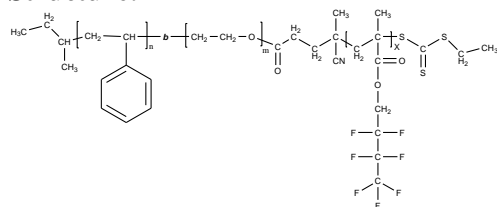


Sample Name: Poly(styrene-b-ethylene oxide-b-2,2,3,3,4,4-Heptafluorobutyl methacrylate)

Sample #: P41572-SEOHFBMA

Structure:



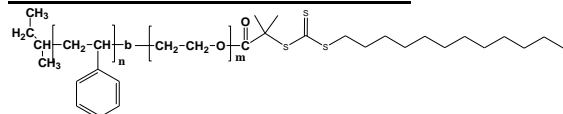
Composition:

Mn x 10 ³ S-b-EO-b-HFBMA	PDI
13.0-b-6.5-b-3.5	1.07

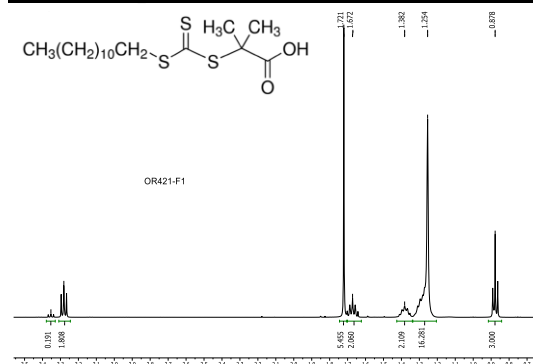
Synthesis Procedure:

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

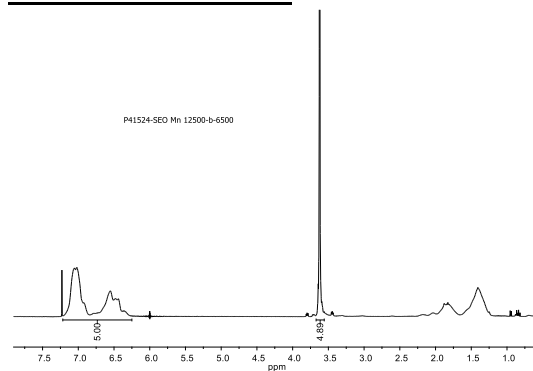
RAFT macroinitiator structure:



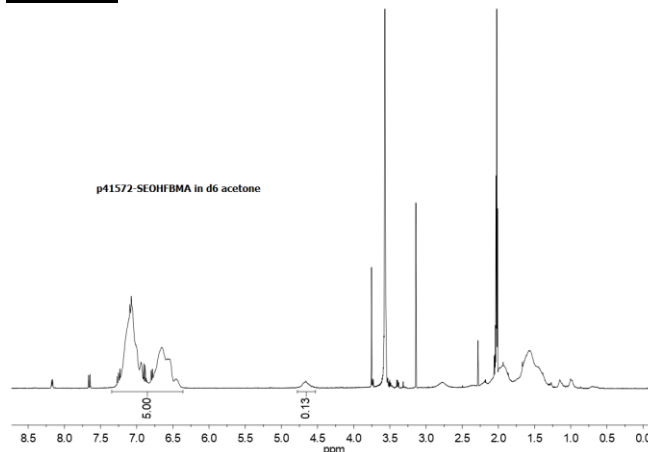
¹H NMR spectrum of the RAFT macroinitiator:



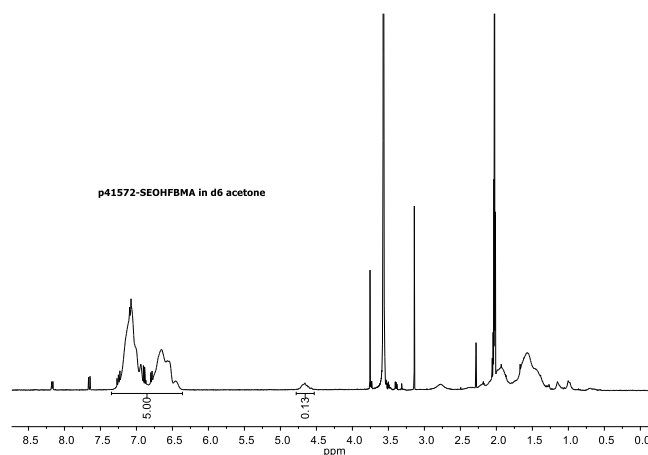
¹H NMR spectrum of the SEO Sample in CdCl₃: LotP41524-SEORRAFT



