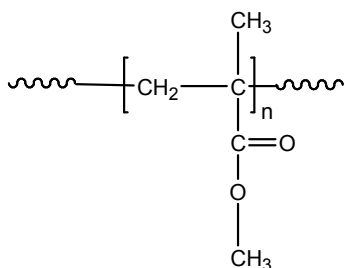


Sample Name: Poly (methyl methacrylate)  
Atactic polymer

Sample #: P40550-MMA

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
36.5	1.10

Syndio : Hetero : Iso	38 : 57 : 5
T <sub>g</sub>	104°C

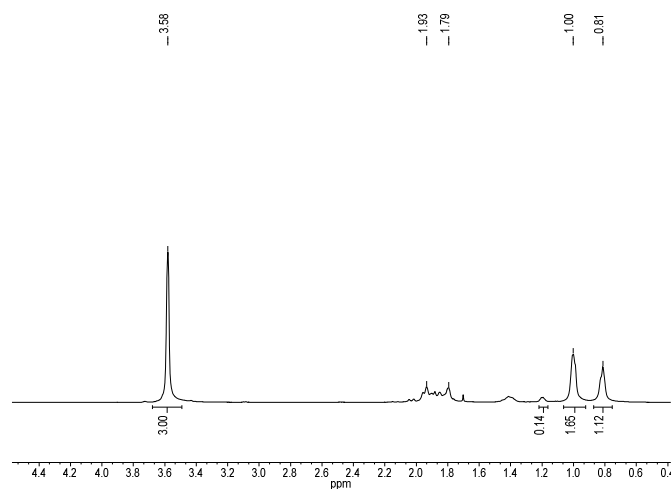
**Synthesis Procedure:**

The polymer was synthesized by anionic polymerization.

**Characterization:**

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

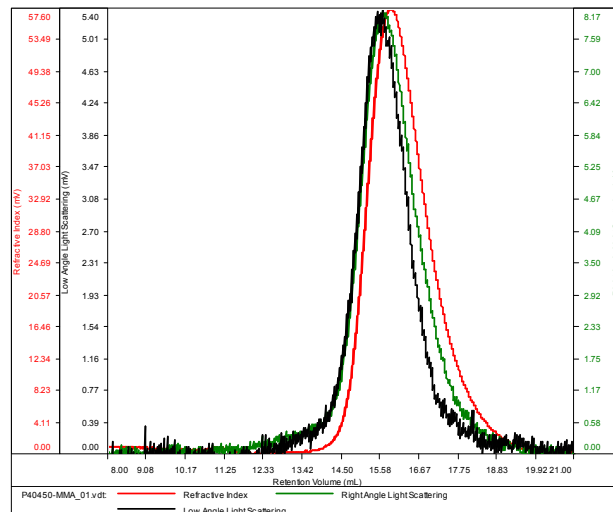
**<sup>1</sup>H NMR spectrum of PMMA:**



**SEC elugram of PMMA homopolymer:**

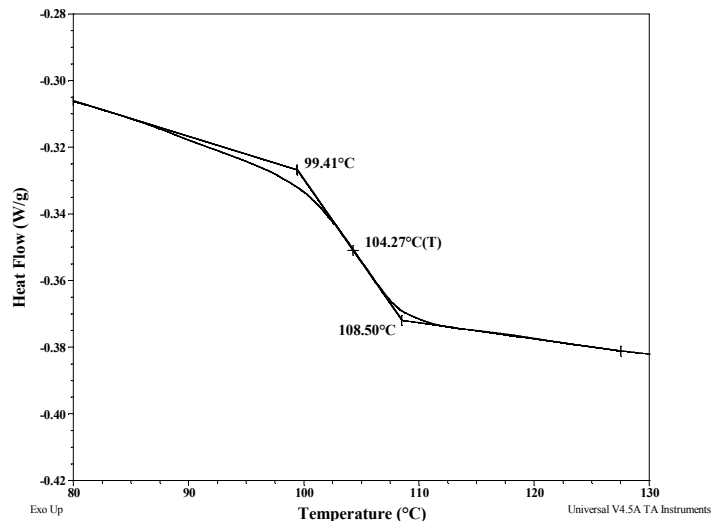
P40550-MMA

Conc	10.8888
dn/dc	0.0650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-March2017-0002.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40450-MMA_01.vdt	36,631	40,534	39,999	1.107	0.1180

**DSC thermogram of the polymer**

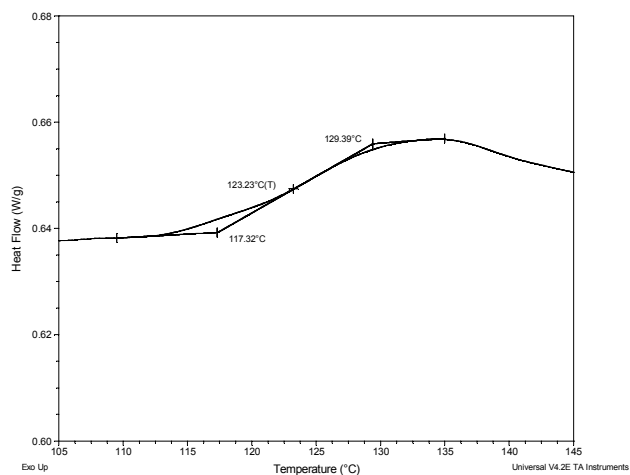


## Thermograms of PMMA:

**(a) syndiotactic >79%**



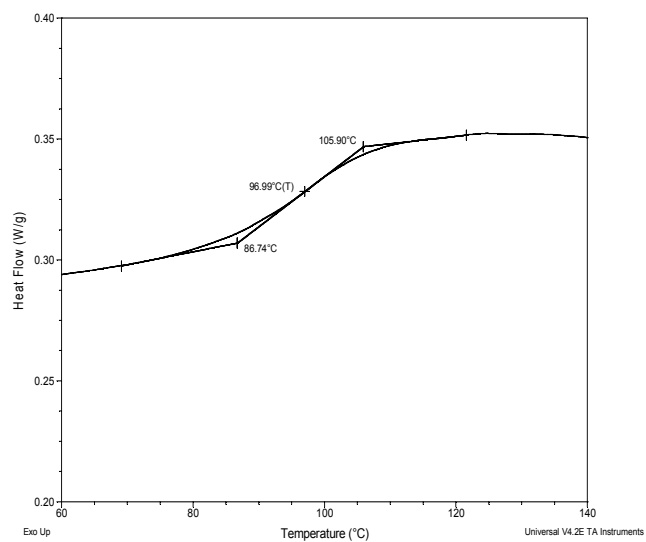
**(b) syndiotactic >85%**



**(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