

Title: **Final report of APMP.T-K6 (original name APMP-IC-1-97): Comparison of humidity measurements using a dew point meter as a transfer standard**

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Abstract

This APMP key comparison of humidity measurements using a dew point meter as a transfer standard was carried out among eight national metrology institutes from February 1999 to January 2001. The NMC/SPRING, Singapore was the pilot laboratory and a chilled mirror dew point meter offered by NMIJ was used as a transfer standard. The transfer standard was calibrated by each participating institute against local humidity standards in terms of frost and dew point temperature. Each institute selected its frost/dew point temperature calibration points within the range from -70 °C to 20 °C frost/dew point with 5 °C step. The majority of participating institutes measured from -60 °C to 20 °C frost/dew point and a simple mean evaluation was performed in this range. The differences between the institute values and the simple means for all participating institutes are within two standard deviations from the mean values. Bilateral equivalence was analysed in terms of pair difference and single parameter Quantified Demonstrated Equivalence. The results are presented in the report.