

ASTRA 6 Report Experiment7

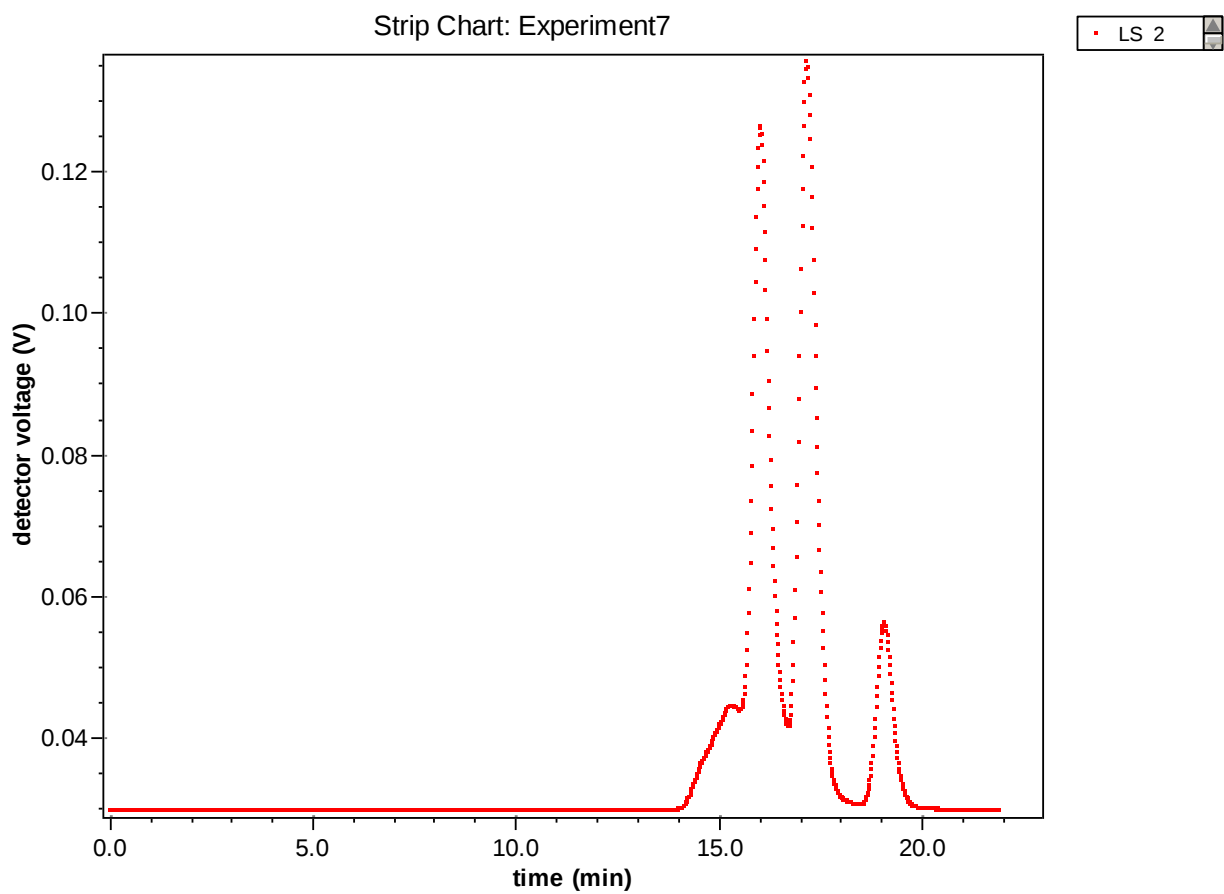


File Name: Experiment7

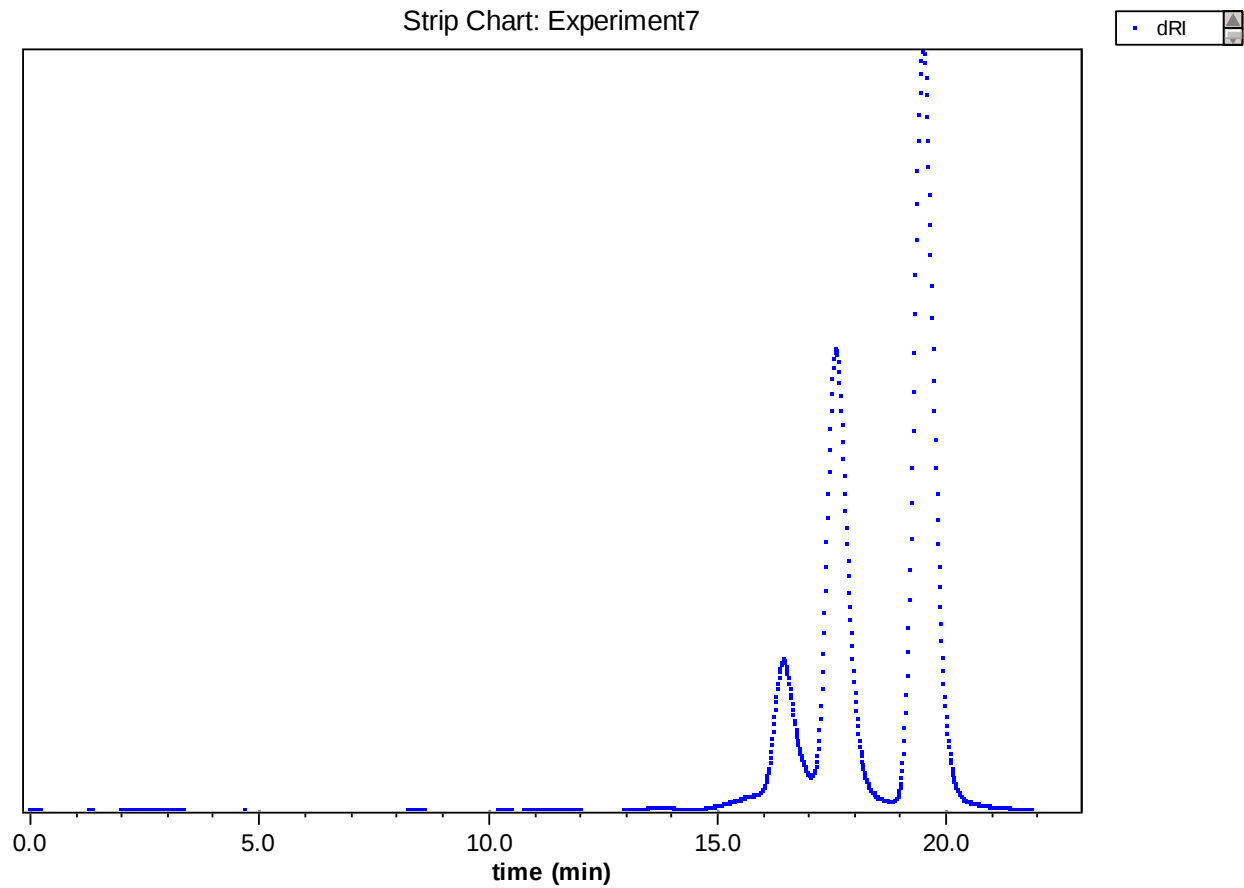
Collection Operator: AYRESGPC\Ayres Research