



Octet® R8e BLI System

Discover with Accuracy:
Enhanced BLI Analytics
With New Heights
of Sensitivity

Simplifying Progress

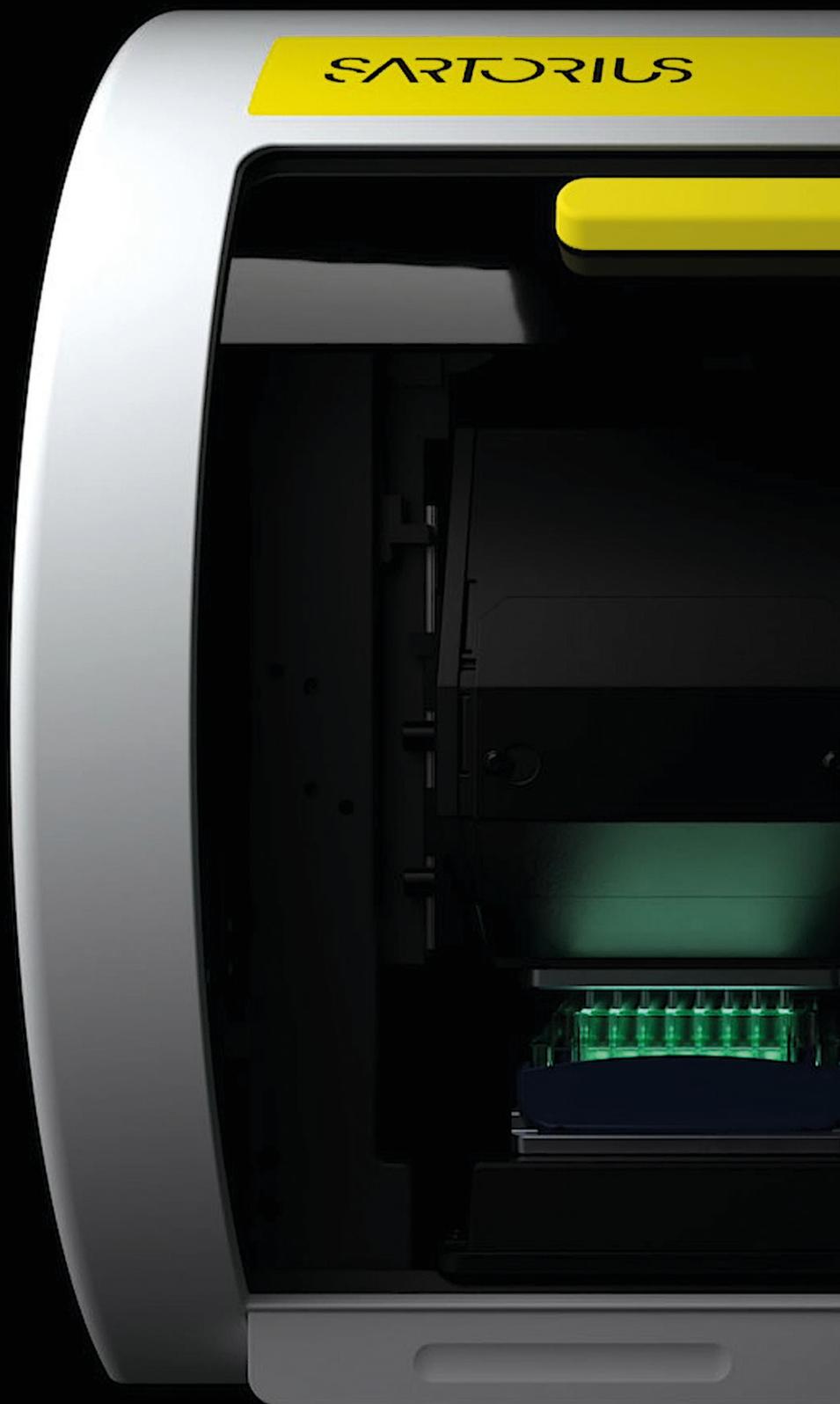
SARTORIUS

The New Octet[®] R8e

Outstanding Sensitivity.

Reliable Data.

Unlimited Potential.



The Most Advanced Detection Capabilities in BLI

Building on the foundational biolayer interferometry (BLI) technology of the Octet® platform, the Octet® R8e features enhanced BLI technology for researchers seeking advanced detection capabilities in real-time, high-throughput biomolecular interaction analysis.

This instrument redefines the boundaries of detection and performance in BLI, accommodating low-molecular weight (> 100 Da) and low-abundance (>10 pM) analytes. It meets the scale and cost demands of studies with flexible throughput and extended unattended run times.

With its exceptional versatility, the Octet® R8e opens new opportunities for research, ensuring reliable results from the initial discovery stages to complex manufacturing processes.

Elevate Your Lab's Capabilities



- **Best-in-Class Sensitivity:** Enhanced BLI technology broadens the dynamic range and improves detection limits, enabling accurate measurement of low molecular weight and low-abundance analytes.

- **Maximum Efficiency:** Compatibility with 384-well plates increases throughput and enables sample volumes as small as 40 μ L, reducing the cost of analysis per sample.



- **Extended Runtime:** Advanced evaporation control in the 96-well plate format preserves sample integrity, allowing for extended runtimes of up to 16 hours.

