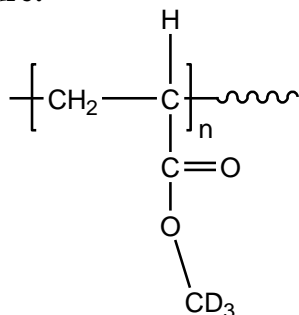


**Sample Name: Deuterated Poly(methylacrylate)**  
**Ester group deuterated**

**Sample #: P42727-d3MA**

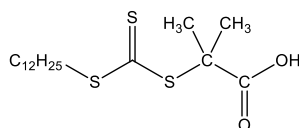
**Structure:**



**Composition:**

$\text{Mn} \times 10^3$	PDI
7.5	1.07

**Synthesis:** The polymer is prepared by RAFT polymerization process using following RAFT reagent:



Chemical Formula:  $\text{C}_{17}\text{H}_{32}\text{O}_2\text{S}_3$   
Molecular Weight: 364.6

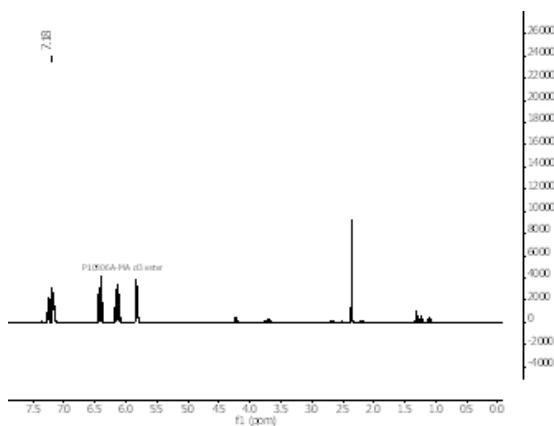
**Characterization:**

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.

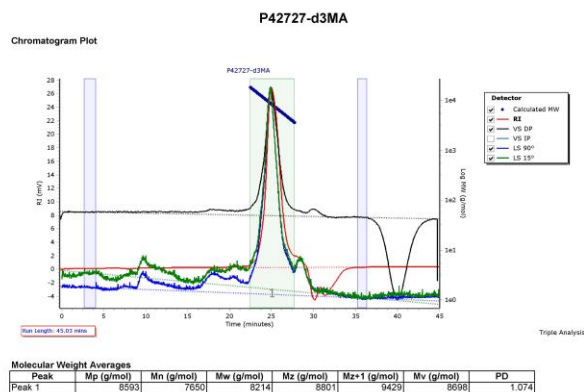
**Solubility:**

Deuterated Poly(methyl acrylate) is soluble in THF,  $\text{CHCl}_3$  and Toluene.

**$^1\text{H}$ -NMR spectrum of the monomer:**



**SEC elugram of the Sample:**



**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