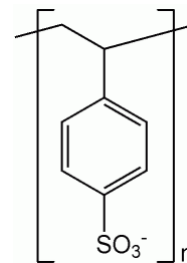


# Polystyrene sulfonate polymer SEC separations

- Columns:
  - Zenix<sup>®</sup> SEC-150 (3  $\mu\text{m}$ , 1.50  $\text{\AA}$ )
  - Zenix<sup>®</sup> SEC-300 (3  $\mu\text{m}$ , 300  $\text{\AA}$ )
  - SRT<sup>®</sup> SEC-500 (5  $\mu\text{m}$ , 500  $\text{\AA}$ )
  - SRT<sup>®</sup> SEC-1000 (5  $\mu\text{m}$ , 1000  $\text{\AA}$ )
- Samples:
  - 1640, 7950, 16600, 34700, 57500, 127000, 505100 Da
  - 15, 80, 150, 300, 670, 1,000 and 2,350 kDa
- With shorter column 7.8 x 150 mm and higher flow rate at 1.5 mL/min, the separation can be achieved under 5 minutes.
- Different pore size columns in tandem will expand the MW separation range .



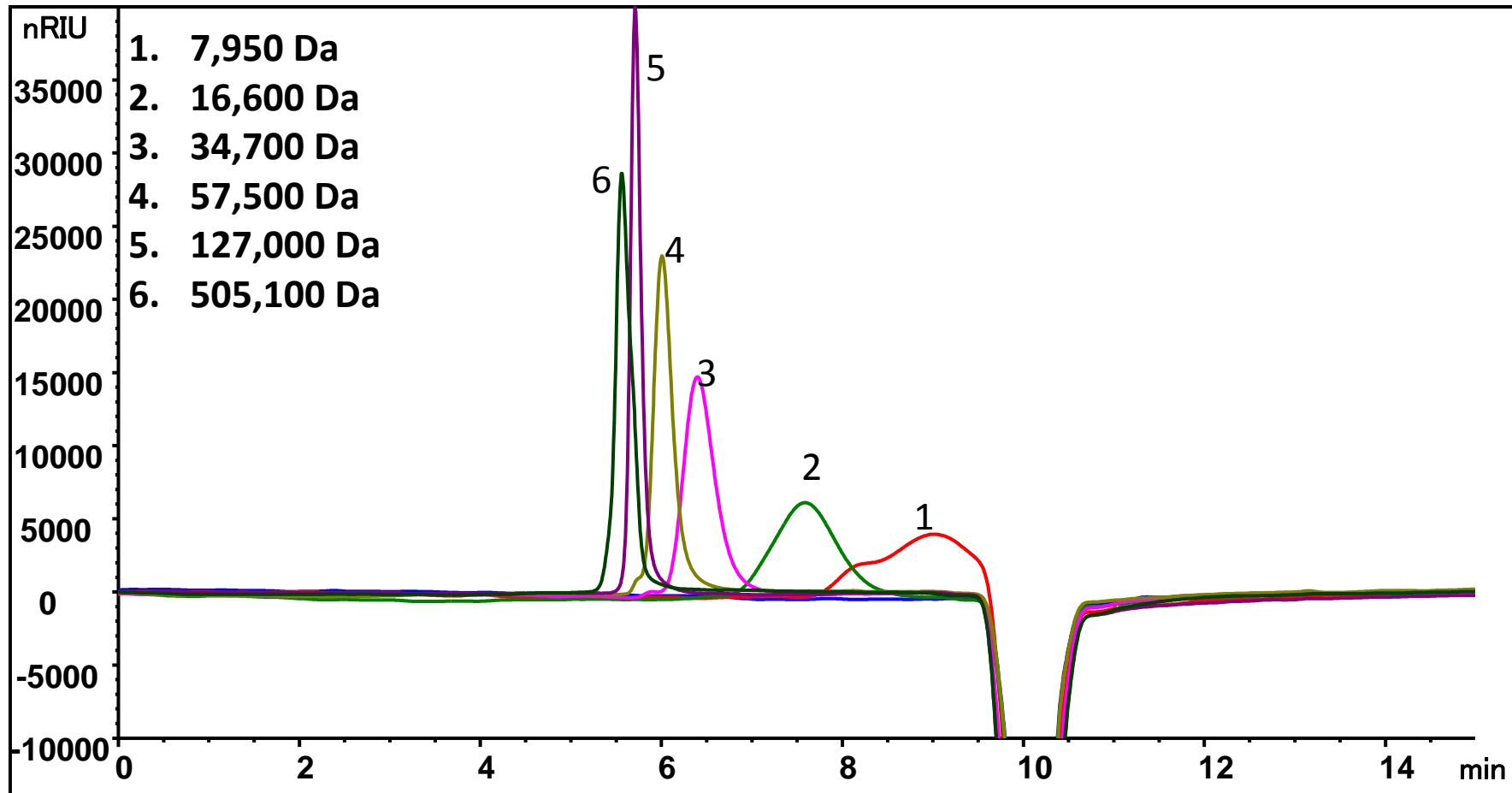
# Sodium polystyrene sulfonate separation on Zenix<sup>®</sup> SEC-150, 7830

