

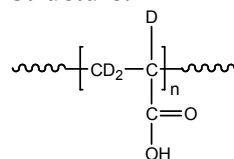
Sample Name:

Deuterated (d3) Poly (acrylic acid)

Backbone protons are deuterated

Sample #: **P14869-d3PAA**

Structure:



Composition:

Mn x 10 ³	PDI
14.0	1.9

Synthesis Procedure:

Poly (d3 acrylic acid) is obtained by controlled radical process using d3 tert Butyl acrylate monomer. tert. Butyl ester was hydrolysed 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 °C. 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.

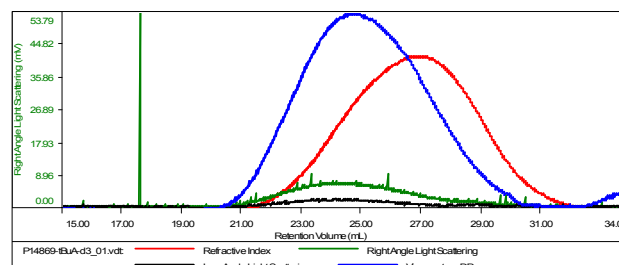
Solubility:

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

SEC of Sample:

Sample ID: P14869-d3tBuA

Concentration (mg/mL)	1.6122
Sample dn/dc (mL/g)	0.0840
Method File	PS80K-April29-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P14869-BuA-d3_01.vdt	25,025	49,789	23,447	1.990	1.5410

D NMR of the d3 tert BuA monomer :

