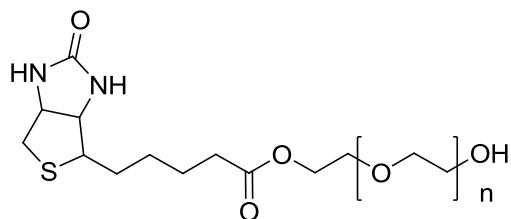


Sample Name: α -Methoxy- ω -Biotin-terminated Poly(ethylene oxide)

Sample #: P20073F1-EO-OCH3Biotin



Composition:

$M_n \times 10^3$ MeO-PEO-Biotin	PDI
2.4 (NMR)	1.2 (SEC)
Biotin functionality $\geq 80\%$ (NMR)	

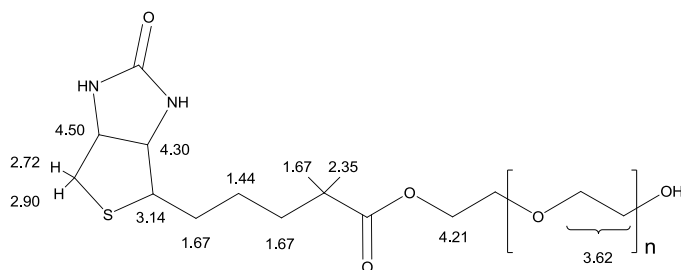
Solubility:

Poly(ethylene oxide) is soluble in toluene, CHCl_3 , Acetone, THF. Insoluble in ether, hexane. Precipitated from DCM or CHCl_3 into ether.

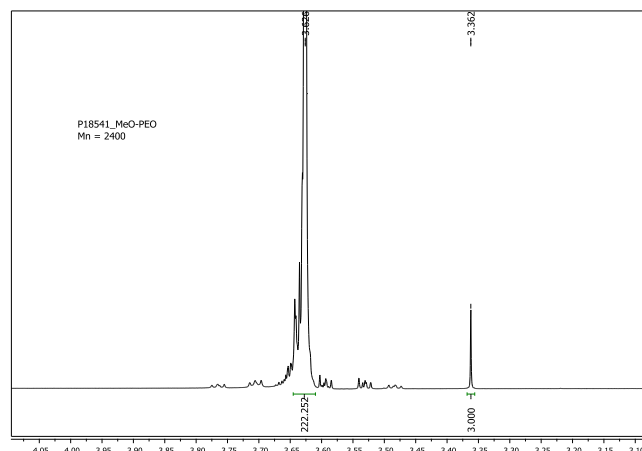
Characterization:

PEO bearing biotin moiety was analyzed by size exclusion chromatography (SEC) to obtain the polydispersity index (PDI). M_n and percentage of Biotin functionality was estimated from NMR by comparing the integrals ratio of the peaks at 3.36 and 3.62 ppm, and 3.36, 3.14 and 4.21 ppm, respectively.

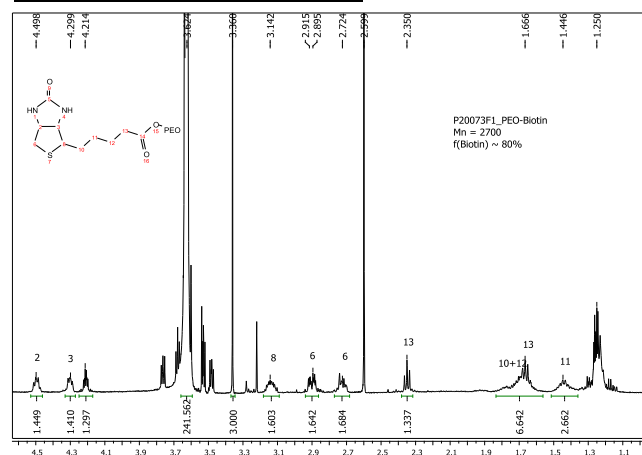
Chemical shifts assignments



^1H -NMR of the Initial PEO:

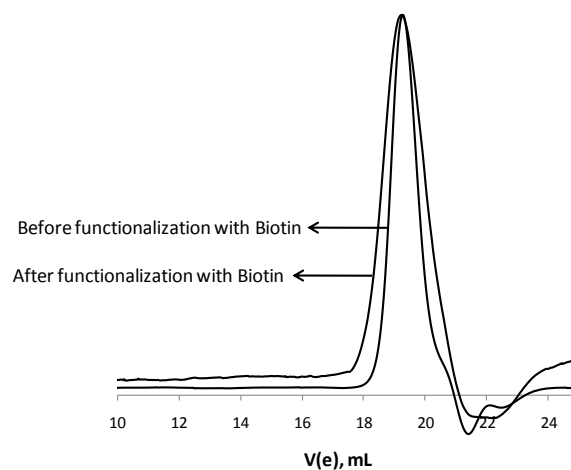


PEO with Biotin End group



SEC of the polymer:

P20073F1-EO-OCH3Biotin



Before functionalization: $M_w / M_n = 1.1$
After functionalization: $M_w / M_n = 1.2$