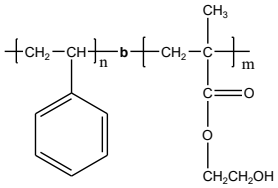
Sample Name:
Poly(styrene-b-hydroxyethyl methacrylate)
Synthesized by RAFT process

Sample #: **P45429-SHEMA**

Structure:



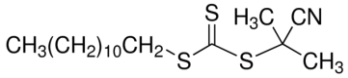
Composition:

Mn × 10^3 S-b-HEMA	Mw/Mn (PDI)
9.0-b-11,5	1.2

Glass transition temperature:

T_g for PS block	-
T_g for HEMA block	116 °C

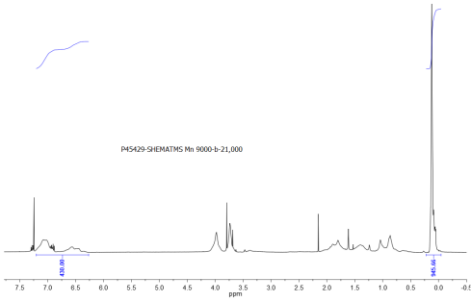
Synthesis Procedure:
Poly(styrene-b-hydroxy ethyl methacrylate) was synthesized by RAFT polymerization by sequence addition of styrene followed by trimethylsiloxyl ethyl methacrylate (HEMA-TMS) and deprotection to obtain S-b-HEMA block copolymer.
RAFT moiety:

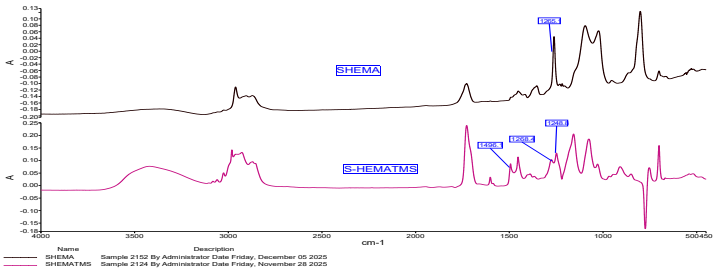


Characterization:
The polymer was characterized by ^{1}HNMR and SEC.

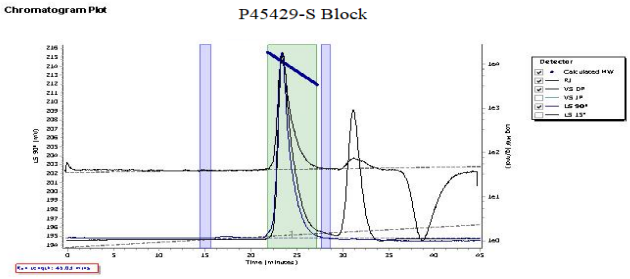
Solubility: Poly(styrene-b-hydroxyethyl methacrylate) is soluble in DMF and precipitated into hexanes.

^{1}H NMR spectrum of the SHEMA-TMS:





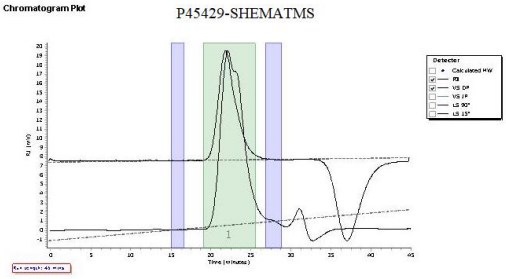
SEC elugram of the first block:



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	11388	9157	9890	10494	10987	10377	1.08

SEC elugram of the block copolymer:



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	38716	27434	33660	40217	46394	39911	1.228

After deprotection of HEMATMS:
Mn 9,000-b-11,500