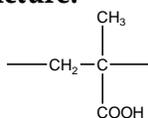


Sample Name:
Poly(methacrylic acid)

Sample #: P14099-MAA

Structure:



Composition:

Mn x 10 ³	PDI
80.0	1.90

Synthesis Procedure:

Poly(methacrylic acid) is synthesized by RAFT process.

Characterization:

The molecular weight and polydispersity index (PDI) of Poly(methacrylic acid) are obtained by size exclusion chromatography in THF after converting polymer into its methyl acrylate.

Thermal analysis:

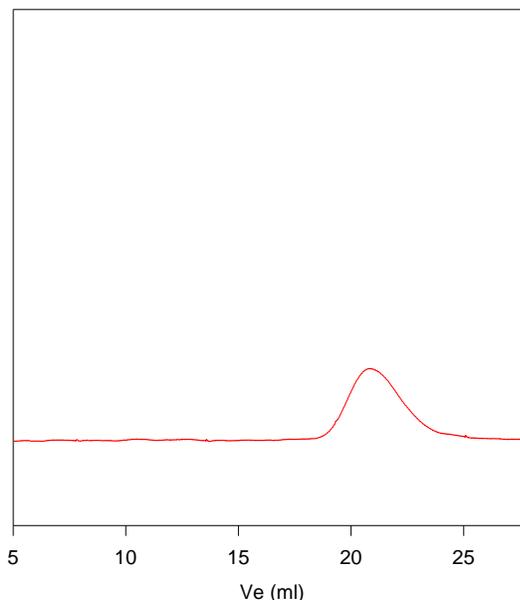
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10 °C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Polymer is soluble in methanol and ethanol.

SEC of the homopolymer:

P14099-MAA (in methyl acrylate form)



Size Exclusion Chromatography of polymer:
PMMA: M_n = 94000, M_w = 180000, PI = 1.90
Poly(methacrylic acid): M_n = 80000, PI = 1.90

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.