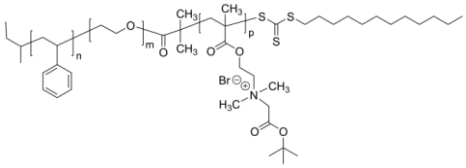
Sample Name:
Poly(styrene)-b-poly(ethylene oxide)-b-poly(N,N-dimethyl-N-[carb-tert-butoxymethyl]aminoethyl methacrylate])

Zwitterionic triblock copolymer obtained from PS-PEO-poly(N,N-dimethylaminoethyl methacrylate, quaternized with tert-butylbromoacetate)

Sample #: **P41683-SEOCBtBu**

Structure:

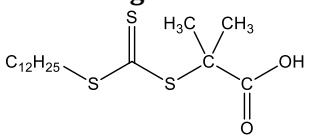


Composition:

Mn x 10^3 S-b-EO-CB-tBu	PDI
10.0-b-11.5-b-5.0	1.07

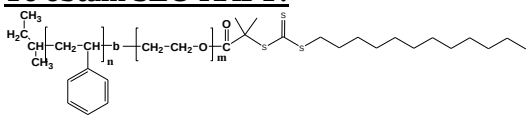
Synthesis:
SEO (OH) end group esterifies with RAFT reagent.

RAFT reagent Structure:

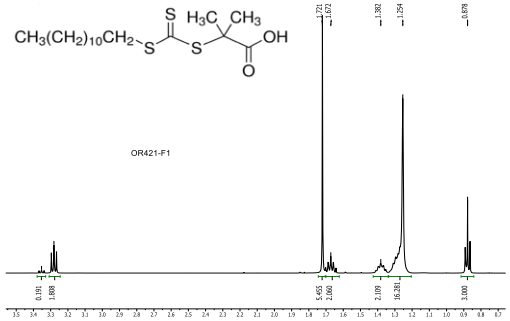


Chemical Formula: $C_{17}H_{32}O_2S_3$
Molecular Weight: 364.6

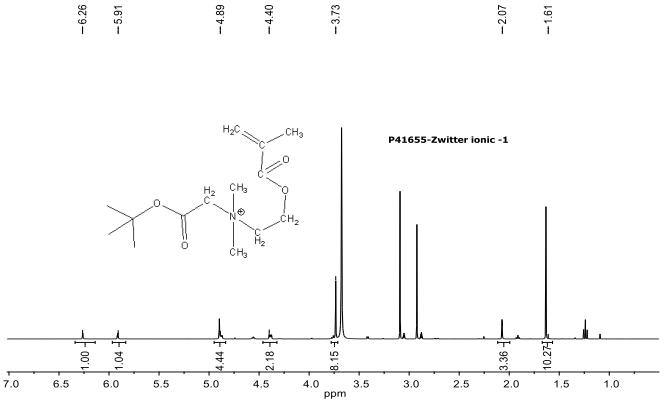
To obtain SEO RAFT:



^{1}H NMR spectrum of the Raft reagent:



HNMR spectrum of the N,N-dimethyl-2-oxoethanaminium with bromoacetic acid) (t-butyloxycarbonyl carboxybetaine) CB-tBu monomer:

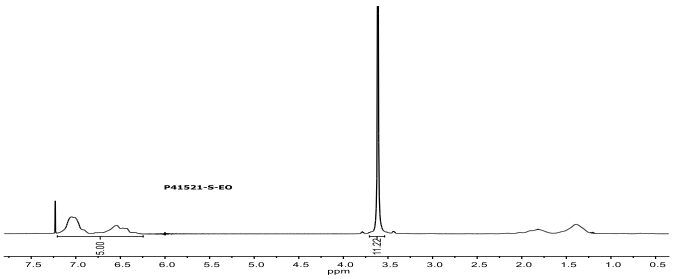


Characterization:
The product was characterized by size exclusion chromatography (SEC) and ^{1}H NMR.

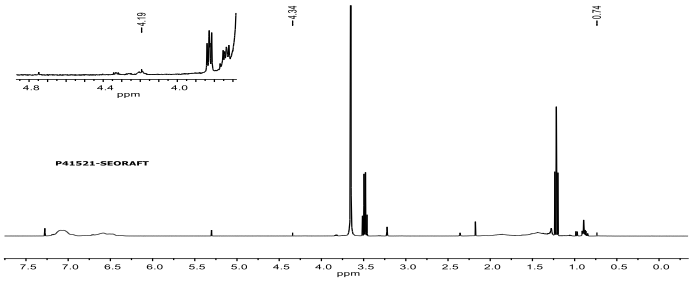
Solubility :

In water: Opaque solution
In methanol : clear solution at 40 ^{o}C

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



HNMR spectrum of SEO-terminated with RAFT:

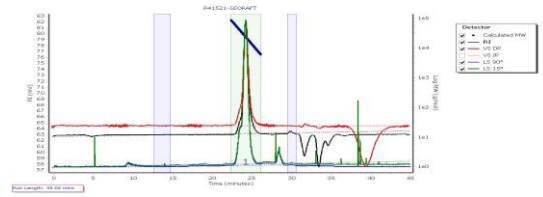


SEC profile of the SEO RAFT Sample used:

Agilent GPC/SEC Software

P41521-SEORAFT

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	23578	21627	23697	25691	27042	24988	1.096

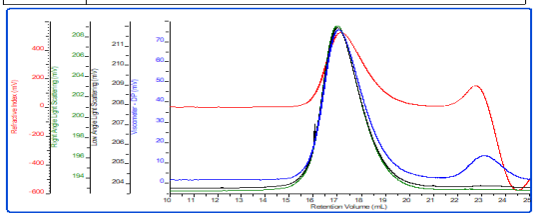
Processing Parameters

Method	Last modified by Polymer Source at 11:41:16 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)	0.135
Entered Ext Coeff ((mg/mL)-*[cm-*])	1.000
Calculated RI concentration (mg/mL)	1.171

SEC profile of the Sample:

P41683-SEOCBtBu

dn/dc	0.0750
Flow	0.7000
Solvent	DMF with LiBr
Method	PSS column-PMMA60K-Jan3-2019-0002.vcm



Mn : 25,500 Mw: 26,800 Mw/Mn : 1.07