

sensitive

Most sensitive ELSD available

simple

Easiest to use and maintain

small

Integrates easily with any HPLC



Leading the Way in ELSD Technology for More than 20 Years

No one has more experience designing and manufacturing ELSDs than Alltech, now a part of Grace. Our customers' needs continue to drive the evolution of our ELSD design and development programs.



1985
MK II



1988
MK IIA



1992
MK III



1994
MK IIIA



1996
ELSD 500



1997
ELSD LTA



2000
ELSD 2000



2003
ELSD 800



2004
ELSD 2000ES



2006
3300 ELSD*
*patent pending

ELSD Advantages

Universal

- Have confidence you're seeing everything in your sample
- Improve quantitative measurements
- Estimate purity more accurately

Sensitive

- Detection limits in the low nanogram range

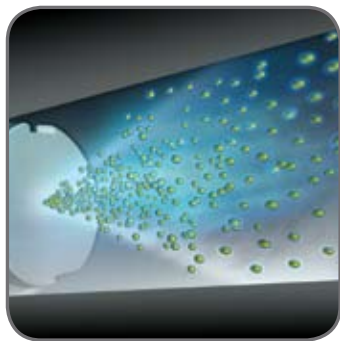
Gradient Compatible

- Maintain stable baselines during steep gradients

Alltech® ELSDs simplify analysis of difficult compounds:

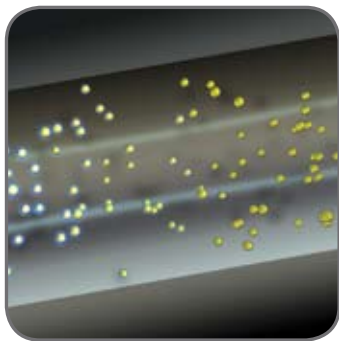
- pharmaceuticals
- impurities
- phospholipids
- fatty acids
- surfactants
- nutraceuticals
- excipients
- amino acids
- triglycerides
- polymers
- carbohydrates

ELSD Detection Process:



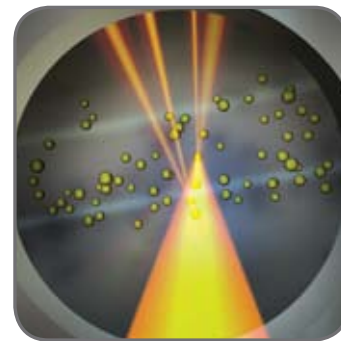
1. Nebulization

Column effluent passes through a needle and mixes with nitrogen gas to form a dispersion of droplets.



2. Evaporation

Droplets pass through a heated "drift tube" where the mobile phase evaporates, leaving a fine mist of dried sample particles in solvent vapor.



3. Detection

The sample particles pass through a cell and scatter light from a laser beam. The scattered light is detected, generating a signal.

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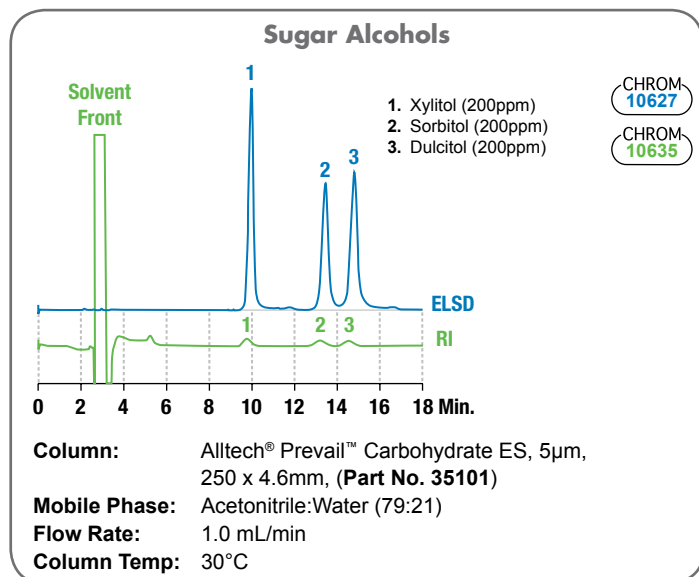
small

