



## **Metrological Procedure for the Evaluation of Self-heating effect of thermometers used in Meteorological and Climate Applications**

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Self-heating of resistance thermometers is an important issue to be considered in the uncertainty of air temperature measurements since in a lot of situations these thermometers are used with currents very different with respect to they were calibrated. Besides, the influence of the thermometer self-heating is usually determined in calibration laboratories under fixed conditions of temperature and surrounded by a different medium than the conditions of use.

This paper describes a metrological procedure for the determination of the self-heating effect with a consistent uncertainty evaluation, by applying different currents to different models of thermometers, used for meteorological applications, immersed in different isothermal enclosures, fixed points, stirred liquid bath and climate chamber and at several temperatures.

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