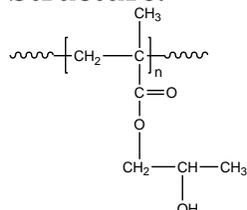


Sample Name: Poly(hydroxyl propyl methacrylate)

Sample #: P3353-HPMA

Polymerization Procedure by ATRP

Structure:

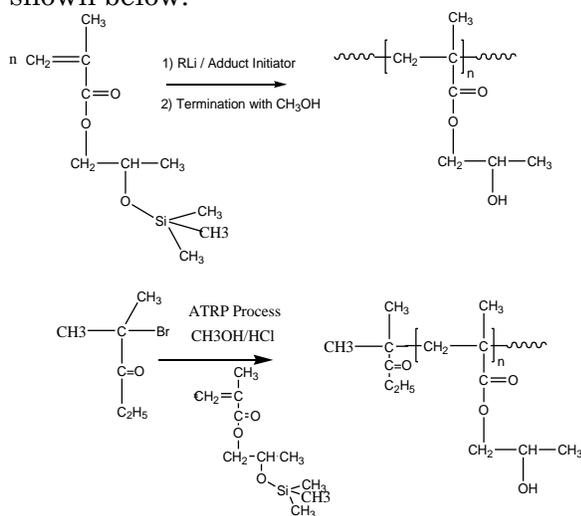


Composition:

$M_n \times 10^3$	PDI
5.0	2.20
T_g (°C)	66

Synthesis Procedure:

Poly(hydroxyl propyl methacrylate) is obtained by living anionic polymerization of trimethyl siloxy protected hydroxyl propyl methacrylate or by control radical polymerization by using **Ethyl α -bromoisobutyrate as a catalyst**. The reaction scheme used for the polymer synthesis is shown below:



Characterization:

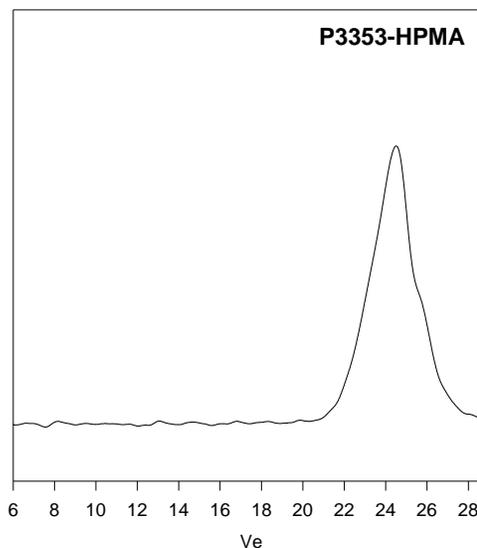
The molecular weight and polydispersity index (PDI) of Poly(hydroxyl propyl methacrylate) are obtained by size exclusion chromatography.

Thermal analysis of the sample was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T_g) has been considered.

Solubility:

Poly(hydroxyl propylmethacrylate) is soluble in DMF and THF.

SEC of Homopolymer:



Size Exclusion Chromatography of Poly(hydroxy propyl methacrylate):
 $M_n = 5000$, $M_w = 11000$, $M_w/M_n = 2.20$

DSC thermogram for the polymer:

