

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 due to its versatility to be applied across m. 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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 nicoya