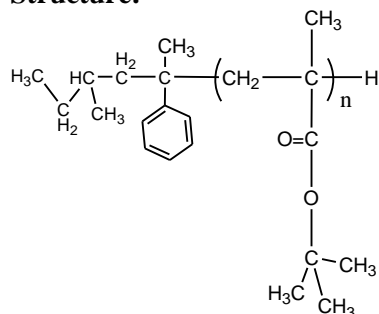


**Sample Name: Poly(t-butyl methacrylate)**  
**Isotactic rich**

**Sample #: P2012-tBuMA**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
328.0	1.33
Iso	>87%

**Synthesis Procedure:**

Poly(t-butyl methacrylate) is obtained by living anionic polymerization of t-butyl methacrylate.

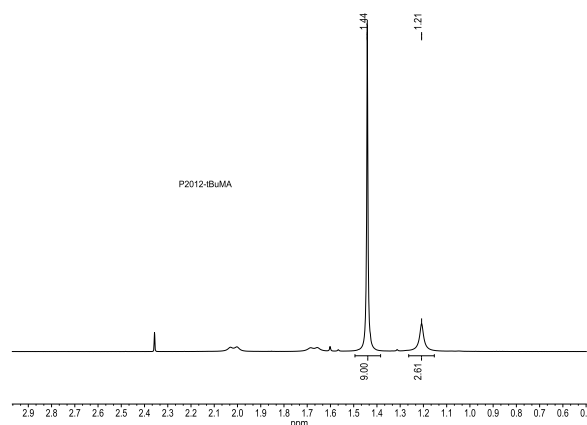
**Characterization:**

The product was characterized by size exclusion chromatography (SEC) and <sup>1</sup>H NMR.

**Solubility:**

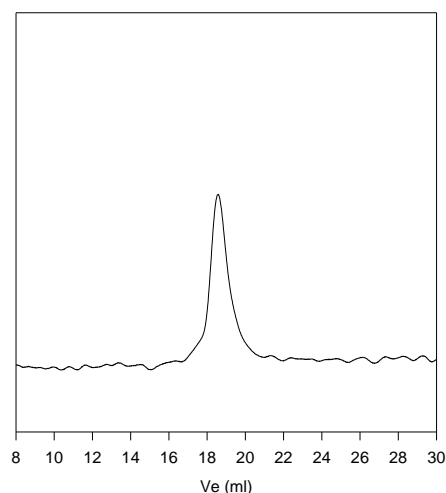
Poly(tert butylmethacrylate) is soluble in THF, CHCl<sub>3</sub>. The polymer is insoluble in DMF however syndio and atactic polymers are soluble in DMF.

**<sup>1</sup>H NMR spectrum of the sample:**



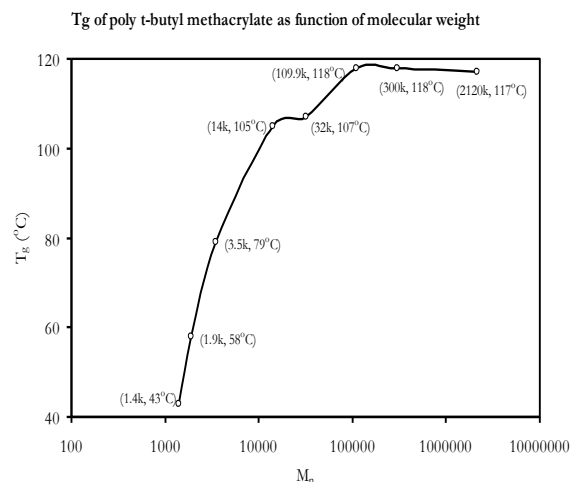
**SEC of Homopolymer:**

**P2012-tBuMA**



Size Exclusion Chromatography of Poly(t-butyl methacrylate)  
M<sub>n</sub>=328,000, M<sub>w</sub>=436,000, M<sub>w</sub>/M<sub>n</sub>=1.33

**DSC thermogram of the Product:**



**T<sub>g</sub> vs MW for selected poly t-butyl methacrylate**

M <sub>n</sub> × 10 <sup>3</sup>	T <sub>g</sub> (°C)	M <sub>n</sub> × 10 <sup>3</sup>	T <sub>g</sub> (°C)
1.4	43	32	107
1.9	58	109.9	118
3.5	79	300	118
14	105	2120	117

**References for further information:**

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.