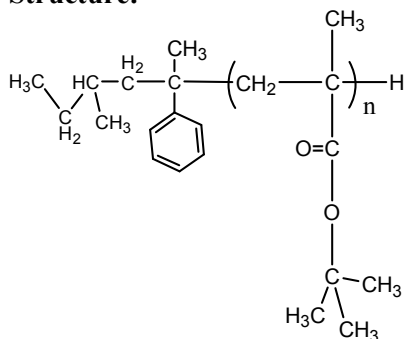


Sample Name: Poly(t-butyl methacrylate)
Isotactic microstructure

Sample #: P8296A-tBuMA

Structure:



Composition:

Mn x 10 ³	PDI
493.0	1.27
Iso contents	>85%

Synthesis Procedure:

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

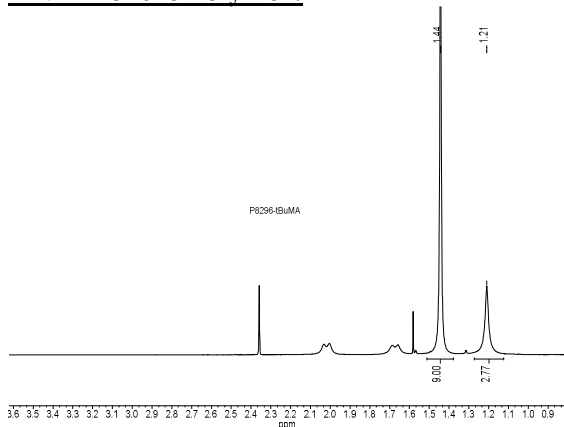
Characterization:

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

Solubility:

Poly(tert butylmethacrylate) is soluble in THF, CHCl₃. The polymer is insoluble in DMF however syndio and atactic polymers are soluble in DMF.

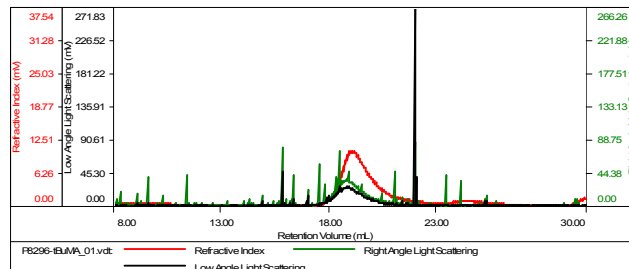
HNMR of the Polymer:



SEC of Homopolymer:

P8296A-tBuMA

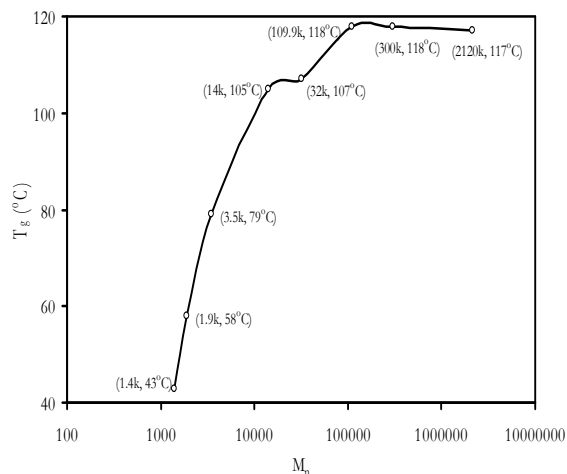
Concentration (mg/mL)	0.3651
Sample dn/dc (mL/g)	0.0840
Method File	PS80K-Feb0017-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P8296-tBuMA_01.vct	493,054	629,191	1.276	4.1896	551,658

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.

