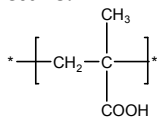


**Sample Name:**

Poly(methacrylic acid) Reference Material

**Sample #:** P4644A-MAA

From hydrolysis of Poly tBuMA polymer

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

Mn x 10 <sup>3</sup>	PDI
488.0	1.08
T <sub>g</sub> (°C)	165
Microstructure Syndio:Heter:iso contents	40:49:11

**Characterization:**

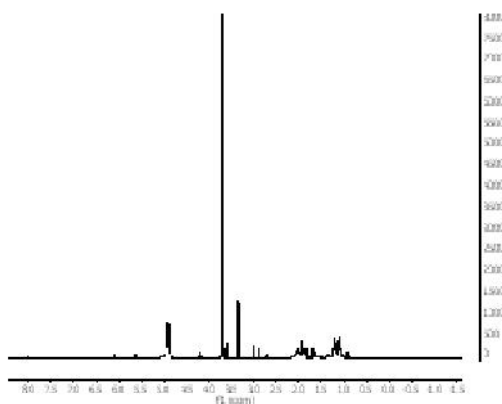
The molecular weight and polydispersity index (PDI) of Poly(methacrylic) are obtained by size exclusion chromatography in DMF at 45 °C.

**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>).

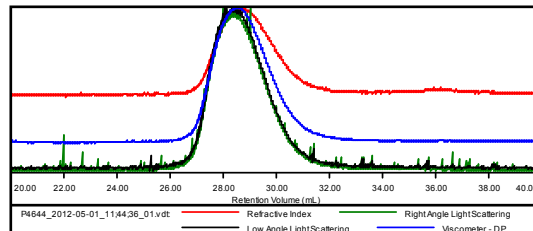
**Solubility:**

Polymer is soluble in methanol and ethanol.

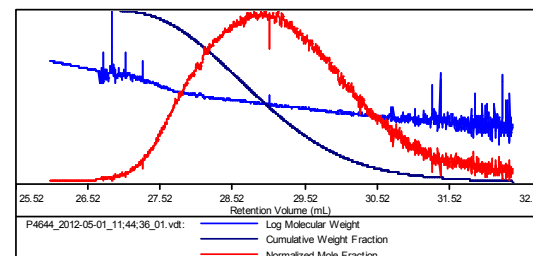
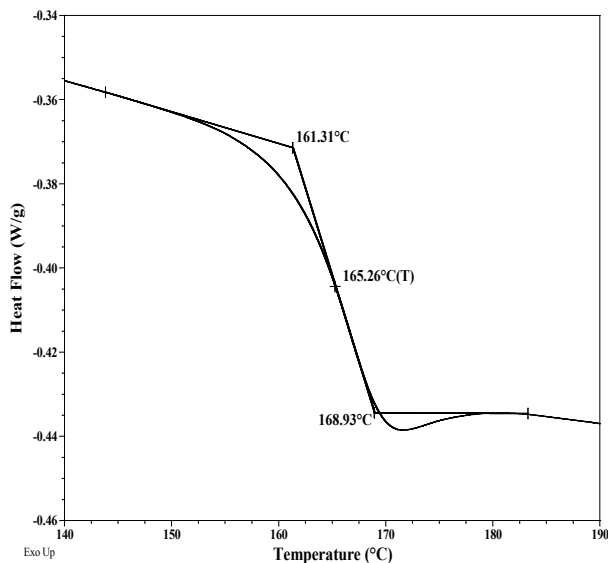
**HNMR of the Polymer****SEC of the homopolymer: Precursor for PMAA**

Sample ID: P4644-tBuMA

Concentration (mg/mL)	1.5121
Sample dn/dc (mL/g)	0.0760
Method File	PS80-APR2012-0000.vcm
Column Set	3xPL 1113-6300
System	System 1



Sample	Mn (Da)	Mw (Da)	Mp (Da)	Mw/Mn	IV (dL/g)
P4644_2012-05-01_11:44:36_01.vdt	807,834	868,583	853,427	1.075	2.3257

**Thermogram for the polymer:****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.