

CERTIFICATE OF CALIBRATION

ISSUED BY H & D FITZGERALD LTD.

DATE OF ISSUE **05 April 2020**

CERTIFICATE NUMBER **12345**



Cefn Du, Tremeirchion,
St. Asaph, Denbighshire
LL17 0US, UK
☎ +44 (0)1352 720 774
calibration@density.co.uk
www.density.co.uk

Page 1 of 1 pages

Approved signatory **H. Fitzgerald**
I. Edge

Client **ABC Testing Ltd., Any Town, Some County.**
Hydrometer # **01/234567** Calibrated **03 April 2020**
Type **BS 718 M100 medium surface tension**
Scale markings **1.00 to 1.10 g/ml at 20°C**

The hydrometer was calibrated by hydrostatic weighing in a reference liquid of known density using equipment traceable to National Standards.

Value indicated by the hydrometer g/ml	Correction to be added to hydrometer value g/ml	Surface tension mN/m
1.000	+0.0002	55
1.030	+0.0001	55
1.070	+0.0001	55
1.100	+0.0002	55

Uncertainty of the correction $\pm 0.0005 \text{ g/ml}$

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 g/ml at 20°C.

The calibration was carried out at $20.0 \pm 0.25^\circ\text{C}$. The equation given in BS718/ISO649/1 was then applied to correct the readings to 20.00°C.

The surface tension values tabulated above are those used in the calibration of 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.

This hydrometer shows signs of being magnetic

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.