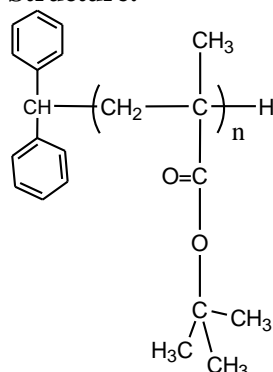


Sample Name: **Poly(t-butyl methacrylate)**
Atactic rich

Sample #: **P6142-tBuMA**

Structure:



Composition:

$M_n \times 10^3$	PDI
11.0	1.25
S:h:I	15:45:40

Synthesis Procedure:

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

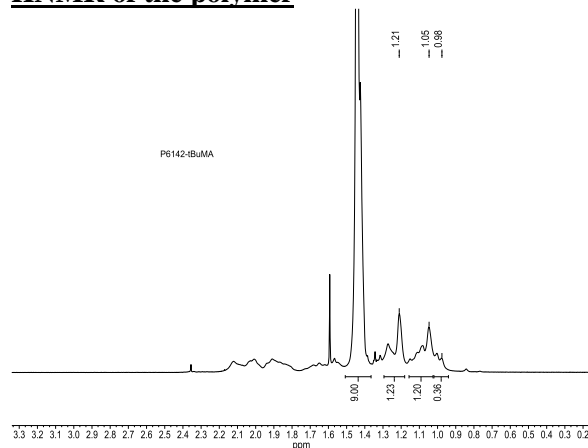
Characterization:

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) and HNMR.

Solubility:

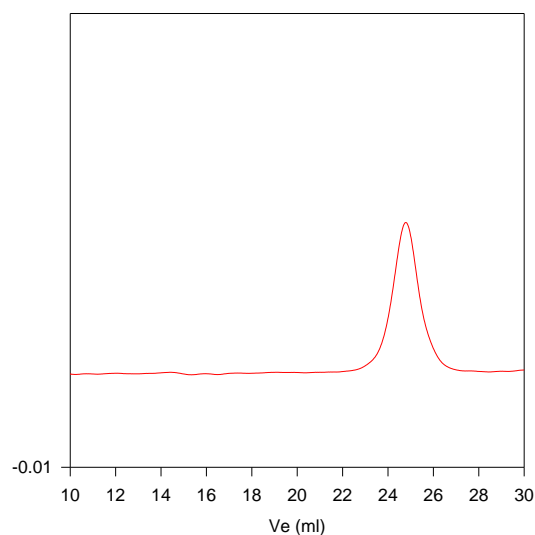
Poly(tert butylmethacrylate) is soluble in THF, CHCl_3 , toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

HNMR of the polymer



SEC of Homopolymer:

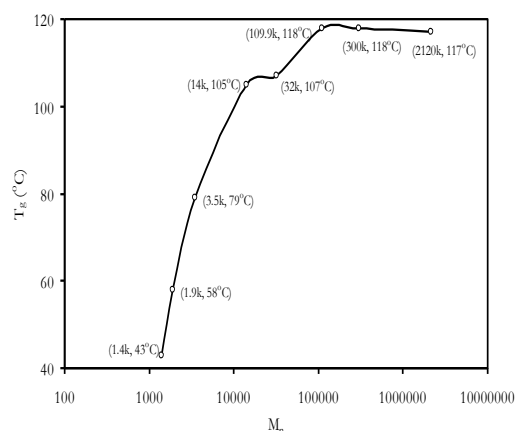
P6142-tBuMA



Size Exclusion Chromatography of Poly(t-butyl methacrylate)
 $M_n=11000$, $M_w=13800$, $M_w/M_n=1.25$

DSC thermogram of the product:

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



Tg 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.