Specifications of Advanced Rheometer [MCR 702e, AntonPaar]

Motor:

- Direct current synchronous single rotational / oscillatory motor for combined motor transducer (CMT) mode
- High-precision air bearing permanent magnet synchronous dual rotational / oscillatory motors for separate motor transducer (SMT) mode and counter movement mode.

Liquid Cooled Peltier temperature controller for plate/plate & cone/plate measuring geometries:

- Compatible with Tribology & Interfacial Rheology Attachment
- Temperature range: - 20 to 200 ℃
- Heating and cooling rate (max): 40 ℃/minute

High temperature convection furnace for plate/plate, cone/plate measuring geometries:

Temperature control:

- Radiation & convection-based oven system, integrated non-reflecting sample illumination.
- Temperature range: -150℃ to 450℃

Specifications of Advanced Rheometer [MCR 702e, AntonPaar]

Plate/Plate & Cone/Plate measuring geometries for Shear Viscometry /Rheology:

- Sandblasted measuring stainless steel plate with diameter 15 mm, 25mm & 50mm.
- Smooth measuring stainless steel plate with diameter 50 mm,8mm & 25mm.
- Measuring stainless steel cone with 10 mm dia with 4 deg angle.
- Concentric cylindrical measuring geometries for medium & high viscous samples.
- Cover/solvent trap SS/TD for PP/CP twin drive.

Attachments:
Interfacial Rheology , Tribology , Microscopy, UV-Curing

Software for Rheology:

- Template based with at least 100 built-in templates pre-programmed for wide range of matter.
- Rotational with rate/control stress/combination of CSR+CSS.
- Oscillatory with strain / direct strain amplitude / control stress / combination of strain+ CSS
- Viscosity curve as a function of time, temperature, shear rate and shear stress
- Complex viscosity as a function of time, temperature, frequency, strain and stress
- Shear stress as a function of shear strain to identify the lver (linear visco-elastic region) of the sample.
- Elastic (G'), loss (G''), complex modulus (G*), tanδ as a function of time, temperature, frequency, strain and stress in shear mode.
- Raw data, LAOS waveforms
- Master curve /time temperature superimposition.
- Stress relaxation / molar mass distribution
- Counter rotation /counter oscillation
- Stribeck curve & Interfacial rheology