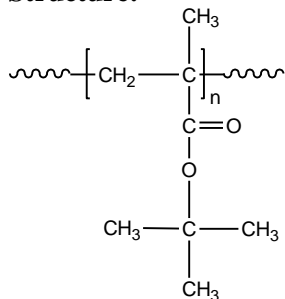


Sample Name: Poly(t-butyl methacrylate)  
*Syndio rich*

Sample #: P18155B-tBuMA

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
6.7	1.4
S;H;I	60:37:3

**Synthesis Procedure:**

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

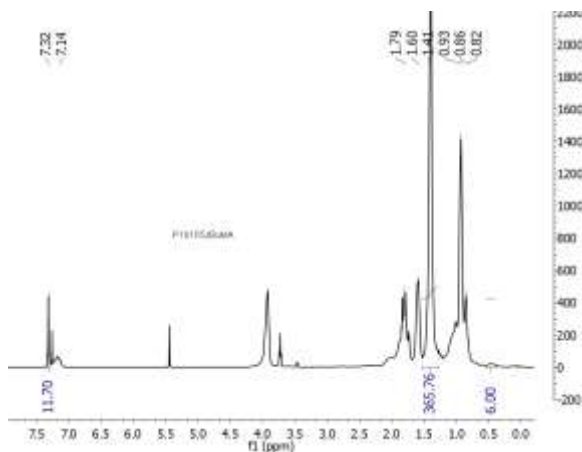
**Characterization:**

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.

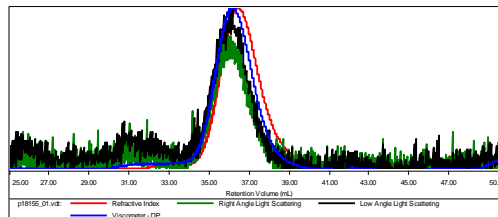
**<sup>1</sup>H NMR of the polymer:**



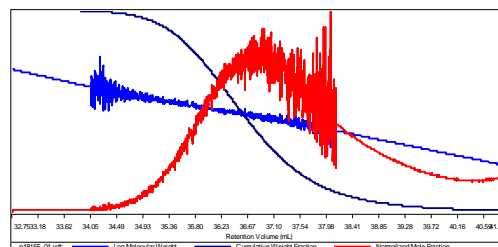
**SEC elugram of Homopolymer:**

Sample ID: P18155-tBuMA

Concentration (mg/mL)	37.2107
Sample dn/dc (mL/g)	0.0760
Method File	PS80K-Aug30-2013-0000.vcm
Column Set	3x PL 1113-6300
System	System 1

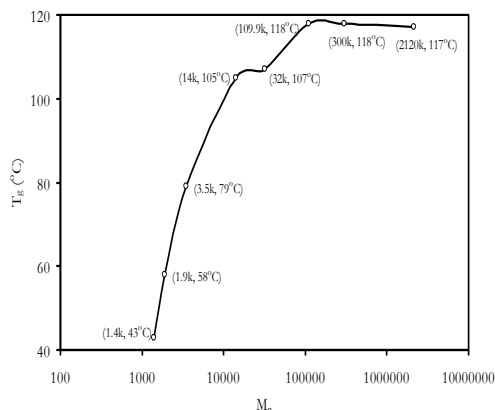


Sample	Mn	Mw	Mp	Mw/Mn	IV
p18155_01.vdt	6,739	9,524	9,185	1.413	0.0826



**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.