

Precipitation Processes Examination with the Flocculation Titrimeter FT5



Characteristics

- Stipulate flocculation points and examine crystal formation in oils
- For very dark samples, undiluted crudes and oil products
- Unpressurised or pressurised up to 700 bar (10,152 psi)
- Stand-alone device or as extended measuring system
- Highly automated test runs

The automated Flocculation Titrimeter FT5 measures precipitation processes, flocculation points and crystal formation of oils by optical analysis of the translucency without prior dilution.

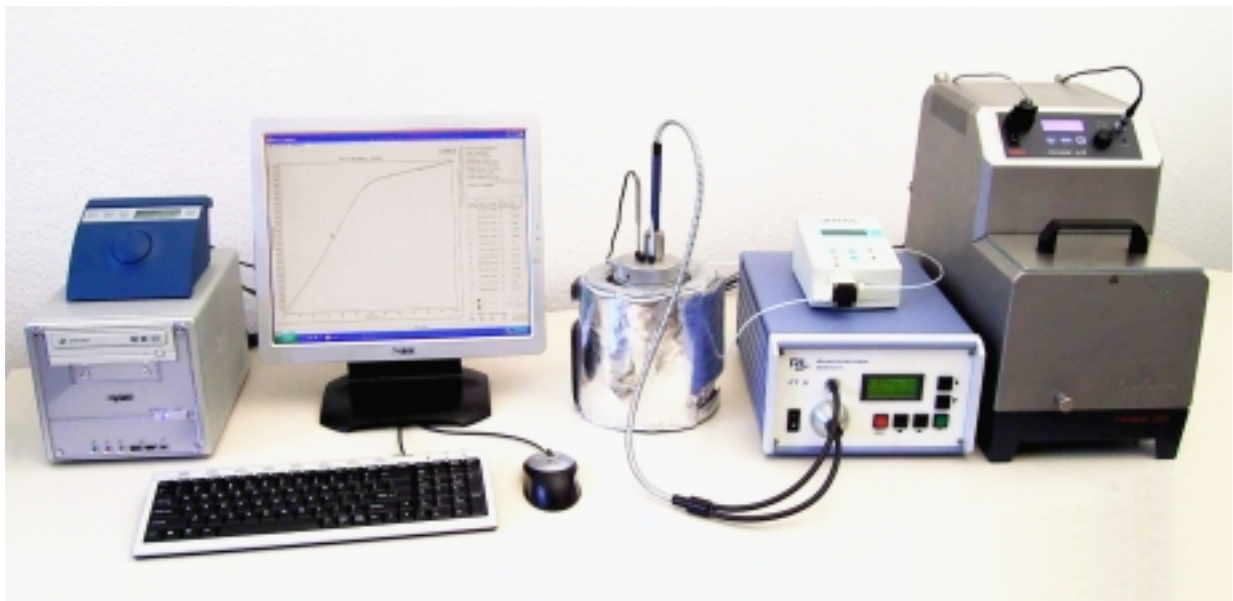
Mode of operation

To stipulate flocculation points, the translucency of a sample is determined by use of a highly sensible light sensor. The light sensor can be automatically adjusted to the translucency of the sample. Thus, even

measurements with very dark, undiluted crudes provide accurate results.

Stand-alone or measuring system

The instrument is available as a stand-alone device as well as an automated system with cryostat and pump. The Flocculation Titrimeter is available with an additional temperature or pressure sensor. A pressure vessel with integrated stirrer can be provided, which permits pressurised measurements up to 200 bar (2,900 psi) or up to 700 bar



(10,152 psi). Thus, extended flocculation tests under specified conditions are possible.

