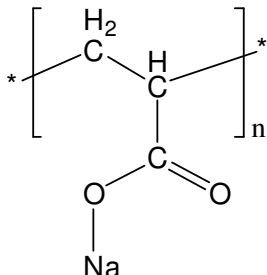


Sample Name: Poly(sodium acrylate)

Synonym: Poly(acrylic acid) sodium salt

Sample # P578-ANa

Structure:

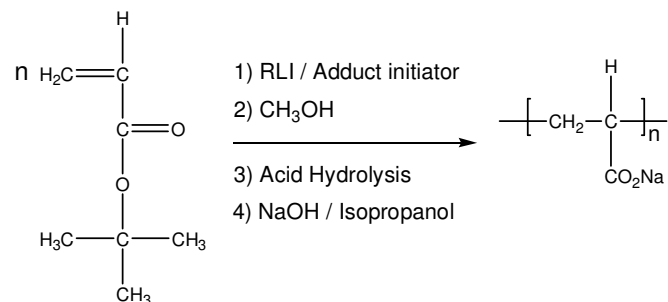


Composition:

| Mn x 10 ³ | Mw/Mn |
|----------------------|-------|
| 0.84 | 1.27 |

Synthesis procedure:

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



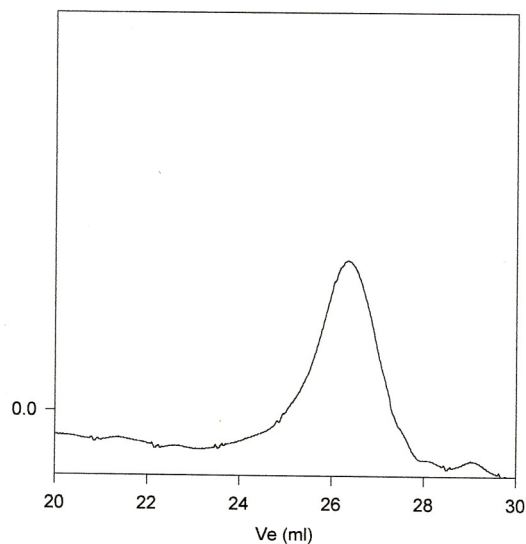
Characterization:

The molecular weight and polydispersity index (Mw/Mn) of poly(sodium acrylate) were obtained by size exclusion chromatography (SEC). The hydrolysis of the ester group was confirmed by FT-IR spectroscopy.

SEC elugram of poly(tert-butyl acrylate)

[precursor to poly(acrylic acid) sodium salt]:

P578-ANa



Size Exclusion Chromatography of Poly(t-butyl acrylate) (Precursor of P578-ANa):

P578-tBuA: M_n=1100, M_w=1400 PI=1.27

Poly(sodium acrylate): M_n=840, M_w=1066, PI=1.27

FTIR spectra of poly(sodium acrylate) [top] and poly(acrylic acid) [bottom]:

