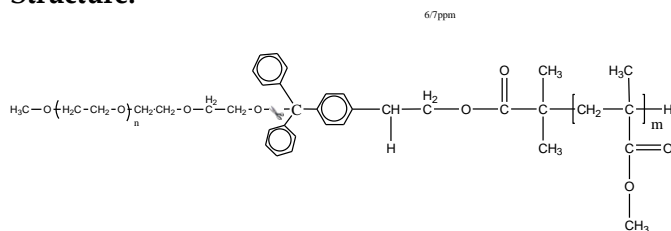


**Sample Name:** Acid Cleavable Poly(ethylene oxide-b-MMA)

**Sample #:** P9669A-EOMMA cleavable

**Structure:**



**Composition:**

Mn × 10 <sup>3</sup> PEO-b-PMMA	PDI
5.0-b-85.0	1.35
T <sub>g</sub> for MMA block: 108°C	T <sub>g</sub> for EO block: not found

**Synthesis Procedure:**

Proprietary procedure.

**Characterization:**

PEG-Br and final block copolymer were analyzed by size exclusion chromatography (SEC) to obtain the molecular weight of PEG and polydispersity index (PDI) for both PEG and block copolymer. The final block copolymer composition was calculated from <sup>1</sup>H-NMR spectroscopy by comparing the peak area of the ethylene oxide protons at about 3.6 ppm with the benzene ring protons at about 6-8 ppm.

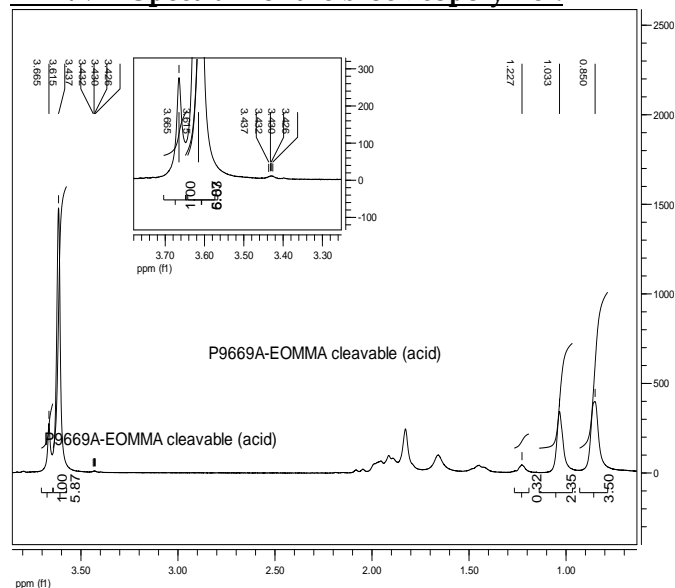
**Thermal analysis:**

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:**

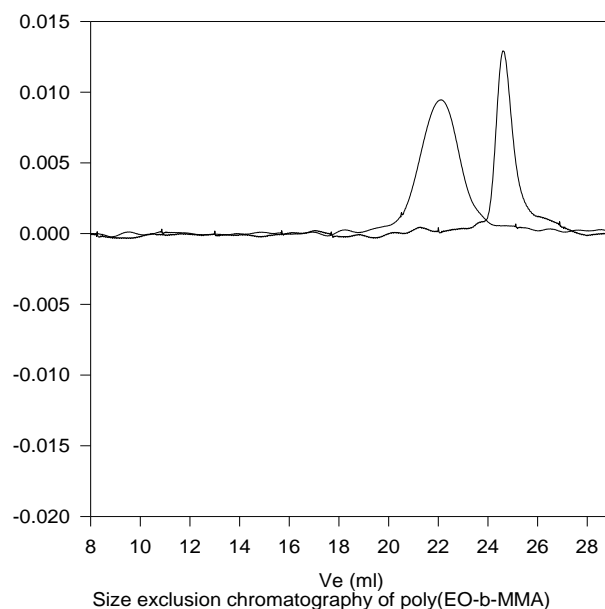
Poly(ethylene oxide-b-MMA) is soluble in THF, acetone, and chloroform and it precipitates out in hexane or methanol.

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



**SEC of the block copolymer:**

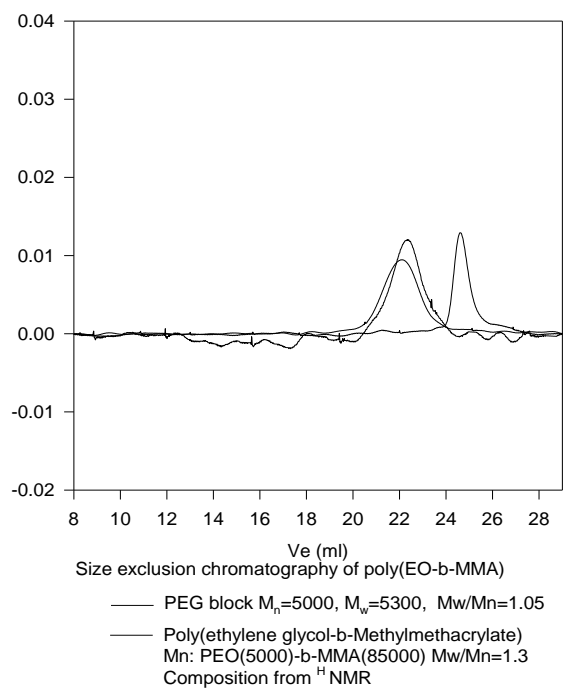
**P9669A-EOMMA Cleavable**



— PEG block M<sub>n</sub>=5000, M<sub>w</sub>=5300, M<sub>w</sub>/M<sub>n</sub>=1.05  
 — Poly(ethylene glycol-b-Methylmethacrylate)  
 Mn: PEO(5000)-b-MMA(85000) M<sub>w</sub>/M<sub>n</sub>=1.3  
 Composition from <sup>1</sup>H NMR

## SEC after acid Cleavage:

**P9669-EOMMA Cleavable**



## DSC thermogram for the MMA block:

