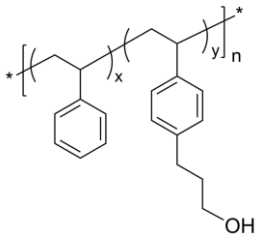
Sample Name: **Poly(styrene–co–4-[3-hydroxypropyl]styrene), random**

Synonym: **Poly(styrene–co–3-[4-vinylphenyl]-1-propanol)**

Sample #: **P2641-SSPropanol**

Structure:



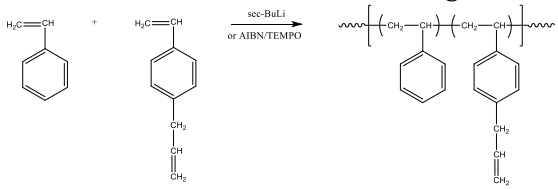
Composition:

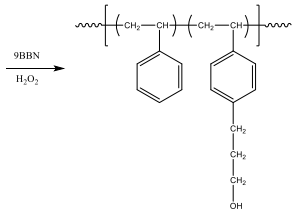
Mn x 10^3	Mw/Mn (Total)
6.5	1.06

Of Branches: 2

Synthesis Procedure:

Polystyrene-g-butyl alcohol is synthesized by oxidation of double bond with 9-BBN. The brief synthetic route is illustrated as following scheme.





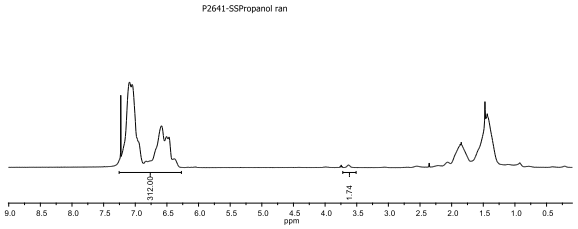
Characterization:

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

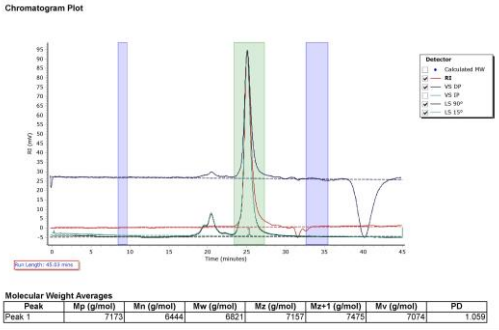
Solubility:

Polystyrene-g-Propyl alcohol is soluble in THF, DMF, chloroform, and Toluene. It precipitates from hexanes.

H NMR spectrum of Polymer:



SEC elugram of Polymer:



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	7173	6444	6821	7157	7475	7074	1.059