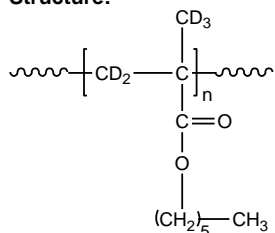


Sample Name: deuterated (d5)
Poly(n-hexyl methacrylate)
Sample #: **P8127A-dPnHMA (d5)**
Structure:

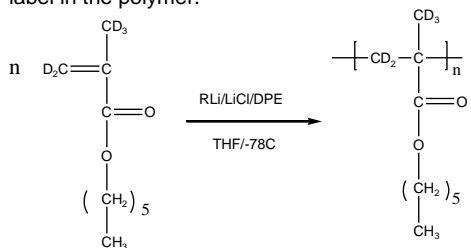


Composition:

Mw x 10 ³	PDI
20.0	2.0

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. H 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:

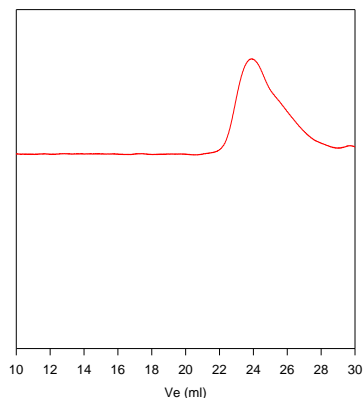
The molecular weight and polydispersity index (PDI) of deuterated (d5)Poly(n-hexyl methacrylate) are obtained by size exclusion chromatography.

Solubility:

Deuterated Poly(n-hexyl methacrylate) is soluble in THF, CHCl₃, toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

SEC of Homopolymer:

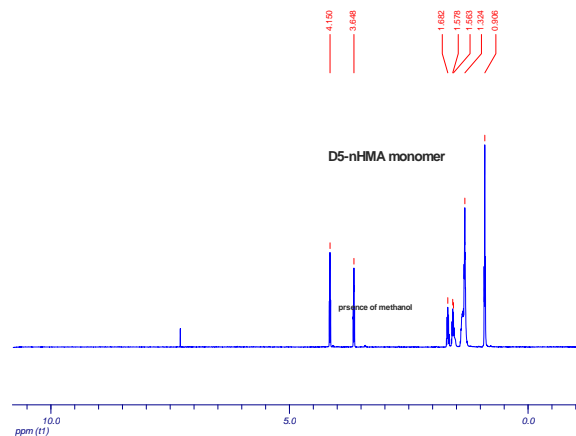
P8127A-d5-nHMA



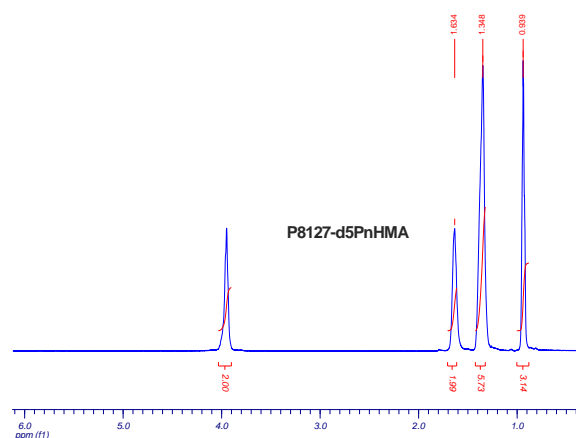
Size exclusion chromatography of deuterated (d5)poly(n-hexyl methacrylate)

Mw=20000, Mn=10000, Mw/Mn=2.0

H NMR spectrum of the d5 Hexylmethacrylate monomer:



H NMR of the Polymer:



Deuterium Spectrum of the polymer:

deuterium spectrum of the polymer

