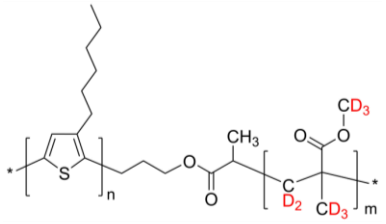
Sample Name: **Poly(3-hexylthiophene-2,5-diyl)-b-poly(deuterated methyl methacrylate-d8)**

Sample #: **P43295-3HT-d8MMA**

Structure:



Composition:

Mn x 10^3 (3HT-b-d8MMA)	PDI
9.5-b-3.0	1.16

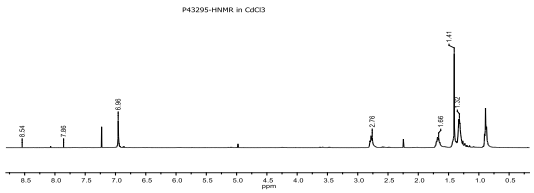
Regioregularity of P3HT: ~90% (H-T)

Purification of polymer:
The crude polymer was recovered from reprecipitation into methanol. The inorganic salts were removed by using a Soxhlet extraction with Methanol and homopoly hexyl thiophene was removed by extraction with hot cyclohexane. The pure polymer was dissolved in chloroform and precipitated in cold Acetone/Hexane.

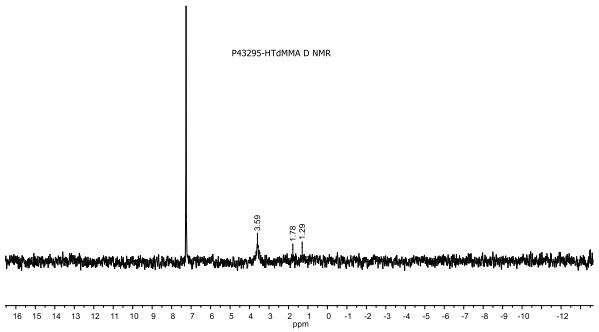
Characterization:
The product was characterized by size exclusion chromatography (SEC) and ^{1}H NMR data analysis.

Solubility:
Poly(3-hexyl thiophene-b-MMA-d8) is soluble in THF, Toluene and $CHCl_3$. It precipitates from methanol and hexane.

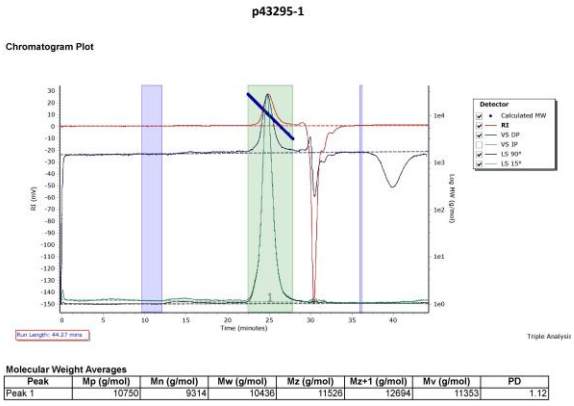
H NMR of poly(3-hexylthiophene-b-MMA-d8):



D NMR spectrum of the Sample:



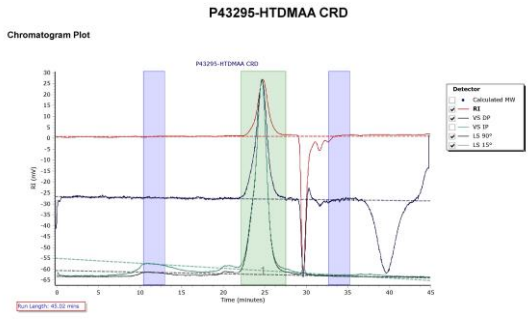
SEC elugram of the first block polymer:



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	10750	9314	10436	11526	12694	11353	1.12

SEC elugram of the polymer:



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	13483	12359	14329	16520	19174	16221	1.159