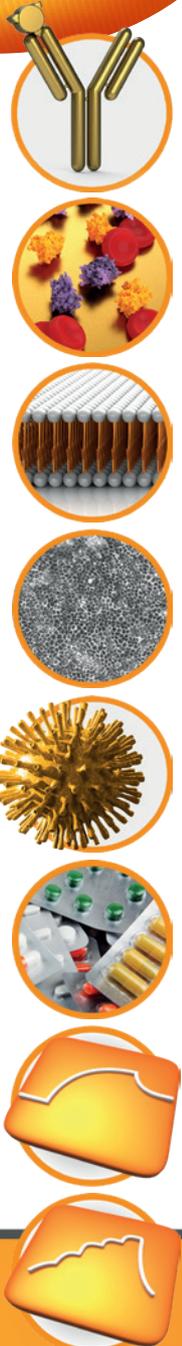




Excellence in Surface Plasmon Resonance
BioNavis

Simultaneous measurement in 4 channels combined with 7-sample automation makes MP-SPR Navi™ 410A KAURIS a powerful tool for both interaction studies and layer characterization.

KineticTitration function enables single-run interaction studies, especially if regeneration is challenging or impossible. Instrument is compatible with organic solvents and complex matrices such as serum providing exceptional versatility for your research.





MP-SPR Navi™ 410A KAURIS specifications

Measurement principle	Real-time and label-free Multi-Parametric Surface Plasmon Resonance (MP-SPR) based on a true goniometric SPR arrangement with a rotating detector. Exceptionally wide angular range 40-78° is measured, real angular resolution 0.001°.
Liquid handling	Automated liquid handling of up to 7 different samples for unattended runs. Controlled buffer flow conditions with precise syringe pumps and integrated degasser . Four flow channels. Configure channels one-by-one (individually) or in series. Dual loop injection mode enabling fast KineticTitration experiments. Flow rate range from 1 µl/min up to 1000 µl/min.
Sample consumption	Partial loop injections enabling minimized sample consumption. Minimum sample volume 100 µl. Minimum injected volume 50 µl.
Wavelength of light	Standard 670 nm in all 4 channels. With additional L-option, each flow channel will be equipped with 2 lasers (670 nm and 785 nm). Other wavelengths available on request. Additional wavelengths enable measurement of thickness and refractive index simultaneously.
Refractive index range	1.00-1.40 (measurement bulk environment) which can be extended with additional wavelength. MP-SPR determines complex refractive index of solid layers in both liquid and gas, and also can measure high RI samples (e.g. toluene or inorganic crystals).
Media	One scan encompasses both environments: gas and liquid . Measurement in water-based liquids, organic solvents (DMSO, ethanol, acetonitrile) and complex biological matrices (serum, saliva).
Mode of operation	Angular Scanning mode, or "MP-SPR mode": scanning across a range of angles providing full SPR curve and multiple of parameters. Several sensograms can be distinguished from the full curve, such as PureKinetics™. Sampling rate depends selected angular range and resolution, typically less than 2 seconds. Fixed Angle mode, or "traditional SPR mode" - measurement from single angle, providing time – intensity sensogram. Mode for fast kinetic studies - sampling rate from 1 ms.
Measurement range	Thickness from Ångströms to micrometers (true range depends on refractive index of the material). Kinetics: $k_a = 10^3 - 10^8$ 1/(M*s), $k_d = 10^{-7} - 0.1$ 1/s, $K_D = 10^{-3} - 10^{-12}$ M
Sensitivity	In gas: Hydrogen (2 Da); in liquid: small molecules <100 Daltons
Noise	Short-term noise 0.3 µRIU, Baseline drift (long term) < 1µRIU/min.
Temperature	Measurement temperature range from 15 – 45 °C (7° below to 20°C above ambient).
Prism	Prism with elastomer enables quick sensor exchange, prevents contamination of sample with RI matching oil and enables further analysis of sample with other methods. No need to use RI matching oil or expensive gold coated prisms!
Flow cells	Flow cells are easily exchanged with a single release button. Standard: 4-channel PDMS flow-cell with a volume of 1 µl/channel. Wider inlet/outlet tubing available for material research or complex biological samples. Optional flow cells: SPR321-EC: Electrochemical flow-cell, custom flow-cell .
Sensor/Substrates	A wide range of surfaces available. Such as metals (Au, Ag, Cu, Pt, etc.), other inorganics (SiO ₂ , Al ₂ O ₃ , TiO ₂ , etc.) or functionalized surfaces (CMD, Ni ²⁺ , protein A/G, Streptavidin, regenerable avidin etc.) If you cannot find what you are looking for, request a custom made surface!
Software	Unlimited MP-SPR Navi™ Control and Data Viewer software. Export data easily to Excel or use our dedicated analyzing tools: TraceDrawer™ software for kinetic analysis included. Optional LayerSolver™ fitting tool for layer characterization.
Maintenance	No service contract required unless you want one. Fluidic parts are easily exchanged.
Computer requirements	Win 8.1 or Win 10, 1 x USB 2.0, 4GB RAM, 10GB hard disk space (1GB for installation + space for measured data)
Dimensions & Weight	W 45 x H 41 x D 51 cm (18" x 16" x 20.5"), 22 kg (48 lbs)
Power requirement	100-240V, 50/60Hz, max. 100W

Specifications are subject to change without prior notice.

Information in this catalogue is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions.

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