Group (AYRESGPC\Ayres Research Group (Ayres Research Group))

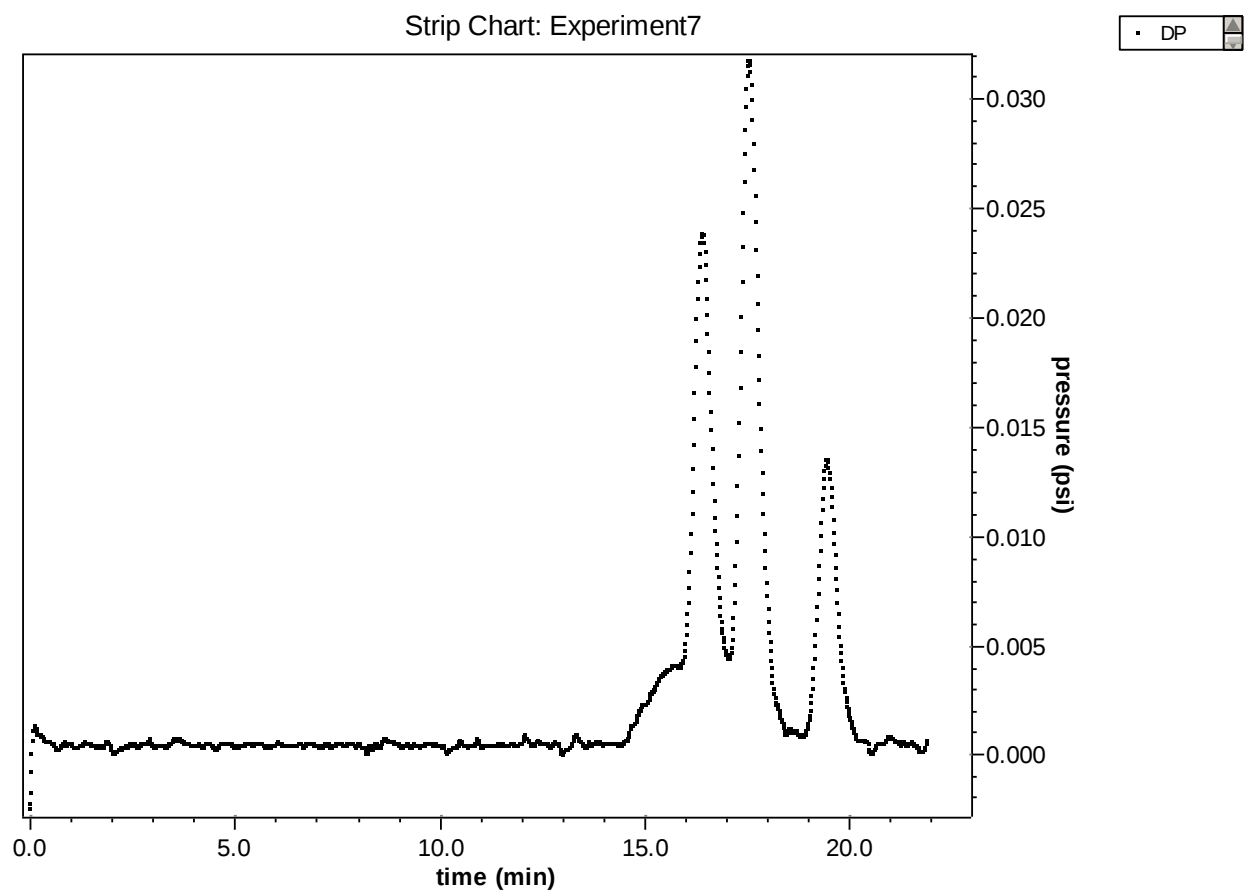
Processing Operator: AYRESGPC\Ayres Research Group (Ayres Research Group)

