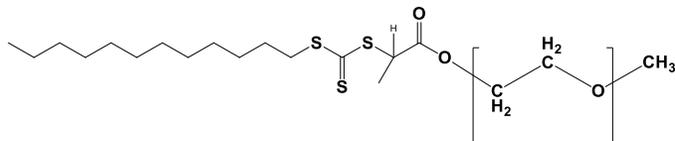


**Sample Name:**  $\alpha$ -Methoxy- $\omega$ -[2-methyl-2-propanoic acid dodecyl trithiocarbonate)-terminated Poly(ethylene oxide)

**Sample #:** P44514-mPEG-RAFT  
**Structure:**



**Composition:**

$M_n \times 10^3$	PDI
5.0	1.08

RAFT functionality  $\geq 90\%$  (NMR)

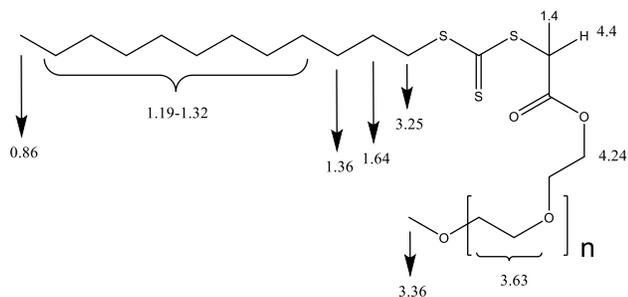
**Characterization:**

PEO bearing RAFT initiating site was analyzed by size exclusion chromatography (SEC) to obtain the polydispersity index (PDI).  $M_n$  and percentage of RAFT functionality was estimated from NMR by comparing the integrals ratio of the peaks at 3.36 and 3.63 ppm, and 3.36 and 4.24 ppm, respectively.

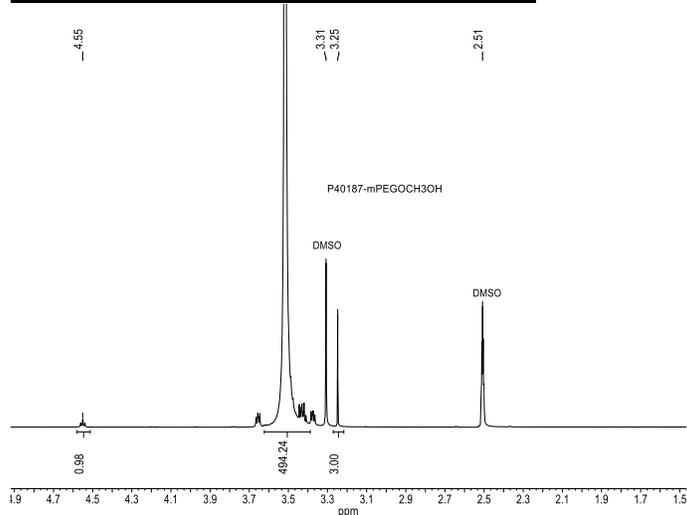
**Solubility:**

Poly(ethylene oxide) is soluble in toluene,  $\text{CHCl}_3$ , Acetone, THF, water. It is insoluble in ether, hexane. Precipitated from DCM or  $\text{CHCl}_3$  into ether.

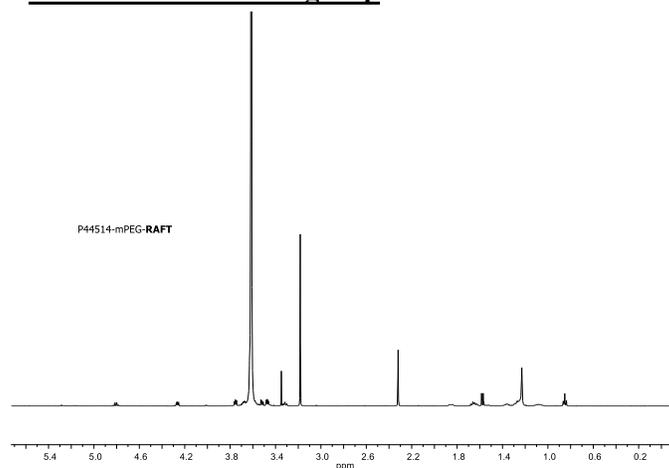
**Chemical shifts assignments**



**$^1\text{H-NMR}$  of the Initial PEO- lot# P40187**

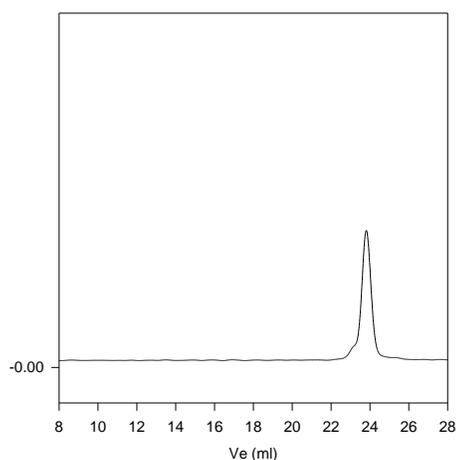


**PEO with RAFT End group**



**SEC profile of the polymer:**

P44514mPEG



Size Exclusion Chromatography of Polyethylene glycol

$M_n=5000$ ,  $M_w=5400$ ,  $PI=1.08$