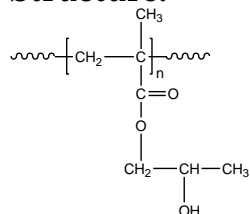


Sample Name: Poly(hydroxyl propyl methacrylate)
Sample #: P3353-HPMA
Polymerization Procedure by ATRP

Structure:

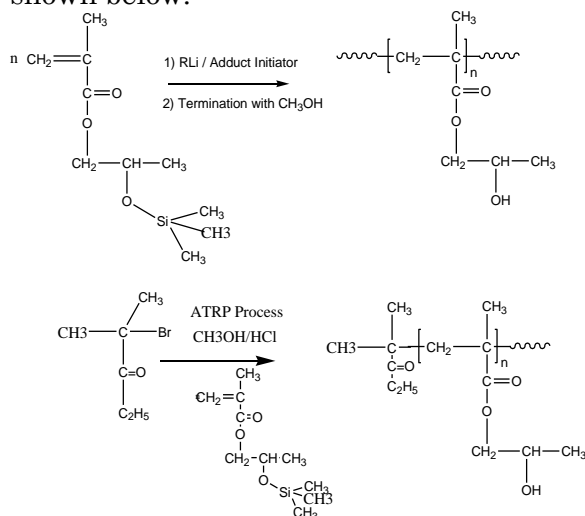


Composition:

| Mn x 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-bromo isobutyrate as a catalyst**. The reaction scheme used for the polymer synthesis is shown below:



Characterization:

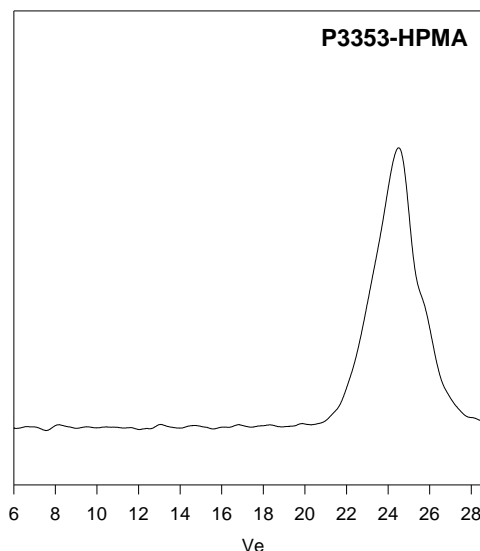
The molecular weight and polydispersity index (PDI) of Poly(hydroxyl propyl methacrylate) are obtained by size exclusion chromatography.

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):
Mn = 5000, Mw = 11000, Mw/Mn: 2.20

DSC thermogram for the polymer:

