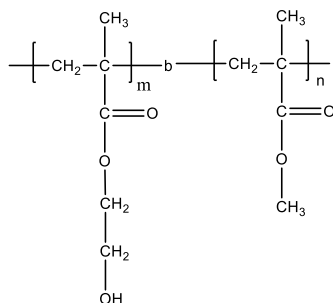


**Sample Name:** Poly(2-hydroxy ethyl methacrylate-b- methylmethacrylate)

**Sample #:** P13150-HEMAMMA

**Structure:**



**Composition:**

Mn × 10 <sup>3</sup> HEMA -b- MMA	PDI
30.5-b-41.0	1.95

**Synthesis Procedure:**

Poly(2-hydroxy ethyl methacrylate-b-methylmethacrylate) block copolymer is synthesized by living anionic polymerization with sequence addition of protecting hydroxyl HEMA (i.e. trimethyl siloxy ethyl methacrylate) and methyl methacrylate. The obtained polymer was precipitated into methanol/acidic water to deprotect the hydroxyl group.

**Characterization:**

The molecular weight and dispersity of deblock copolymer was determined by SEC using DMF/LiBr as eluent. The final block copolymer composition was determined by <sup>1</sup>H-NMR spectroscopy in DMF-d<sub>7</sub>.

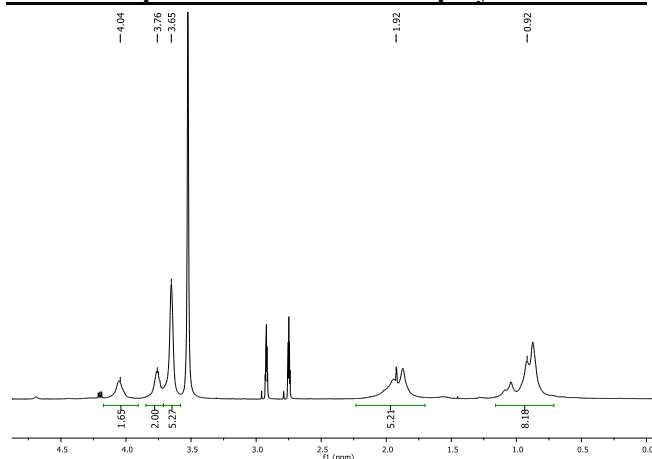
**Thermal analysis:**

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/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<sub>g</sub>).

**Solubility:**

The polymer is soluble in DMF and Acetone.

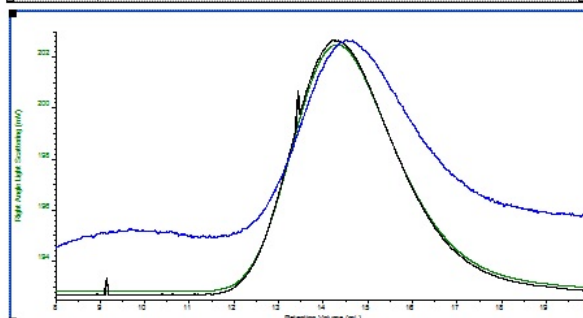
**<sup>1</sup>H-NMR Spectrum of the block copolymer in DMF**



**SEC of the block copolymer:**

P13150-HEMAMMA

dn/dc	0.0650
Flow	0.7000
Solvent	DMF with LiBr
Method	PSS column-PMMA60K-Jan3-2019-0002.vcm



Sample	Mn	Mw	Mz	IV	Mw/Mn
P13150 1 201	71,293	139,137	288,825	0.3482	1.952