

Mettler Toledo LabTec  
Service LabTec  
Im Langacher  
8606 Greifensee  
N/A

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

## Customer

Company:	Sample Customer		
Address:	Sample Address		
City:	Sample City	Contact:	Customer contact
Zip/Postal:	Sample	Order Number:	N/A
State/Province:	Sample State		

## Weighing Device

Manufacturer:	Mettler Toledo	Instrument Type:	Weighing Instrument
Model:	MX205DU	Asset Number:	Asset no. 111
Serial No.:	03102025	Alternate Asset No.:	Alt. Asset no. 777
Building:	Building	Terminal Model:	N/A
Floor:	Floor	Terminal Serial No.:	N/A
Room:	Room	Terminal Asset No.:	N/A

Range	Max. Capacity	Readability (d)
1	82 g	0.00001 g
2	220 g	0.0001 g

## Procedure

Reference Document:	Ph. Eur. General Chapter 2.1.7
METTLER TOLEDO Work Instruction:	Pharmacopeia Certificate "SVC-WI-MTLABTEC-058"

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

As Found Test Date:	05-Jan-2026	Service Technician:	
As Left Test Date:	05-Jan-2026		
Issue Date:	05-Jan-2026		Service Technician
Next Test Date:	31-Jan-2027		

## Summary of Results

Repeatability			As Found	As Left
Test	Smallest Net Weight	Tare Load	Assessment	Assessment
RP_SNW_0.05000g_Tare_50g_Load_10g	0.05000 g	50 g	✓	✓
RP_SNW_0.4000g_Tare_200g_Load_10g	0.4000 g	200 g	✓	✓
Accuracy			As Found	As Left
Eccentricity			✓	✓
Linearity			✓	✓
Sensitivity			✓	✓

## Measurement Results

### Repeatability

RP\_SNW\_0.05000g\_Tare\_50g\_Load\_10g

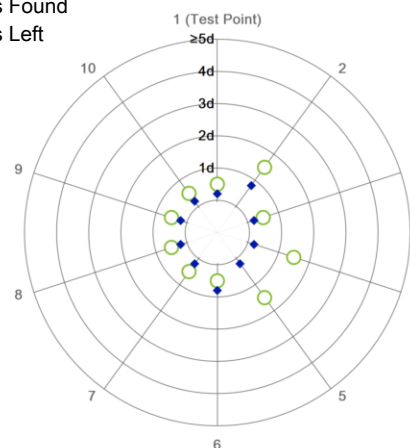
Smallest Net Weight: 0.05000 g  
Test Load: 10 g  
Tare Load: 50 g

Tare Vessel ID: N/A  
Tare Vessel Description: N/A

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

Mean Value	10.000005 g	10.000002 g
Standard Deviation	0.000010 g	0.000004 g
Calculation <sup>1</sup>	0.0389 %	0.0169 %
Assessment <sup>2</sup>	0.04 % ✓	0.02 % ✓
Requirement	0.10 %	0.10 %
Minimum Weight <sup>3</sup>	0.01944 g	0.00843 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 absolute values of the differences from the mean value.

RP\_SNW\_0.4000g\_Tare\_200g\_Load\_10g

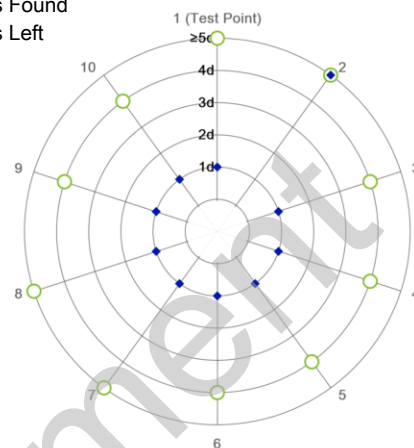
Smallest Net Weight: 0.4000 g  
Test Load: 10 g  
Tare Load: 200 g

Tare Vessel ID: N/A  
Tare Vessel Description: N/A

	As Found	As Left
1	10.0000 g	10.0000 g
2	10.0000 g	10.0001 g
3	9.9999 g	10.0000 g
4	9.9999 g	10.0000 g
5	9.9999 g	10.0000 g
6	9.9999 g	10.0000 g
7	10.0000 g	10.0000 g
8	10.0000 g	10.0000 g
9	9.9999 g	10.0000 g
10	9.9999 g	10.0000 g

Mean Value	9.99994 g	10.00001 g
Standard Deviation	0.00005 g	0.00003 g
Calculation <sup>1</sup>	0.0258 %	0.0205 %
Assessment <sup>2</sup>	0.03 %	0.02 %
Requirement	0.10 %	0.10 %
Minimum Weight <sup>3</sup>	0.1033 g	0.0820 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 absolute values of the differences from the mean value.

<sup>1</sup> The following value is calculated:  $2 * \text{standard deviation} / \text{smallest net weight}$ . If the standard deviation s is 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 s is replaced by  $0.41 * d$ .

<sup>2</sup> The assessment is carried out after the calculated value is mathematically rounded to the readability of the requirement of 0.10 %.

<sup>3</sup> Minimum weight =  $2000 * s$ . If the calculated standard deviation s is 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 s is replaced by  $0.41 * d$ . In this case, minimum weight =  $2000 * 0.41 * d$ .

All intermediate calculations are performed in the software to 16 decimal places.

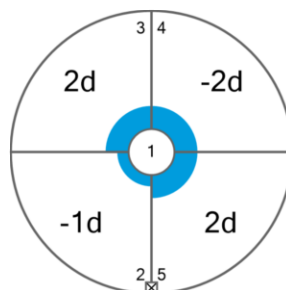
## Accuracy

### Eccentricity

Test Load: 100 g

Position	As Found	As Left
1	99.9999 g	100.0000 g
2	99.9998 g	100.0001 g
3	100.0001 g	100.0000 g
4	99.9997 g	99.9999 g
5	100.0001 g	100.0000 g

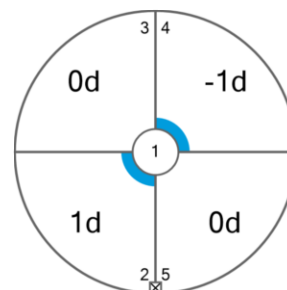
Maximum Deviation <sup>1</sup>	0.0002 g	0.0001 g
Requirement	0.0500 g	0.0500 g



As Found

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.



As Left

<sup>1</sup> The eccentricity test is passed if the maximum deviation  $\leq 0.05\%$  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

	Tare Load	Test Load	CMV	Indication	Deviation <sup>1</sup>	Requirement
1	N/A	50 g	50.00000 g	50.00001 g	0.00001 g ✓	0.02500 g
2	N/A	100 g	100.00000 g	99.9999 g	-0.0001 g ✓	0.0500 g
3	N/A	150 g	150.00000 g	149.9999 g	-0.0001 g ✓	0.0750 g
4	N/A	200 g	200.00000 g	199.9998 g	-0.0002 g ✓	0.1000 g

### As Left

	Tare Load	Test Load	CMV	Indication	Deviation <sup>1</sup>	Requirement
1	N/A	50 g	50.00000 g	49.99999 g	-0.00001 g ✓	0.02500 g
2	N/A	100 g	100.00000 g	100.00000 g	0.0000 g ✓	0.0500 g
3	N/A	150 g	150.00000 g	150.00001 g	0.0001 g ✓	0.0750 g
4	N/A	200 g	200.00000 g	200.00000 g	0.0000 g ✓	0.1000 g

<sup>1</sup> The linearity test is passed if the maximum deviation  $\leq 0.05\%$  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<sub>2</sub>

Weight Set No.:	E2 2013	Date of Issue:	24-Jul-2013
Certificate Number:	1234567	Calibration Due Date:	03-Oct-2029

## Remarks

The measurement results of the following tests were imported from the calibration certificate: CH4005-008-010526-ACC:

- Accuracy Test: Eccentricity
- Accuracy Test: Linearity

The user is responsible for maintaining the configuration (settings) of the balance which was used when the assessment was performed.

This document is issued to record completion of the work performed by METTLER TOLEDO on the subject device in accordance with agreed standards. It does not guarantee the continued performance of the subject device. Any measurements recorded are based on the subject device's performance at a given time as tested by METTLER TOLEDO and, except where explicitly stated otherwise, do not express an opinion as to the sufficiency of any customer designed procedures used to test the device. This document is not a warranty, either implied or express. METTLER TOLEDO expressly disclaims any liability arising from the use of the information in this document for any purpose other than as specified herein.

Safety Factor Information

Repeatability Test RP\_SNW\_0.05000g\_Tare\_50g\_Load\_10g

As Found		As Left	
- Safety Factor Defined	2.0	- Safety Factor Defined	2.0
- Safety Factor Achieved	2.6	- Safety Factor Achieved	5.9

Repeatability Test RP\_SNW\_0.4000g\_Tare\_200g\_Load\_10g

As Found		As Left	
- Safety Factor Defined	2.0	- Safety Factor Defined	2.0
- Safety Factor Achieved	3.9	- Safety Factor Achieved	4.9

\* Safety factor achieved is defined as (Smallest Net Weight / Minimum Weight)