sedex LT-ELSD™

SEDEX™ 100LT
FOR HIGH PERFORMANCE AND HIGH THROUGHPUT

Wide choice of nebulizers to fit your application

New Generation design for low-temperature evaporation and better universality

Direct dynamic range of 5+ orders of magnitude and extended linear region for easy and reliable quantitation

Drivers available for most of chromatographic software for easy integration and total control

The SEDEX Model 100LT Low-Temperature Evaporative Light-Scattering Detector for conventional HPLC, U-HPLC and SFC allows for the detection of essentially all compounds: detection is based on a universal property of all analytes and does not require the presence of a chromophoric group, electroactive group, etc.

The SEDEX Model 100LT combines the highest sensitivity, reliability, and accuracy for your analyses compared to all other aerosol-based detectors, thanks to unrivalled SEDERE low-temperature technology.

This detector presents a number of outstanding innovations thereby providing the best optical and electronic benefits at a reasonable price. The SEDEX Model 100LT can be connected to any HPLC or SFC system, and you can control the detector locally or via a PC for a fully integrated system using a broad range of SEDEX drivers.

A remote shut down mode is also provided to minimize cost and enhance system lifetime. Full SOP protocols are provided for GLP compliance and validation procedures.

SENSITIVITY
FLEXIBILITY
EXPERIENCE

sedere

SEDERE IS COMMITED TO USER SATISFACTION WITH EVERY SEDEX DETECTOR

Worlwide distribution

On-site installation and training

Full qualification protocol

Technical and application support

Web-access to application database

User seminars, on and off-site

Flexible contract options

Spare parts and accessories
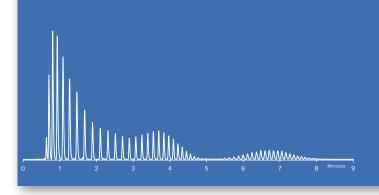
APPLICATION

Polyethylene glycol (PEG) is a substance with a wide range of uses in many industries: For example, it is used as a thickening agent, a conservation agent, a solvent, a component in cosmetic preparations and even as a laxative agent.

Evaporative Light-Scattering Detection (ELSD) is a nearly universal technique that should be considered as an advantageous alternative to UV or RID detection in impurity profiling, since response factor is generally tighter than with UV detectors, providing a more accurate picture of mixtures profile, and allowing the use of gradient elution.

As a demonstration, we prepared a mix composed of several commercial batches of PEG, of following molecular weights: MW200, MW300, MW400, MW600, MW1000 and MW2000. This mix, which is used for illustrative purposes, is used to develop a method that will be compatible with each of these commercial batches. Based on visual examination, the baseline separation is obtained starting with the ethylene glycol monomer (the first peak) to a polymer composed of 60 monomers of ethylene glycol, within 8.5 minutes.

Standard mixture:	Synthetic Mix of PEG MW 200, 300, 400, 600, 1000 and 2000
Column:	ACE Excel C-18 (100 x 3.0 mm; 1.7 µm)
Column Oven:	40°C
Injection Volume:	1µL of 10mg/ml sample in water
Flowrate:	1.0mL/min
Eluent:	A: H_2O-B: ACN
Gradient:	0-4 minutes: 15% to 31% of B,
	4-4.5 minutes: 31% of B,
	4.5-9 minutes: 31% to 40% of B
Detector:	SEDEX 100LT ,45°C, filter 1s, 3.5bar, SAGA activated

TECHNICAL SPECIFICATIONS

COMPONENTS

Detection	SAGA-enhanced Photodiode
Light Source	Blue SEDERE high power laser Elapsed Time Counter
Temperature Range	Ambient to 100°C
Nebulizer	HPLC, UHPLC, SFC
Eluent Flow Rate	50µL/min to 2mL/min
Typical Sensitivity	< 250 pg

DATA

Analog Output	0 - 1 Volt
Gain Settings	1 to 7 or SAGA (patented)
Filter	Dedicated numerical filter
Signal Amplification	SAGA (SEDEX Automated Gain Adjustment)
Data Rate	100Hz

COMMUNICATION

Selection & Display	OLED Display and Keypad
Events	Contact Closure, TTL for Ready, Autozero
Power-down Methods	Shut-off: Gas, Light Source, Heating and/or Photodiode Cleaning Mode
Computer Interface	USB, RS-232
Software	Drivers (option)

EXTERNAL REQUIREMENTS

Power	100V to 240V (50Hz/60Hz)
Gas Supply	Nitrogen or Air 3.5bar (less than 3L/min)
Dimensions	250mm (10in) W 330mm (13in) H 530mm (21in) D
Weight	15kg (33lb)