

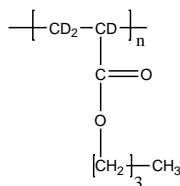
Sample Name:

**Deuterated Poly(n-butyl acrylate-d3)**

*Backbone protons are deuterated*

Sample #: **P43636C-d3nBuA**

**Structure:**



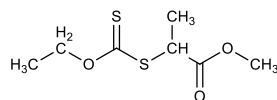
**Composition:**

Mn x 10 <sup>3</sup>	PDI
5.5	1.16

**Synthesis Procedure:**

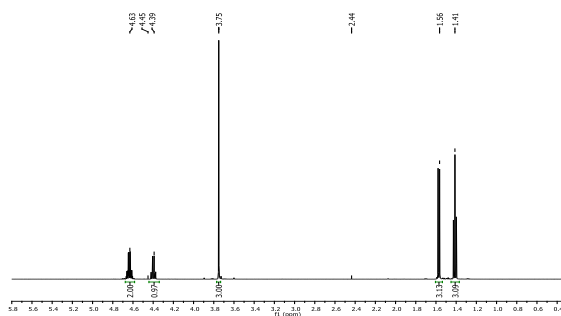
Poly(d3 acrylic acid) is obtained by the RAFT polymerization for d3AA monomer in dioxane. Then the obtained polymer was trans-esterified in presence of n-butanol.

**RAFT reagent used in this synthesis:**



Chemical Formula: C<sub>7</sub>H<sub>12</sub>O<sub>3</sub>S<sub>2</sub>  
Molecular Weight: 208.3

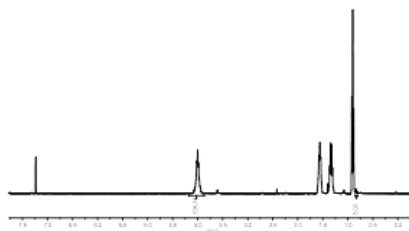
**<sup>1</sup>H NMR spectrum of RAFT (400 MHz, CDCl<sub>3</sub>):**



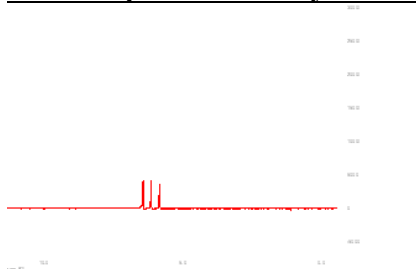
**Characterization:**

The product was characterized by size exclusion chromatography (SEC) and <sup>1</sup>H NMR.

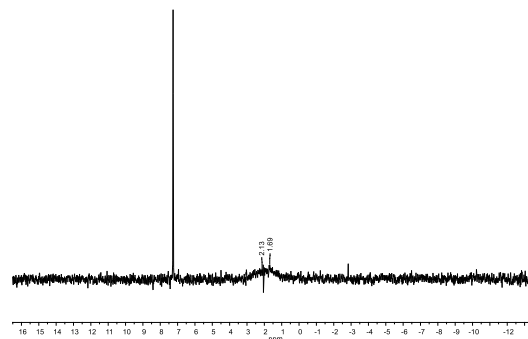
**<sup>1</sup>H NMR spectrum of the polymer in CDCl<sub>3</sub>:**



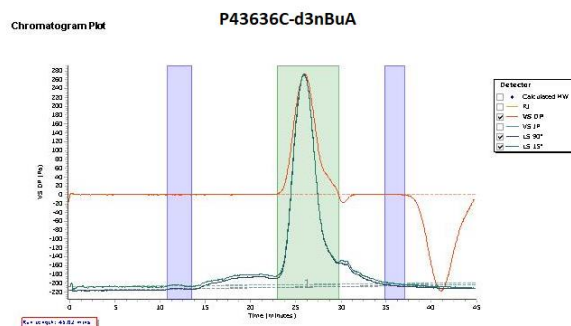
**D NMR spectrum of acrylic acid monomer:**



**D NMR spectrum of the Polymer in CHCl<sub>3</sub>:**



**SEC elugram of the Sample:**



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mz (g/mol)	PDI
Peak 1	6273	5624	6525	7456	8376	7397	1.16