Column: **Zenix<sup>®</sup> SEC-150** (3  $\mu\text{m}$ , 150  $\text{\AA}$ , 7.8 x 300 mm)

Mobile phase: 150mM Phosphate Buffer, pH 7

Flow rate: 1.0 mL/min; Detector: RI; Column temperature: RT

Injection volume: 50  $\mu\text{g}$ , Sample: See chromatogram, total run time 15 min



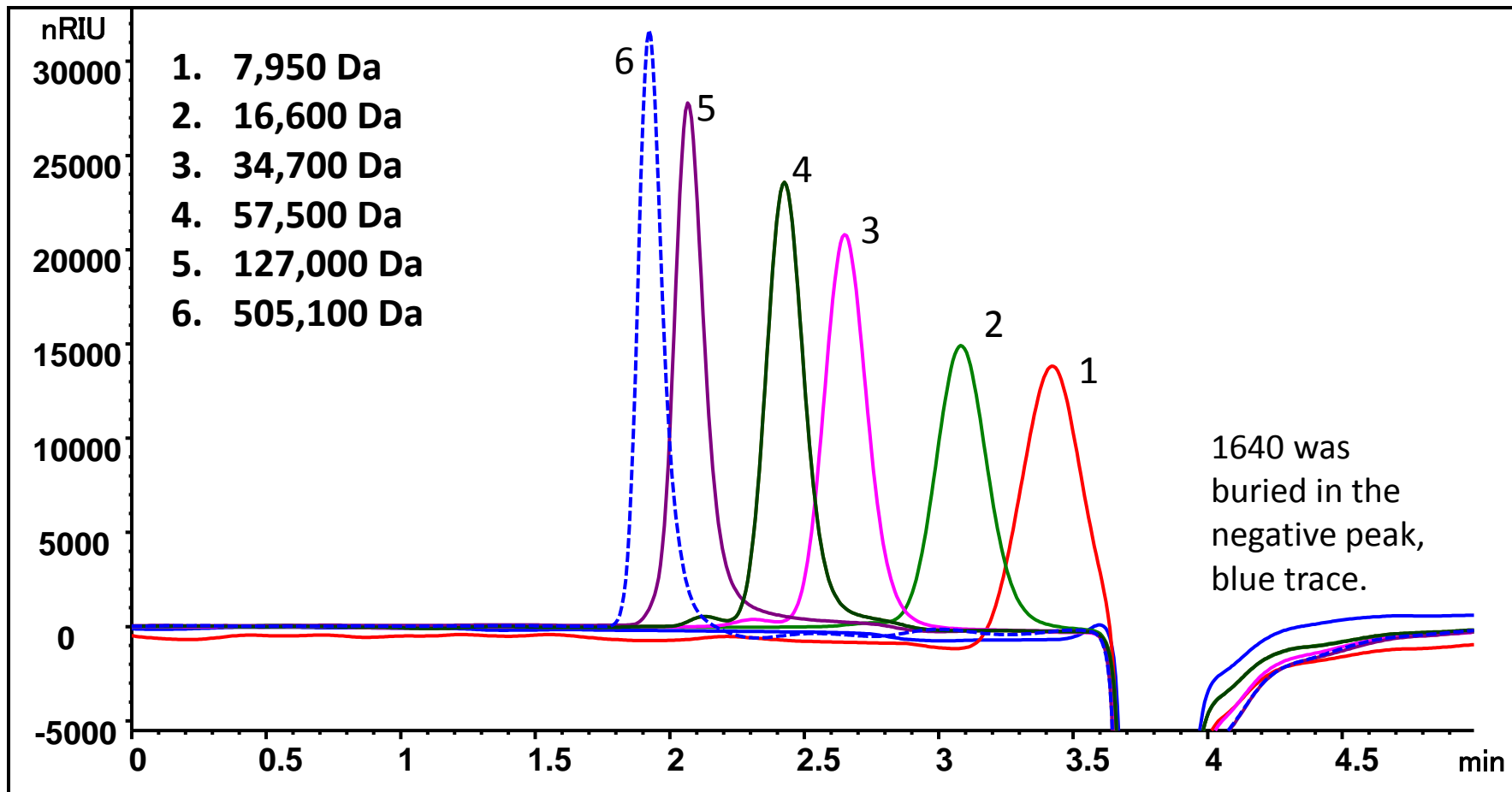
# Sodium polystyrene sulfonate separation on Zenix<sup>®</sup> SEC-300, 7815, RI

