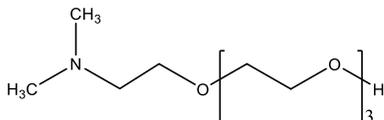


Sample Name:  
**Poly(ethylene oxide), a-dimethyl amino-terminated**

Sample#: **P42996B2-EGN(CH3)2**

**Structure:**



**Composition:**

$M_n \times 10^3$ (g/mol)	$M_w/M_n$	Dp
0.12	1.04	3

**Synthesis Procedure:**

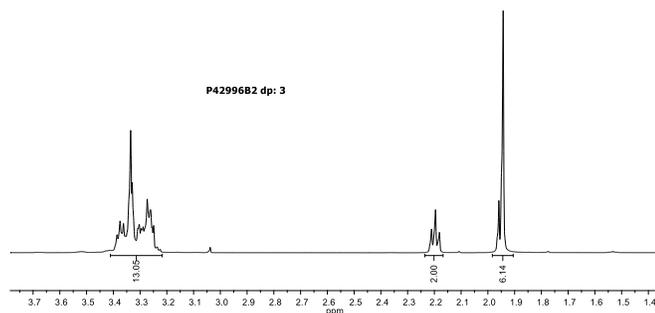
Ethylene oxide was polymerized by living anionic polymerization using potassium salt of N,N dimethyl amino ethanol .

**Characterization:**

Purity and polymer structure was confirmed by  $^1\text{H}$  NMR analysis done on 500 MHz Bruker spectrometer using  $\text{CDCl}_3$  and/or  $\text{DMSO-d}_6$  solvents.

The average molecular weight and polydispersity index ( $M_w/M_n$ ) were determined by size exclusion chromatography (SEC) with triple detection, using DMF or THF as an eluent.

**$^1\text{H}$ -NMR spectrum of polymer in  $\text{CDCl}_3$ :**

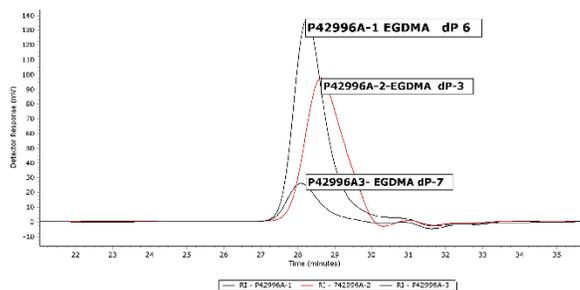


Note: End hydroxy group cannot be seen by NMR in chloroform but can be observed in dimethylsulfoxide.

**SEC elugram of functionalized PEG:**

Workspace Details  
 Workspace name Calibration 2020-05-25  
 Location C:\ProgramData\Agilent Technologies\GPC\Workspaces\Calibration 2020-05-25\  
 Comments  
 Created by agilent2 at 10:50:19 AM on May-25-20

Chromatogram Plot



Workspace Details  
 Workspace name Calibration 2020-05-25  
 Location C:\ProgramData\Agilent Technologies\GPC\Workspaces\Calibration 2020-05-25\  
 Comments  
 Created by agilent2 at 10:50:19 AM on May-25-20

Chromatogram Plot

