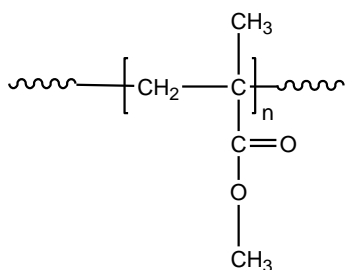


Sample Name: Poly (methyl methacrylate)  
Atactic polymer

Sample #: P41146-MMA

**Structure:**



**Composition:**

$M_n \times 10^3$	PDI
112.0	1.9

Syndio : Hetero : Iso	36 : 50 : 14
$T_g$	104°C

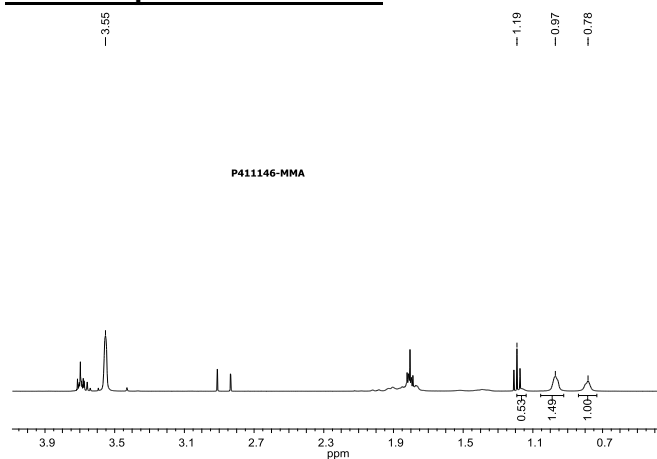
**Synthesis Procedure:**

The polymer was synthesized by anionic polymerization process.

**Characterization:**

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

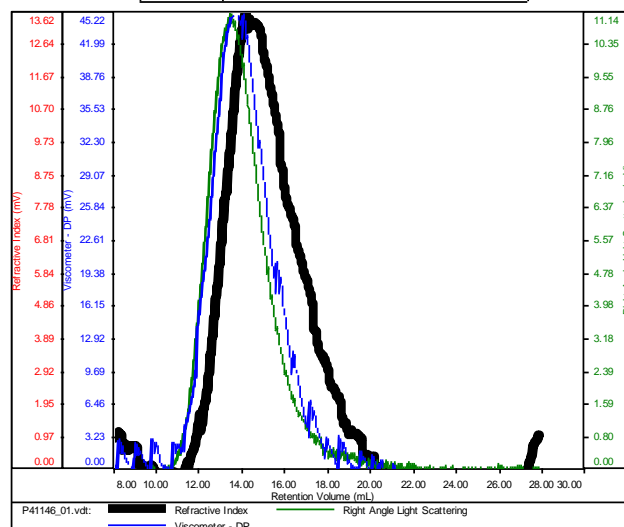
**$^1\text{H}$  NMR spectrum of PMMA:**



**SEC elugram of PMMA homopolymer:**

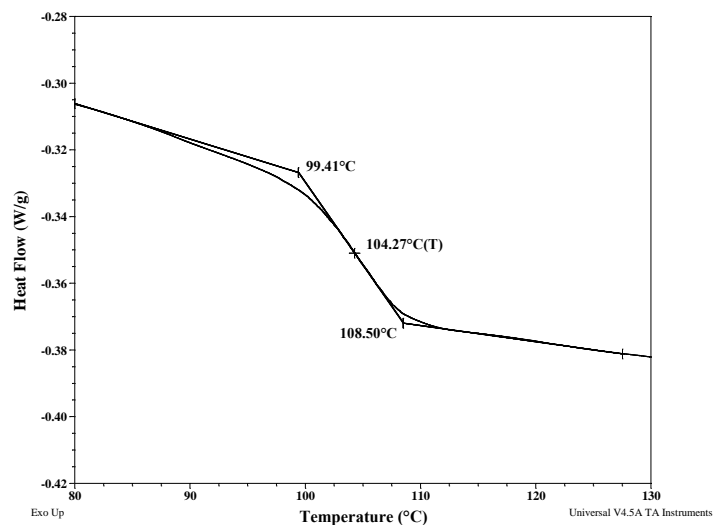
P41146-MMA

Conc	3.0524
dn/dc	0.0650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS-80k_2018-04-02-0000.vcm



