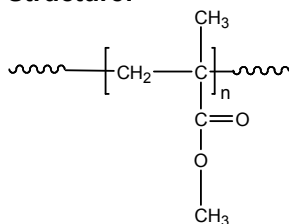


**Sample Name: Poly (methyl methacrylate)**

*Different microstructure*

**Sample #: P19327F-MMA**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
227.0	1.7
Syndio : Hetero : Isotactic	60:35:5

**Synthesis Procedure:**

Poly (methyl methacrylate) is obtained by RAFT process.

**Characterization:**

Tacticity of the polymer was determined by <sup>1</sup>H NMR. The molecular weight and polydispersity index (PDI) were 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.

Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T<sub>g</sub>) of the sample has been considered.

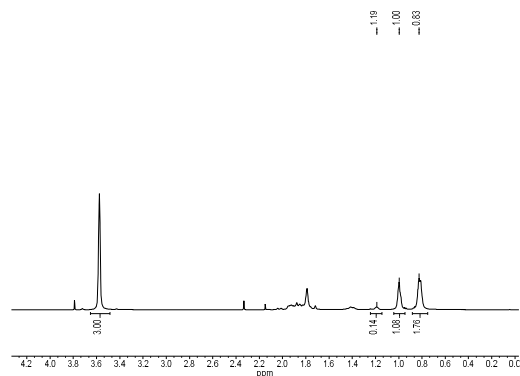
**Solubility:**

The polymer is soluble in THF, CHCl<sub>3</sub>, toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

**T<sub>g</sub> vs MW for selected atactic PMMA:**

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)
1.1	51	36	98
2.5	76	55	111
5.0	91	70	107
15	101	127	115
19	107	230	114
29	96	700	121

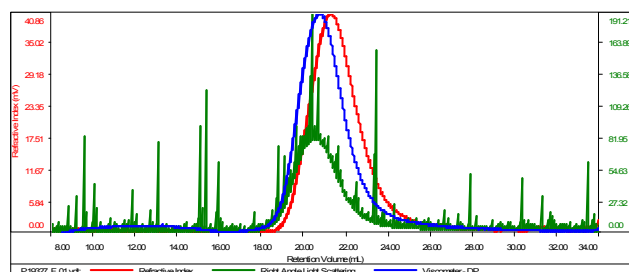
**<sup>1</sup>H NMR spectrum of PMMA:**



**SEC elugram of PMMA homopolymer:**

**Sample ID: P19327F-MMA**

Concentration (mg/mL)	1.2466
Sample dn/dc (mL/g)	0.0940
Method File	PS80K-June30-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19327_F_01.vcl	226,851	394,711	268,483	1.740	3.3222

**DSC:**

T<sub>g</sub> of atactic poly methyl methacrylate as function of molecular weight

