

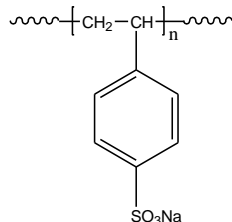
Sample Name:

Poly(4-styrene sulfonic acid sodium salt)

Dialyzed form

Sample #: **P41859A-SSO3Na**

Structure:

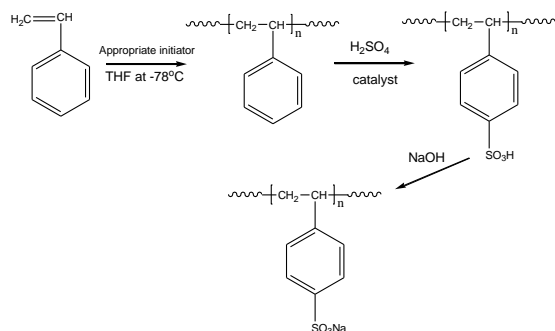


Composition:

Mn x 10 ³	PDI
68.0	1.02
C:H:S	36.33;5.57;14.0
Degree of sulfonation	>95%

Synthesis Procedure:

The following reaction scheme shows how the product was prepared:



Characterization:

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

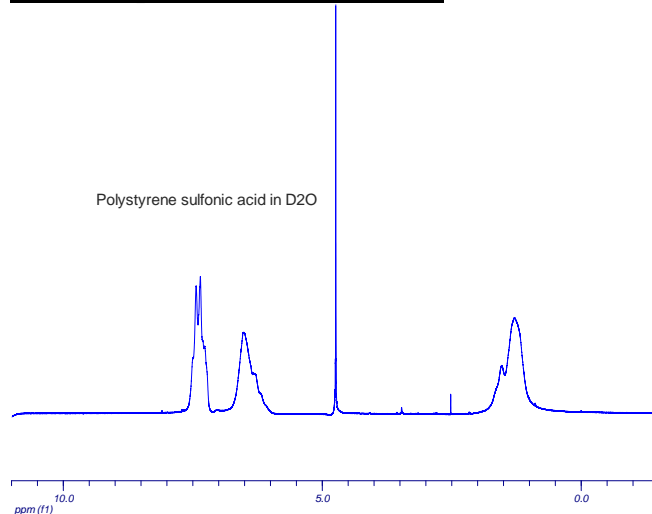
Solubility:

Poly(styrene sulfonic acid) is soluble in methanol, water and precipitated out from the hexane, THF, toluene.

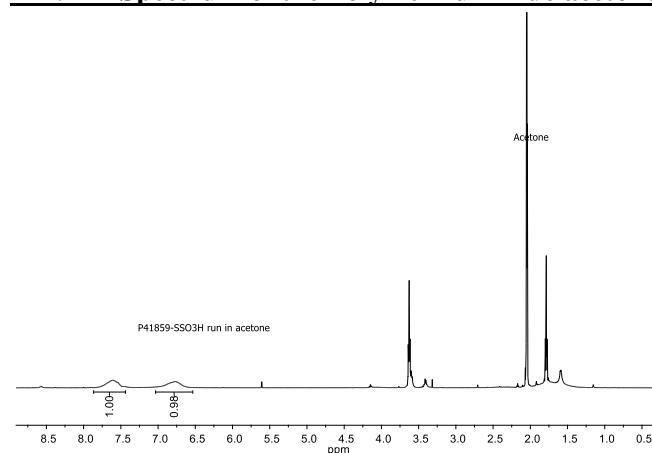
Dialysis of the Polymer:

Dialysis was carried out in a membrane (from spectrum Co). The solution was prepared in H₂O (distilled Millipore) and filtered after the dialysis is completed. Normally it was carried out for 3 days. The obtained polymer was freeze dried in water.

¹H NMR Spectrum of the Polymer:



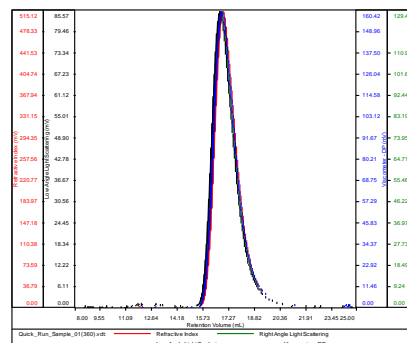
¹H NMR Spectrum of the Polymer run in d6 acetone



SEC of Homopolymer used for the sulfonation

Lot# P40382 Mn 34,000 Mw/Mn 1.02

P40382-S	
Conc (mg/mL)	30.0201
dn/dc (mL/g)	0.1650
Method	PS80X_December-2016-0004.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mp	Mw/Mn	IV
Quick_Run_Sample_01(360).vdt	34,062	34,782	33,225	1.021	0.0942

