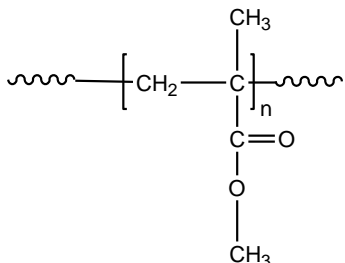


**Sample Name:** Poly (methyl methacrylate)  
Atactic polymer

**Sample #:** P19183-MMA

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
38.5	1.36

Syndio : Hetero : Iso	34:57:9
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**Synthesis Procedure:**

Tacticity of the poly(methyl methacrylate) is tailored by GTP technique of MMA monomer.

**Characterization:**

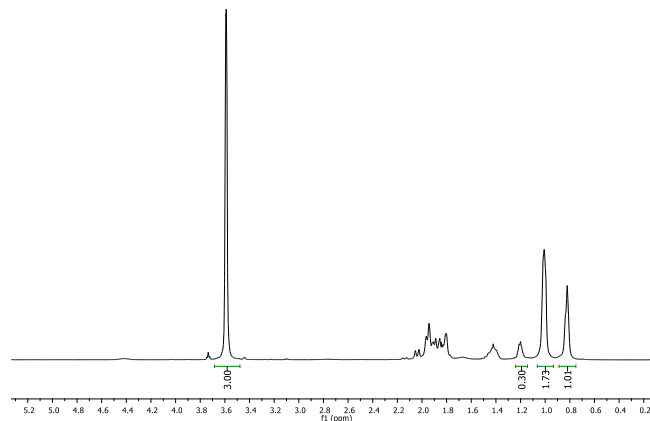
Tacticity of the polymer was determined by <sup>1</sup>H NMR. The molecular weight and polydispersity index (PDI) were obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors.

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.

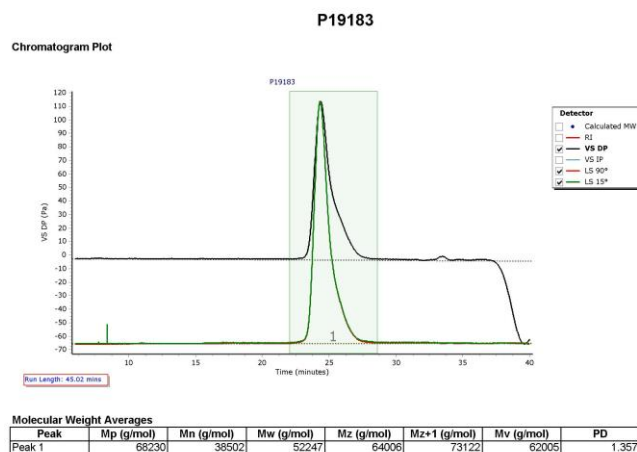
**Solubility:**

The polymer is soluble in chloroform, THF and DMF.