Column: **Zenix<sup>®</sup> SEC-300** (3  $\mu\text{m}$ , 300  $\text{\AA}$ , 7.8 x 150 mm)

Mobile phase: 150mM Phosphate Buffer, pH 7

Flow rate: 1.5 mL/min; Detector: RI; Column temperature: RT

Injection volume: 50  $\mu\text{g}$ , Sample: See chromatogram, total run time 5 min



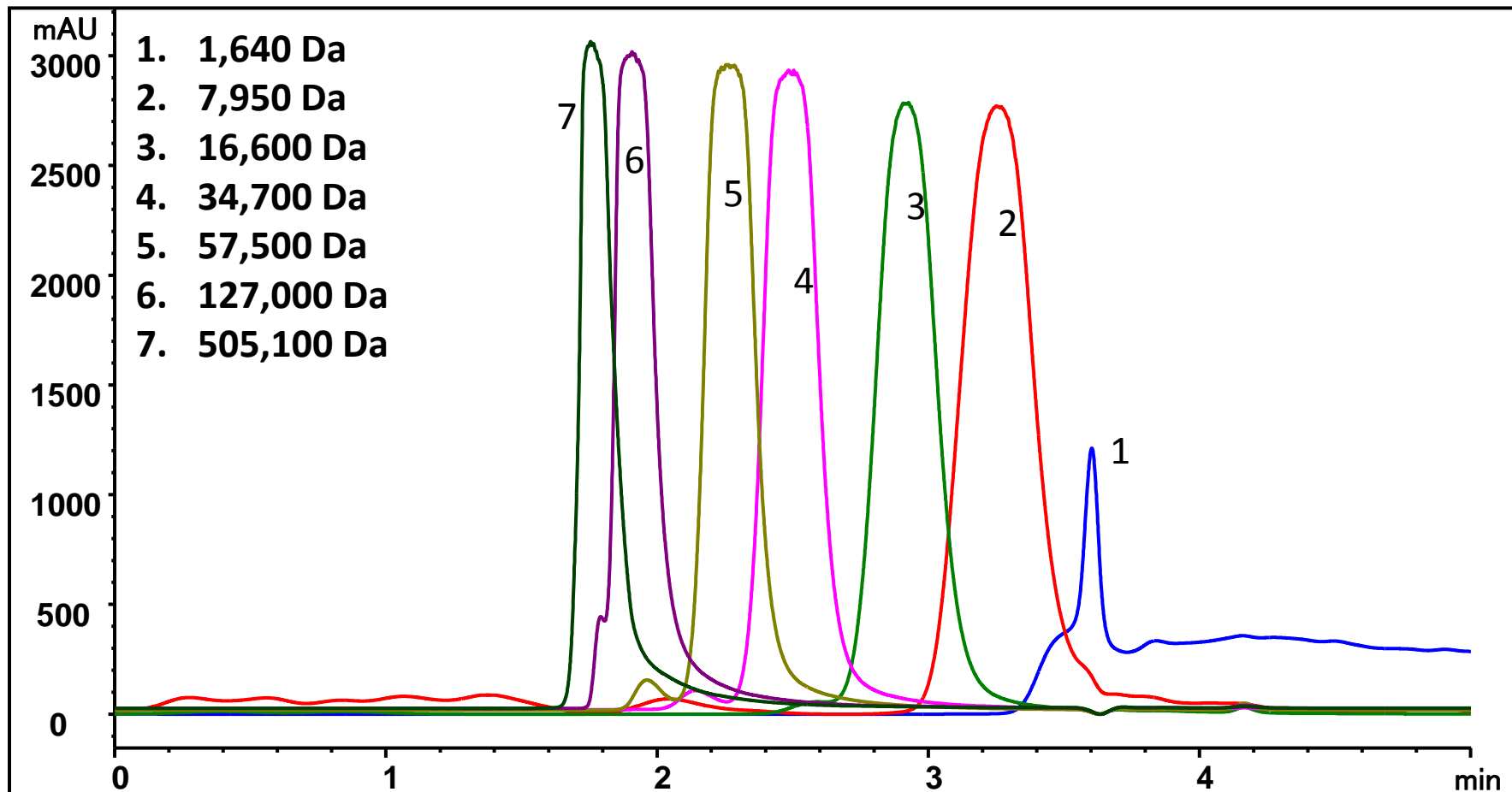
# Sodium polystyrene sulfonate separation on Zenix® SEC-300, 7815

