

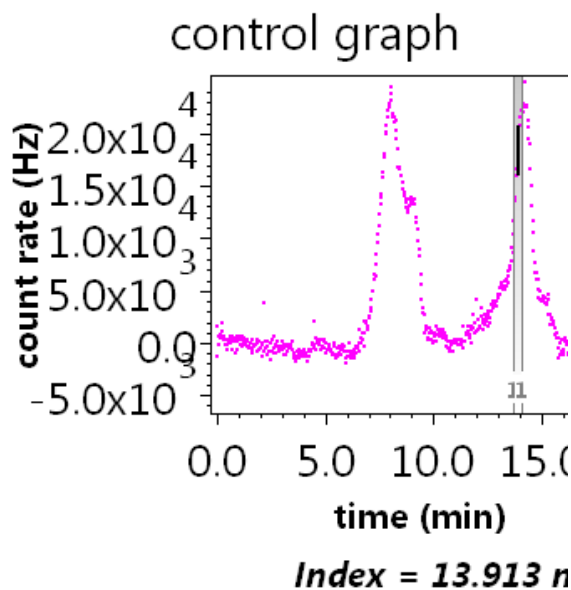
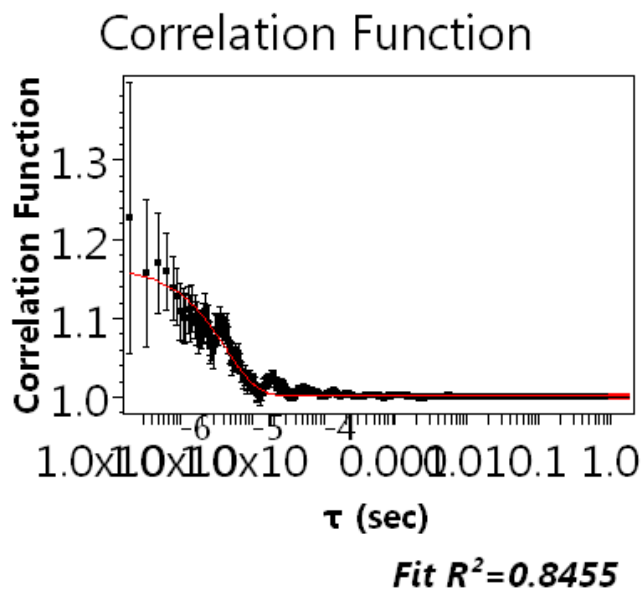
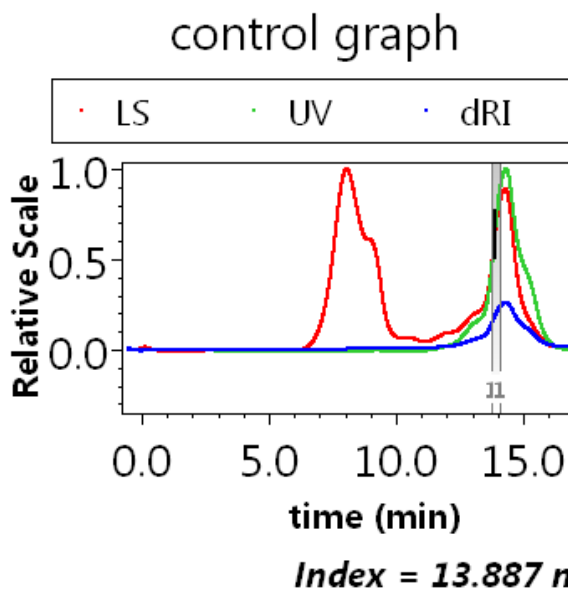
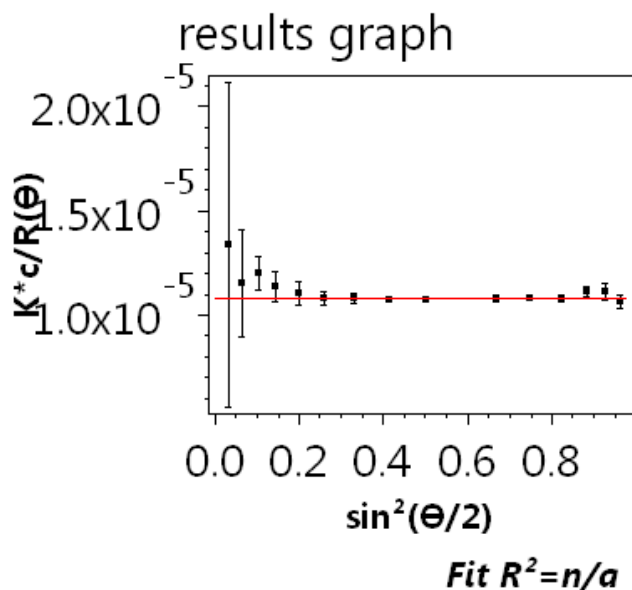


