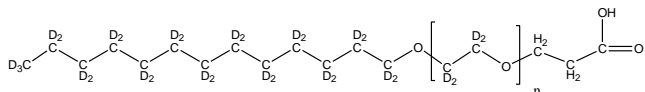


Sample Name:

**Deuterated  $\alpha$ -tridecanol,  $\omega$ -propionic acid Terminated Poly(ethylene glycol)**

**Sample #: P10042A-DPEO-Tridecanol-COOH**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
1.5	1.09
Hydrolysis of Tert.butyl ester to COOH	<90%
Physical Appearance at room temperature	Wax like and light off white color

**Synthesis Procedure:**

$\alpha$ -tridecanol,  $\omega$ -Propionic acid terminated poly(ethylene glycol) was synthesized by anionic living polymerization of ethylene oxide.

**Characterization:**

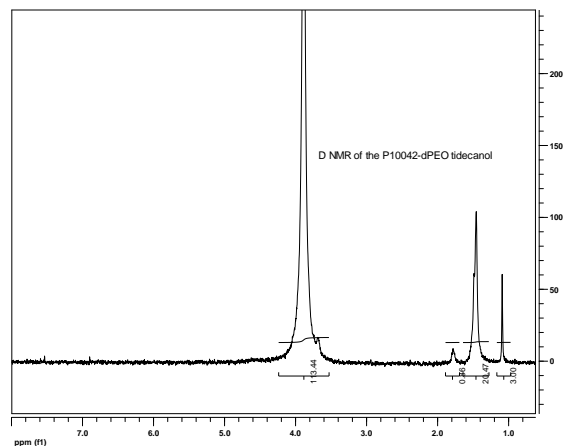
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

**Functionality:** Functionality of the polymer was determined by H NMR analysis.

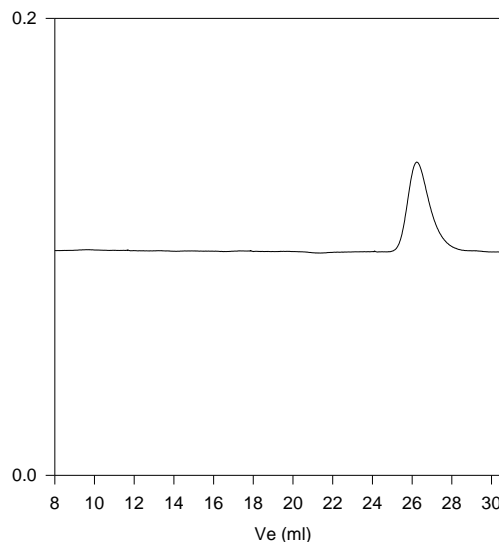
**Solubility:**

Polymer is soluble in chloroform and THF; it will be also soluble in water, methanol and ethanol. It is precipitated out from cold hexane and ether(-20°C).

**<sup>1</sup>H NMR of the product:**

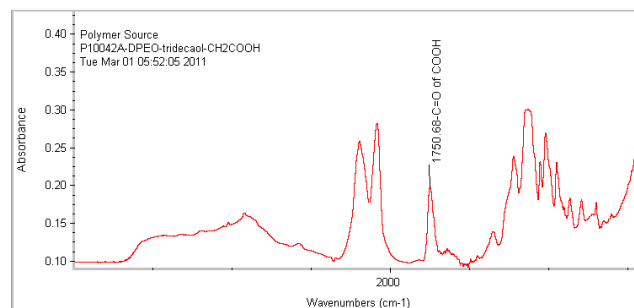


**P10042A- Deuterated EGTridecanol-OH Before converting to acetic acid end group**



Size exclusion chromatography:

— Deuterated Tridecanol terminated deuterated Poly(ethylene glycol)  
M<sub>n</sub>=1500, M<sub>w</sub>=1600, PI=1.09



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k