

Device

Dimensions	(175 x 155 x 55) mm
Weight	< 1.3 kg
Operating temperature range	-10°C to 40°C
Power requirement	Two USB ports via computer or laptop
Computer requirements	Windows 7 and up
Light source	Polychromatic LEDs light source Specific wavelength band available upon request
Detector	Range of 550 – 750 nm (for Au sensors) Other spectral options available
Software	LabVIEW control software
Data processing	Compatible with Ridgeview's TraceDrawer, Origin, Matlab, Excel and more.

Microfluidic cell

Material	Polydimethylsiloxane (PDMS)
Channel configuration	3 + 1 (current) 1 x 4 (option available soon) 2 x 2 (option available soon)

Injection modes

Direct injection into cell via:	> 100 µL pipette syringe with blunt needle (18 gauge)
Injection ports via:	Luers syringe peristaltic or syringe pump
Direct injection into cell	40 µL for 3-channel segment 10 µL for 1-channel segment

Injection via ports

Number of ports	2 4 (option available soon)
Dead volume	80 µL
Max flow rate with pump	6 mL / min (100 µL per second)

Analytical performances

RI range	1.333-1.390 RIU
RI resolution	1-5 µRI
Standard variation on 5 min	0.012 nm (n = 665)
Drift slope over 30 min	-0.000009 nm / s
Drift shift over 30 min	-0.026 nm
Au sensor calibration	(2170 ± 30) nm / RIU (n = 9)
Average channel-to-channel CV%	(2.2 ± 0.8) % (n=9)

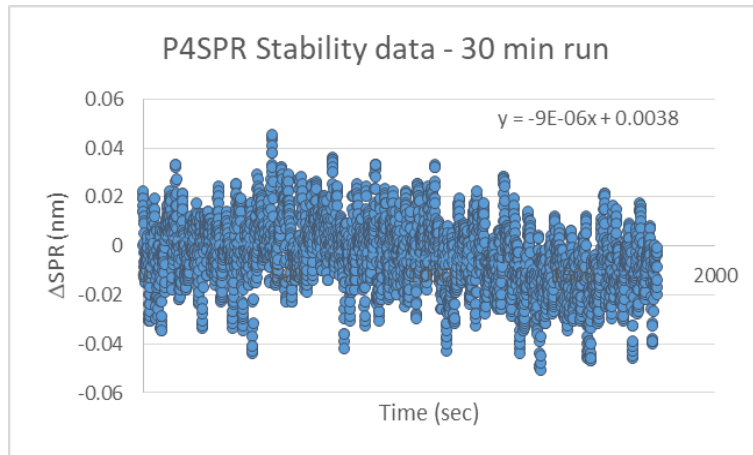


Figure 1 – Stability test with P4SPR in water over 30 minutes at room temperature condition.

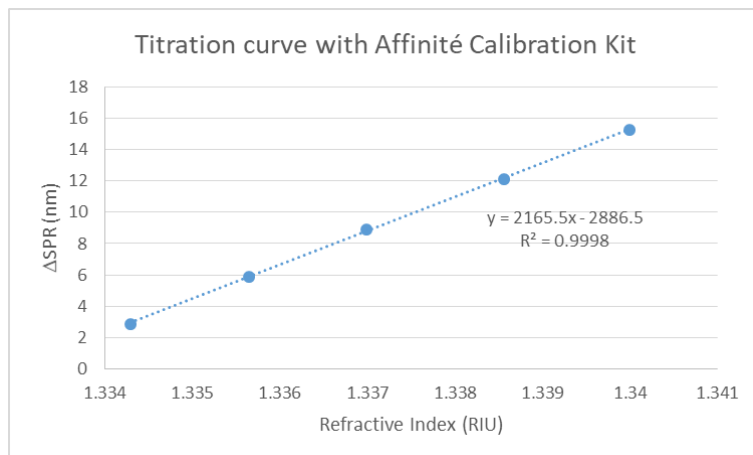
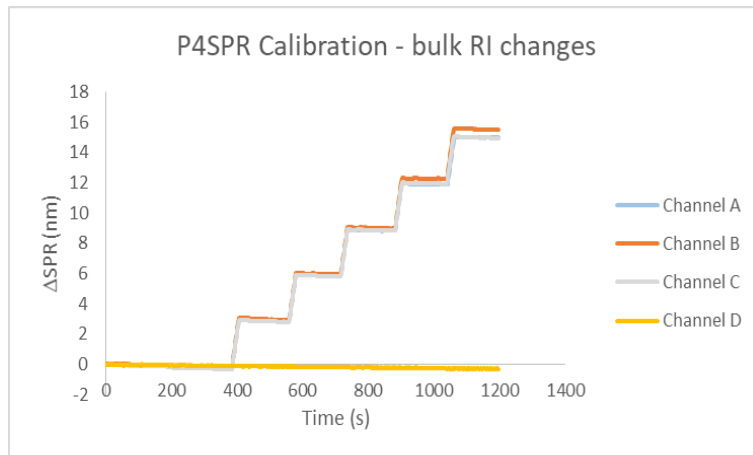


Figure 2 – P4SPR response to bulk refractive index variations (top) sensorgram and (bottom) titration curve.