

ASTRA 6 Report Experiment1



ASTRA - Experiment1

File Edit View Experiment Processing System Window Help

Experiment1: Basic Collection Experiment1: Report (detailed) Experiment1: Baselines

Autofind Baselines fx Parameters Source: LS 2 Set All

Define Baselines

LS 1 LS 2 LS 3 dRI DP

	Visible	Style	X1	Y1	X2	Y2
LS 1	<input type="checkbox"/>	Snap-Y	4.9535	0.0511	29.4959	0.0511
LS 2	<input checked="" type="checkbox"/>	Snap-Y	4.0153	0.0297	28.4827	0.0299
LS 3	<input type="checkbox"/>	Snap-Y	6.4921	0.0394	28.9330	0.0395
dRI	<input type="checkbox"/>	Snap-Y	5.6009	-0.0000	30.0120	0.0000
DP	<input type="checkbox"/>	Snap-Y	8.5214	0.0001	29.7987	0.0005

OK Cancel Apply

For Help, press F1

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ASTRA - Experiment1

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Experiments: Experiment1: Report (detailed) Experiment1: Baselines

Autofind Baselines Parameters Source: LS 2 Set All

Define Baselines

LS 1
 LS 2
 LS 3
 dRI
 DP

differential refractive index

time (min)

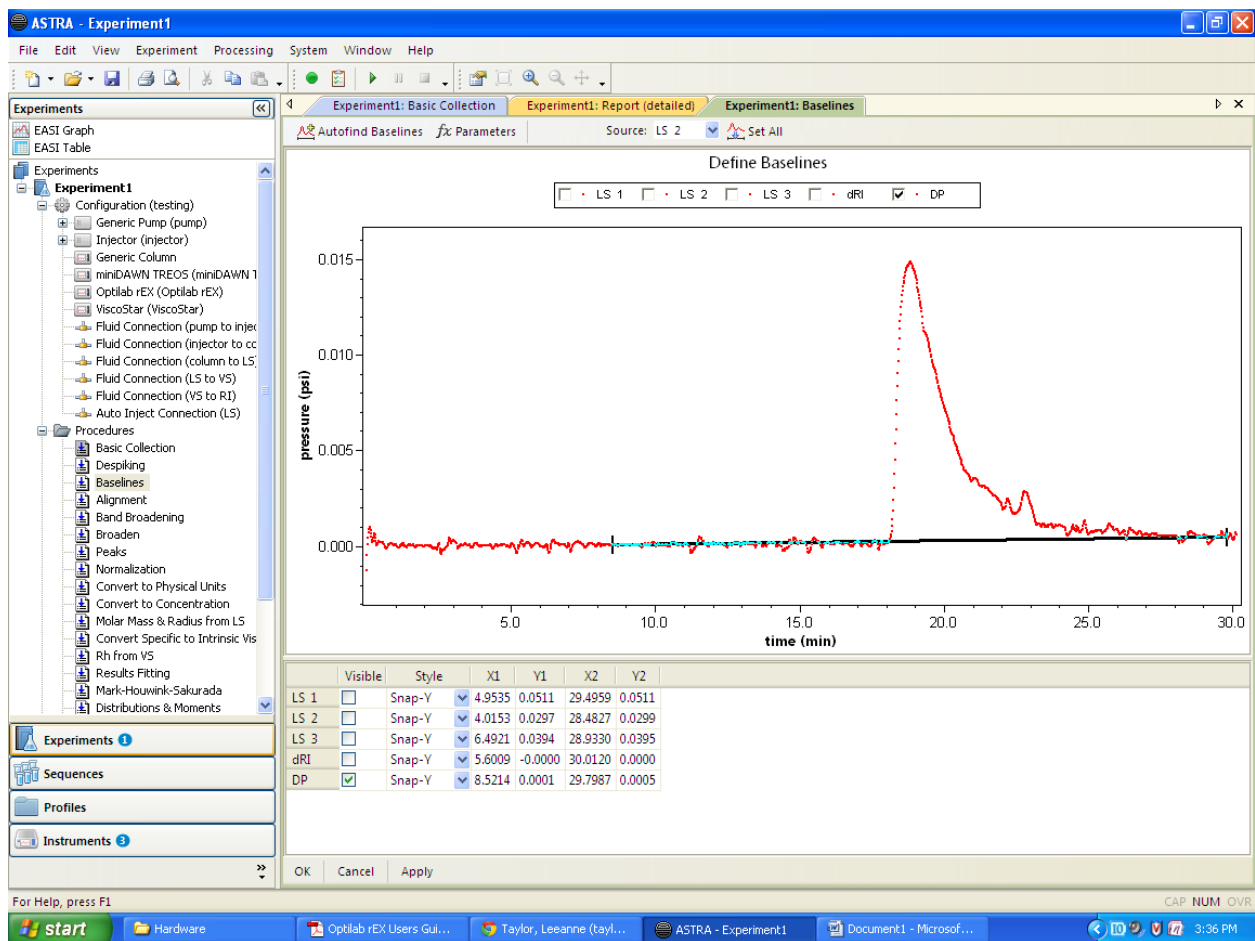
	Visible	Style	X1	Y1	X2	Y2
LS 1	<input type="checkbox"/>	Snap-Y	4.9535	0.0511	29.4959	0.0511
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OK Cancel Apply

