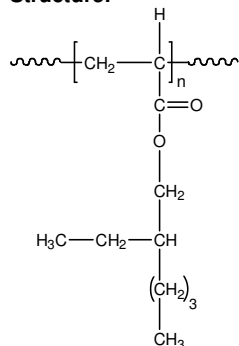


## Sample Name: Poly(2-ethyl hexyl acrylate)

Sample #: **P1148-EHeA**

### **Structure:**

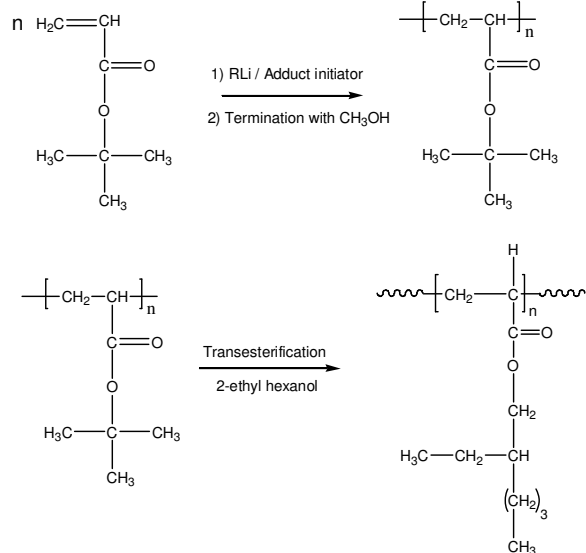


### **Composition:**

Mn x 10 <sup>3</sup>	PDI
51.5	1.05

### **Synthesis Procedure:**

Poly(2-ethyl hexyl acrylate) is obtained by living anionic polymerization of t-butyl acrylate followed by transesterification with 2-ethyl hexanol. The reaction scheme used for the polymer synthesis is shown below:



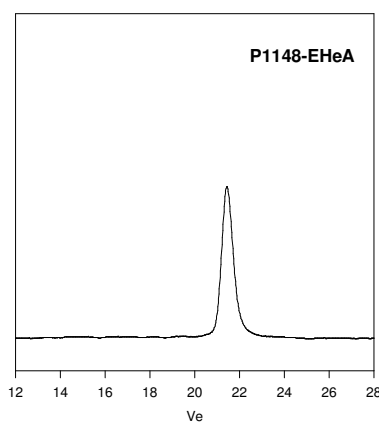
### **Characterization:**

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(2-ethylhexyl acrylate) is soluble in THF, toluene and  $\text{CHCl}_3$ . This polymer precipitates from ethanol and methanol containing 10-15% water.

### **SEC of Homopolymer:**



Size Exclusion Chromatography of Poly 2-ethyl hexyl acrylate:

$M_n=51500$ ,  $M_w=54300$ ,  $M_z=57300$ ,  $PI=1.05$

### **References:**

1. Ph. Teyssie, Ph. Bayard, R. Jerome, **S. K. Varshney**, and J. S. Wang, *35th IUPAC International Union of Pure & Applied Chemistry International Symposium on Macromolecules* 1994, 67.
2. R. Fayt, R. Forte, C. Jacobs, R. Jerome, T. Ouhadi, Ph. Teyssie and **S. K. Varshney**, *Macromolecules*, 1987, 20, 1442-1444.
3. Jerome, R. Forte, **S. K. Varshney**, R. Fayt, and Ph. Teyssie, "The Anionic Polymerization of Alkylacrylates: A Challenge" in the Recent Advances in Mechanistic and Synthetic Aspects of Polymerization: M. Fontanille and A. Guyot Ed., NATO ASI Series C 215, 101 (1987), CA Vol. 108, 12, 094992.
4. Ph. Teyssie, R. Fayt, C. Jacobs, R. Jerome, L. Leemans, and **S. K. Varshney** *Am. Chem. Soc., Polym. Prepr.* 1988, 28, 2, 52-53