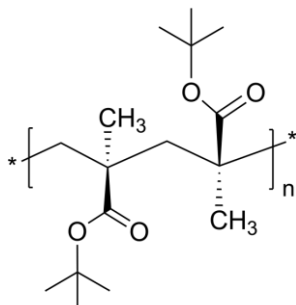


Sample Name:

**Poly(tert-butyl methacrylate), syndiotactic**

Sample#: **P43684-tBuMA**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
325.0	1.25

S:H:I: 54:42:4
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**Synthesis Procedure:**

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

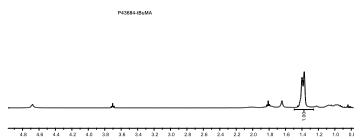
**Characterization:**

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

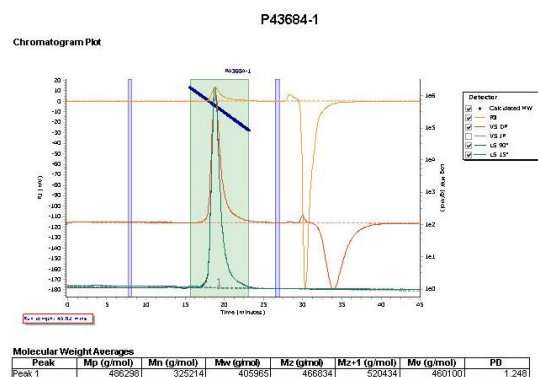
**Solubility:**

Poly(tert-butylmethacrylate) is soluble in THF, CHCl<sub>3</sub>, toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

**<sup>1</sup>H-NMR spectrum of the polymer:**

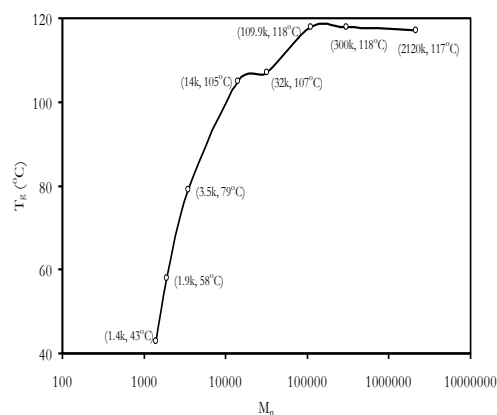


**SEC elugram of Homopolymer:**



**DSC thermogram of the Product:**

T<sub>g</sub> of poly t-butyl methacrylate as function of molecular weight



**T<sub>g</sub> vs MW for selected poly t-butyl methacrylate:**

M <sub>n</sub> × 10 <sup>3</sup>	T <sub>g</sub> (°C)	M <sub>n</sub> × 10 <sup>3</sup>	T <sub>g</sub> (°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.