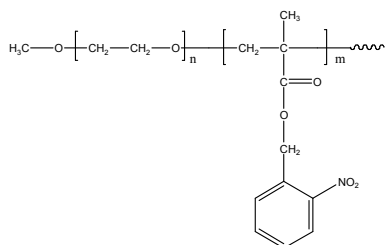


Sample Name: Poly(ethylene oxide-b-Nitro benzyl methacrylate)

NBMA= Nitro benzyl methacrylate

Sample #: P13015-EONBMA

Structure:

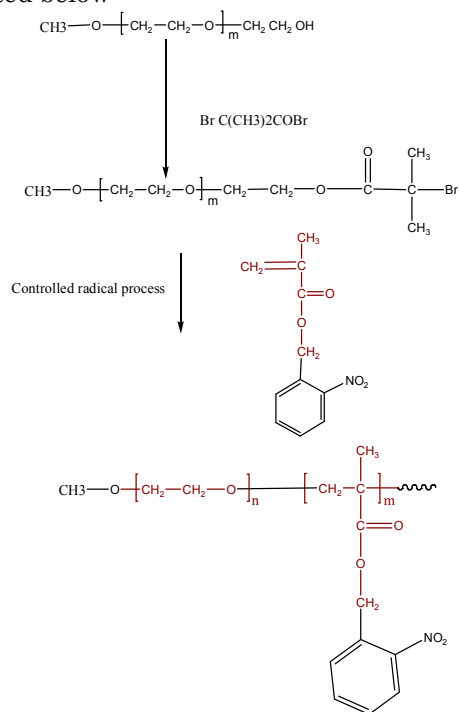


Composition:

Mn × 10 ³ PEO-b-PNBMA	PDI
5.0-b- 1.0	1.3

Synthesis Procedure:

Poly(ethylene oxide-b-NBMA) is prepared by ATRP using bromo-terminated poly(ethylene glycol) as the macro-initiator. The scheme of the reaction is illustrated below:



Characterization:

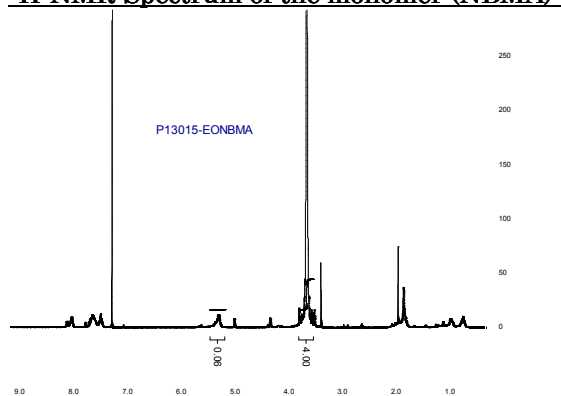
PEG-Br and final block copolymer were analyzed by size exclusion chromatography (SEC) to obtain the molecular weight of PEG and polydispersity index (PDI) for both PEG and block copolymer. The final block copolymer composition was calculated from ¹H-NMR spectroscopy by comparing the peak area of the ethylene oxide protons at about 3.6 ppm with the benzyl protons at about 5.3 ppm. The molecular

weights calculated was found higher than the values obtained by SEC using PMMA as reference material.

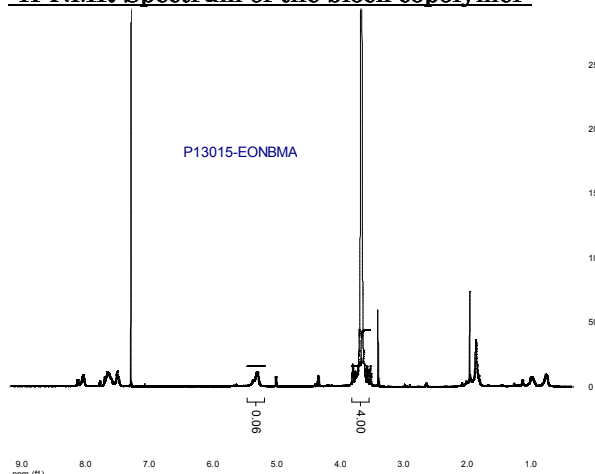
Solubility:

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

¹H-NMR Spectrum of the monomer (NBMA):



¹H-NMR Spectrum of the block copolymer:



SEC of the block copolymer:

