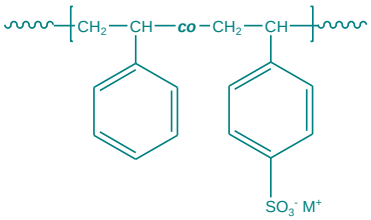
Sample Name: **Ionomer of Poly (styrene-co-4-styrene sulfonic acid)**

Sample #: **P40909-SSO3H**
Dialyzed form

Structure:

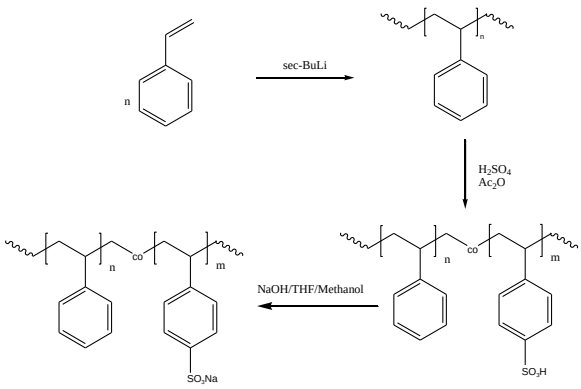


M = H

Composition:

Mn x 10^3	Mole% of SO3H	PDI
190.0	60.0%	1.04

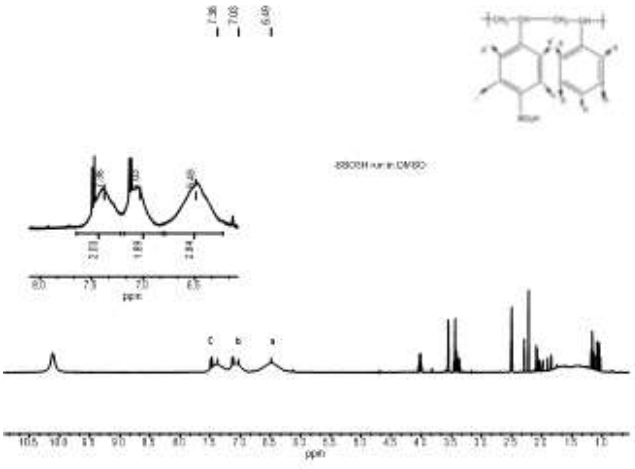
Synthesis:
Poly (styrene-co-4-styrene sulfonic acid) is synthesized by partially sulfonation of monodispersed polystyrene, and the reaction scheme is shown below.



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

Solubility:
The polymer is soluble in methanol.

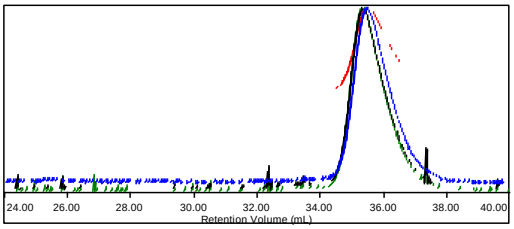
^{1}HNMR spectrum of the Sample runs in DMSO:



SEC elugram of Polystyrne used for sulfonation process:

Sample ID: P10447-S

Concentration (mg/mL)	1.0627
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-July-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn (Da)	Mw (Da)	Mp (Da)	Mw/Mn	IV (dL/g)
P10447_2011-10-03_11;46;24_01.vdt	129,718	135,801	132,436	1.047	1.0116