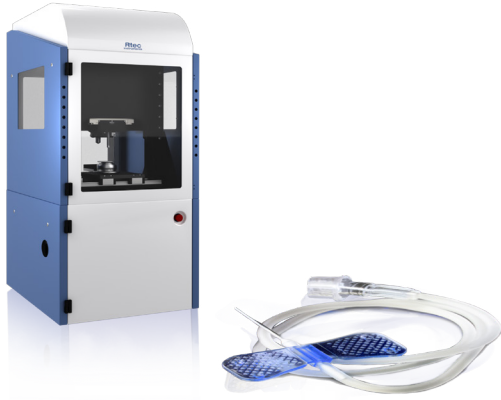




Catheter Friction Testing on the Multi Function Tribometer, MFT-5000



Rtec-Instruments' Multi Function Tester combined with patented capForce sensors allows unprecedented lubricity characterization of catheters. Lubricity is a critical factor effecting insertion force, push force/navigation force, removal force, and over all performance of the catheter.

The MFT-5000 combines multiple techniques in one platform to evaluate the effect of surface coatings and texture on catheter lubricity. The closed-loop down force control allows conformal contact throughout the test. The open platform allows test set ups for different geometries and orientations with options for simultaneous testing for multiple samples.

Advanced Capacitance Sensors, In-line Confocal profilometer and Integrated Probe for Coating Thickness provides comprehensive surface analysis in one tool with options to produce Friction Maps.

Down Force Control

The applied forces can be controlled to mN ranges. The force can be maintained constant or changed during the test.

capForce Sensor

Patented Ultra High Resolution capacitance based sensors introduced for the first time in tribology for reliable and accurate force characterization to microNewton levels on real world samples.

Flexible Test Set Ups

Multiple options to test real components in conformal contact to characterize push force, navigation force and catheter lubricity

Environmental Controller

Test under controlled humidity, temperature and liquid media.

In-line Confocal Imaging

Characterize effect of texture and surface profile on lubricity and performance including insertion and removal forces.

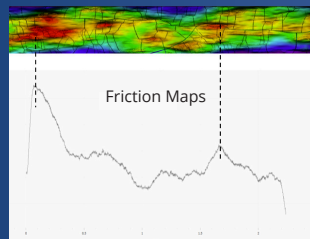
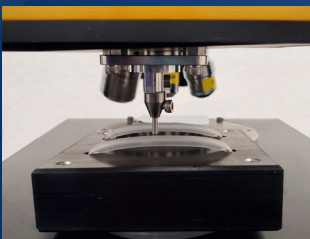
Coating Thickness

Independent spectroscopy based probe to characterize coating thickness & uniformity.

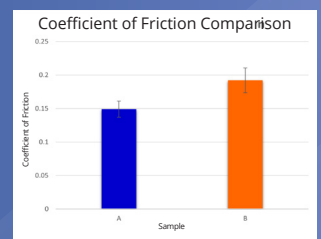
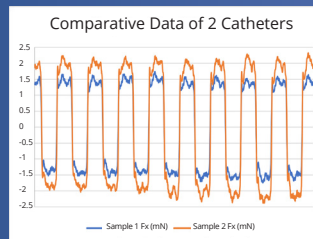
Comprehensive Software

Integrate Surface Profile, Coating thickness & Tribology data to produce Friction maps.

Friction Maps - Effect of Surface Texture on Friction



Ultra High Resolution Sensor to Characterize mN Forces



Software

The tester comes with a powerful operation, statistical and image analysis software. All software are windows based and are very easy to learn and operate. The software allows to run the tool in advanced mode for experienced users or just push a button mode for new users or operators. The data can be saved in proprietary format or in ASCII format.

- Stop Criteria
- Recipe based software
- Very easy to use
- Collection of test libraries
- Remote control of platform
- Advanced statistical analysis package

Specifications

- Floor standing or Bench Top

XY stage

- Motion resolution: 0.1 μ m
- Maximum speed: 10 mm/s

Multiple Z stages

- Max speed: 10 mm/s

Key Parameters

- Flexible Test set ups
- Single or Multiple Catheters
- Several tips, materials
- Custom motions Linear, Rotary, Butterfly etc.
- Customizable speed profiles, linear, and logarithms

Computer console

- Latest Windows OS



High Precision Capacitance Sensors
To reliably and accurately characterize lubricity for R&D and quality control.

Real Time Down Force Control
Force can be changed during the test automatically

Recreate in Vivo Conditions
Test in different conditions, such as saline and aqueous with real-time temperature control

Customizable Test Setups
Open platform with closed-loop controllers on each axis for customized motions.

In-line Profilometer and Integrated Coating Thickness Characterization
Multiple techniques on one unique platform



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