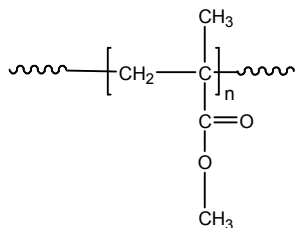


Sample Name: Poly (methyl methacrylate)
Different microstructure

Sample #: **P40539D-MMA**

Structure:



Composition:

$M_n \times 10^3$	PDI
19.5	1.32

Syndio : Hetero : Iso	59:37:4
T_g	82 °C

Synthesis Procedure:

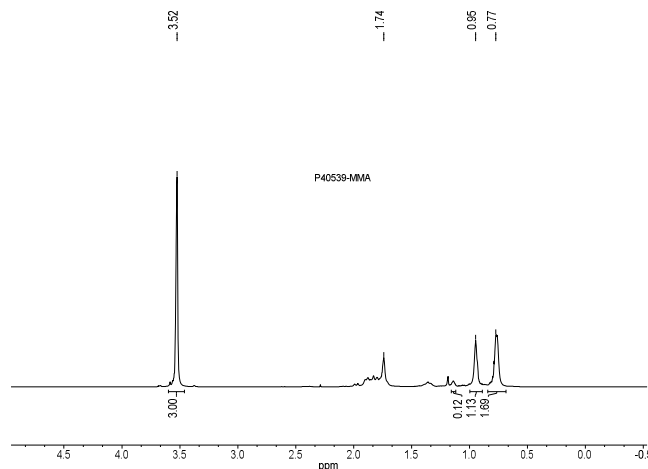
The polymer was synthesized by anionic polymerization.

Characterization:

The product was characterized by size exclusion chromatography (SEC) and ^1H NMR.

Thermal analysis was performed on TA Instruments Q100 differential scanning calorimeter (DSC) under a nitrogen atmosphere. The glass transition temperature (T_g) of the polymer was measured at a scan rate of 10°C/min shortly after creating thermal history of the sample.

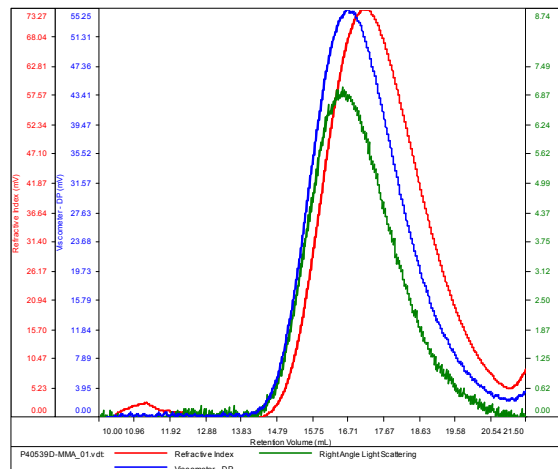
^1H NMR spectrum of PMMA:



SEC elugram of PMMA homopolymer:

P40539D-MMA

Conc	21.2781
dn/dc	0.0650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-March2017-0002.vcm

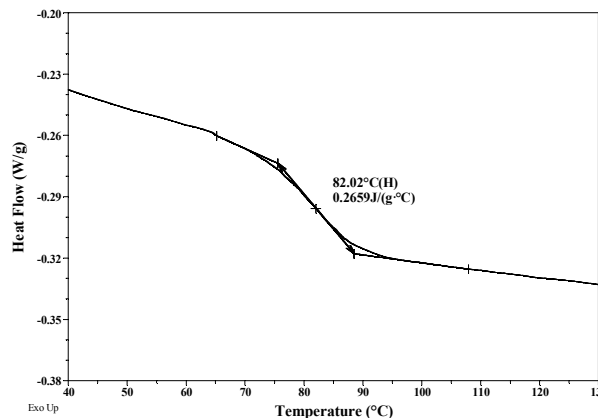


Sample	M_n	M_w	M_p	M_w/M_n	IV
P40539D-MMA_01.vdt	19,245	25,483	24,512	1.324	0.0831

DSC thermogram (2nd heating scan, 10°C/min):

Sample: P40539D-MMA
 Size: 14.5000 mg

File: P40539D-MMA.001

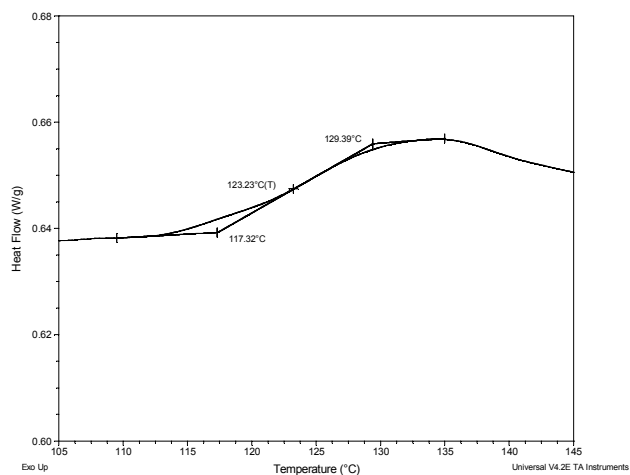


Thermograms of PMMA:

(a) syndiotactic >79%



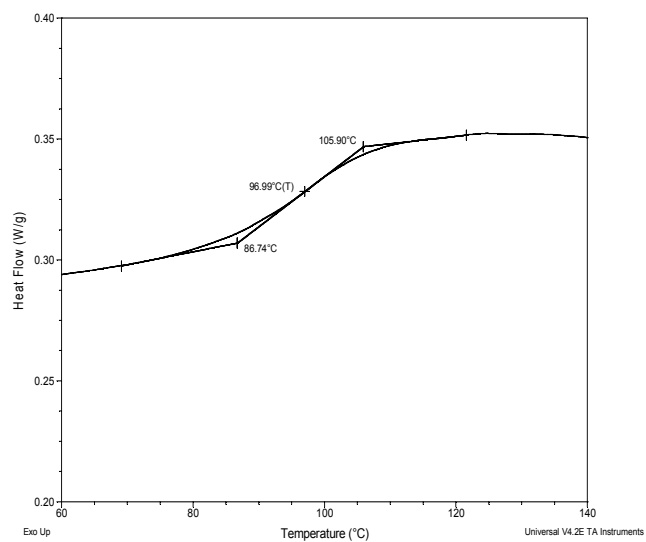
(b) syndiotactic >85%



(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_g (°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