

## CURIE POINTS OF REFERENCE MATERIALS FOR THERMOGRAVIMETRY

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Measurements were made of the Curie points of the thermogravimetry temperature-reference materials certified by the International Confederation for Thermal Analysis for use in interlaboratory correlation of data. The ability to detect the changes in apparent weight without appreciable disturbance of the temperature gradients enables their use for direct temperature calibration.

This work provides data independent of any thermobalance; the actual temperatures of the specimen were obtained by spotwelding a thermocouple, which also supported the specimen, to the test specimens. The thermocouple wires passed through a ceramic tube held in a wheel on the shaft of a rotary variable differential transformer. A magnet was placed near enough to the specimen to attract it strongly below the Curie point and much less strongly in the paramagnetic region.

The event that can be identified uniquely with both force-restoring and displacement-measuring thermobalances and with this apparatus is the discontinuity of attraction when the sample is being cooled. These values are for Permanorm-3, 265 °C; for nickel, 367 °C; for Mumetal, 406 °C; and for Permanorm-5, 462 °C. The values apply only to the certified batches.

Calibration of the thermobalance does not remove the need for reporting the values of  $T_2$  and  $T_3$  in publishing data.

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