

# Welch ELSD-5450 Low-Temperature Evaporative Light Scattering Detector



To minimize cost and prolong system life, the instrument provides not only remote shutdown mode, but also complete SOP scheme for complying with GLP and verification procedures.

**Brand: Welch**

**Type: ELSD-5450**

**P/N: WEL50000**

## Introduction

Welch ELSD-5450 Low-Temperature Evaporative Light Scattering Detector is suitable for HPLC method, mainly used in quality control field or teaching laboratory and available for detecting most compounds: detection is based on the general characteristics of all analytes while special groups such as chromogenic groups or electroactive groups in analytes are not required. ELSD-5450 detector has the characteristics of high sensitivity, high reliability and high accuracy based on unparalleled SEDEX technology, which provides guarantee for your analysis.

ELSD-5450 detector shows the new design and outstanding innovations, offering the best optoelectronic performance at very competitive price. It can be used with most of the HPLC devices on the market, and you can control it through HPLC workstation or our series of SEDEX driver software on the computer.

## Features:

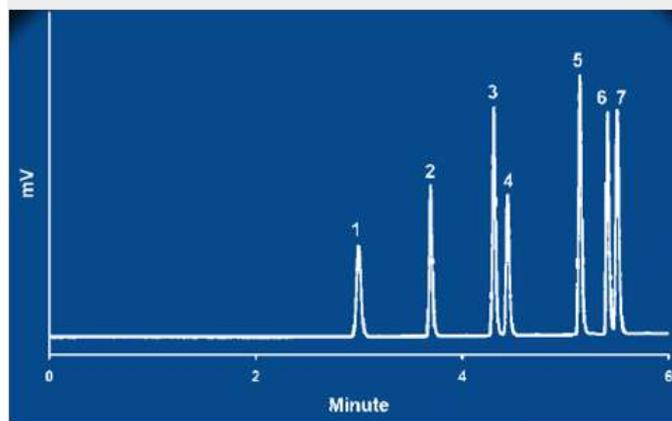
- Optimized detection sensitivity for nonvolatile, thermally unstable and semi-volatile compounds.
- Based on the precise SEDEX low temperature nebulizer and innovative flow pool design, the spectral band broadening is minimized.
- The easy-to-install and detach nebulizer flow ranges from 200  $\mu\text{L}/\text{min}$  to 2  $\text{mL}/\text{min}$ .
- Through SAGA (SEDEX automatic gain adjustment technology), an innovative gain control controlled by software, the SEDEX liquid phase instrument can automatically adjust the gain setting to avoid any overrange of the detector.
- Complete remote control: gas, heater, photodiode, light source can be automatically closed after a series of analysis.

## Application: Natural Products

Many natural products, such as herbs, have attracted more and more attention in the medicine and health products industry because of their content of bioactive compounds. Some of these compounds, such as saponins and terpenes, do not have chromophores, therefore, they can not be analyzed by uv detector in high performance liquid chromatography. On the basis of SEDEX technology, Welch ELSD-5450 detector can detect molecules with or without chromophores through a single gradient high performance liquid chromatography analysis by high sensitivity. The example on the right shows a rapid and simultaneous determination of terpene lactones and flavonoids in ginkgo biloba.

## Welch ELSD-5450 LC System:

Manufacturer	LC Software System	Software system lowest version required
Welch	Clarity™	7.3
	ChemStation Edition™	B.02.01.SR1 (259)
	OpenLab ChemStation Edition™	C.01.01 C.01.07 SR2
Agilent	EZChrom Elite™	3.1.4
	OpenLab EZChrom Edition™	A.04.01 A.04.07 SR2
	OpenLab CDS™	2.1
	DataApex	Clarity™
Knauer	ChromGate™	3.1.4
Shimadzu	Chromeleon™	7.2 (A Chromeleon™ instrument C license is required to operate)
	ChromQuest™	4.2
	Xcalibur™	2.0.7



### Analyze four kinds of terpene lactones and three flavonoids by HPLC/ELSD method

1-Ginkgolide, 2-Ginkgolide C, 3- Ginkgolide A, 4- Ginkgolide B  
5-Quercetin, 6-Isorhamnetin, 7- Kaempferol

## Technical Parameters:

Instrument technical parameters :	
Detecting element	Photodiode
Light source	Blue LED, running time counter
Temp. range	Ambient temp. up to 100℃
Nebulizer type	Liquid phase
Eluent flow rate	200 $\mu\text{L}/\text{min}$ ~2 $\text{mL}/\text{min}$
Typical sensitivity	5ng
Analog output	0~1V
Gain Settings	1~7
Filter	Special numerical algorithm
Signal amplification	SAGA (SEDEX automatic gain adjustment)
Data transmission	40Hz
Selection and show	Keyboard and OLED screen
Trigger control	Contact closure, TTL and auto zero setting
Power off way	Close: air source, light source, heating module, photodiodes and cleaning mode
Interface of internet	USB, RS-232
Software	Driver software (optional)
Power	100V~240V(50/60Hz)
Air supply	Nitrogen or air (3.5bar, <3L/min)
Dimension	250mm×330mm×530(W×H×D)
Weight	15 Kg

Welch is committed to make users satisfied with each ELSD-5450 detector, and provides you with:

- Site installation and training
- Complete SOP(Standard operation system), include IQ, OQ and PQ
- Technical support
- Rich applications in various fields
- Webinar for users
- Flexible service contract options.
- Spare parts and accessories which is easy to order

Welch Materials.Inc.  
Email: info@welchmat.com  
Web: www.welch-us.com