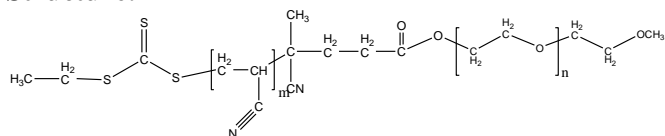


Sample Name:
Poly(ethylene oxide-b-acrylonitrile)

Sample #: P41494-EOACN

Structure:



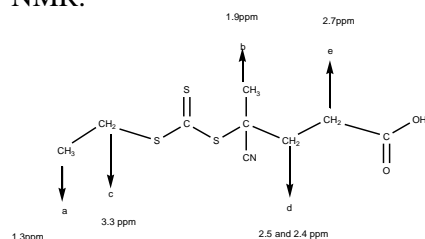
Composition:

Mn x 10 ³ PEO-b-PACN	PDI
14.0-b-71.0	1.26
Color of the polymer	White -ivory

Synthesis procedure:

The polymer was synthesized by RAFT polymerization process.

PEO bearing RAFT functionality was characterized by NMR.



Composition:

Formula	C ₉ H ₁₃ NO ₂ S ₃
Mw	263.40
Purity	> 90%

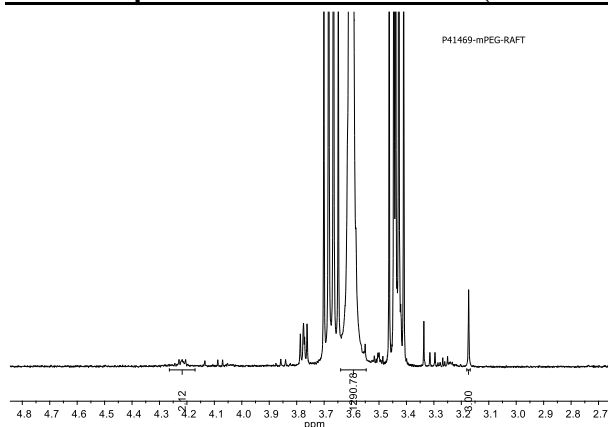
Characterization:

The structure of product was characterized and confirmed by ¹H NMR.

Solubility:

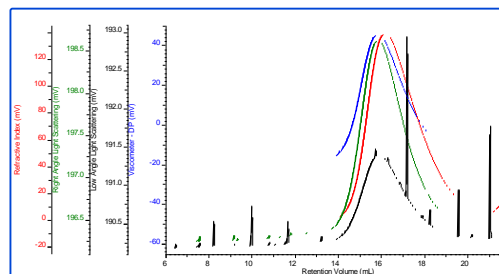
The polymer is soluble in DMF.

¹H NMR spectrum of the PEG-RAFT (lot#P41469):



SEC elugram of the RAFT macroinitiator:
P41469-EO-RAFT

dn/dc	0.0490
Flow	0.7000
Solvent	DMF with LiBr
Method	PSS

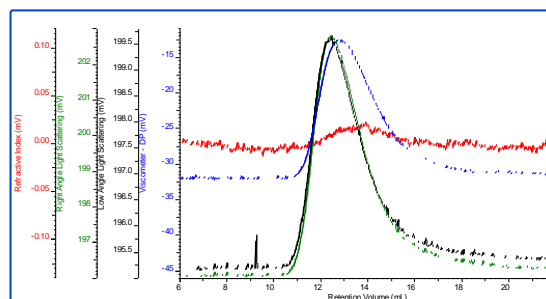


Sample	Mn	Mw	Mz	IV	Mw/Mn
P41469_1_2018-11-1	13,736	17,294	24,131	0.3259	1.259

SEC elugram of the Polymer

P41494-EOACN

dn/dc	0.0570
Flow	0.7000
Solvent	DMF with LiBr
Method	PSS



Sample	Mn	Mw	Mz	IV	Mw/Mn
P41494_1_2018-11-2	85,230	112,780	158,247	1.0000	1.323

Thermal analysis was performed on TA Instruments Q100 differential scanning calorimeter (DSC) under a nitrogen atmosphere. The glass transition temperature (T_g) of the polymer was measured at a scan rate of $10^\circ\text{C}/\text{min}$ shortly after creating thermal history of the sample.

DSC thermogram of the polymer (2nd heating scan, $10^\circ\text{C}/\text{min}$):

