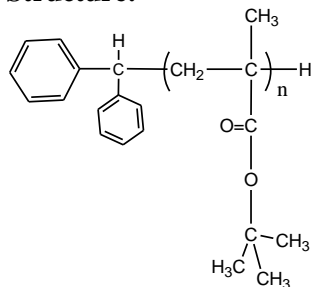


**Sample Name: Poly(t-butyl methacrylate)**  
*Atactic rich*

**Sample #: P1417A-tBuMA**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
125.0	1.05
S;H;I	0:92:8

**Synthesis Procedure:**

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

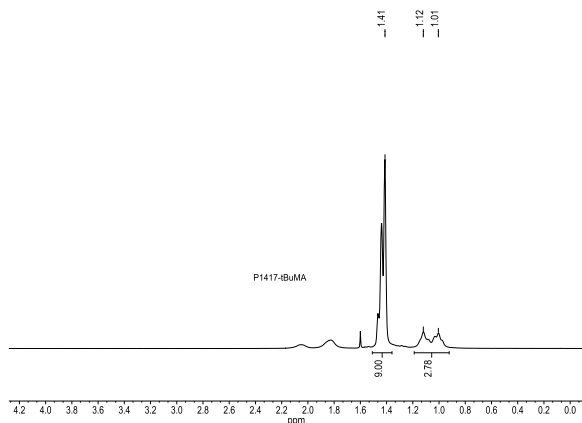
**Characterization:**

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

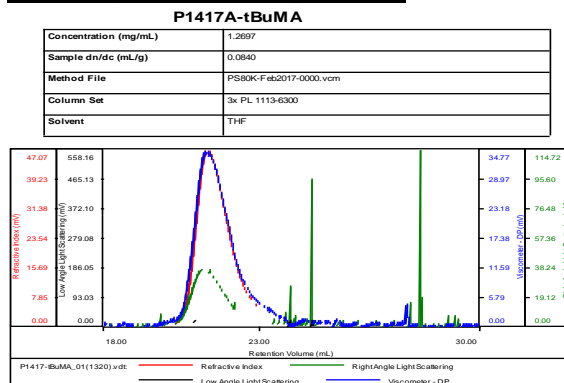
**Solubility:**

Poly(tert butylmethacrylate) is soluble in THF, CHCl<sub>3</sub>, toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

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



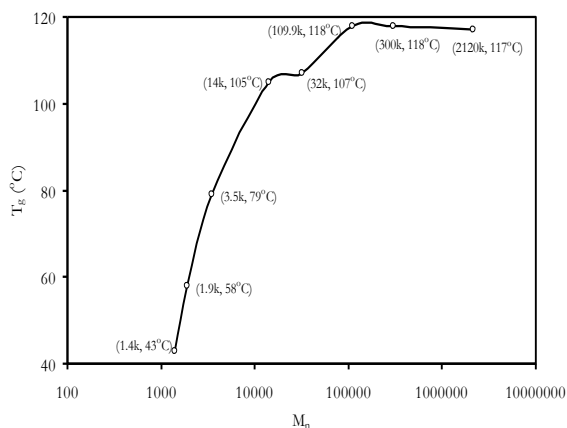
**SEC elugram of Homopolymer:**



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P1417-tBuMA_01(1320)	124,850	131,013	1.049	1.1453	124,826

**DSC thermogram of the Product:**

T<sub>g</sub> of poly t-butyl methacrylate as function of molecular weight



**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.