Sample Name: Poly(n-hexyl methacrylate)

Sample #: P 13205B-nHMA

Structure:

$$CH_3$$

$$CH_2 - C \xrightarrow{C}_n$$

$$C = O$$

$$C = O$$

$$CH_2 \xrightarrow{C}_5 CH_3$$

Composition:

Mn x 10 ³	PDI
130.0	1.10
T _g (°C)	-27
Syndio:heter:: iso ratio	79:14:7

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:

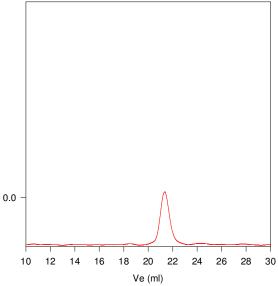
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10° C/min.The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Poly(n-hexyll methacrylate) is soluble in THF, CHCl₃, toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

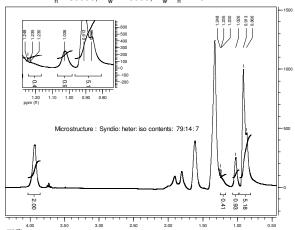
SEC of Homopolymer:

P13205B-nHMA



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

 $M_n = 130000, M_w = 143000, M_w/M_n = 1.10$



DSC thermogram for the polymer:

