

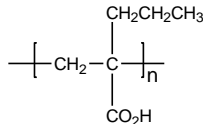
Sample Name:

Poly(α -propyl acrylic acid)

Initiator (PH)3C based

Sample #: **P9990-PrAA**

Structure:

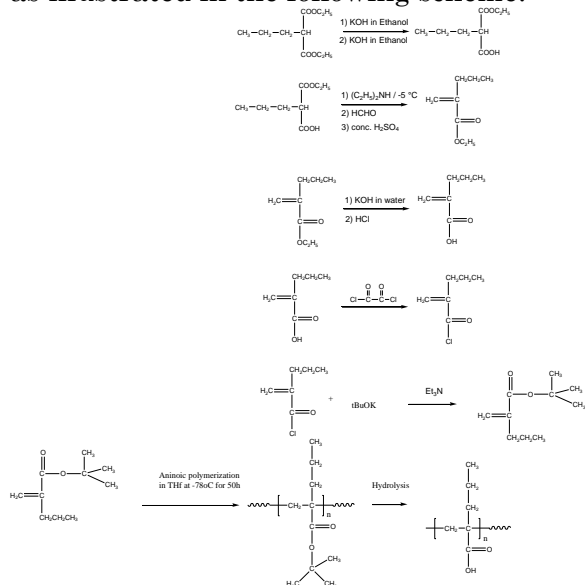


Composition:

$M_n \times 10^3$	PDI
2.6	1.2

Synthesis Procedure:

Poly(α -propyl acrylic acid) is synthesized as illustrated in the following scheme:



Characterization:

The molecular weight and polydispersity index (PDI) of Poly(α -propyl acrylic acid) are obtained by size exclusion chromatography.

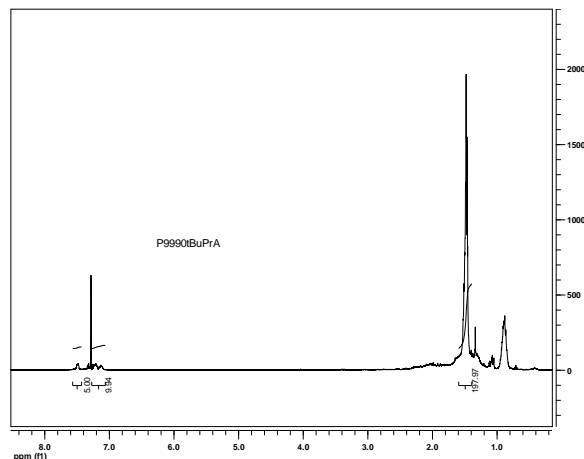
Thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of $10^\circ\text{C}/\text{min}$. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

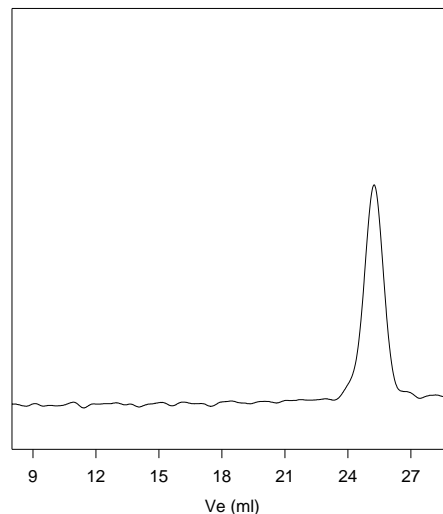
Polymer is soluble in ethanol, methanol THF, Dioxane.

HNMR of the Polymer PtBuPrA)



SEC of Homopolymer:

P9990-tBuPrA Precursor for P9990PrAA



Size Exclusion Chromatography of Poly alpha propyl tert-butyl acrylate:

After Hydrolysis of tert. butyl ester: $M_n = 3700$ $M_w/M_n = 1.2$

Polypropyl acrylic acid: $M_n = 2600$ $M_w/M_n = 1.2$