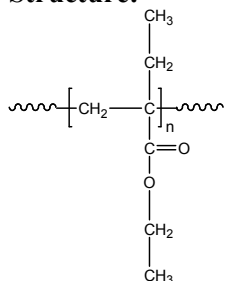


**Sample Name:** Poly ( $\alpha$ -ethyl ethyl acrylate)

**Sample #:** P40418-EEA

**Structure:**

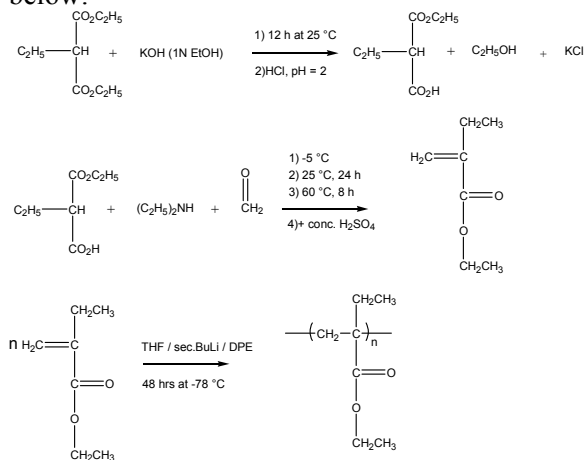


**Composition:**

Mn x 10 <sup>3</sup>	PDI
18.0	1.7

**Synthesis Procedure:**

Poly ( $\alpha$ -ethyl ethyl acrylate) is obtained by living anionic polymerization of ethyl  $\alpha$ -ethyl ethyl acrylate. The reaction scheme used for the monomer and the polymer synthesis are shown below:



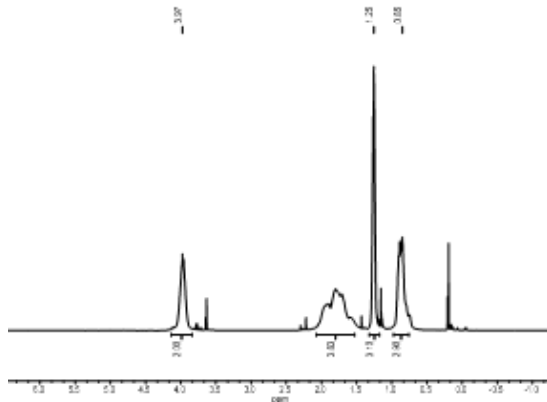
**Characterization:**

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.

**Solubility:**

Poly (ethyl-ethyl acrylate) is soluble in THF, toluene and CHCl<sub>3</sub>. This polymer precipitates from ethanol and methanol containing 10-15% water.

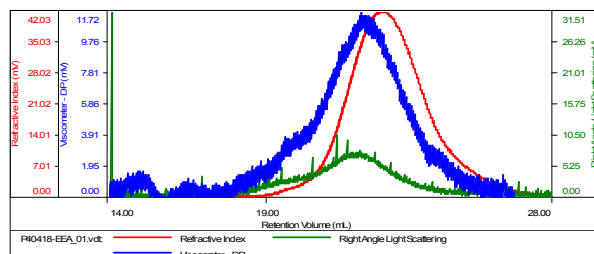
**<sup>1</sup>HNMR spectrum of the Polymer:**



**SEC elugram of Homopolymer:**

**P40418-EEA**

Concentration (mg/mL)	2.4009
Sample dn/dc (mL/g)	0.0940
Method File	PS80K-Fat2017-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Mp (Da)
P40418-EEA_01.vdt	17,856	30,904	1.731	0.3712	19,364