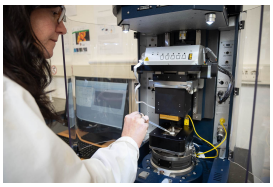
UMT-Tribolab system

https://search.researchequipment.wur.nl/SearchDetail.aspx?deviceid=f5353c33-4864-4eba-9b7b-79aa60599434



Brand

Bruker

Type

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Description

A Tribometer can be used to perform friction measurements and wear tests for liquid and soft solid materials. The UMT (Universal Mechanical Tester) Tribolab allows to perform these measurements with a range of applied forces, and different movements. The upper and lower probes can be changed and custom-made to mimic different testing conditions.
The UMT Tribolab also allows to control the samples environment including temperature or humidity well. In addition, the UMT allows to use home-build devices such as specific surfaces made by WUR's Technical Development Studio to mimic the roughness and softness of the mouth. This versatility is a feature that is not offered by tribometers from other suppliers. In addition, the UMT Tribolab is also more versatile and sensitive than other available tribometers.

Technical Details

• Linear drive: 0.001 to 10 mm/s
• Rotary drive: 1-5000 rpm
• Reciprocating drive: 0.1-60 Hz
• Heating to 400°C
• Force sensors: 0.05N – 5N, 0.2N -20N
• Holders for: cylindrical probes, flat probes, balls
• Sample holders for liquids and solids
• Probes: glass, PDMS, silicon, other materials for home-build probes

Applications

The UMT Tribolab can be used to a range of soft matter materials, including foods, biological materials, and synthetic materials. For applications and phenomena as biomimetic surfaces, biofouling, cell adhesion, polymer adhesion, joint movements, water desalination, and bio refining, tribology could provide useful information on the surface properties.