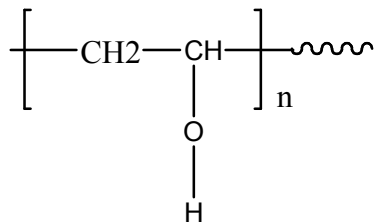


Sample Name: Poly(Vinyl alcohol)

Sample #: P11284-VA

**Structure:**

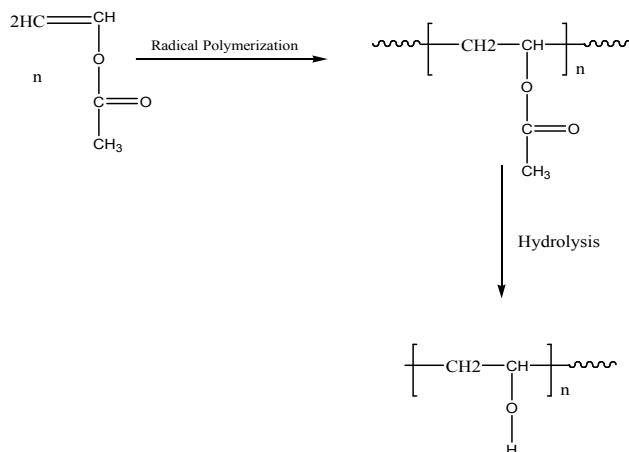


**Composition:**

Mn x 10 <sup>3</sup>	PDI
53.0	1.8

**Synthesis Procedure:**

Poly vinyl alcohol is obtained from the hydrolysis of poly vinyl acetate under alkaline conditions. Poly vinyl acetate is obtained by free radical polymerization using iodo ethyl acetate as chain transfer reagent. Polymerization was carried out in bulk. The polymerization scheme can be illustrated as follows:

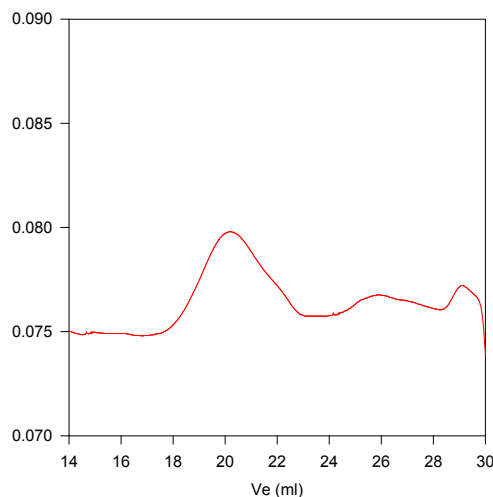


**Characterization:**

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co. <sup>1</sup>H NMR analysis was carried out on Varian instrument at 500MHz.

SEC of Homopolymer:

**P11284-VA**



Size exclusion chromatograph of Poly vinyl acetate:

M<sub>n</sub>=102000 M<sub>w</sub>=183000 PI=1.8

dn/dc in THF: 0.033 ml/g

Solution Viscosity in THF at 30 °C: 0.4000dl/g and Radius of Gyration: 9,57nm

Data from Viscotek triple detectors.

After Hydrolysis of acetate group: Mn 53,000 Mw/Mn : 1.8