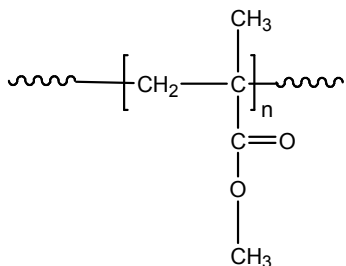


Sample Name: Poly (methyl methacrylate)  
Different microstructure

Sample #: P40539-MMA

**Structure:**



**Composition:**

$M_n \times 10^3$	PDI
26.5	1.6

Syndio : Hetero : Iso	59:37:4
$T_g$	127 °C

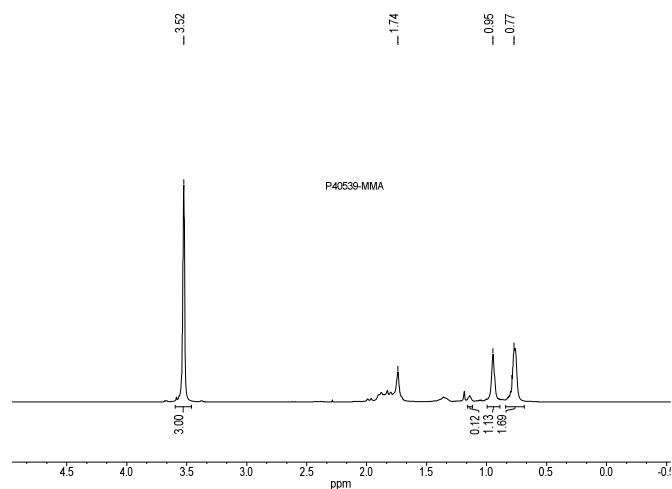
**Synthesis Procedure:**

The polymer was synthesized by anionic polymerization.

**Characterization:**

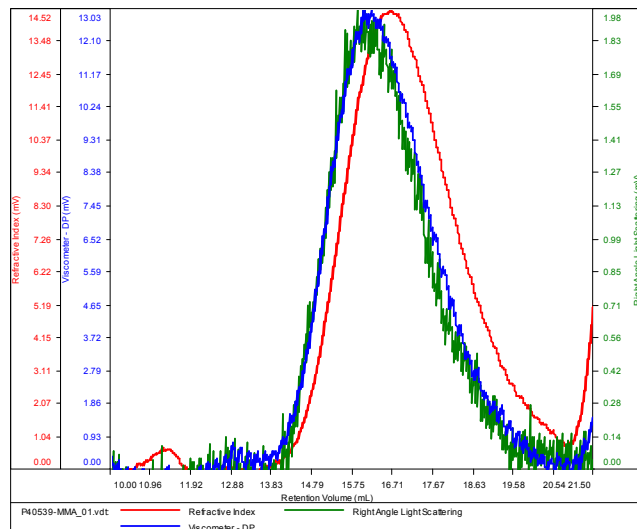
The product was characterized by size exclusion chromatography (SEC) and  $^1\text{H}$  NMR.

**$^1\text{H}$  NMR spectrum of PMMA:**



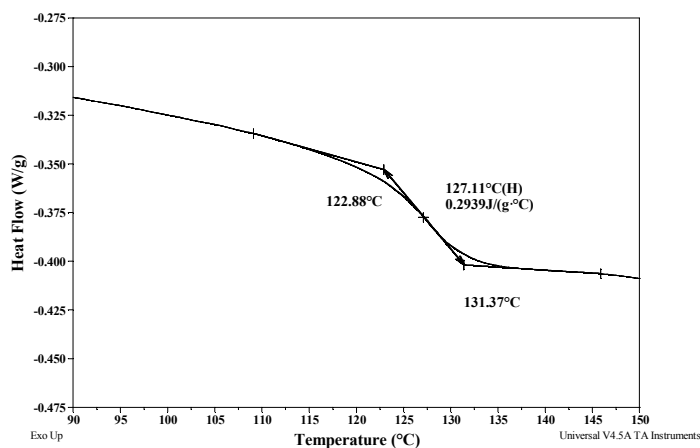
**SEC elugram of PMMA homopolymer:**  
P40539-MMA

Conc	4.2726
dn/dc	0.0650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-March2017-0002.vcm



