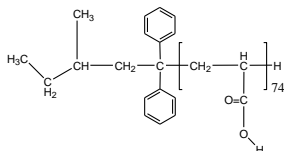


Sample Name: Poly(acrylic acid)

Sample #: P43560A-AA

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
5.0	1.08

**Synthesis Procedure:**

Poly(acrylic acid) is synthesized by anionic polymerization of t-butyl acrylate followed by hydrolysis of the tert. butyl group.

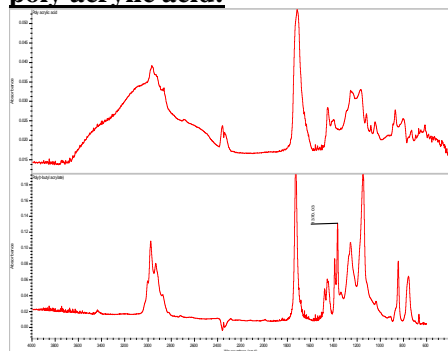
**Characterization:**

The product was characterized by size exclusion chromatography (SEC), <sup>1</sup>H NMR and FTIR data analysis.

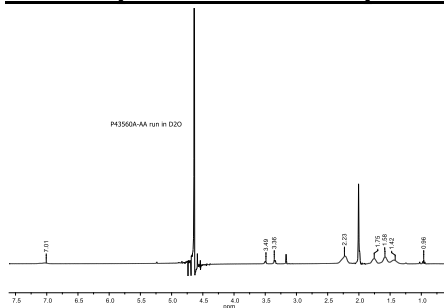
**Solubility:**

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

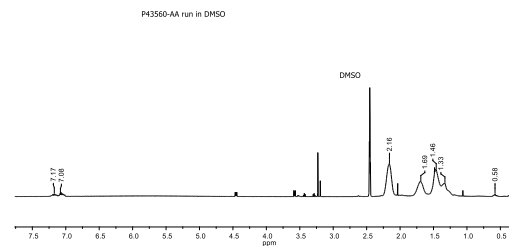
**FTIR Spectra of Poly tert. butyl acrylate and poly acrylic acid:**



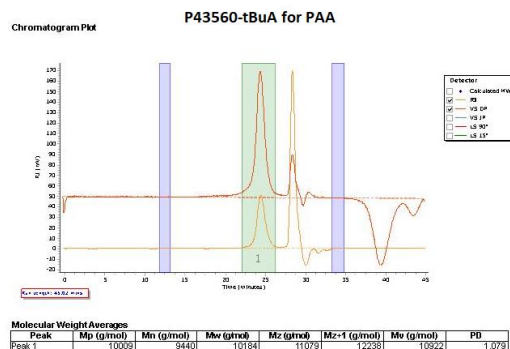
**HNMR spectrum of the Sample run in D2O:**



**HNMR spectrum of the Sample run in DMSO:**



**SEC elugram of PtBuA precursor:**



**References:**

1. Ph. Teyssie, Ph. Bayard, R. Jerome, **S. K. Varshney**, and J. S. Wang, *35th IUPAC International Union of Pure & Applied Chemistry International Symposium on Macromolecules* 1994, 67.
2. R. Fayt, R. Forte, C. Jacobs, R. Jerome, T. Ouhadi, Ph. Teyssie and **S. K. Varshney**, *Macromolecules*, 1987, 20, 1442-1444.
3. Jerome, R. Forte, **S. K. Varshney**, R. Fayt, and Ph. Teyssie, "The Anionic Polymerization of Alkylacrylates: A Challenge" in the Recent Advances in Mechanistic and Synthetic Aspects of Polymerization: M. Fontanille and A. Guyot Ed., NATO ASI Series C 215, 101 (1987), CA Vol. 108, 12, 094992.
4. Ph. Teyssie, R. Fayt, C. Jacobs, R. Jerome, L. Leemans, and **S. K. Varshney** *Am. Chem. Soc., Polym. Prepr.* 1988, 28, 2, 52-53