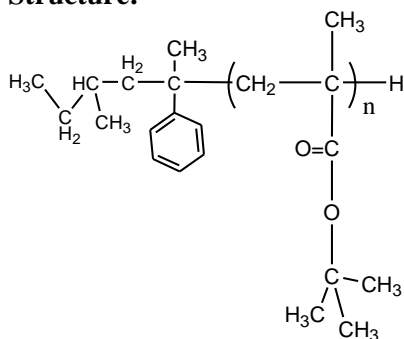


Sample Name: Poly(t-butyl methacrylate)

Atactic

Sample #: P18153-tBuMA

Structure:



Composition:

$M_n \times 10^3$	PDI
7.0	1.3
S:H:I	5:90:5

Synthesis Procedure:

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

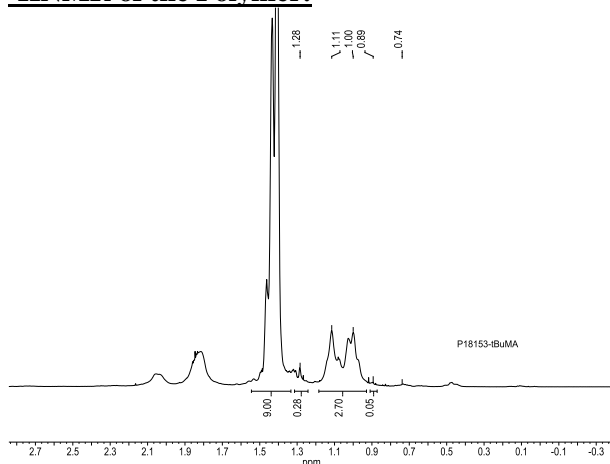
Characterization:

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

Solubility:

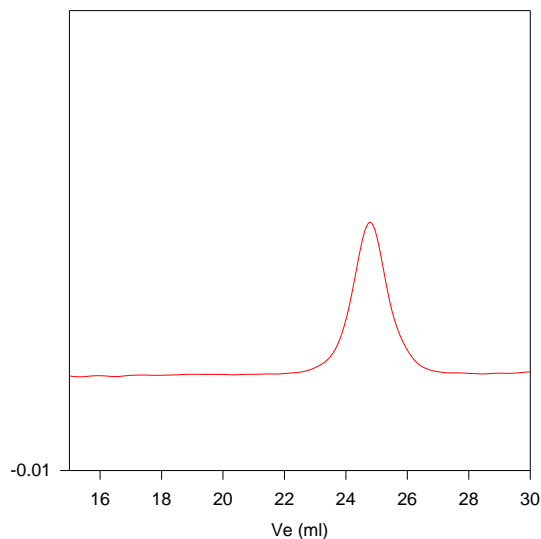
Poly(tert butylmethacrylate) is soluble in THF, CHCl_3 , toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

^1H NMR of the Polymer:



SEC elugram of Homopolymer:

P18153-tBuMA

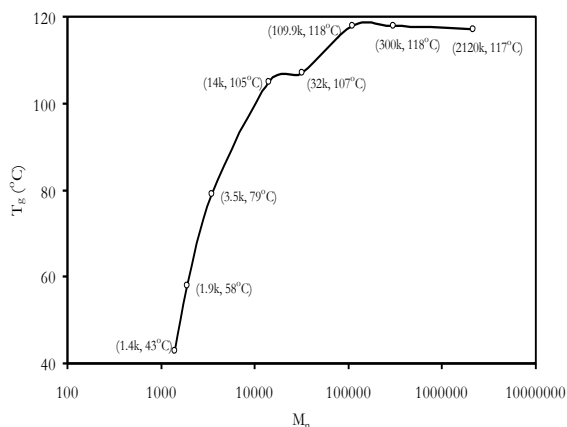


Size Exclusion Chromatography of Poly(t-butyl methacrylate)

$M_n=7,000$, $M_w=9,000$, $M_w/M_n=1.3$

DSC thermogram of the Product

Tg of poly t-butyl methacrylate as function of molecular weight



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.