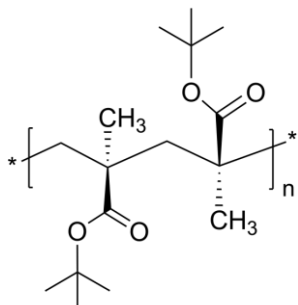


Sample Name:

Poly(tert-butyl methacrylate), syndiotactic

Sample#: **P43676-tBuMA**

Structure:



Composition:

Mn x 10 ³	PDI
193.0	1.10

S:H:I: 54:42:4

Synthesis Procedure:

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

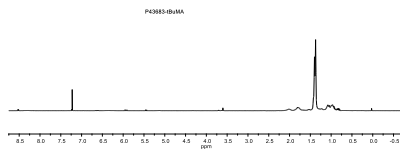
Characterization:

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

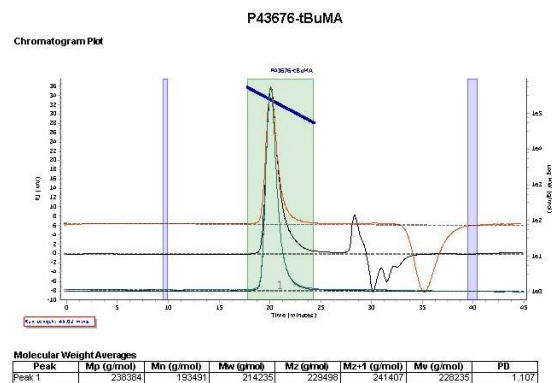
Solubility:

Poly(tert-butylmethacrylate) is soluble in THF, CHCl₃, toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

¹H-NMR spectrum of the polymer:

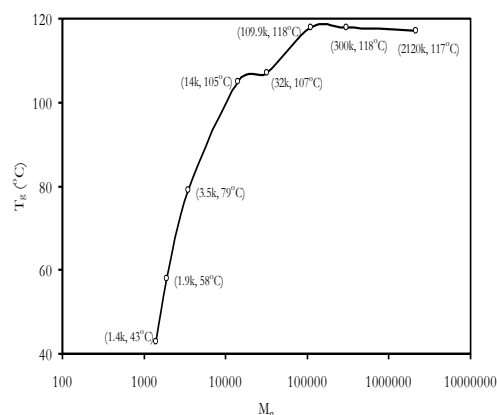


SEC elugram of Homopolymer:



DSC thermogram of the Product:

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



T_g vs MW for selected poly t-butyl methacrylate:

M _n × 10 ³	T _g (°C)	M _n × 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.