Abbe-Refractometer Krüss Optronic Type AR4D

Technische Universität Braunschweig | Institute for Chemical and Thermal Process Engineering ictv@tu-braunschweig.de | Telephone +49 (0) 531 391-2781

Principal of measurement

Measurement of the refractivity / the index of refraction of solid and fluid substances on the basis of a total reflection of light between a prism and the sample.

Possibilities

- Determination of concentrations in liquid samples: i.e. in binary mixtures or in solutions.
- The determination of the index of reflection of solid samples is possible by using a contact liquid.



Accessories

- Peltier thermostat PT31 for tempering the sample between 8°C and 40°C
- 589 nm LED illumination
- Digital thermostat (40-200 °C)
- Cinnamon oil + prism for calibration

Duration of experiment

 Results are visible immediatly on the scale after adjusting the optical characteristics.

Measuring range

- 1.3000-1.7000 nD
- 0-95 % Brix
- Observational accuracy: +/-0,0002 nD; +/-0,1%Brix
- Scale division: 0,0005 nD or 0,25% Brix
- Only a small amount of the sample is necessary for measurement

