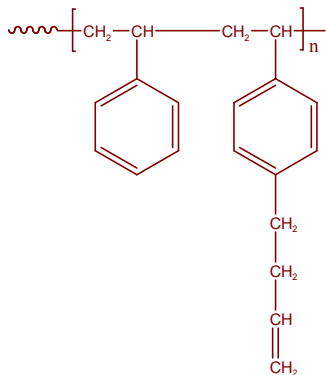


Sample Name: Random copolymer of styrene with 4-butenestyrene

Sample #: P14120-Ssbutene

Structure:

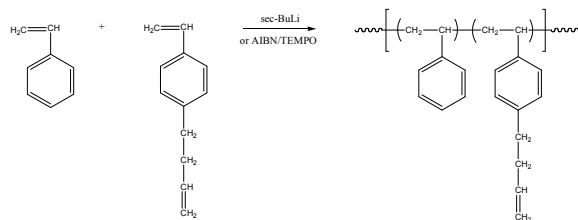


Composition:

Mn x 10 ³	Double Bond mol%	Mw/Mn (Total)
6.6	9.0	1.26

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.



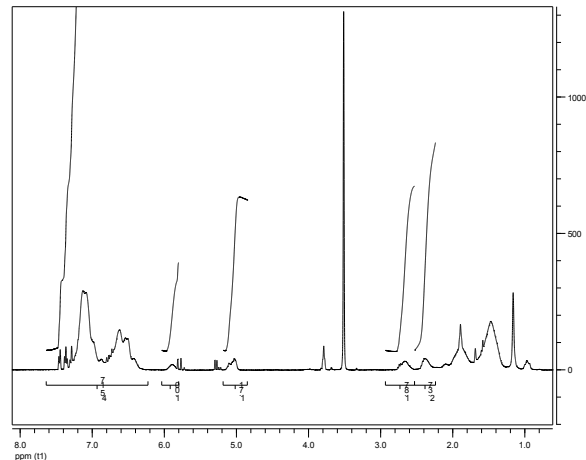
Characterization:

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:

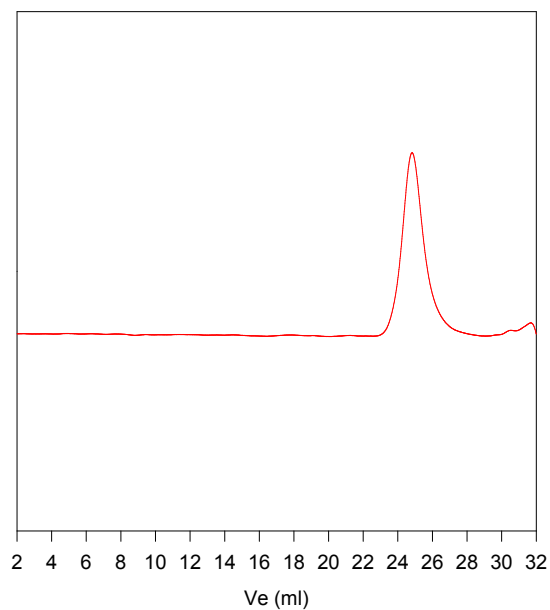
Polystyrene-g-butene is soluble in THF, DMF, chloroform, and Toluene. It precipitates from hexanes or methanol.

NMR of Polymer:



SEC of Polymer:

P14120-SSbutene



Size exclusion chromatography of copolymer:

M_n=6600, M_w=8300, PI=1.26