

# Overview of different optical label-free methods



Label-free approach	Detection principle	Transducer surface	Main characteristics
Single colour reflectometry (SCORE)	Interferometry	Glass	High-throughput High penetration depth (several micrometres) Robust to temperature changes
Reflectometric interference spectroscopy (RIfS)	Interferometry	Glass	High penetration depth (several micrometres) Sensitive to temperature changes
Surface plasmon resonance (SPR)	Evanescent field-based	Noble metal (commonly gold)	Offered by many different manufacturers Limited penetration depth (few hundred nanometres)
Resonant mirror	Evanescent field-based	Varying	More sensitive than SPR Limited penetration depth (few hundred nanometres)
Photonic crystal	Photonic crystal	Varying	Standard microplate formats available Low cell numbers required
Raman spectroscopy	Inelastic scattering	Varying	Determination of biochemical constitution