Explanation Monthly Detailed Report

Results for each element are shown on separate pages. Select the report you wish to view using the "Samples", "Method Set" and "Analyte" boxes, as described for the Review Report.

The table on the left shows the robust statistics, calculated according to Algorithm A (ISO 13528) from all results submitted and also for specific methods. No outlier exclusion test is used before the calculation of robust statistics. N is the number of results, Mean is the robust mean of results, SD is the robust standard deviation of results and CV is the coefficient of variation and it is equal to the robust standard deviation divided by the robust mean multiplied by 100.

In the table on the right you see your result, the robust mean of all the results obtained with your method, the assigned value (robust mean of all the results), your bias expressed as a percentage and your z-score. Bias and z-score are calculated using the following equations:

Bias = [(lab result – assigned value) / assigned value] * 100

z-score = (lab result – assigned value) / standard deviation for proficiency testing

Values for "Standard deviation for proficiency testing" are included in the document "Explanation Monthly review report".

The statistics (means, standard deviation, coefficient of variation, bias, z-score) are calculated from the not-rounded results, expressed in mass unit and then rounded to three significant figures (means, standard deviation, coefficient of variation, bias) or one decimal figure (z-score). Finally, conversion in molar unit is performed.

When the number of participants is lower than 15, a message indicates that the stastistics are given for educational purposes.

The histogram shows the distribution of the results from all participants, centered on the assigned value. The width of each bar is 1 robust Standard Deviation. The light grey bars represent all results reported by laboratories using your method while the dark grey bars show the results obtained with all the other methods. Your result is indicated with a red diamond. Results exceeding the assigned value +4.5 SD are shown all together in the bar at the extreme right, above the sign ">". On the extreme left, the bar above the sign "<" shows all the results lesser than the assigned value - 4.5 SD. The grey background to the histogram indicates the concentration range corresponding to z-scores between -3 and + 3.

Explanation Monthly Detailed Report

OELM-MDR_EN.v2[06-2015]

The chart at the bottom of the page shows the z-scores for the past 12 months. The window between +2 and -2 z-score is white. The zones for scores between 2 and 3 z-score (positive and negative sides) are pale grey and the zones for scores of more than 3 z-score are shaded with a darker grey. The black squares are the scores for your individual results. The red line represents the mean z-score of the last 24 results (cumulative z-score). Z-scores < -5 or > 5 (outliers) are not included in the calculation of the cumulative z-score, but to warn the lab that they made a blunder, they are shown at the extreme edge (positive or negative) of the graph, as red dots. For new participant, new scheme, new method set, use of more than one method set the red line represents the mean z-score of the past results from the beginning of the cycle or use of the method set.