CERTIFICATE of CALIBRATION

Issued By: AML Instruments Limited

10354

Issue Date: 18 October 2021 **Certificate Number: 5409-1**

AML Instruments Limited
Eco One, Highcliffe Business Park
The Cliff Ingham, Lincoln
Lincolnshire, LN1 2WE
01522 789375
sales@amlinstruments.co.uk

Approved Signatory:
Alex Leeson

Alex Leeson

Digitally signed by Alex Leeson
DN: cn=Alex Leeson gn=Alex Leeson c=GB United Kingdom l=GB United Kingdom o=AML Instruments Ltd e=alex@amlinstruments.co.uk
Reason: I am approving this document
Location:
Date: 2021-10-21 08:06+01:00

Customer:

Location: PCR Molecular
Job Card Number: 5409

Calibration Date: 14 October 2021 **Frequency:** 12 **Months**
Re Calibration: Oct 2022

Description: Non-Automatic Weighing Instrument
Manufacturer: Ohaus **Model** PX85
Serial Number: C123916420 **Customer Ref:**

Procedure: WI-1 **Calibrated By:** D.Leonard

Status of Calibration: **Pass** For tests B to D

Pass / Fail criteria based on a +/- error of 3 divisions where the acceptance band will equal the tolerance band with zero guard bands (shared risk) where the uncertainty of measurement, at the 95% confidence level, will be considered to assure that the TUR ≥ 1

Obervations

None

Traceability Information: The equipment used for this calibration was:

Serial Number:	Instrument:	Certificate Number:	
990a	Humidity & Temperature Meter	59477	UKAS
1900a	E2 Weights	8723	UKAS
560a	Barometer	C136537	UKAS

Basis of Test: The measurement results obtained are shown in the Table on the following page(s). The non-automatic weighing instrument has been calibrated using a weight set which is traceable to National and International standards. The method records measurements of non-linearity, eccentricity and carries out a repeatability test.

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Description: Non-Automatic Weighing Instrument

Method Of Test:

TEST A: Weights covering the full range of the IUT were applied to the centre of the load receptor prior to any adjustments, or immediately after the internally operated calibration cycle had completed (only with weigh instruments with integral calibration weights). This test was carried out prior to tests B,C and D and is designed to test the functionality of the IUT prior to calibration.

TEST B: Weights covering the range of under test of the IUT, Zero, 1/4, 1/2, 3/4 and full scale were applied to the centre of the load receptor in ascending order.

TEST C: A load of at least half the range under test of the IUT was applied to the centre of the load receptor five times for a capacity of < 100 kg 3 time for > 100 kg in the same position and then removed between each individual measurement.

TEST D: A load value equalling 1/3 or greater of the weighing range was applied, firstly to the centre of the load receptor, then at four off centre points

Environment:

Start of Test:		End of Test:	
Temperature (°C) :	22.1	Temperature (°C) :	24.1
Relative Humidity (%) :	51.3	Relative Humidity (%) :	47.3
Atmospheric Pressure (mbar):	1017	Atmospheric Pressure (mbar):	1016.4

Range Under Test	0	to	80	Readability	0.00001	Unit of Measurement	g

Internal Span Calibration Activated before commencement of calibration? Yes

Results of test as found prior to any adjustments

TEST A:

	Applied Mass	IUT Reading	Error
Zero	0	0.00000	0.00000
1/4	19.99999	20.00013	0.00014
1/2	39.999958	40.00014	0.00018
3/4	59.999971	60.00040	0.00043
Max	79.99993	80.00051	0.00058

Results of test after any adjustments (if applicable)

TEST A:

	Applied Mass	IUT Reading	Error
Zero	0	0.00000	0.00000
1/4	19.99999	20.00000	0.00001
1/2	39.999958	39.99996	0.00000
3/4	59.999971	59.99999	0.00002
Max	79.99993	79.99993	0.00000

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TEST B:

	Applied Mass	IUT Reading	Error
Zero	0	0.00000	0.00000
1/4	19.99999	20.00000	0.00001
1/2	39.999958	39.99995	-0.00001
3/4	59.999971	59.99996	-0.00001
Max	79.99993	79.99993	0.00000

TEST C:

Repeatability At:	IUT Reading
1	49.99998
2	49.99998
3	49.99997
4	49.99997
5	49.99998

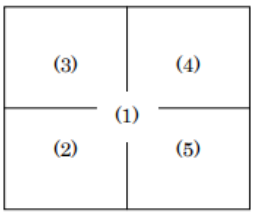
Less than 100 kg 5 repetitions

Greater than 100 kg 3 repetitions

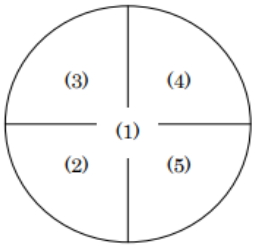
Standard Deviation **0.00000548**

TEST D:

Position	IUT Reading	Difference from Position 1
1	29.99996	0.00000
2	29.99995	-0.00001
3	29.99996	0.00000
4	29.99997	0.00001
5	29.99998	0.00002



For a square weighing pan



For a round weighing pan

The uncertainty of measurement for all tests with the maximum load used is ± 0.00015

The uncertainty evaluation has been carried out in accordance with UKAS requirements. It includes contributing factors from the linearity and repeatability, tests B & C but does not make an allowance for eccentric loading errors from test D

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95%.

*** End Of Report ***