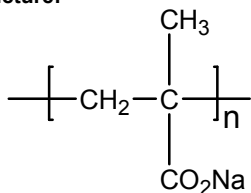


Sample Name:
Poly(sodium methacrylate)

Sample #: **P18155-MANa**

Structure:

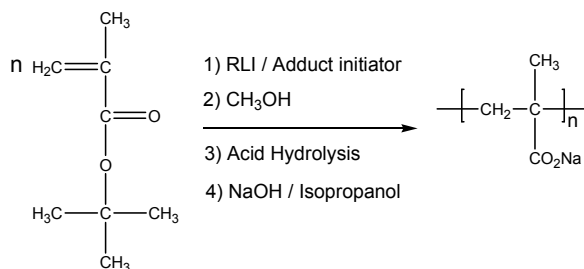


Composition:

Mn x 10 ³	PDI
6.5	1.15

Synthesis Procedure:

Poly(sodium methacrylate) is synthesized by living anionic polymerization of t-butyl acrylate followed by hydrolysis of the t-butyl group and neutralization with NaOH. The reaction scheme is shown below.

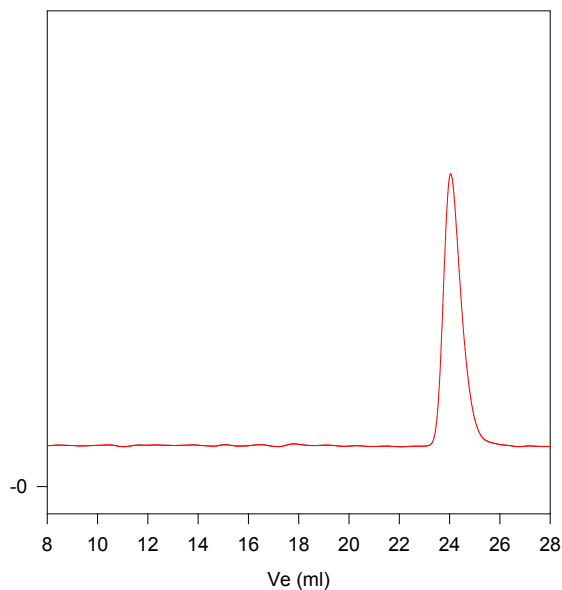


Characterization:

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co. ^1H NMR analysis was carried out on Varian instrument at 500MHz.

SEC of Homopolymer:

P18155-tBuMA
(precursor of P18155-MAA/Na)



Size Exclusion Chromatography of Poly(t-butyl methacrylate)

$$M_n=8500, M_w=10,000, M_w/M_n=1.15$$

Poly(methacrylic acid): $M_n=5300$, 1.15

Sodium salt form: Mn: 6500 Mw/Mn : 1.15