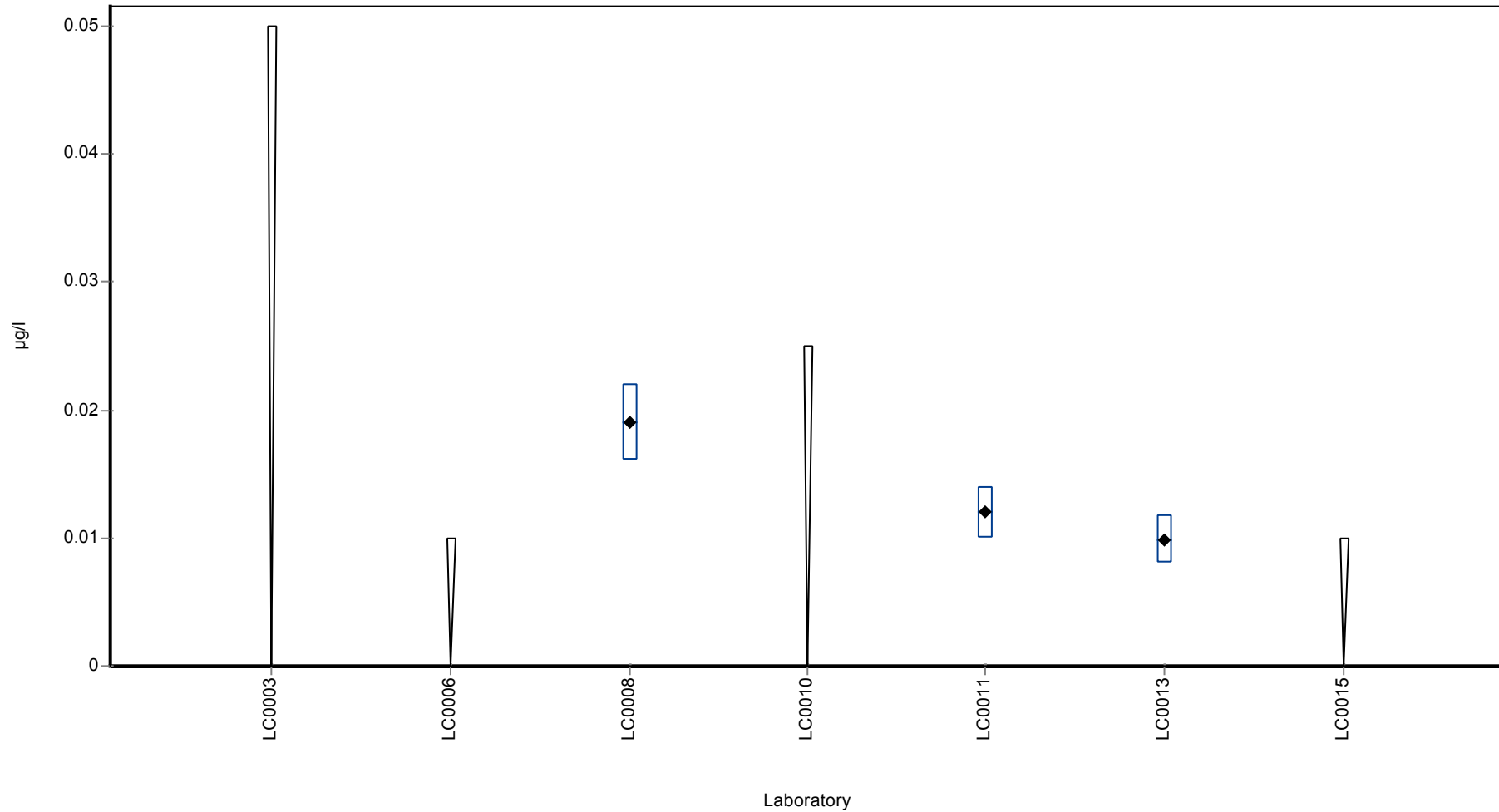
| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|---------------|--------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | < 0.05 (LOQ) | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | - | - | - | - | |
| LC0006 | < 0.01 (LOQ) | - | - | - | |
| LC0007 | - | - | - | - | |
| LC0008 | 0.019 | 0.003 | - | - | |
| LC0009 | - | - | - | - | |
| LC0010 | < 0.025 (LOQ) | - | - | - | |
| LC0011 | 0.012 | 0.002 | - | - | |
| LC0012 | - | - | - | - | |
| LC0013 | 0.0099 | 0.0019 | - | - | |
| LC0014 | - | - | - | - | |
| LC0015 | < 0.01 (LOQ) | - | - | - | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|------------------|------------------|------|
| Mean ± CI (99%) | 0.0136 ± 0.00825 | - | µg/l |
| Minimum | 0.0099 | 0.0099 | µg/l |
| Maximum | 0.019 | 0.019 | µg/l |
| Standard deviation | 0.00476 | - | µg/l |
| rel. Standard deviation | 34.9 | - | % |
| n | 3 | 3 | - |

Graphical presentation of results

Results



Parameter oriented report

AZ3 B

Metoprolol

| | |
|------------------------|---------------|
| Unit | µg/l |
| Mean ± CI (99%) | 1.34 ± 0.286 |
| Minimum - Maximum | 1.05 - 1.69 |
| Control test value ± U | 1.07 ± 0.0531 |

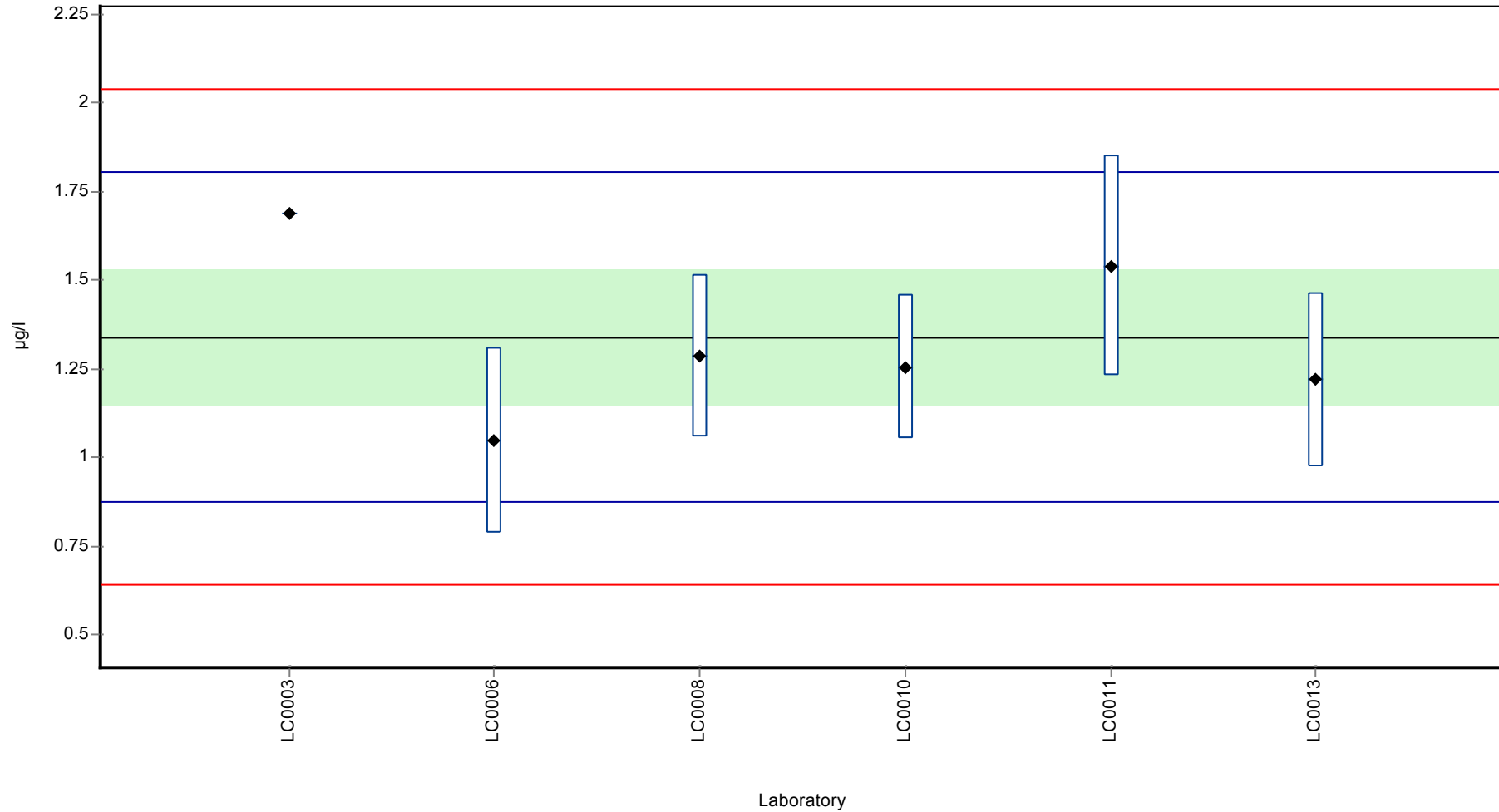
| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | 1.69 | - | 126 | 1.5 | |
| LC0004 | - | - | - | - | |
| LC0005 | - | - | - | - | |
| LC0006 | 1.049 | 0.262 | 78.3 | -1.25 | |
| LC0007 | - | - | - | - | |
| LC0008 | 1.286 | 0.231 | 96 | -0.23 | |
| LC0009 | - | - | - | - | |
| LC0010 | 1.255 | 0.203 | 93.7 | -0.36 | |
| LC0011 | 1.54 | 0.31 | 115 | 0.86 | |
| LC0012 | - | - | - | - | |
| LC0013 | 1.219 | 0.244 | 91 | -0.52 | |
| LC0014 | - | - | - | - | |
| LC0015 | - | - | - | - | |

Characteristics of parameter

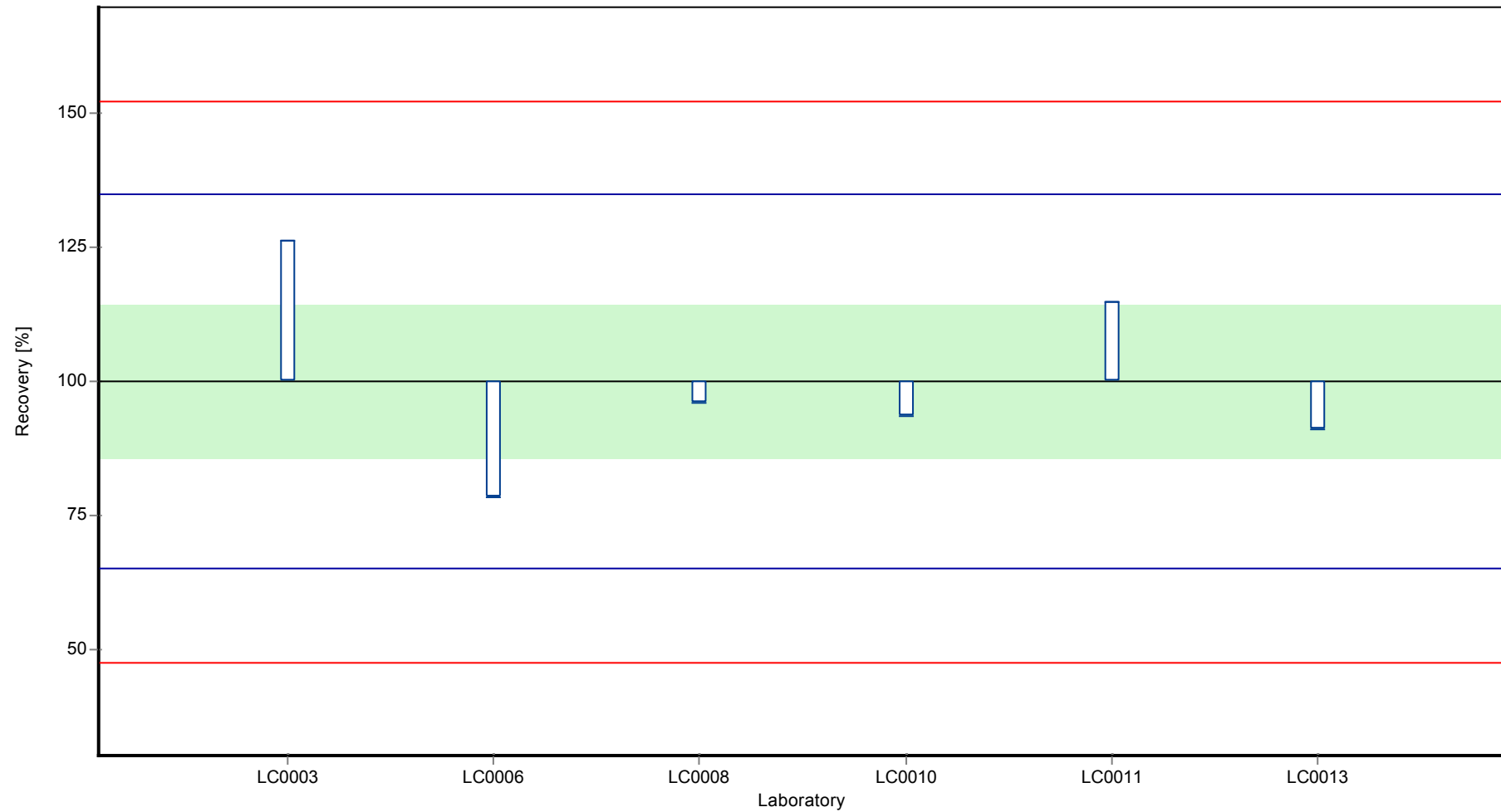
| | all results | without outliers | Unit |
|-------------------------|--------------|------------------|------|
| Mean ± CI (99%) | 1.34 ± 0.286 | 1.34 ± 0.286 | µg/l |
| Minimum | 1.05 | 1.05 | µg/l |
| Maximum | 1.69 | 1.69 | µg/l |
| Standard deviation | 0.233 | 0.233 | µg/l |
| rel. Standard deviation | 17.4 | 17.4 | % |
| n | 6 | 6 | - |

