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 *		0.1μRIU/h	0.2μRIU/h
Linearity range		≥ 300μRIU	≥ 600μRIU
Noise **		≤ 1nRIU	≤ 2.5nRIU
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		5μRIU	10μRIU
Off-set resolution		25nRIU	50nRIU
Integrator output (Sensitivity)		DC 0~1V (4mV/μRIU, 16mV/μRIU)	DC 0~1V (2mV/μRIU, 8mV/μRIU)
Cell volume		8μL	
Flow rate	(Usual)	0.2~3.0mL/min	
	(Max.)	10mL/min (solvent ; pure water)	
Maximum back pressure		50kPa	
Internal volume		IN→Cell ; 80μL Cell→OUT ; 600μL All (Cell→OUT) ; 690μL	IN→Cell ; 60μL Cell→OUT ; 600μL All (Cell→OUT) ; 670μL
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±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	

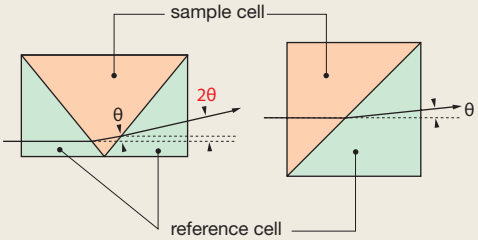
*Pure water 1mL/min, PURGE OFF
**Pure water, response : 1.5sec

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 defection degree and results in not only reduces the noise half, but reduces the drift caused by optical systems half.

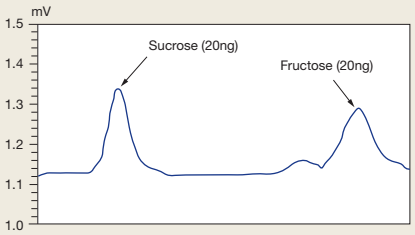
3 chamber-type flow cell
RI-201

Current 2 chamber-type flow cell
RI-100 series, RI-201H



Application

3 chamber-type flow cell



Current 2 chamber-type flow cell