



AnaLight® Bio200

**Established
development platform
for structure - function
studies**



The **AnaLight® Bio200** is designed to bring Farfield's revolutionary **Dual Polarisation Interferometry** (DPI) technology into development and discovery research facilities with a range of applications.

DPI is an exciting analytical technique with the exquisite sensitivity to study structural changes taking place in molecular systems as they function and interact. **DPI** provides real-time, high-resolution measurements of molecular size, density and mass.

In simple terms, the **AnaLight® Bio200** is a 'molecular microscope' whose quantitative **structural** measurements can be compared directly with complimentary techniques such as NMR, x-ray crystallography and neutron reflection, whilst also being capable of **kinetic** measurement at far higher sensitivity and with less ambiguity than biosensor technologies such as SPR or QCM.

System Features:

- Simultaneous measurements on three channels gives total confidence in data integrity
- Sample loading options give flexibility and precision with low sample volumes
- Open fluidic design can be optimised for your application
- Straightforward upgrade to full automation available
- Sub-atomic structural detail combined with class-leading kinetic performance
- Wide dynamic range extends solvent and buffer handling capabilities

Software Features:

- Automated sensor chip and buffer calibration for ultimate measurement accuracy
- **Resolver™** software features real-time display of all measurements giving rapid data analysis and streamlined method development
- **Kinetic** software gives comprehensive analysis of both interaction kinetics and structural change, in quantitative units
- **Interpreter™** software features freestyle maths editor to express data in your choice of quantitative units
- Automatic reference channel subtraction for full integrity of results

The **AnaLight® Bio200** is a quantitative analytical instrument, not a sensor. Molecules are immobilised (physically or chemically) onto one of a range of surfaces available from Farfield.

The **AnaLight® Bio200** routinely and reproducibly obtains **quantitative** data on real-time changes in thickness (resolution <0.1Å) and surface density (resolution <0.1 picogram/mm²) of the immobilised layer.

This allows accurate calculation of further parameters including mass, surface coverage and concentration. This means, for example, that the **AnaLight® Bio200** can reliably detect molecules below 50Da binding to immobilised proteins of up to 100,000Da with a mass resolution of <5Da.

Applications for **AnaLight® Bio200** include:

Protein – Small Molecule Interactions: Routine measurement of binding parameters and resulting structural change in proteins. Easy differentiation of specific versus non-specific binding.

Conformational Change in Proteins: Quantify dimensions of structural change in real time under a range of external factors such as pH, metal ion binding, co-factor binding, temperature.

Protein Fold and Structure: Comparative analysis of protein fold states and rapid dimensional measurement of protein molecules.

Protein and Peptide Aggregation: Real-time measurement of aggregation processes and the factors affecting them.

Lipids and Membranes: Understand the behaviour behind lipid bilayer formation and perform subsequent interaction studies with membrane proteins

Protein – Protein Interactions: Kinetic analysis of interactions and differentiation of specific versus non-specific complex formation. Analyse differential interactions of protein isoforms.

Surfactants, Polymers and Interfacial Studies: High-resolution, real-time studies of interfacial behaviour during polymer, surfactant and protein interactions.

Nanotechnology: Quantitative characterisation of surface nanostructures and complex layer formation.

Advance your Research with the Measurement Science Leaders

The **AnaLight® Bio200** is a result of Farfield's philosophy of advancing measurement science across the physical and life sciences. At Farfield, we are dedicated to providing a new generation of quantitative tools for researchers to gain new insights into the intimate relationship between molecular structure and function.

Farfield is committed to your success with our instruments after purchase. We provide extensive and ongoing training for all our users. After purchase, you will have access to Farfield's applications specialists and chemists. Technical support is available direct from Farfield or through our global distribution network. Our team of field service engineers is available worldwide to keep your Farfield instrument in peak working order.

Farfield

illuminating the molecular world...