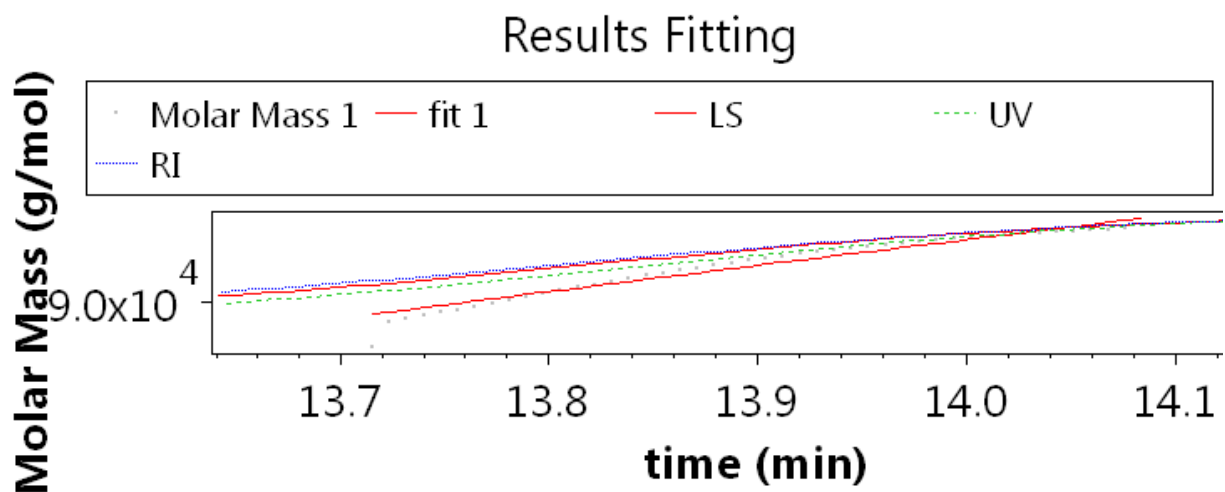
File Properties

File Name: \\paf\Home\Documents\COVID19\Nsp12\Nsp12 (primase)[050120_COVID_2].afe7
 Created: September 18, 2020 12:29:17.000

