

SURFTENS

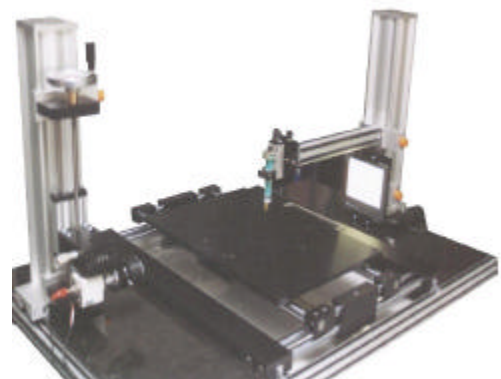
Universal optical measuring instruments for contact angle, surface tension, wetting ability and adsorption

The ideal solution for industrie and research

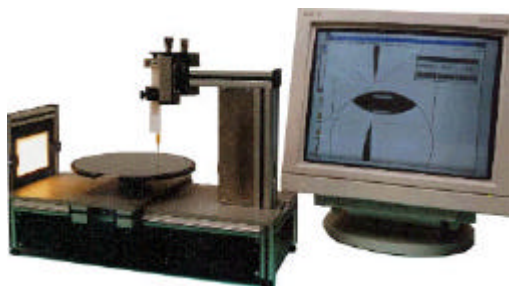
The measurement of the contact angle of a liquid drop facilitates exact statements about the moistening behavior of solid surfaces. Furthermore the surface tension can be calculated both from a solid and a liquid after polar and non-polar component from the measured contact angles. The company OEG offers a complete range of contact angle measuring instruments starting with the pure image processing system for upgrading existing devices to manual measurement equipment and fully-automated measurement systems for the position-dependent measurement of contact angles and surface tensions.

The determination of surface tension is essential in many different industries. Wherever solids and liquids interact, the application of chemical analysis methods for threshold surfaces facilitates the targeted development of products and their optimal adjustment to the desired chemical and physical properties. The companies who benefit from the development work e.g. in the paint, lacquer and ink industry, the semiconductor and display industry, the cosmetic, pharmaceutical and dental industry and in biological engineering or they produce textiles, plastics and glues, films or optical equipment. The contact angle measurement can, for example, be used to show the results of a plasma treatment of surfaces.

The semiconductor industry uses the surface tension data for making predictions about the expected planarization and adhesion properties and the homogeneity and stability of layers (e.g. resist) on the wafer surface. During the display generation the homogeneity of surface properties of flat panel substrates can be analyzed.



SURFTENS_inspection for contact angle measurements on large specimen geometries



Surftens_HL for Semiconductor Technology



SURFTENS_mobile: portable contact angle measuring head

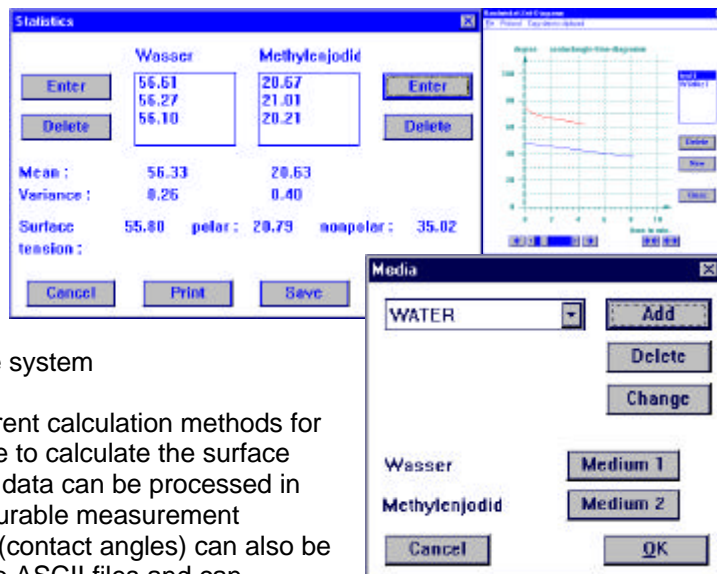
Highly accurate and fast measurements by use of image processing

The drop image is digitized in real time by an image processing system consisting of a telecentric measuring lens, a CCD-camera, a frame grabber and the image processing software. The drop is shown as live video image on the PC screen. The software runs under Windows 9x and offers all possibilities, which are to be expected from a powerful image processing system. The contact angles were measured automatically.

Comfortable software with numerous measuring functions

Measurement functions and options

- automated measurement of the contact angle
- manual measurement of the contact angle
- automated time-dependent measurement of the contact angle and the presentation in diagrams
- automated place-dependent measurement of the contact angle and the 3D presentation of the contact angle distribution over the surface
- measurement of the surface tension of solids and liquids on the basis of the polar and disperse proportion of contact angles
- selectable measurement of the right, left or centered contact angle
- measurement with an automated dispense system
- special option: measurement equipment with a micro dispense system



The user has a choice between different calculation methods for the surface tension. It is also possible to calculate the surface tension of liquids. The measurement data can be processed in standard protocols or in freely configurable measurement protocols. The measurement results (contact angles) can also be stored from the standard protocol into ASCII files and can therefore be further processed in any possible way.

The comfortable documentation functions do not only facilitate the storage of measurement data. The measured contact angles can also be drawn into the image with the belonging measurement markers and data. With the help of the marking function you can enter texts, dates etc. The documented images are stored in a comfortable image database. Apart from the specific functions for measuring contact angles and surface tensions, SURFTENS offers all those functions which characterize a modern WINDOWS-based image processing system. The user can add any number of measurement liquids to the media database which stores the polar and the disperse proportions of the surface tension.