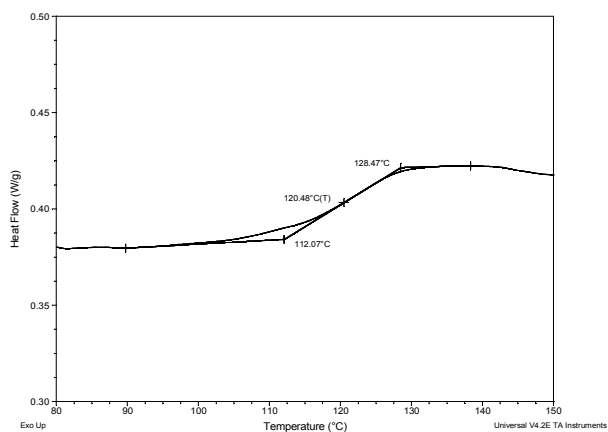
Sample	$M_n$	$M_w$	$M_p$	$M_w/M_n$	IV
P40539-MMA_01.vdt	26,427	41,901	35,581	1.586	0.0965

**DSC thermogram of the polymer**  
Size: 6.0000 mg DSC

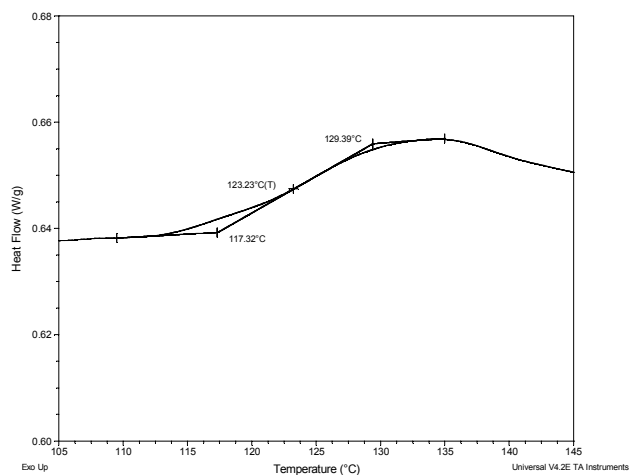


## Thermograms of PMMA:

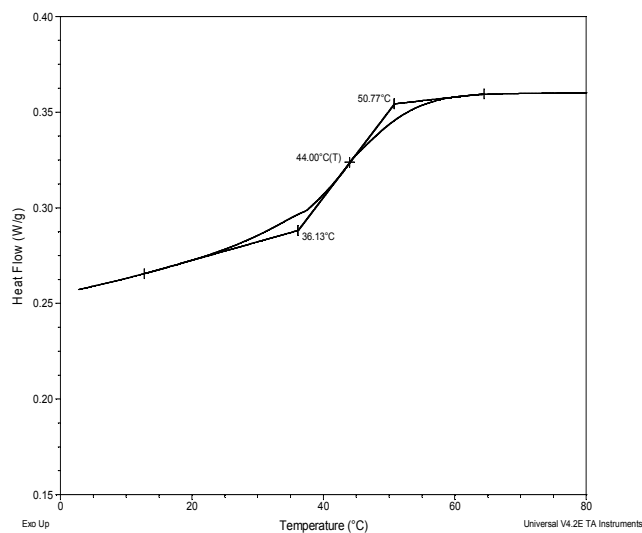
**(a) syndiotactic >79%**



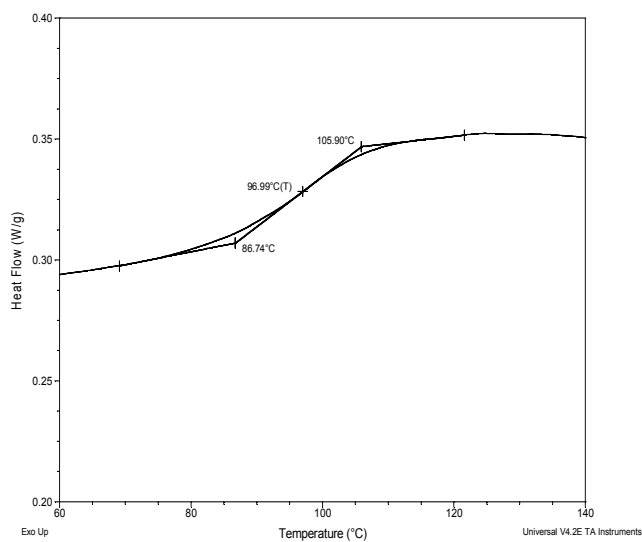
**(b) syndiotactic >85%**



**(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