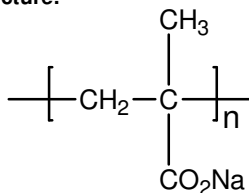


Sample Name:
Poly(sodium methacrylate)

Sample #: **P2328-MANa**

Structure:

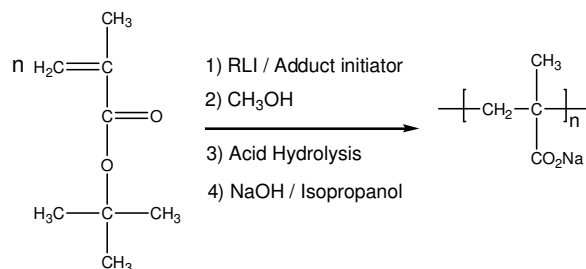


Composition:

| Mn x 10 ³ | PDI |
|----------------------|------|
| 6.8 | 1.09 |

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.

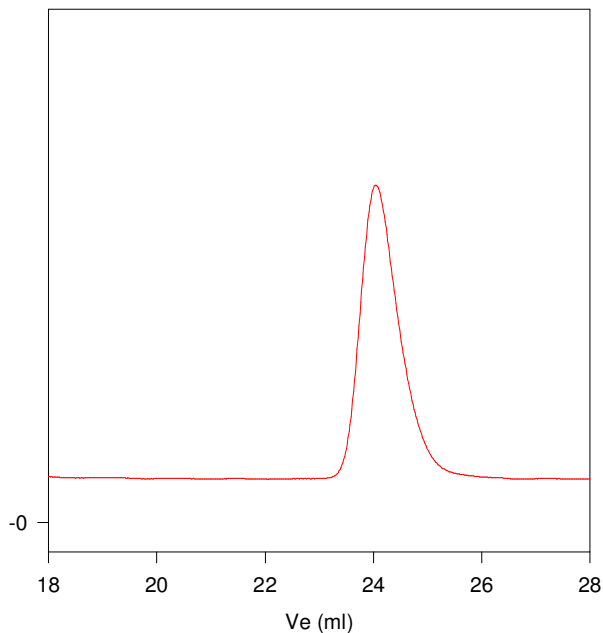


Characterization:

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:

P2328-tBuMA
(precursor of P2328-MAA/Na)



Size Exclusion Chromatography of Poly(t-butyl methacrylate)
(Precursor of P2328-MAA):

P2328-tBuMA: M_n=8900, M_w=9700, M_w/M_n=1.09

Poly(methacrylic acid): M_n=5600, 1.09

Sodium salt form: Mn: 6800 Mw/Mn : 1.09