

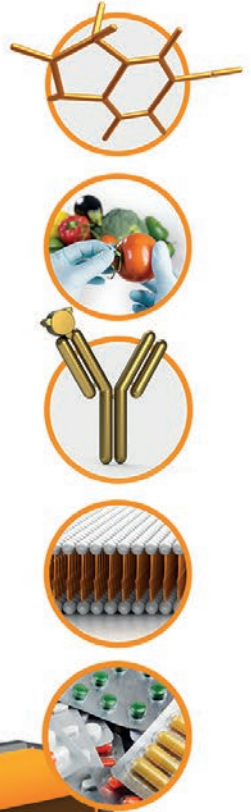


MP-SPR Navi™ 420A ILVES

Excellence in Surface Plasmon Resonance
BioNavis

4-channel MP-SPR Navi™ 420A ILVES for molecular interaction studies is the fastest member of the MP-SPR family! KineticTitration function makes it an ideal solution for challenging-to-regenerate-surfaces, or in case you just want to obtain your results faster!

PureKinetics™ (pat.pend.) uniquely eliminates bulk effect, extends life span of functionalized sensors and together with minimal dead volumes provides high quality kinetic data for small molecules as well as proteins in purified and crude samples, including 100% serum.





MP-SPR Navi™ 420A ILVES specifications

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 laser. Exceptionally wide angular range 40-78° is measured, true angular resolution 0.001°.
Liquid handling	Automated 96-well plate liquid handling for unattended runs . 4 flow channels . Configure channels one-by-one (individually) or in series. Dual loop injection mode enabling e.g. fast KineticTitration experiments, and experiments in multiple buffers. Controlled buffer flow conditions with precise syringe pumps and integrated degasser . 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. Special PureSample™ function removes diluted sample entering measurement channel.
Wavelength of light	Standard 670 nm for all channels.
Refractive index range	1.00-1.40 (measurement bulk environment) Layers that MP-SPR can measure can have much higher RI such as diamond like carbon (2.7) and inorganic crystals.
Media PureKinetics™ (pat.pend.)	Full scan encompasses both environments: gas and liquid . Robust fluidics allows for water based liquids but also for some organic solvents. PureKinetics™ is a unique feature that enables measurements in 100% Serum and allows having high refractive index difference between running the buffer and the sample. Thus, while injected sample has 5% DMSO to ensure solubility of the sample, the running buffer can run without DMSO altogether (0% DMSO). Significantly reduced contact time of surface proteins with DMSO extends the life span of the functionalized sensors and thus saves consumable costs.
Mode of operation	Angular Scanning mode , "MP-SPR mode" – scanning across a range of angles providing full SPR curve and multiple parameters. Several sensograms can be plotted from the full curve, such as PureKinetics™. Sampling rate depends on selected angular range, typical less than 2 seconds. Fixed Angle mode , "traditional SPR mode" - measurement from single angle, providing time – intensity sensogram. Mode for fast kinetic studies - sampling rate from 1ms
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	In gas: from 2 Daltons (Hydrogen) - in liquid: <100 Daltons
Noise	Short-term noise 0.3 µRIU, Baseline drift (long term) < 1µRIU/min.
Temperature	Measurement temperature range from 15 – 40 °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: 4 channel PDMS flow cell. Flow cell volume: 1 µl. Optional flow cells: SPR321-EC: Electrochemical flow cell (one chamber), or request custom made flow cell!
Substrates	Wide range of surfaces available. Such as metals (Au, Ag, Cu, Pt...), other inorganics (SiO ₂ , Al ₂ O ₃ , TiO ₂ ...) or functionalized surfaces (CMD, Ni ²⁺ , Protein A, Biotin, Steptavidin, Disulfide...). If you cannot find what you are looking for, ask our custom made surfaces!
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 needed unless you want one. HPLC tubing enables easy exchange of parts. Ask more information about annual maintenance contract and Gold, Silver, or Bronze service contracts.
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	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.