

CERTIFICATE OF CALIBRATION

ISSUED BY H & D FITZGERALD LTD.

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CERTIFICATE NUMBER **09999**



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Approved signatory **H. Fitzgerald**

Client **T&F Alcohol Testing Ltd., Hunniton, Sedburgh.**
Hydrometer # **9999.99** Calibrated **26 May 1999**
Type **BS5470 Ethanol Class II**
Scale markings **800 to 820 kg/m³ at 20°C**

The hydrometer was calibrated by hydrostatic weighing at **20.000 ± 0.008°C** in a reference liquid of known density using equipment traceable to National Standards.

Value indicated by the hydrometer kg/m ³	Correction to be added to hydrometer value kg/m ³	Surface tension mN/m
800	- 0.07	22.9
806	- 0.05	23.2
814	- 0.04	23.5
820	+ 0.03	23.8

Uncertainty of the correction ± **0.15kg/m³**

Once the above correction has been added to the observed scale reading, and any necessary meniscus or temperature corrections have been made, the result will be the density in kg/m³ at 20°C.

The surface tension values tabulated above are those defined in BS5470 as the reference values for this hydrometer.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a level of confidence of about 95%. The evaluation of the uncertainty has been carried out in accordance with UKAS requirements.