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

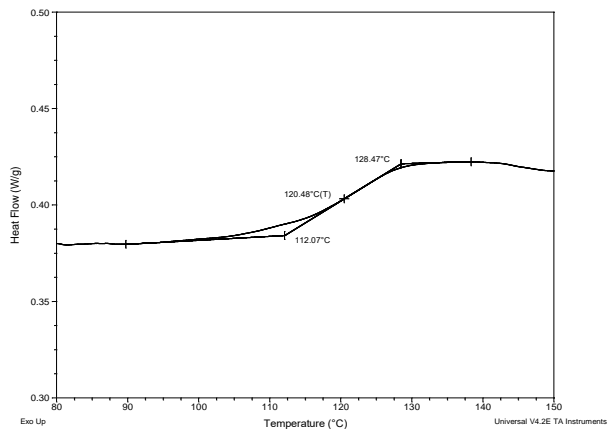


**SEC elugram of PMMA homopolymer:**

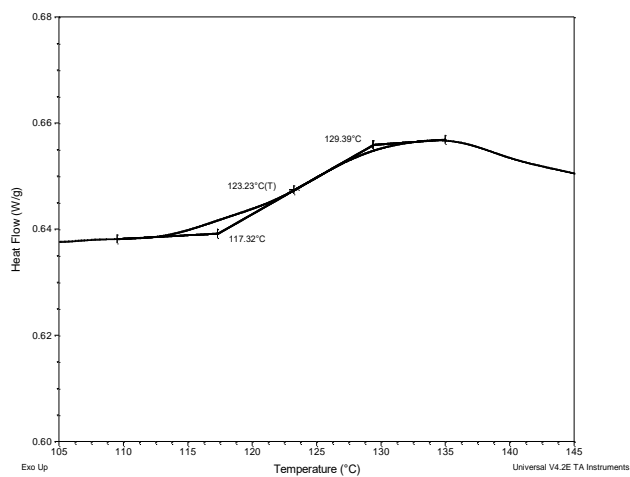


## Thermograms of PMMA:

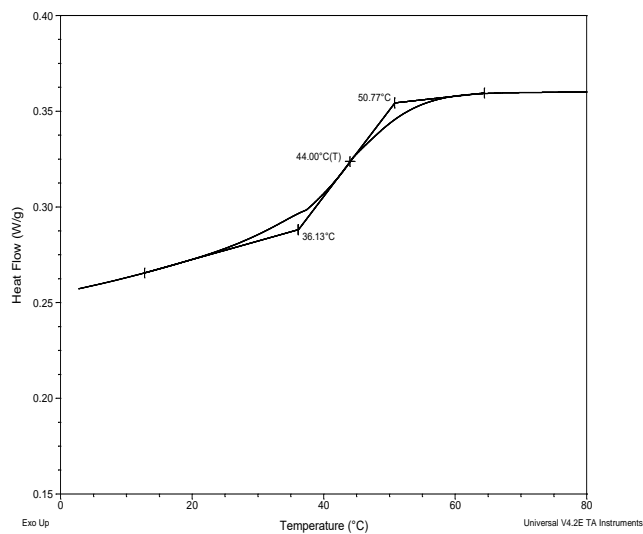
### (a) syndiotactic >79%



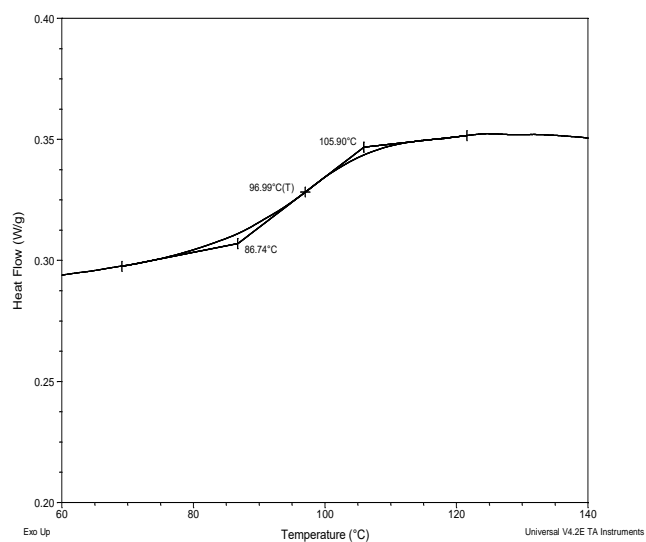
### (b) syndiotactic >85%



### (c) isotactic >97%



### (d) atactic



### Summary of DSC results for PMMA of different tacticity:

<i>PMMA microstructure</i>	<i>Tacticity Syndio : Iso : Hetero</i>	<i>T<sub>g</sub> (°C)</i>
Syndiotactic >79%	79 : 19 : 2	120
Syndiotactic >85%	86 : 0 : 14	123
Isotactic >97%	0 : 97 : 3	44
Atactic	56 : 6 : 38	97