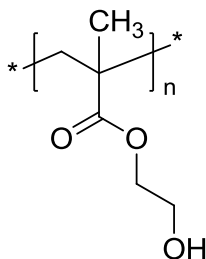


Sample Name: Poly (2-hydroxyethyl methacrylate)

Sample # P6601-HEMA

Structure:



Composition:

| Mn x 10 ³ (g/mol) | Mw/Mn |
|------------------------------|-------|
| 11.6 | 1.09 |

| T _g (°C): | 111 °C |
|----------------------------|---------|
| Microstructure: S: h: I | 76:23:1 |

Synthesis Procedure:

Poly (2-hydroxyethyl methacrylate) was synthesized by living polymerization using 2-(trimethylsilyl)-ethyl methacrylate, followed by deprotection of hydroxyl group under acidic conditions.

Characterization:

The molecular structure was confirmed by ¹H NMR spectroscopy analysis. The molecular weight and polydispersity index (M_w/M_n) of poly(2-hydroxyethyl methacrylate) were obtained by size exclusion chromatography (SEC).

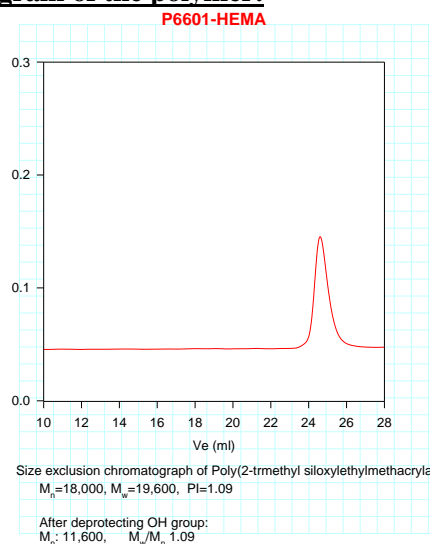
Thermal Analysis:

Thermal analysis was performed on TA Instruments Q100 differential scanning calorimeter (DSC) under a nitrogen atmosphere. The glass transition temperature (T_g) of the polymer was measured at a scan rate of 10°C/min shortly after creating thermal history of the sample.

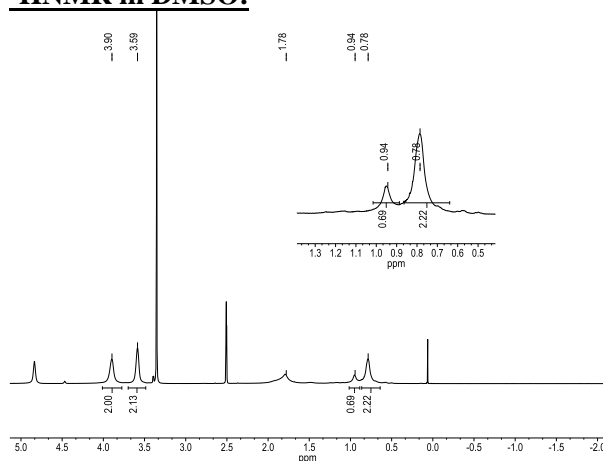
Solubility:

Poly (2-hydroxyethyl methacrylate) is soluble in DMF, ethanol; and it is insoluble in hexane, toluene, THF, and water.

SEC elugram of the polymer:



¹H NMR in DMSO:



DSC thermogram (2nd heating scan, 10°C/min):

