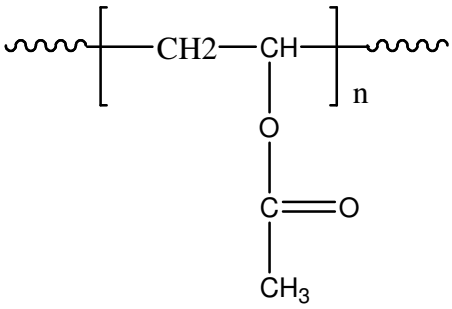
Sample Name: **Poly(Vinyl Acetate)**

Sample #: **P19873-VAC**

Structure:

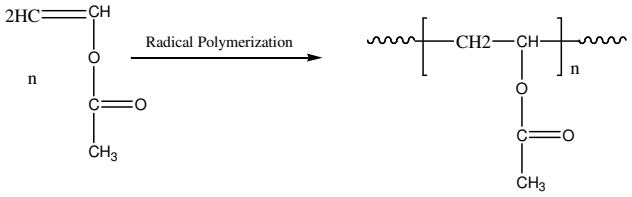


Composition:

MW x 10^3	Mn x 10^3	Mw/Mn
151.0	60.0	2.5

Synthesis Procedure:

Poly vinyl acetate is obtained by free radical polymerization using iodo ethyl acetate as chain transfer reagent or by heterogeneous polymerization in water using potassium persulfate as initiator.. 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 DMF as well as 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.

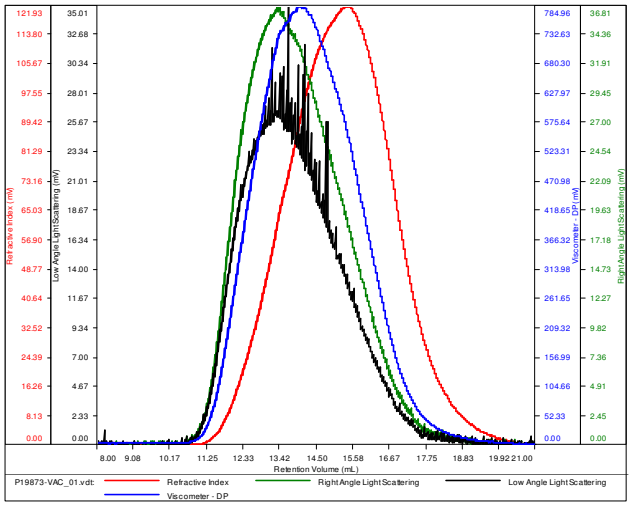
Solubility:

Polymer is soluble in THF, $CHCl_3$, toluene and dioxane. The polymer precipitates from hexanes and ether.

SEC elugram of Homopolymer:

P19873-VAC

Conc (mg/mL)	40.2120
dn/dc (mL/g)	0.0430
Method	ps80k-May2016-0002.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS

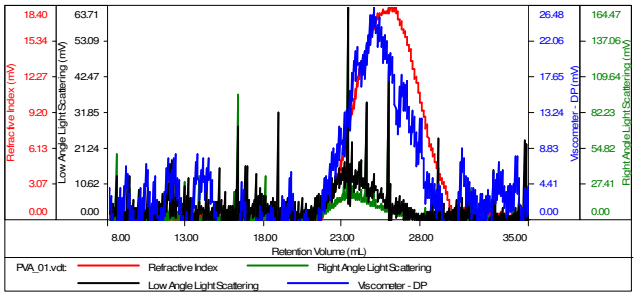


Sample	Mn	Mw	Mp	Mw/Mn	IV
P19873-VAC_01.vdt	60,157	151,074	76,171	2.511	0.7608

SEC elugram in THF:

Sample ID:P19873-VAC

Concentration (mg/mL)	3.1371
Sample dn/dc (mL/g)	0.0650
Method File	PS80K-April-18-2016-0001.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Ret Vol (mL)	Mp (Da)
PVA_01.vdt	27,886	158,794	5.694	1.3012	26.133	93,156