

High sensitivity and exceptional ease of use position the Finnigan SpectraSYSTEM RI-150 as the ideal universal high-performance detector for liquid chromatography. The RI-150 is also well-suited for detecting compounds which have poor UV absorption such as alcohols, fatty acids, and esters.

Finnigan™ SpectraSYSTEM™ RI-150

Refractive Index Detector

- **High sensitivity**
- **Thermostatically regulated optical bench for stable baselines, low noise**
- **Low-dead-volume flowcell**
- **Automatic lamp brightness compensation for flowcell stains**
- **Soft keypad for solvent resistance**
- **Digital display offers local user control**
- **Optimum sensitivity and selectivity with Thermo Electron columns**

Sensitivity

The noise specification of the RI-150 is 2.5×10^{-9} refractive index units (RIU). A thermostatically regulated optical bench provides very stable baselines, with drift of 2×10^{-7} RIU per hour or less.

Combined with the low volume detector cell, this gives the RI-150 its high sensitivity.

Universal Detection

The RI-150 is the ideal detector for carbohydrates, alcohols, fatty acids, and other compounds having weak chromophores. It can also be used in tandem with a programmable UV or photodiode array detector.

Easy Operation

In addition to the microprocessor-controlled auto zero function, a PURGE ON/OFF button provides easy replacement of the eluent in the reference cell.

The typical flow rate range is 0.2 mL to 3.0 mL per minute, but it can be used at flow rates up to 10 mL/min in certain applications. Its operating range of 1.00 to 1.75 RIU facilitates its use with a broad selection of mobile phases.

The linear range of the detector is exceptionally wide— 10^5 .

Applications

Applications include alcohols, mono- and polysaccharides, fatty acids, esters – all compounds with low UV/Vis molar extinction coefficients. The system is similarly well adapted to the analysis of the molecular weight distribution of polymers such as polystyrene, PEG, and SBR, where the mobile phase has a high UV absorbance, rendering absorbance detection impractical.

In addition to GPC, the detector is compatible with both normal phase and reverse phase chromatography.

PC-based Data Acquisition

The analog signal produced by the RI-150 can be collected by the Atlas™ Chromatography Data System and A/D converter. Atlas provides a full suite of qualitative and quantitative tools for the analytical chemist.



Recommended Flow Rate

0.2 to 3.0 mL/min

Maximum Flow Rate

10 mL/min

Linearity

$> 60 \times 10^{-5}$ RIU

Short-term Noise

2.5×10^{-9} RIU

Auto Zero Range

$\pm 10 \times 10^{-5}$ RIU

Auto Zero Resolution

$\pm 10 \times 10^{-9}$ RIU

Drift/Unit Time

2×10^{-7} RIU/h

Drift/Unit Temperature

2×10^{-7} RIU/ $^{\circ}$ C

Integrator Output

0–1 V
(512×10^{-5} RIU/FS)

Recorder Output

0–10 mV

Measuring Method

Deflection method

Refractive Index Range

1.00 to 1.75 RIU

Response

FAST/STD/SLOW (3 steps)

Inputs

Contact: 12VDC, 0.1A min.

- ①PURGE ②POLARITY
③AUTO ZERO ④MARKER

Outputs

Contact: 12 VDC, 0.5 A max.

- ①ZERO OVER ②INTENSITY ③MARKER

Temperature Setting

35 $^{\circ}$ C fixed (with 76 $^{\circ}$ C thermal fuse)

Flowcell Volume

8 μ L

Flowcell Pressure

5 kg/cm² max

Power Source

AC 100/115/220/240 V, 50/60 Hz, 60 VA

Dimensions

260 \times 400 \times 160 mm (W \times D \times H)

Weight

ca. 12 kg

Product Certification

CE Mark
FCC (EMI)

Part Number Description

2509-6692	Flow Cell
3901-2196	Replacement Lamp
ATLAS-64010	Atlas 2003 Chromatography Data System
A5183-010	Thermo Electron C8 Column 15 cm \times 4.6 mm
ATLAS-64060	Data Server A/D Interface
RI150-010	RI-150 Index Detector

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