

Refractive Index Detector

Shodex RI-201

The RI-201 is a highly sensitive RI detector incorporating a three-chamber flow cell.

〈Features〉

- A novel optical system (three-chamber flow cell) provides at least twice the sensitivity of our previous detectors.
- The double temperature control method significantly reduces drift caused by room temperature fluctuations.
- The limit of detection for saccharides is approximately 2ng.

Refractive Index Detector

Shodex RI-201H

〈Features〉

- Uses the same optical system as that of RI-101.
- Reasonable price

Product Code	F4010105	F4010106
Model	RI-201	RI-201H
	Analysis	
Flow cell type	3 chamber-type	2 chamber-type
Measurement method	Deflection type	
Refractive Index range	1.00~1.75	
Measurement range	0.125~256RIU	0.25~512RIU
Drift *	0.1 μ RIU/h	0.2 μ RIU/h
Linearity range	$\geq 300\mu$ RIU	$\geq 600\mu$ RIU
Noise **	≤ 1 nRIU	≤ 2.5 nRIU
Response	0.1, 0.25, 0.5, 1, 1.5, 2, 3, 6sec	
Auto zero	Full auto zero	
Auto zero range	All range	
Off-set range	5 μ RIU	10 μ RIU
Off-set resolution	25nRIU	50nRIU
Integrator output (Sensitivity)	DC 0~1V (4mV/ μ RIU, 16mV/ μ RIU)	DC 0~1V (2mV/ μ RIU, 8mV/ μ RIU)
Cell volume	8 μ L	
Flow rate	(Usual)	0.2~3.0mL/min
	(Max.)	10mL/min (solvent ; pure water)
Maximum back pressure	50kPa	
Internal volume	IN \rightarrow Cell ;	80 μ L
	Cell \rightarrow OUT ;	600 μ L
	All (Cell \rightarrow OUT) ;	690 μ L
Internal volume	IN \rightarrow Cell ;	60 μ L
	Cell \rightarrow OUT ;	600 μ L
	All (Cell \rightarrow OUT) ;	670 μ L
Recorder output	0~10mV/FS	
External input	—	
External Output	① READY (temperature control) ② LEAK ③ ERROR (ROM, RAM, PARAMETER, HOME-POSITION, OVER-HEAT, OPT.-BALANCE, INTENSITY)	
Temperature control	OFF, 30~55°C (1°C step), 77°C Temp. fuse (Double Temperature control)	
Communication port	USB	
Operator support function	None	
Wetted materials	Stainless steel 316, Teflon, Quartz Glass	
Power source, Power consumption	AC100~240V \pm 10%, 50/60Hz, 150VA max	
Dimension, Weight	W260 x D400 x H150 (mm), ca. 12kg	
Accessories	Power cable, signal cable, connector tube, fuse, operation manual	

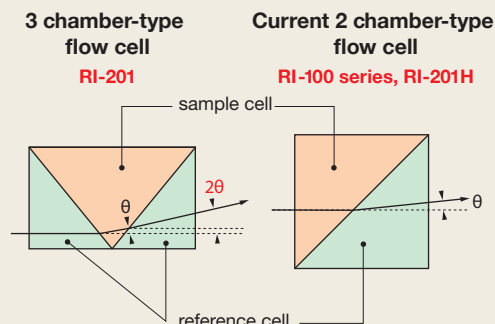
*Pure water 1mL/min, PURGE OFF

**Pure water, response : 1.5sec



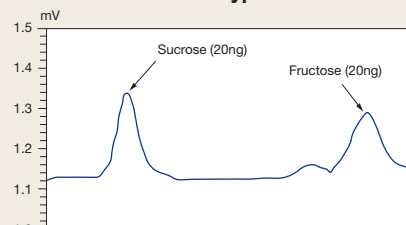
■ Principle of new optical system measurement

In our previous optical system, the measurement light passing through the flow cell was refracted only once. The new three-chamber flow cell allows the light to be refracted twice, thereby increasing sensitivity at least two-times at the same optical path length. This doubles the deflection degree and results in not only reduces the noise half, but reduces the drift caused by optical systems half.



Application

3 chamber-type flow cell



Current 2 chamber-type flow cell

