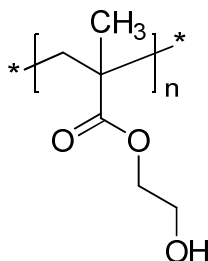


Sample Name: Poly (2-hydroxyethyl methacrylate)

Sample # P10843-HEMA

(Note: Synthesized by anionic process.)

Structure:



Composition:

Mn x 10 ³ (g/mol)	Mw/Mn
16.0	1.3
T _g (°C):	97 °C
Microstructures: S: H: I	69;28:3

Synthesis Procedure:

Poly(2-hydroxyethyl methacrylate) was synthesized by living anionic 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:

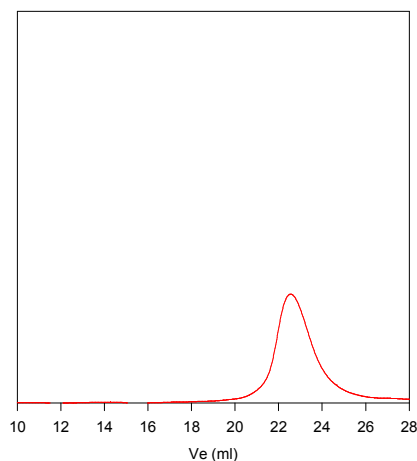
Thermal analysis was performed on TA Instruments Q100 differential scanning calorimeter (DSC) under a nitrogen atmosphere. The glass transition temperature (T_g) of the polymer was measured at a scan rate of 10°C/min shortly after creating thermal history of the sample.

Solubility:

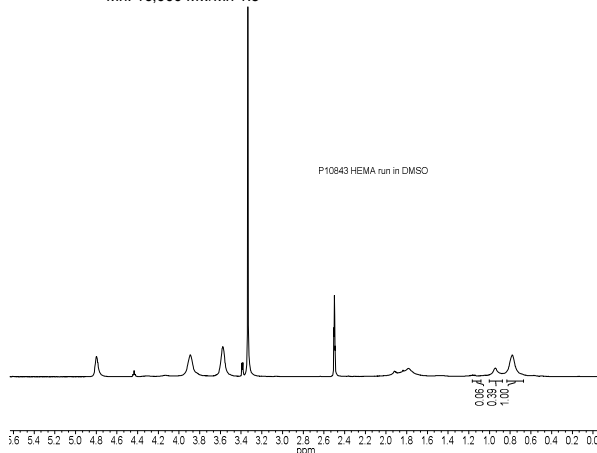
Poly (2-hydroxyethyl methacrylate) is soluble in DMF, ethanol; and it is insoluble in hexane, toluene, THF, and water.

SEC elugram of the polymer:

P10843-HEMA



Size exclusion chromatograph of Poly(2-trimethyl siloxylethylmethacrylate):
M_n=25,000, M_w=32,500, PI=1.3
After deprotecting OH group:
Mn: 16,000 Mw/Mn 1.3



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

Sample: P10843_HEMA
Size: 20.6000 mg

DSC

File: P10843_HEMA_after drying.001