Graphical presentation of results

Results



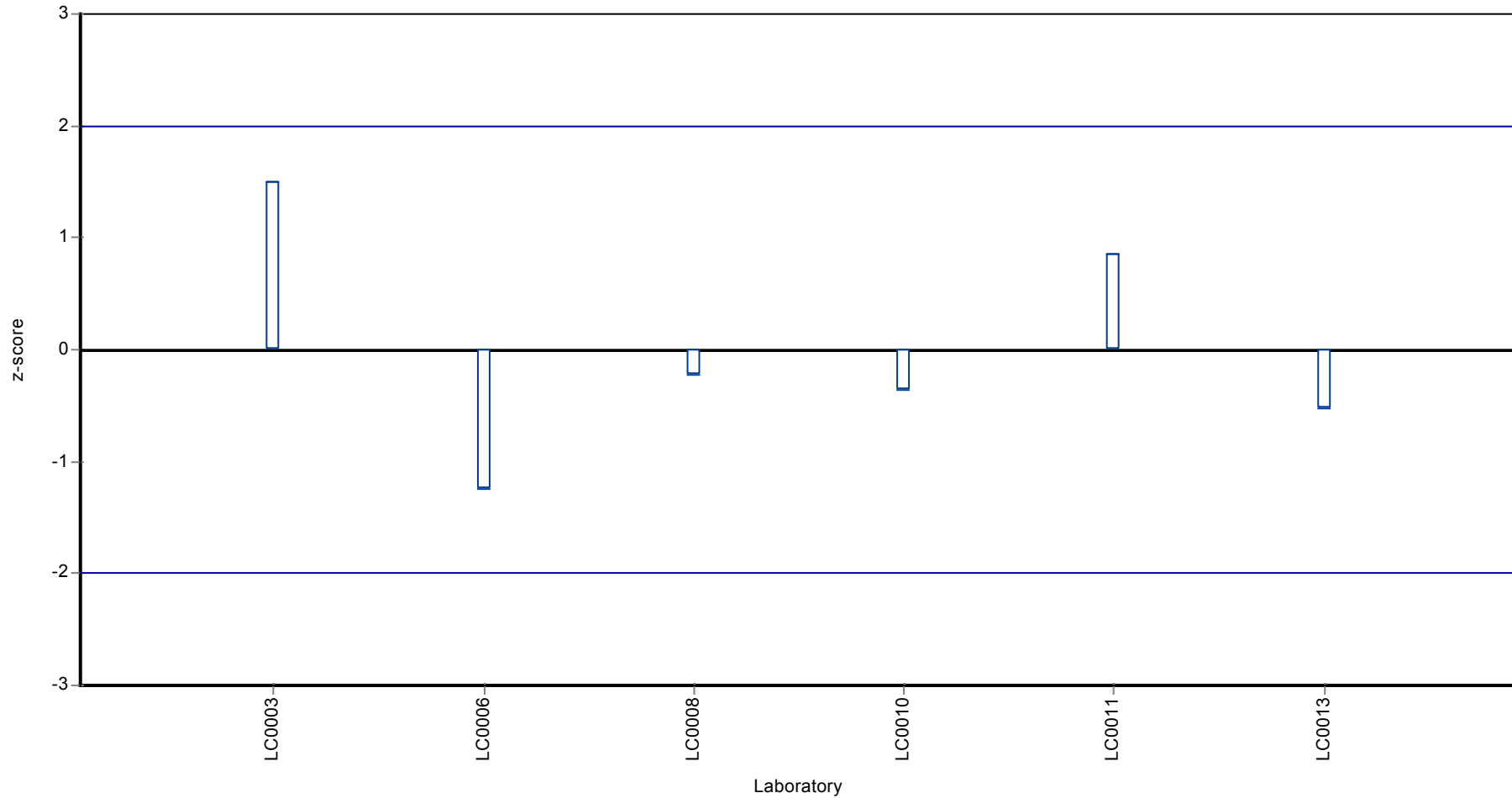
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3B, Parameter: Metoprolol

Z-score



Parameter oriented report

AZ3 A

Sotalol

| | |
|------------------------|---------------|
| Unit | µg/l |
| Mean ± CI (99%) | - |
| Minimum - Maximum | - |
| Control test value ± U | < 0.025 (LOD) |

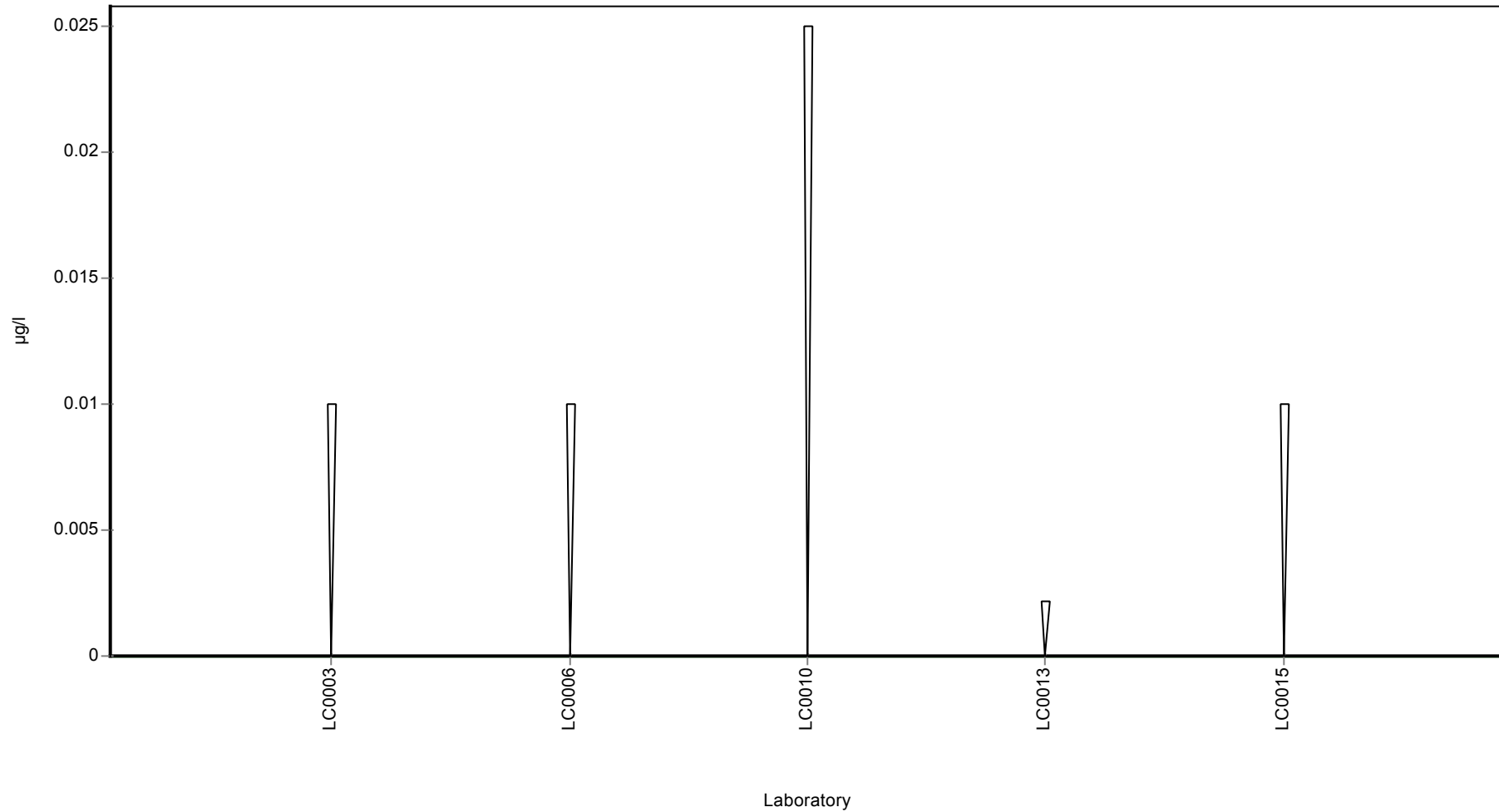
| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|----------------|-----|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | < 0.01 (LOQ) | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | - | - | - | - | |
| LC0006 | < 0.01 (LOQ) | - | - | - | |
| LC0007 | - | - | - | - | |
| LC0008 | - | - | - | - | |
| LC0009 | - | - | - | - | |
| LC0010 | < 0.025 (LOQ) | - | - | - | |
| LC0011 | - | - | - | - | |
| LC0012 | - | - | - | - | |
| LC0013 | < 0.0022 (LOQ) | - | - | - | |
| LC0014 | - | - | - | - | |
| LC0015 | < 0.01 (LOQ) | - | - | - | |

Characteristics of parameter

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

Graphical presentation of results

Results



Parameter oriented report

AZ3 B

Sotalol

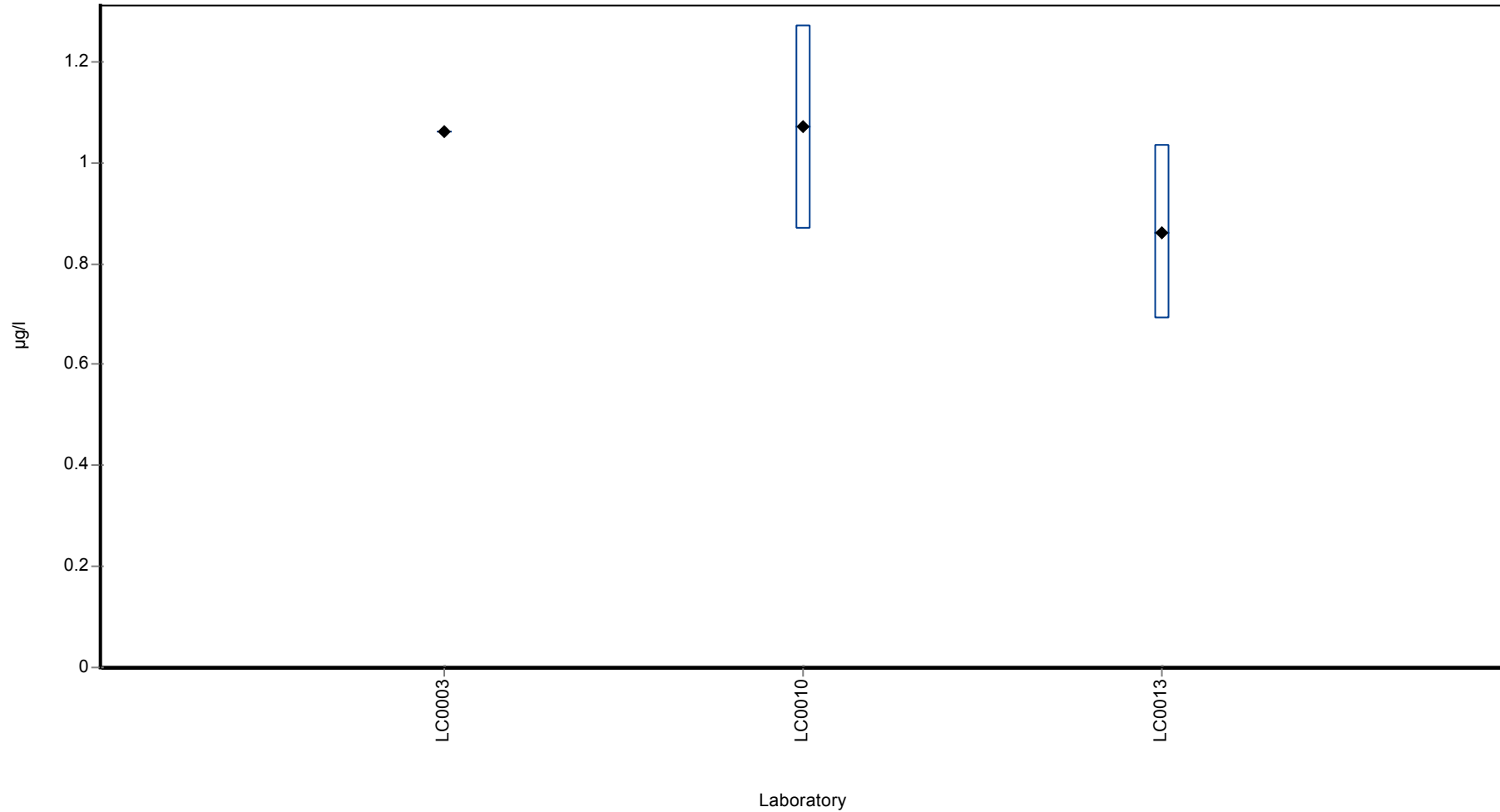
| | |
|------------------------|--------------|
| Unit | µg/l |
| Mean ± CI (99%) | - |
| Minimum - Maximum | 0.862 - 1.07 |
| Control test value ± U | 0.96 ± 0.161 |

| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | 1.06 | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | - | - | - | - | |
| LC0006 | - | - | - | - | |
| LC0007 | - | - | - | - | |
| LC0008 | - | - | - | - | |
| LC0009 | - | - | - | - | |
| LC0010 | 1.07 | 0.202 | - | - | |
| LC0011 | - | - | - | - | |
| LC0012 | - | - | - | - | |
| LC0013 | 0.862 | 0.172 | - | - | |
| LC0014 | - | - | - | - | |
| LC0015 | - | - | - | - | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|---------------|------------------|------|
| Mean ± CI (99%) | 0.997 ± 0.203 | - | µg/l |
| Minimum | 0.862 | 0.862 | µg/l |
| Maximum | 1.07 | 1.07 | µg/l |
| Standard deviation | 0.117 | - | µg/l |
| rel. Standard deviation | 11.8 | - | % |
| n | 3 | 3 | - |

Graphical presentation of results
Results



Parameter oriented report

AZ3 A

Sucralose

| | |
|------------------------|---------------|
| Unit | µg/l |
| Mean ± CI (99%) | - |
| Minimum - Maximum | 0.153 - 0.29 |
| Control test value ± U | 0.177 ± 0.035 |

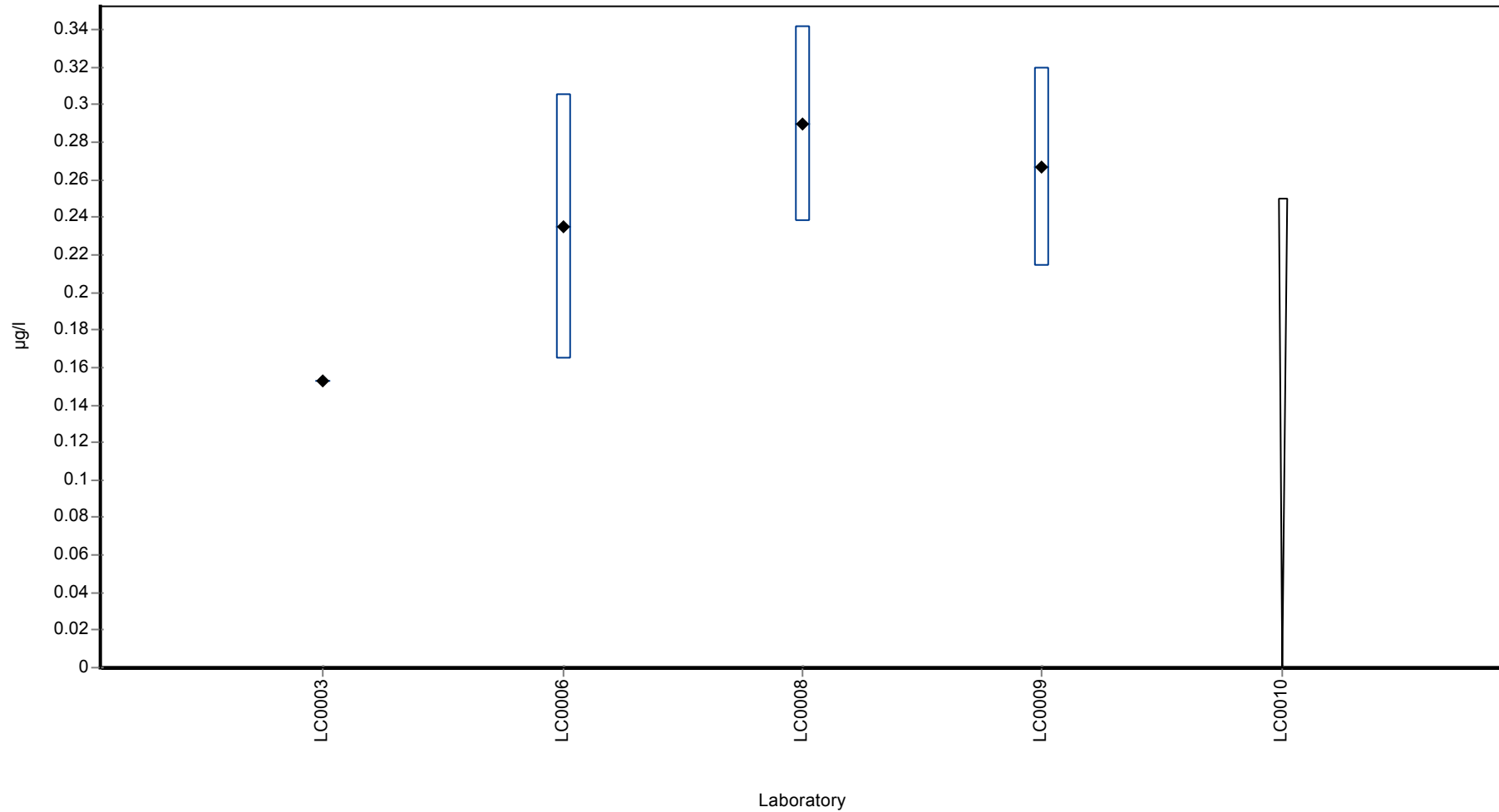
| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | 0.153 | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | - | - | - | - | |
| LC0006 | 0.235 | 0.071 | - | - | |
| LC0007 | - | - | - | - | |
| LC0008 | 0.29 | 0.052 | - | - | |
| LC0009 | 0.267 | 0.053 | - | - | |
| LC0010 | < 0.25 (LOQ) | - | - | - | |
| LC0011 | - | - | - | - | |
| LC0012 | - | - | - | - | |
| LC0013 | - | - | - | - | |
| LC0014 | - | - | - | - | |
| LC0015 | - | - | - | - | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|----------------|------------------|------|
| Mean ± CI (99%) | 0.236 ± 0.0899 | - | µg/l |
| Minimum | 0.153 | 0.153 | µg/l |
| Maximum | 0.29 | 0.29 | µg/l |
| Standard deviation | 0.0599 | - | µg/l |
| rel. Standard deviation | 25.4 | - | % |
| n | 4 | 4 | - |

