

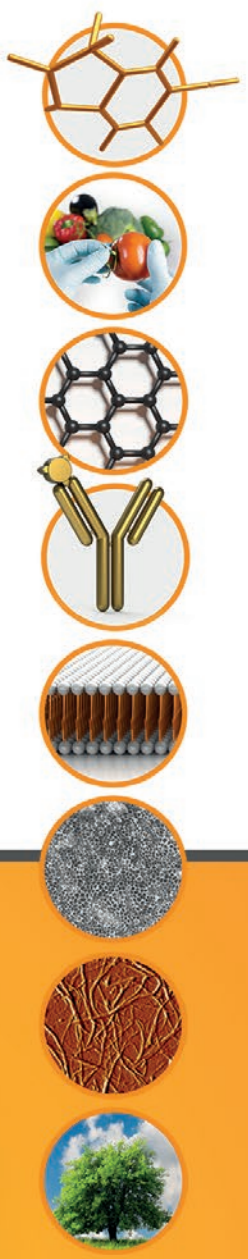
Excellence in Surface Plasmon Resonance



MP-SPR Navi™ 220A NAALI



MP-SPR Navi™ 220A NAALI enables all the measurements as traditional SPR and moreover, provides premium quality data with PureKinetics™. It also allows measurements of conformation changes.





MP-SPR Navi™ 220A NAALI specifications

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| Measurement principle | Real-time and label-free Multi-Parametric Surface Plasmon Resonance (MP-SPR) is 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 96-well plate liquid handling for unattended runs . Controlled buffer flow conditions with precise syringe pumps and integrated degasser. 2 separate flow channels. Software switch to select serial or parallel injection mode. 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 both flow channels. With additional L-option, each flow channel will be equipped with 2 lasers (670 nm and 785 nm). Other wavelength combinations available on request. Additional lasers are utilized to detect conformation changes and allow layer characterization. |
| Refractive index range | 1.00-1.40 (measurement bulk environment) which can be extended with additional wavelength Layers that MP-SPR can measure can have much higher RI such as diamond like carbon (2.7) and inorganic crystals. MP-SPR determines also complex refractive index. |
| Media | One scan encompasses both environments: gas and liquid . Measure not only in water based liquids but also in some organic liquids such as ethanol and acetonitrile. PureKinetics™ enables liquid composition difference between running buffer and the sample, even 5% DMSO difference can be corrected! |
| Mode of operation | Angular Scanning mode, or "MP-SPR mode": scanning across a range of angles providing full SPR curve and multiple parameters. Several types of sensograms can be extracted from the recorded SPR curves, 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 | 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 Thickness from Ångströms to micrometers (true range depends on refractive index of the material). |
| Sensitivity | Smallest detected molecule: 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, avoids contamination of sample with RI matching oil and enables further analysis of sample with other methods. No need to use RI oil or expensive gold coated prisms! |
| Flow cells | Standard: 2 channel PDMS flow cell. Flow cell volume is 1 µl. Optional flow cells: SPR321-EC : Electrochemical flow cell, SPR305-MS : high chemical resistant PEEK flow cell, SPR310-GS : Gas flow cell, SPR302-LS for fast kinetic studies, or request custom made flow cell! |
| Sensors/Substrates | Wide range of surfaces is 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⁺ etc.). The sensor holder allows for <i>ex-situ</i> depositions on sensors (e.g. dip coating). If you cannot find what you are looking for, request a custom made surface! |
| Software | Unlimited MP-SPR Navi™ Control and Data Viewer software. 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 7, 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 62 x H 41 x D 47 cm (24" x 16" x 18.5"), 50 kg (110 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.