

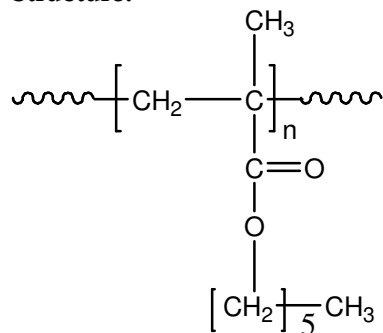
## SEC of Homopolymer:

P5432-nHMA

Sample Name: Poly(n-hexyl methacrylate)

Sample #: P5432-nHMA (by GTP process)

**Structure:**

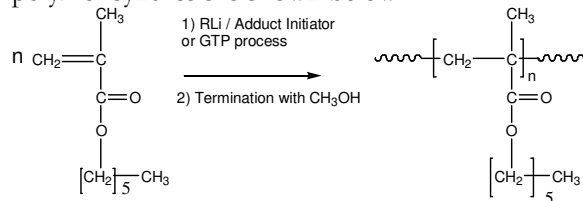


**Composition:**

$M_n \times 10^3$	PDI
28.0	1.7
Sndio: Hetero: iso Contents	53:37:9.5
$T_g$ ( $^{\circ}C$ )	-18

**Synthesis Procedure:**

Poly(n-hexyl methacrylate) is obtained by living anionic or GTP polymerization of n-hexyll methacrylate. The reaction scheme used for the polymer synthesis is shown below:



**Characterization:**

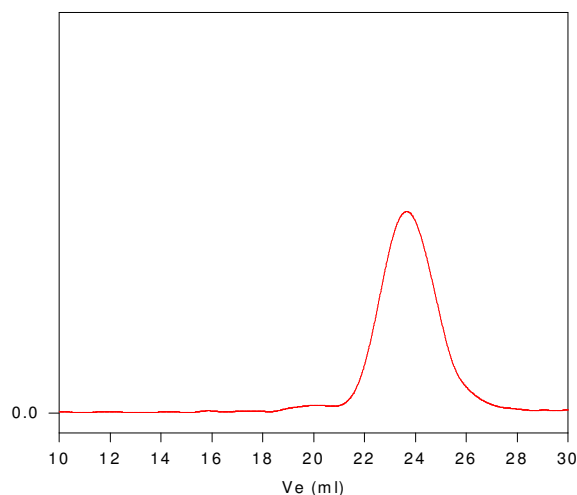
The molecular weight and polydispersity index (PDI) of Poly(n-hexyl methacrylate) are obtained by size exclusion chromatography.

**Thermal analysis of the sample:**

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of  $10^{\circ}C/min$ . The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature ( $T_g$ ).

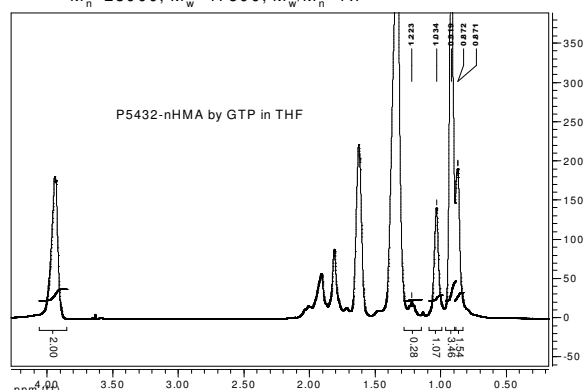
**Solubility:**

Poly(n-hexyl methacrylate) is soluble in THF,  $CHCl_3$ , toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

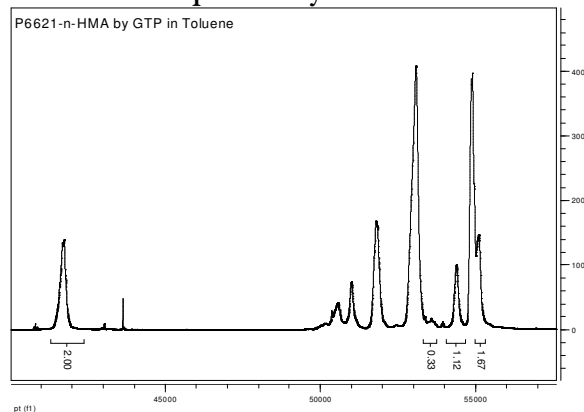


Size exclusion chromatography of poly(n-hexyl methacrylate):

$M_n=28000$ ,  $M_w=47500$ ,  $M_w/M_n=1.7$



**$^1H$  NMR of the product synthesized in Toluene:**



**DSC thermogram for the sample:**

