Certificate No.: FT0007-069-071911

Mettler Toledo
Service Business Unit Laboratory
1900 Polaris Parkway
Columbus, OH 43240
1-800-METTLER

METTLER TOLEDO

Standard Calibration Certificate

Customer

Company:	ABC Pharma Incorporated		
Address:	1432 East 9th Street		
City:	Columbus	*State/Province:*	OH
Zip/Postal:	43322		
Contact:	John Buttler	*Work Order No:*	98984759

Device

Manufacturer:	Mettler Toledo	*Terminal Type:*	IND780
Model:	KE1500 1500kg	*Serial No. Terminal:*	767287876HYH
Serial No.:	9889828892	*Printer Serial No.:*	8973743988
Max Capacity:	1500 kg	*Location:*	Formulation Rm 4B
Readability:	0.2 kg	*Asset No.:*	89879992
Scale Class:	III	*Verification Value:*	0.2 kg
Tolerance Type:	In-Service		

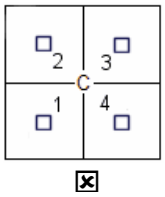
Procedure Statement: The device referenced in this document has been metrologically tested in accordance with METTLER TOLEDO Work Instruction. All translations into other languages are based on the referenced work instruction, which is in English.
This certificate refers to : As Found and As Left

Conform Statement: This device was tested in accordance with MT SOP # VP0080A and is certified to **CONFORM** with MT Procedures.

Test Date:	19-Jul-2011	*Next Cal. Due Date:*	31-Jul-2012
Service Technician:	Craig Stickel	*Signature:*	ELECTRONIC SIGNATURE

Measuring Results

Eccentricity



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Test Weight 500 kg

	AS FOUND		*AS LEFT*	
Position	*Displayed Value*	*Deviation*	*Displayed Value*	*Deviation*
Center	500.0 kg	N/A	500.0 kg	N/A
Left Front	500.0 kg	0.0 kg	500.0 kg	0.0 kg
Left Rear	499.8 kg	0.2 kg	500.0 kg	0.0 kg
Right Rear	500.0 kg	0.0 kg	500.0 kg	0.0 kg
Right Front	500.2 kg	0.2 kg	500.0 kg	0.0 kg
Maximum Deviation:	0.2 kg		0.0 kg	
Allowable Deviation:	0.6 kg		0.6 kg	
Within Tolerances:	YES		YES	

Linearity

	As Found				
	Nominal Value	*Reading*	*Error*	*Allowable Error*	*Within Tolerances*
1	0 kg	0.0 kg	0.0 kg	0.2 kg	YES
2	4 kg	4.2 kg	0.2 kg	0.2 kg	YES
3	250 kg	250.0 kg	0.0 kg	0.4 kg	YES
4	500 kg	500.0 kg	0.0 kg	0.6 kg	YES
5	750 kg	749.8 kg	-0.2 kg	0.6 kg	YES
6	1000 kg	1000.0 kg	0.0 kg	0.6 kg	YES
7	1500 kg	1500.0 kg	0.0 kg	0.6 kg	YES

	As Left				
	Nominal Value	*Reading*	*Error*	*Allowable Error*	*Within Tolerances*
1	0 kg	0.0 kg	0.0 kg	0.2 kg	YES
2	4 kg	4.0 kg	0.0 kg	0.2 kg	YES
3	250 kg	250.0 kg	0.0 kg	0.4 kg	YES
4	500 kg	500.0 kg	0.0 kg	0.6 kg	YES
5	750 kg	750.0 kg	0.0 kg	0.6 kg	YES
6	1000 kg	1000.0 kg	0.0 kg	0.6 kg	YES
7	1500 kg	1500.0 kg	0.0 kg	0.6 kg	YES

Repeatability

Test Weight: 750 kg

	Without Test Weight	*With Test Weight*	*Actual Value*
1	0.0 kg	750.0 kg	750.0 kg
2	0.0 kg	750.0 kg	750.0 kg
3	0.0 kg	750.0 kg	750.0 kg
	Deviation:		0.0 kg
	Allowable Error:		0.6 kg
	Within Tolerances:		YES

Uncertainty

Loads Applied	x_i	0 kg	4 kg	250 kg	500 kg
Combined Uncertainty	$u(E_I)$	± 0.06 kg	± 0.06 kg	± 0.06 kg	± 0.06 kg
Expanded Uncertainty	U	± 0.12 kg	± 0.12 kg	± 0.12 kg	± 0.12 kg

Loads Applied	x_i	750 kg	1000 kg	1500 kg	N/A
Combined Uncertainty	$u(E_I)$	± 0.06 kg	± 0.06 kg	± 0.07 kg	N/A
Expanded Uncertainty	U	± 0.12 kg	± 0.12 kg	± 0.14 kg	N/A

Note that measurement uncertainty was not included in the comparison to the MPE. If your procedures require inclusion of measurement uncertainty, the current uncertainty requires increasing the MPE by an expansion factor of 30%.

METTLER TOLEDO

Minimum Weight Certificate

Expanded Measurement Uncertainty

U	=	Uo	+	C	x	I
Ur1	=	0.12 kg		0.000013		Load

Value "I" represents the display at various net loads

Example calculated expanded measurement uncertainty values at different net weight displays:

Net Weight Display	*Expanded Measurement Uncertainty*	
1.5 kg	0.1 kg	8.00133 %
15 kg	0.1 kg	0.80133 %
150 kg	0.1 kg	0.08133 %
750 kg	0.1 kg	0.01733 %
1500 kg	0.1 kg	0.00933 %

Explanation of minimum weight table:

The minimum weight values in this table indicate where the instrument expanded measurement uncertainty (k=2, ~95% confidence) multiplied by a safety factor is equal to or lower than the required weighing accuracy. Find the minimum weight value where the required Weighing Accuracy (0.1, 0.2, 0.5, 1, 2, 5%) intersects the desired Safety Factor (1, 2, 3, 5).

Table of minimum net weight display values (minimum weights) for different weighing accuracies and various safety factors

	Safety Factors			
Weighing Accuracy	*1x (no safety factor)*	*2x (safety factor of 2)*	*3x (safety factor of 3)*	*5x (safety factor of 5)*
0.1 %	121.6 kg	246.6 kg	375.0 kg	642.9 kg
0.2 %	60.4 kg	121.6 kg	183.7 kg	310.3 kg
0.5 %	24.1 kg	48.3 kg	72.6 kg	121.6 kg
1 %	12.0 kg	24.1 kg	36.1 kg	60.4 kg
2 %	6.0 kg	12.0 kg	18.0 kg	30.1 kg
5 %	2.4 kg	4.8 kg	7.2 kg	12.0 kg

Notes on minimum weight values in above table:

1. If “N/A” is shown above, no appropriate value could be calculated.
2. For multirange and multi-interval devices, the display values in the above table apply to the smallest weighing range.
3. METTLER TOLEDO is not responsible for the proper selection of a Weighing Accuracy or Safety Factor.
4. The user is responsible for ensuring that device settings are not modified from the settings at the time the tests for producing this certificate were conducted.
5. The user is responsible for ensuring that the environment does not change from that found at the time the tests for producing this certificate were conducted.

METTLER TOLEDO

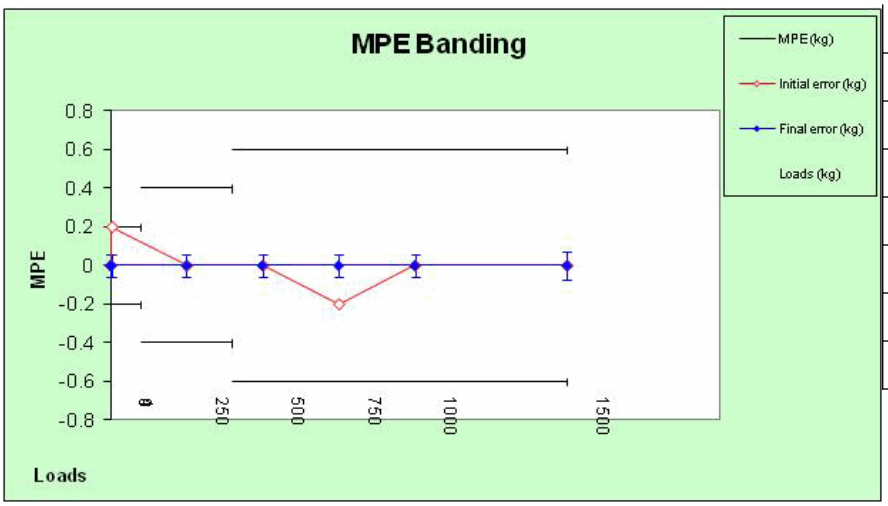
Reference Weights

Traceability All weights used for metrological testing are traceable to national or international standards. The weights were calibrated and certified by an accredited calibration laboratory.

Weight Set 1

Weight Set No.:	M1 Weight Set	*Certificate Number:*	667739928378
Class:	M1	*Date of Issue:*	1-Feb-2011
Calibration Due Date:	1-Feb-2012		

MPE Banding



Maximum Permissible Error		
Class III		
e = 0.2 kg		
Start	*End*	*Tolerance*
0.00	100.00	0.2
100.00	400.00	0.4
400.00	1,500.00	0.6
In-Service Tolerance		

Remarks

None.