ELSD Advantages Over Other LC Detectors

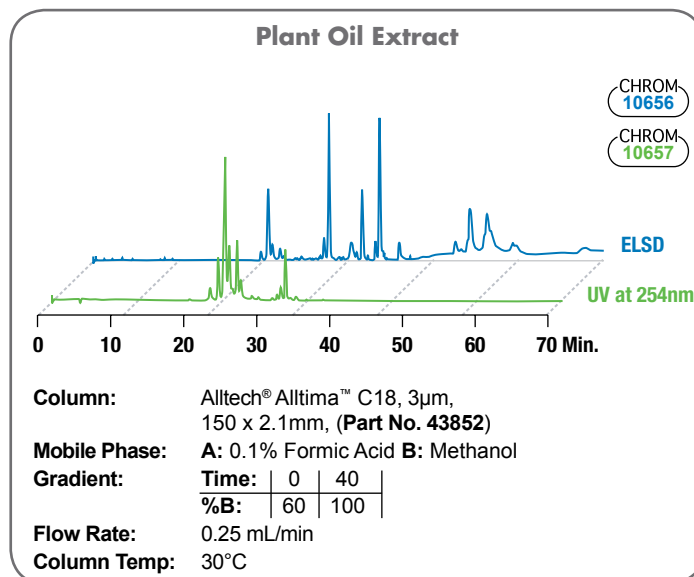
	ELSD	RI	UV	MS
Sensitivity	●	○	●	●
Gradient Capability	●	○	◐	●
Baseline Stability	●	○	◐	●
Solvent Interference	●	○	○	●
Mass Balance	●	●	○	○

CHART KEY	
Excellent:	●
Good:	◐
Poor:	○

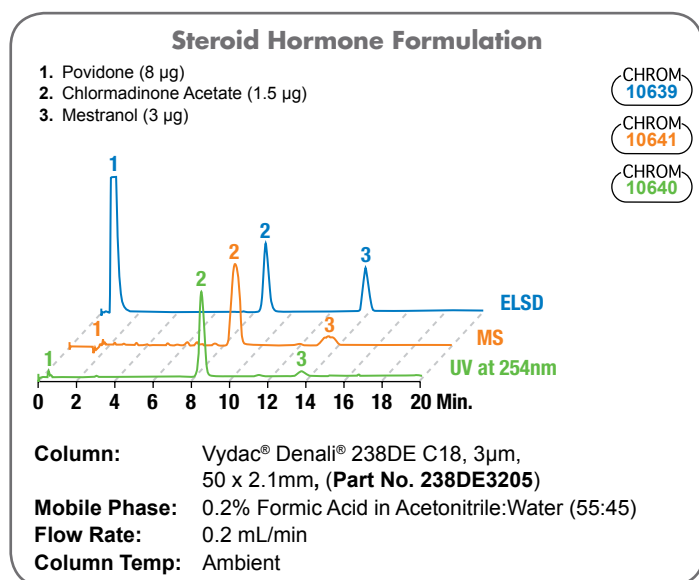
ELSD improves baseline stability and detection sensitivity compared to refractive index (RI)



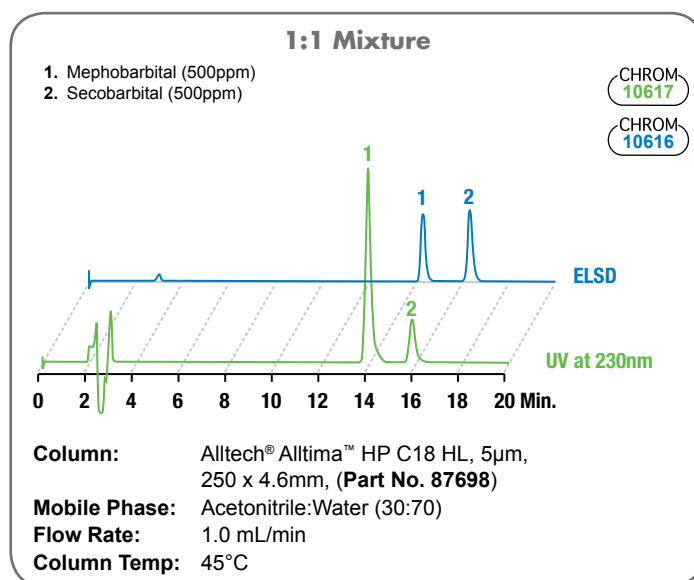
ELSD shows what may be missing from your UV chromatogram