Column: **Zenix® SEC-300** (3  $\mu\text{m}$ , 300 Å, 7.8 x 150 mm)

Mobile phase: 150mM Phosphate Buffer, pH 7

Flow rate: 1.5 mL/min; Detector: UV 214 nm; Column temperature: RT

Injection volume: 50  $\mu\text{g}$ , Sample: See chromatogram, total run time 5 min



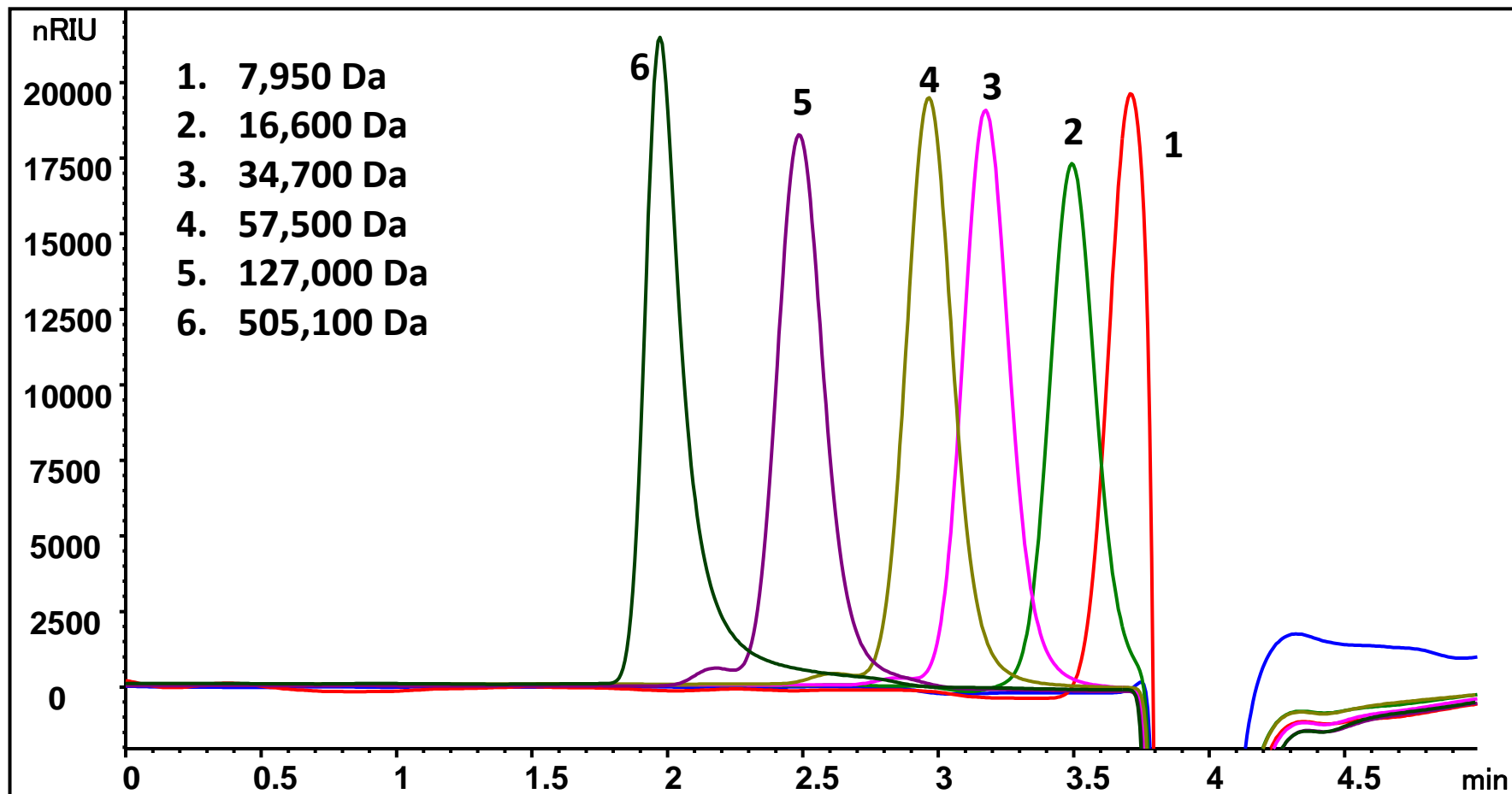
# Sodium polystyrene sulfonate separation on SRT<sup>®</sup> SEC-500, 7815

Column: **SRT<sup>®</sup> SEC-500** (5  $\mu\text{m}$ , 500  $\text{\AA}$ , 7.8 x 150 mm)

Mobile phase: 150mM Phosphate Buffer, pH 7

Flow rate: 1.5 mL/min; Detector: RI; Column temperature: RT

Injection volume: 50  $\mu\text{g}$ , Sample: See chromatogram, total run time 5 min



