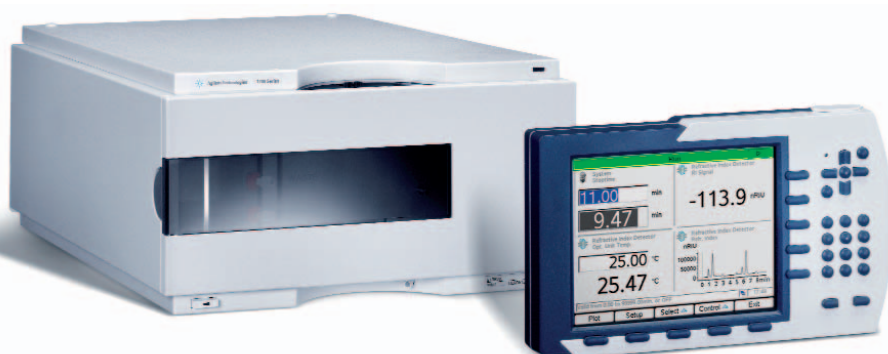




## Agilent 1200 Series Refractive Index Detector



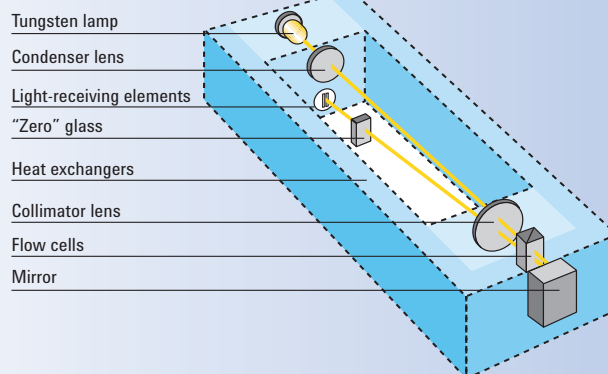
### High sensitivity and robust detection

The Agilent 1200 Series Refractive Index Detector (RID) is the ideal detector for fast and reliable LC results when routinely analyzing non-UV absorbing substances, such as carbohydrates, lipids and polymers. The 1200 Series RID is also the detector of choice for gel permeation chromatography (GPC) or size exclusion chromatography (SEC).

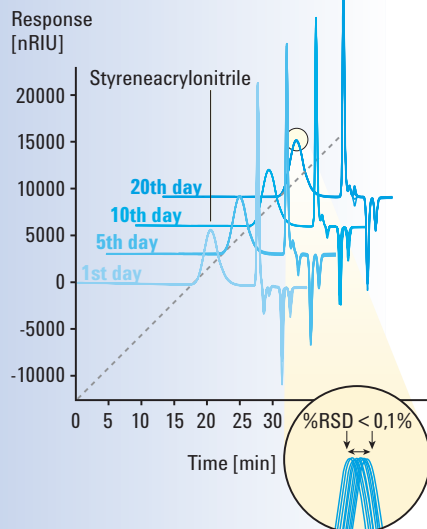
- Minimum baseline noise results in excellent sensitivity for low limits of detection.
- Unmatched thermal and electronic stability for consistent, reproducible results. Electronic temperature regulation maintains a steady optical unit temperature of up to 55 °C.
- Optimum light level, adjusted automatically to compensate for lamp degradation and flow cell staining.

- Thermal design that typically allows initial setup in less than two hours. Warm-up of the module generally takes less than one hour enabling fast startup.
- Recycle valve that can be switched on to keep the system at operating conditions, avoiding warm-up time and saving solvent.
- Early Maintenance Feedback (EMF), with user-settable limits for continuous tracking of the reference flow cell purging.
- Built-in GLP/GMP compliance, such as operational qualification and performance verification (OQ/PV) maximize productivity.
- User-settable purge and wait times enables automatic purging of the reference flow cell.
- Unattended operation by programming autozero as part of the method.
- Convenient front access for inspection and maintenance of tubing and valves.
- Self-diagnostics to minimize down-time and ensure optimum system performance.

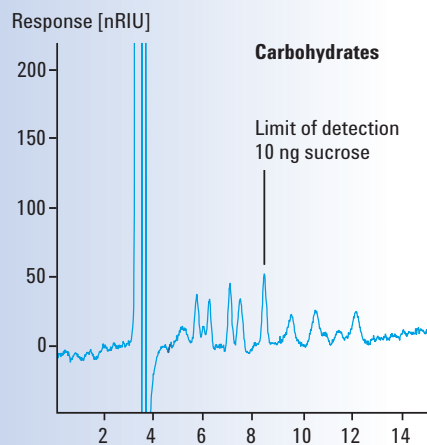
**Countercurrent heat exchangers keep the optical unit – and the flow cells – at constant temperature.**



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This overlay of 10 consecutive runs per day shows the remarkable intra- and interday retention-time precision achieved with the Agilent 1200 Series GPC-SEC system.



Low limits of detection allow you to inject small amounts of sample. You save sample preparation time and extend column life.

## Specifications

Detection type:	Deflection method
Short-term noise:	$\pm 2.5 \times 10^{-9}$ RIU*
Drift:	$< 200 \times 10^{-9}$ RIU/h*
Refractive index range:	1.00 – 1.75, calibrated
Flow cell:	8 $\mu$ L cell volume, 5 bar (75 psi) pressure maximum
Temperature control:	Ambient +5 °C to 55 °C
pH range:	2.3 – 9.5
Control:	Parameter entry, signal display, online help and diagnostics with the Agilent 1200 Series Instant Pilot featuring a 12.5 x 9.5 cm color LCD screen and a USB slot for method, sequence and logbook storage and transfer. PC-based software for control and data evaluation with Agilent ChemStation or Agilent EZChrom Elite chromatography data systems.
Time programmable:	Polarity, peak width
Zero adjustment:	Automatic zero
Valves:	Automatic purge and automatic solvent recycle
Analog output:	Recorder/integrator: 100 mV or 1 V, with offset adjustment, output range selectable.
Communications:	Control Area Network (CAN), GP-IB, RS-232, APG remote, optional Local Area Network (LAN). Remote ready, start and shutdown signals.
Safety and maintenance:	Extensive diagnostics, error detection and display leak detection, safe leak handling, leak output signal for shutdown of pumping system, low voltage in major maintenance areas
GLP features:	Early Maintenance Feedback (EMF) for continuous tracking of instrument usage with user-settable limits (purge interval) and feedback messages. Electronic records of maintenance and errors, automated OQ/PV procedures.
Housing:	All materials recyclable
Environment:	0 to 55 °C constant temperature at < 95% humidity (non-condensing)
Dimensions: (h x w x d)	180 x 345 x 435 mm (7 x 13.5 x 17 inches)
Weight	17 kg (38 lbs)

\* According to ASTM E-1303-95 "Practice for Refractive Index Detectors used in Liquid Chromatography." Reference conditions: response time 4 s, 35 °C, 1 mL/min H<sub>2</sub>O (online degassing), restriction capillary.

## Complete solution

The Agilent 1200 Series GPC-SEC system is a complete solution, based on the refractive index detector. The configuration comes with a startup kit containing:

- an application-specific column,
- reference standards,
- an application note with setup instructions and performance data

[www.agilent.com/chem/1200](http://www.agilent.com/chem/1200)

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