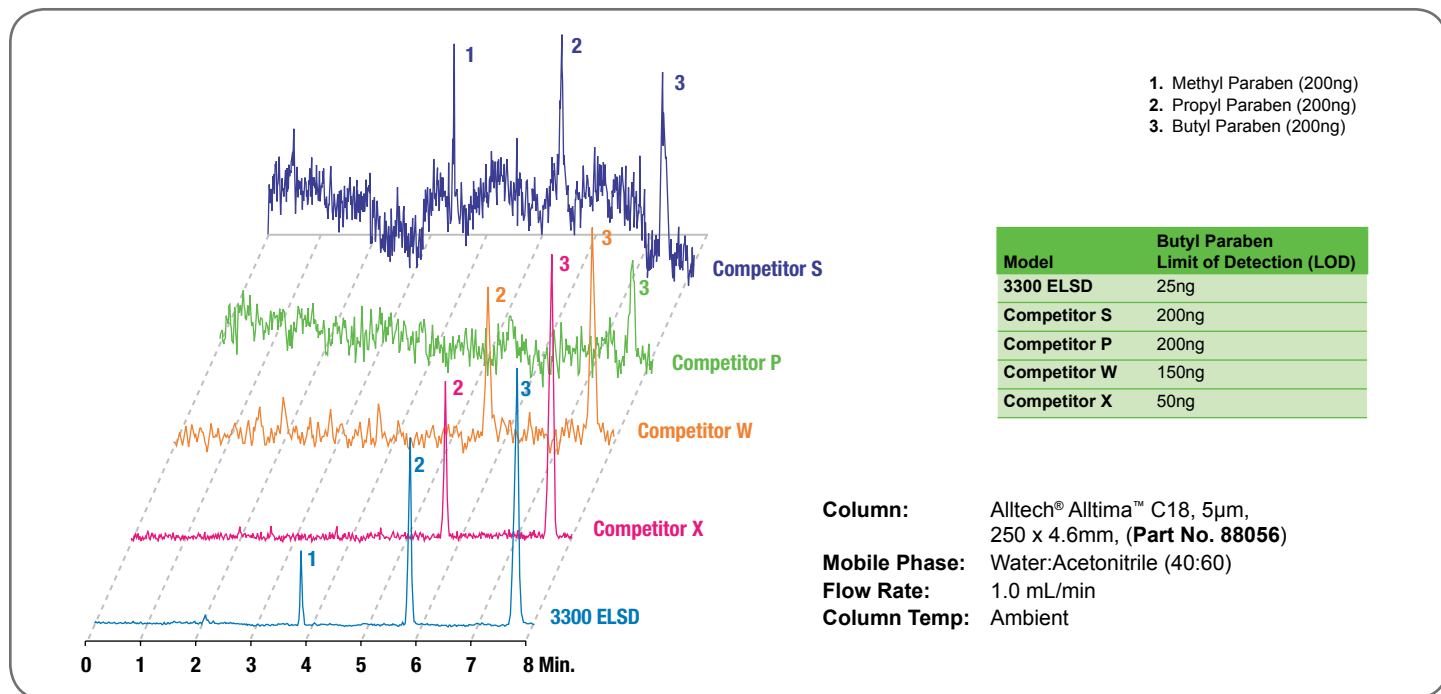
Use ELSD in parallel with UV/Vis and MS for maximum structural and concentration information



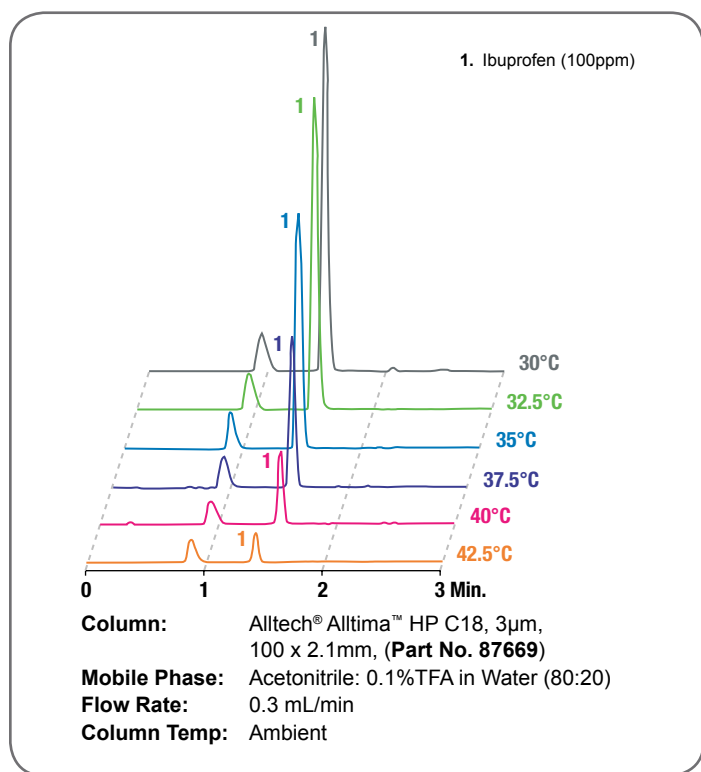
ELSD obtains a more accurate representation of sample mass than UV/Vis



