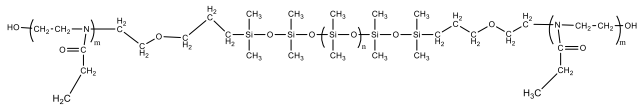
Sample Name:

Poly(2-ethyl oxazoline)-b-poly(dimethyl siloxane)-b-poly(2-ethyl oxazoline), with propyl-ethoxy link between blocks

Sample #: **P42763B-EtOXZDMSEtOXZ**

Structure:



Composition:

Mn x 10^3	PDI
0.6-b-3.0-b-0.6	1.02

Dp of each unit: (6-b-40-b-6)

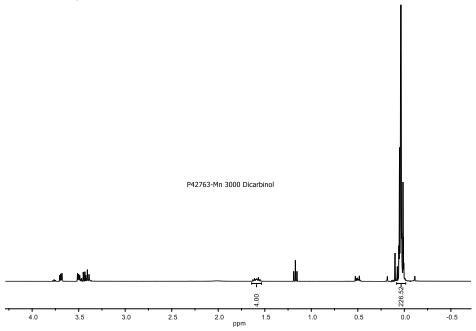
Synthesis Procedure:

The α–ω dihydroxy terminated Poly(2-ethylloxazoline-b-dimethylsiloxane-b-2-ethyloxazoline) triblock copolymer was prepared by combination of anionic living polymerization of hexamethylcyclotrisiloxane (D3) and cationic polymerization of 2-ethyl oxazoline, using difunctional initiator. Polymer was treated with equivalent amount of end functional moieties with NaOH/Methanol. Polymer was recovered in cold acetone, washed couple of times with cold acetone to remove any unreacted amount of monomer trace.

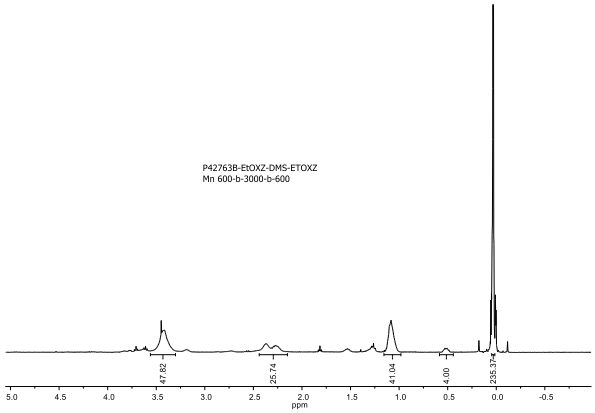
Characterization:

The product was characterized by ^{1}H NMR spectroscopy. Size exclusion chromatography (SEC) of such polymer cannot be carried out in THF or DMF as eluants. A mixture of DMF/THF (20/80 by volume) in addition of 3 V% (Et)3N has been used to elute the sample. The values of Mw/Mn, and the composition of the polymer were determined by its HNMR data analysis.

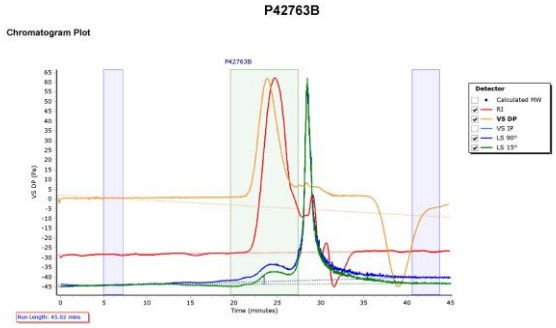
^{1}H-NMR spectrum of Dicarbinol (Propyl ethoxy linker):



^{1}H-NMR spectrum of Block copolymer:



SEC elugram of the sample:



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	4291	4275	4278	4282	4286	4264	1.001