- **Unlocked Potential:** The combination of cutting-edge innovation with long-term flexibility supports new applications and workflows without costly upgrades.

One System, Many Applications

The Octet® platform is a comprehensive tool for screening and characterizing molecular interactions, including protein-protein and protein-drug interactions. It supports a wide range of applications across various stages of biologics and drug development, from early selection and validation to manufacturing.

Octet® Platform Applications

Competition | Inhibitor Assays Small Molecules



Viruses | Vaccines



Ligand Binding Assays



Fc Receptors

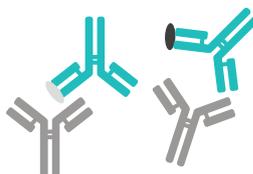


AAV E/F Ratio



Epitope Binning

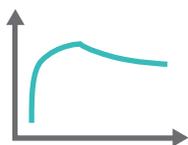
- In-tandem assays
- Sandwich assays
- Pre-mix assays



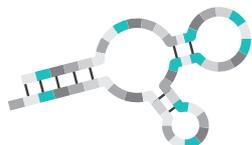
ELISA Replacement



Off-rate Ranking



Aptamers



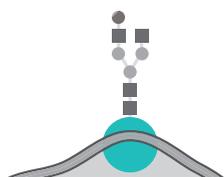
Biosimilars



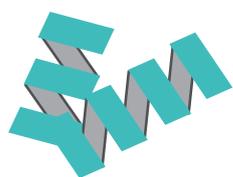
DNA | RNA Binding Proteins



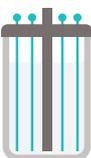
Glycan Profiling



Residual Protein Analysis



Manufacturing Control
Bioprocessing QC

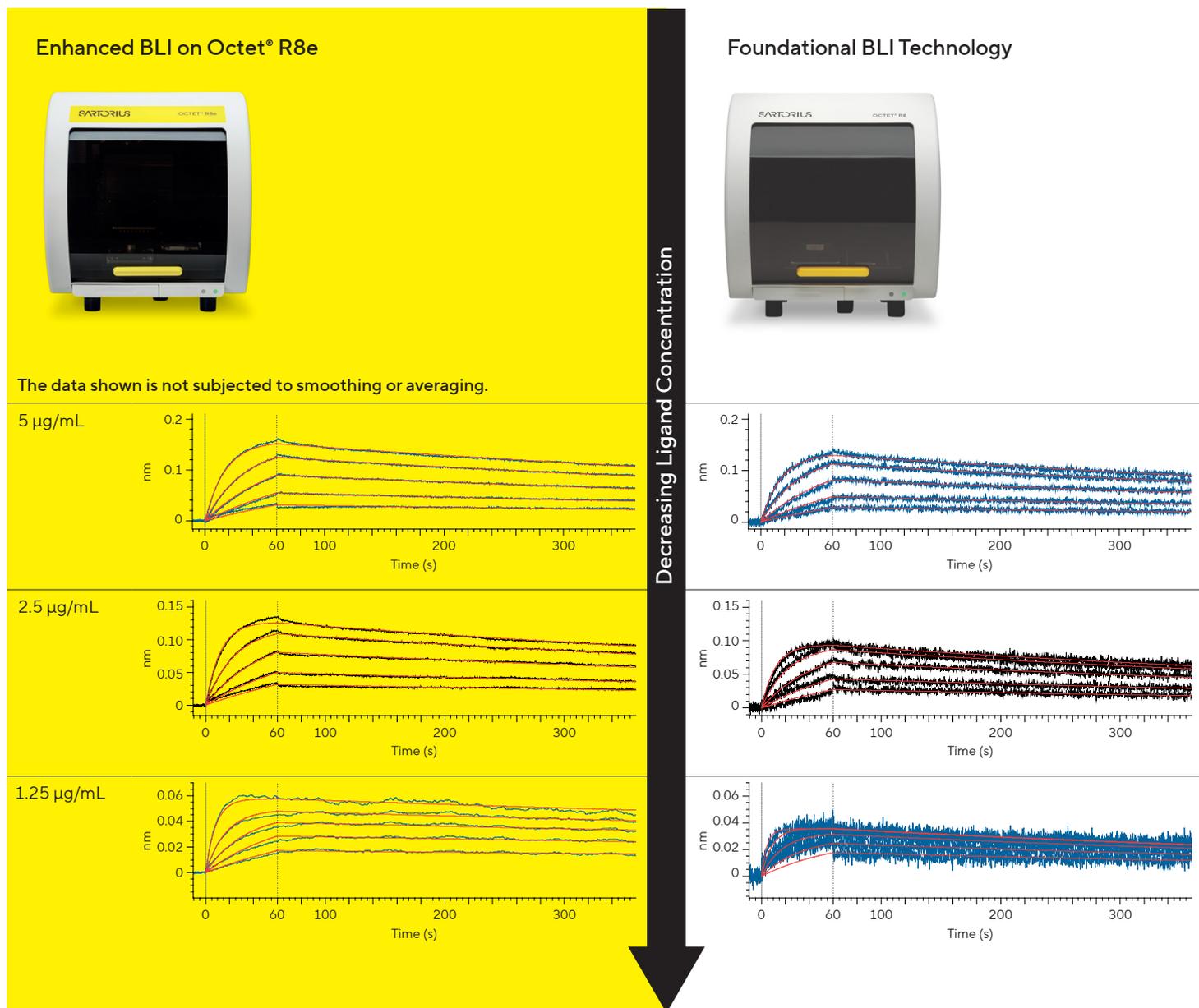


Confident Results Even at the Edge of Detection

The Octet® R8e BLI System achieves picometer resolution in BLI response levels, enhancing the resolution of lower molecular weight interactions. This capability allows for the examination of molecular interactions at significantly reduced ligand surface densities, minimizing secondary interactions, preserving analyte activity, reducing aggregation, and limiting mass transport effects.