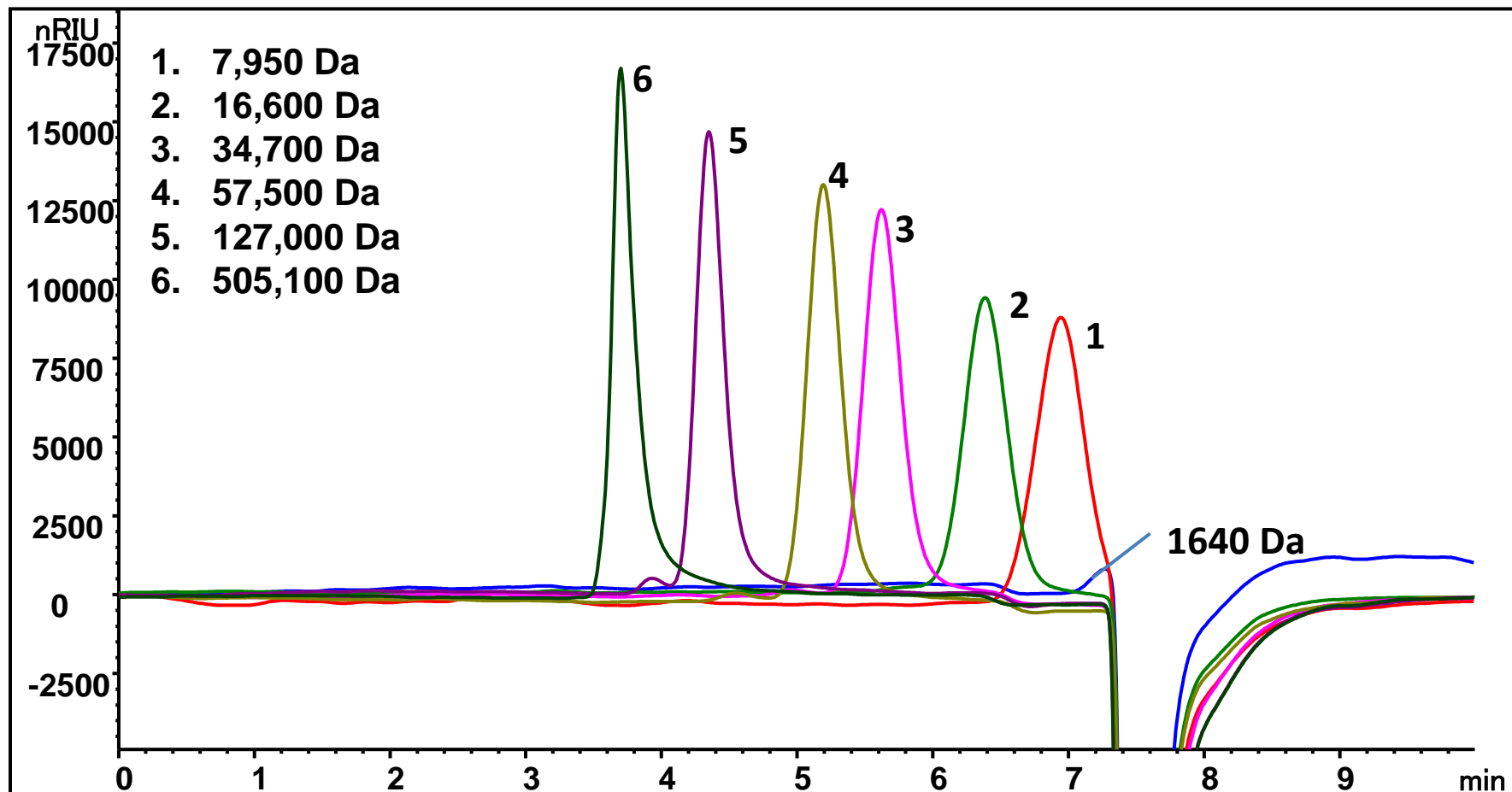
## Zenix® SEC-300 and SRT® SEC-500 in tandem

Column: **Zenix® SEC-300** (3  $\mu\text{m}$ , 300  $\text{\AA}$ , 7.8 x 150 mm), **SRT® SEC-500** (5  $\mu\text{m}$ , 500  $\text{\AA}$ , 7.8 x 150 mm)

Mobile phase: 150mM Phosphate Buffer, pH 7

Flow rate: 1.5 mL/min; Detector: RI; Column temperature: RT

Injection volume: 50  $\mu\text{g}$ , Sample: See chromatogram, total run time 10 min



