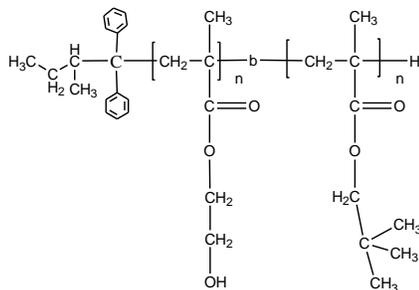


**Sample Name:** Poly (2-hydroxyethyl methacrylate)-b-neopentyl methacrylate)

**Sample #:** P3963-HEMANPMA

**Structure:**



**Composition:**

$M_n \times 10^3$ HEMA-b-NPMA	PDI
6.8-b-370.0	1.15
54 units per HEMA block	$T_g$ for NPMA block: 122 °C

**Synthesis:**

The diblock copolymer was synthesized by anionic polymerization process.

**Characterization:**

The polymer was characterized by size exclusion chromatography (SEC).

**Thermal analysis**

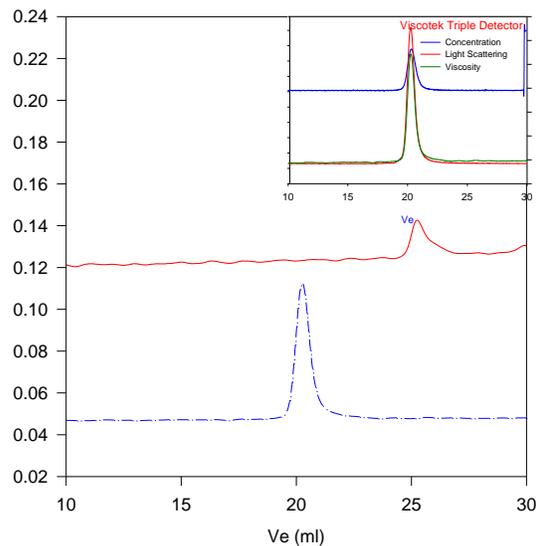
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature ( $T_g$ ).

**Solubility:**

Poly(2-hydroxy ethyl methacrylate-b-neopentyl methacrylate) is soluble in DMF, THF and  $CHCl_3$  (depends upon block composition) but insoluble in water. The polymer is insoluble in hexane while HEMA chain is too long.

**SEC of the block copolymer:**

**P3963-HEMANPMA**



Size Exclusion Chromatography of poly(HEMATMS-NPMA):

- PolyTrimethylsiloxy hydroxy ethylmethacrylate  
 $M_n=6800$ ,  $M_w=7500$ ,  $M_w/M_n=1.08$ ,
- - - Diblock Copolymer PHEMATMS(6800)-b-PNPMA(370000),  $M_w/M_n=1.15$   
 $R_g = 28.20nm$ ,  $[\eta] = 1.434$  (dL/g) (in THF at 30°C)  
(Viscotek Triple detector vlaue)  
After hydrolysis:  
PHMA-b-NPMA Dp: 32 units-b-2372

**DSC thermogram for NPMA block:**

