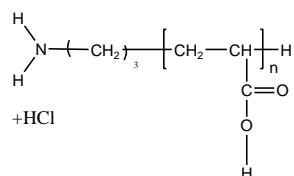


Sample Name:

Amino Terminated Poly acrylic acid

Sample #: **P19090A-AANH2**

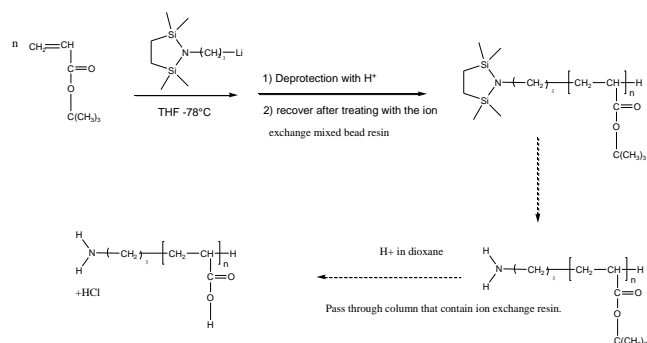


Composition:

Mn x 10 ³	PDI
3.0	1.2

Synthesis Procedure:

α -amino terminated poly tert-butylacrylate was synthesized by anionic living polymerization using NH₂ protected initiator. The details please see our published results. Varshney, S. K.; Song, Z.; Zhang, Jian-Xin.; Jerome, Robert. Rapid Communication; J. Polym. Sci. Part A, 2006, 44, 3400.



Characterization:

The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. However, amino terminated poly tert-butylacrylate was found to interact with chromatography columns and therefore the amino group was protected by reaction with 1-naphthyl isocyanate before GPC analysis. Removal of the protecting group was confirmed by UV spectroscopy and the degree of functionality was confirmed by titration with HClO₄ using crystal violet as the indicator.

Hydrolysis of tert-butyl ester was monitored by disappearance of ester absorbance at 1365cm⁻¹.

Solubility:

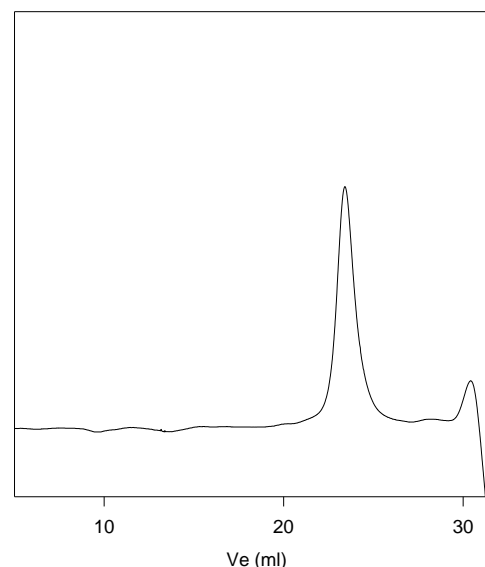
Polymer is soluble in THF, methanol and water.

Purification:

After Hydrolysis the product was precipitated in hexane/ether dried at room temperature under vacuum. The dried product was dissolved in water/methanol mixture and passed through ion exchange resin to remove any charge on terminal amino ends group. The obtain polymer solution was dried under vacuum .

SEC of Sample:

P19090-tBuANH2



M_n=5,000, M_w=6,000, PI=1.2

After Hydrolysis of tert.butyl ester : PAA-NH₂: 3,000 Mw/Mn 1.2

¹H NMR of the product:

