



GRATING COUPLED INTERFEROMETRY TECHNOLOGY

(GCI-based system; mod. Creoptix WAVEsystem)

VENDOR: ALFATEST SRL

YEAR OF ACQUISITION: 2024

SCIENTIFIC SUPERVISORS: prof. Stefano Bruno; prof. Massimiliano Tognolini

Technical features:

- Association constant range:
 - $k_a = 10^2 - 5 \times 10^7 \text{ M}^{-1} \text{ sec}^{-1}$ (piccole molecole)
 - $k_a = 10^2 - 3 \times 10^9 \text{ M}^{-1} \text{ sec}^{-1}$ (macromolecole)
- Dissociation constant range:
 - $k_d = 10^{-6} - 10 \text{ sec}^{-1}$
- No lower molecular weight limit.
- Anti-obstruction microfluidic incorporated into the chip.
- Analysis temperature range: 15°C-40°C.
- Thermostatic autosampler, compatible with HPLC-vials and 96- or 384 well.
- Sample recovery function.
- Automation: 120 hours of unattended operation.

Applications:

- Measurement of affinity kinetics of molecular interactions, label-free and in real time
- Measurement of kinetic constants and dissociation of macromolecules with other macromolecules or small molecules
- Evaluation of the interaction between small molecules and drug targets.

Acquired for the Department of Excellence MUR 2023-2027