

Title: Calibration Of Metrohm Analogue P-E Loop Tester

Scope Work Instruction for the internal calibration of Metrohm Analogue P-E Loop Testers. To be used in the absence of a manufacturers calibration instruction.

Preparation

Calibration must be carried out using Category A Master instruments as required.

Equipment required;-

- 1.1 P-E Loop Tester Resistor Bank

Method

- 3.2.1 All calibration results must be entered on Appendix A.
 - 3.2.2 Enter the actual value of test resistors A, B, C, D, E, F, G, H in the appropriate column for tests 2 to 10 respectively.
 - 3.2.3 Use the UUT to measure the basic loop impedance and note reading.
 - 3.2.4 Carry out tests 2 to 10, note each result, subtract the basic loop impedance and enter on the results table.
 - 3.2.5 Complete the results sheet header and enter Pass / Fail.
- All records must be kept for audit purposes

References

Appendix A Calibration Results for Metrohm Analogue P-E Loop Tester

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Appendix A

Calibration Results for Metrohm Analogue P- E Loop Tester

ModelSerial No

DateResult

Lab Temp / RHOperator

User LocationCertificate No

Accuracies quoted are from the manufacturer's specification or relevant British Standard.

Test 1 Do "correct wiring" indicators operate correctly Pass / Fail

Calibration

UUT Accuracy: $\pm 1.6\text{mm}$ of reading

Test No	UUT Range	UUT Indication	Actual Value	Allowed Limits	Result
2	2 ohm			$\pm 1.6\text{mm}$	Pass / Fail
3	2 ohm			$\pm 1.6\text{mm}$	Pass / Fail
4	2 ohm			$\pm 1.6\text{mm}$	Pass / Fail
5	2 ohm			$\pm 1.6\text{mm}$	Pass / Fail
6	100 ohm			$\pm 1.6\text{mm}$	Pass / Fail
7	100 ohm			$\pm 1.6\text{mm}$	Pass / Fail
8	100 ohm			$\pm 1.6\text{mm}$	Pass / Fail
9	100 ohm			$\pm 1.6\text{mm}$	Pass / Fail
10	100 ohm			$\pm 1.6\text{mm}$	Pass / Fail

The UUT was calibrated using the following equipment:

1. P-E Loop Tester Resistor Bank S/N _____

The uncertainty in the applied values is estimated not to exceed:

Resistance: $\pm 0.8\%$

The uncertainty limits quoted refer to the applied values only and do not relate to the stability of the UUT.