

Certification

Certification of the Freezing Point of Indium Cell

Cell Model: 5944 Serial Number: In-44029

As a primary defining fixed point of the International Temperature Scale of 1990, the assigned temperature of the freezing point of indium is 156.5985°C.

Fluke Calibration certifies that the above tin freezing point cell was produced from high purity indium (99.9999%, Lot #332975), graphite (99.9997%) and argon (99.9999%) through an elaborate procedure. The pressure of argon at the freezing point in the cell is 84.8 kPa.

The freezing point cell was tested in a Fluke Calibration Laboratory by the freezing point slope analysis method. The results of the tests are shown on the following pages. It is certified that the expanded uncertainty ($k=2$) of the above indium freezing point cell is within 0.0007°C after considering the correction for the pressure difference from one standard atmosphere (101.325 kPa) and the correction for the hydrostatic pressure. (Refer to the user manual or ITS-90 supplementary information for discussions of these corrections.) The height from the bottom of the re-entrant well to the upper surface of the pure metal in the cell is about 156 mm. The actual calculated temperature at a mid-point of the SPRT sensor (immersion depth of 131 mm) during a freezing plateau is 156.59812°C \pm 0.0007°C.

Performed by: Dell Cor

Approved by: [Signature]

Date: 8/20/15

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