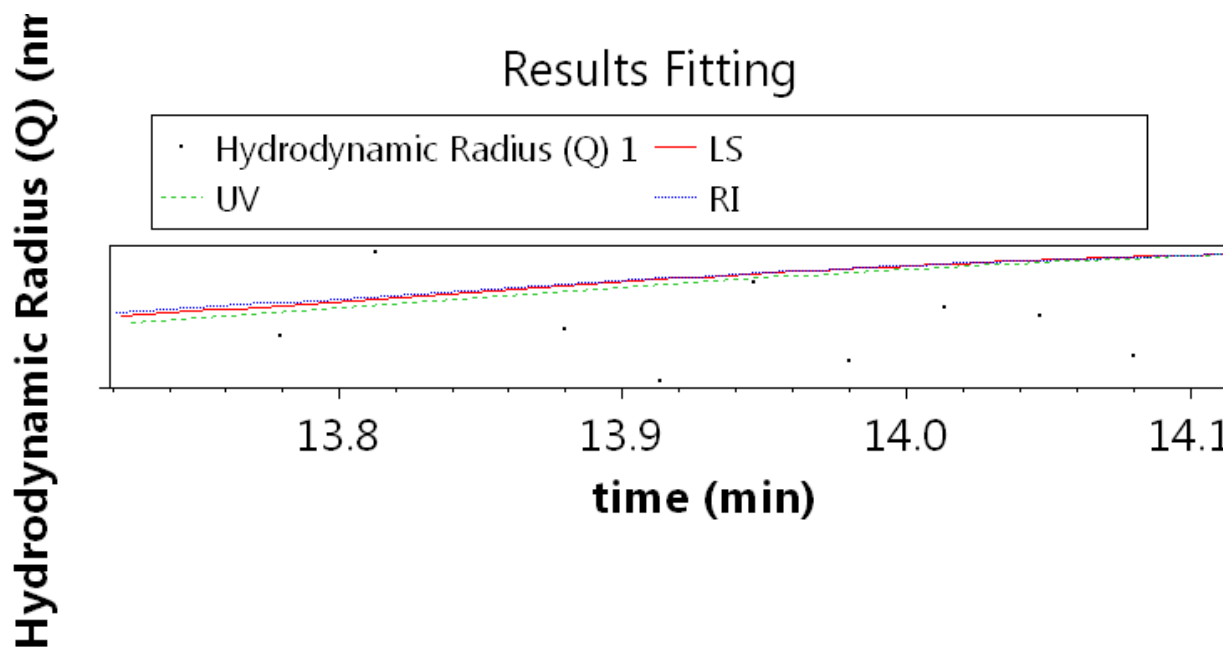
Sample: Nsp12 (primase)

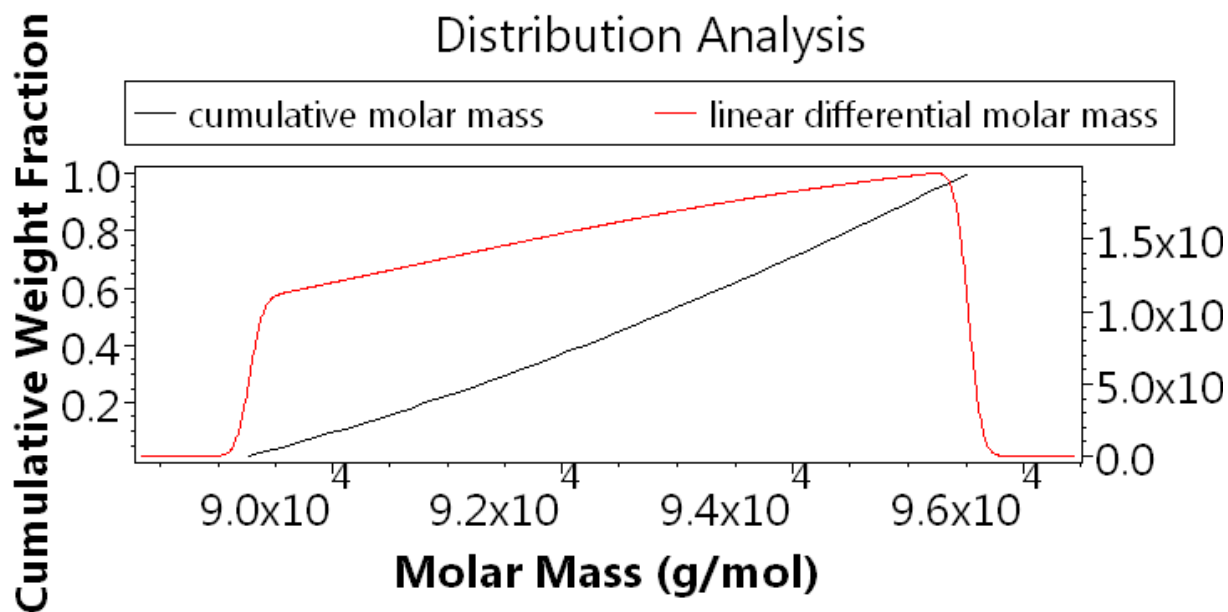
dn/dc: 0.1850 mL/g
 Concentration: 2.000 mg/mL



