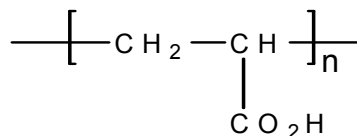


Sample Name: **Isotactic rich Poly (Acrylic acid)**

Sample #: **P40527-IAA**

Structure:



Composition:

Mn x 10 ³	Mw/Mn (PDI)
49.0	1.3

Synthesis Procedure:

Poly(acrylic acid) is synthesized by anionic process.

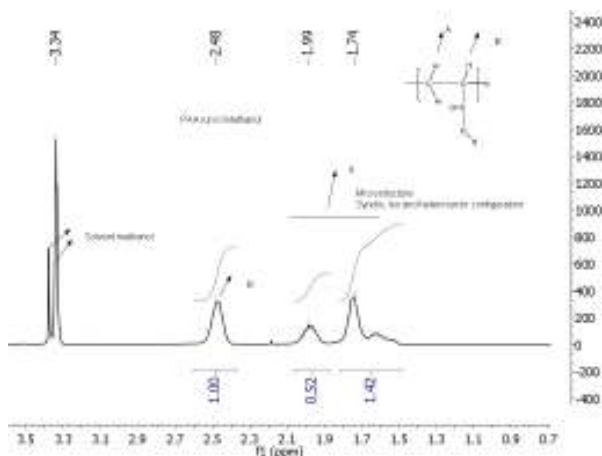
Characterization:

Polyacrylic acid 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

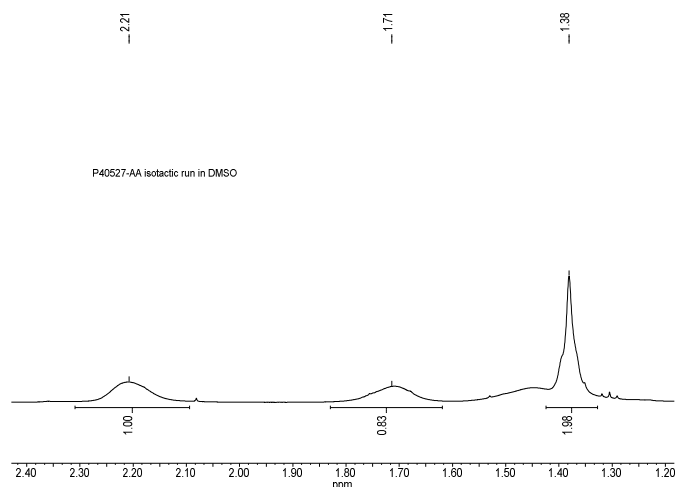
Solubility:

Polymer is soluble in water, and methanol.

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



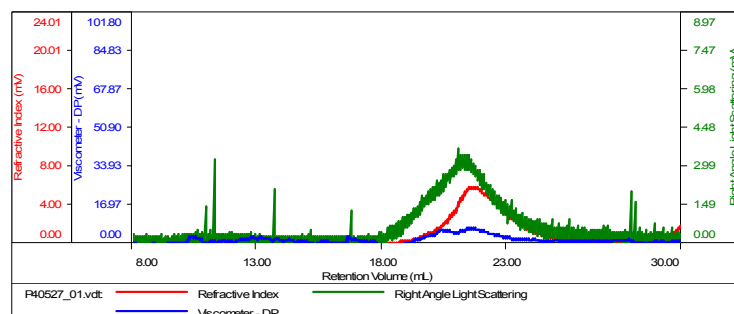
¹H-NMR Spectrum of the isotactic PAA run in DMSO:



SEC elugram of the Polymer in THF:

P40527-tBuA

Concentration (mg/mL)	0.2772
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)
P40527_01.vdt	86,842	113,603	1.308	1.5101	84,926

After converting tBuA to PAA:

Mn: 49,000 Mw/Mn 1.3