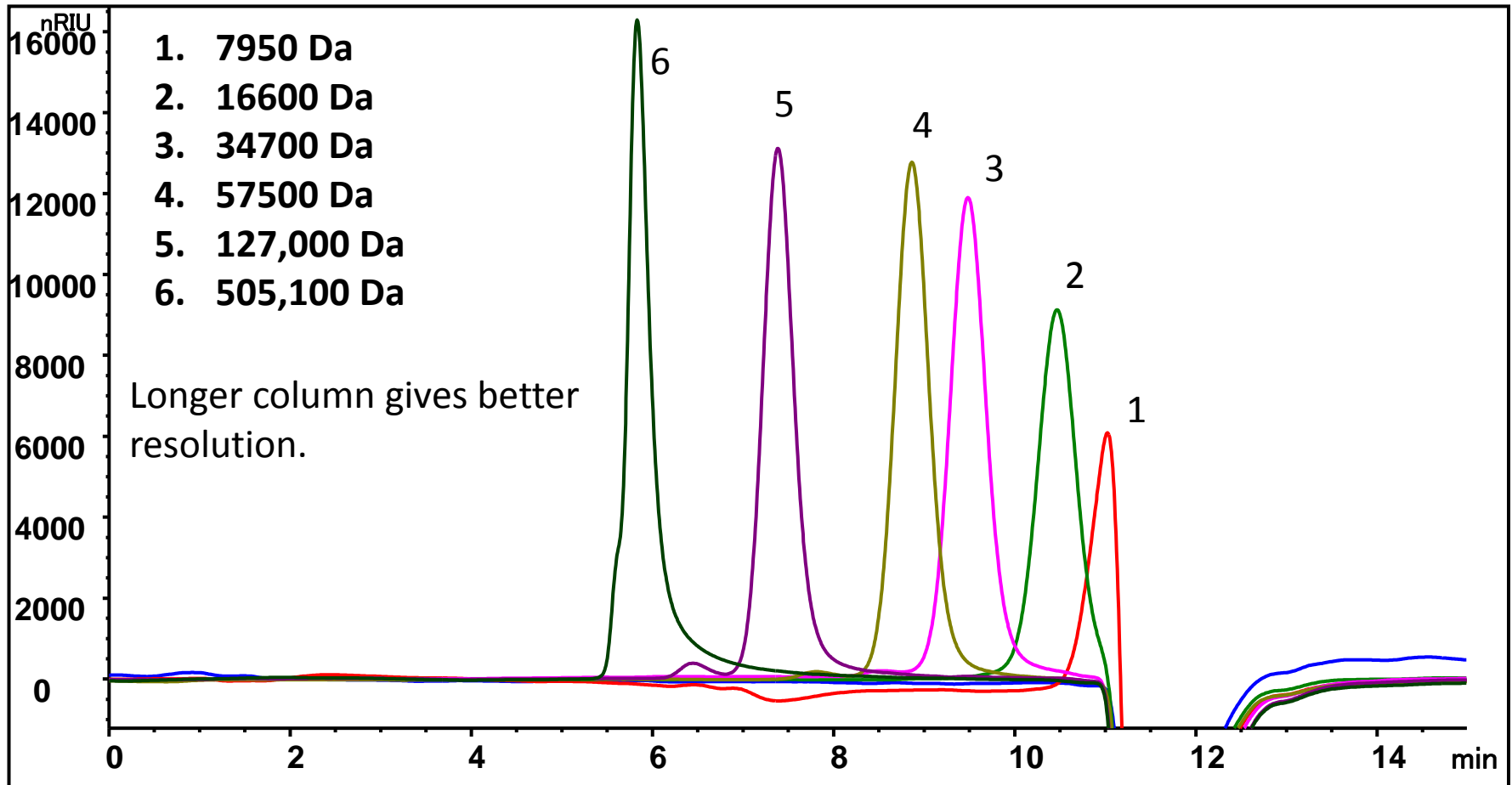
# Sodium polystyrene sulfonate separation on SRT<sup>®</sup> SEC-500 7830

Column: **SRT<sup>®</sup> SEC-500** (5  $\mu\text{m}$ , 500  $\text{\AA}$ , 7.8 x 300 mm)

Mobile phase: 150mM Phosphate Buffer, pH 7

Flow rate: 1.0 mL/min; Detector: RI; Column temperature: RT

Injection volume: 50  $\mu\text{g}$ , Sample: See chromatogram, total run time 15 min



