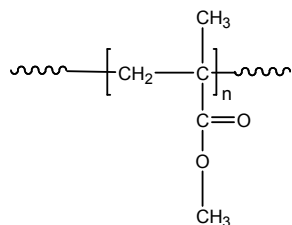


Sample Name: **Poly(methyl methacrylate)**
Syndiotactic rich contents > 79%

Sample #: **P9407-MMA**

Structure:



Composition:

Mn x 10 ³	PDI
228.4	1.12

Synthesis Procedure:

Syndiotactic Poly(methyl methacrylate) is obtained by living anionic polymerization using sec.BuLi as initiator and capped with a unit of diphenyl ethylene or few units of α -methylstyrene.

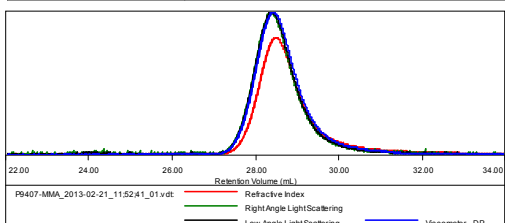
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co. ¹H NMR analysis was carried out on Varian instrument at 500MHz.

Solubility:

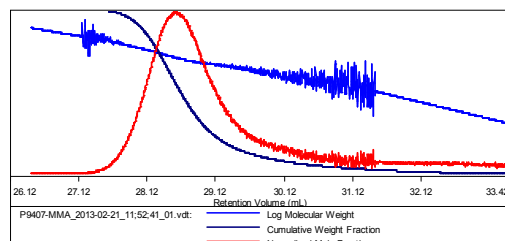
Poly(methyl methacrylate) is soluble in THF, CHCl₃, toluene and dioxane. The polymer precipitates from hexanes, methanol and ethanol.

Sample ID: **P9407-MMA**

Concentration (mg/mL)	4.0877
Sample dn/dc (mL/g)	0.0840
Method File	PS80K-Feb-2013-0001.vcm
Column Set	3xPL 1113-6300
System	System 1

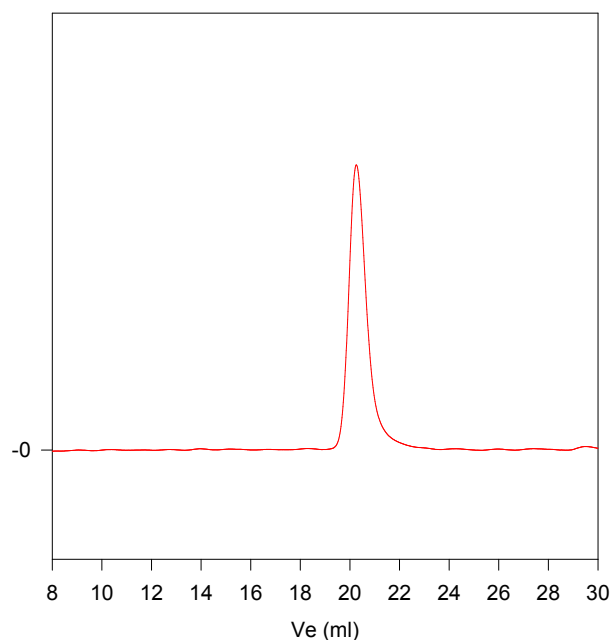


Sample	Mn (Da)	Mw (Da)	Mp (Da)	Mw/Mn	IV (dL/g)
P9407-MMA_2013-02-21_11:52:41_01.vdt	230,549	257,235	274,947	1.116	0.7580



SEC of Sample # **P9407-MMA:**

P9407-MMA



Size Exclusion Chromatography of Poly(methylmethacrylate)

— P9407-MMA: M_n=228400, M_w= 255800 PI=1.12

References for further information:

- (a) S. K. Varshney, R. Fayt, Ph. Teyssie, US Patent 5,629,393, 1997 (b) Ph. Bayard, R. Fayt, Ph. Teyssie and S. K. Varshney, Vuillemin B, Phillipe, H, US patent 5,677,387, 1997. (c) Ph. Bayard, R. Fayt, Ph. Teyssie and S. K. Varshney, B, Vuillemin, H. Phillipe, US patent 5,687,534, 1997. (d) S. K. Varshney, R. Fayt, Ph. Teyssie, US Patent 5,723,559, 1998. (e) Ph. Teyssie, S. K. Varshney, R. Jerome, R. Fayt US patent, 4,826,941., 1989.
- Ph. Teyssie, Ph. Bayard, R. Jerome, S. K. Varshney, and J. S. Wang, *35th IUPAC International Union of Pure & Applied Chemistry International Symposium on Macromolecules* 1994, 67.
- Ph. Teyssie, R. Fayt, J. P. Hautekeer, C. Jacobs, R. Jerome, L. Leemans and S. K. Varshney *Makromolekulare Chemie, Macromol. Symp.*, 1990, 32,61-73.
- S. K. Varshney, J. P. Hautekeer, R. Fayt, R. Jerome, and Ph. Teyssie *Macromolecules*, 1990, 23, 2618-2622.