

ACQUITY APC Calibration Standards

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I. INTRODUCTION

Representing an industry first, ACQUITY APC™ Calibration Standards were specifically designed to match the molecular weight range of the ACQUITY® APC XT Columns. They eliminate the need to manually prepare custom standard calibration mixes as ACQUITY APC Calibration Standards provide the right number of data points for the targeted MW range. In addition, calibration time on the ACQUITY APC System is reduced by a factor of 3–5x, enabling higher confidence in the accuracy of your results by performing more frequent calibrations. Due to LC system, sample preparation and laboratory environment variances, routine calibration is critical to achieving high accuracy in MW determination.

The ACQUITY APC Standards are available in both polystyrene and polymethylmethacrylate configured into Low, Middle, and High Molecular Weight Calibration Kits. They are also available in convenient Method Development Kits to include the full separation range of all three kits combined.

The ACQUITY APC Columns Selector will assist you in choosing the set of columns and calibration standards for your analysis.

II. STORAGE AND STABILITY

How to use:

1. Select the appropriate vial and unscrew the cap.
2. Add 1.5 mL of the mobile phase solvent via syringe or pipette, etc.

Note: If using a flow marker (i.e. toluene in tetrahydrofuran [THF]), take a portion of the eluent and set it aside for sample preparation. (The eluent may be a mixture or a pure solvent.) Then add the flow marker to the small portion that was set aside. Use that solution to dilute/dissolve your samples.

3. Close the vial and wait 2 - 5 hours. Gently swirl the vial for a homogeneous solution.

Note: Shaking the vial during this time will speed up the dissolution process.

4. Inject each solution separately and use peak molecular weight (Mp) values to construct a calibration curve.
5. Use only freshly prepared solutions and consume within one week. Do not freeze standards in solution; freezing can destroy the sample.

Storage: Store the tightly recapped polymer standard in a dry, dark, cool area; e.g. a refrigerator (2-8° C).

Expiration date: Please see calibration curve delivered with each kit.

III. EXAMPLES USING THE ACQUITY APC CALIBRATION STANDARDS

System: ACQUITY APC

Sample: Polymethylmethacrylate
Low MW Standards
(MW: 202-12,600)

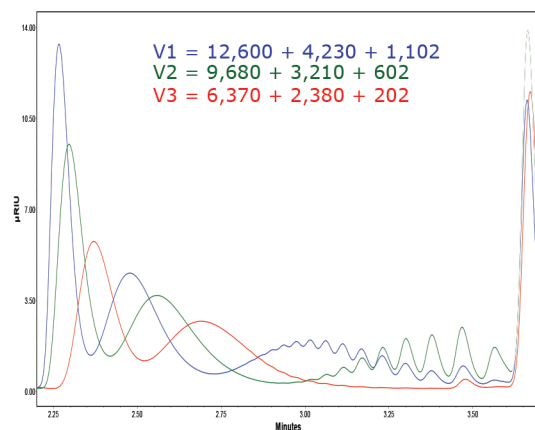
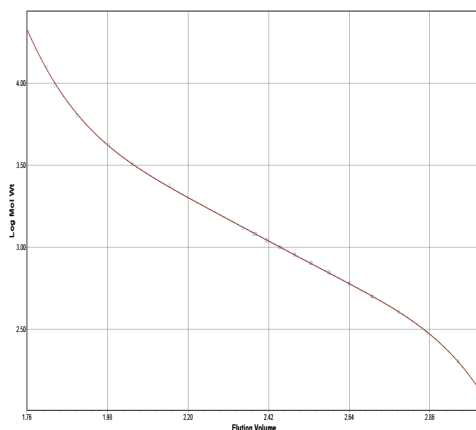
Column: ACQUITY APC XT,
4.6 x 150 mm x 2 (45Å and 45Å)

Flow rate: 0.8 mL/min

Injection vol: 10 µL

Eluent: THF

Detection: ACQUITY RI



System: ACQUITY APC

Sample: Polymethylmethacrylate
Middle MW Standards
(MW: 202-201,000)

