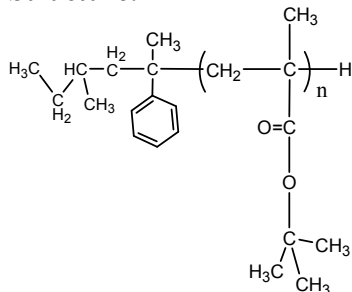


Sample Name: Poly(t-butyl methacrylate)
Isotactic rich

Sample #: P2040A-tBuMA

Structure:



Composition:

$M_n \times 10^3$	PDI
106.0	1.35
$T_g (^{\circ}\text{C})$	78
Iso	>90%

Synthesis Procedure:

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

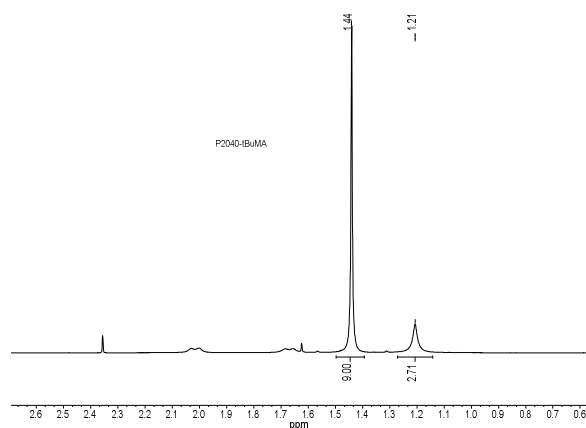
Characterization:

The product was characterized by size exclusion chromatography (SEC) and ^1H NMR.

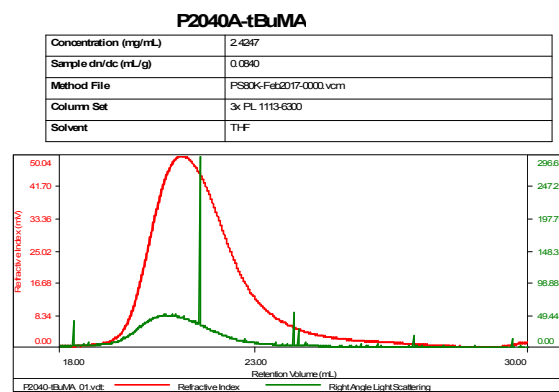
Solubility:

Poly(tert butylmethacrylate) is soluble in THF, CHCl_3 . The polymer is insoluble in DMF however syndio and atactic polymers are soluble in DMF.

^1H NMR of the Polymer:

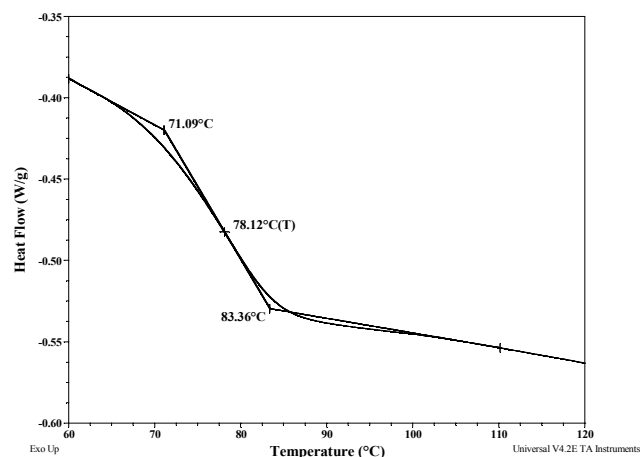


SEC elugram of Homopolymer:



Sample	Mh (Da)	Mw (Da)	Mw/Mh	IV (dL/g)	Mp (Da)
P2040-tBuMA_01.vdt	105,846	143,668	1.357	1.5053	146,636

DSC thermogram for the sample:



T_g vs MW for selected poly t-butyl methacrylate

$M_n \times 10^3$	$T_g (^{\circ}\text{C})$	$M_n \times 10^3$	$T_g (^{\circ}\text{C})$
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.