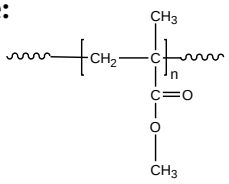
Sample Name: **Poly (methyl methacrylate)**

Different microstructure

Sample #: **P43238-MMA**

Structure:



Composition:

Mn x 10^3	PDI
450.0	1.17

Isotactic: Hetero : Syndio	4:28:68

Synthesis Procedure:

Poly (methyl methacrylate) is obtained by anionic polymerization using Cumyl Potassium initiator.

Characterization:

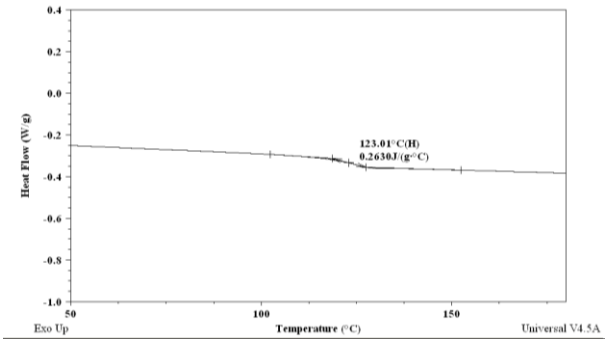
The product was characterized by size exclusion chromatography (SEC) and ^{1}H NMR.

Solubility:

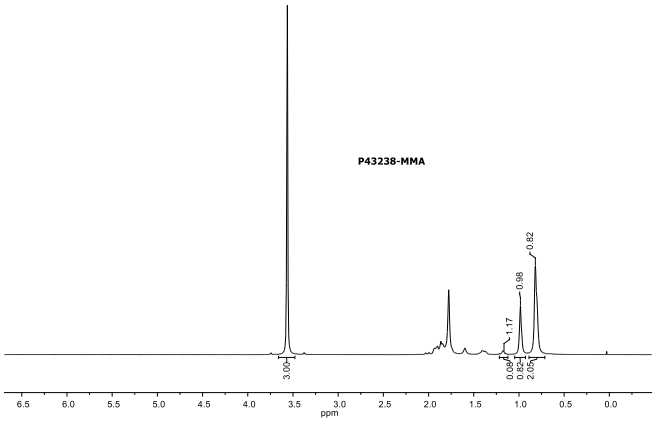
The polymer is soluble in THF, $CHCl_3$, toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

T_g vs MW for selected atactic PMMA:

$M_n \times 10^3$	T_g (°C)	$M_n \times 10^3$	T_g (°C)
1.1	51	36	98
2.5	76	55	111
5.0	91	70	107
15	101	127	115
19	107	230	114
29	96	700	121



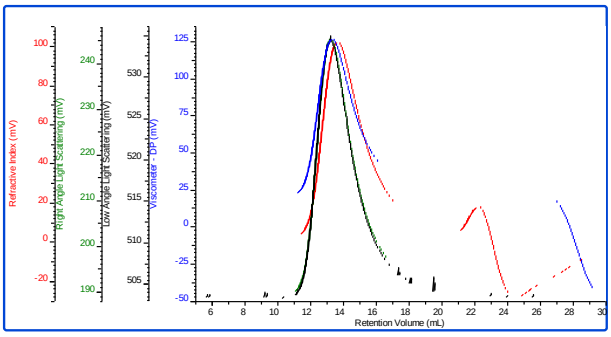
^{1}H NMR spectrum of PMMA Sample:



SEC elugram of PMMA homopolymer:

P43238-MMA

dn/dc	0.0570
Flow Rate	0.7000
Solvent	DMF with LiBr
Method	Calibration_2020-11-25_PMMA-85K-0003.vcm



Sample	Mn	Mw	Mp	Mw/Mn
P43238_1_2021-06-02	449,729	529,657	515,019	1.178

DSC thermogram:

Tg of atactic poly methyl methacrylate as function of molecular weight