

Rheometer Physica MCR 101 Anton Paar

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Principal of measurement

- The sample is placed in a gap between a flat cone and a coaxial disc. A steady shear rate allocation inside the crack can be achieved by choosing a practical cone angle.
- A defined shear rate or deformation is being specified before measuring and the shear stress is being detected.
- The rheological variables can be made accessible via the cone-disc geometry as a function of the shear rate, the deformation or rather the oscillation frequency.
- Alternatively a disc-disc system can be applied.

Measuring range

- Temperature (depends on the type of countercooling):
ca. 10 °C - 200 °C
- Thermostat tempering:
,Temperature Device: -20 °C - 70 °C;
,Watercooling-Heat: 15 °C - 40 °C
- Torque: 0,5 µNm - 200 mNm
- Torque resolution: 0,002 µNm
- Torque accuracy: max . (0,2 µNm; 0,5 %)
- Max. torque increase: 1500 Nm/s
- Range of speeds CSS: 10⁻⁶ min⁻¹ ... 3000 min⁻¹
- Range of speeds CSR: 10⁻⁴ min⁻¹ ... 3000 min⁻¹
- Sample volume dependent on the medium

Duration of experiment

- Dependent on the measuring program (2-30 minutes)



Possibilities

- Rotation and oscillation tests with high shear rates and frequency range
- Temperature variation

Accessories

- Peltier controlled lower disc
- Peltier controlled cap
- Various cone and disc measuring systems with varying diameters and angles
- Thermostat for countercooling