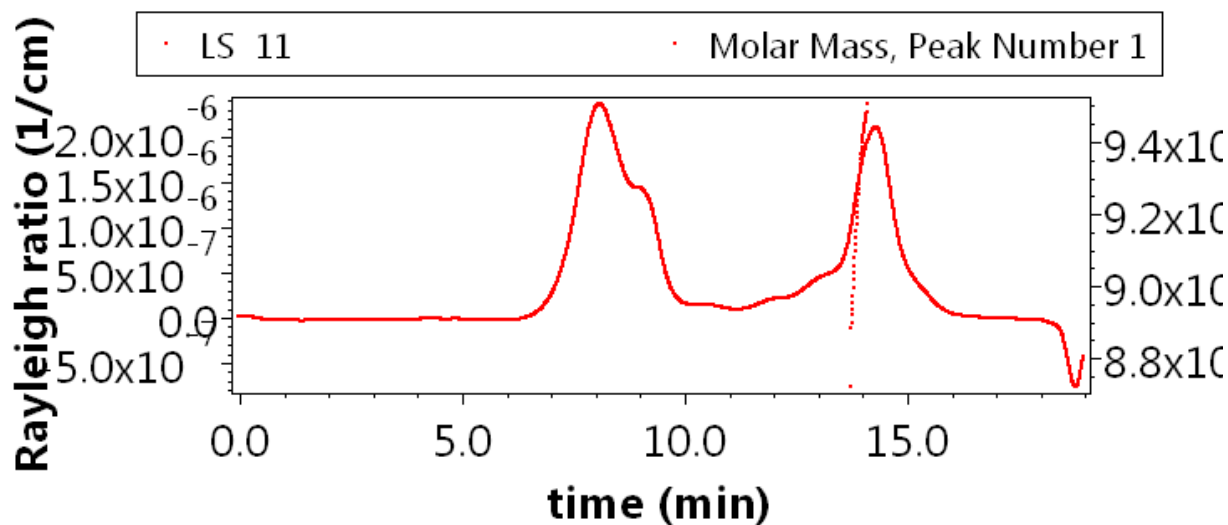


Fit Adjusted $R^2=0.9$





masses vs volume



Configuration

Abscissa Units: min
 Concentration Source: RI
 Flow Rate: 0.500 mL/min
 Pulse Correction Enabled: yes

Light Scattering Instrument: DAWN HELEOS
 Cell Type: Fused Silica
 Wavelength: 660.0 nm
 Calibration Constant: $3.3316 \times 10^{-5} \text{ 1/(V cm)}$

RI Instrument: Optilab T-rEX
 Wavelength: 658.0 nm

UV Instrument: Generic UV

Solvent: PBS, Aqueous
 Refractive Index: 1.331

Fluid Connections

Source Instrument	Destination Instrument	Delay Volume (mL)
Generic Pump	Injector	0.000
Injector	Generic UV Instrument	0.000
Generic UV Instrument	DAWN HELEOS	0.026
DAWN HELEOS	Optilab rEX	0.222

Aux Connections

ASTRA Report Nsp12 (primase)[050120_COVID_2]

Processing

Collection Operator: MICHAELFARADAY\Michael Faraday (MICHAELFARADAY\Michael Faraday (Michael Faraday))
 Collection Time: Friday, May 01, 2020 14:39:43 PM
 Collection Version: 7.1.4.9
 Processing Operator: MHAMMEL0242\michalhammel (michalhammel)
 Processing Time: Friday, September 18, 2020 12:30:36 PM
 Despiking Level: Heavy