HNMR spectrum of the SEOHFBMA Sample in d6-Acetone:



HNMR spectrum of the SEOHFBMA Sample in d8-THF

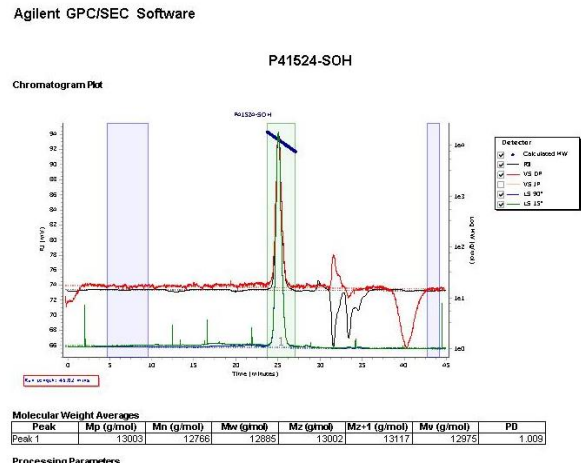


HNMR analysis of the triblock copolymer:

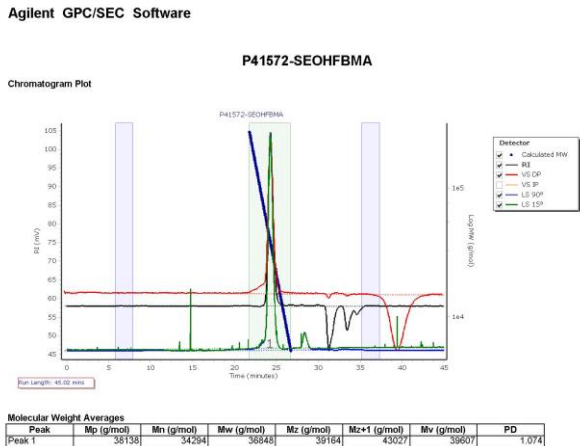
HNMR analysis in CdCl₃, D6 Acetone gives ambiguity compositions of HFBMA moiety.

Following are the results in CdCl₃ or acetone. THF was found the good solvent for the determination of HFBMA composition in triblock copolymer.

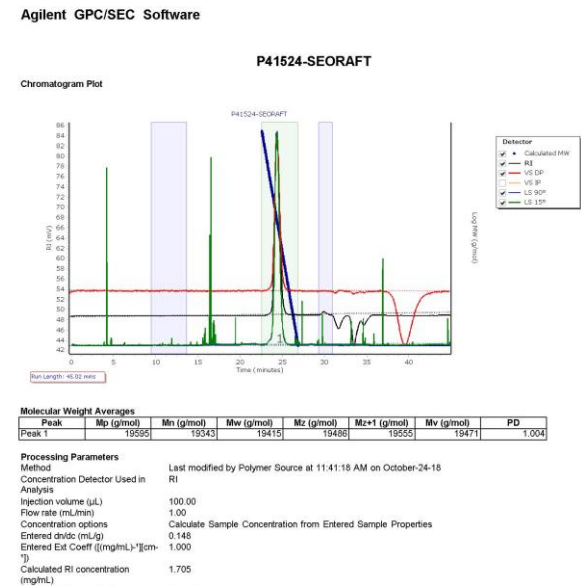
SEC profile of the SOH Sample:



SEC elugram of the Sample:



SEC elugram of the SEO-RAFT Sample:



Solubility in Different solvents:

CHCL3	Insoluble
THF	Clear at 35 °C
Acetone	Soluble at Room temperature
DMF	Insoluble

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.