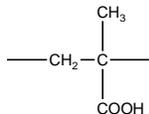


Sample Name: Poly(methacrylic acid) rich in Atactic contents

Sample #: P2328-MAA (rich in atactic)

Structure:



Composition:

Mn x 10 ³	PDI
6.4	1.06

Synthesis Procedure:

Poly(methacrylic acid) is synthesized anionic polymerization followed by hydrolysis of tert.butyl ester.

Characterization:

The molecular weight and polydispersity index (PDI) of Poly(methacrylic acid) are obtained by size exclusion chromatography in DMF at 45 °C.

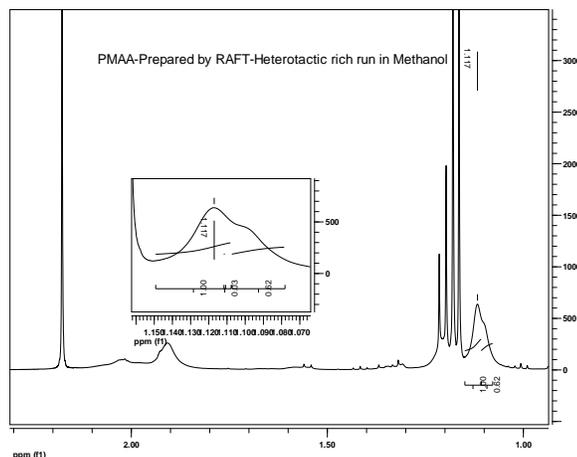
Thermal analysis:

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:

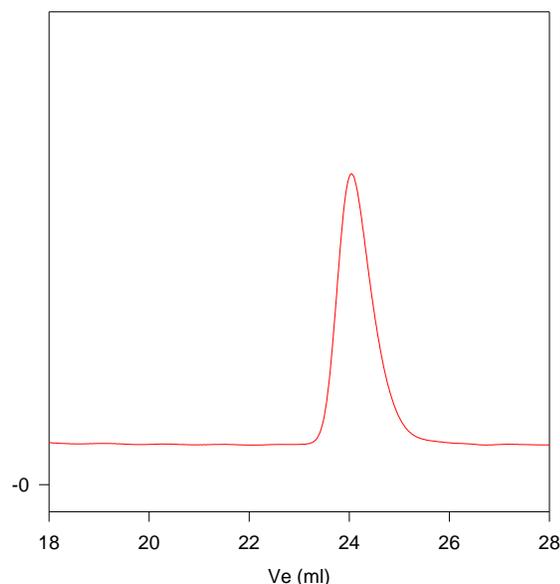
Polymer is soluble in methanol and ethanol.

¹H NMR of the Polymer



SEC of the homopolymer:

P2328-tBuMA
(precursor of P2328-MAA/Na)



Size Exclusion Chromatography of Poly(t-butyl methacrylate)
(Precursor of P2328-MAA):
P2328-tBuMA: M_n=10,400, M_w/M_n=1.06
Poly(methacrylic acid): M_n=6400, 1.06

References:

S. K. Varshney, Z. Gao, Xing Fu Zhong, A. Eisenberg
“Effect of Lithium Chloride on the “Living”
Polymerization of tert-Butylmethacrylate and Polymer
Microstructure Using Monofunctional Initiators”
Macromolecules, 1994, 27, 1076.