Even prior to data processing, the sensorgram data generated by the Octet® R8e provides the resolution necessary to interpret weak binding events, enabling researchers to confidently advance critical discovery programs.

Sensorgram Comparison



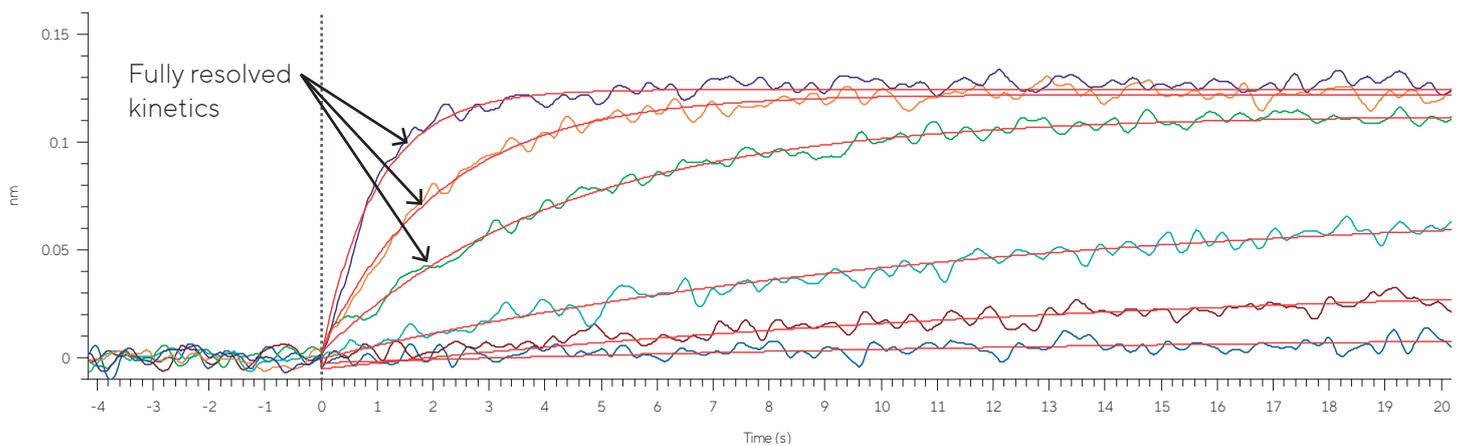
The Octet® R8e BLI System delivers cleaner data with significantly lower-noise levels.

Reliable Capture of Fast Initial Kinetics With Enhanced Data Acquisition

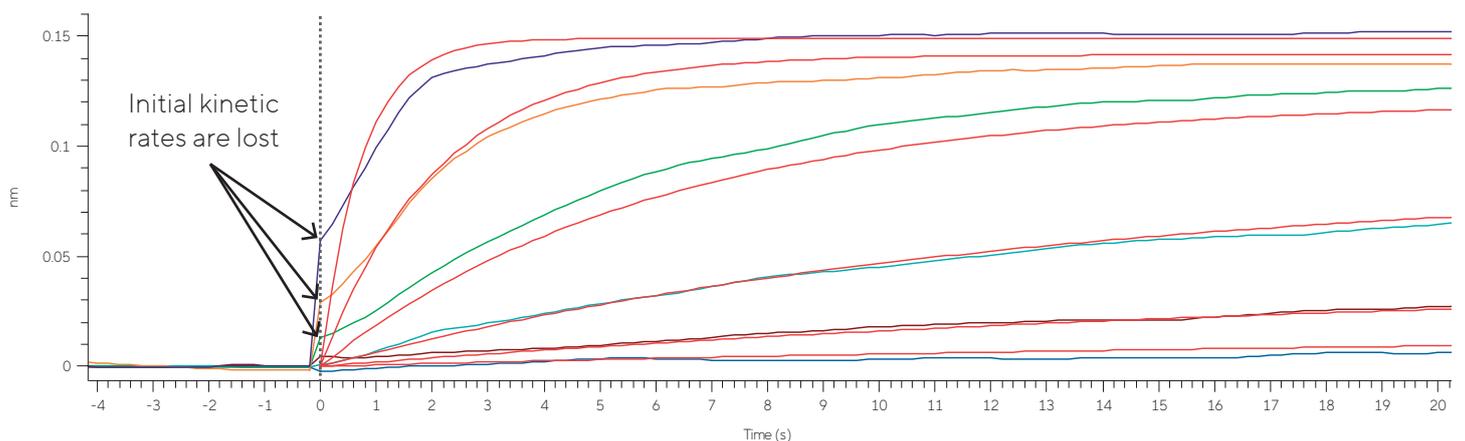
The Octet® R8e introduces enhanced data acquisition, enabling real-time capture of the initial binding phase, a critical window often missed by foundational BLI technology. The Octet® R8e delivers greater accuracy and confidence in kinetic analysis, leading to:

- More accurate kinetic rate calculations
- Better differentiation between fast- and slow-binding molecules
- Higher confidence in kinetic parameters, even for fast or weak interactions

Octet® R8e Enhanced Data Acquisition



Foundational BLI Technology Standard Data Acquisition



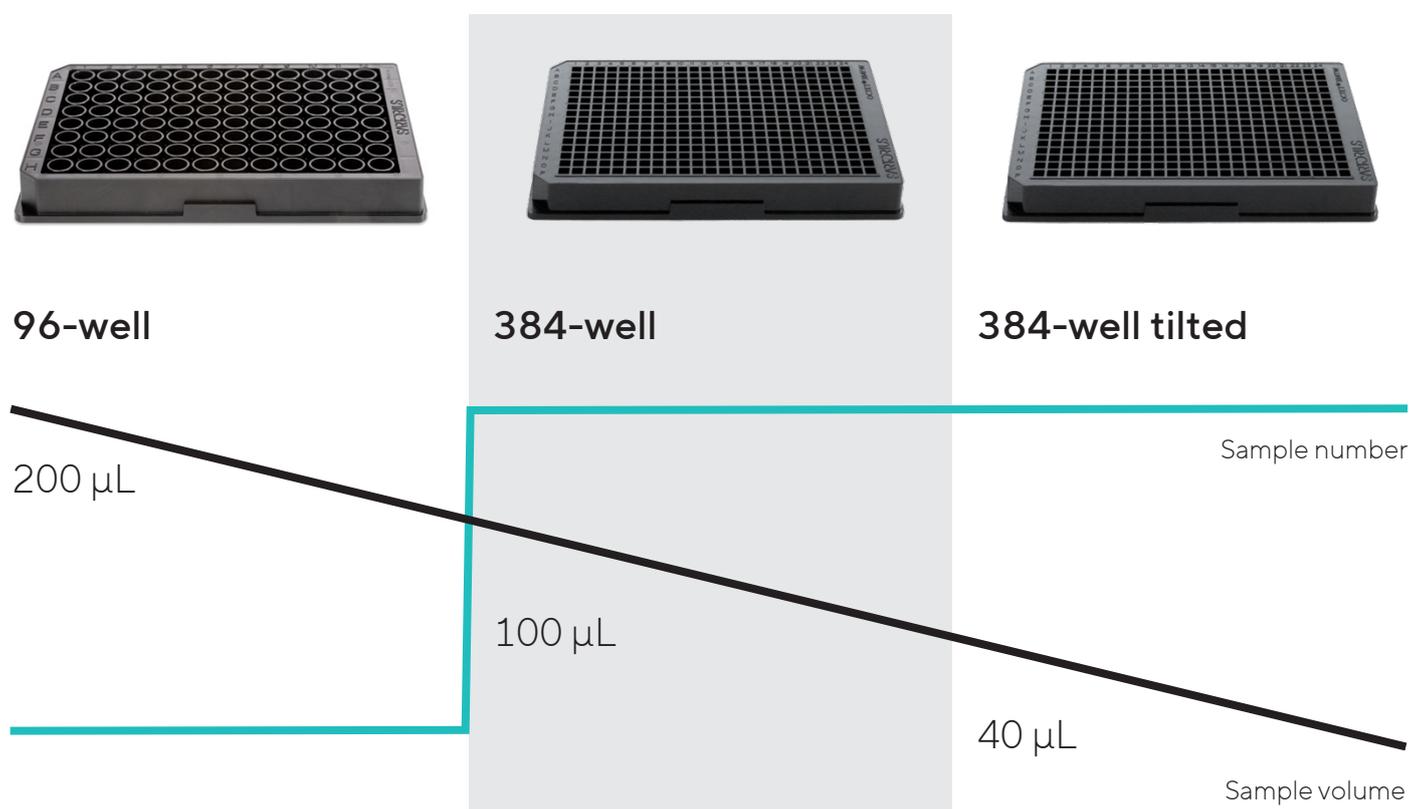
High-resolution initial kinetic rates ensure that no critical binding information is lost.

More Data From a Single Assay With Only 20% of the Sample

The capabilities of the Octet® R8e BLI System are extended to accept both 96- and 384-well microplate formats. 384-well microplates offer an instantly recognizable benefit over 96-well microplates by increasing cost efficiency through use of smaller sample volumes (40 μL versus 200 μL , respectively). By using smaller sample volumes, the need for reagents and materials is reduced, significantly lowering the overall assay cost.

Workflows involving precious or limited samples will benefit from reduced sample volumes as well as increased sample capacity and more conditions per run. The Octet® R8e system's 384-well plate compatibility allows the following:

- **Minimized Sample Usage:** Use as little as 40 μL , perfect for rare or expensive analytes
- **Enhanced Capacity:** Process more samples per plate, boosting productivity
- **Improved Efficiency:** Experience fewer plate changes and achieve more results in a single session
- **Reduced Waste:** Benefit from smaller volumes, lower reagent costs, and greener workflows



The Octet® R8e BLI System offers flexibility in experimental design to meet a wide range of assay requirements.

A Workflow Everyone Knows, Intuitive from Sample to Insights

Biomolecular Interaction Analysis for Screening,
Kinetics, Affinity, Epitope Binning, Concentration,
and Relative Potency.

Step 1: Prepare the sample plate

Set-up once. Explore more.

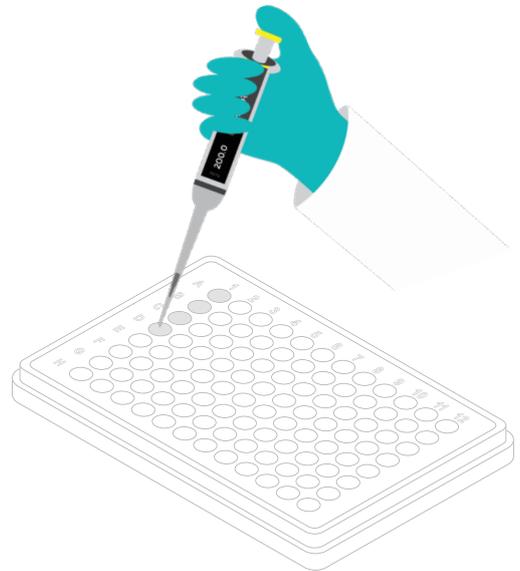
- Run different assay conditions in parallel
- Higher operational efficiency with capacity options and streamlined assay development in parallel

Step 2: Prepare the biosensors

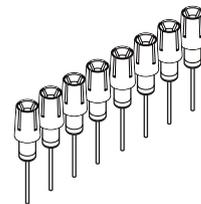
**Use one to 96 Biosensors -
your choice, or fully flexible.**

Biosensors are available in a wide range of surface chemistries for use in a diverse set of biomolecular applications.

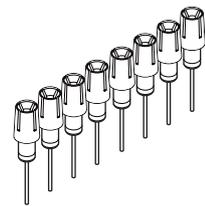
 Visit our [online store](#) to get more information about our selection of biosensor tips, consumable offerings, and to place orders.



