SPR NAVI™ 210A

Automated and Flexible MP-SPR

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SPR Navi™ 210A is based on the MP-SPR (Multi-Parametric Surface Plasmon Resonance) technology. It offers same unique features as SPR Navi™ 200, but is fully automated. The instrument is equipped with a built-in degasser, automated valves and syringe pumps that automate up to 6 samples. See the comparison with our other MP-SPR instruments. Also here, to fully enjoy the MP-SPR, we recommend the additional set of lasers.

Key Features of SPR Navi™ 210A:

True Goniometric SPR

Unlike most SPR systems, SPR Navi™ 210A is a true goniometric SPR. This eanbles a wide angular scan range (= 40–78°) that produces a complete SPR curve with absolute angle information. The true goniometric SPR configuration confers great advantages as it widens the range of refractive indexes at which you can measure, allowing you to characterize surfaces in gas and/or liquid. It also allows you to check the quality of user-defined surfaces before sample injection, providing you with additional evidences. In other words, the wide angular scan range makes SPR Navi instruments sensitive and versatile.

Customizable flow cell

SPR Navi™ 210A comes with dual measurement channels for in-line referencing or duplicate measurements. In addition, the easily accessible flow-cell can be customized for user-specific experiments, thus broadening your experimental capabilities. For instance, BioNavis can provide

electrochemical flow cells or flow cells equipped with optical fibers for surface illumination. The flow cell shape can also be customized to tailor the flow dynamics to your needs.

Flexible sensor-slide system

With the SPR Navi™ 210A instrument, you can use the innovative sensor-slide holder for easy "drop-in" placement of your sensor-slide into the instrument. It allows users to change surfaces within seconds, making SPR Navi™ 220A an extremely convenient instrument to work with. The sensor-slide holders can be labeled and used for long-term storage of your custom-modified surfaces. Sensor-slides can be modified outside the instrument, with a great number and combination of layers, prior to the actual analysis. This unique removable sensor system provides additional flexibility. It allows you to combine SPR data with other widely used techniques to provide supporting information, including surface topography, surface wettability, chemical composition, photochemical processes, swelling, adsorption...

Contamination free MP-SPR

The proprietary optical elastomer in the SPR Navi™ 210A finally does away with the need for messy and potentially contaminating index-matching oil. The result is a contamination-free environment for your measurements. The optional immobilizer, a horizontally oriented stand-alone flow cell, can be used for in-situ functionalization of SPR slides. This further minimizes the risk of cross-contamination and enables minimal sample depositions.

LIQUID HANDLING SPR Navi™ 210A Specification:

Integrated Autosampler The instrument is equipped with one autosampling areas:

- Autosampling area:
  - Fully configurable program
  - Sample capacity: 6 samples in vials or bottles
  - Injection modes: Full loop, partial loop
  - Wash: Programmable, wash between injections and wash between vials
  - Loop volume: 12 - 2000 µL programmable, exchangable, others by request. Loops are standard liquid chromatography loops and can be exchanged easily.

Integrated Syringe pump

- Sample syringe: 2 500 µL, 1-channel
- Measurement flow (running buffer)
- 2-channel
- 2500 µL standard
- Flowrates: 1µl/min to 6 mL/min

Integrated Degasser

- 2-channel degasser
- Internal volume only 285 µl
- Eliminates baseline fluctuations, advanced error and leak checking functions

Wetted Parts

- Instrument: FEP (teflon-like), PEEK, Systec AF (teflon-like), FFKM
- Flow-cell: PDMS/PEEK/titanium

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