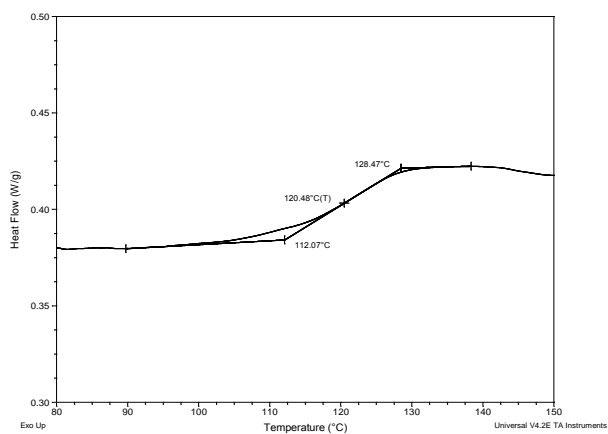
Sample	$M_n$	$M_w$	$M_p$	$M_w/M_n$	IV
P41146_01.vdt	112,190	213,134	217,424	1.900	0.5558

**DSC thermogram of the polymer**

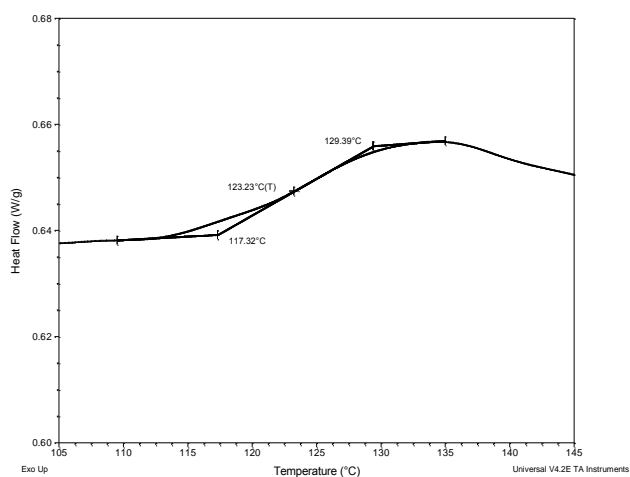


## DSC Thermograms of PMMA:

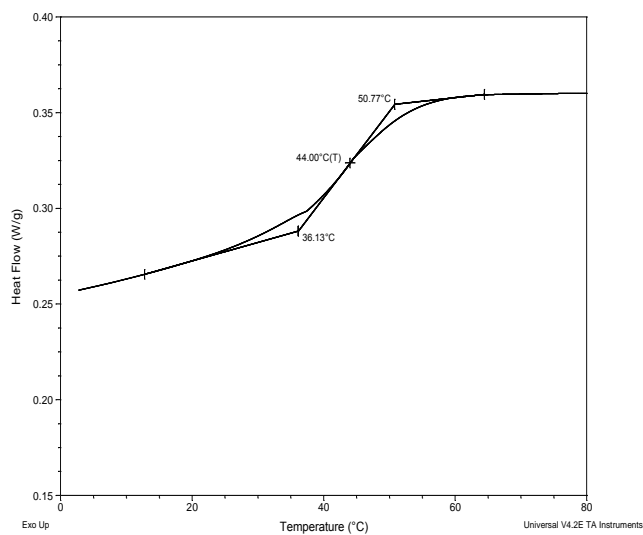
**(a) syndiotactic >79%**



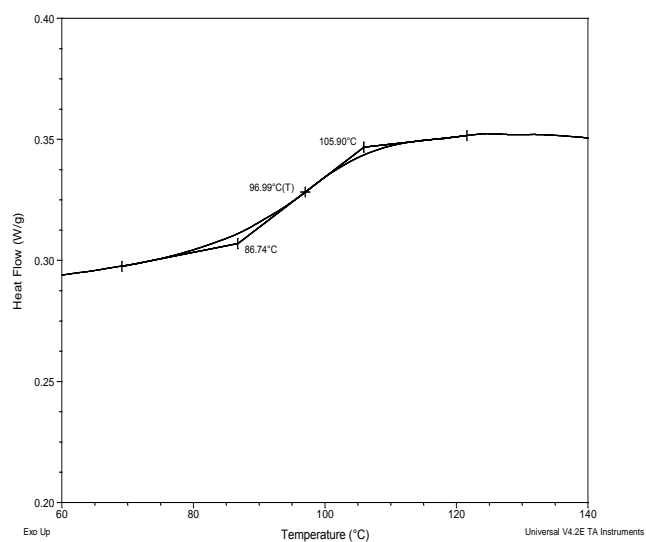
**(b) syndiotactic >85%**



**(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