For Help, press F1

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File Name: Experiment1

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

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

Sample: sample

Concentration: 0.000 mg/mL

Configuration

Concentration Source: RI

Flow Rate: 1.000 mL/min

Light Scattering Instrument: miniDAWN TREOS

Band Broadening Correction: n/a

Cell Type: Fused Silica

Wavelength: 656.0 nm

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

Detector Scattering angle Gain Normalization coefficient

Detector	Scattering angle	Gain	Normalization coefficient
1	46.6°	n/a	0.745
2	90.0°	n/a	1.000
3	133.4°	n/a	0.837

RI Instrument: Optilab rEX

Band Broadening Correction: n/a

Wavelength: 658.0 nm

Viscometer: ViscoStar

Band Broadening Correction: n/a

Dilution Factor: 0.4976

Solvent: thf

Refractive Index: 1.402

uid Connections

Source Instrument	Destination Instrument	Delay Volume (mL)
Generic Pump	Injector	0.000
Injector	Generic Column	0.000
Generic Column	miniDAWN TREOS	0.000
miniDAWN TREOS	ViscoStar	0.000
ViscoStar	Optilab rEX	0.000

Processing

Collection Time: Wednesday January 29, 2014 03:00:22 PM Eastern Daylight Time

Processing time: Wednesday January 29, 2014 03:33:26.968 PM Eastern Daylight Time

Basic Collection:

LS Instrument Collection Interval: 1.000 sec

Baselines:

Series	Start	Stop	Type
detector 1	(4.954, 0.051)	(29.496, 0.051)	manual x, auto y
detector 2	(4.015, 0.030)	(28.483, 0.030)	manual x, auto y

Series	Start	Stop	Type
detector 3	(6.492, 0.039)	(28.933, 0.040)	manual x, auto y
differential refractive index data	(5.601, - 0.000)	(30.012, 0.000)	manual x, auto y
Differential Pressure	(8.521, 0.000)	(29.799, 0.000)	manual x, auto y

Peak settings:

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

Results Fitting Procedure:

Data	Fit Model	Degree	R ²	Extrapolation
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Results

Peak Results

		Peak 1
Masses		
	Calculated Mass (µg)	275.45
Molar mass moments (g/mol)		
	Mn	3.240×10 ⁴ (±0.776%)
	Mp	4.500×10 ⁴ (±0.409%)
	Mv	3.841×10 ⁴ (±0.051%)
	Mw	4.411×10 ⁴ (±0.500%)

Peak Results

	Peak 1
Mz	6.792×10^5 ($\pm 1.069\%$)
Mz+1	3.285×10^7 ($\pm 0.036\%$)
M(avg)	4.944×10^4 ($\pm 0.020\%$)
Polydispersity	
Mw/Mn	1.362 ($\pm 0.923\%$)
Mz/Mn	20.964 ($\pm 1.321\%$)
rms radius moments	
Rn	n/a
Rw	n/a
Rz	n/a
R(avg)	22.0 ($\pm 0.7\%$)
Intrinsic viscosity moments (mL/g)	
η_n	52.728 ($\pm 2.039\%$)
η_w	59.29 ($\pm 1.68\%$)
η_z	115.697 ($\pm 6.377\%$)
$\eta(\text{avg})$	61.500 ($\pm 0.102\%$)
Hydrodynamic radius moments (nm)	
Rh(n)	6.4 ($\pm 0.7\%$)
Rh(w)	7.1 ($\pm 0.6\%$)
Rh(z)	14.6 ($\pm 2.2\%$)
Rh(avg)	7.4 ($\pm 0.0\%$)
Mark-Houwink-Sakurada a:	0.454 ($\pm 0.444\%$)
Mark-Houwink-Sakurada K:	5.062×10^{-1} ($\pm 2.169\%$) mL/g