

Octet

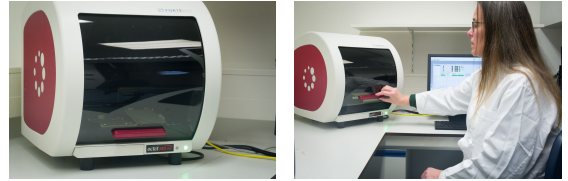
<https://labfacilities.wur.nl/SearchDetail.aspx?deviceid=a088459b-f116-49c0-b061-a1f72dde2df5>

Brand

ForteBio (by Molecular Devices)

Type

RED96e



Contact

Jan Bergervoet (jan.bergervoet@wur.nl)

Organisation

Plant Sciences Group

Department

Bio Interacties en Plantgezondheid

Description

The Octet RED96e monitors label-free binding events in real time to calculate on rates (k_a), off rates (k_d), and affinity constants (KD). Assays are performed using biosensors, reagent and assay kits in 96-well microplates. The fluidics-free Octet can measure a wide range of sample types; from large biologics to small molecules, purified or in crude form. The Octet RED96e operates with a wide range in temperature (15–40°C). The microplate evaporation cover minimizes sample loss enabling up to 12 hours of unattended run time.

Technical Details

- Technology: Bio-Layer Interferometry (BLI) based on fiber-optic biosensors
- Sample volume: 180–220 μL /well, Non-destructive testing, easily recovered
- Data presentation: Sensorgrams displaying kinetic traces or concentration binding rates, Epitope binning and cross-blocking matrices and trace overlays, Tabulated kinetic or concentration data
- Automation: Up to 8 assays in parallel; up to 96 assays per 96-well plate
- Orbital flow capacity: Static or 100–1500 rpm
- Analysis temperature: Ambient + 4°C to 40°C, in 1°C increments
- Association rate constant (k_a): 101 to 107 $\text{M}^{-1} \text{S}^{-1}$
- Dissociation rate constant (k_d): 10⁻⁶ to 10⁻¹ s⁻¹
- Affinity constant (KD): 1 mM – 10 pM
- Baseline noise (RMS) <3 pm
- Baseline drift: < 0.12 nm/hour
- Quantitation range: 0.5 $\mu\text{g}/\text{mL}$ to 2000 $\mu\text{g}/\text{mL}$ at 200 rpm, 0.05 $\mu\text{g}/\text{mL}$ to 100 $\mu\text{g}/\text{mL}$ at 1000 rpm
- Quantitation precision: CV <10%
- Sample type: Proteins, antibodies, peptides, serum containing media (up to 25%), DMSO containing buffers, virus-like particles, untreated cell culture supernatants and crude cell lysates
- Sample plate: Standard, 96-well, black, flat-bottom microplate
- Molecular weight detection: >150 Da

Applications

- Protein-protein interactions
 - Antibody pairing, affinity
 - Detection of small molecules
- More information can be found on the manufacturer's website.