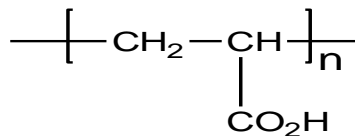


Sample Name: Isotactic rich Poly (Acrylic acid)

Sample #: P40586-iAA

Structure:



Composition:

Mn x 10 ³	Mw/Mn (PDI)
7.5	1.7

Synthesis Procedure:

Poly(acrylic acid) is synthesized by anionic process.

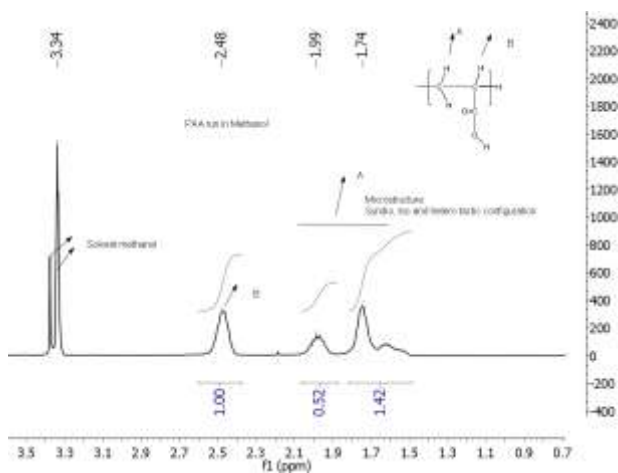
Characterization:

Polyacrylic acid and analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI) using water containing 0.1M NaNO₃ and 0.01M NaH₂PO₄ and 4 Vol% acetonitrile as eluent. The molecular weight can also be verified after converting poly acrylic acid to poly n-butyl acrylate by transesterification process and analyzing the polymers by SEC in organic phase.

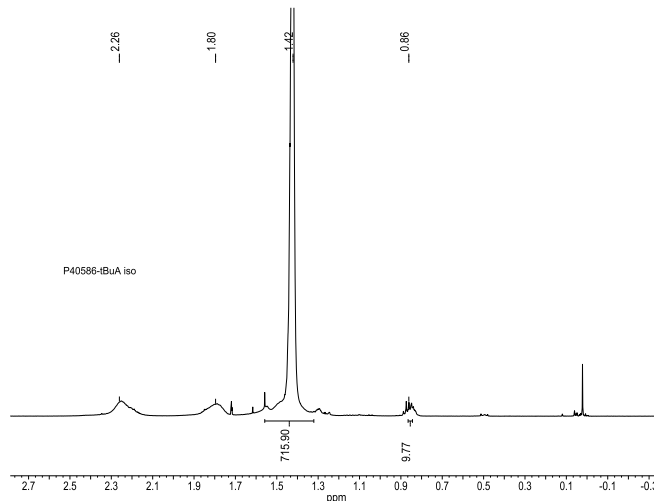
Solubility:

Polymer is soluble in water and methanol.

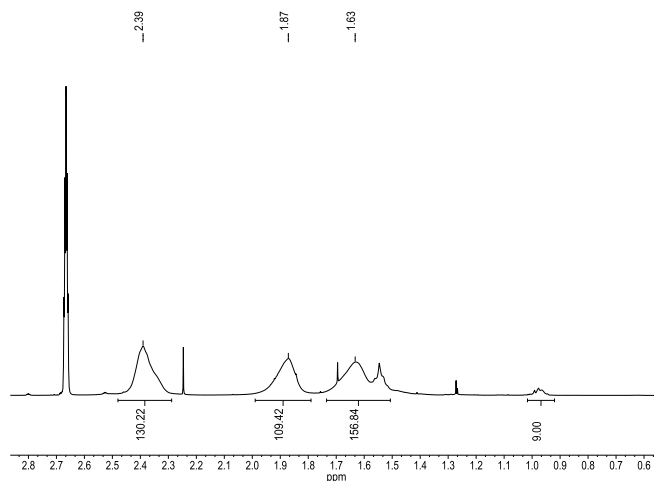
¹H-NMR Spectrum of Syndiotactic PAA run in methanol:



¹H-NMR Spectrum of isotactic PtBuA



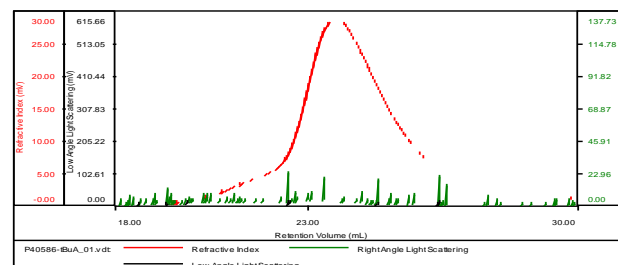
¹H-NMR Spectrum of isotactic PAA run in DMSO:



SEC elugram of the Polymer run in THF:

P40586-tBuA iso

Concentration (mg/mL)	1.4997
Sample dn/dc (mL/g)	0.0840
Method File	PS80K-Feb2017-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P40586-tBuA_01.vdt	13,200	21,592	1.636	0.5021	16,959