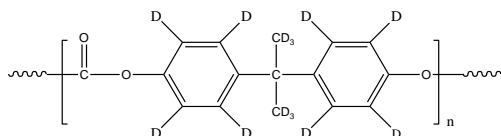


**Sample Name: Deuterated Polycarbonate (d14)**  
**(Bisphenol A Based)**

**Sample #: P41796-d14PC**

### Chemical Structure:



### Composition:

Mw x 10 <sup>3</sup>	Mn x 10 <sup>3</sup>	PDI
14.5	9.1	1.5

### Purification of the Polymer:

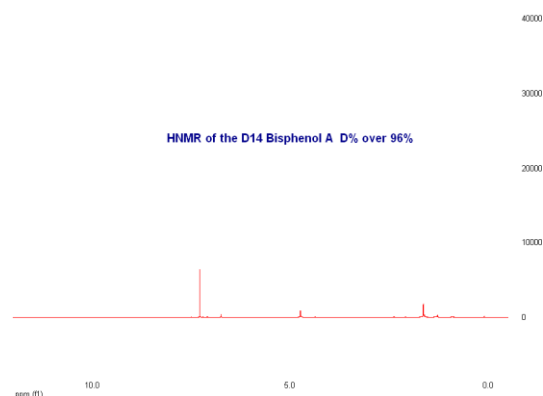
Purification of the obtained polymer was carried out rigorously as follows to ensure the removal of the catalyst side product (NaOH and phosgene byproducts):

1. Dissolved the polymer in Benzene and wash with water.
2. Polymer solution in benzene was dried over anhydrous sodium sulfate.
3. Solution filtered and then passed through a column packed with basic Al<sub>2</sub>O<sub>3</sub>. Solution was filtered and then concentrated on rota-evaporator.

Polymer solution freeze dried from Benzene and dried at 40 °C for 24h.

D14 Bisphenol monomer was characterized by Mass spectroscopy and by HNMR.

### H NMR spectrum of D14 Bisphenol A monomer:



### Characterization:

The product was characterized by size exclusion chromatography (SEC).

### Solubility:

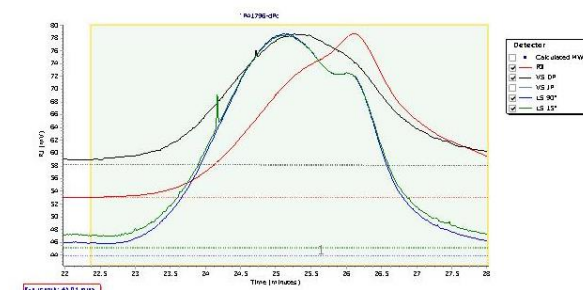
Polymer is soluble in CHCl<sub>3</sub>, Benzene and THF.

### SEC profile of the product:

Agilent GPC/SEC Software

"P41796-dPc

Chromatogram Plot



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PDI
------	------------	------------	------------	------------	--------------	------------	-----

Peak 1	11050	5111	14482	21823	31399	20793	1.59
--------	-------	------	-------	-------	-------	-------	------

Processing Parameters

Method: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100