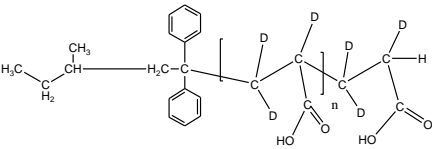


Sample Name:
Deuterated (d3) Poly (acrylic acid)
Backbone protons are deuterated

Sample #: P40178-d3PAA

Structure:



Composition:

Mn x 10 ³	PDI
45.0	1.15

Synthesis Procedure:

Poly (d3 acrylic acid) is obtained by anionic process using d3 tert Butyl acrylate monomer. tert. Butyl ester was hydrolyzed to obtain poly acrylic acid d3.

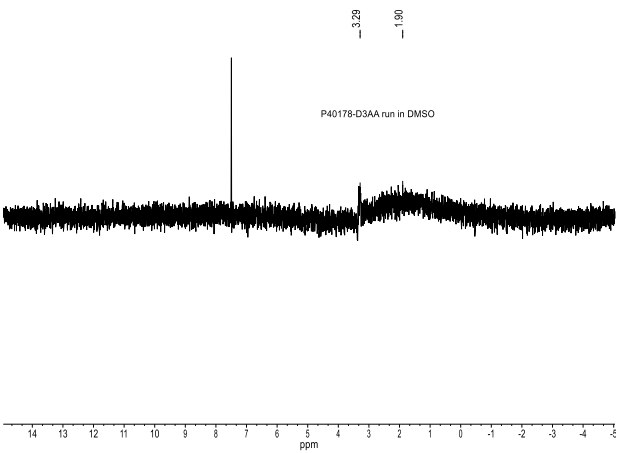
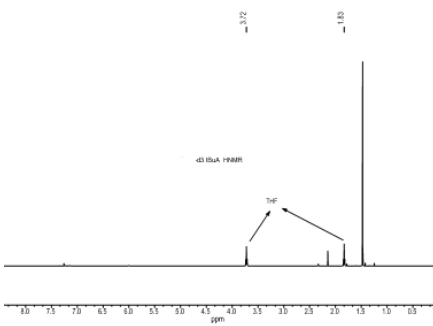
Characterization:

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in DMF at 60 oC. 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.

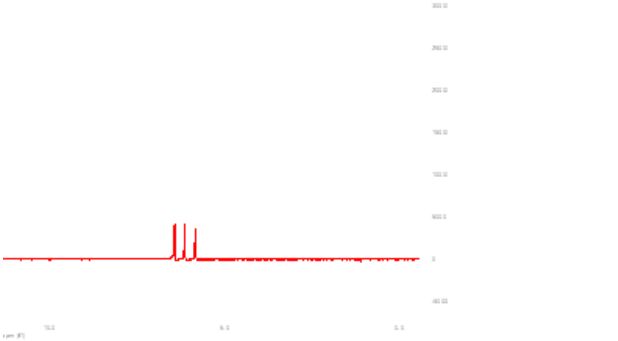
Solubility:

Polymer is soluble in methanol, ethanol. Polymer precipitates from ether or hexanes.

H NMR spectrum:



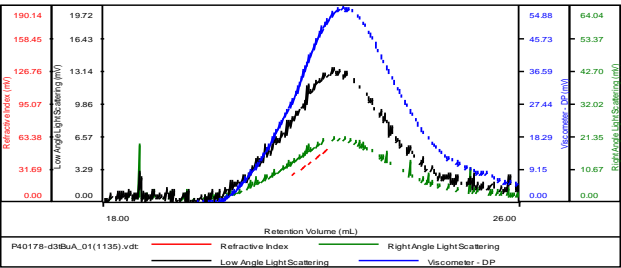
D NMR of the d3 tert BuA monomer:



SEC elugram of the Sample:

Sample ID: P40178-d3 tBuA

Concentration (mg/mL)	7.9145
Sample dn/dc (mL/g)	0.0510
Method File	PS80K-29August2016-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P40178-d3tBuA_01(11	77,996	90,320	1.158	0.5450	82,023