



Dear Laboratorian,

Enclosed are your Data Reduction Reports from Maine Standards Company.

Data Reduction Service from Maine Standards Company includes both linearity and peer group analysis. Therefore, the Data Reduction Reports contain two sections - the first section is the linearity analysis of your data and the second section is an analysis of your results as compared to results from your peer group.

Some key aspects of the reports are highlighted below. For a more detailed explanation of the sections of the report, please visit our website, [www.mainestandards.com/Analysis.htm](http://www.mainestandards.com/Analysis.htm).

### **Linearity Analysis:**

**Target Values** – Calculated based on the actual recovered values submitted. A detailed explanation of the calculation of target values can be found at <http://www.mainestandards.com/targets.htm>.

**Tables** – The report shows results for bottle level (“L”) and Linear Dilution level (“X”). Data is displayed in ascending order for linear dilution level. Therefore, for inverted analytes and analytes with 6 Levels, the linear dilution level will not correspond with bottle Level.

**Applied Limits** - Fifty percent of the total allowable error, as defined by CLIA (42 CFR 493) and/or other published industry acceptable standards, is used in the linearity analysis. Fifty percent of the total allowable error for linearity is based on comparison of output from the Maine Standards Company data reduction method and the method outlined in CLSI (formerly NCCLS) EP-6A Volume 23 No. 16: **Evaluation of the Linearity of Quantitative Measurement Procedures: A Statistical Approach; Approved Guideline.**

**Graph** - Displays your individual recovered values for each linear dilution level (effective X value) versus your calculated target values. If Peer Group data is available, your graph will also display the Peer Mean value for each linear dilution level.

### **Peer Group Analysis:**

**Peer Statistics Table** - Displays statistical information for your peer group.

**Peer Comparison Table** – Provides a comparison of your mean values to the peer mean values for each linear dilution level. An evaluation of the deviation from the peer mean is also provided. Fifty percent of the total allowable error, as defined by CLIA (42 CFR 493) and/or other published industry acceptable standards, is used in the peer group analysis.

**Graph** - Displays your mean recovered values as compared to peer means at each linear dilution level. Your mean results are plotted as a percent difference from the peer means. The red lines on the graph represent the allowable error for each level. The yellow lines represent two times the percent Coefficient of Variation (% CV) for each level.

In some cases there may be insufficient data available to provide Peer Group statistics for a particular analyte. The statement “No Peer Data Available” will be displayed over the Peer Statistics and Peer Comparison Tables and no % Difference plot will be displayed. However, if any peer data is available, you will receive a report detailing the Peer Minimum, Peer Median and Peer Maximum for each linear dilution level as well as a comparison of your mean to the Peer Median. No % Difference plot will be displayed.

If you have any questions, please feel free to contact Technical Support at 1-800-377-9684.

Data Reduction Department  
Maine Standards Company