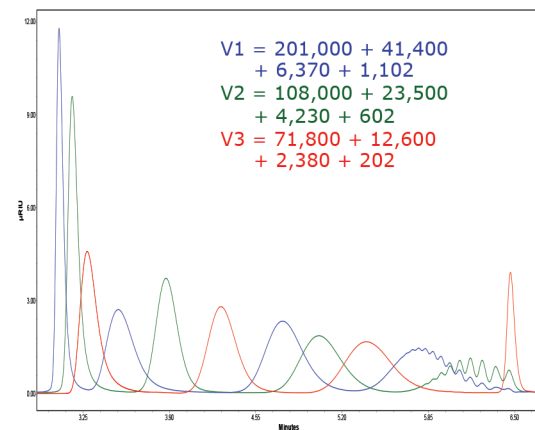
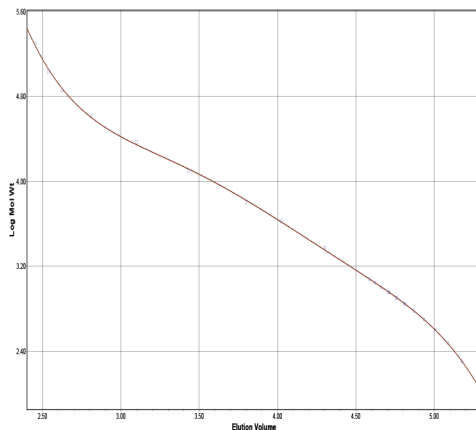
Column: ACQUITY APC XT,
4.6 x 150 mm x 3
(45Å, 125Å and 200Å in series)

Flow rate: 0.8 mL/min

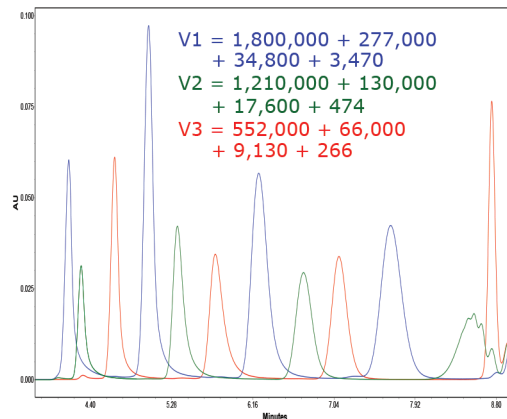
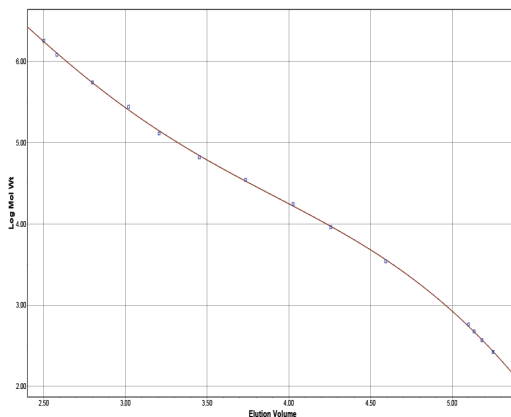
Injection vol: 10 µL

Eluent: THF

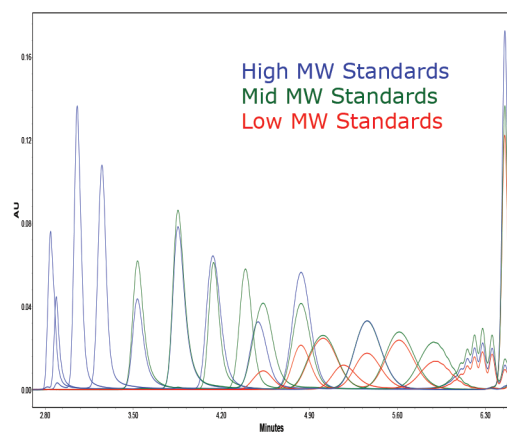
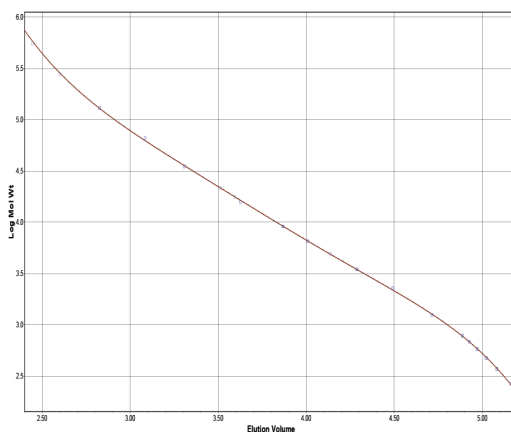
Detection: ACQUITY RI



System: ACQUITY APC
Sample: Polystyrene High MW Standards (MW: 266-1,800,000)
Column: ACQUITY APC™ XT, 4.6 x 150 mm x 3 (45Å, 200Å and 900Å in series)
Flow rate: 0.6 mL/min
Injection vol: 10 µL
Eluent: THF
Detection: ACQUITY PDA



System: ACQUITY APC
Sample: Polystyrene Method Development Standards (MW: 266-1,800,000)
Column: ACQUITY APC XT, 4.6 x 150 mm x 3 (45Å, 125Å and 450Å in series)
Flow rate: 0.8 mL/min
Injection vol: 10 µL
Eluent: THF
Detection: ACQUITY PDA



