

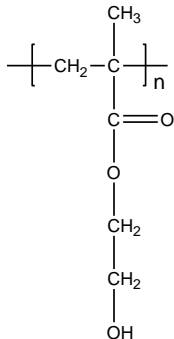
Sample Name:

**Poly (2-hydroxyethyl methacrylate)**

Sample #: **P6623-HEMA**

**(Synthesized by GTP)**

**Structure:**



**Composition:**

$M_n \times 10^3$	PDI
121.0	1.5
$T_g$ ( $^{\circ}\text{C}$ )	104
Microstructures S: H: I	53:40:7

**Synthesis Procedure:**

Poly (2-hydroxyethyl methacrylate) is synthesized by living polymerization (anionic or by GTP process) of 2-(trimethylsilyl) ethyl methacrylate followed by deprotection of hydroxyl group under acidic conditions.

**Characterization:**

The molecular weight and polydispersity index (PDI) of Poly (2-hydroxyethyl methacrylate) are obtained by size exclusion chromatography.

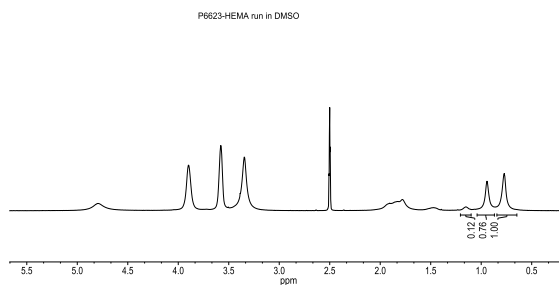
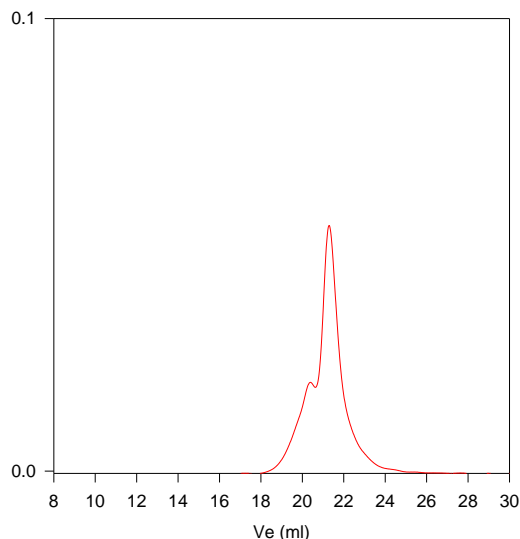
**Thermal analysis**

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of  $10^{\circ}\text{C}/\text{min}$ . 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 (2-hydroxyethyl methacrylate) is soluble in ethanol, DMF etc. But it is insoluble in hexane, toluene, THF, and water.

**SEC of Homopolymer:**

**P6623-HEMA**



**DSC thermogram for the homopolymer:**

