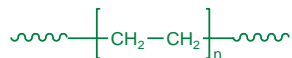


Sample Name:

Hydroxy terminated Polyethylene

Sample #: **P2902-EOH**

Structure:

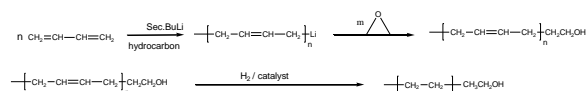


Composition:

Mn x 10 ³	PDI
21.1	1.05

Synthesis Procedure:

Hydroxy end functionalized Polyethylene is made from the hydrogenation of OH terminated Poly 1,4-polybutadiene. Poly 1,4-polybutadiene is synthesized by living anionic polymerization of butadiene in non-polar solvent followed by termination of reaction with ethylene oxide.



Characterization:

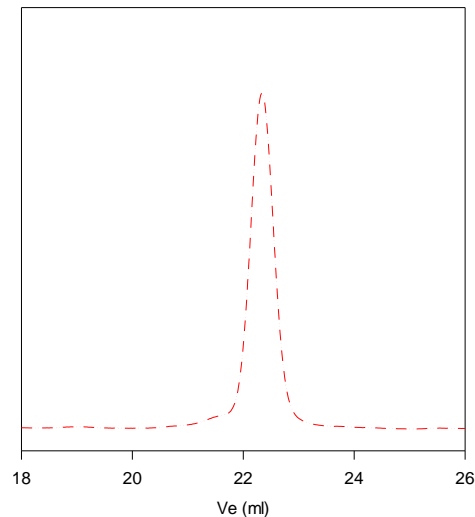
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography. The hydrogenation of polybutadiene is confirmed by FT-IR with disappearance of the alkene double bond.

Solubility:

Polyethylene is soluble in hot toluene and hot xylene. The polymer is insoluble in hexane, methanol and ethers.

SEC of Sample

P2094-BdOH (precursor for P2902-EOH)



Size exclusion chromatography of Poly butadiene hydroxy terminated:

--- Polybutadiene, M_n=20,400, M_w=21,400 PI=1.05 Functionality > 0.98