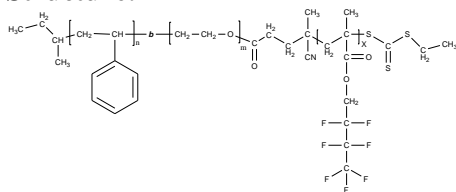


Sample Name: Poly (styrene-b-ethylene oxide-b-Hepta fluorobutylmethacrylate)

Sample #: P41628B-SEOHFBMA

Structure:



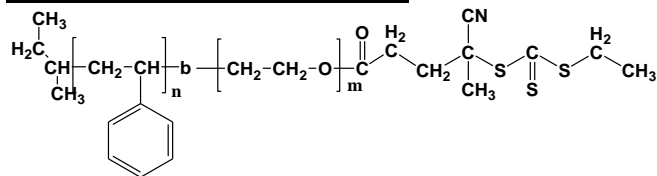
Composition:

Mn x 10 ³ S-b-EO-b-HFBMA	PDI
12.0-b-6.0-b-3.5	1.04

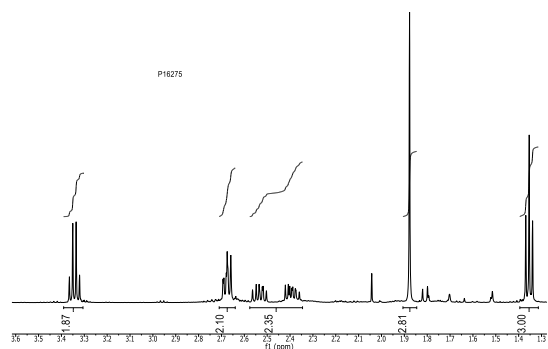
Synthesis Procedure:

The polymer was prepared by combination of anionic and RAFT polymerization process.

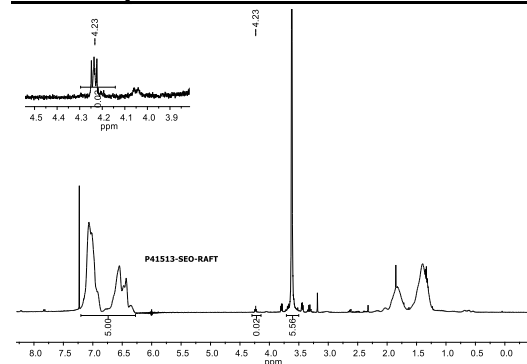
RAFT macroinitiator structure:



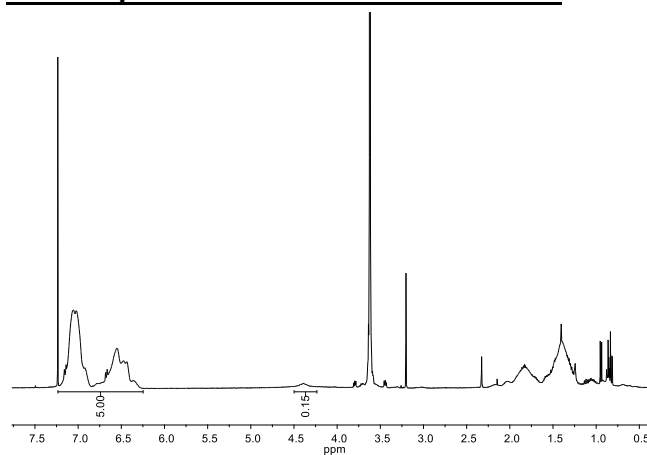
¹H NMR spectrum of the RAFT macroinitiator:



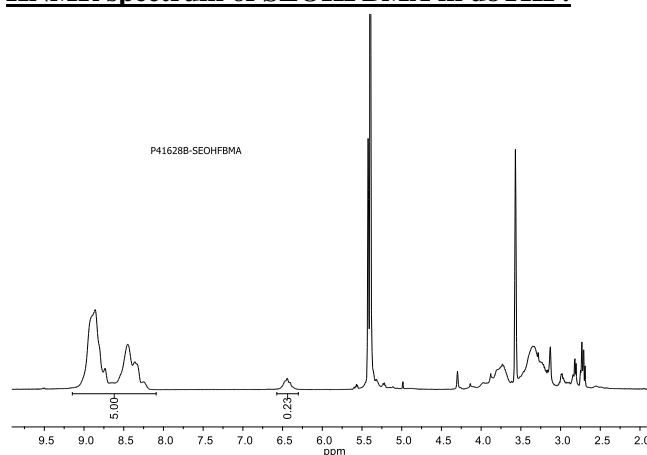
HNMR spectrum of SEO-terminated with RAFT



HNMR spectrum of SEOHFBMA in CdCl3:



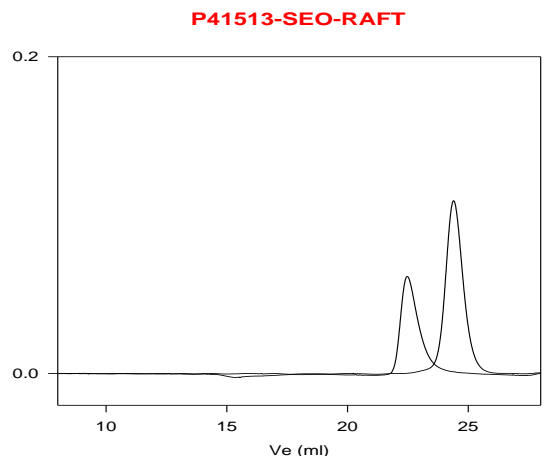
HNMR spectrum of SEOHFBMA in d8THF:



HNMR analysis of the triblock copolymer:

HNMR analysis in CdCl₃, D₆ Acetone gives ambiguity compositions of HFBMA moiety. Following are the results in CdCl₃. THF was found the good solvent for the determination of HFBMA composition in triblock copolymer.

SEC elugram of SEO-terminated with RAFT:

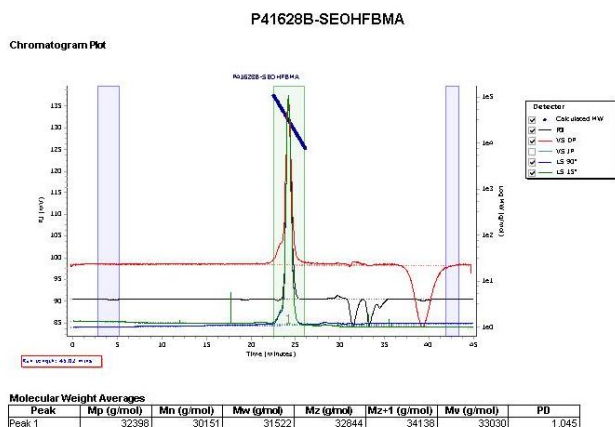


Size Exclusion Chromatography:

- Polystyrene, $M_n=12,000$, $M_w=12,300$, $PI=1.02$
- Block Copolymer Polystyrene-*b*-Poly(ethylene oxide)
- M_w : PS(12,000)-*b*-PEO(6,000), $PI=1.10$

SEC elugram of the SEOHFBMA Sample:

Agilent GPC/SEC Software



GPC analysis of the triblock copolymer:

GPC of the final polymer shows elution counts retarded in comparison to SEO RAFT diblock copolymer. From GPC only, molecular weight distribution calculated and compositions from its HNMR analysis.

Furthermore, Homo poly 2,2,3,3,4,4-Heptafluorobutyl methacrylate polymer shows negative dn/dc in THF.