

# CERTIFICATE OF CALIBRATION

ISSUED BY H & D FITZGERALD LTD.

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Approved signatory **H. Fitzgerald**

<b>Client</b>	<b>Fred Bloggs, Just Down The Road, Anytown.</b>
<b>Instrument</b>	<b>Paar DMA 48</b>
<b>Serial number</b>	<b>115766</b>
<b>Date calibrated</b>	<b>5 September 2003</b>

## Measurements

The indicated temperature on the DMA 48 was checked by inserting a calibrated thermometer into the measuring cell.

When the density meter displayed a cell temperature of 20.1°C, the corrected thermometer reading was 20.1°C ± 0.1°C.

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

Liquid	Temperature indicated on DMA48 °C	Density indicated on DMA48 g/cm <sup>3</sup>	Certificate density g/cm <sup>3</sup>	Correction g/cm <sup>3</sup>
2,2,4 trimethyl pentane	20.0	0.6921	0.6927	+0.0006
Deaired distilled water	20.0	0.9982	0.9983	+0.0001
Tetrachloroethylene	20.0	1.6241	1.6243	+0.0002

The density of the 2,2,4 trimethyl pentane and the tetrachloroethylene was determined on our UKAS accredited hydrostatic weighing rig. The density of the water was taken from the CIPM equation.

Once the above correction has been added to the indicated reading, the result will be the density in g/cm<sup>3</sup> at the indicated temperature.

The uncertainty in the density of the liquids used was ± 0.00001g/cm<sup>3</sup>.  
Ambient air temperature was 20 ± 1°C.