

# Report of Calibration

|                         |               |                      |             |
|-------------------------|---------------|----------------------|-------------|
| <b>Calibration Date</b> | 12-07-2006    | <b>Description</b>   | PRT         |
| <b>Report Number</b>    | 2482          | <b>Model Number</b>  | 12345       |
| <b>Customer</b>         | Customer Name | <b>Serial Number</b> | 12345       |
| <b>PO Number</b>        | 1234-5668     | <b>Manufacturer</b>  | RTD Company |

The above referenced Platinum Resistance Thermometer (PRT) was calibrated by comparison to calibrated standards and by fixed point at the triple point of water. The calibration methods used are based on the information provided by NIST Technical Note 1265 'Guidelines for Realizing the International Temperature Scale of 1990 (ITS-90)' relevant to secondary PRTs and in BIPM's 'Techniques for Approximating the International Temperature Scale of 1990'. The calibration is compliant to ANSI/NCSL Z540-1-1994.

The measurements were made using a DC readout and DC reference resistors at 1 mA of excitation current. The environmental conditions in the laboratory are controlled within 17 to 23 deg C and 80% maximum relative humidity.

The following reference standards and measurement equipment were used in this calibration. This calibration is traceable to NIST.

| <b>Instrument</b>             | <b>Model</b> | <b>Serial No.</b> | <b>Recall Date</b> |
|-------------------------------|--------------|-------------------|--------------------|
| SPRT, Metal Sheath            | 162CE        | 3310              | 1/1/2008           |
| SPRT, Quartz Sheath           | 8163         | 1720599           | 1/1/2008           |
| Resistance Standard           | 9330/100     | 43940             | 5/23/2007          |
| Precision Digital Thermometer | 1590         | 1234              | 1/1/2008           |

The PRT was calibrated at the following temperatures. The given uncertainty estimates account for all known uncertainties present at the time of calibration including long-term behavior of the calibration system, measurement noise, and any short-term effects of the PRT under test. The uncertainties given may be larger at temperatures intermediate to those given and may be computed from these values and the ITS-90 error propagation curves.

| <b>Temperature deg C</b> | <b>Measured Resistance</b> | <b>Expanded Uncertainty (k=2) deg C</b> |
|--------------------------|----------------------------|---|
| -197.000                 | 4.67350                    | 0.012                                   |
| -39.000                  | 21.55828                   | 0.009                                   |
| 0.010                    | 25.55801                   | 0.004                                   |
| 232.000                  | 48.37775                   | 0.012                                   |
| 420.000                  | 65.68914                   | 0.015                                   |

The following ITS-90 deviation function coefficients were calculated from the calibration data.

| <b>Coefficient</b> | <b>Value</b>   |
|--------------------|----------------|
| RTPW               | 25.55801       |
| a4                 | -1.9313680E-04 |
| b4                 | 1.2035645E-05  |
| a8                 | -2.1792881E-04 |
| b8                 | -1.2206724E-05 |

Calibration technician:

Date: 12-07-2006