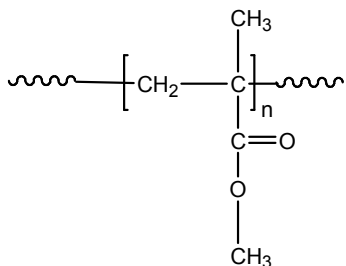


Sample Name: Poly (methyl methacrylate)  
Different microstructure

Sample #: P40536C-MMA

Structure:



Composition:

Mn x 10 <sup>3</sup>	PDI
77.0	1.23

Syndio : Hetero : Iso	59:37:4
T <sub>g</sub>	127 oC

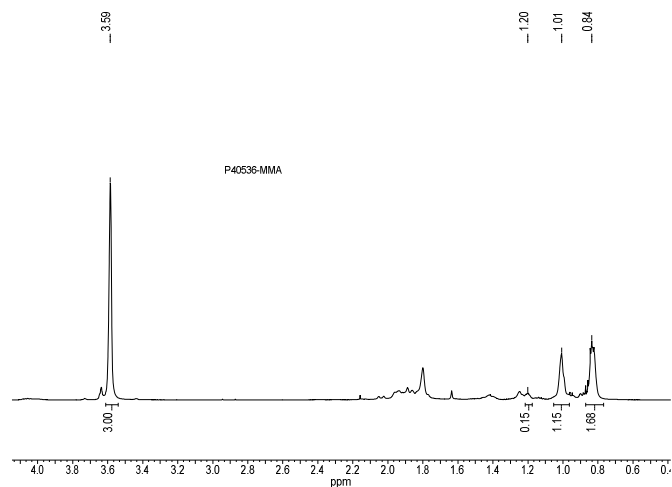
Synthesis Procedure:

The polymer was synthesized by anionic polymerization.

Characterization:

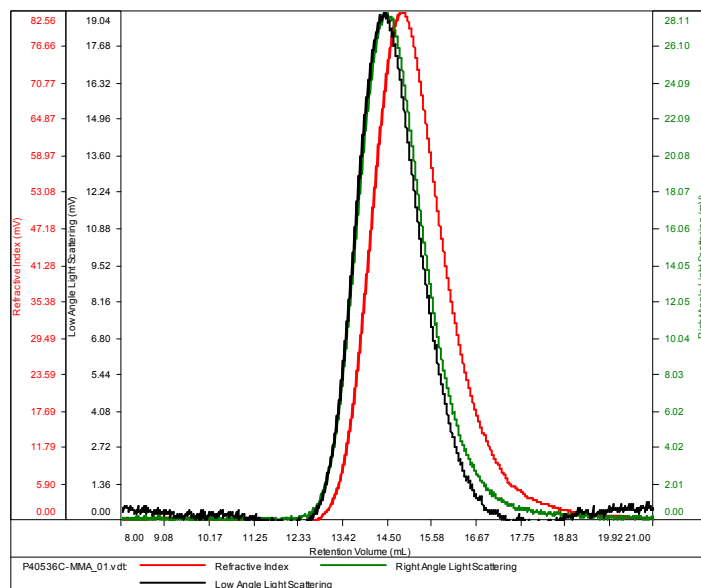
The product was characterized by size exclusion chromatography (SEC) and <sup>1</sup>H NMR.

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



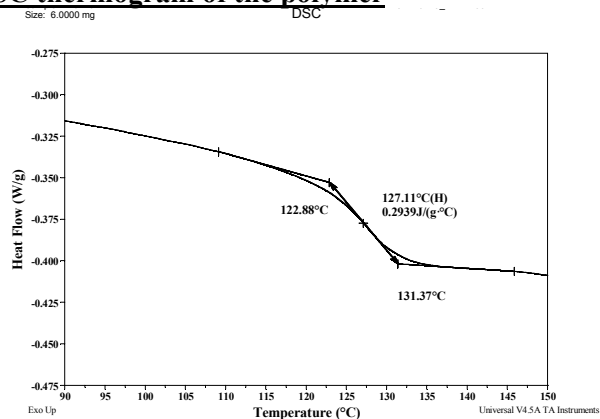
SEC elugram of PMMA homopolymer:  
P40536C-MMA

Conc	16.3694
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
P40536C-MMA_01.vdt	77,322	95,460	89,576	1.235	0.2216

DSC thermogram of the polymer

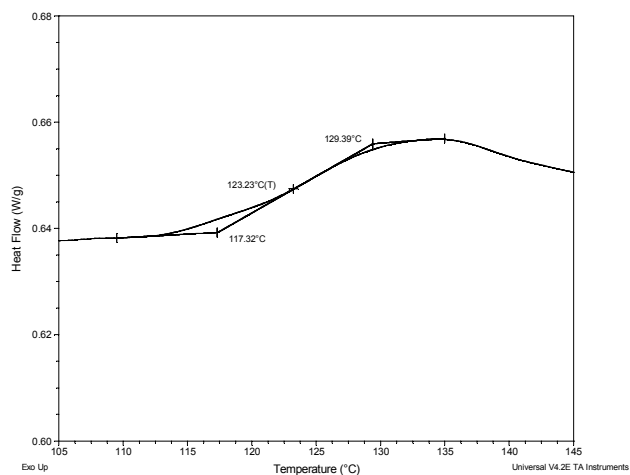


## Thermograms of PMMA:

**(a) syndiotactic >79%**



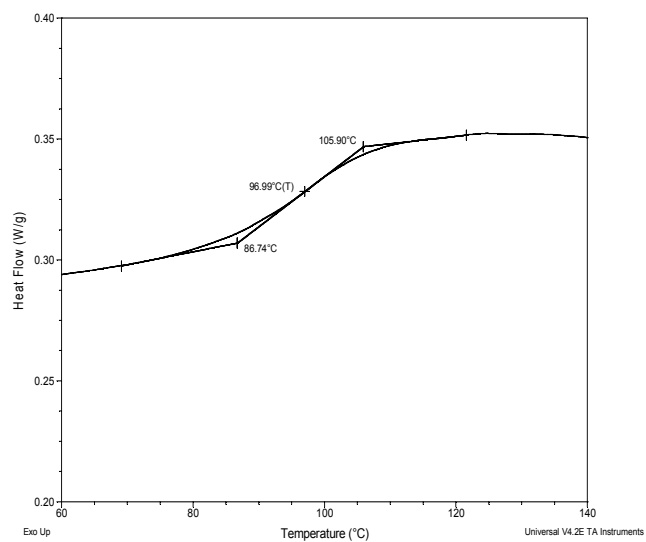
**(b) syndiotactic >85%**



**(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