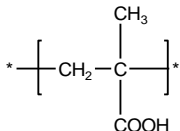


**Sample Name:**

Poly(methacrylic acid) rich in Atactic contents

**Sample #: P14456-MAA**

(rich in atactic)

**Structure:****Composition:**

Mn x 10 <sup>3</sup>	PDI
410.0	1.25
T <sub>g</sub> (°C)	167
Heter:iso	60:40

**Synthesis Procedure:**

Poly(methacrylic acid) is synthesized by RAFT process

**Characterization:**

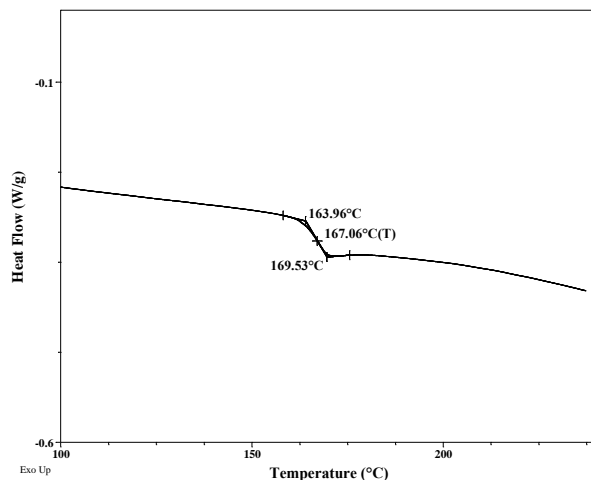
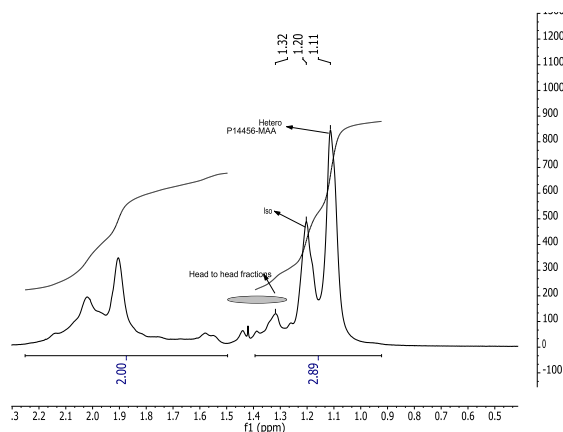
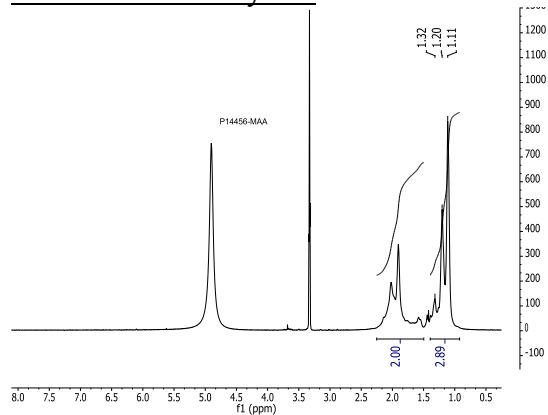
The molecular weight and polydispersity index (PDI) of Poly(methacrylic acid) are obtained by size exclusion chromatography in DMF at 45 °C.

**Thermal analysis:**

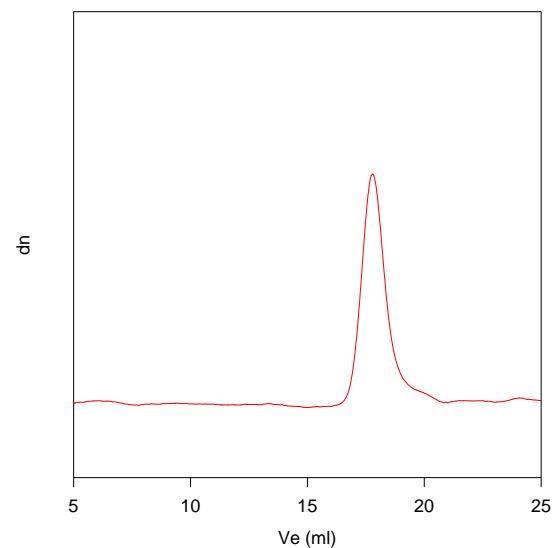
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10 °C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T<sub>g</sub>).

**Solubility:**

Polymer is soluble in methanol and ethanol.

**Thermogram for the polymer:****HNMR of the Polymer****SEC of the homopolymer:**

**P14456-MAA**



Size Exclusion Chromatography of polymer in DMF at 60 °C.

M<sub>n</sub>=410,000, M<sub>w</sub>=513,000, PI=1.25

**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.