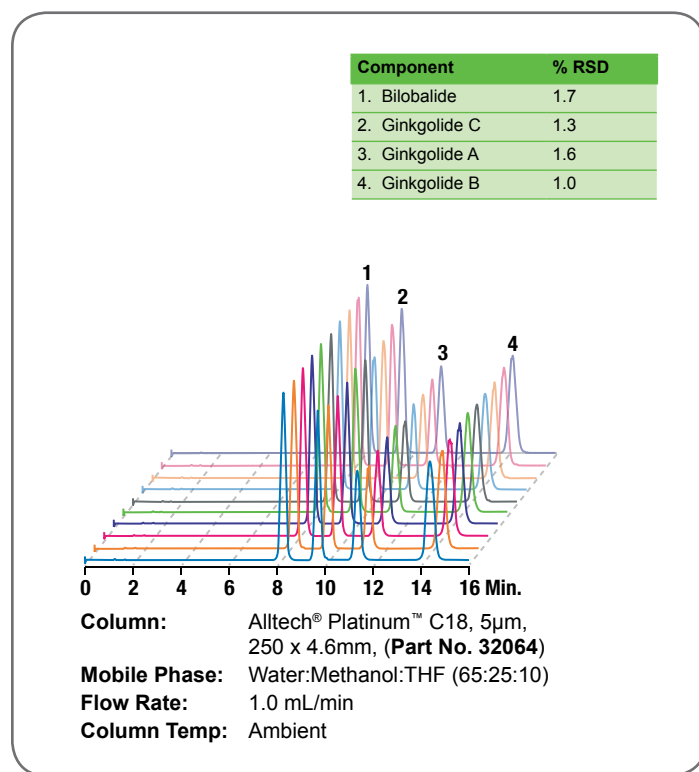
With reduced noise and greater baseline stability, the 3300 ELSD is more **SENSITIVE** than any other ELSD available

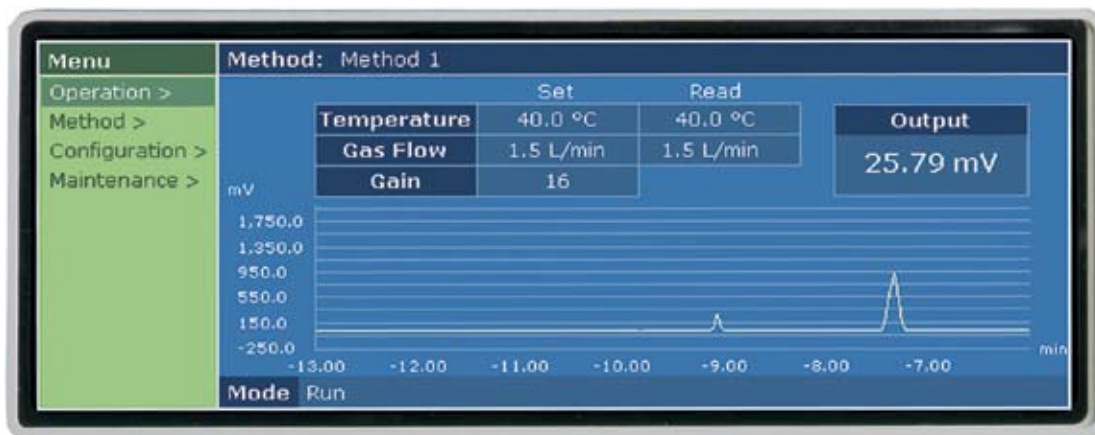


The 3300 ELSD's near ambient temperature evaporation maximizes **SENSITIVITY FOR SEMI-VOLATILES**

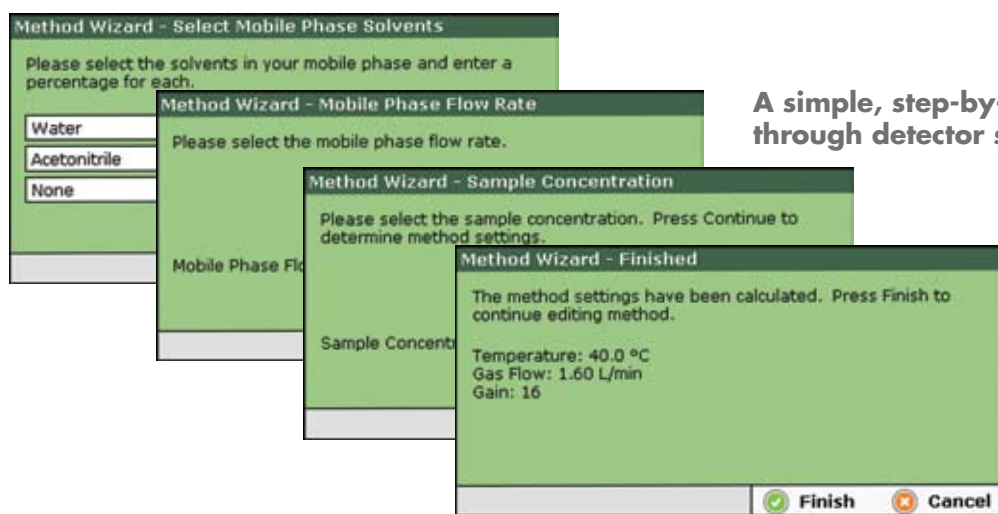


The 3300 ELSD is very **REPRODUCIBLE** as demonstrated by 10 identical injections of four ginkgolide components





A Windows®-based user interface makes navigating through menus intuitive and easy. All critical operating parameters and a scrolling chromatogram trace are shown on the large, full color LCD.



A simple, step-by-step method wizard guides you through detector setup

Select from seven different languages for the user interface:

- English
- Español
- Français
- Deutsch
- Italiano
- Japanese
- Chinese



An informative help function is available in each screen

Additional Features:

- Control and collect data digitally through Agilent ChemStation and EZChrom chromatography data software
- Ensure GLP compliance with password protected screen and error log
- Store up to 100 methods for fast set up
- Save gas and extend optics lifetime by programming unit to enter stand by mode at end of run

coming soon

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Maintenance Made Simple!



Parts requiring cleaning or service are accessible from the front



Remove the nebulizer with a simple twist and pull



Clean the drift tube easily with the included custom brush



Onboard diagnostics automate the troubleshooting process

Full IQ/OQ/PQ Protocols Included with each ELSD

We make it easy for you to integrate the ELSD into a qualified HPLC system. The 3300 ELSD is thoroughly tested before shipment and calibration and performance documents are included with each instrument. Detailed IQ/OQ/PQ procedures are included with the detector to help you perform your own qualification. We also provide the option of onsite qualification performed by one of our service engineers.



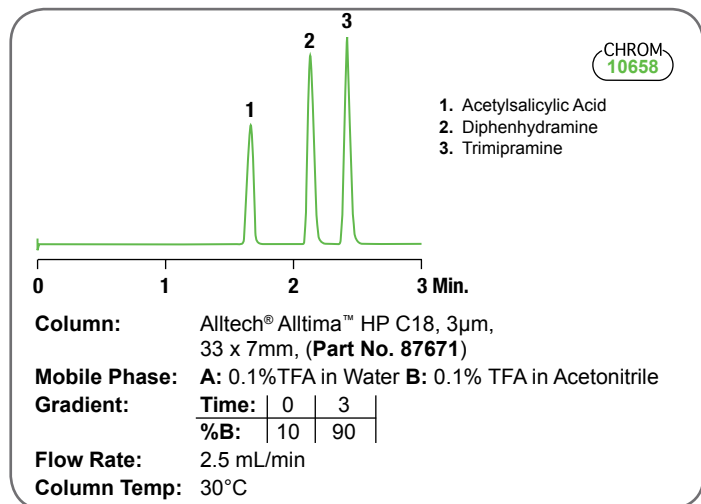
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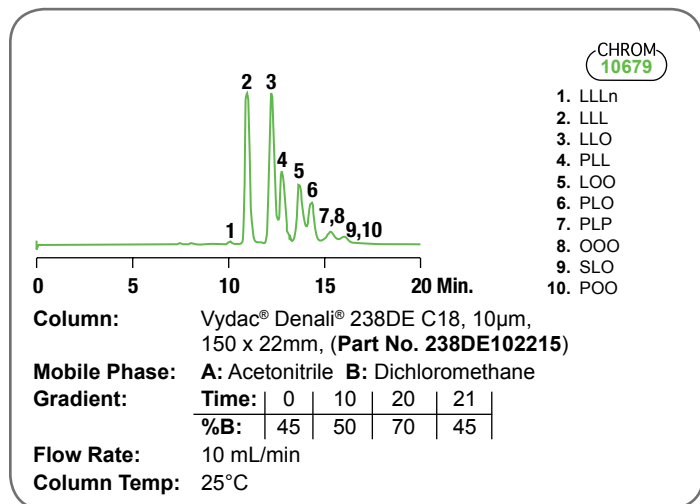
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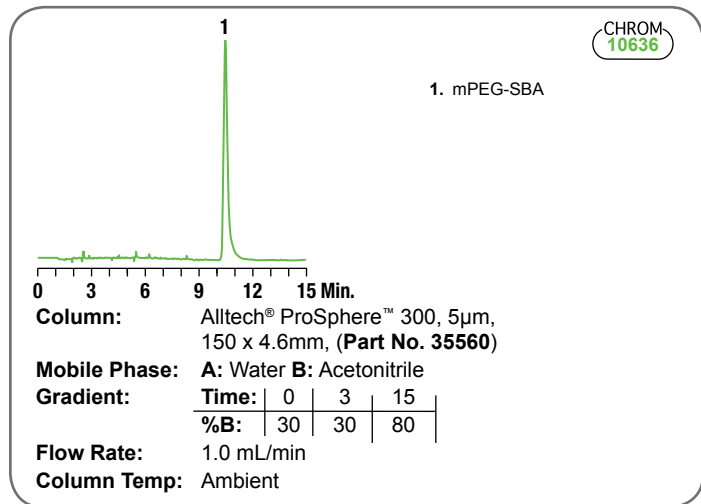
Stable Baselines with Fast, Steep Gradients



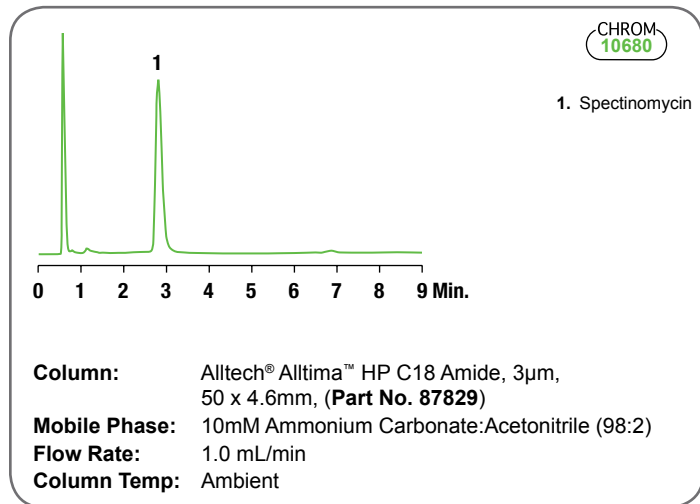
Use ELSD to Trigger Collection of UV Transparent Compounds in Prep Applications



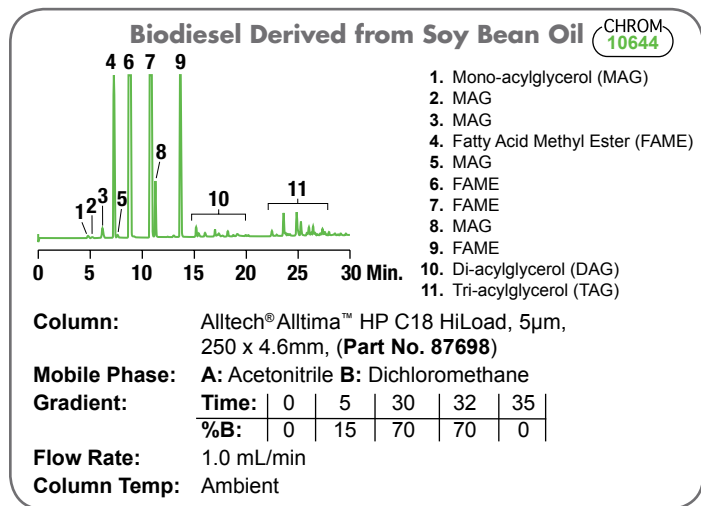
Simplify Detection of Weak Absorbing Polymers



