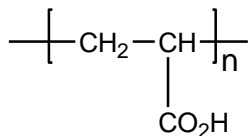


Sample Name: Poly(acrylic acid)

Sample #: P40598A-AA

Structure:



Composition:

Mn x 10 ³	PDI
116.0	1.10

Synthesis Procedure:

Poly(acrylic acid) is obtained by living anionic polymerization reaction.

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.

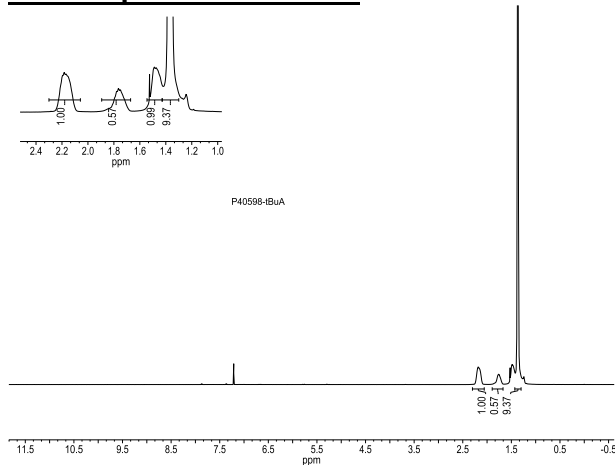
Hydrolysis:

The quantitative hydrolysis of the ester is confirmed by the disappearance of tert.butyl ester absorbance at around 1370cm⁻¹.

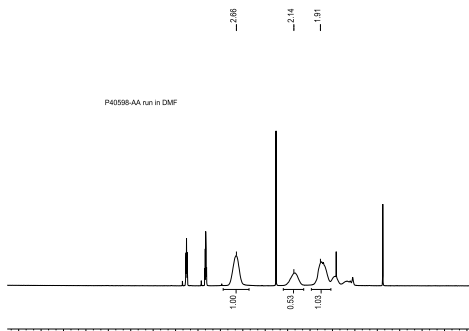
Solubility:

Poly(acrylic acid) is soluble in THF, water, methanol, ethanol. The polymer precipitates from ether, acetone, hexane.

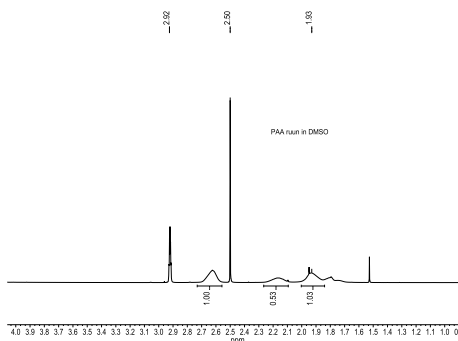
HNMR spectrum of PtBuA:



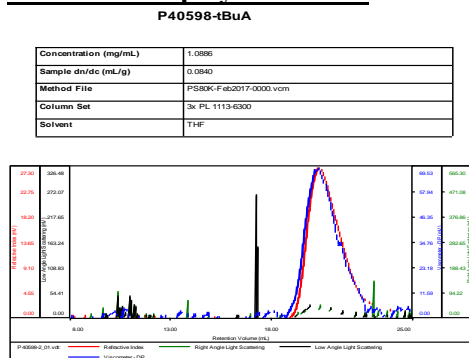
HNMR spectrum of PAA in DMF:



HNMR spectrum of Polymer in DMSO:



SEC of Homopolymer: tBuA



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P40598-2_01.vdt	206,584	226,842	1.098	3.7611	218,979

FTIR Spectra of Poly(tert. butyl acrylate) and poly(acrylic acid)

