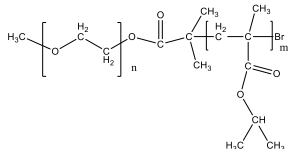


Sample Name: Poly(ethylene oxide)-b-Poly(isopropyl methacrylate)

Sample #: P43957A-EOisoPrMA

Structure:

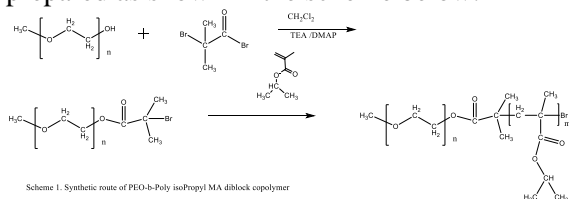


Composition:

Mn x 10 ³ PEO-b-IsoPrMA	PDI
5.0-b-5.0	1.33

Synthesis Procedure:

Poly(Ethylene oxide- isopropyl methacrylate) is prepared as shown in the scheme below:



Scheme 1. Synthetic route of PEO-b-Poly(isopropyl MA) diblock copolymer

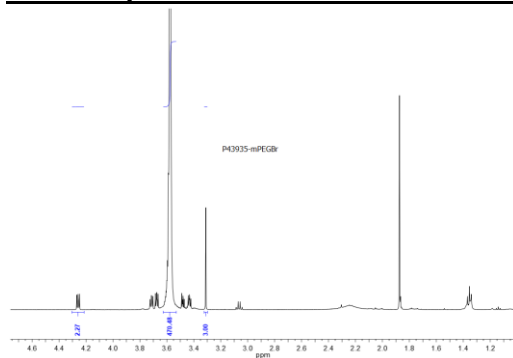
Characterization:

Polymer composition was determined by H NMR taking the integration of PEG block at 3.66 ppm and methyl ester of PMMA block at 3.62 ppm. Molecular weights of the first block and the Mw/Mn of the final and the first block was determined by SEC in THF.

Solubility:

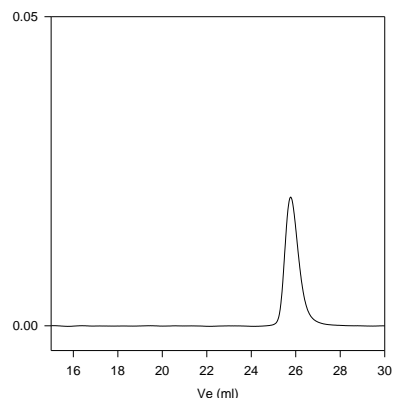
Poly(ethylene oxide -b- isoPrMA) is soluble in CHCl₃, THF, toluene. The polymer precipitated out from hexane.

H NMR spectrum of the PEGBr Mn of 5000:



SEC profile of the PEG Sample:

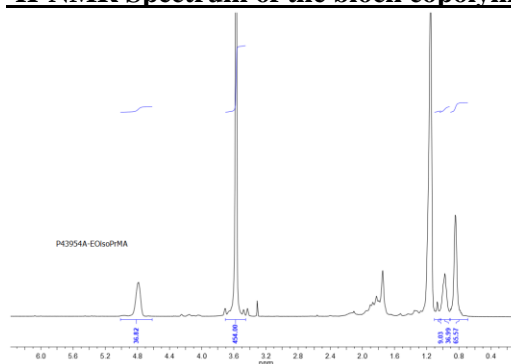
P43935-EGOCH3Br



Size exclusion chromatography:

— Bromo terminated Poly(ethylene glycol methyl ether),
M_n=5,000, M_w=5,400, PDI=1.06

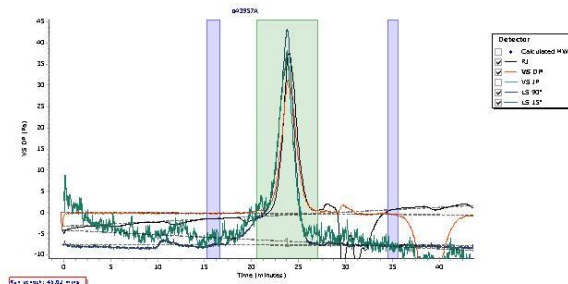
¹H-NMR Spectrum of the block copolymer:



SEC of the block copolymer:

p43957A

Chromatogram Plot



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PDI
------	------------	------------	------------	------------	--------------	------------	-----

Peak 1	13178	10295	13707	18041	24030	16389	1.331
--------	-------	-------	-------	-------	-------	-------	-------