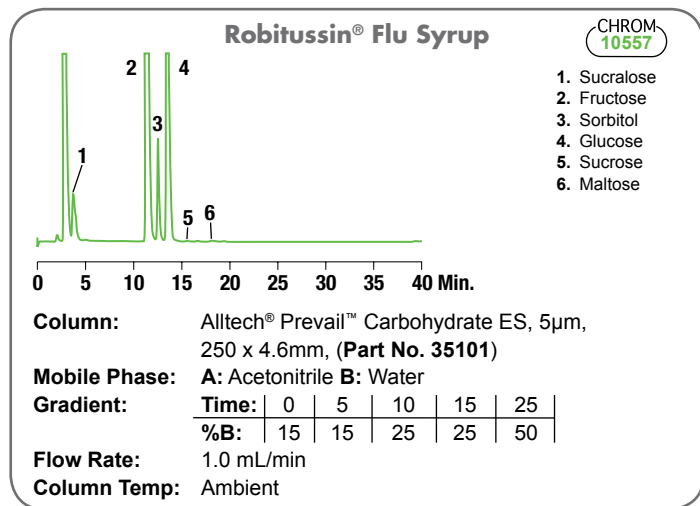
Easily Detect Non-Chromophoric Drug Compounds



Detect Difficult Samples without Derivatizing



Improve Sensitivity for Carbohydrates



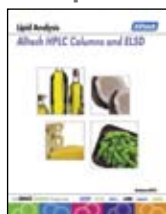
Alltech® 3300 ELSD*	
DESCRIPTION	PART No.
3300 ELSD 110V – 240V	5135834

*Patent Pending

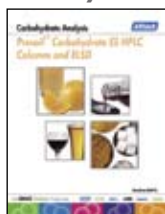
Services for the Alltech® 3300 ELSD	
DESCRIPTION	PART No.
Installation and Training	INSTALL
Qualification	
IQ/OQ at Customer Site	Q330010
PQ at Customer Site	Q330020
IQ/OQ/PQ at Customer Site	Q330030

Our dedicated applications chemists and technical support professionals are constantly adding new applications to our vast technical library. Visit www.ELSD.com to search and download applications or one of our applications brochures.

Lipids



Carbohydrates



Pharmaceuticals



Alltech® 3300 ELSD Specifications	
Light Source:	Laser diode with collimating optics, 650nm, 30mW output, class IIIB
Detector Element:	Silicon photodiode
Temperature Range:	Ambient to 120°C in 1°C increments
Nebulizer Gas:	Nitrogen preferred; Calibrated to 4.0L/min
Inlet Pressure:	60 – 80psig
Typical Operating Range:	1.0 – 2.0L/min
Flow Control:	Digital Mass Flow Control
Mobile Phase Flow Rate:	To 3.0mL/min
Analog Output:	1V or 10mV full scale
Communications:	<i>Inputs:</i> TTL/contact closure for auto zero, gas shutoff, start, and standby <i>Outputs:</i> Contact Closure for pump shutdown in error conditions, general events <i>Data Ports:</i> USB, RS232, Ethernet
User Interface:	Full color Microsoft Windows® based Graphical LCD with alphanumeric keypad
Power Requirements:	120/240V, 50/60Hz
Dimensions:	11.6" H x 10.3" W x 19.5" D (29.5cm H x 26.2cm W x 49.5cm D)
Weight:	30lbs (16Kg)
IEC/FDA Classification:	Class 1 Laser Product; Complies with 21 CFR Subpart J
Manufacturing Standards:	Meets all applicable safety and EMC certifications; CE, UL, and CSA certified
Warranty:	1 year parts and labor

See how the 3300 ELSD can benefit your analysis! Visit www.elsd.com and click on "Contacts". Ask about sample analysis or a product demonstration in your lab.

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