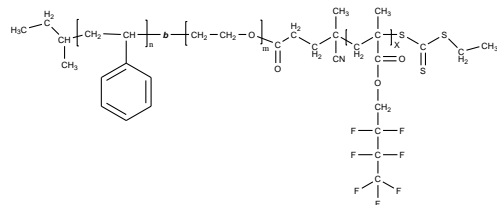Sample Name: **Poly (styrene-b-ethylene oxide-b-Hepta flurobutylmethacrylate)**

Sample #: **P41517G-SEOHFBMA**

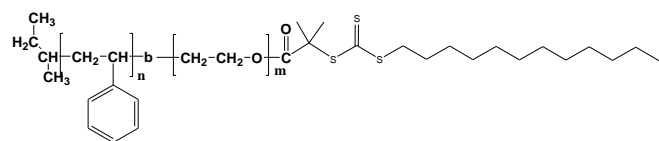**Structure:**

Composition:

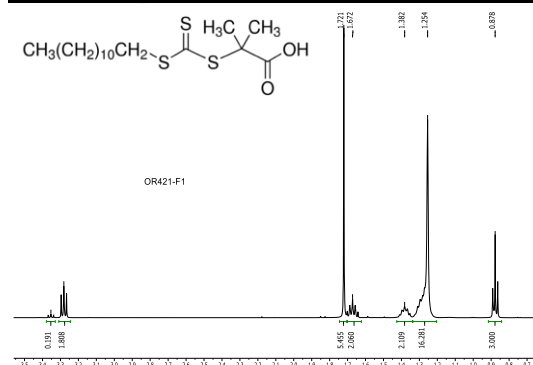| Mn x 10^3 S-b-EO-b-HFBMA	PDI
9.0-b-19.5-b-39.0	1.05

Synthesis Procedure:

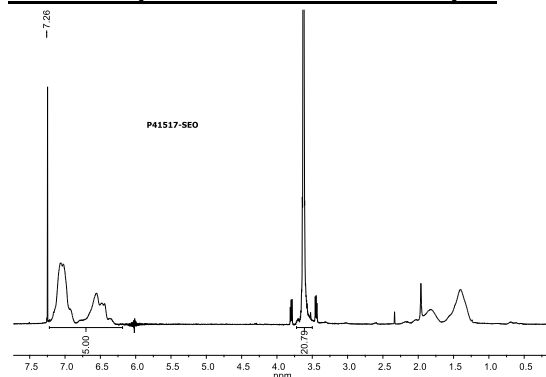The polymer was prepared by combination of anionic and RAFT polymerization process.
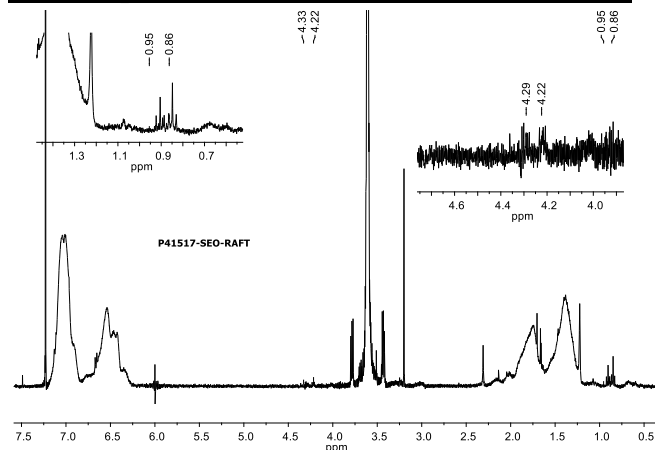
RAFT macroinitiator structure:
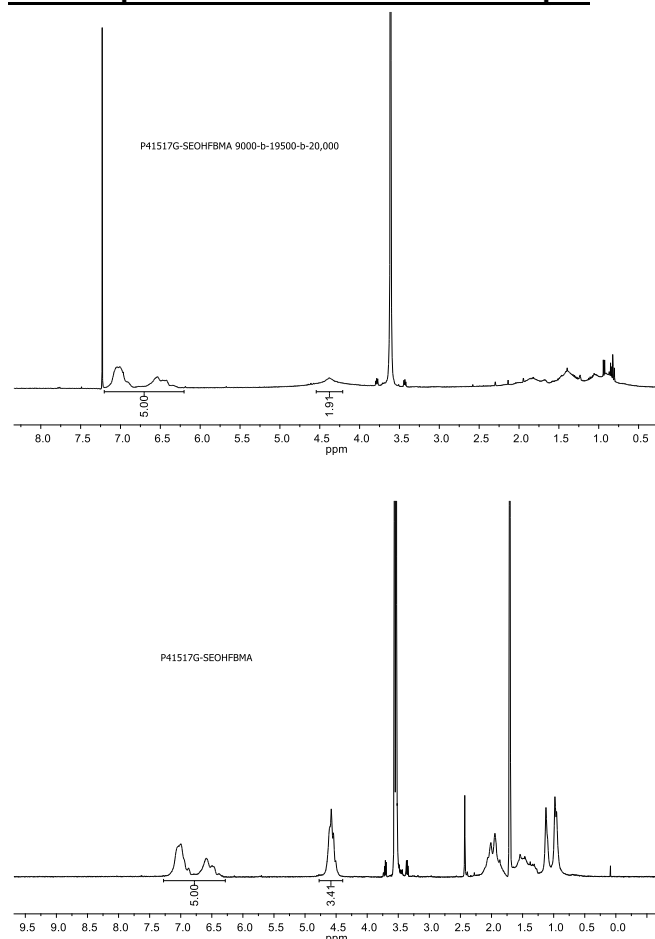

^{1}H NMR spectrum of the RAFT macroinitiator:

^{1}H NMR spectrum of the SEO Sample:

HNMR spectrum of SEO-terminated with RAFT:

HNMR spectrum of the SEOHFBMA Sample:

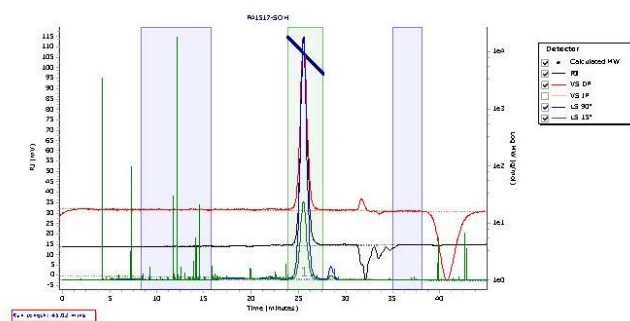**HNMR analysis of the triblock copolymer:**

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 the SOH Sample:

Agilent GPC/SEC Software

P41517-SOH

Chromatogram Plot

Molecular Weight Averages

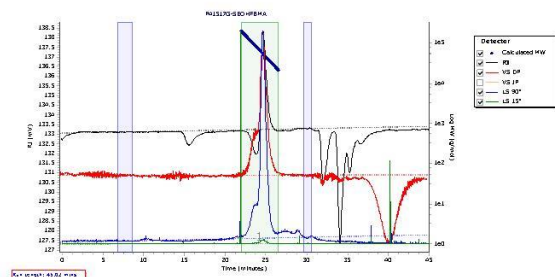| Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	9199	9030	9229	9427	9630	9379	1.022

Processing Parameters

SEC elugram of SEO-terminated with RAFT:

Agilent GPC/SEC Software

P41517G-SEOHFBMA

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)	PD
Peak 1	53919	48963	50114	51165	52119	50934	1.024

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-Heptaflurobutyl methacrylate polymer shows negative dn/dc in THF.