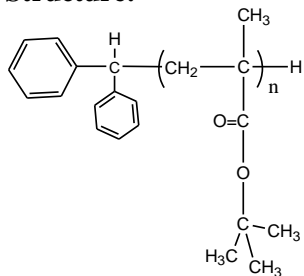


Sample Name:
Poly(t-butyl methacrylate)

Atactic rich

Sample #: **P1411A-tBuMA**

Structure:



Composition:

$M_n \times 10^3$	PDI
82.0	1.23
$T_g (^{\circ}\text{C})$	125
S;H;I	0:96:4

Synthesis Procedure:

Poly(t-butyl methacrylate) is obtained by living anionic polymerization of t-butyl methacrylate using diphenyl Potassium initiator.

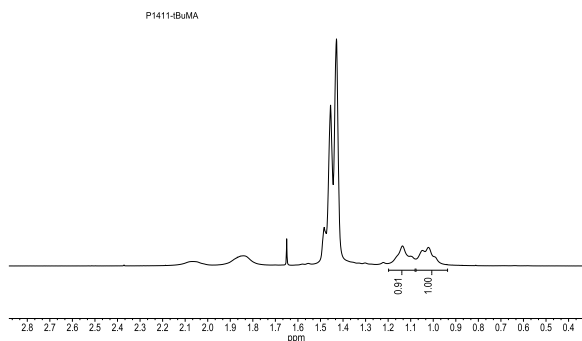
Characterization:

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

Solubility:

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

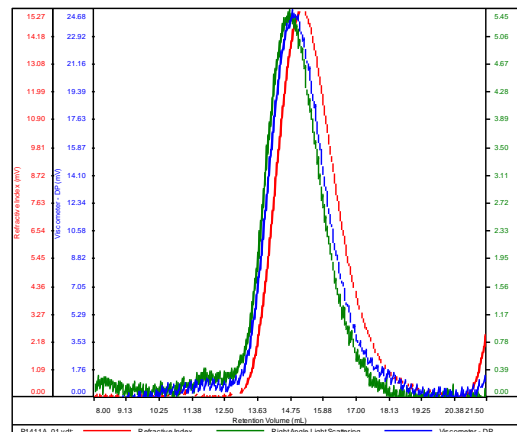
^1H NMR spectrum of the polymer:



SEC elugram of Homopolymer

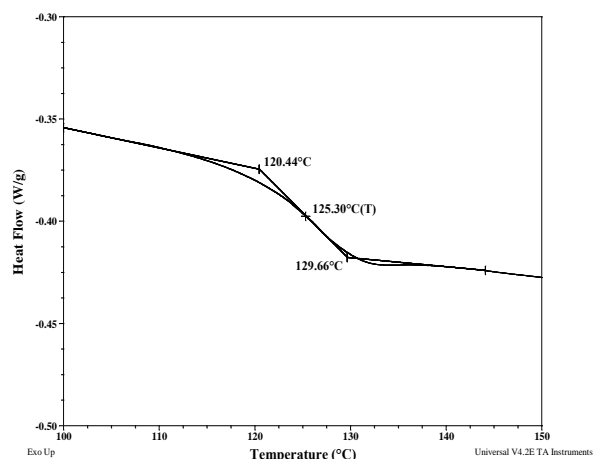
P1411A-tBuMA

Conc	4.1534
dn/dc	0.0650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-May2017-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P1411A_01.vdt	81,753	101,074	93,772	1.236	0.1523

DSC thermogram of the Product:



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.