

Pharmatherm the Calibration Specialists 'Conductivity Explained'

Pharmatherm Conductivity Probe Calibration Standard Operating Procedure



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PharmaTherm Pressure Probe Calibration Standard Operating Procedure, this section must be signed-off for approval of the document before the document can be distributed for use.

Report Approval:

Approved By - _____ [Date]

Validation Engineer Andrew Varley

Conductivity and Temperature Probe Calibration Procedure

Before you perform a calibration, check that all of the calibration equipment being used has a valid calibration certificate traceable national standards

Calibration Equipment

1. Digitron Temperature Probe calibrated for the temperature range 0.0°C to 100.0°C.
2. Conductivity standard solution 1.3 µms x 2 bottles.

3. Conductivity standard solution 5.0 μms x 2 bottles.
4. Conductivity standard solution baths x 2.

Method:

1. Document the zero and span calibration offsets in the Kemotron conductivity instrument (see the engineering manual for key functions).
2. Clean/rinse the conductivity standard solution bath with WFI and set aside.
3. Clean/rinse the conductivity standard solution bath with the conductivity standard solution being used and set aside.
4. Allow the conductivity standard solutions 5.0 μms and 1.3 μms to stabilize at ambient temperature in the area where the calibration is being performed. Note: The aim is to reduce the risk of temperature rise in the conductivity solutions being used during the calibration procedure.
5. Fill the conductivity standard solution bath with the conductivity standard solution 5.0 μms .
6. Insert the calibrated Digitron temperature probe into the 5.0 μms conductivity standard solution. Document the temperature and from the 5.0 μms conductivity standard solutions, look up on the table provided on the conductivity standard solutions container. Document the actual μms conductivity standard measurement for the temperature achieved.
7. Insert the conductivity probe to be calibrated into the conductivity standard solution. Oscillate the conductivity probe in the conductivity solution ensuring that the entire probe has been immersed in the conductivity solution being used.
8. Document the conductivity reading being measured by the Kemotron conductivity instrument.
9. Insert the Digitron temperature probe in the conductivity bath and solution. Document the temperature being measured. Document the temperature being measured by the Kemotron conductivity instrument.

10. Repeat steps 3,4,5,6,7 & 8 using the 1.3µms reference conductivity standard solution.
11. Should calibration offset adjustments be necessary on the Kemotron conductivity instrument. Document the zero and span calibration offsets in the Kemotron conductivity instrument (see the engineering manual for key functions).
12. Re-check the conductivity set points of 5.0 µms and 1.3µms using conductivity solutions. Should the time period be greater than 10 minutes from opening the conductivity solutions and rechecking the conductivity set points of 5.0 µms and 1.3µms use new standard solution to ensure accuracy.
13. Re-check the temperature readings on the Kemotron conductivity instrument using Digitron temperature probe in the conductivity bath and solutions being used. Document the temperature being measured in the conductivity solution. Document the temperature being measured by the Kemotron conductivity instrument.
14. Complete the PharmaTherm standard conductivity calibration certificate form. Check all of the documented conductivity and temperature readings, offsets and offset adjustments made before signing the calibration certificate.

Contact Pharmatherm for further advice on conductivity calibration setups contact us for quotation however large or small the project maybe. We aim to provide a competitive validation service. Please 'don't delay and contact PharmaTherm today' email: info@pharmatherm.ie

See the Pharmatherm website please log onto www.pharmatherm.ie technical/training page



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