

Densitometer Anton Paar DMA 4100 M

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Objectives

- Measuring instrument for determination of the density, the relative density and the concentration of fluids according to the Anton Paar bending vibration method.
- The measuring instrument is equipped with an all-solid thermostat, a patented reference oscillator (ThermoBalance™), an automatic full range adjustment of the viscosity effect of the sample and the latest technology for density measurement (FillingCheck™)
- Determination of the density of gases, fluids and solutions at various temperatures.

Principal of measurement

- A glass tube is being stimulated and is therefore vibrating. The frequency of the oscillation can be determined by a sensor which can detect the period of the oscillation.
- An empty glass tube is vibrating with an eigenfrequency. By filling the tube with a gas or a fluid, the frequency will change according to the density of the sample: The higher the density, the lower the frequency.

Measuring range

- Density: 0 – 3 g/cm³
- Accuracy of density: 0,0001 g/cm³
- Temperature: 5 – 90 °C
- Accuracy of temperature: 0,05 °C
- Volume of sample: ca. 1 ml, optimal > 2,5 ml

Accessories

- Several interfaces
- Storage: 512 MB SD-Card (upgradable to 2 GB)
- 1000 measured values with or without pictures
- Touchscreen



Duration of experiment

- ca. 30 sec./ Sample