

	Standard Operating Procedure		SOP Number D-809	Revision 1
	Use and Calibration of Conductivity Meter		Effective Date 05/13/22	Page Page 1 of 3
Written by/ Date <i>gshaw 04/08/22</i>		Reviewed by/ Date <i>jm 05/12/22</i>		Approved by/ Date <i>SSS 05/12/22</i>
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1.0 Purpose

The purpose of this procedure is to provide guidelines for the use and calibration of the VWR Model 89094-958 conductivity tester for use in the QC microbiology department.

2.0 Scope

This procedure gives general guidance for the use of the Conductivity Meter. This procedure also give specific instructions on calibration of the conductivity meter. This procedure complies with USP<645> water conductivity.

3.0 Responsibility

- 3.1 It is the responsibility of QC laboratory personnel to follow this procedure.
- 3.2 It is the responsibility of QC Laboratory Management to implement this procedure and to ensure that the procedure is being followed.
- 3.3 It is the responsibility of QC Laboratory Management to keep the procedure current with the latest Ion Labs practices.

4.0 Definitions

- 4.1 ATC – Automatic Temperature Correction
- 4.2 QC – Quality Control

5.0 References

- 5.1 USP <645> Water Conductivity

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- 5.2 E-705-F1, Form, Municipal Water Test Ticket
- 5.3 E-705-F2, Form, Purified and Millipore Water Test Ticket
- 5.4 E-705-F3, Form, Conductivity Stage 2 Test Ticket
- 5.5 Traceable Conductivity Meter Instructions

6.0 Procedure

- 6.1 Operation
 - 6.1.1 Place the probe in fresh Millipore water for 30 minutes to thoroughly rinse the meter probe.
 - 6.1.2 Turn the meter on by pressing the SET button.
 - 6.1.3 Place the probe head into the solution being measured. Ensure that calibration was completed as in step 6.2.
 - 6.1.4 Ensure that the probe head and temperature sensor are completely immersed.
 - 6.1.5 Ensure that there is adequate movement of the liquid around the tip, this can be achieved by swirling the meter in the liquid.
 - 6.1.6 Take measurement.
 - 6.1.7 The HLD button can be pressed to freeze the measurement prior to recording the value. Press this button again to unfreeze the measurement.
- 6.2 Daily Calibration
 - 6.2.1 Conductivity meter should be calibrated daily prior to use.
 - 6.2.2 Place the probe in fresh Millipore water for 30 minutes to thoroughly rinse the meter probe.
 - 6.2.3 Turn the meter on using the SET button.

6.2.4 Place the probe head in the Conductivity Standard that is closest to the value of the samples being tested. (ex : use 1.0uS/cm for distilled/purified water samples, use 1413 uS/cm for municipal water.)

6.2.5 Press and hold the CAL button for three (3) seconds..

6.2.6 Press the Up Arrow or the Down arrow buttons to adjust the display to the known value of the Conductivity standard.

6.2.7 With the known value of the conductivity standard appearing and the ready flashing, press the ENTER button, the meter will return to the measurement display.

6.3 Calibration Notebook

6.3.1 This notebook will record the following information each time the Conductivity Meter is calibrated:

6.3.1.1 Analyst calibrating the conductivity meter

6.3.1.2 Date

6.3.1.3 Lot number, concentration, and expiration date of conductivity standard used.

6.3.1.4 The recheck value of the conductivity standard in normal mode.

7.0 Revision History

Revision	Date	Description of Changes	CCR #	By
0	06/24/21	New.	N/A	G. Shaw
1	04/08/22	Changed SOP to new meter model and its instructions for use and calibration.	CC-22-0167	G. Shaw