MDL ESTIMATION

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

Analyte(s): **Example**

Analyical 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**

Note: Maximum 1 outlier per analytical MDL batch

Replicate Number	Value *units*	Excluded Outlier(1) *(x)*	Accepted Value units
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			
		0	**OK**

Note: Each sample must be processed through the entire analytical procedure and must be recorded in run order

(1) - Outlier identified by the Dixon Test

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

Standard Deviation (S) : 0.3123

Student t Value ($t_{(n-1)}$) : 2.821

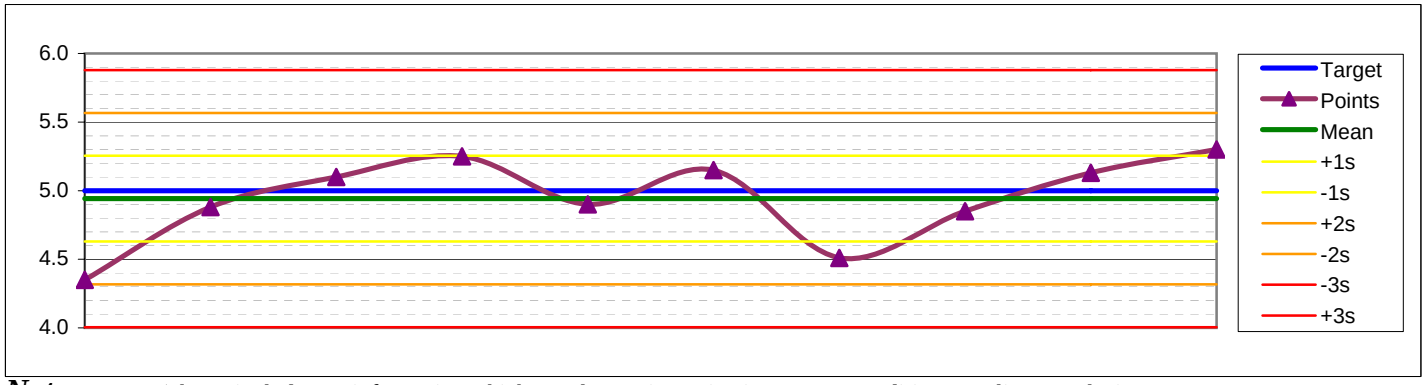
Mean Analyte Level : **4.942** **units**

Mean Analyte Recovery : **98.8** **%**

Note: report calculated MDLto two significant digits

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

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



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.