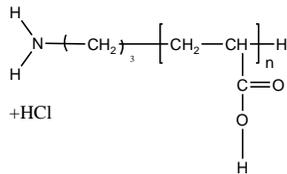


Sample Name:
Amino Terminated Poly acrylic acid

Sample #: P11185-AANH2

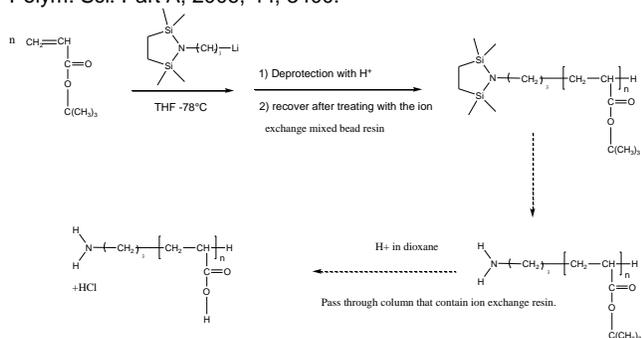


Composition:

Mn x 10 ³	PDI
6.0	1.4

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.butyl acrylate 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.

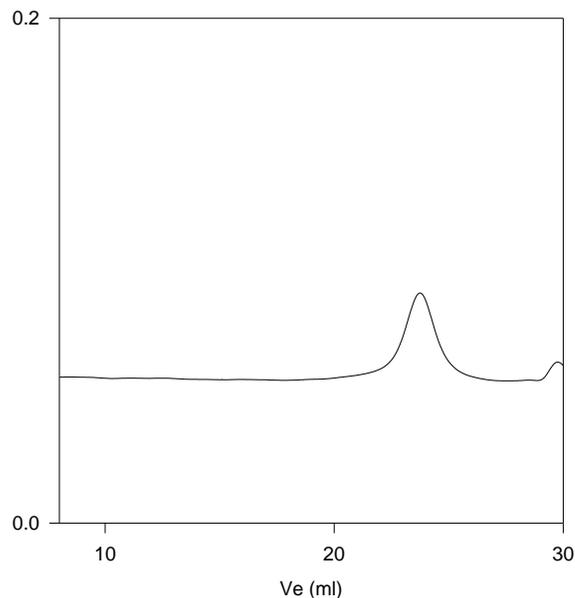
Hydrolysis of tert-butyl ester was monitored by disappearance of ester absorbance at 1365cm⁻¹.

Solubility:

Polymer is soluble in THF, methanol and water. .

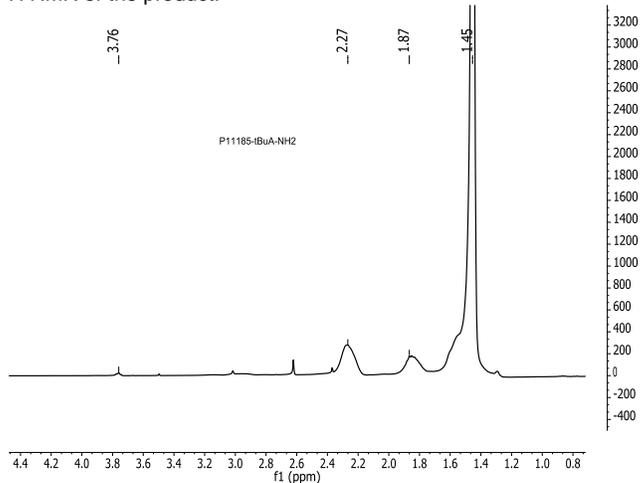
SEC of Sample:

P11185-tBuANH2



M_n=10,000, M_w=14,000, PI=1.4
 After Hydrolysis of ester: PAA-NH₂ Mn=6,000 Mw/Mn=1.4

H NMR of the product:



HNMR of PAA run in methanol

