



# MDL ESTIMATION

Method No: SOP-300  
Rev. No.: 2.0  
Effective Date: January 31, 2006

Analyte(s): **Example**

Analytical Procedure: **AP-XXX**

Instrument: Instrument ID

Date Performed (mm/dd/yy): Date

Performed by: Technician

Reporting Units: **units**

"Estimated" MDL: **1** units

Note: Prepared Lab Standard Concentration should be should be 5 - 10 times "Estimate MDL"

Prepared Lab Standard Concentration: **5** units

**OK**

Accepted

Note: Maximum 1 outlier per analytical MDL batch

|   | Replicate Number | Value units | Excluded Outlier <sup>(1)</sup> (x) | Accepted Value units |
|---|------------------|-------------|-------------------------------------|----------------------|
| Note: Each sample must be processed through the entire analytical procedure and must be recorded in run order | 1                | 4.350       |                                     | 4.350                |
|   | 2                | 4.880       |                                     | 4.880                |
|   | 3                | 5.100       |                                     | 5.100                |
|   | 4                | 5.250       |                                     | 5.250                |
|   | 5                | 4.900       |                                     | 4.900                |
|   | 6                | 5.150       |                                     | 5.150                |
|   | 7                | 4.510       |                                     | 4.510                |
|   | 8                | 4.850       |                                     | 4.850                |
|   | 9                | 5.130       |                                     | 5.130                |
|   | 10               | 5.300       |                                     | 5.300                |
|   | 11               |             |                                     |                      |

Number of Replicates (n) : **10** **OK**

Standard Deviation (S) : 0.3123

Student t Value (t<sub>(n-1)</sub>) : 2.821

Mean Analyte Level : **4.942** units

Mean Analyte Recovery : **98.8** %

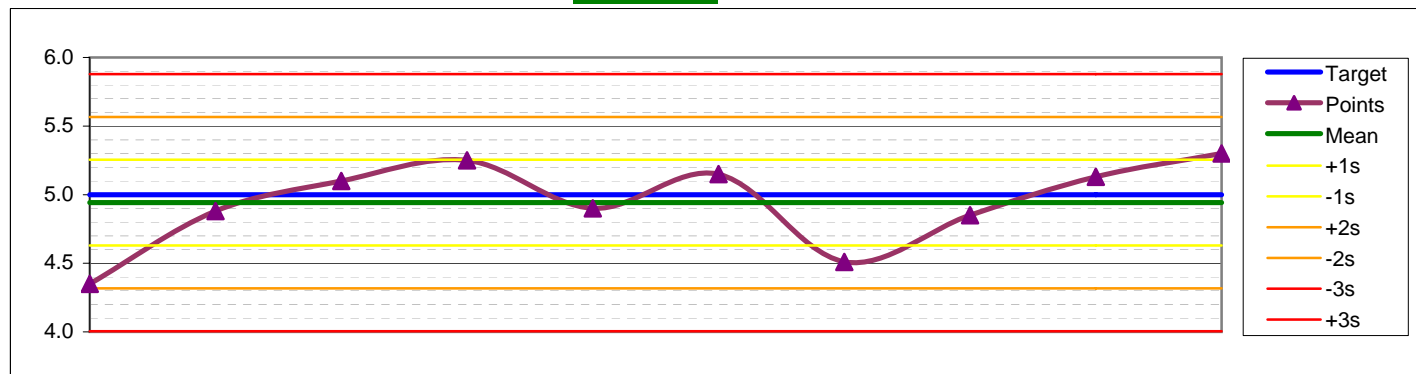
Note: report calculated MDL to two significant digits

Calculated MDL: **0.8810** units **MDL**

Note: MDL should be 5 - 10 times Mean Analyte Level **5.61**

(1) - Outlier identified by the Dixon Test

0 **OK**



Notes: (please include any information which may be pertinent, i.e. instrument conditions, replicate exclusion reasons, etc.)

Technician Signature: \_\_\_\_\_

Lab Manager Signature: \_\_\_\_\_

Please forward completed sheet to Laboratory Manager for approval.