

Product Selection Guide

Accelerate your next
discovery with Nicoya's
SPR platforms





At Nicoya, our mission is to improve human life by helping scientists succeed. Many of us have been impacted by diseases such as cancer and Alzheimer's. Globally, there are millions of researchers who are working relentlessly to better understand these diseases, and we are here to help.

Surface plasmon resonance (SPR) is a label-free technique used to detect biomolecular interactions in real time. It is widely adopted in pharmaceutical and life science research as a central tool for quantitative analysis given its versatility and compatibility with a wide range of biomolecules. As a unique technique that allows for determination of both binding affinity and kinetics, it lends itself well to applications such as ligand-receptor and enzyme-substrate interaction studies, drug screening, epitope mapping, protein conformation studies, and label-free immunoassays.

The detailed insights provided by SPR on the strength and stability of key interactions is critical to advancing our knowledge of human diseases and how to treat them. Find out which of our benchtop SPR platforms is right for your lab.

helping
scientists
succeed.

Nicoya SPR platforms

Powerful benchtop solutions for any lab

	OpenSPR	OpenSPR-XT	Alto
Overview			
System	 <p>Obtain publication-quality binding kinetics & affinity data on your benchtop.</p>	 <p>Maximize your productivity with fully automated operation of our benchtop SPR.</p>	 <p>Accelerate drug discovery with high-throughput analysis powered by digital microfluidics.</p>
Consumable		Nanotechnology enabled sensors	Nanotechnology enabled sensor cartridges
Software		OpenSPR Software Control software for operation and data acquisition	Alto Software Suite Cloud-based solution with experimental design, control and analysis software*
Assay Types		<ul style="list-style-type: none">• Kinetics/affinity• Yes/no binding• Epitope mapping• Concentration analysis• Competition assays• Thermodynamics	<ul style="list-style-type: none">• Kinetics/affinity• Yes/no binding• Epitope mapping• Epitope binning• Concentration analysis• Competition assays• Screening

*Automation integration available

Technical specifications

	OpenSPR	OpenSPR-XT	Alto
Fluidics			
Data Channels		2	16
Reference:Standard		1:1	1:1 standard Any combination possible
Fluidics System	Conventional microfluidics		Digital microfluidics
Sample Handling			
Sample Volume	150µL per injection	200µL per sample well	2µL per sample well Up to 5 dilutions per well
Sample Capacity & Configuration	-	2x96-well microplate Standard	1x64-well cartridge Microplate format
Interaction Time	Flow rate dependent		30s-4h
Assay Automation	Semi-automated injection process	Autosampler	Automated serial dilutions & injections Robot compatibility
Buffer Selection	Automated switching 3 ports available		Automated switching
Unattended Run Time	Limited	24h	120h ¹
Performance			
Association Range	$10^3 - 10^7$ 1/M*s	$10^3 - 10^7$ 1/M*s	Up to 10^9 1/M*s
Dissociation Range	$10^{-5} - 0.1$ 1/s	$10^{-5} - 0.1$ 1/s	$10^{-5} - 1.0$ 1/s
Affinity Range	mM-pM	mM-pM	mM-pM
General			
Core Detection Technology	Localized SPR biosensors		Localized SPR fiber optic biosensors
Analysis Temperature ²	10°C below Ambient – 40°C		15°C – 50°C
Sample Storage ²	-	Chilled from 20°C – 4°C	15°C – Ambient
Compliance ³	-		21 CFR Part 11 CE
Size HxWxD (cm)	21 x 46 x 34	53 x 78 x 55	46 x 35 x 51
Weight (kg)	19	45.3	23

¹When integrated in fully automated environment.

²Lower bound of temperature will be dew point or listed temperature.

³All products are under processes that are compliant to ISO 13485.

Speak with an Application Scientist today

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