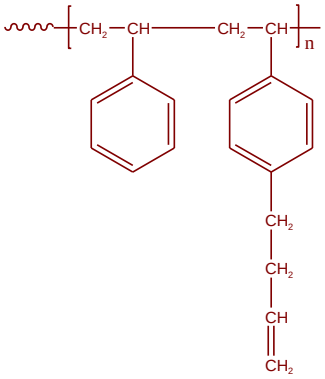
Sample Name: Random copolymer of styrene with 4-butenestyrene

Sample #: **P18332-SSbutene**

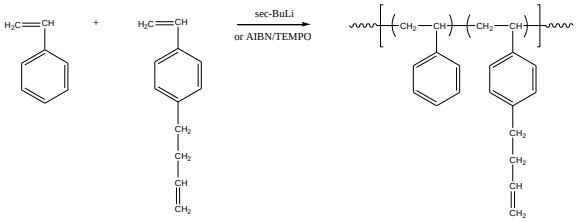
Structure:



Composition:

Mn x 10^3	Double Bond mol%	Mw/Mn (Total)
4.0	10.0	1.30

Synthesis Procedure:
Polystyrene-g-1-butene is synthesized by copolymerization of styrene and 4-butene styrene. The brief synthetic route is illustrated as following scheme.

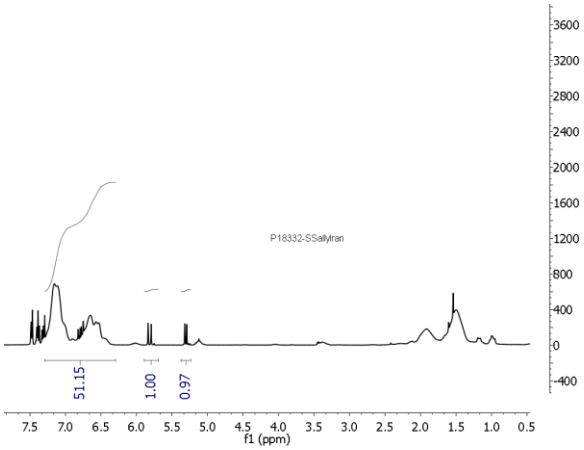


Characterization:

The molecular weight and polydispersity index (PDI) of polymers are obtained by size exclusion chromatography. The composition of grafting polymer is determined by NMR.

Solubility:
Polystyrene-g-butene is soluble in THF, DMF, chloroform, and Toluene. It precipitates from hexanes or methanol.

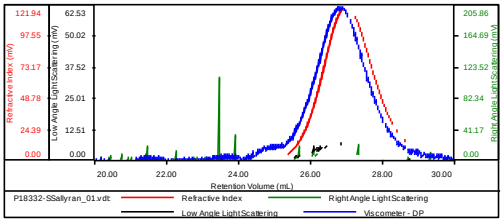
NMR of Polymer:



SEC of Polymer:

Sample ID: P18332-SSallyl ran

Concentration (mg/mL)	5.3650
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-NOV25-2013-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18332-SSallyran_01.vdt	4,036	5,394	5,405	1.336	0.0786