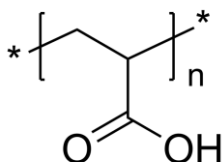


Sample Name:
Poly(acrylic acid), atactic

Sample #: **P14588A-AA**

Structure:



Composition:

Mn x 10 ³	PDI
432.0	1.26

Synthesis Procedure:

Poly(acrylic acid) is synthesized by RAFT process and then converted to its sodium salt.

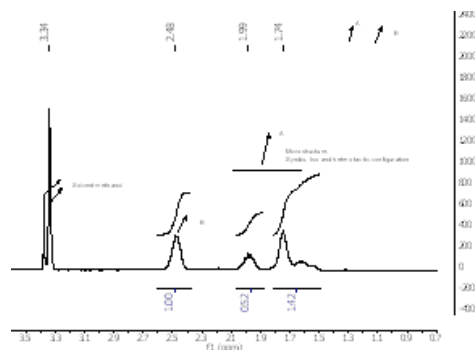
Characterization:

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. For the analysis purposes of its molecular weights poly acrylic acid was converted to its n-butyl ester and characterized in THF 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 dual detectors model 270 from Viscotek Co.

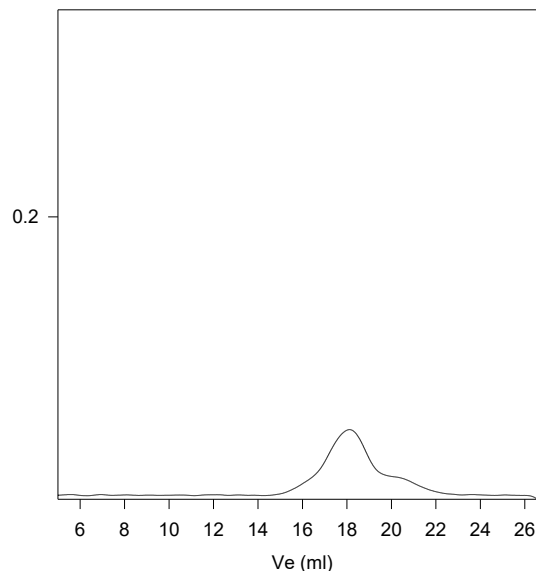
Solubility:

Poly(acrylic acid) is soluble in water.

HNMR of the Poly acrylic acid run in CD3OD:



SEC profile of the Sample:
P14588A-AA (SEC In water at 60 oC)



Size Exclusion Chromatography of the polymer:
PAA: Mn 432,000 Mw: 544,000 Mw/Mn 1.26

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