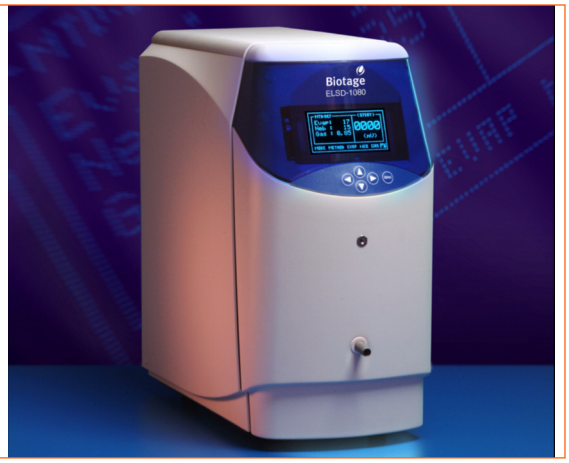
Isolera™ ELSD-1080

Evaporative Light-scattering Detection for Flash Chromatography



The **Isolera ELSD** (evaporative light-scattering detector) is a universal detector designed for use with Isolera flash purification systems when purifying organic compounds that are undetectable UV or visible light. Flash chromatography with detection and fractionation is now possible when purifying carbohydrates, steroids, lipids, terpenes and other UV-transparent compounds.

Features

- **Flexibility** - high sensitivity provides superb responses for all compounds, able to detect virtually any compound
- **Sub-ambient operation** - provides detection capability for highly volatile compounds with operation at temperatures as low as 10 °C up to 80 °C
- **Reproducible** - below 2% with reliable and accurate results
- **Independent temperature controls** - for both nebulizer and evaporator provides optimization capability for normal-phase solvent systems
- **Compact size** – requires minimal bench space
- **Compatible and portable** – operates with other analytical HPLC systems

Advanced design

Organic compounds have different chemical and physical properties and they impact detection, even with an ELSD. The Isolera ELSD-1080 provides intelligent method design which enables the chemist to independently set nebulizer and evaporator temperatures for a particular compound or compound class. Independent temperature control helps ensure that all compounds are detected.

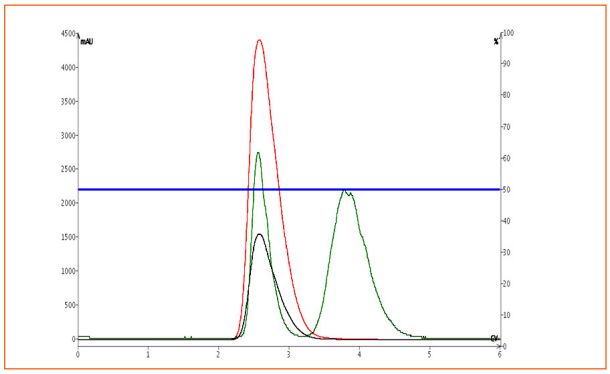


Figure 1. Separation of 3-Nitroaniline and 1,2:5,6-Di-O-Isopropylidene-a-D-Glucofuranose using an Isolera UV Flash system with ELS Detection and Biotage SNAP KP-Sil 25g cartridges. The Glucofuranose is only detected by ELSD.

Sub-ambient operation

Incorporated with the independent temperature control is the ability to evaporate solvents at temperatures as low as 10 °C. This is desirable when purifying highly volatile compounds.

How does ELSD work?

Sample eluting from a flash cartridge enters the ELSD where it is mixed with compressed nitrogen to nebulizer the sample (creates small droplets). The nebulize is heated and begins to evaporate the solvent and the nitrogen pushes the sample into a heating chamber where the remaining solvent is evaporated leaving small sample particles in the nitrogen stream. While migrating through the evaporator, light is shone perpendicular to the "sample flight path" and a sensor measures how much light is coming through. This information is then relayed to the Isolera where it is then collected.

Biotage

Technical Specifications

Power	90/120V AC or 220/250V AC, 50/60 Hz 2A max
System control and data management	200 mm (8”) x 415 mm (16”) x 450 mm (18”) diagonal touch screen interface
Dimensions (W x H x D)	200 mm (8”) x 415 mm (16”) x 450 mm (18”)
Weight	13 kg (28 lb)
Light source	LED 480 nm (Class 1 LED Product)
Detector	Photomultiplier tube digital signal processing
Temperature range	Evaporator OFF, 10 – 80 °C (1 °C increments) Nebulizer OFF, 25 – 90 °C (1 °C increments)
Gas Flow rate	0.9 SLM to 3.25 SLM @ 25 °C with integrated controlled gas shut off valve
Pressure operating range	60 – 100 psi (4 – 6.7 bar)
Eluent flow rate	0.2 – 5 mL/min
Analogue output	0 – 1V FSD
Digital output	24 bit digital data, 10 or 40 Hz
Communication	Serial (RS232) Remote Start Input Remote A/Z Contact closure TTL
Instrument operation	Graphical vacuum fluorescent display with keypad Ten pre-defined methods
Detector status	Standby, run
Safety features	Gas shut off valve, vapor and leak detection
Certifications	CE, CSA

Ordering Information

Part Number	Description
ISO-ELSD-1080	Isolera ELSD-1080 with flow splitter kit

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