Graphical presentation of results

Results



Parameter oriented report

AZ3 B

Sucralose

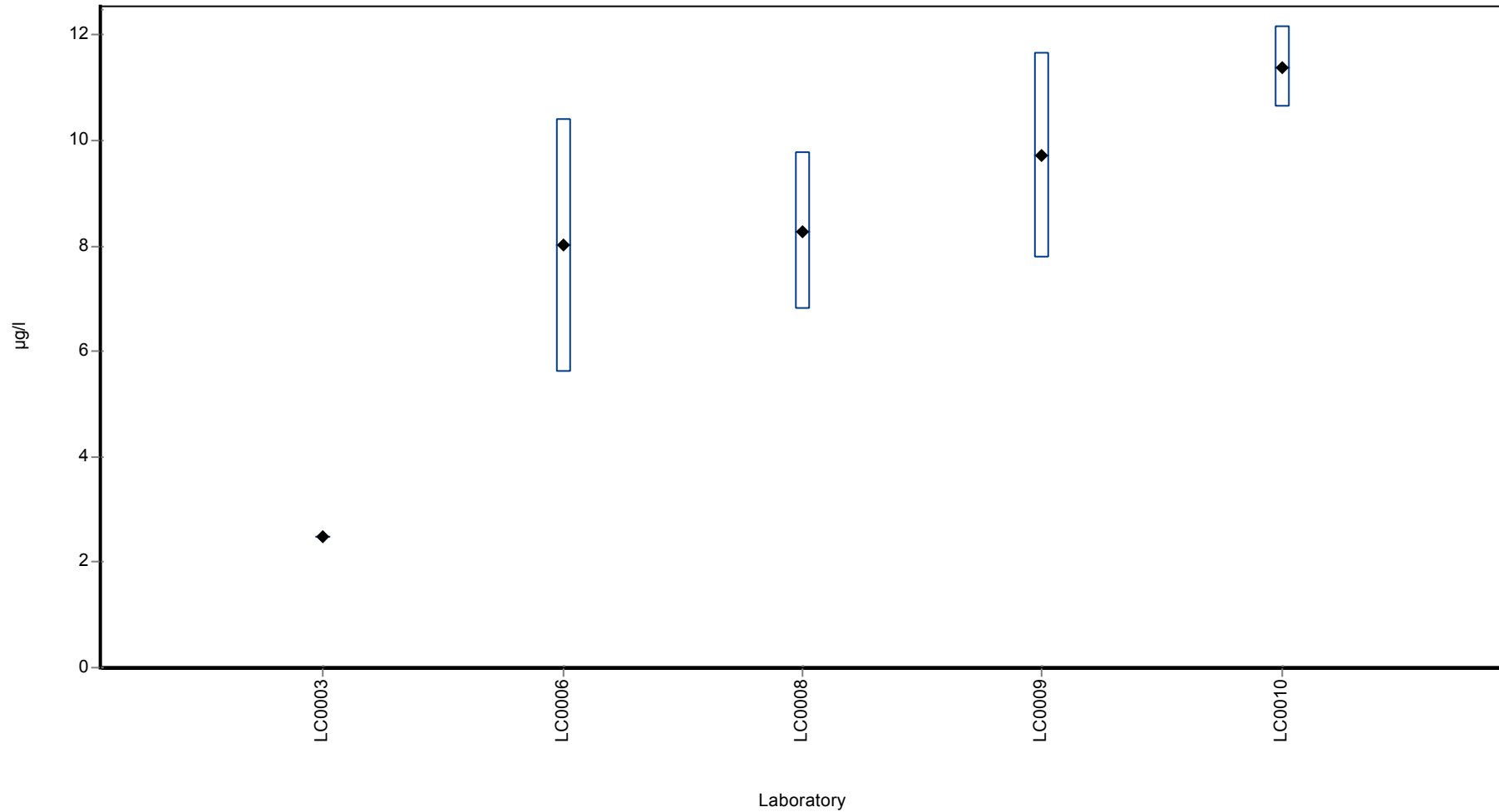
| | |
|------------------------|--------------|
| Unit | µg/l |
| Mean ± CI (99%) | - |
| Minimum - Maximum | 2.48 - 11.4 |
| Control test value ± U | 5.96 ± 0.153 |

| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | - | - | - | - | |
| LC0003 | 2.48 | - | - | - | |
| LC0004 | - | - | - | - | |
| LC0005 | - | - | - | - | |
| LC0006 | 8.009 | 2.403 | - | - | |
| LC0007 | - | - | - | - | |
| LC0008 | 8.278 | 1.49 | - | - | |
| LC0009 | 9.727 | 1.945 | - | - | |
| LC0010 | 11.4 | 0.775 | - | - | |
| LC0011 | - | - | - | - | |
| LC0012 | - | - | - | - | |
| LC0013 | - | - | - | - | |
| LC0014 | - | - | - | - | |
| LC0015 | - | - | - | - | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|-------------|------------------|------|
| Mean ± CI (99%) | 7.98 ± 4.5 | - | µg/l |
| Minimum | 2.48 | 2.48 | µg/l |
| Maximum | 11.4 | 11.4 | µg/l |
| Standard deviation | 3.36 | - | µg/l |
| rel. Standard deviation | 42.1 | - | % |
| n | 5 | 5 | - |

Graphical presentation of results
Results



Parameter oriented report

AZ3 A

Sulfamethoxazole

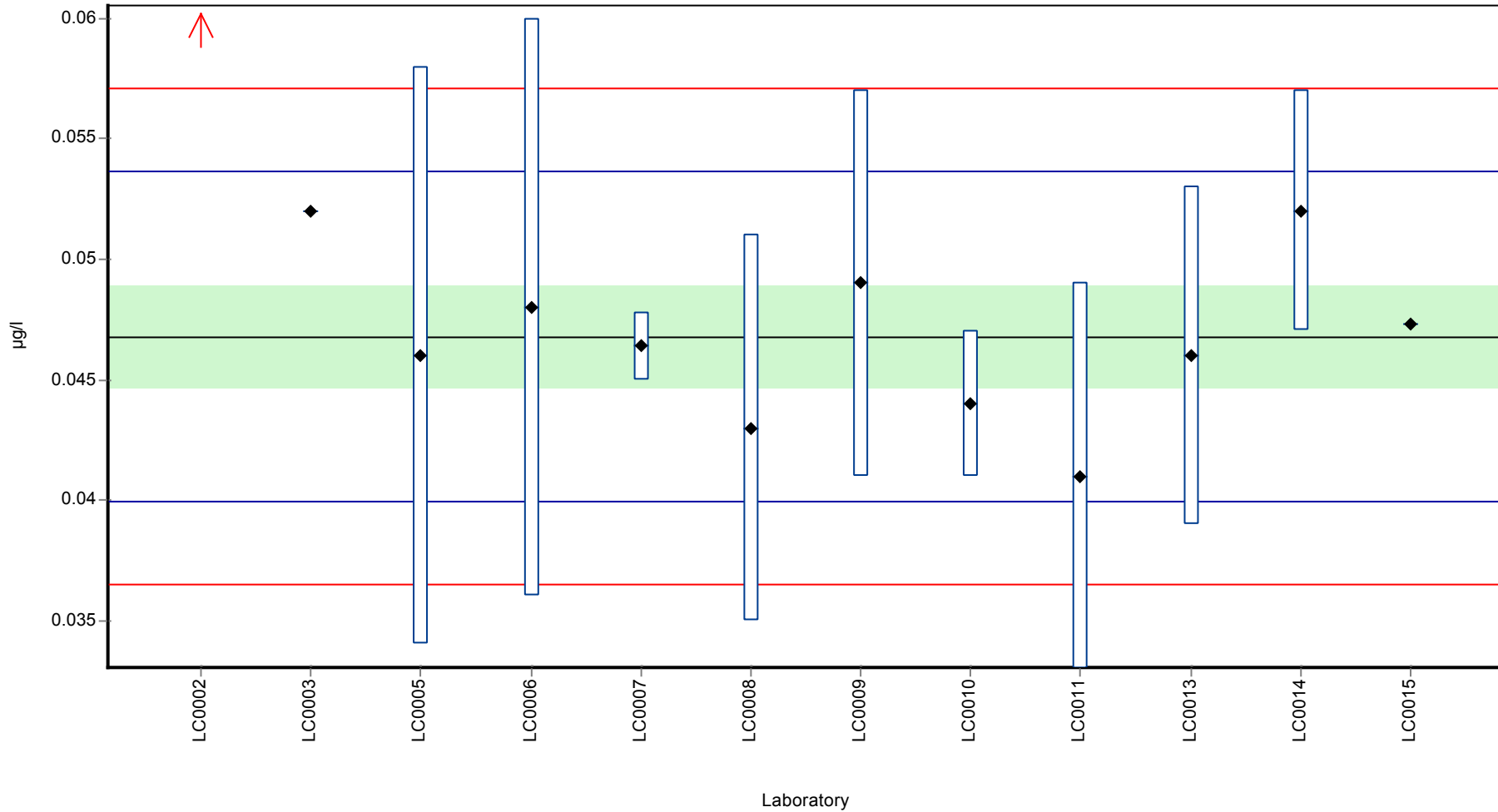
| | |
|------------------------|------------------|
| Unit | µg/l |
| Mean ± CI (99%) | 0.0468 ± 0.00311 |
| Minimum - Maximum | 0.041 - 0.052 |
| Control test value ± U | 0.0475 ± 0.0043 |

| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|--------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | 0.066 | 0.016 | 141 | 5.59 | H |
| LC0003 | 0.052 | - | 111 | 1.52 | |
| LC0004 | - | - | - | - | |
| LC0005 | 0.046 | 0.012 | 98.3 | -0.23 | |
| LC0006 | 0.048 | 0.012 | 103 | 0.35 | |
| LC0007 | 0.0464 | 0.0014 | 99.2 | -0.11 | |
| LC0008 | 0.043 | 0.008 | 91.9 | -1.1 | |
| LC0009 | 0.049 | 0.008 | 105 | 0.64 | |
| LC0010 | 0.044 | 0.003 | 94 | -0.81 | |
| LC0011 | 0.041 | 0.008 | 87.6 | -1.69 | |
| LC0012 | - | - | - | - | |
| LC0013 | 0.046 | 0.007 | 98.3 | -0.23 | |
| LC0014 | 0.052 | 0.005 | 111 | 1.52 | |
| LC0015 | 0.0473 | - | 101 | 0.15 | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|------------------|------------------|------|
| Mean ± CI (99%) | 0.0484 ± 0.00558 | 0.0468 ± 0.00311 | µg/l |
| Minimum | 0.041 | 0.041 | µg/l |
| Maximum | 0.066 | 0.052 | µg/l |
| Standard deviation | 0.00644 | 0.00343 | µg/l |
| rel. Standard deviation | 13.3 | 7.34 | % |
| n | 12 | 11 | - |

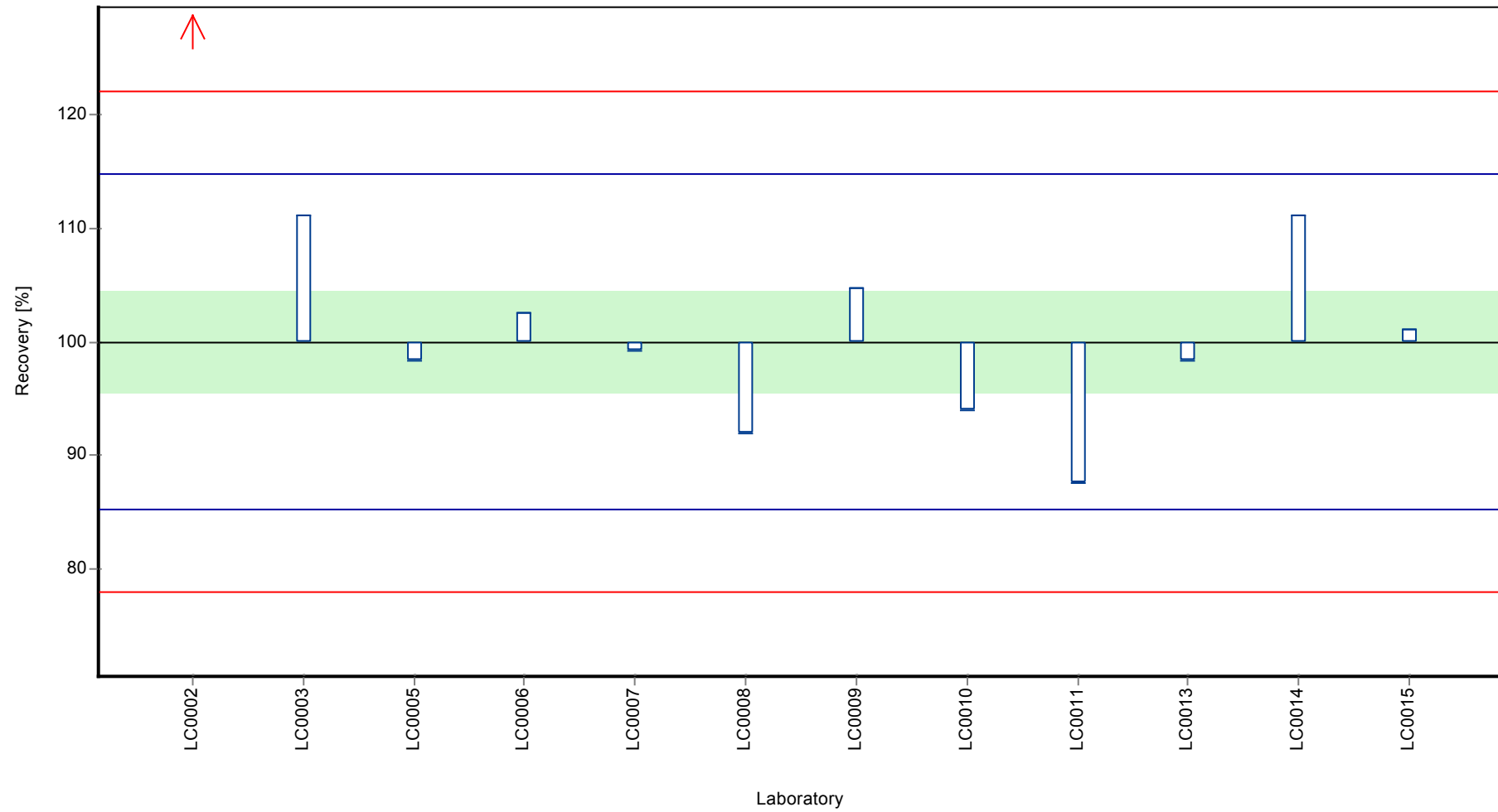
Graphical presentation of results
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3A, Parameter: Sulfamethoxazole

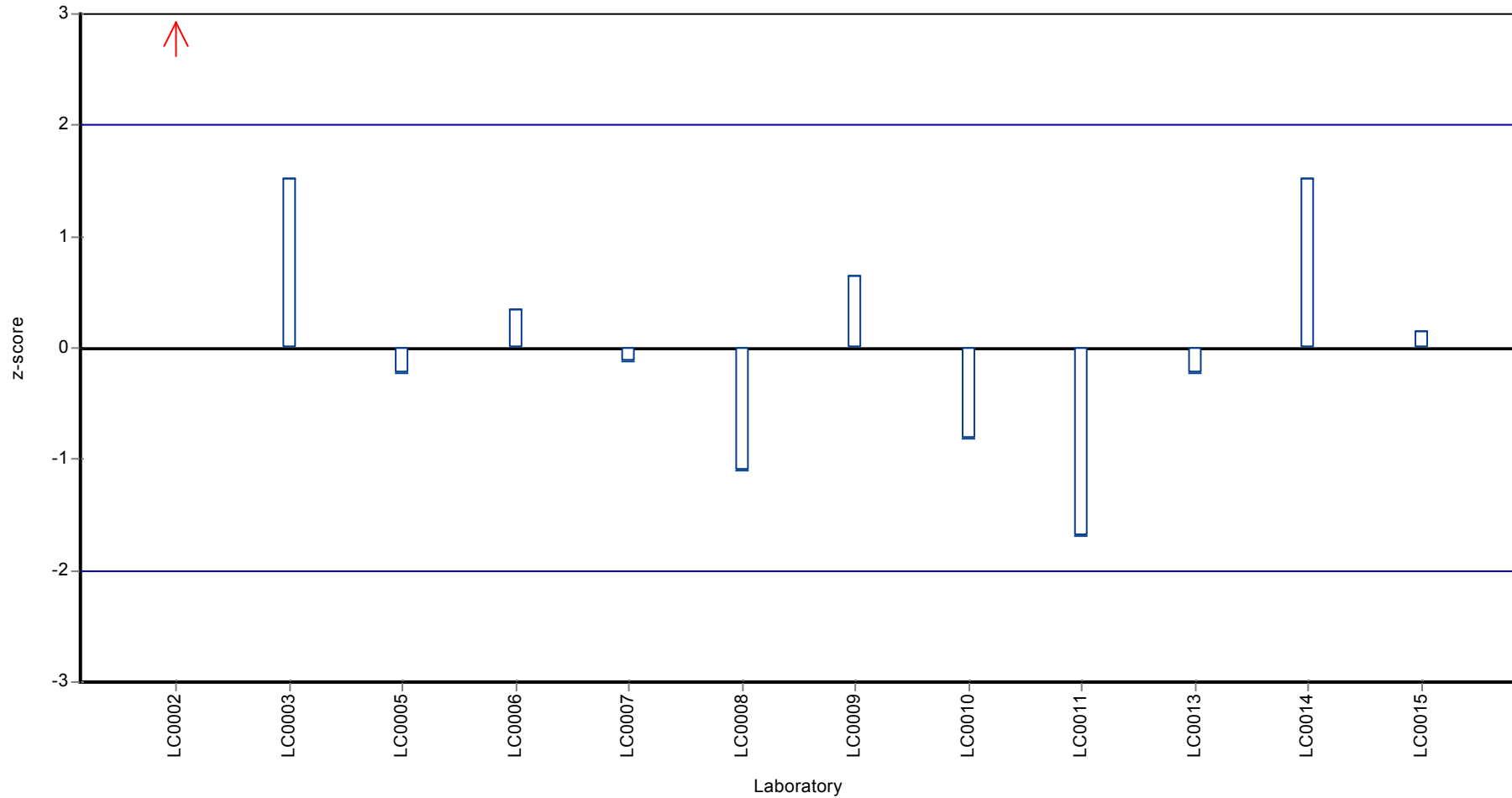
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3A, Parameter: Sulfamethoxazole

Z-score



Parameter oriented report

AZ3 B

Sulfamethoxazole

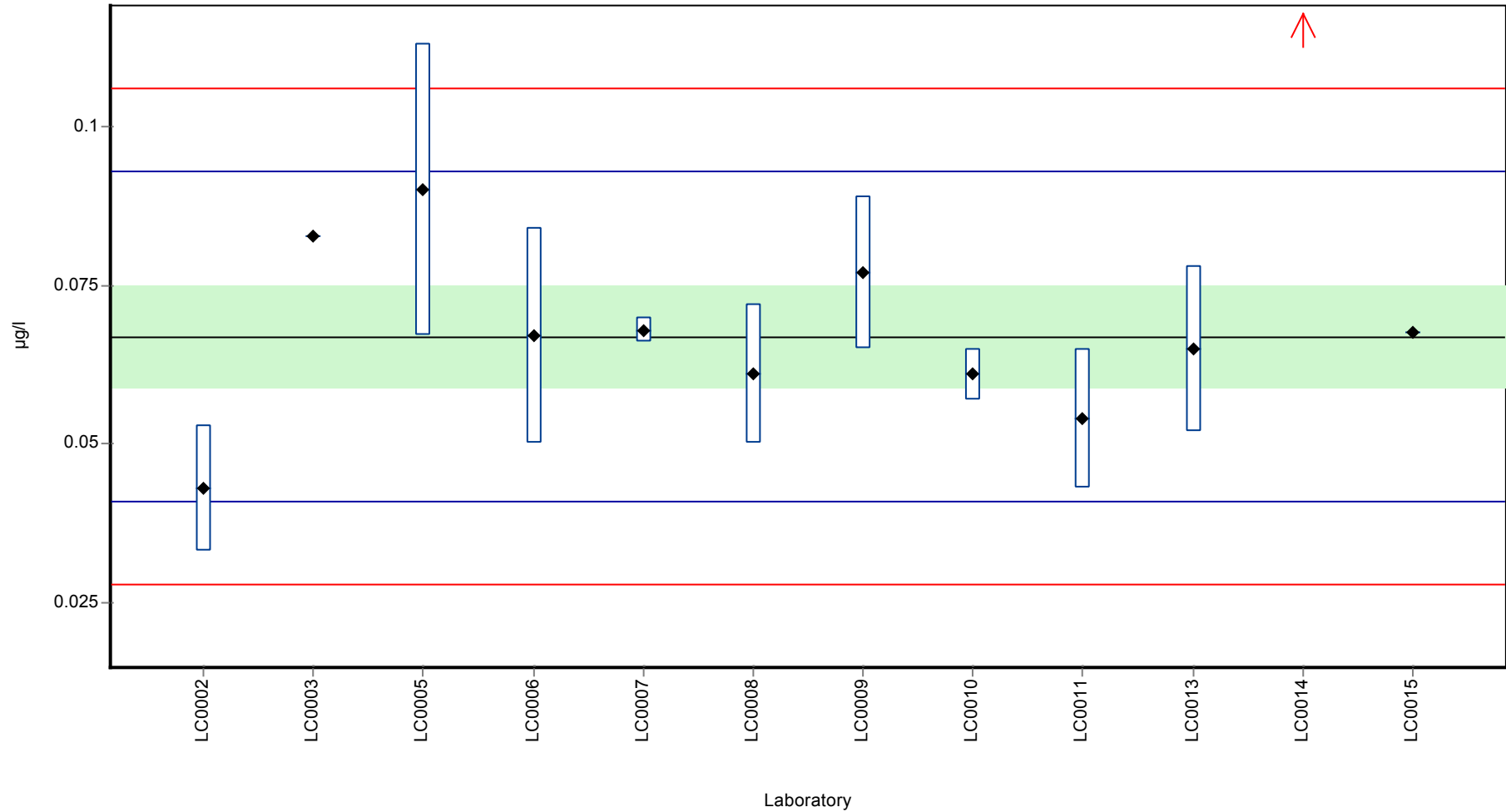
| | |
|------------------------|------------------|
| Unit | µg/l |
| Mean ± CI (99%) | 0.0669 ± 0.0118 |
| Minimum - Maximum | 0.043 - 0.09 |
| Control test value ± U | 0.0655 ± 0.00494 |

| Labcode | Result | ± U | Recovery [%] | z-score | Comments |
|---------|--------|-------|--------------|---------|----------|
| LC0001 | - | - | - | - | |
| LC0002 | 0.043 | 0.01 | 64.3 | -1.84 | |
| LC0003 | 0.0826 | - | 123 | 1.2 | |
| LC0004 | - | - | - | - | |
| LC0005 | 0.09 | 0.023 | 134 | 1.77 | |
| LC0006 | 0.067 | 0.017 | 100 | 0.01 | |
| LC0007 | 0.0679 | 0.002 | 101 | 0.08 | |
| LC0008 | 0.061 | 0.011 | 91.2 | -0.46 | |
| LC0009 | 0.077 | 0.012 | 115 | 0.78 | |
| LC0010 | 0.061 | 0.004 | 91.2 | -0.46 | |
| LC0011 | 0.054 | 0.011 | 80.7 | -0.99 | |
| LC0012 | - | - | - | - | |
| LC0013 | 0.065 | 0.013 | 97.1 | -0.15 | |
| LC0014 | 0.789 | 0.079 | 1180 | 55.5 | H |
| LC0015 | 0.0676 | - | 101 | 0.05 | |

Characteristics of parameter

| | all results | without outliers | Unit |
|-------------------------|---------------|------------------|------|
| Mean ± CI (99%) | 0.127 ± 0.181 | 0.0669 ± 0.0118 | µg/l |
| Minimum | 0.043 | 0.043 | µg/l |
| Maximum | 0.789 | 0.09 | µg/l |
| Standard deviation | 0.209 | 0.013 | µg/l |
| rel. Standard deviation | 164 | 19.5 | % |
| n | 12 | 11 | - |

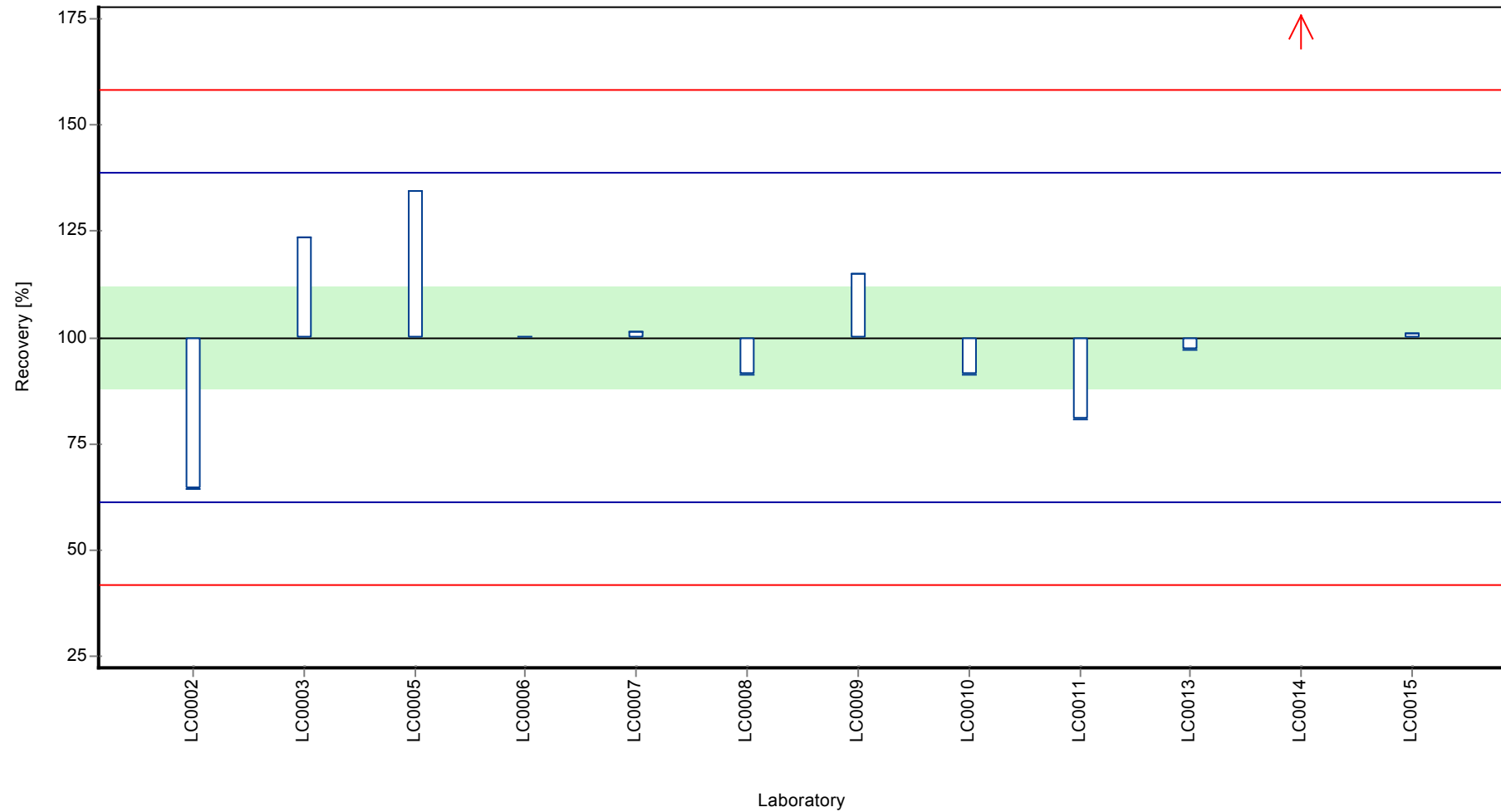
Graphical presentation of results
Results



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3B, Parameter: Sulfamethoxazole

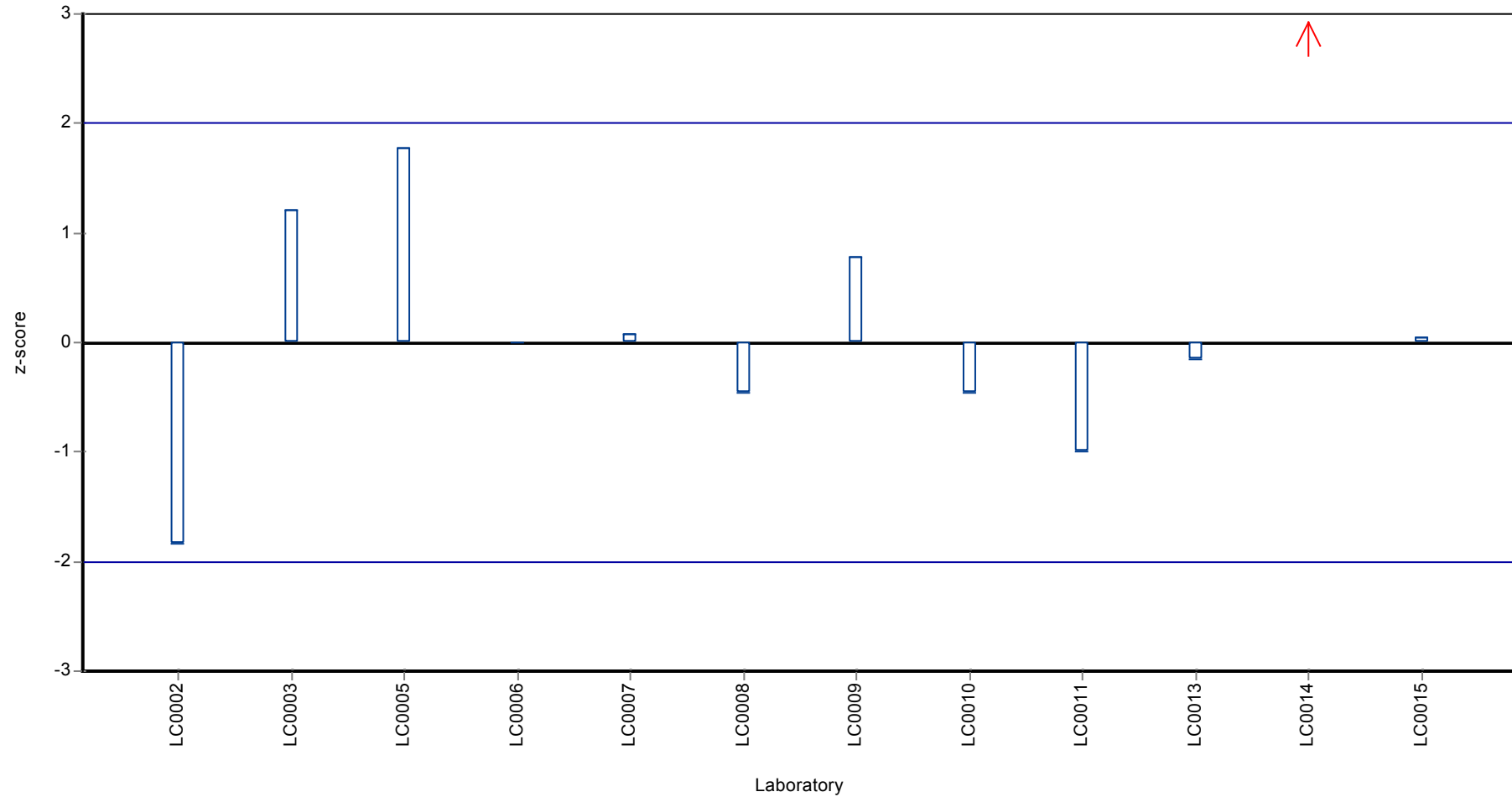
Recovery rate



Parameter oriented report Pharmaceuticals, Industrial Chemicals and Artificial Sweeteners - AZ3

Sample: AZ3B, Parameter: Sulfamethoxazole

Z-score



8 Laboratory oriented report

The laboratory oriented report is sorted by laboratory code.

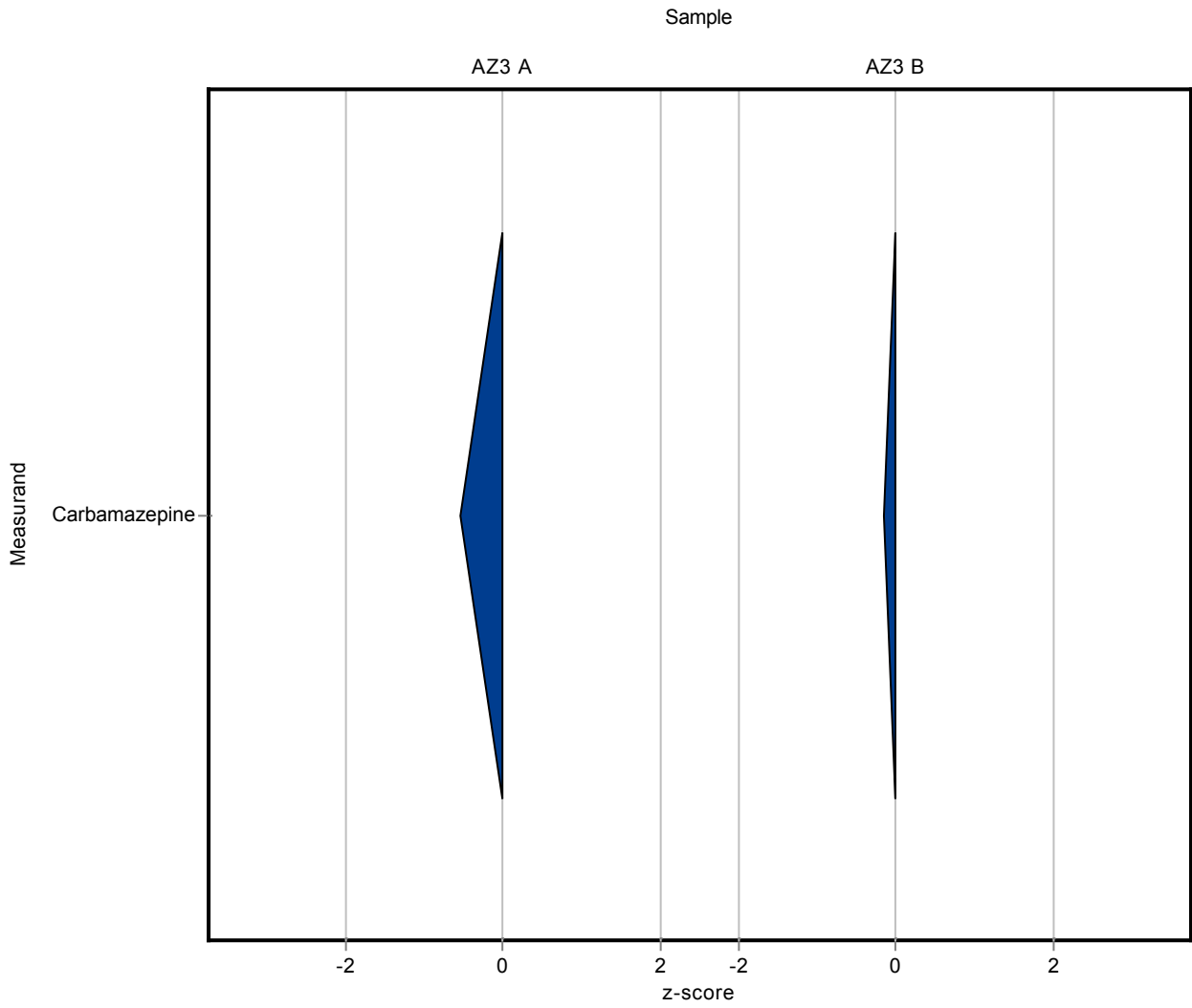
The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-------|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | - | - | 0.0446 | - | - |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | - | - | 0.0341 | - | - |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | 0.022 | 0.007 | 0.00456 | 89.7 | -0.55 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | - | - | 0.0155 | - | - |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | - ± - | - | - | - | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | - | - | 0.00343 | - | - |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|------|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | - | - | 0.299 | - | - |
| Benzotriazole | µg/l | 7.47 ± 0.428 | - | - | 0.377 | - | - |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | 0.6 | 0.18 | 0.0779 | 98.1 | -0.15 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | - | - | 0.304 | - | - |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | - | - | 0.233 | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | - | - | 0.013 | - | - |



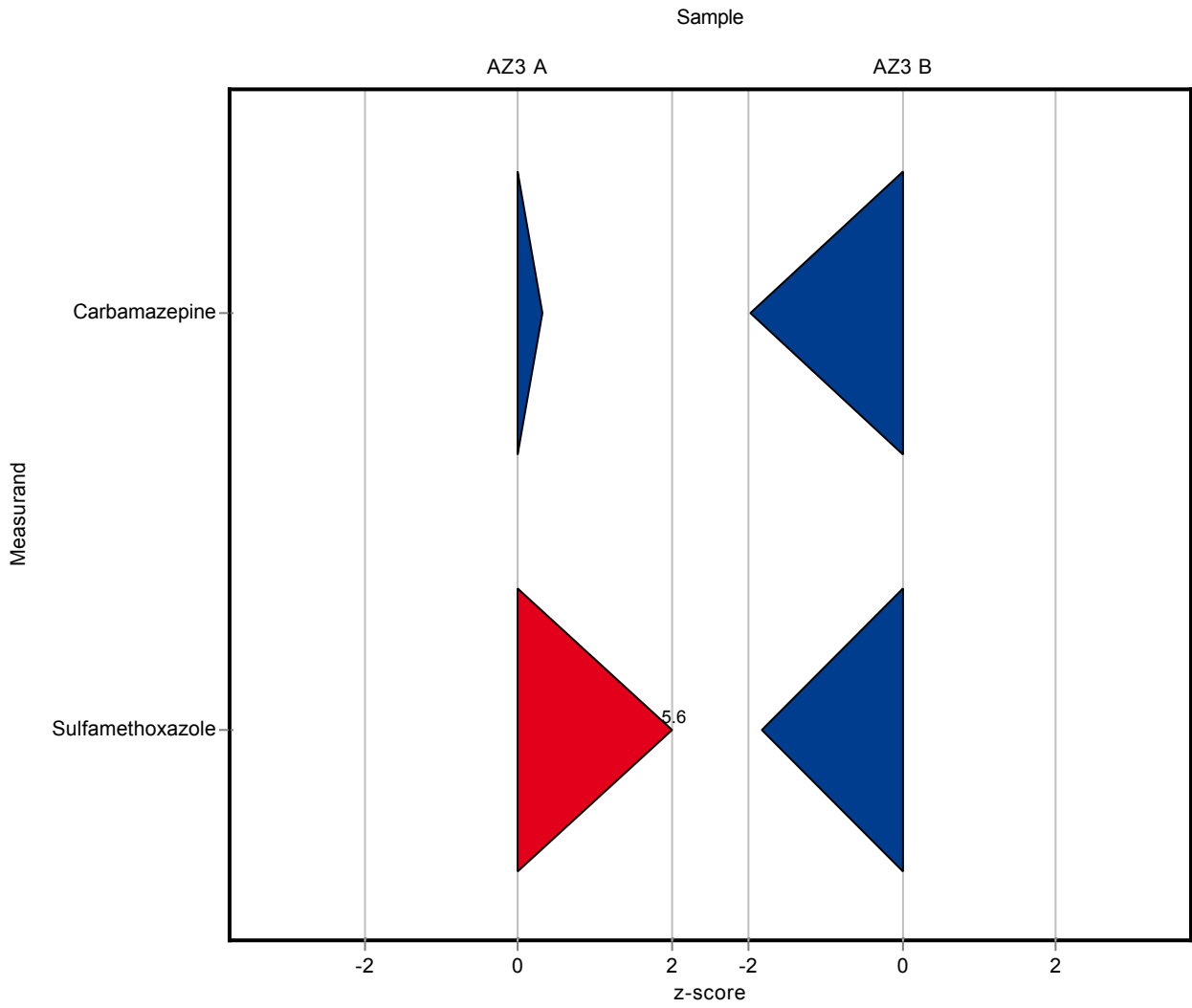
The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-------|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | - | - | 0.0446 | - | - |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | - | - | 0.0341 | - | - |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | 0.026 | 0.008 | 0.00456 | 106 | 0.32 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | - | - | 0.0155 | - | - |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | - ± - | - | - | - | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | 0.066 | 0.016 | 0.00343 | 141 | 5.59 |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-------|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | - | - | 0.299 | - | - |
| Benzotriazole | µg/l | 7.47 ± 0.428 | - | - | 0.377 | - | - |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | 0.458 | 0.134 | 0.0779 | 74.9 | -1.97 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | - | - | 0.304 | - | - |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | - | - | 0.233 | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | 0.043 | 0.01 | 0.013 | 64.3 | -1.84 |



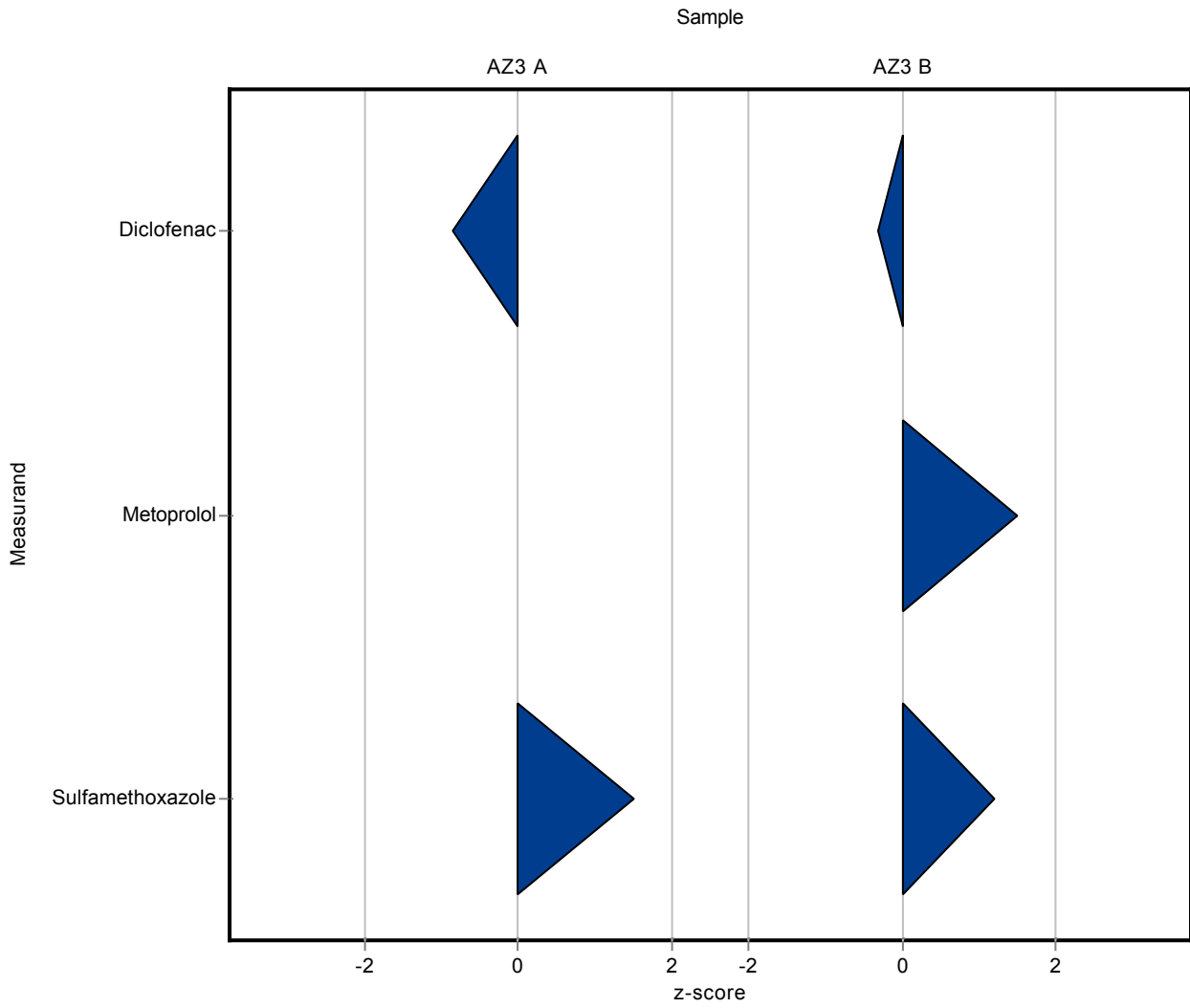
The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|-------------|-----|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | - | - | 0.0446 | - | - |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | - | - | 0.0341 | - | - |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | - | - | 0.00456 | - | - |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | 0.138 | - | 0.0155 | 91.4 | -0.84 |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | - ± - | <0.05 (LOQ) | - | - | - | - |
| Sotalol | µg/l | - ± - | <0.01 (LOQ) | - | - | - | - |
| Sucralose | µg/l | - ± - | 0.153 | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | 0.052 | - | 0.00343 | 111 | 1.52 |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-----|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | - | - | 0.299 | - | - |
| Benzotriazole | µg/l | 7.47 ± 0.428 | - | - | 0.377 | - | - |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | - | - | 0.0779 | - | - |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | 3.14 | - | 0.304 | 96.9 | -0.33 |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | 1.69 | - | 0.233 | 126 | 1.5 |
| Sotalol | µg/l | - ± - | 1.06 | - | - | - | - |
| Sucralose | µg/l | - ± - | 2.48 | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | 0.0826 | - | 0.013 | 123 | 1.2 |



The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-----|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | - | - | 0.0446 | - | - |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | - | - | 0.0341 | - | - |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | - | - | 0.00456 | - | - |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | - | - | 0.0155 | - | - |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | - ± - | - | - | - | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | - | - | 0.00343 | - | - |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-----|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | - | - | 0.299 | - | - |
| Benzotriazole | µg/l | 7.47 ± 0.428 | - | - | 0.377 | - | - |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | - | - | 0.0779 | - | - |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | - | - | 0.304 | - | - |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | - | - | 0.233 | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | - | - | 0.013 | - | - |