Sample: sample



Strip Chart: Experiment7





Configuration

Concentration Source: RI

Flow Rate: 1.000 mL/min

Light Scattering Instrument: miniDAWN TREOS

Cell Type: Fused Silica

Wavelength: 656.0 nm

Calibration Constant: 6.1050×10^{-5} 1/(V cm)

RI Instrument: Optilab rEX

Viscometer: ViscoStar

Dilution Factor: 0.4976

Solvent: thf

Refractive Index: 1.402

Processing

Collection Time: Friday January 31, 2014 03:06:45 PM Eastern Daylight Time

Processing time: Friday January 31, 2014 03:41:46.437 PM Eastern Daylight Time

Peak settings:

Peak Name	Peak 1	Peak 2	Peak 3
Light Scattering Model	Zimm	Zimm	Zimm
Fit Degree	1	1	1
dn/dc (mL/g)	0.1850	0.1850	0.1850
A2 (mol mL/g²)	0.000	0.000	0.000
Injected Mass (µg)	100.000	255.000	475.000
Viscometry Model	Huggins	Huggins	Huggins
Huggins Equation Parameter	0	0	0
Kraemers Equation Parameter	0	0	0

Results Fitting Procedure:

Data Fit Model Degree R² Extrapolation

Results

Peak Results

	Peak 1	Peak 2	Peak 3
Masses			
Calculated Mass (µg)	59.69	151.02	237.80
Molar mass moments (g/mol)			
Mn	6.157×10 ⁵ (±0.206%)	1.933×10 ⁵ (±0.638%)	2.812×10 ⁴ (±3.533%)
Mp	6.461×10 ⁵ (±0.151%)	2.082×10 ⁵ (±0.511%)	2.966×10 ⁴ (±2.797%)
Mv	6.718×10 ⁵ (±0.071%)	1.951×10 ⁵ (±0.082%)	2.840×10 ⁴ (±0.502%)

Peak Results

	Peak 1	Peak 2	Peak 3
Mw	6.865×10^5 ($\pm 0.228\%$)	1.953×10^5 ($\pm 0.562\%$)	2.845×10^4 ($\pm 3.192\%$)
Mz	8.417×10^5 ($\pm 0.649\%$)	1.970×10^5 ($\pm 1.209\%$)	2.874×10^4 ($\pm 6.863\%$)
Polydispersity			
Mw/Mn	1.115 ($\pm 0.308\%$)	1.010 ($\pm 0.850\%$)	1.012 ($\pm 4.761\%$)
Mz/Mn	1.367 ($\pm 0.681\%$)	1.019 ($\pm 1.367\%$)	1.022 ($\pm 7.719\%$)
rms radius moments (nm)			
Rn	30.4 ($\pm 0.7\%$)	2.5 ($\pm 301.7\%$)	n/a
Rw	33.2 ($\pm 0.6\%$)	1.8 ($\pm 542.5\%$)	n/a
Rz	38.9 ($\pm 0.5\%$)	1.0 ($\pm 1793.5\%$)	n/a
Intrinsic viscosity moments (mL/g)			
η_n	168.677 ($\pm 2.158\%$)	72.048 ($\pm 1.515\%$)	18.603 ($\pm 3.076\%$)
η_w	180.89 ($\pm 2.84\%$)	71.96 ($\pm 1.36\%$)	18.49 ($\pm 2.97\%$)
η_z	208.373 ($\pm 4.435\%$)	71.870 ($\pm 1.241\%$)	18.386 ($\pm 2.869\%$)
Hydrodynamic radius moments (nm)			
Rh(n)	25.3 ($\pm 0.7\%$)	13.0 ($\pm 0.5\%$)	4.3 ($\pm 1.6\%$)
Rh(w)	26.7 ($\pm 0.9\%$)	13.0 ($\pm 0.5\%$)	4.4 ($\pm 1.5\%$)
Rh(z)	29.6 ($\pm 1.3\%$)	13.1 ($\pm 0.5\%$)	4.4 ($\pm 1.5\%$)
Mark-Houwink-Sakurada a: 0.719 ($\pm 0.145\%$)			
Mark-Houwink-Sakurada K: 1.132×10^{-2} ($\pm 1.297\%$) mL/g			