

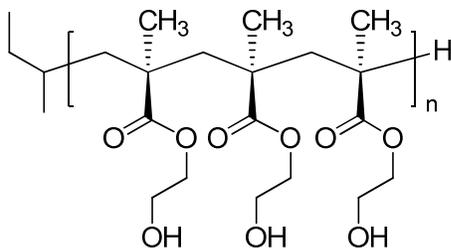
Sample Name:

Poly (2-hydroxyethyl methacrylate), isotactic rich

Sample # **P40340-HEMAiso**

(Note: Synthesized by anionic process.)

Structure:



Composition:

Mn x 10 ³ (g/mol)	Mw/Mn
51.0	1.6
T _g (°C):	53 °C
Microstructures: S:H:I	5:10:85

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:

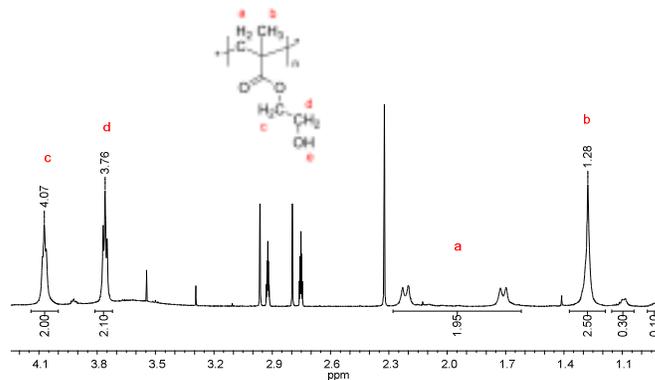
The molecular structure was confirmed by ¹H NMR spectroscopy analysis. The molecular weight and polydispersity index (M_w/M_n) of poly(2-hydroxyethyl methacrylate) were obtained by size exclusion chromatography (SEC) using DMF as an eluent.

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.

¹H NMR (500 MHz, DMF-d₇) spectrum:

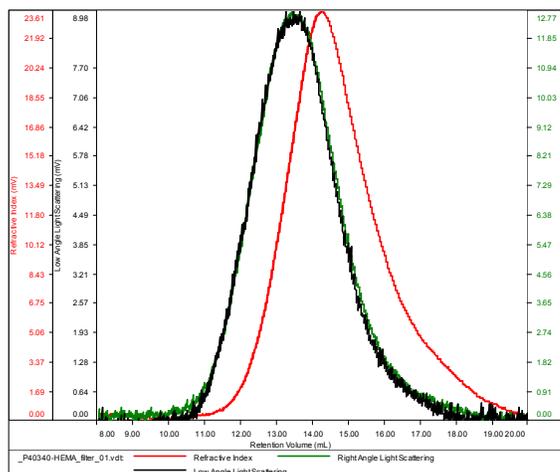
¹H NMR (500 MHz, DMF-d₇): P40340-HEMA



SEC elugram of the polymer in DMF:

P40340-HEMA

Conc (mg/mL)	2.4143
dn/dc (mL/g)	0.1650
Method	PS80k_December-2016-0004.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mp	Mw/Mn	IV
_P40340-HEMA_filter_01.vdt	50,820	82,374	62,797	1.621	0.4798

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