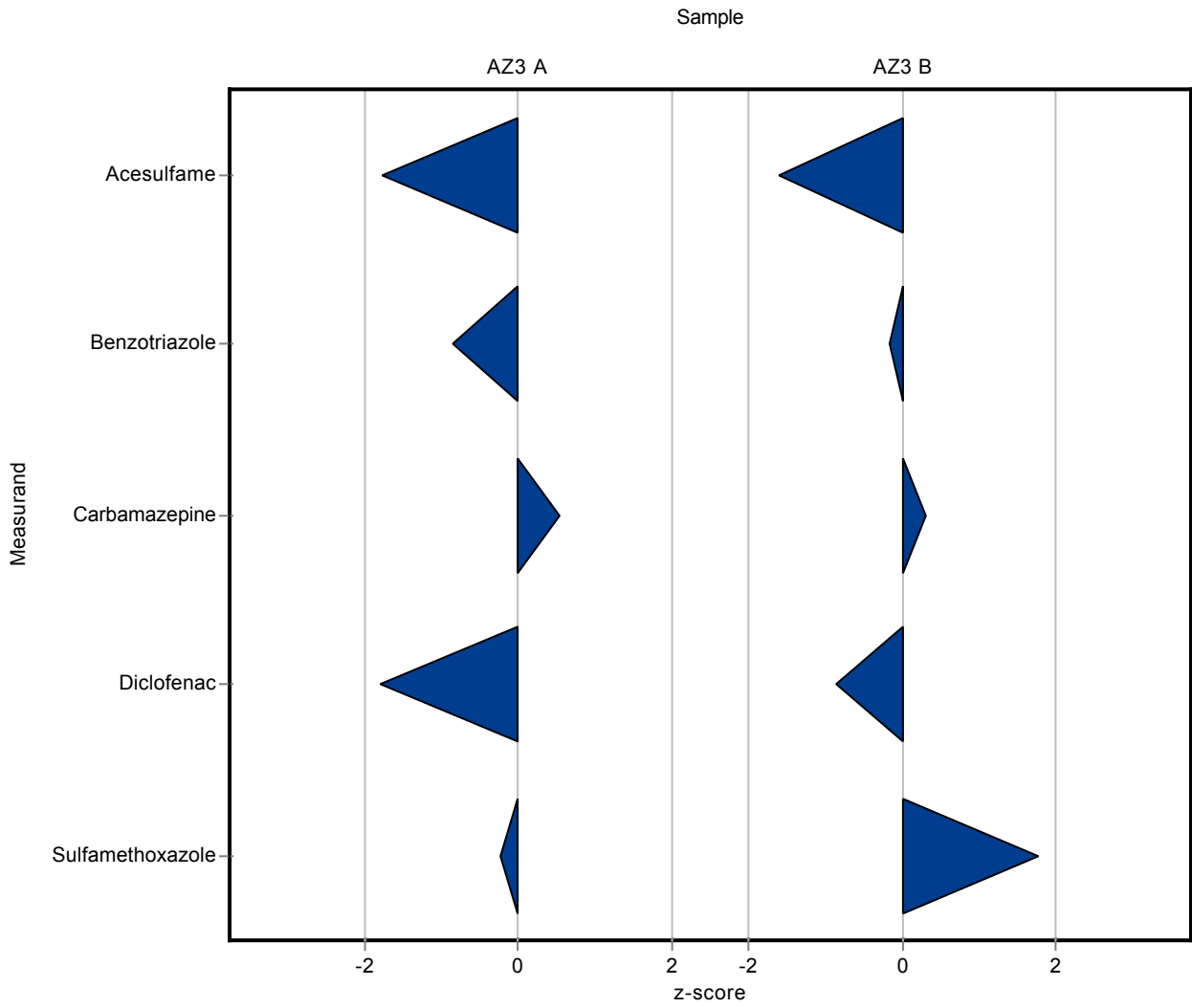
The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-------|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | 0.156 | 0.039 | 0.0446 | 66.6 | -1.76 |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | 0.28 | 0.07 | 0.0341 | 90.5 | -0.86 |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | 0.027 | 0.007 | 0.00456 | 110 | 0.54 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | 0.123 | 0.031 | 0.0155 | 81.5 | -1.8 |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | - ± - | - | - | - | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | 0.046 | 0.012 | 0.00343 | 98.3 | -0.23 |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-------|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | 0.799 | 0.2 | 0.299 | 62.4 | -1.61 |
| Benzotriazole | µg/l | 7.47 ± 0.428 | 7.41 | 1.85 | 0.377 | 99.2 | -0.16 |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | 0.635 | 0.159 | 0.0779 | 104 | 0.3 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | 2.98 | 0.745 | 0.304 | 92 | -0.85 |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | - | - | 0.233 | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | 0.09 | 0.023 | 0.013 | 134 | 1.77 |



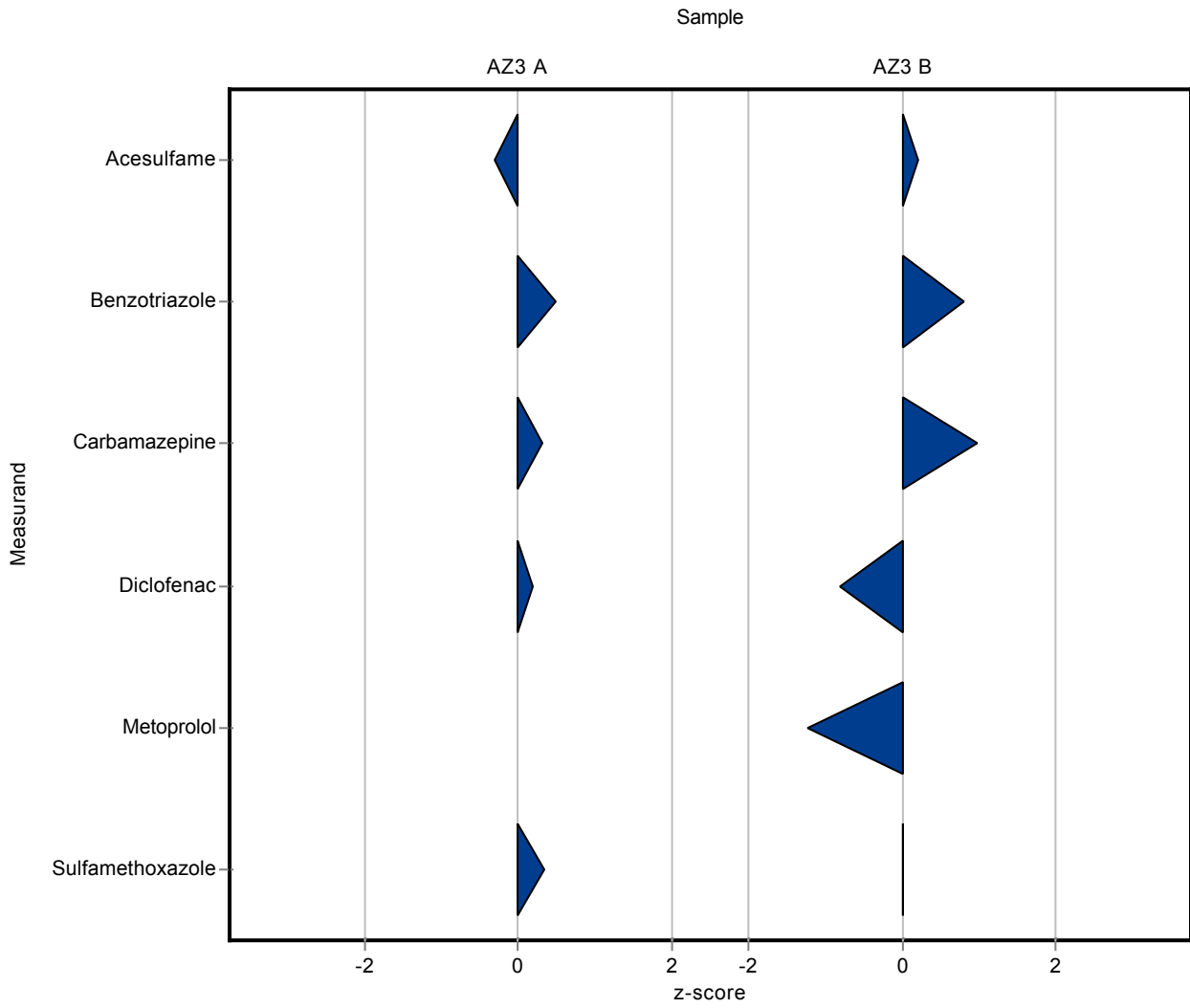
The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|-------------|-------|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | 0.221 | 0.055 | 0.0446 | 94.3 | -0.3 |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | 0.326 | 0.081 | 0.0341 | 105 | 0.49 |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | 0.026 | 0.006 | 0.00456 | 106 | 0.32 |
| Diazepam | µg/l | - ± - | 0.165 | 0.033 | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | 0.154 | 0.038 | 0.0155 | 102 | 0.19 |
| Ibuprofen | µg/l | - ± - | 0.245 | 0.049 | - | - | - |
| Metoprolol | µg/l | - ± - | <0.01 (LOQ) | - | - | - | - |
| Sotalol | µg/l | - ± - | <0.01 (LOQ) | - | - | - | - |
| Sucralose | µg/l | - ± - | 0.235 | 0.071 | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | 0.048 | 0.012 | 0.00343 | 103 | 0.35 |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|-------------|-------|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | 1.338 | 0.335 | 0.299 | 104 | 0.19 |
| Benzotriazole | µg/l | 7.47 ± 0.428 | 7.771 | 1.943 | 0.377 | 104 | 0.8 |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | 0.688 | 0.172 | 0.0779 | 112 | 0.98 |
| Diazepam | µg/l | - ± - | <0.01 (LOQ) | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | 2.995 | 0.749 | 0.304 | 92.4 | -0.81 |
| Ibuprofen | µg/l | - ± - | 1.508 | 0.302 | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | 1.049 | 0.262 | 0.233 | 78.3 | -1.25 |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | 8.009 | 2.403 | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | 0.067 | 0.017 | 0.013 | 100 | 0.01 |



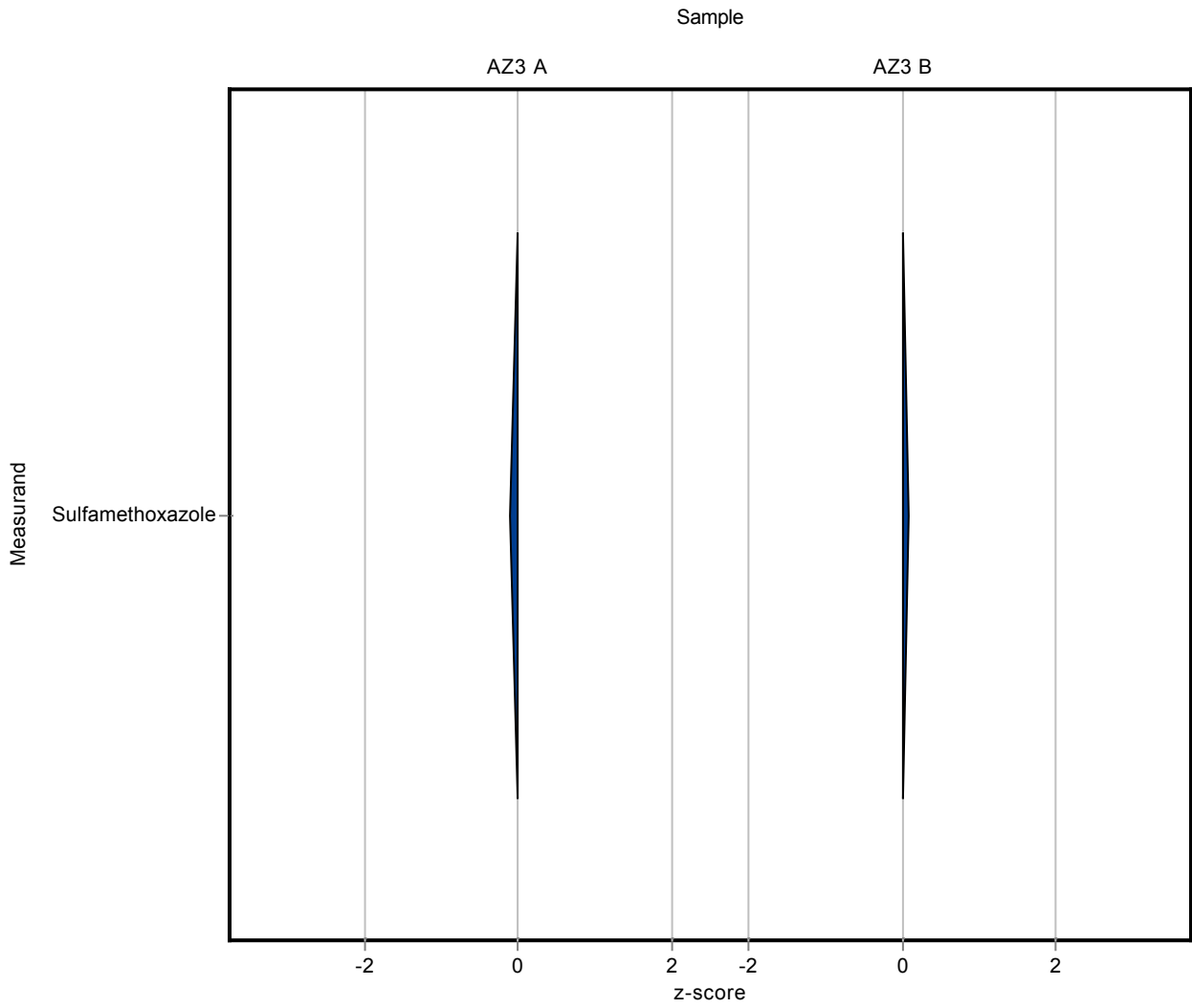
The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|--------|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | - | - | 0.0446 | - | - |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | - | - | 0.0341 | - | - |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | - | - | 0.00456 | - | - |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | - | - | 0.0155 | - | - |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | - ± - | - | - | - | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | 0.0464 | 0.0014 | 0.00343 | 99.2 | -0.11 |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-------|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | - | - | 0.299 | - | - |
| Benzotriazole | µg/l | 7.47 ± 0.428 | - | - | 0.377 | - | - |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | - | - | 0.0779 | - | - |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | - | - | 0.304 | - | - |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | - | - | 0.233 | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | 0.0679 | 0.002 | 0.013 | 101 | 0.08 |



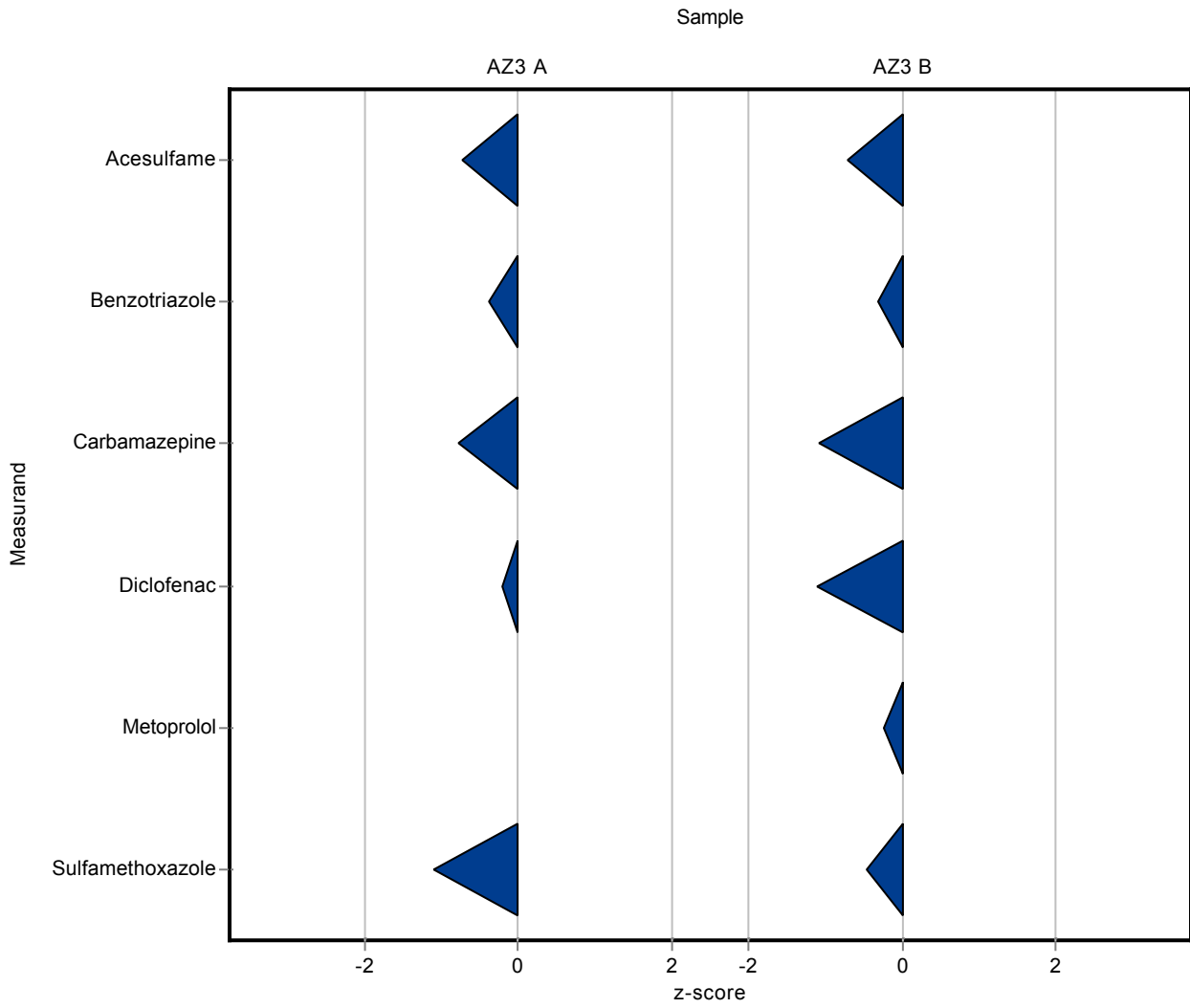
The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-------|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | 0.202 | 0.036 | 0.0446 | 86.2 | -0.73 |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | 0.296 | 0.053 | 0.0341 | 95.7 | -0.39 |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | 0.021 | 0.004 | 0.00456 | 85.6 | -0.77 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | 0.148 | 0.027 | 0.0155 | 98 | -0.19 |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | - ± - | 0.019 | 0.003 | - | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | 0.29 | 0.052 | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | 0.043 | 0.008 | 0.00343 | 91.9 | -1.1 |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-------|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | 1.069 | 0.192 | 0.299 | 83.5 | -0.71 |
| Benzotriazole | µg/l | 7.47 ± 0.428 | 7.347 | 1.322 | 0.377 | 98.3 | -0.33 |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | 0.528 | 0.095 | 0.0779 | 86.3 | -1.07 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | 2.902 | 0.522 | 0.304 | 89.6 | -1.11 |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | 1.286 | 0.231 | 0.233 | 96 | -0.23 |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | 8.278 | 1.49 | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | 0.061 | 0.011 | 0.013 | 91.2 | -0.46 |



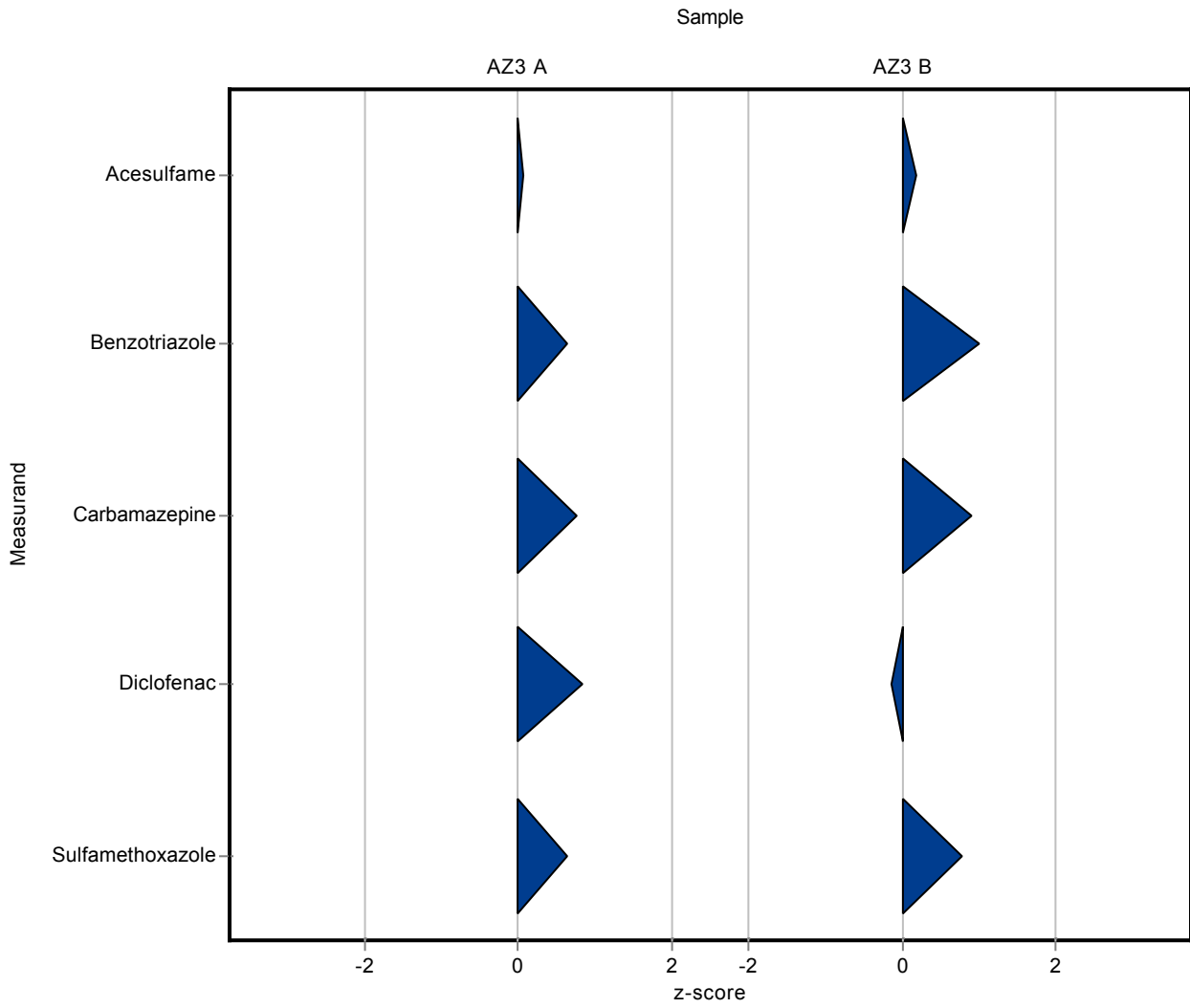
The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-------|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | 0.237 | 0.038 | 0.0446 | 101 | 0.06 |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | 0.331 | 0.066 | 0.0341 | 107 | 0.64 |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | 0.028 | 0.005 | 0.00456 | 114 | 0.76 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | 0.164 | 0.026 | 0.0155 | 109 | 0.84 |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | - ± - | - | - | - | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | 0.267 | 0.053 | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | 0.049 | 0.008 | 0.00343 | 105 | 0.64 |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-------|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | 1.334 | 0.213 | 0.299 | 104 | 0.18 |
| Benzotriazole | µg/l | 7.47 ± 0.428 | 7.844 | 1.569 | 0.377 | 105 | 0.99 |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | 0.682 | 0.109 | 0.0779 | 111 | 0.9 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | 3.195 | 0.511 | 0.304 | 98.6 | -0.15 |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | - | - | 0.233 | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | 9.727 | 1.945 | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | 0.077 | 0.012 | 0.013 | 115 | 0.78 |



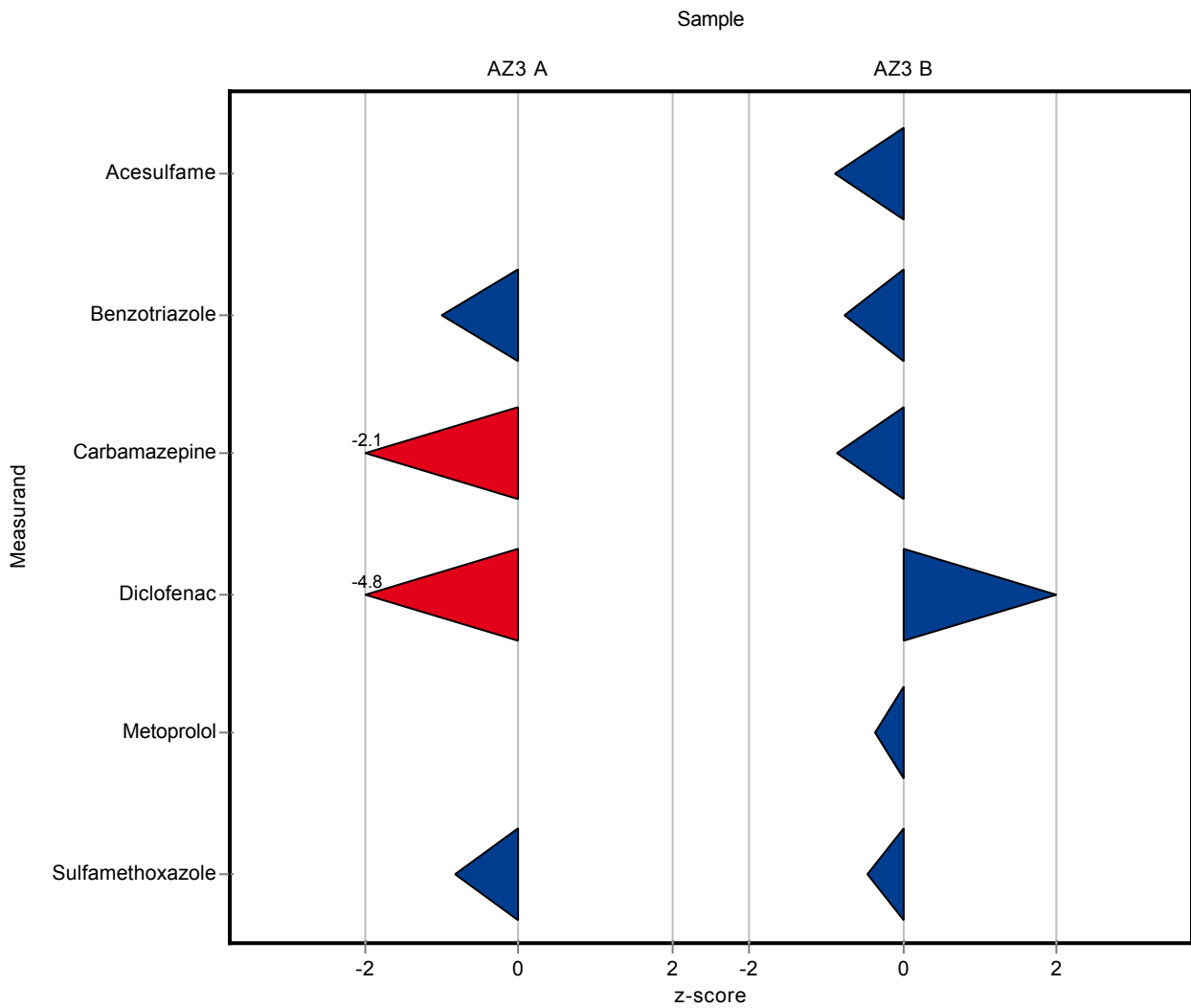
The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target | ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|--------|-----------|--------------|--------|----------|----------|---------|
| Acesulfame | µg/l | 0.234 | ± 0.0473 | <0.5 (LOQ) | - | 0.0446 | - | - |
| Benzotriazole | µg/l | 0.309 | ± 0.0341 | 0.275 | 0.023 | 0.0341 | 88.9 | -1 |
| Carbamazepine | µg/l | 0.0245 | ± 0.00413 | 0.015 | 0.0014 | 0.00456 | 61.2 | -2.09 |
| Diazepam | µg/l | - | ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 | ± 0.0155 | 0.077 | 0.0065 | 0.0155 | 51 | -4.76 |
| Ibuprofen | µg/l | - | ± - | - | - | - | - | - |
| Metoprolol | µg/l | - | ± - | <0.025 (LOQ) | - | - | - | - |
| Sotalol | µg/l | - | ± - | <0.025 (LOQ) | - | - | - | - |
| Sucralose | µg/l | - | ± - | <0.25 (LOQ) | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 | ± 0.00311 | 0.044 | 0.003 | 0.00343 | 94 | -0.81 |

Sample: AZ3B

| Parameter | Unit | Target | ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|--------|-----------|--------|--------|----------|----------|---------|
| Acesulfame | µg/l | 1.28 | ± 0.318 | 1.016 | 0.183 | 0.299 | 79.3 | -0.88 |
| Benzotriazole | µg/l | 7.47 | ± 0.428 | 7.181 | 0.603 | 0.377 | 96.1 | -0.77 |
| Carbamazepine | µg/l | 0.612 | ± 0.0739 | 0.544 | 0.0522 | 0.0779 | 88.9 | -0.87 |
| Diazepam | µg/l | - | ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 | ± 0.304 | 3.846 | 0.323 | 0.304 | 119 | 1.99 |
| Ibuprofen | µg/l | - | ± - | - | - | - | - | - |
| Metoprolol | µg/l | 1.34 | ± 0.286 | 1.255 | 0.203 | 0.233 | 93.7 | -0.36 |
| Sotalol | µg/l | - | ± - | 1.07 | 0.202 | - | - | - |
| Sucralose | µg/l | - | ± - | 11.4 | 0.775 | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 | ± 0.0118 | 0.061 | 0.004 | 0.013 | 91.2 | -0.46 |



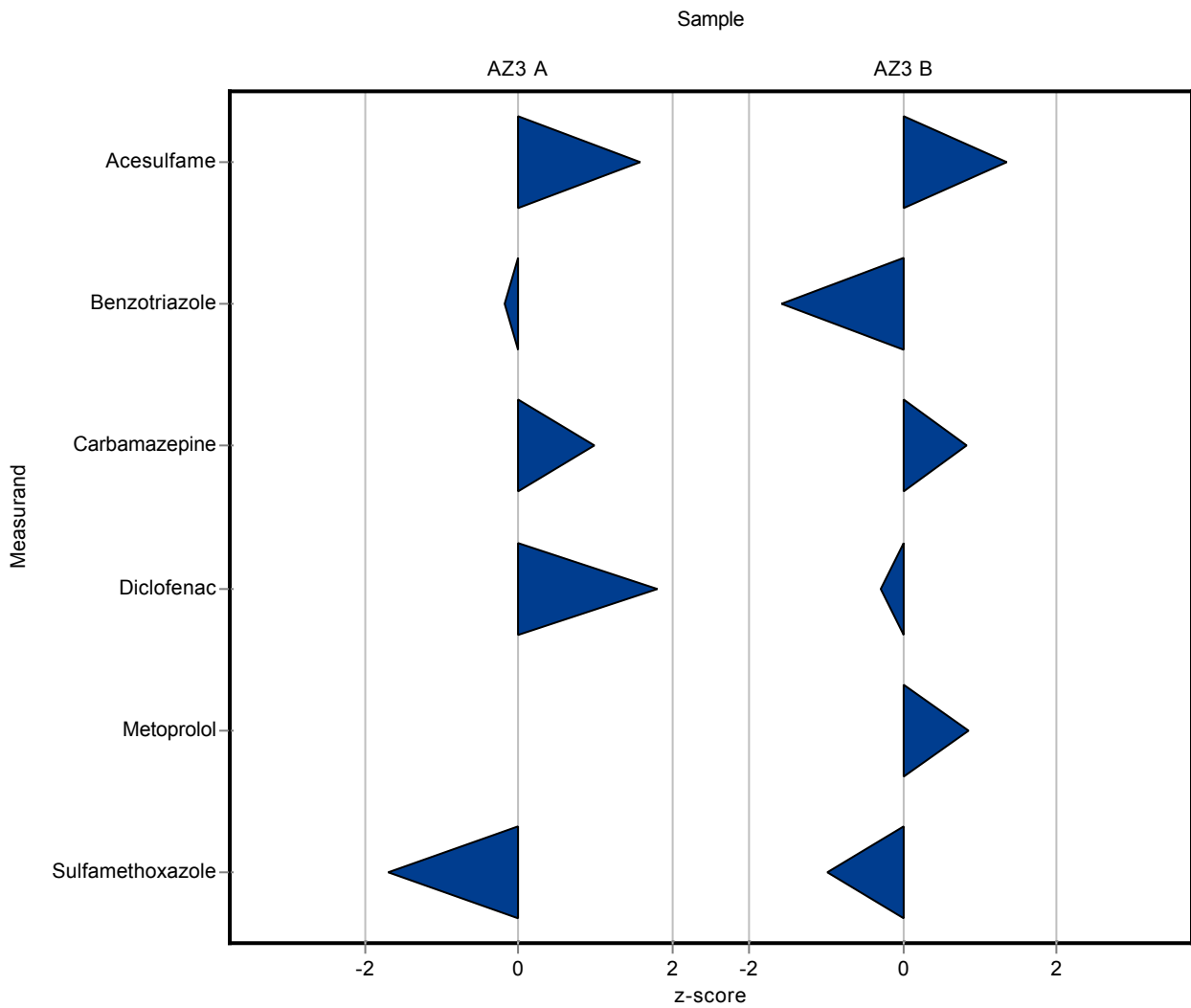
The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|------------|-------|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | 0.305 | 0.061 | 0.0446 | 130 | 1.58 |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | 0.303 | 0.061 | 0.0341 | 98 | -0.18 |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | 0.029 | 0.006 | 0.00456 | 118 | 0.98 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | 0.179 | 0.036 | 0.0155 | 119 | 1.8 |
| Ibuprofen | µg/l | - ± - | <0.1 (LOQ) | - | - | - | - |
| Metoprolol | µg/l | - ± - | 0.012 | 0.002 | - | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | 0.041 | 0.008 | 0.00343 | 87.6 | -1.69 |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|------------|-------|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | 1.68 | 0.34 | 0.299 | 131 | 1.33 |
| Benzotriazole | µg/l | 7.47 ± 0.428 | 6.87 | 1.37 | 0.377 | 92 | -1.59 |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | 0.676 | 0.135 | 0.0779 | 111 | 0.83 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | 3.15 | 0.63 | 0.304 | 97.2 | -0.3 |
| Ibuprofen | µg/l | - ± - | <0.1 (LOQ) | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | 1.54 | 0.31 | 0.233 | 115 | 0.86 |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | 0.054 | 0.011 | 0.013 | 80.7 | -0.99 |



The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-----|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | - | - | 0.0446 | - | - |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | - | - | 0.0341 | - | - |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | - | - | 0.00456 | - | - |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | - | - | 0.0155 | - | - |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | - ± - | - | - | - | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | - | - | 0.00343 | - | - |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-----|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | - | - | 0.299 | - | - |
| Benzotriazole | µg/l | 7.47 ± 0.428 | - | - | 0.377 | - | - |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | - | - | 0.0779 | - | - |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | - | - | 0.304 | - | - |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | - | - | 0.233 | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | - | - | 0.013 | - | - |

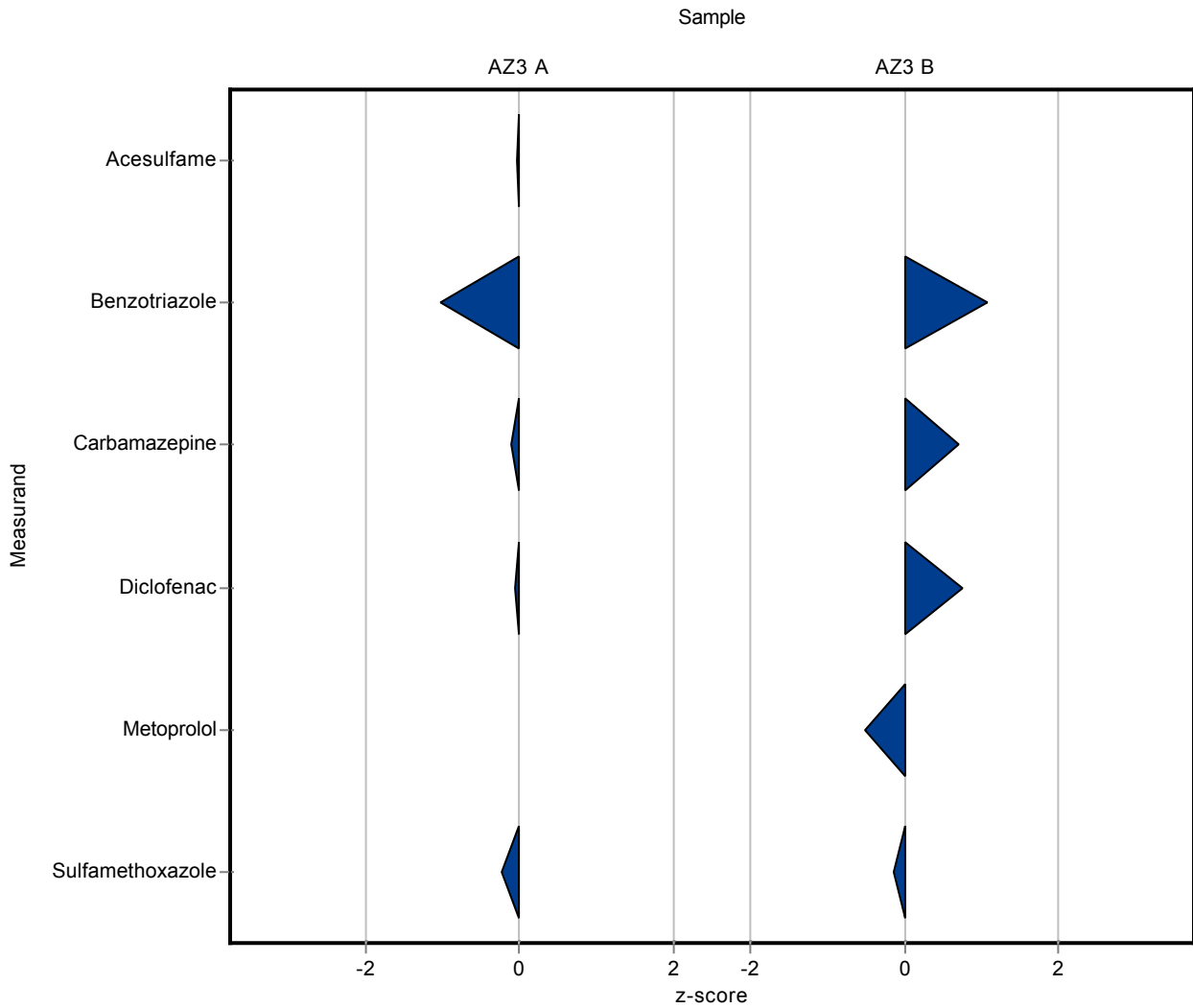
The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|---------|--------|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | 0.233 | 0.047 | 0.0446 | 99.4 | -0.03 |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | 0.274 | 0.082 | 0.0341 | 88.6 | -1.03 |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | 0.024 | 0.005 | 0.00456 | 97.9 | -0.12 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | 0.15 | 0.045 | 0.0155 | 99.3 | -0.06 |
| Ibuprofen | µg/l | - ± - | 0.107 | 0.021 | - | - | - |
| Metoprolol | µg/l | - ± - | 0.0099 | 0.0019 | - | - | - |
| Sotalol | µg/l | - ± - | <0.0022 | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | 0.046 | 0.007 | 0.00343 | 98.3 | -0.23 |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|-------------|-------|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | - | - | 0.299 | - | - |
| Benzotriazole | µg/l | 7.47 ± 0.428 | 7.872 | 1.574 | 0.377 | 105 | 1.06 |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | 0.667 | 0.133 | 0.0779 | 109 | 0.71 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | 3.471 | 0.694 | 0.304 | 107 | 0.76 |
| Ibuprofen | µg/l | - ± - | <0.03 (LOQ) | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | 1.219 | 0.244 | 0.233 | 91 | -0.52 |
| Sotalol | µg/l | - ± - | 0.862 | 0.172 | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | 0.065 | 0.013 | 0.013 | 97.1 | -0.15 |



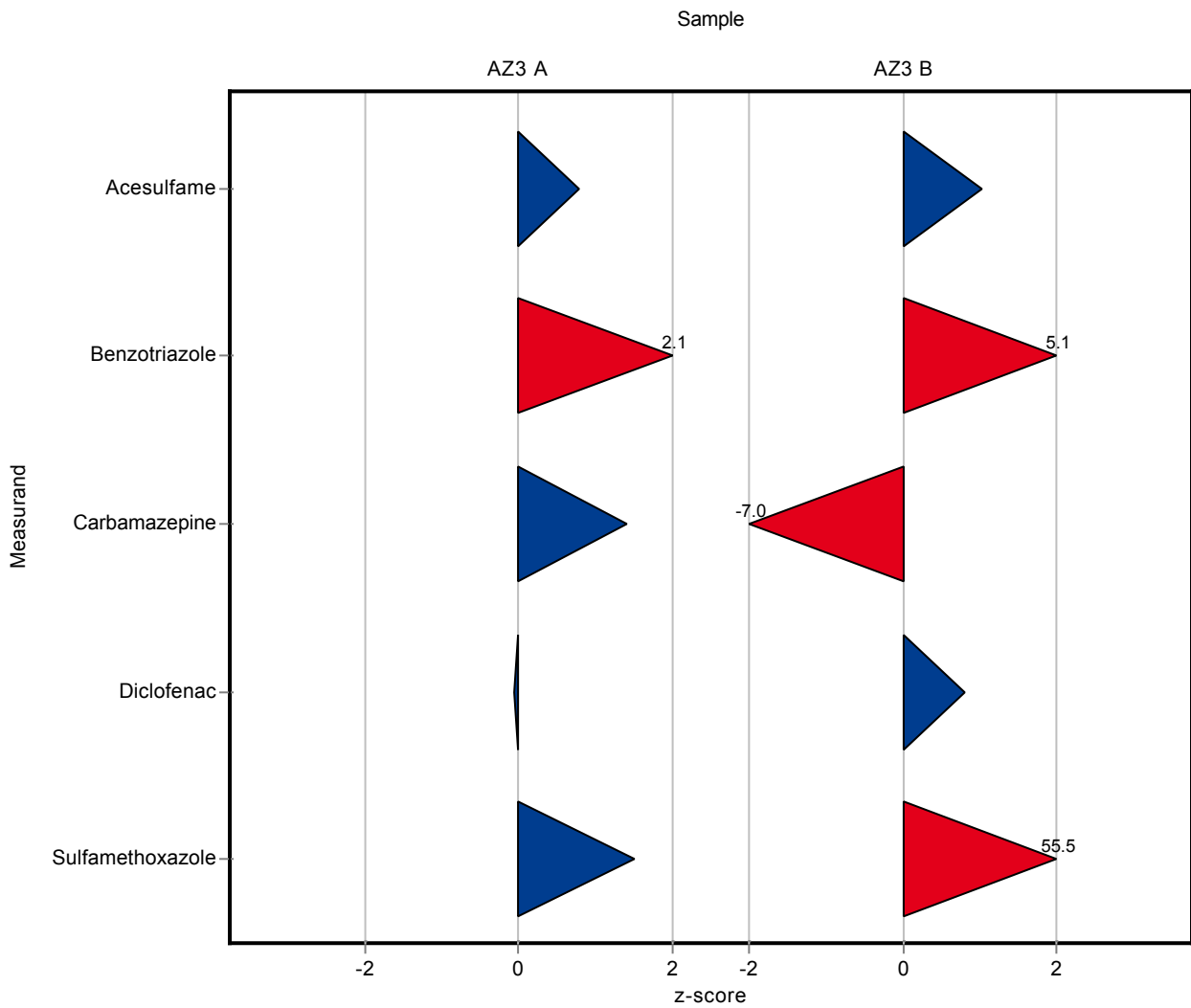
The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-------|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | 0.27 | 0.043 | 0.0446 | 115 | 0.8 |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | 0.38 | 0.038 | 0.0341 | 123 | 2.07 |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | 0.031 | 0.003 | 0.00456 | 126 | 1.42 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | 0.15 | 0.022 | 0.0155 | 99.3 | -0.06 |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | - ± - | - | - | - | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | 0.052 | 0.005 | 0.00343 | 111 | 1.52 |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|--------|-------|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | 1.59 | 0.254 | 0.299 | 124 | 1.03 |
| Benzotriazole | µg/l | 7.47 ± 0.428 | 9.4 | 0.94 | 0.377 | 126 | 5.11 |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | 0.069 | 0.007 | 0.0779 | 11.3 | -6.97 |
| Diazepam | µg/l | - ± - | - | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | 3.48 | 0.52 | 0.304 | 107 | 0.79 |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | - | - | 0.233 | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | 0.789 | 0.079 | 0.013 | 1180 | 55.5 |



The following results were achieved:

Sample: AZ3A

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|-------------|-------|----------|----------|---------|
| Acesulfame | µg/l | 0.234 ± 0.0473 | 0.251 | 0.028 | 0.0446 | 107 | 0.37 |
| Benzotriazole | µg/l | 0.309 ± 0.0341 | 0.318 | - | 0.0341 | 103 | 0.26 |
| Carbamazepine | µg/l | 0.0245 ± 0.00413 | 0.0208 | - | 0.00456 | 84.8 | -0.82 |
| Diazepam | µg/l | - ± - | 0.211 | - | - | - | - |
| Diclofenac | µg/l | 0.151 ± 0.0155 | 0.153 | - | 0.0155 | 101 | 0.13 |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | - ± - | <0.01 (LOQ) | - | - | - | - |
| Sotalol | µg/l | - ± - | <0.01 (LOQ) | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0468 ± 0.00311 | 0.0473 | - | 0.00343 | 101 | 0.15 |

Sample: AZ3B

| Parameter | Unit | Target ± CI(99%) | Result | ± U | Criteria | Recovery | z-score |
|------------------|------|------------------|-------------|-------|----------|----------|---------|
| Acesulfame | µg/l | 1.28 ± 0.318 | 1.419 | 0.156 | 0.299 | 111 | 0.46 |
| Benzotriazole | µg/l | 7.47 ± 0.428 | - | - | 0.377 | - | - |
| Carbamazepine | µg/l | 0.612 ± 0.0739 | 0.639 | - | 0.0779 | 104 | 0.35 |
| Diazepam | µg/l | - ± - | <0.01 (LOQ) | - | - | - | - |
| Diclofenac | µg/l | 3.24 ± 0.304 | - | - | 0.304 | - | - |
| Ibuprofen | µg/l | - ± - | - | - | - | - | - |
| Metoprolol | µg/l | 1.34 ± 0.286 | - | - | 0.233 | - | - |
| Sotalol | µg/l | - ± - | - | - | - | - | - |
| Sucralose | µg/l | - ± - | - | - | - | - | - |
| Sulfamethoxazole | µg/l | 0.0669 ± 0.0118 | 0.0676 | - | 0.013 | 101 | 0.05 |