Peak settings:

Peak Name	Peak 1
Peak Limits (min)	13.714- 14.088
Light Scattering Model	Zimm
Fit Degree	1
dn/dc (mL/g)	0.1850
dn/dc Ref. Temp. (°C)	25.000
Modifier dn/dc (mL/g)	0.0000
Modifier dn/dc Ref. Temp. (°C)	25.000
A2 (mol mL/g ²)	0.000
UV Ext. Coef. (mL/(mg cm))	0.667
UV Ext. Coef. Ref. Temp. (°C)	25.000
Modifier UV Ext. Coef. (mL/(mg cm))	0.000
Modifier UV Ext. Coef. Ref. Temp. (°C)	25.000
Real Refractive Index	0
Imaginary Refractive Index	0
Shell Thickness (nm)	0.000
Shell Real Refractive Index	0
Shell Imaginary Refractive Index	0
Rod radius (nm)	0.000
Molecular Standard	n/a
Concentration (mg/mL)	2.000
Concentration Ref. Temp. (°C)	25.000
Mn (g/mol)	0.000
Mw (g/mol)	0.000
Mp (g/mol)	0.000
Intrinsic Viscosity (mL/g)	0.000
Intrinsic Viscosity Ref. Temp. (°C)	25.000
Mark-Houwink-Sakurada K (mL/g)	0.000
Mark-Houwink-Sakurada a	0
Flory-Fox Equation Phi Parameter	0
Pititsyn-Eizner Equation Epsilon Parameter	0
Viscometry Model	Huggins
Huggins Equation Parameter	0
Kraemers Equation Parameter	0
radius (nm)	3.480
Radius Type	rms

Molar Mass & Radius from LS:

Peak Name: Peak 1
 Molar Mass: 9.254 ± 0.146 e+4 g/mol
 rms radius: 3.6 ± 15.7 nm
 Light Scattering Model: Zimm
 Fit Degree: 1
 Concentration: (7.763 ± 0.052) e-2 mg/mL
 dn/dc: 0.186 mL/g
 Slice Index: 1703
 Abscissa Position: 13.887 min
 Fit R²: n/a
 Enabled Detectors: 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18

rh from QELS:

Use Disabled Slices: no
 Prefilter Correlation Function before Averaging: yes
 Minimum Delay for FIT: 2.000×10^{-7} sec
 Maximum Delay for FIT: 1.0 sec
 Minimum Radius Threshold: 1.00 nm
 Maximum Radius Threshold: 300.00 nm
 Suppress Distribution Peaks Below: 0.50 nm
 Suppress Distribution Peaks Above: 10000.000 nm

Results Fitting Procedure:

Data	Fit Model	Degree	R ²	Extrapolation
Molar Mass	Polynomial	1	0.953947	none

Results

Peak Results

	Peak 1
Hydrodynamic radius (Q) moments (nm)	
rh(Q)n	1.397 (±7.457%)
Std Dev rh(Q)n	0.275
rh(Q)w	1.395 (±7.434%)
Std Dev rh(Q)w	0.273
rh(Q)z	1.394 (±7.411%)
Std Dev rh(Q)z	0.273
rh(Q)(avg)	1.279 (±2.411%)
General (mL/(mg cm))	
UV Ext. Coef. (mL/(mg cm))	1.097
Masses	
Injected Mass (µg)	100.00
Calculated Mass (µg)	14.45
Mass Recovery (%)	14.5
Mass Fraction (%)	100.0
Concentration (mg/mL)	
Average concentration	0.078 (±0.000%)
Molar mass moments (g/mol)	
Mn	9.270×10^4 (±0.324%)
Mp	9.553×10^4 (±0.393%)
Mv	n/a
Mw	9.273×10^4 (±0.322%)
Mz	9.277×10^4 (±0.719%)
Mz+1	9.280×10^4 (±1.157%)
M(avg)	9.277×10^4 (±0.045%)
Polydispersity	
Mw/Mn	1.000 (±0.457%)
Mz/Mn	1.001 (±0.789%)
rms radius moments (nm)	
rn	5.9 (±161.7%)
Std Dev rn	5.567
rw	6.0 (±158.6%)
Std Dev rw	5.578
rz	6.0 (±155.5%)

