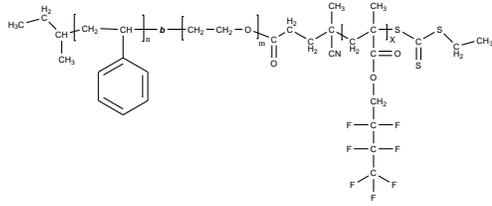


Sample Name: Poly(styrene-b-ethylene oxide-b-2,2,3,3,4,4-Heptafluorobutyl methacrylate)

Sample #: P41572-SEOHFBMA

Structure:



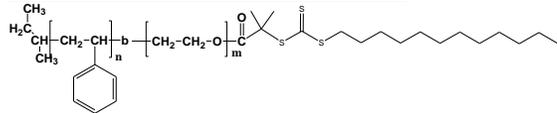
Composition:

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

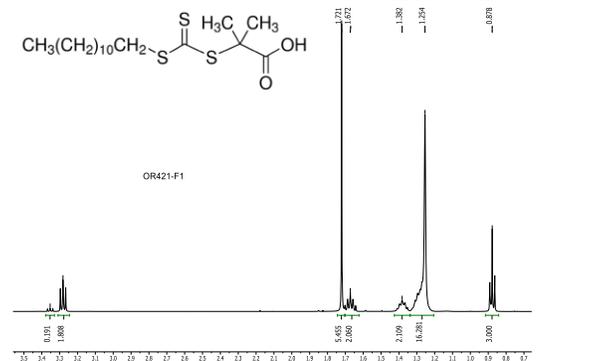
Synthesis Procedure:

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

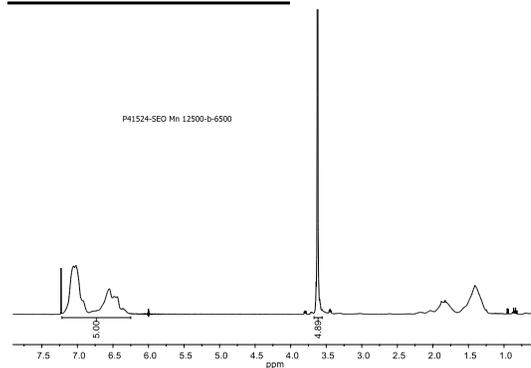
RAFT macroinitiator structure:



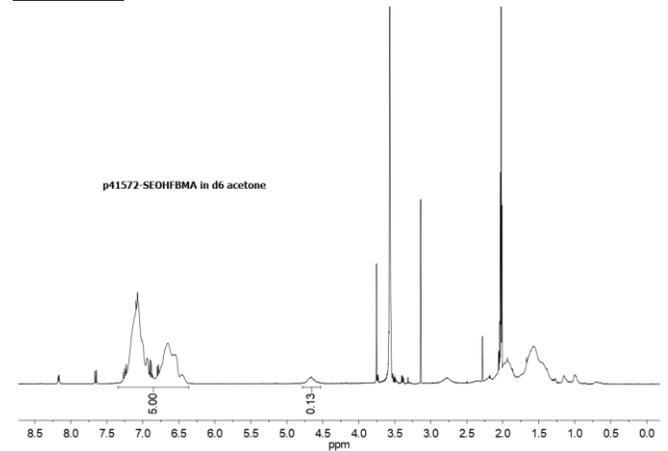
¹H NMR spectrum of the RAFT macroinitiator:



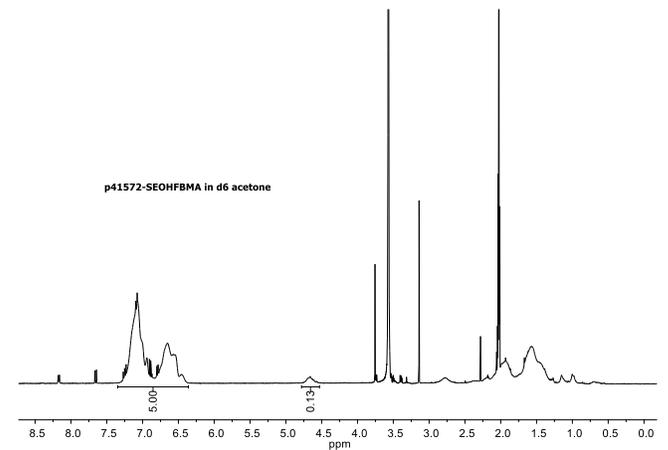
**¹H NMR spectrum of the SEO Sample in CdCl₃:
LotP41524-SEORAF**



HNMR spectrum of the SEOHFBMA Sample in d6-Acetone:



HNMR spectrum of the SEOHFBMA Sample in d8-THF

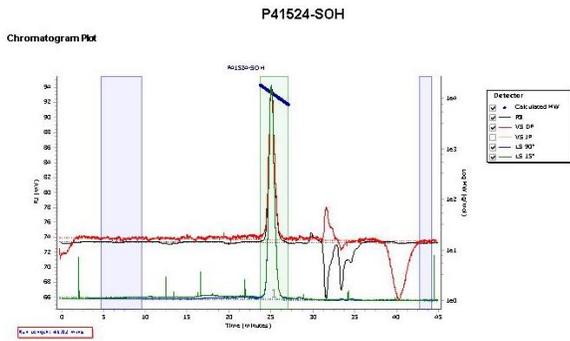


HNMR analysis of the triblock copolymer:

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:

Agilent GPC/SEC Software

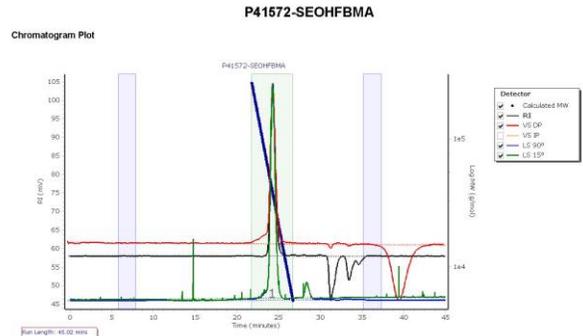


Molecular Weight Averages							
Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	13003	12768	12895	13002	13117	12975	1.009

Processing Parameters

SEC elugram of the Sample:

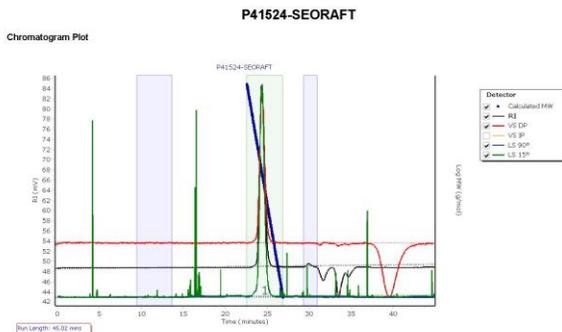
Agilent GPC/SEC Software



Molecular Weight Averages							
Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	38139	34294	35048	39184	43027	39507	1.074

SEC elugram of the SEO-RAFT Sample:

Agilent GPC/SEC Software



Molecular Weight Averages							
Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	19595	19343	19475	19468	19555	19471	1.004

Processing Parameters

Method: Last modified by Polymer Source at 11:41:18 AM on October-24-18
 Concentration Detector Used in Analysis: RI
 Injection volume (µL): 100.00
 Flow rate (mL/min): 1.00
 Concentration options: Calculate Sample Concentration from Entered Sample Properties
 Entered dn/dc (mL/g): 0.148
 Entered Ext Coeff ((mg/mL)⁻¹cm⁻¹): 1.000
 Calculated RI concentration (mg/mL): 1.705

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.