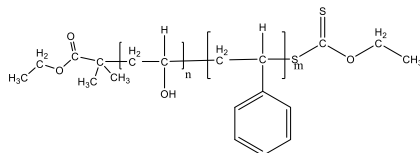


Sample Name: Poly(vinyl alcohol)-b-poly(styrene)

Sample #: P42340F1-VAS

Structure:

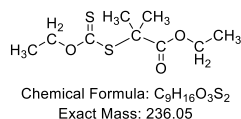


Composition:

$M_n \times 10^3$ VA-b-S	PDI
5.0-b-89.0	1.5

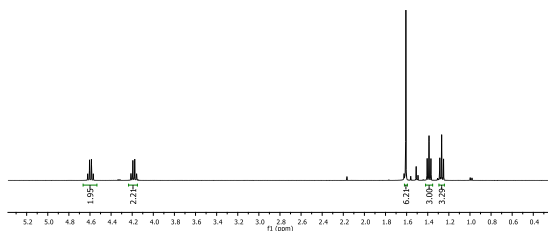
Synthesis Procedure:

The product was obtained by successive RAFT polymerization of vinyl acetate and styrene using AIBN as a radical initiator and the following chain transfer agent:



Hydrolysis of Polymer in THF at 40 °C by adding 2 equivalents of NaOH (w.r.t vinyl acetate fraction) in methanol and polymer precipitated out wash with cold water and dry in vacuum.

1H NMR of RAFT (400 MHz, $CDCl_3$):



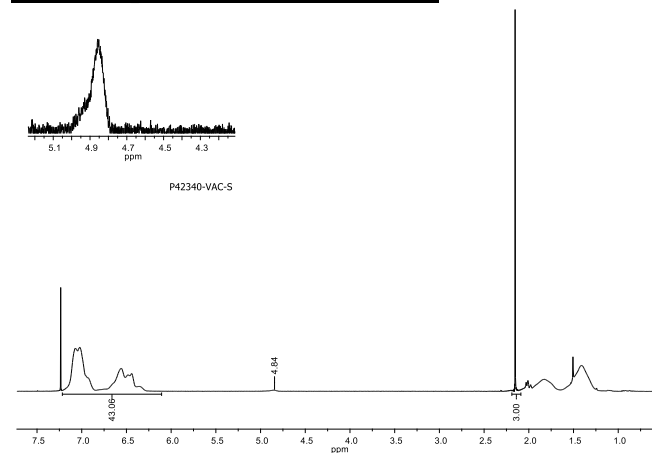
Characterization:

The product was characterized by size exclusion chromatography (SEC) and 1H NMR.

Solubility in different solvents:

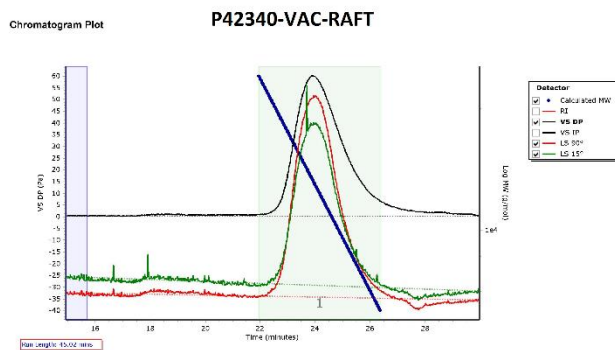
Solvent	Solubility
THF	NO
DMSO	Limited 1mg/ml
Pyridine	5mg/ml
THF/Water	Opaque solution

1H NMR spectrum of PVAc-b-PS:



SEC elugram of VAC-RAFT macroinitiator:

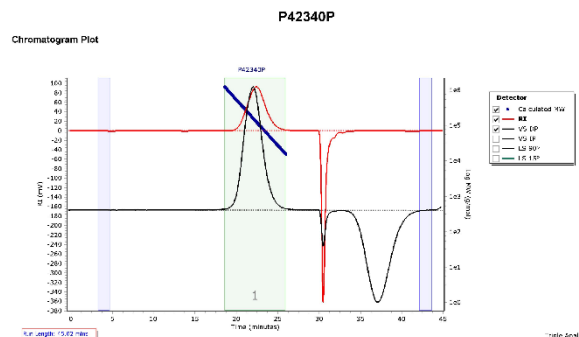
Agilent GPC/SEC Software



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	13730	10041	12406	14965	17384	14655	1.235

SEC elugram of the block copolymer:

Agilent GPC/SEC Software



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	129334	99025	150278	215533	299794	200255	1.508