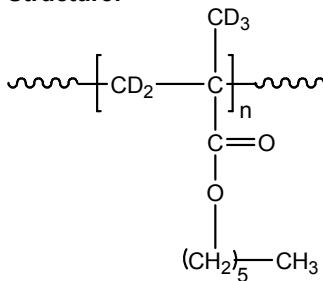


Sample #: **P8127-d5PnHMA**

Structure:

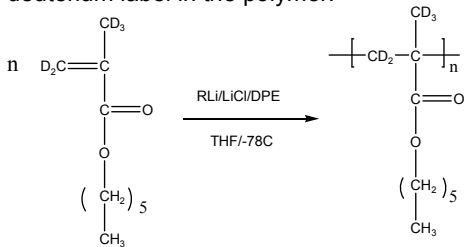


Composition:

Mw x 10 ³	PDI
90.0	1.28

Synthesis Procedure:

Deuterated d5 Poly(n-hexyl methacrylate) is obtained by living anionic polymerization of deuterated(d5) n-hexyl methacrylate. The reaction scheme used for the polymer synthesis is shown below. The monomer d5-deuterated n-hexyl methacrylate synthesized from deuterated d5 methacrylic acid and protonated n-hexanol. ¹H NMR of the monomer is illustrated below indicating over 98% deuterium label in the monomer and also d5 (main chain deuterium label in the polymer).



Characterization:

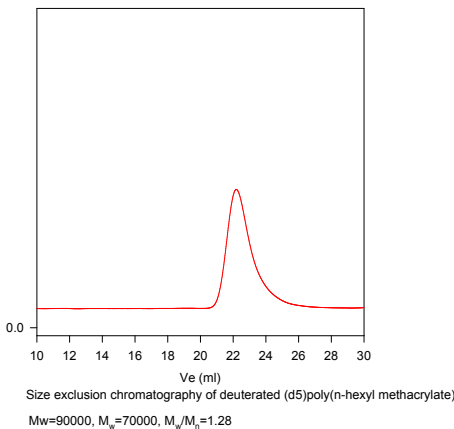
The molecular weight and polydispersity index (PDI) of deuterated (d5)Poly(n-hexyl methacrylate) are obtained by size exclusion chromatography.

Solubility:

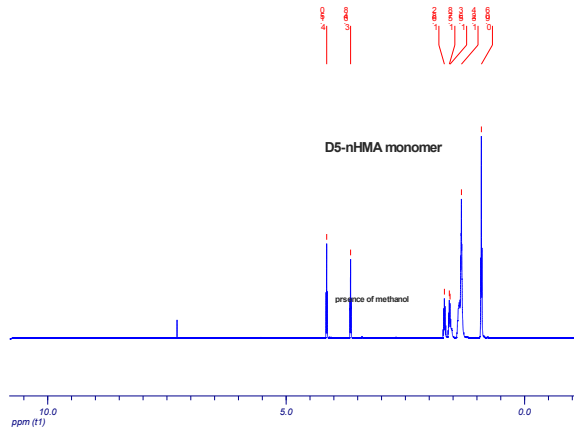
Deuterated Poly(n-hexyl methacrylate) is soluble in THF, CHCl_3 , toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

SEC of Homopolymer:

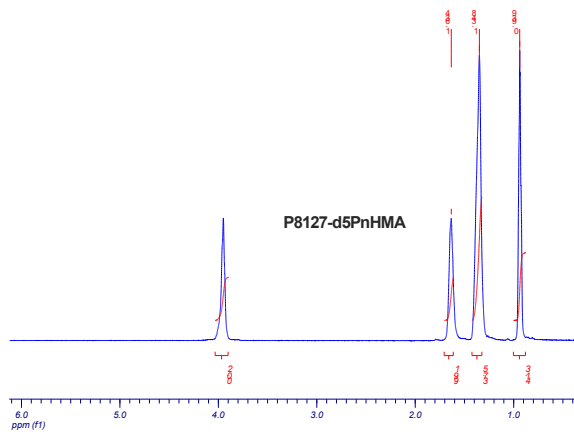
P8127-d5-nHMA



H NMR spectrum of the d5 Hexylmethacrylate monomer:



H NMR of the Polymer:



Deuterium Spectrum of the polymer:

deuterium spectrum of the polymer

