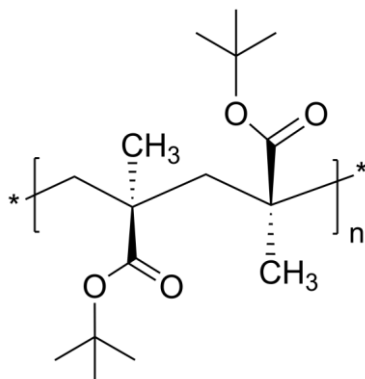


Sample Name:
Poly(tert-butyl methacrylate), syndiotactic.

Sample #: **P42477-tBuMA**

Structure:



Composition:

Mn x 10 ³	PDI
46.5	1.07
S:H:I	53:42:4

Synthesis Procedure:

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

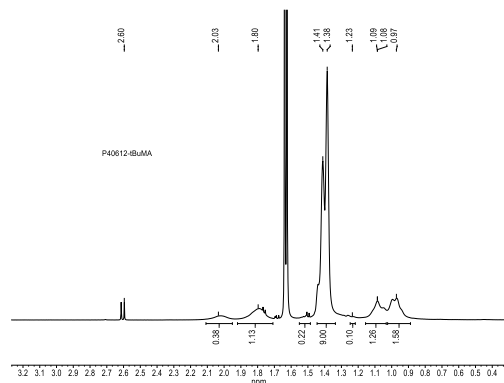
Characterization:

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

Solubility:

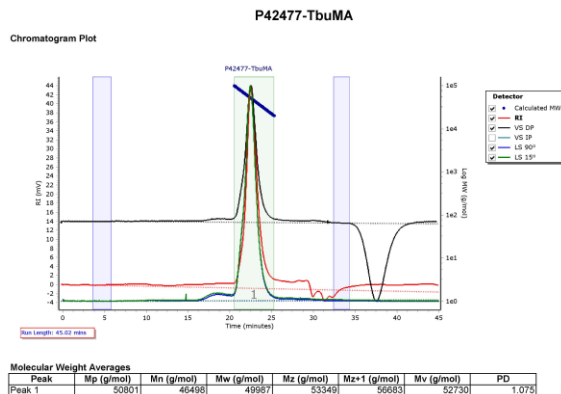
Poly(tert butylmethacrylate) is soluble in THF, CHCl₃, toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

¹H NMR spectrum of the polymer:



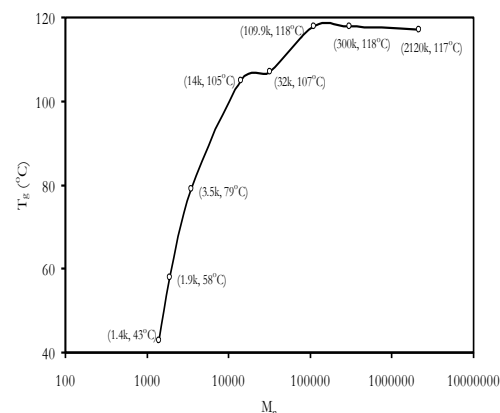
SEC elugram of Homopolymer:

Agilent GPC/SEC Software



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.