ASTRA Report Nsp12 (primase)[050120_COVID_2]

	Peak 1
Peak Width at User-Specified-Height (4.4%, min)	0.000
Asymmetry Factor	0.000
Tailing Factor	0.000
Column Plate Count	0.000
Mean (min)	13.921
Standard Deviation (min)	0.106
Skew	-27.940
Peak Area (%)	100.000
Refractive index peak statistics	
Peak Area (RIU min)	5.347×10 ⁻⁶
Peak Height (RIU)	2.013×10 ⁻⁵
Retention Time (min)	14.366
Peak Width at Half-Height (min)	0.000
Peak Width at Quarter-Height (min)	0.000
Peak Width at Tenth-Height (min)	0.000
Peak Width at User-Specified-Height (4.4%, min)	0.000
Asymmetry Factor	0.000
Tailing Factor	0.000
Column Plate Count	0.000
Mean (min)	13.920
Standard Deviation (min)	0.104
Skew	-8.317
Peak Area (%)	100.000
UV peak statistics	
Peak Area (channel 1) (AU min)	3.172×10 ⁻²
Peak Area (channel 2) (AU min)	0.000
Peak Height (channel 1) (AU)	1.254×10 ⁻¹
Peak Height (channel 2) (AU)	0.000
Retention Time (channel 1) (min)	14.349
Retention Time (channel 2) (min)	14.008
Peak Width at Half-Height (channel 1) (min)	0.000
Peak Width at Half-Height (channel 2) (min)	0.000
Peak Width at Quarter-Height (channel 1) (min)	0.000
Peak Width at Quarter-Height (channel 2) (min)	0.000
Peak Width at Tenth-Height (channel 1) (min)	0.000
Peak Width at Tenth-Height (channel 2) (min)	0.000
Peak Width at User-Specified-Height (channel 1) (4.4%, min)	0.000
Peak Width at User-Specified-Height (channel 2) (4.4%, min)	0.000
Asymmetry Factor (channel 1)	0.000
Asymmetry Factor (channel 2)	0.000
Column Plate Count (channel 1)	0.000
Column Plate Count (channel 2)	0.000
Tailing Factor (channel 1)	0.000
Tailing Factor (channel 2)	0.000
Mean (channel 1) (min)	13.927
Mean (channel 2) (min)	13.923
Standard Deviation (channel 1) (min)	0.105
Standard Deviation (channel 2) (min)	0.103
Skew (channel 1)	-0.134
Skew (channel 2)	-5.945
Peak Area % (channel 1) (%)	100.000
Peak Area % (channel 2) (%)	100.000
Translational diffusion coefficient moments (cm²/sec)	
Dt(n)	2.36×10 ⁻⁶ (±7.22%)
Dt(w)	2.36×10 ⁻⁶ (±7.20%)
Dt(z)	2.36×10 ⁻⁶ (±7.18%)
Dt(avg)	2.25×10 ⁻⁶ (±2.42%)

laser monitor average: 0.999 V
 Forward Monitor Average: 0.936 V
 laser current average: 0.156 amps
 laser voltage average: -226029.257 V
 rms conformation plot slope: 17.14 (±1443.76%) log(nm)/log(g/mol)
 rms Conformation Plot y-intercept: -84.365 (±1460.728%) log(nm)
 rh(Q) conformation plot slope: -2.075 (±73.640%) log(nm)/log(g/mol)
 rh(Q) Conformation Plot y-intercept: 10.441 (±72.742%) log(nm)
 rms radius vs. rh(Q) plot slope: -2.993 (±39.155%) rms radius vs. rh(Q) plot slope
 rms radius vs. rh(Q) Plot y-intercept: 9.891 (±17.012%) log(nm)