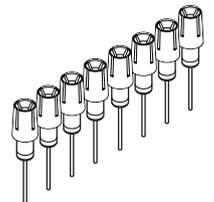
Hydrate the
biosensor tips

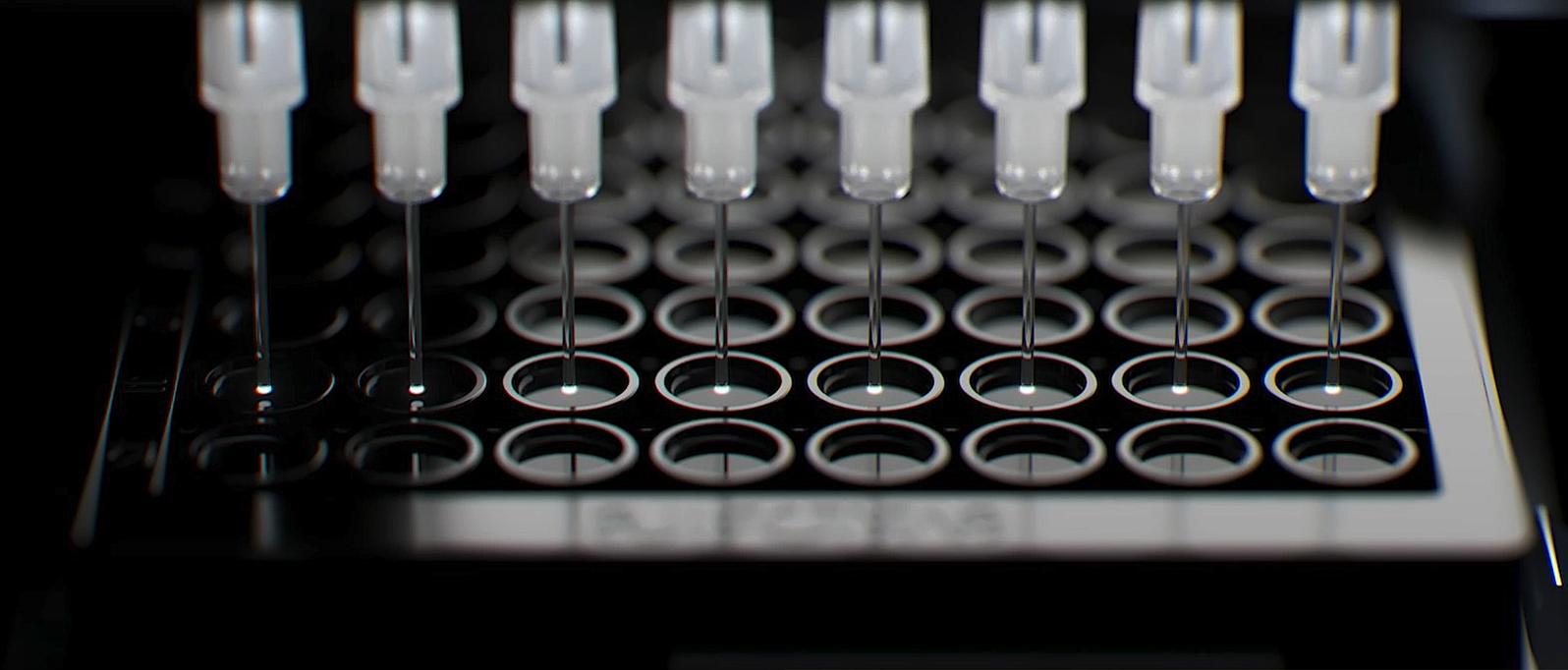


Attach ligand



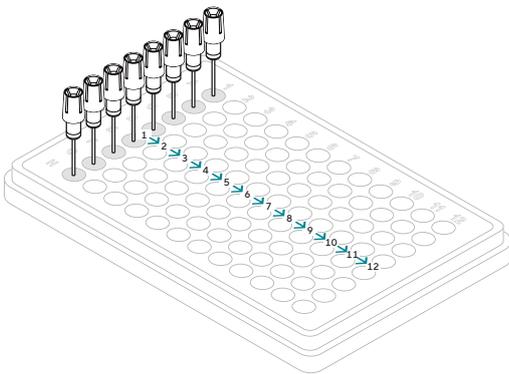
Dip and read biosensors are
ready for your experiment





Step 3: Load the sample plate and biosensors, and walk away.

No Prep. No Cleaning. Just Run.

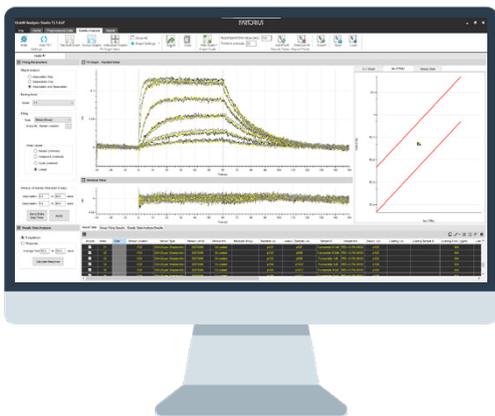


Step 4: Run the experiment

- Non-destructive measurement
- No loading times or cleaning between runs
- The eight-channel setup increases the number of conditions tested per unit time
- Up to 16 hours unattended run time for flexible experiments

Step 5: Analyze the data

Intuitive software for setup and analysis

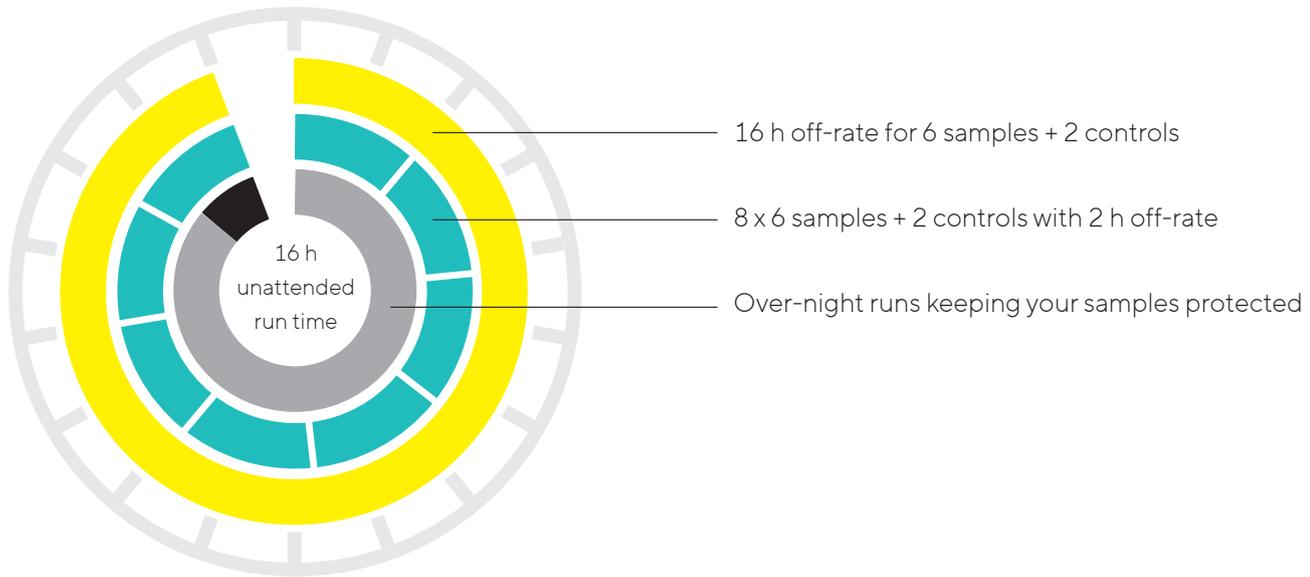


Octet® CFR software and our Octet® GxP Server enable data acquisition and data analysis in laboratories working under GMP, GLP and 21 CFR Part 11 regulations. They also provide necessary technical administrative features for compliance with FDA regulations. An additional Software Validation Package is available to validate data calculations produced by the Octet® software.

