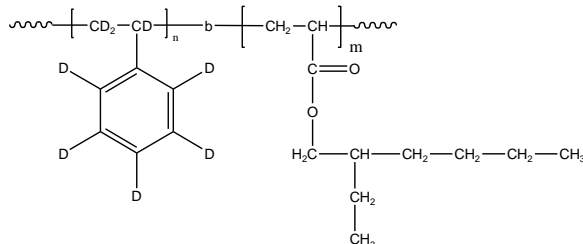


Sample Name:

Deuterated polystyrene (d₈)- poly 2-ethylhexylacrylate(protonated)

Sample #: P9457-dPSEtHA

Structure:

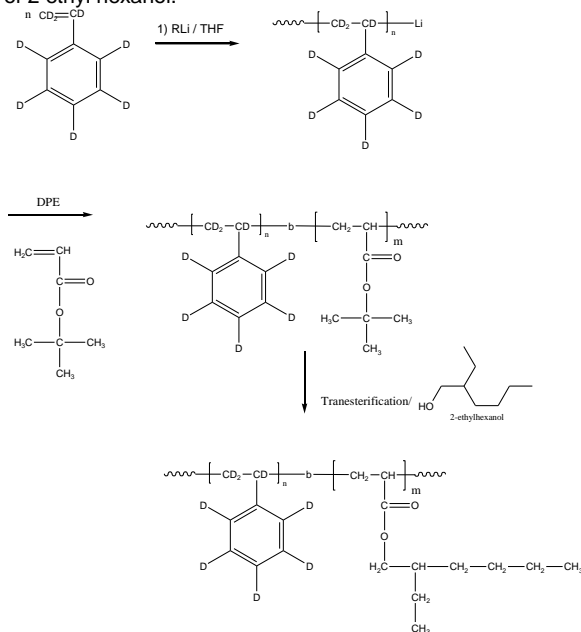


Composition:

Mn x 10 ³	PDI
10.5-b-11.5	1.06

Synthesis Procedure:

Deuterated poly(styrene (D₈)-b-t-butyl acrylate) is prepared by living anionic polymerization in THF at -78 °C using sec.BuLi initiator in the presence of LiCl. Deuterated Polystyrene macroanions were end capped with a unit of diphenyl ethylene (DPE) before adding tert.butylacrylate (tBuA) monomer. For further details please see our published articles.¹⁻⁵ The obtained polymer tranesterified in presence of 2 ethyl hexanol.



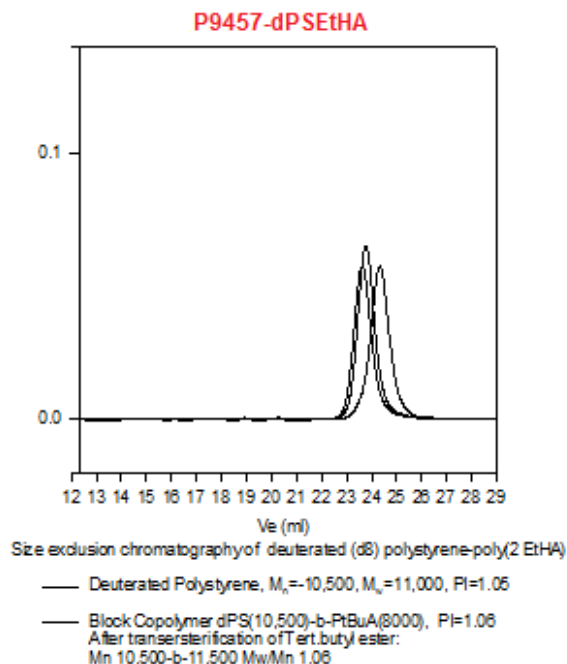
Characterization:

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 from Viscotek Co. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used.

Solubility:

Deuterated polystyrene-b-2-ethyl hexylacrylate is soluble in THF, dioxane. Toluene, benzene CHCl₃. It precipitates from methanol/water.

SEC of the product:



References for further information:

1. S. K. Varshney, R. Fayt, Ph. Teyssie, and J.P. Hautekeer US Patent 5,264,527 (1993)
2. 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.
3. Ph. Teyssie, R. Fayt, J. P. Hautekeer, C. Jacobs, R. Jerome, L. Leemans and S. K. Varshney Makromolekular Chemie, Macromol. Symp., 1990, 32,61-73.
4. S. K. Varshney, J. P. Hautekeer, R. Fayt, R. Jerome, and Ph.Teyssie Macromolecules, 1990, 23, 2618-2622.
5. R. 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.