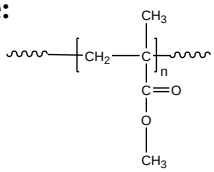
Sample Name: **Poly (methyl methacrylate)**

Different microstructure

Sample #: **P43234-MMA**

Structure:



Composition:

Mn x 10^3	PDI
364.0	1.28

Isotactic: Hetero: Syndio	4.3:37.5:58.2

Synthesis Procedure:

Poly (methyl methacrylate) is obtained by controlled radical polymerization or GTP process.

Characterization:

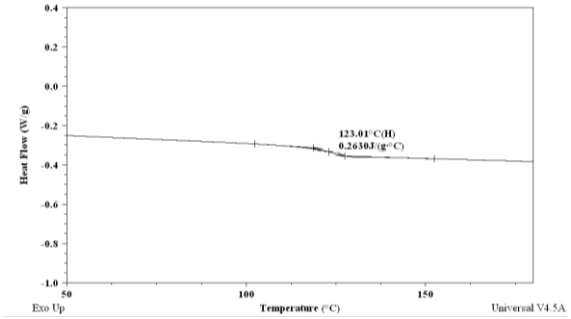
The product was characterized by size exclusion chromatography (SEC) and ^{1}H NMR and DSC termo analysis.

Solubility:

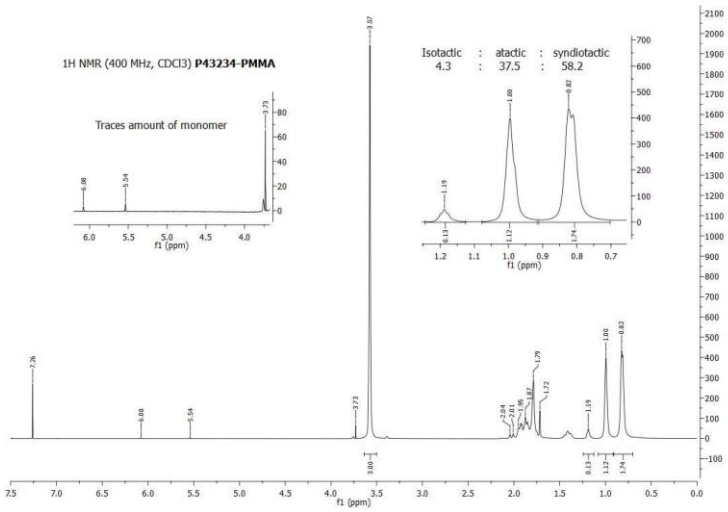
The polymer is soluble in THF, $CHCl_3$, toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

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



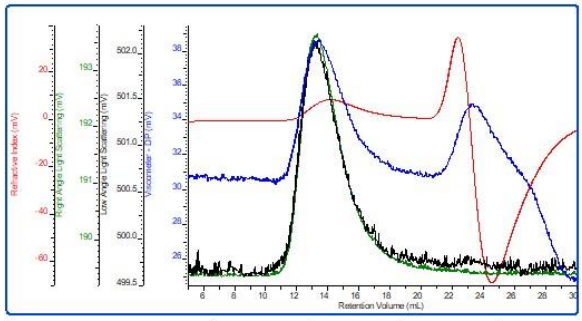
^{1}H NMR spectrum of PMMA Sample:



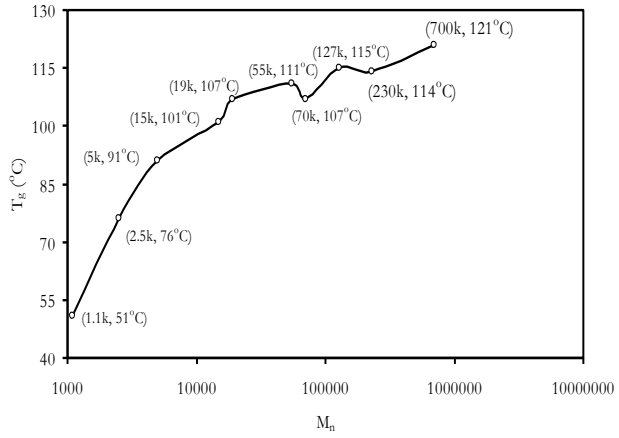
SEC elugram of PMMA homopolymer:

P43234-PMMA

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
P43234-PMMA_1_2021-05	364,026	469,181	389,098	1.289

DSC thermogram:

Tg of atactic poly methyl methacrylate as function of molecular weight