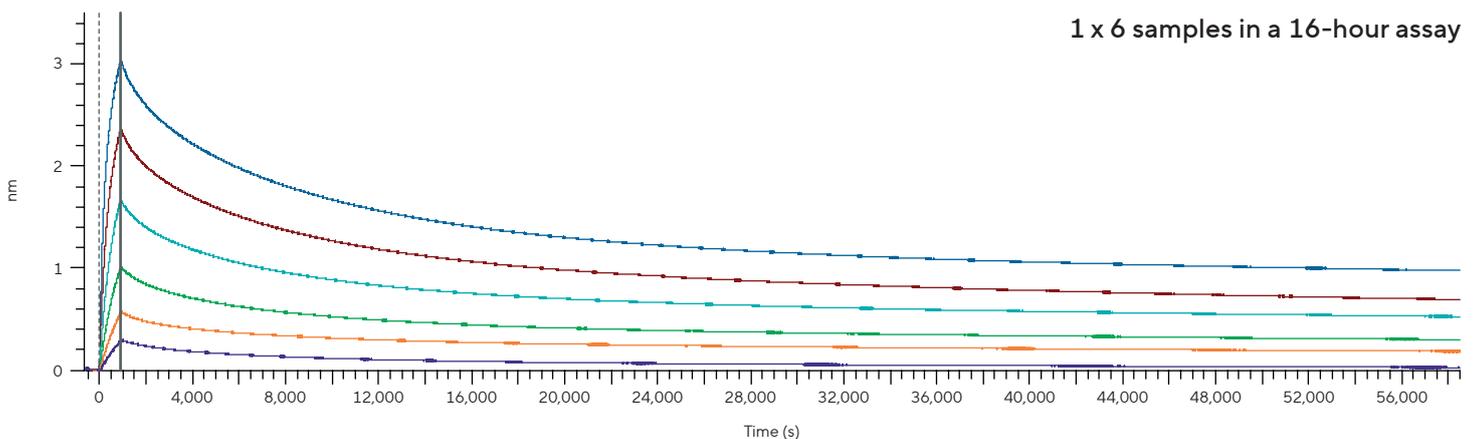
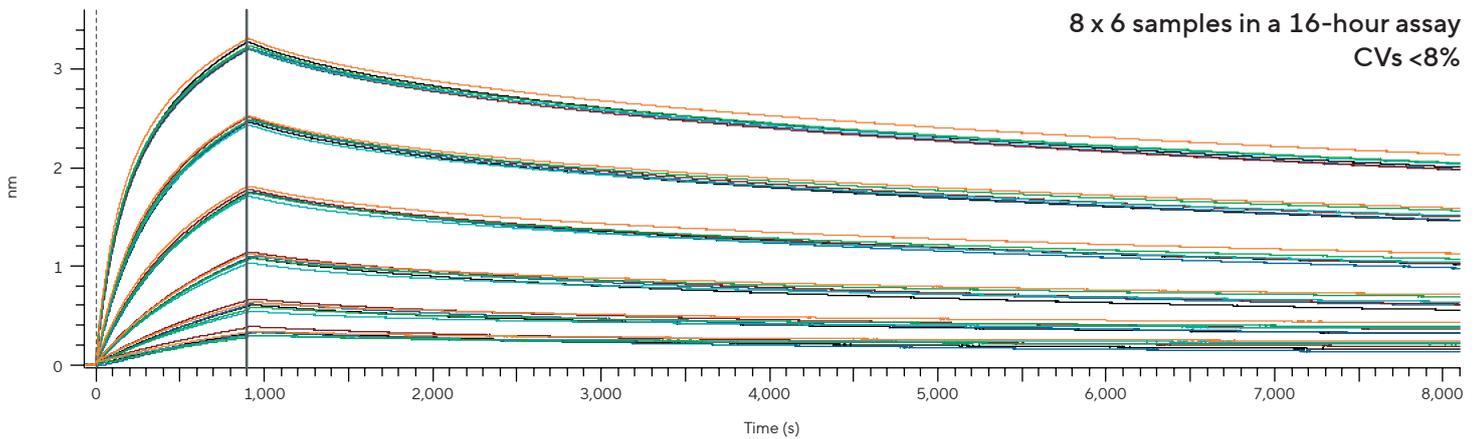


Precision Through Evaporation Control

The new Octet® AE Microplate Evaporation Cover for 96-well microplates minimizes evaporation across all wells to maintain consistent sample concentrations during extended or sensitive BLI assays. Preserving sample integrity throughout the experiment ensures greater data accuracy and reproducibility, even in long-duration kinetic studies.



