

Low Angle Light Scattering (LALS) Detector



Viscotek announces a new low angle light scattering detector that represents a major breakthrough in light scattering technology for determination of absolute molecular weight. The Model 270-03 Low Angle Light Scattering (LALS) detector surpasses traditional technologies and will operate at an angle of 7 degrees.

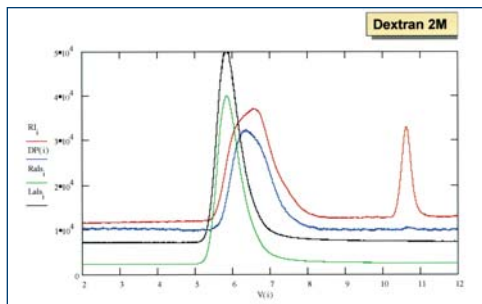
Low Angle Light Scattering is the only GPC detection method that provides absolute molecular weights without extrapolation or correction. Unlike multi-angle light scattering techniques that can only determine molecular weight by extrapolation, the Viscotek LALS directly measures molecular weight for a large range of synthetic polymers, natural polymers and proteins.

The Viscotek Model 270-03 LALS allows direct determination of absolute molecular weight without extrapolation, correction or assumptions required by other light scattering techniques.

The new LALS represents a significant enhancement to Viscotek's unique Triple Detector Array (TDA), the most comprehensive and flexible molecular characterization tool on the market. Triple Detection sets the standard for GPC/SEC technology and is the preferred method for characterizing natural and synthetic polymers and proteins. It employs a concentration detector, patented 4-capillary viscometer and a light scattering detector acting in concert, with each detector providing different but complimentary information.

**Note: For more information on Triple Detection, the Triple Detector Array or the Dual Detector, visit the Viscotek web site or see product literature.*

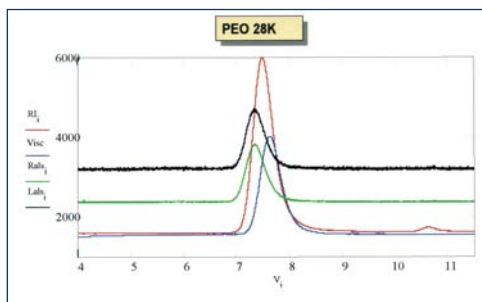
for more information visit us @ www.viscotek.com



Chromatographic Conditions

Columns: *Viscogel PW Mixed Bed*
 Solvent: *0.1M NaNO₃*
 Flow Rate: *0.70 ml/min*
 Inj Vol: *103µl*
 Temp: *40*

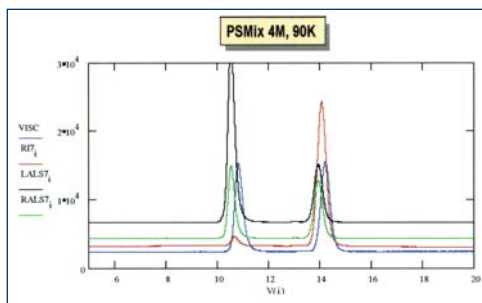
Results:	Sample	IV (dl/g)	Mw ⁹⁰	Mw ⁷
	Dextran 2M	0.636	2,709,000	2,695,000



Chromatographic Conditions

Columns: *Viscogel PW Mixed Bed*
 Solvent: *0.1M NaNO₃*
 Flow Rate: *0.70 ml/min*
 Inj Vol: *103µl*
 Temp: *40*

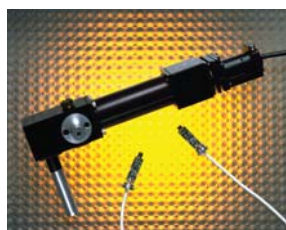
Results:	Sample	IV (dl/g)	Mw ⁹⁰	Mw ⁷
	PEO 28K Std	0.429	28,600	28,550



Chromatographic Conditions

Columns: *Viscogel G4000, GMHx1*
 Solvent: *THF*
 Flow Rate: *1.0 ml/min*
 Inj Vol: *103µl*
 Temp: *35*

Results:	Sample	IV (dl/g)	Mw ⁹⁰	Mw ⁷
	PS90K	0.441	90,100	89,900
	PS4M	7.35	4,301,000	4,441,000



Technical Specifications

Light Scattering Detector

Right Angle Light Scattering Detector uses a 90° angle geometry for maximum signal-to-noise.

Low Angle Light Scattering Detector uses a 7° angle geometry that requires no extrapolation or correction.

Cell Volume: 18 microliters

Maximum Backpressure on Cell: 15 psi

Maximum Signal: 2.5 volts

Baseline Noise: 0.4 millivolts

Baseline Drift: 3.0 millivolts/hour

Light Source: laser at 670 nm wavelength

TDA, GPCmax, FIPA, TriSEC, ETA, PolyCAL, ViscOGEL, and Viscotek are trademarks of Viscotek, Incorporated. The 4-capillary viscometer and the 2-capillary viscometer are covered by the following U.S. Patent Nos. and corresponding foreign Patent Nos.: 4,463,598; 4,627,271. Other patents pending.

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