

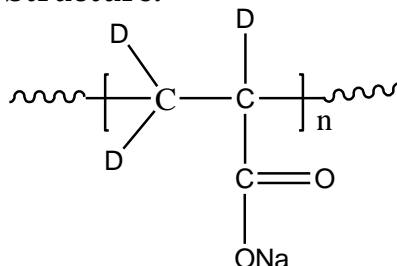
Sample Name:

Deuterated (d3) Poly(sodium acrylate)

Backbone protons are deuterated

Sample #: P5648A--d3PANa

Structure:



Composition:

Mn x 10 ³	PDI
10.2	4.8

Synthesis Procedure:

Poly(d3 acrylic acid) is obtained by the free radical polymerization of d3AA monomer in dioxane and then neutralized with NaOH in methanol.

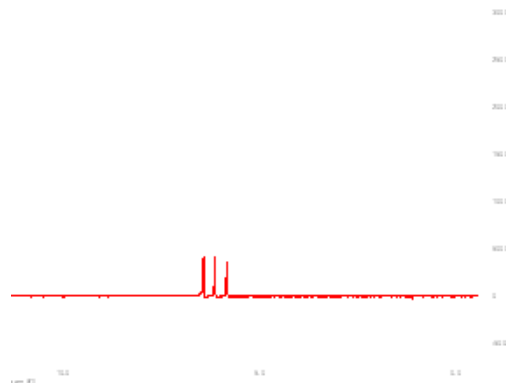
Characterization:

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF after converting the poly acrylic acid to poly d3 n-butyl acrylate. 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.

Solubility:

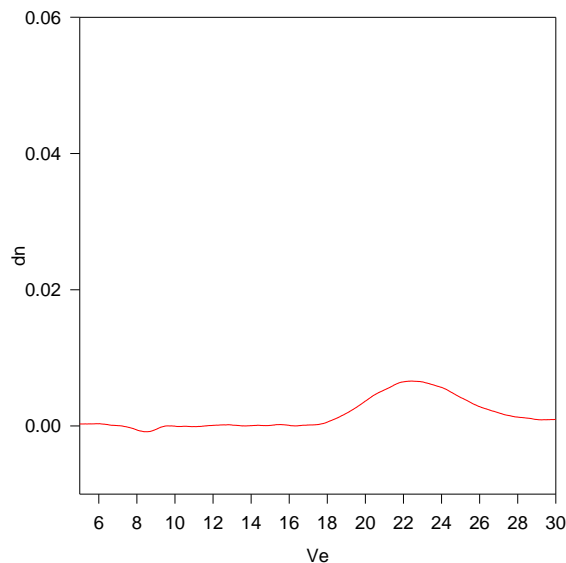
Polymer is soluble in water, THF and methanol.

DNMR of acrylic acid monomer:



SEC of Sample:

P5648A-d3AA (SEC of d3 nBuA)



Size Exclusion Chromatography of Poly(n-butyl acrylate-d3)

$M_n=14000$, $M_w=68000$, $M_w/M_n=4.8$

For the d3 AA: $M_n=8000$, $M_w/M_n=4.8$