



Measuring surface free energy in a second with only one click

- Newly developed Mobile Surface Analyzer MSA by KRÜSS for mobile quality control of pretreated or coated surfaces
- One-Click measurement of surface free energy based on contact angles in less than one second
- First presentation at analytica exhibition 2014 in Munich

Hamburg, March 14th, 2014 – At analytica 2014 in Munich, KRÜSS will present the newly developed *Mobile Surface Analyzer MSA* for the first time. The instrument measures wettability based on the contact angle with two test liquids simultaneously and fully automated using the innovative "One-Click SFE" method. Reliable values for the two contact angles, the surface free energy of the sample and its polar part are available within one second. The result enables well-founded statements about wettability by aqueous or organic liquids, e.g. for coatings processes. KRÜSS has three patent applications for new technologies in the MSA.

Simultaneous dosing and analysis of two drops obviates the need to change the test liquid during the material testing, as is the case with conventional dosing units. The dosing system is specially developed by KRÜSS. It doses two parallel drops within milliseconds, with high volume precision and minimal kinetic energy. In spite of its high speed the procedure resembles the gentle way of placing a drop with a dosing needle. The contactless method, without the usual dosing needles, prevents undesirable contact with the sample and possible damage or contamination of the probe.

Cartridges filled with the test liquids – usually water (polar) and diiodomethane (non-polar) – ensure that the dosing operation is easy to handle. Furthermore, an alternative dosing solution was created for liquids which require extensive cleaning effort such as adhesives, inks or paints. The dosing system can quickly be changed to an automatic syringe dosing module, which uses conventional disposable syringes.

Due to its use with a notebook and USB power connection, its low weight and small footprint the MSA is specially designed for mobile and non-destructive quality control. The instrument measures samples of any size, such as automobile bodies, and provides reliable values, even for vertical surfaces such as shower walls and for convex surfaces.

The modern, intuitive software automatically calculates the surface free energy based on proven and meaningful scientific models. For example, precise information relating to the polarity of the surface provides a reliable indication of the effect of activation by such methods as plasma treatment. Thanks to the simple measuring sequence and the software's clear user guidance, measurement errors due to incorrect operation are virtually ruled out.

About KRÜSS

Advancing your Surface Science. As specialists in interfacial chemistry and the world's leading supplier of measuring instruments for surface and interfacial tension, we not only provide high quality product solutions - our offer is a combination of technology and scientific consulting. These include seminars, technical service, our Customer Support Lab and our Surface Science Center for professional measurement services. Many well-known companies have already been inspired by our know-how, precision and passion consulted by our offices in Hamburg, the USA, Great Britain, France and with the help of our exclusive distributor network. Acting quickly and flexibly, we are always at our customer's doorstep in the research and development laboratories as well as quality control centers of countless industries all over the world.

Images



Surface free energy with one click: the Mobile Surface Analyzer MSA

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