



Research and teaching laboratories with a desire to utilize surface plasmon resonance for the study of biomolecular interactions have often found this technology inaccessible due to its high cost. The SensIQ Discovery is an entry-level, low cost device designed for those labs just getting started using SPR, but would like to take advantage of its label-free, real time analysis capabilities.

APPLICATIONS

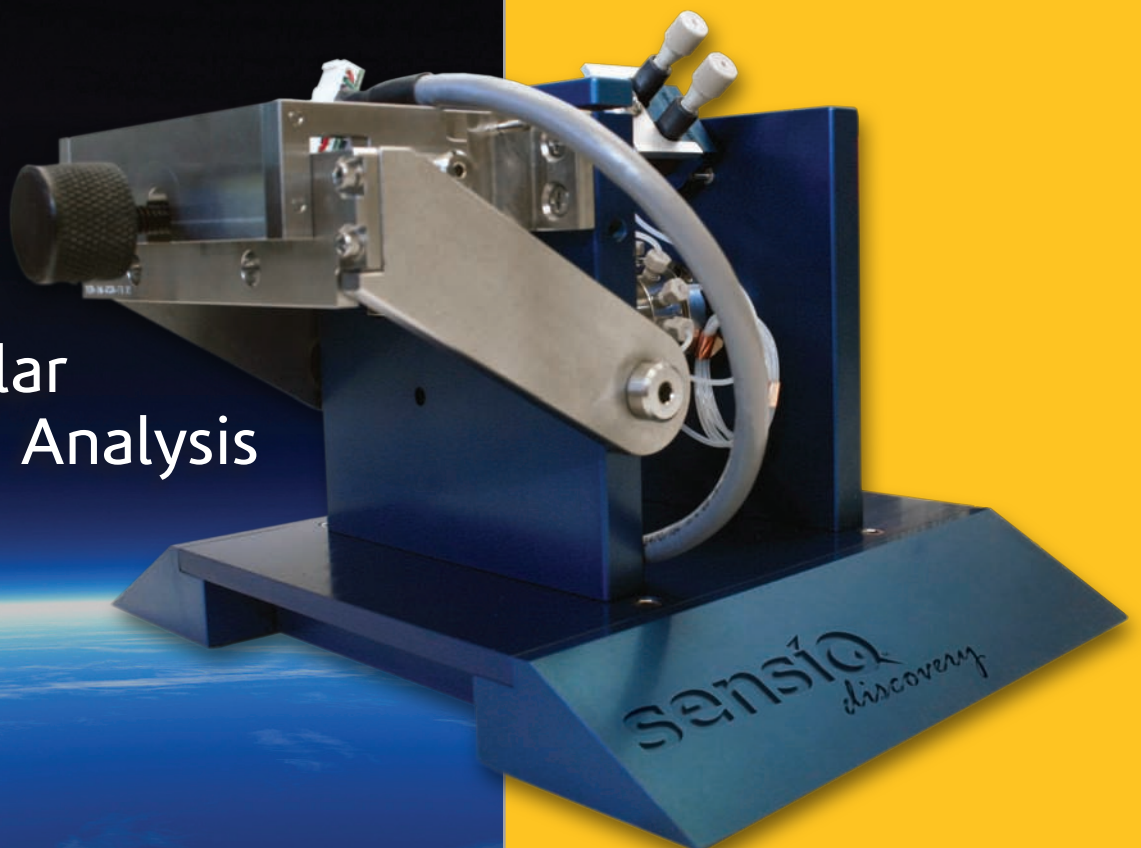
SensIQ Discovery measures several different types of interactions including:

- Protein – Protein
- Protein – DNA
- Antibody – Antigen

Analysis can be performed to determine:

- Binding specificity
- Kinetics
- Affinity
- Concentration
- Binding stoichiometry

Biomolecular
Interaction Analysis



TECHNICAL SPECIFICATIONS

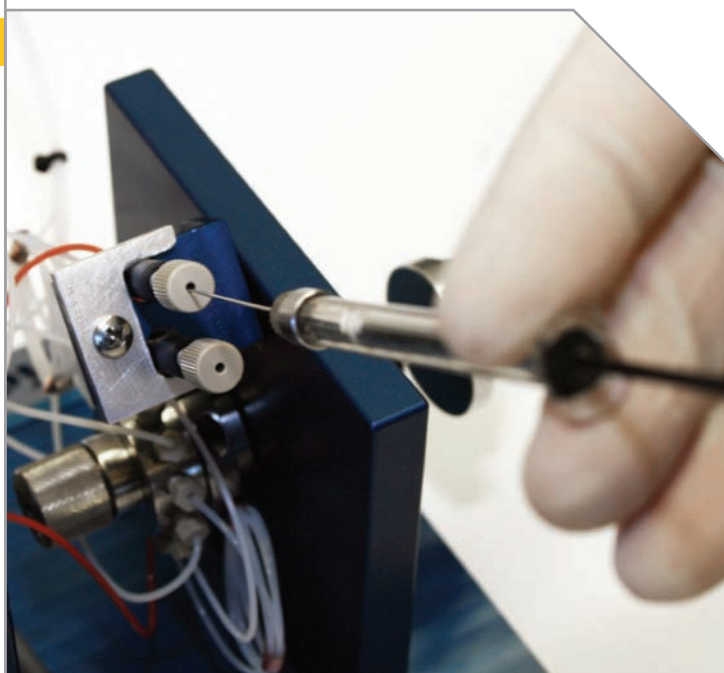
Real time reference curve subtraction	yes
Flow cell volume	50nl
Simultaneous injection	yes
Injection volume	10 to 250 μ l
Refractive index range	1.33 - 1.40
Short time noise	<1 RU
Flow rate	user configurable
Sample loading	manual (syringe)
Sample injector	manual actuation
Sample loops	2 (independently loaded)
Temperature	room temp. operation

WORKING RANGES

k_a	$1 \times 10^8 \text{M}^{-1} \text{s}^{-1}$
k_d	$10^{-1} - 10^{-6} \text{s}^{-1}$
Concentration	$\sim 10^{-3} - 10^{-11} \text{M}$

The high quality data generated by the SensiQ Discovery can be easily and quickly analyzed using Qdat Data Analysis software. Qdat, from the developers of the widely used Scrubber and Clamp software, takes the mystery out of SPR data analysis by stepping the user through the process and generating results in minutes. Simple, straightforward operational parameters ensure the system is up and running quickly. All operations, other than data acquisition and display, are performed manually and the software has been tailored to provide user prompts for accurate timing of events.

The SensiQ Discovery is a manual, dual channel device that combines a proven sensor design, fluidics and software at an affordable price. The sensor utilizes the well-known Kretschmann SPR geometry which has been in use for many years. The flow channel volumes have been minimized to ensure high mass transport rates of sample to the sensor surface. Samples are loaded manually into one or both sample loops and are then injected over one or both sensing channels. The system is operated at ambient temperature without active temperature control. Real time reference curve subtraction is employed as a means of subtracting interference from temperature drift and bulk refractive index variations.



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