IV. ORDERING INFORMATION

Description			Part Number
ACQUITY APC Polystyrene Low MW Calibration Kit			186007539
Qty Clear Vials	Cap Color	Mp	Quantity
10	Green	15.7 K, 4.92 K, 1.25 K	1.5 mg each
10	Dark Blue	9.13 K, 3.47 K, 0.474 K	1.5 mg each
10	Black	6.54 K, 2.28 K, 0.266 K	1.5 mg each
Description			Part Number
ACQUITY APC Polystyrene Middle MW Calibration Kit			186007540
Qty Clear Vials	Cap Color	Mp	Quantity
10	Red	130 K, 21.5 K, 6.54 K, 1.25 K	1.5 mg each
10	Light Blue	66 K, 15.7 K, 3.47 K, 0.474 K	1.5 mg each
10	White	35.5 K, 9.13 K, 2.28 K, 0.266 K	1.5 mg each

Description			Part Number
ACQUITY APC Polystyrene High MW Calibration Kit			186007541
Qty Clear Vials	Cap Color	Mp	Quantity
10	Yellow	277 K, 34.8 K, 3.47 K	1.5 mg each
		1,800 K	0.75 mg
10	Purple	130 K, 17.6 K, 0.474 K	1.5 mg each
		1,210 K	0.75 mg
10	Pink	552 K, 66 K, 9.130 K, 0.266 K	1.5 mg each

Description			Part Number
ACQUITY APC Polystyrene Method Development MW Calibration Kit			186007542
Qty Clear Vials	Cap Color	Mp	Quantity
3	Purple	130 K, 17.6 K, 0.474 K	1.5 mg each
		1,210 K	0.75 mg
3	Yellow	277 K, 34.8 K, 3.47 K	1.5 mg each
		1,800 K	0.75 mg
3	Pink	552 K, 66 K, 9.13 K, 0.266 K	1.5 mg each
3	Light Blue	66 K, 15.7 K, 3.47 K, 0.474 K	1.5 mg each
3	Red	130 K, 21.5 K, 6.54 K, 1.25 K	1.5 mg each
3	White	35.5 K, 9.13 K, 2.28 K, 0.266 K	1.5 mg each
3	Green	15.7 K, 4.92 K, 1.25 K	1.5 mg each
3	Dark Blue	9.13 K, 3.47 K, 0.474 K	1.5 mg each
3	Black	6.54 K, 2.28 K, 0.266 K	1.5 mg each
3		BHT	1.5 mg

Description			Part Number
ACQUITY APC Polymethylmethacrylate Low MW Calibration Kit			186007543
Qty Clear Vials	Cap Color	Mp	Quantity
10	Green	12.6 K, 4.23 K, 1.102 K	1.5 mg each
10	Dark Blue	9.68 K, 3.21 K, 0.602 K	1.5 mg each
10	Black	6.37 K, 2.38 K, 0.202 K	1.5 mg each

Description			Part Number
ACQUITY APC Polymethylmethacrylate Middle MW Calibration Kit			186007544
Qty Clear Vials	Cap Color	Mp	Quantity
10	Red	201 K, 41.4 K, 6.37 K, 1.102 K	1.5 mg each
10	Light Blue	108 K, 23.5 K, 4.23 K, 0.602 K	1.5 mg each
10	White	71.8 K, 12.6 K, 2.38 K, 0.202 K	1.5 mg each

Description			Part Number
ACQUITY APC Polymethylmethacrylate High MW Calibration Kit			186007545
Qty Clear Vials	Cap Color	Mp	Quantity
10	Yellow	201 K, 23.5 K, 2.38 K	1.5 mg each
		1,600 K	0.75 mg
10	Purple	608 K, 88.5 K, 12.6 K, 0.602 K	1.5 mg each
10	Pink	340 K, 41.4 K, 6.37 K, 0.202 K	1.5 mg each

Description			Part Number
ACQUITY APC Polymethylmethacrylate Method Development MW Calibration Kit			186007546
Qty Clear Vials	Cap Color	Mp	Quantity
3	Yellow	201 K, 23.5 K, 2.38 K	1.5 mg each
		1,600 K	0.75 mg
3	Purple	608 K, 88.5 K, 12.6 K, 0.602 K	1.5 mg each
3	Pink	340 K, 41.4 K, 6.37 K, 0.202 K	1.5 mg each
3	Light Blue	108 K, 23.5 K, 4.23 K, 0.602 K	1.5 mg each
3	Red	201 K, 41.4 K, 6.37 K, 1.102 K	1.5 mg each
3	White	71.8 K, 12.6 K, 2.38 K, 0.202 K	1.5 mg each
3	Green	12.6 K, 4.23 K, 1.102 K	1.5 mg each
3	Dark Blue	9.68 K, 3.21 K, 0.602 K	1.5 mg each
3	Black	6.37 K, 2.38 K, 0.202 K	1.5 mg each
3		BHT	1.5 mg each

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