

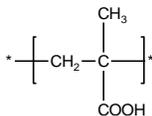
### Sample Name:

Poly(methacrylic acid) Syndiotactic

Sample #: P10802-MAA

From hydrolysis of syndiotactic Poly tBuMA polymer

### Structure:



### Composition:

Mn x 10 <sup>3</sup>	PDI
260.0	1.10
T <sub>g</sub> (°C)	165
Microstructure Syndio:Heter:iso contents	40:49:11

### Synthesis Procedure:

Poly(methacrylic) is synthesized by RAFT process

### Characterization:

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

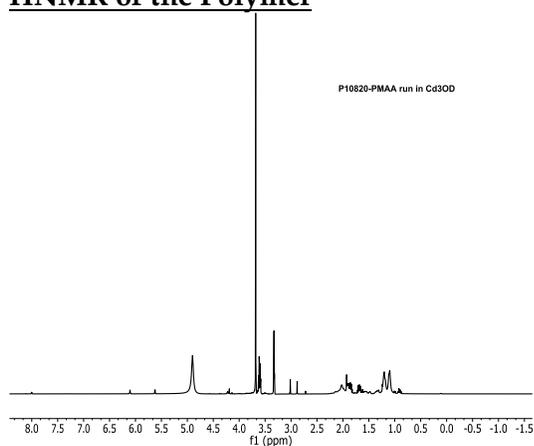
### Thermal analysis:

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:

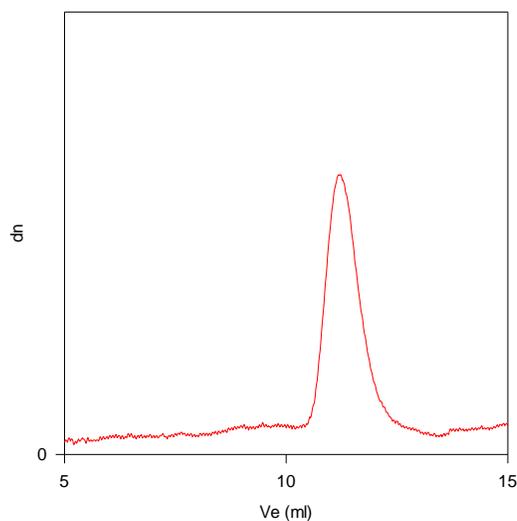
Polymer is soluble in methanol and ethanol.

### HNMR of the Polymer



### SEC of the homopolymer:

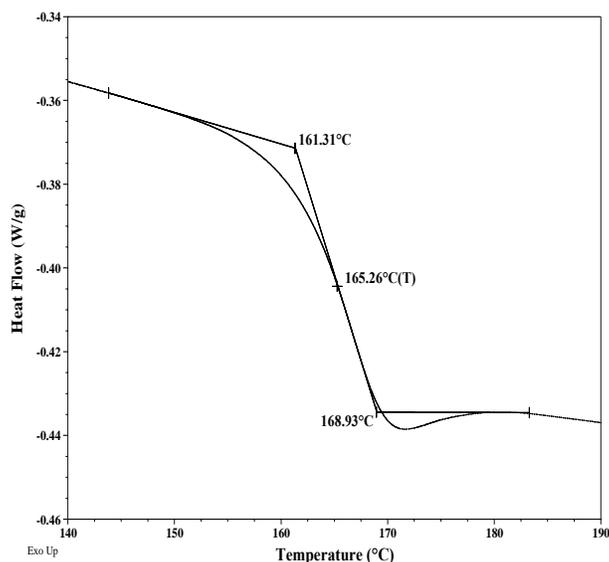
P10802-MAA



Size Exclusion Chromatography of polymer in DMF at 45 °C.

M<sub>n</sub>=260,000, M<sub>w</sub>=286,000, PI=1.10

### 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.