Certificate ID
CH0001-057-210228-EP

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METTLER TOLEDO

Certificate Ph. Eur. General Chapter 2.1.7 "Balances for Analytical Purposes"

Customer

Company:	Omega Pharma Manufacturing		
Address:	1900 Polaris Pkwy		
City:	Columbus	**Contact:**	John Doe
Zip/Postal:	43235	**Order Number:**	PO12345
State/Province:	OH		

Weighing Device

Manufacturer:	Mettler Toledo	**Instrument Type:**	Weighing Instrument
Model:	XPR205DR	**Asset Number:**	1111111111
Serial No.:	1234567890	**Terminal Model:**	N/A
Building:	GD	**Terminal Serial No.:**	N/A
Floor:	4th floor	**Terminal Asset No.:**	N/A
Room:	GD610	**Alternate Asset No.:**	EP98493211

Range	Max. Capacity	Readability (d)
1	81 g	0.00001 g
2	220 g	0.0001 g

Procedure

Reference Document:	Ph. Eur. General Chapter 2.1.7
METTLER TOLEDO Work Instruction:	Pharmacopeial Certificate WI 10000027820

This certificate contains measurements for the As Found and As Left tests.

The sensitivity of the weighing instrument was adjusted before the As Left tests.

As Found Test Date:	28-FEB-2011	**Service Technician:**	Klaus Fritsch
As Left Test Date:	28-FEB-2021		
Issue Date:	28-FEB-2021		
Next Test Date:	28-FEB-2022		

Summary of Results

Repeatability			As Found	As Left
Test	**Smallest Net Weight**	**Tare Load**	N/A	N/A
RP_SNW_0.05g	0.05 g	N/A	✓	✓
Accuracy			**As Found**	**As Left**
Eccentricity			✓	✓
Linearity			✓	✓
Sensitivity			✓	✓

Measurement Results

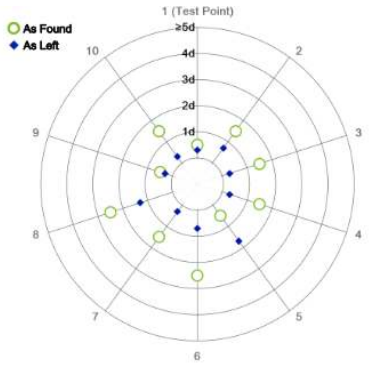
Repeatability

Repeatability Test RP_SNW_0.05g

Smallest Net Weight: 0.05 g
Test Load: 10 g
Tare Load: N/A
Tare Vessel ID: N/A
Tare Vessel Description: N/A

	As Found	As Left
1	10.00002 g	10.00000 g
2	10.00003 g	10.00001 g
3	10.00001 g	9.99998 g
4	10.00001 g	10.00000 g
5	9.99999 g	10.00000 g
6	10.00001 g	10.00001 g
7	10.00001 g	10.00000 g
8	10.00001 g	9.99999 g
9	10.00002 g	9.99999 g
10	9.99999 g	10.00001 g

Mean Value	**10.000010 g**	**9.999999 g**
Standard Deviation	**0.000012 g**	**0.000010 g**
Assessment [1)]	**0.05 %** ✓	**0.04 %** ✓
Requirement	**0.10 %**	**0.10 %**
Minimum Weight [2)]	**0.02494 g**	**0.01989 g**



The "d" in the graph represents the readability of the range/interval in which the test was performed.
The results of this graph are based upon the absolute values of the differences from the mean value.

[1)] The repeatability test is passed if 2 * standard deviation / smallest net weight ≤ 0.10 %. If the calculated standard deviation results in a value smaller than the rounding error of 0.41*d where d is the readability of the range/interval in which the test was performed, then the standard deviation is replaced by 0.41*d for the assessment.

[2)] Minimum weight = 2000 * standard deviation. If the calculated standard deviation results in a value smaller than the rounding error of 0.41*d where d is the readability of the range/interval in which the test was performed, then the standard deviation is replaced by 0.41*d. In this case, minimum weight = 2000 * 0.41 * d.

All calculations are performed in the software to 16 decimal places, however the printed results are rounded according the following rules: The standard deviation is rounded mathematically to one digit further than the readability of the range/interval in which the test was performed. The minimum weight is rounded mathematically to three significant figures. For the repeatability assessment, the printed result of the formula (2*standard deviation / smallest net weight) or (2 * 0.41*d / smallest net weight, respectively) is rounded mathematically to the same readability as the repeatability requirement (0.10%), i.e. with two digits after the decimal when presented as a percentage.

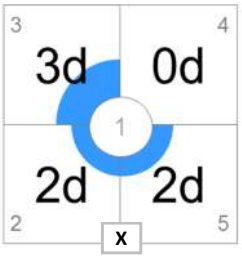
Accuracy

Eccentricity

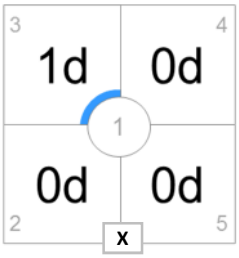
Test Load: 70 g

Position	As Found	As Left
1	70.00000 g	70.00000 g
2	70.00002 g	70.00000 g
3	69.99997 g	70.00001 g
4	70.00000 g	70.00000 g
5	70.00002 g	70.00000 g

Max Deviation [1)]	**0.00003 g** ✓	**0.00001 g** ✓
Requirement	**0.03500 g**	**0.03500 g**



As Found



As Left

The "d" in the graph represents the readability of the range/interval in which the test was performed.
The results of this graph are based upon the values of the differences from the center value.

[1)] The eccentricity test is passed if the maximum deviation ≤ 0.05 % of the test load value. The requirement for the assessment of an individual balance property in respect to accuracy is 0.05 %. This ensures adherence to the overall accuracy requirement of 0.10 % because other balance properties might also limit the accuracy of the instrument.

Linearity

As Found

	Test Load	CMV	Indication	Deviation [1)]	Requirement
1	50 g	50.00002 g	50.00005 g	0.00003 g ✓	0.02500 g
2	100 g	99.9999 g	100.0000 g	0.0001 g ✓	0.05000 g
3	150 g	150.0001 g	150.0003 g	0.0002 g ✓	0.07500 g
4	220 g	220.0001 g	200.0007 g	0.0006 g ✓	0.11000 g

As Left

	Test Load	CMV	Indication	Deviation [1)]	Requirement
1	50 g	50.00002 g	50.00003 g	0.00001 g ✓	0.02500 g
2	100 g	99.9999 g	99.9999 g	0.0000 g ✓	0.05000 g
3	150 g	150.0001 g	150.0001 g	0.0000 g ✓	0.07500 g
4	220 g	220.0001 g	220.0002 g	0.0001 g ✓	0.11000 g

[1)] The linearity test is passed if the maximum deviation ≤ 0.05 % of the test load value. The requirement for the assessment of an individual balance property in respect to accuracy is 0.05 %. This ensures adherence to the overall accuracy requirement of 0.10 % because other balance properties might also limit the accuracy of the instrument.

Sensitivity

The largest test point of the linearity test is also used to assess sensitivity.

Reference Weights

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: OIML E_2

Weight Set No.:	WS12345_E2	**Date of Issue:**	04-JAN-2021
Certificate Number:	34567890	**Calibration Due Date:**	03-JAN-2023

Remarks

Remark regarding this mockup: Within the Accuracy test, only the test of sensitivity is compulsory. Tests of eccentricity and linearity are voluntary and can be added upon the user's request.