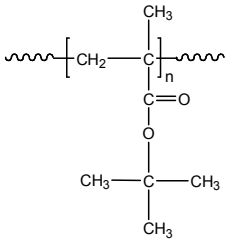
Sample Name: **Poly(t-butyl methacrylate)**
Atactic microstructure

Sample #: **P6143A-tBuMA**

Structure:



Composition:

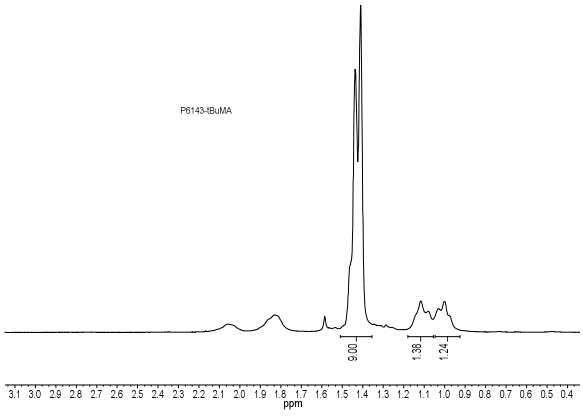
Mn x 10^3	PDI
15.2	1.02
S;H;I	45:50:5

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 ^{1}H NMR.

Solubility:
Poly(tert butylmethacrylate) is soluble in THF, $CHCl_3$, toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

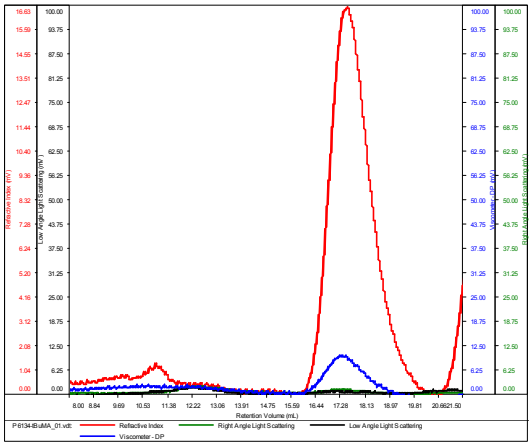
^{1}HNMR of the Polymer:



SEC elugram of Homopolymer:

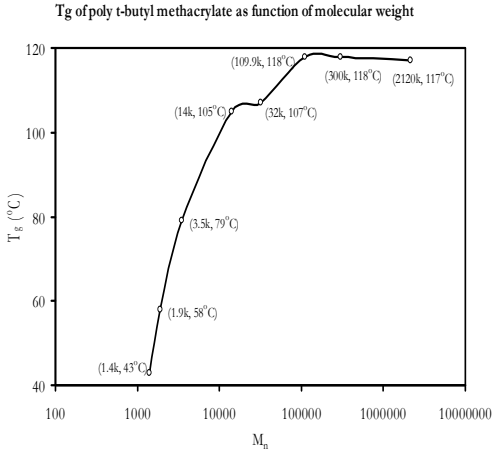
P6134A-tBuMA

Conc	2.5702
dn/dc	0.0650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-March2017-0002.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P6134-tBuMA_01.vdt	15,192	15,469	15,649	1.018	0.0628

DSC thermogram of the Product:



T_g vs MW for selected poly t-butyl methacrylate

$M_n \times 10^3$	T_g (°C)	$M_n \times 10^3$	T_g (°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.