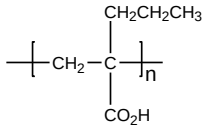
Sample Name:
Poly(α-propyl acrylic acid)
Initiator (PH)3C based
Sample #: **P9975-PrAA**

Structure:

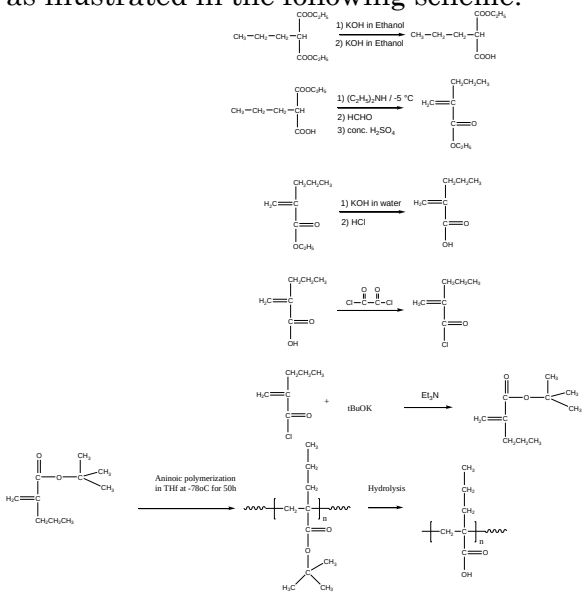


Composition:

Mn × 10^3	PDI
1.1	1.26

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.

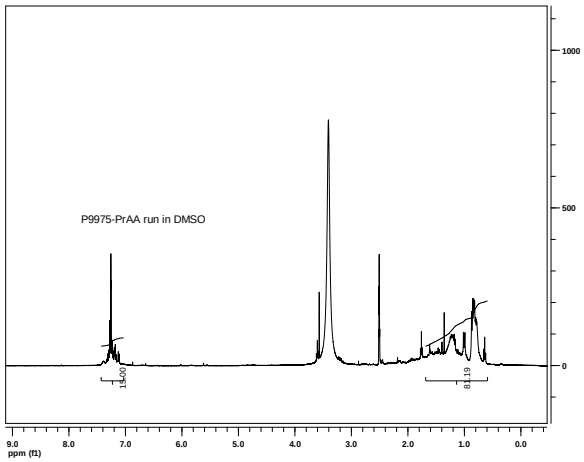
Thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/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).

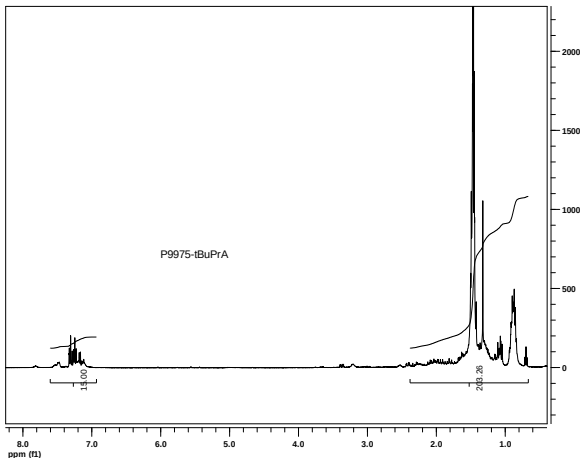
Solubility:

Polymer is soluble in ethanol, methanol THF, Dioxane.

^{1}H NMR of the Polymer run in DMSO:

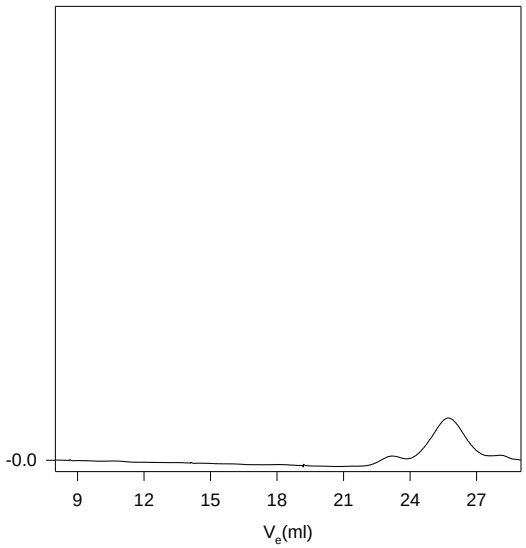


P9975-tBuPrA



SEC of Homopolymer:

P9975-PrtBuA precursor for P9975-PrAA



Size exclusion chromatography of Poly(alpha-propyl tert.butyl acrylate)

Mn = 1,700; Mw =2,100; PI = 1.26
After Hydrolysis of the tert.butyl ester

Poly propyl acrylic acid: Mn 1,100 Mw/Mn 1.26