Long-term Assay Precision In The Octet® R8e



Octet® R8e Brings High-Performance Label-Free Analysis: Fast, Sensitive, Scalable

Octet® R8e Advantages



Best-In-Class Sensitivity

Higher signal-to-noise ratio for precise detection of low molecular weight and low concentration analytes



Fast Data Acquisition

Improved data acquisition feature to ensure the accurate capture of rapid kinetics



Evaporation Control

Maintains analyte concentrations for 16+ hours, boosting data accuracy and precision



Walk-Away Time

Extends hands-free operation for 16+ hours, maximizing system usage and boosting lab efficiency



Reduced Sample Volume

Achieve reliable results with as little as 40 µL, conserving precious samples and cutting costs



384-Well Plate Compatibility

Supports high-sample capacity workflows, maximizing lab efficiency

Foundational Octet® BLI Advantages



Fast Time to Results

An 8-Channel BLI system can quaternate 96 samples in 30 minutes



Easy to Use

The Octet® system features a streamlined user interface that minimizes training time so you can focus less on setup and more on generating insights



Fluidic Free Sampling

Offers true walk-in, walk-out operation with no fluidics to clean or maintain, saving operator time, reducing system downtime, and eliminating sample contamination risks



Robust, Low Maintenance System

Run your experiments round the clock with minimal instrument downtime



Crude Sample Compatibility

Only molecules that bind or dissociate from the biosensor surface produce a signal. No time-consuming sample pre-treatment or purification required



Recover and Reuse Samples

Samples remain intact after analysis and can be reused for additional experiments. Get more data from the same sample

Technical Specifications

Description	Specification
Detection technology	Biolayer Interferometry (BLI)
Biosensor type	Disposable, single-use fiber optic biosensors with optional reuse by regeneration and re-racking in the sensor tray
Information provided	<ul style="list-style-type: none">▪ Yes/No binding▪ Kinetic and affinity analysis (k_{on}, k_{off}, K_{D})▪ Specific and selective detection of molecules, even in crude samples▪ Relative and absolute quantitation of specific proteins in crude matrices or purified samples▪ Relative potency (EC_{50}) and Inhibition (IC_{50}) analysis
Sample types	Proteins, antibodies, peptides, DNA, RNA, liposomes, viruses, and VLPs in various media, including serum, buffers containing DMSO, periplasmic fractions, bacterial cells, nanoparticles, untreated cell culture supernatants, and crude cell lysates
Number of spectrometers	8
Maximum simultaneous reads	8
Data collection rates	Enhanced to Standard Data Collection rates
Sample position and format	One standard 96-well, 384-well flat-bottom microplate, or 384-well tilted-bottom microplate
Minimum sample volume	40 μL
Orbital flow capacity	Static or 100–1,500 rpm
Analysis temperature range	15–40 °C
Kinetics	
Workflow	Up to 8 assays in parallel
Molecular weight detection	>100 Da
Association rate constant	$10^1 - 10^7 \text{ M}^{-1}\text{s}^{-1}$
Dissociation rate constant	$10^6 - 0.1 \text{ s}^{-1}$
Affinity K_{D} constant	1 mM - 10 pM
Baseline noise	Typically < 0.001 nm (RMS)
Baseline drift	<0.1 nm per hour
Quantitation	
Workflow	Up to 8 assays in parallel
Direct quantitation range for ProA biosensor	0.01 - 4,000 $\mu\text{g}/\text{mL}$

Compliance

Compliant with	CE, FCC, ICES, KC, UKCA, RCM
Safety	IEC/EN/UL/CSA-C22.2 61010-1 IEC/EN/UL/CSA-C22.2 61010-2-010:P19
Electromagnetic compatibility (EMC)	EN/IEC 61326-1, ICES-003, FCC Part 15 KS C 9811, KS C 9610-6
Environmental	RoHS, EN IEC 63000, TSCA

Ordering Information

Product	Part No
Octet® R8e System Includes: <ul style="list-style-type: none">▪ Octet® R8e Instrument▪ Instrument Controller and monitor▪ Four licenses of Octet® Discovery and Analysis Software▪ Installation kit▪ 1 Box of Octet® AE Evaporation Covers	Octet-R8e
Octet® R8e IQOQ kit Includes: <ul style="list-style-type: none">▪ Octet® R8e IQ/OQ Kit and Manual	41-0332
Octet® R8e PQ-Q kit Includes: <ul style="list-style-type: none">▪ Octet® R8e Performance Qualification Kit and Instructional Manual for Quantitative Applications	18-5175
Octet® R8e PQ-K kit Includes: <ul style="list-style-type: none">▪ Octet® R8e Performance Qualification Kit and Instructional Manual for Kinetic Applications	18-5176
Octet® R8e PQ kit Bundle Includes: <ul style="list-style-type: none">▪ Octet® R8e Performance Qualification Kit and Instructional Manual for Kinetic Applications▪ Octet® R8e Performance Qualification Kit and Instructional Manual for Quantitative Applications	18-5174
Octet R8e, GxP Kit Includes: <ul style="list-style-type: none">▪ Octet® R8e IQ/OQ Kit and Manual▪ Octet® R8e Performance Qualification Kit and Instructional Manual for Kinetic and Quantitative Applications▪ Four licenses of Octet 21 CFR Part 11 Software▪ Octet® Software Validation Package	18-5177
Octet® AE Evaporation covers, Box of 10	18-5152



Octet[®] R8e BLI System

Discover with Accuracy: Enhanced BLI Analytics With New Heights of Sensitivity

Unlock the potential of your research by extending enhanced BLI to more projects, enabling you to move faster and make better decisions. This way, you can leave the lab knowing your work is complete and your life outside is waiting. With confidence in your work, you can enjoy the freedom that follows.

Contact us for a demo

Our team of application specialists helps your team to get set up, with real samples, in a matter of days. Collaborate and understand the simplicity of the workflow, right in your own laboratory.



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