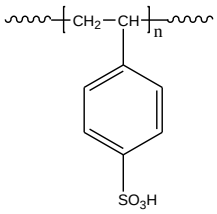
Sample Name: **Poly (4-styrene sulfonic acid)**
Or Poly (styrene sulfonic acid)

Sample #: **P42085-SSO3H**

dialysed form

Structure:



Composition:

Mn x 10^3	PDI
6.0	1.05

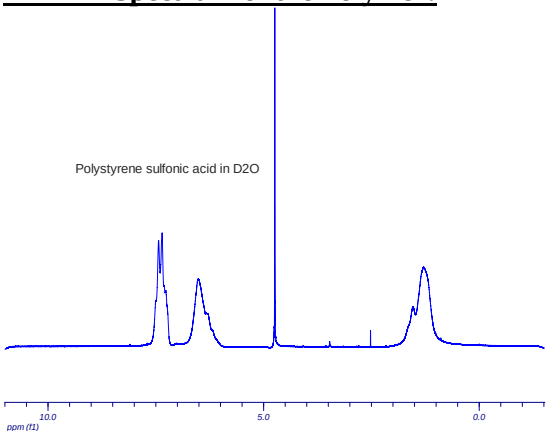
Sulfonation degree > 95%

Synthesis Procedure:
Poly (styrene sulfonic acid) is obtained from the sulfonation of polystyrene. Polystyrene was obtained by anionic living polymerization.

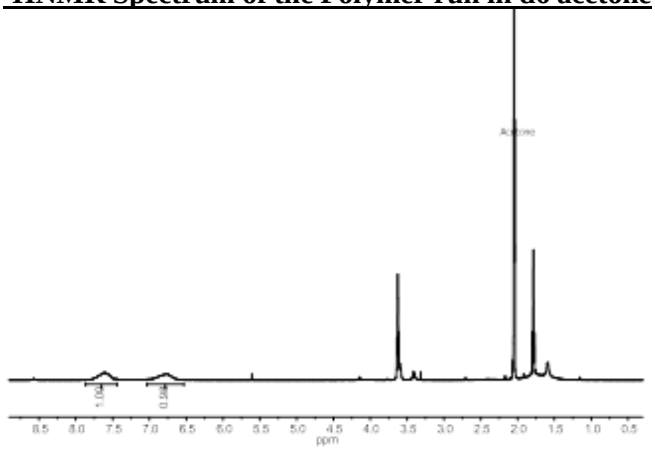
Characterization:
The molecular weight and polydispersity index (PDI) of poly (styrene sulfonic acid) are obtained by size exclusion chromatography. The degree of sulfonation is determined by acid/base titration and by elemental analysis.

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

^{1}HNMR Spectrum of the Polymer:



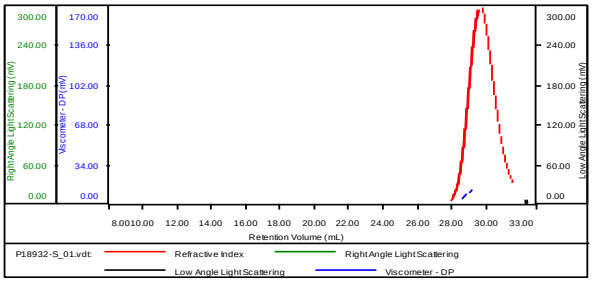
^{1}HNMR Spectrum of the Polymer run in d6 acetone



SEC of Homopolymer used for the sulfonation Lot# P18933 Mn 3,500 Mw/Mn 1.05:

Sample ID: P18933-S

Concentration (mg/mL)	1.3362
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-1020-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersit	Intrinsic Viscosity (dL/g)
P18932-S_01.vdt	3,480	3,645	3,589	1.047	0.4069