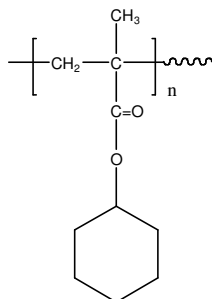


Sample Name: Poly(cyclohexyl methacrylate)

SEC of Sample:

Sample #: P5425-CHMA

Structure:



Composition:

$M_n \times 10^3$	PDI
350.0	1.11
T_g (°C)	103

Synthesis Procedure:

Poly(cyclohexyl methacrylate) is obtained by one of the following technique: by living anionic polymerization or GTP process.

Characterization:

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co. 1H NMR analysis was carried out on Varian instrument at 500MHz.

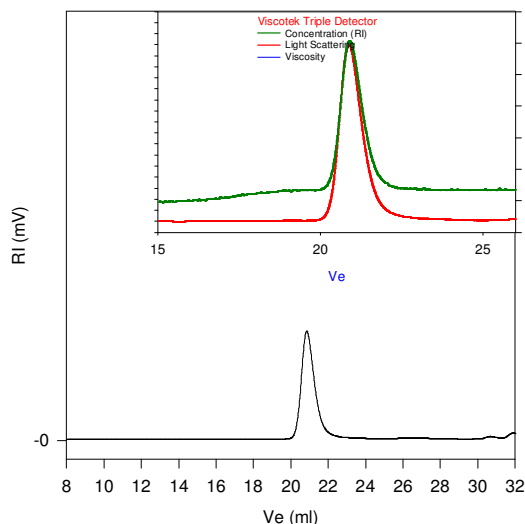
Thermal analysis of the sample:

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(cyclohexyl methacrylate) is soluble in THF, $CHCl_3$, toluene and dioxane. The polymer precipitates from hexanes, methanol and ethanol.

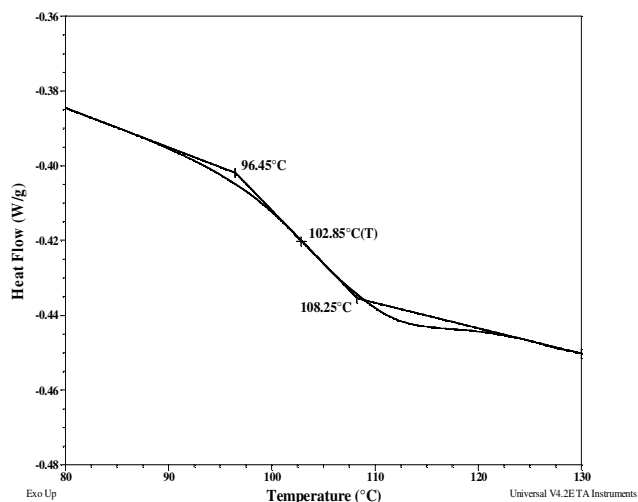
P5425-CHMA



Size Exclusion Chromatography of the Product:

$M_n = 350,000$, $M_w = 388,000$, $M_w/M_n = 1.11$
Solution Viscosity in THF at 35 °C: 0.682 dl/g
 dn/dc in THF at 35 °C: 0.080 ml/g
R_{gw}: 22.35 nm

DSC thermogram for the polymer:



References for further information:

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- Ph. Teyssie, Ph. Bayard, R. Jerome, S. K. Varshney, and J. S. Wang, *35th IUPAC International Union of Pure & Applied Chemistry International Symposium on Macromolecules* 1994, 67.
- Ph. Teyssie, R. Fayt, J. P. Hautekeer, C. Jacobs, R. Jerome, L. Leemans and S. K. Varshney *Makromolekulare Chemie, Macromol. Symp.*, 1990, 32, 61-73.
- S. K. Varshney, J. P. Hautekeer, R. Fayt, R. Jerome, and Ph. Teyssie *Macromolecules*, 1990, 23, 2618-2622.