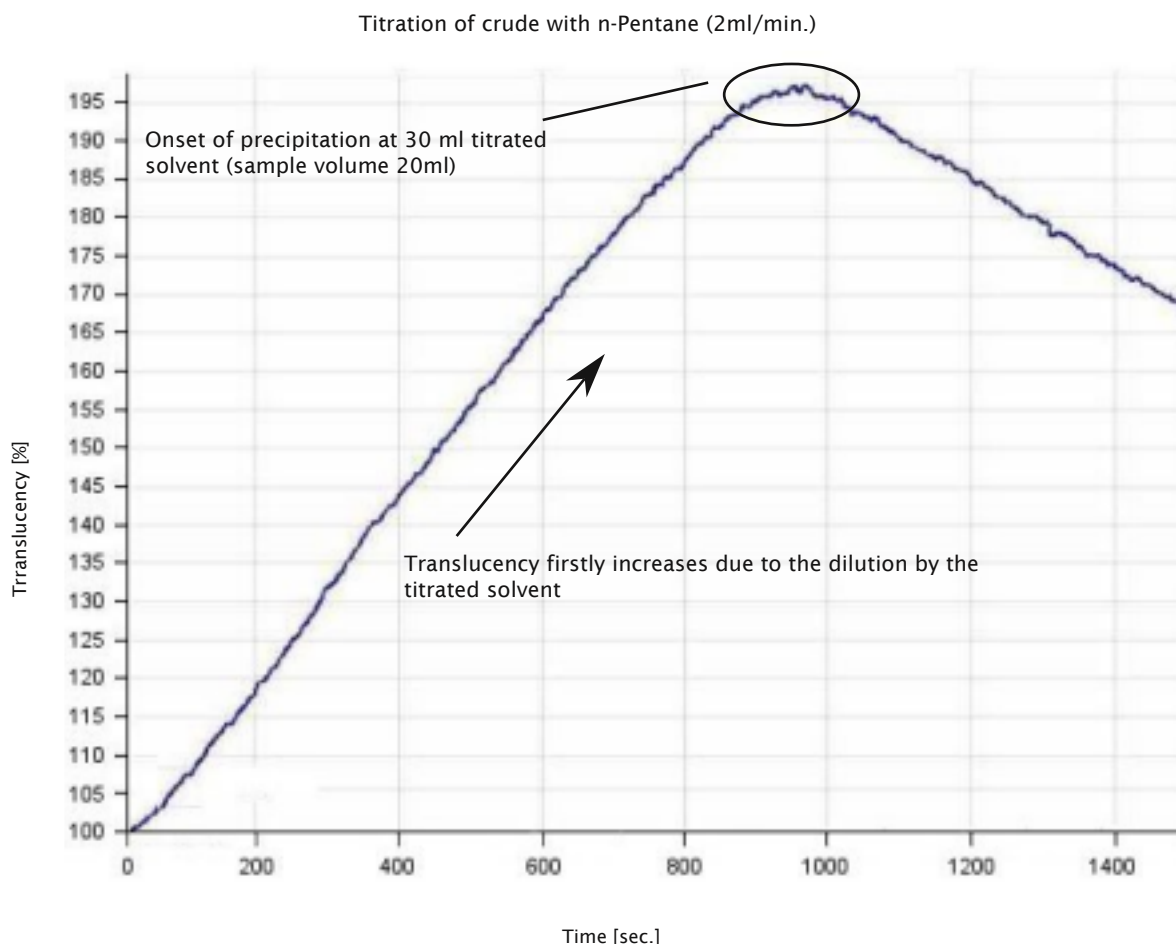
Fully automated with software

The Flocculation Titrimeter and the other components of the FT5-System can be controlled via PSL software *WinFT*. The software allows an easy programming and execution of test schedules, as well as a comfortable display and evaluation of measuring results.

Typical measuring gradient

A typical measuring gradient shows a rise in translucency first because the sample is diluted by the titrated liquid. As soon as a precipitation process starts, light is scattered by colloidal particles. The gradient flattens because the translucency decreases.

The Flocculation Titrimeter can be adapted to your requirements.



Measurement example for asphaltene flocculation

Specifications:

Media:	crudes
Temperature range*:	-25 °C ... +150 °C (-13 °F ... +302 °F) / -40 °C ... +200 °C (-40 °F ... +392 °F)
Pressure range*:	ambient / 200 bar (2,900 psi) / 700 bar (10,152 psi)
Stirrer speed*:	130 rpm ... 1,000 rpm
Flow rate*:	0.3 ml/min ... 30 ml/min
Power consumption:	300 W
Voltage input:	230 V~ / 115 V~ (auto-select)
Weight:	FT5: 4 kg, System: 38 kg (with PC)
Dimensions (WxDxH):	FT5: 26 cm x 38 cm x 16 cm, System: 110 cm x 50 cm x 40 cm (with PC)

* Specification of the devices used additionally in the Flocculation Measuring System