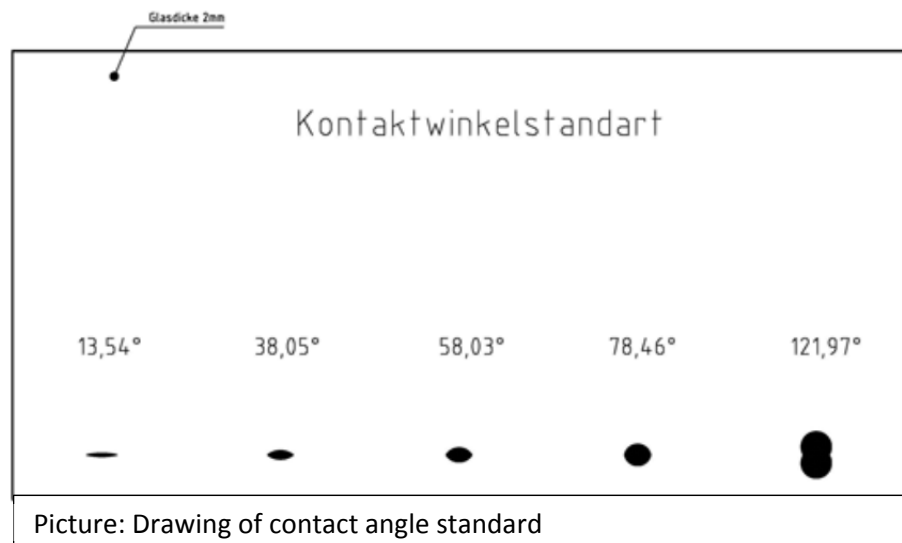


Contact Angle Standard

The contact angle standard is a glass plate with images, representing sessile drops with different contact angles. The contact angle standard is manufactured by a high accurate lithographic process, so the images itself are very accurate according given CAD-data. The Glass plate is placed on the measuring table instead of a real drop.



Application

The proof of the reproducibility of the contact angle measurement is performed by a repeated measurement of the object (sessile drop). For a correct test the measurement must be performed, using the live video (not a frozen image).

For a real sessile drop exists the problem, that it evaporates permanently. The result of the permanent evaporation is the permanent change of the contact angle. Therefore, the proof of the reproducibility of the contact

angle measurement is not possible, using a real liquid, since the object changes permanently the contact angle.

The contact angle standard does not change the form (contact angle) and can be used therefore as object to **proof the reproducibility** of the measuring system.

Moreover, the pictured a manufactured very accurate and symbolize different contact angles. Therefore the contact angle standard can be used also to **proof the absolute measuring accuracy** of a contact angle measuring system!



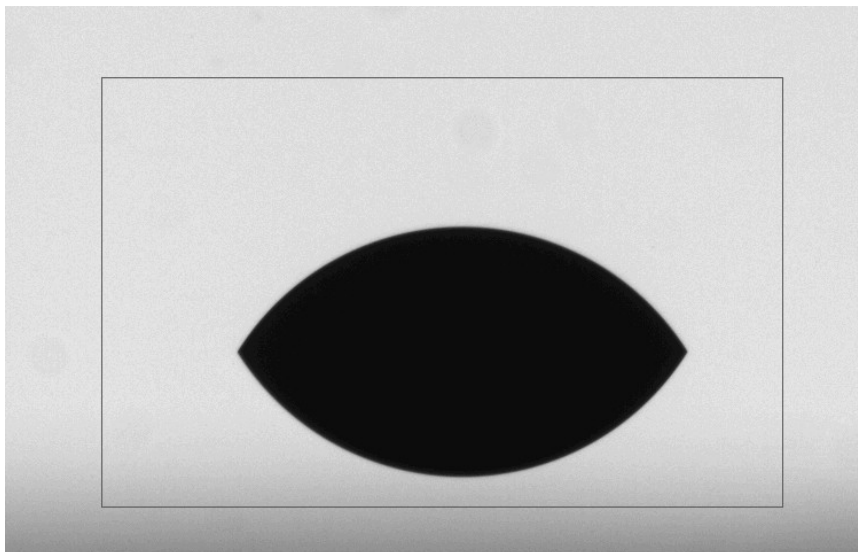
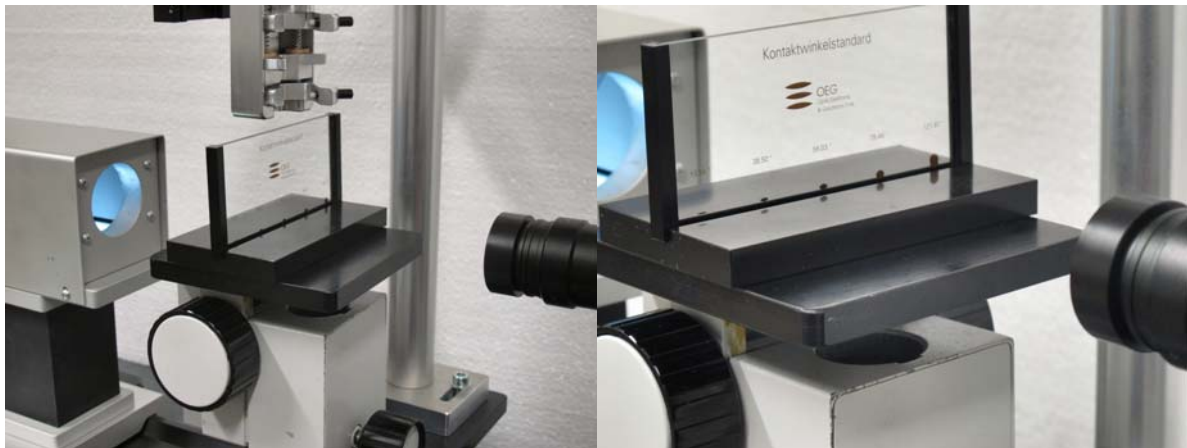
How to perform the proof of accuracy

Note: this is not a calibration of the measuring system, since for the contact angle measurement a calibration is not necessary. It is a proof of measuring accuracy.

1. Step

Place the glass plate on the on the measuring table.

Adjust the height of the measuring table and the optics, so that the live image of the drop-picture appears on the computer monitor.



On the computer screen appears a drop image like during a normal contact angle measurement.

2. Step

Choose the contact angle measuring function of the SURFTENS software and measure the contact angle.

The measured contact angle must be in the range of $\pm 0,5$ according the stated contact angle on the glass plate.