## Polystyrene sulfonate separation on SRT<sup>®</sup> SEC-1000

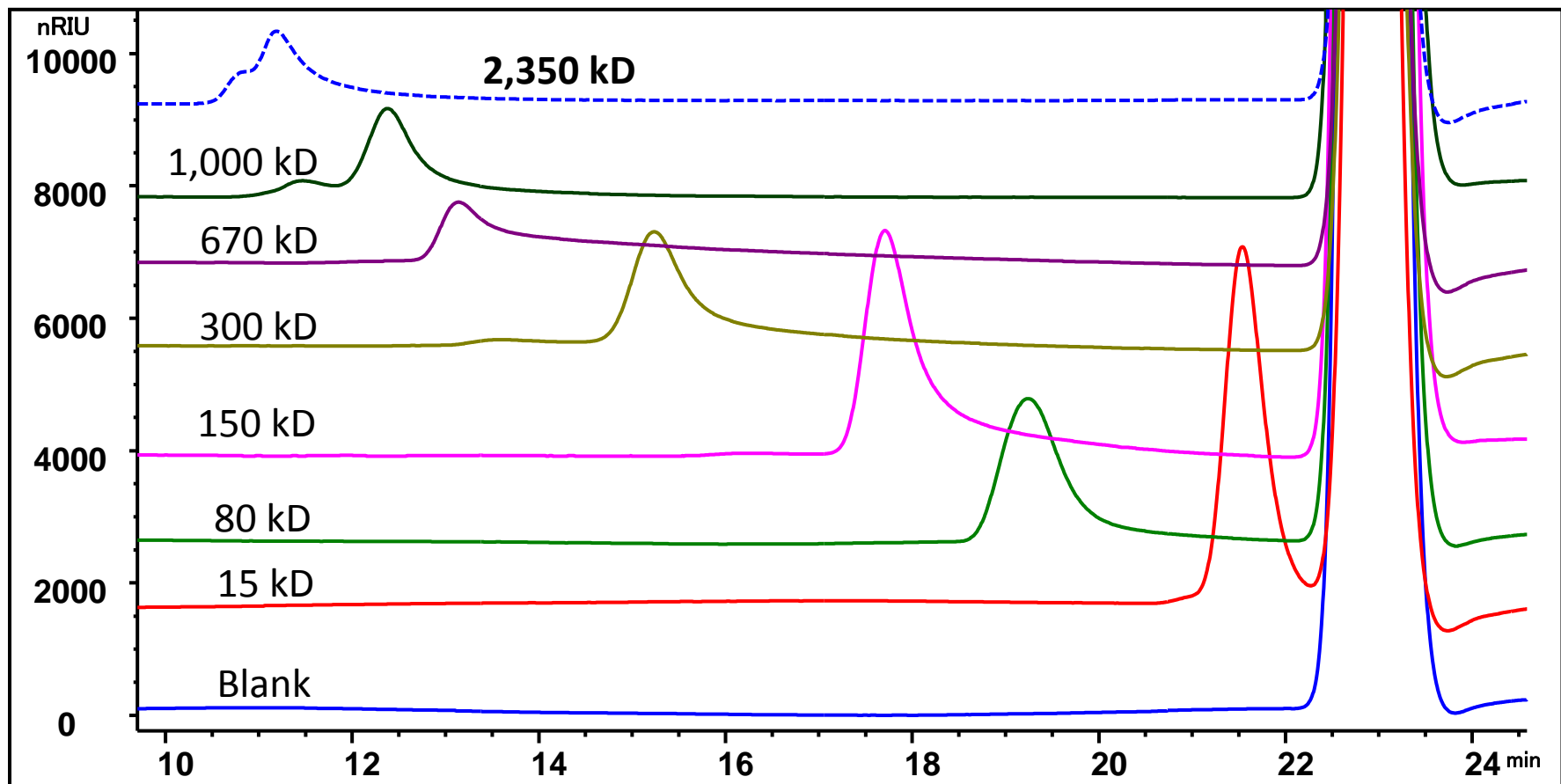
Column: SRT<sup>®</sup> SEC-1000 ( 5  $\mu\text{m}$ , 1000  $\text{\AA}$ , 7.8 x 300 mm)

Mobile phase: 0.2 M NaCl + 0.01% NaN<sub>3</sub>

Flow rate: 0.5 mL/min, Detector: RI ( 35 $^{\circ}\text{C}$  ), Column temperature: 35 $^{\circ}\text{C}$

Injection volume: 100  $\mu\text{L}$  0.1 mg/mL, Pressure: 23 bar

Sample: Blank, 15, 80, 150, 300, 670, 1,000 and 2,350 kD Sodium polystyrene sulfonate





## Polystyrene sulfonate MW Calibration Curve on SRT<sup>®</sup> SEC-1000

