CERTIFICATE OF CALIBRATION

ISSUED BY H & D FITZGERALD LTD.

DATE OF ISSUE **06 April 2020** CERTIFICATE NUMBER **12345**

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Approved signatory

Client **Somebody Ltd., Any Road, Atown, Some Country**

Instrument **Paar DMA 35N**

Serial number **123456** Date calibrated **05 April 2020**

Measurements

On receipt, the meter read 0.0005 g/cm³ high when filled with water. It was adjusted to read correctly.

The indicated temperature on the meter was checked by circulating water at constant temperature through the measuring cell at 20.0°C ± 0.1°C. The density meter displayed a temperature of 20.2°C i.e it read 0.2°C high.

The density meter was filled with three liquids of known density. The results are tabulated below.

Liquid	Temperature indicated by density meter °C	Displayed density g/cm³	Corrected density meter temperature °C	Calculated density from certificate g/cm³	Correction g/cm³
2,2,4-trimethylpentane	21.5	0.690_4	21.5	0.6906	+0.0002
Water	20.4	0.998_1	20.4	0.9981	0.0000
Tetrachloroethylene	22.1	1.619_2	22.1	1.6192	0.0000

The densities of the liquids used were determined on our UKAS accredited hydrostatic weighing rig.
At the time of calibration, the uncertainty of measurement with the calibrants listed above was 0.000 50 g/cm³.
Uncertainty of the temperature measurement was ±0.02°C.

Ambient air temperature was 21.2 ±1°C.

When clean & dry, the cell reads 0.001_3 g/cm³.

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.

Different models of density meters show different responses to sample viscosity, and exhibit different rates of temporal drift. These effects need to be taken into account when considering the uncertainty of a density measured subsequent to the calibration.

Sample certificate

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