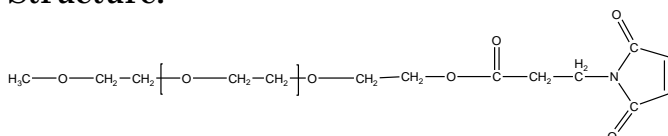


Sample Name:

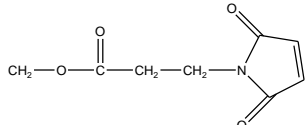
α -Methoxy ω -Maleimido end functionalized Poly(ethylene glycol)

Sample #: **P10169-EGOCH3maleimido**

Structure:

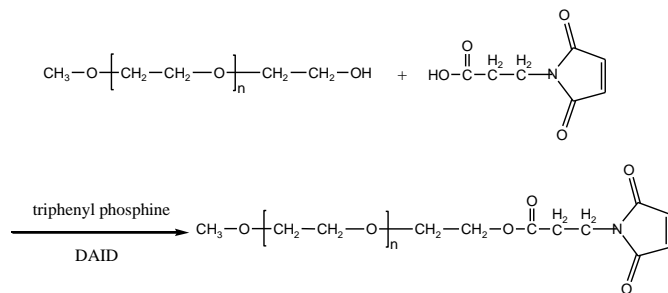


Composition:

Mn x 10 ³	PDI
2.0	1.10
Maleimido End group functionality	>50%
On the basis of CH2 ester: 	>90%

Synthesis Procedure:

α -Methoxy ω -Maleimido end functionalized Poly(ethylene glycol) was synthesized by anionic living polymerization of ethylene oxide using ethylene glycol/potassium salt as an initiator, followed by the conversion of hydroxyl end group into 3-maleimidopropionate group by reacting them with 3-maleimidopropionic acid. The reaction scheme is as follows.



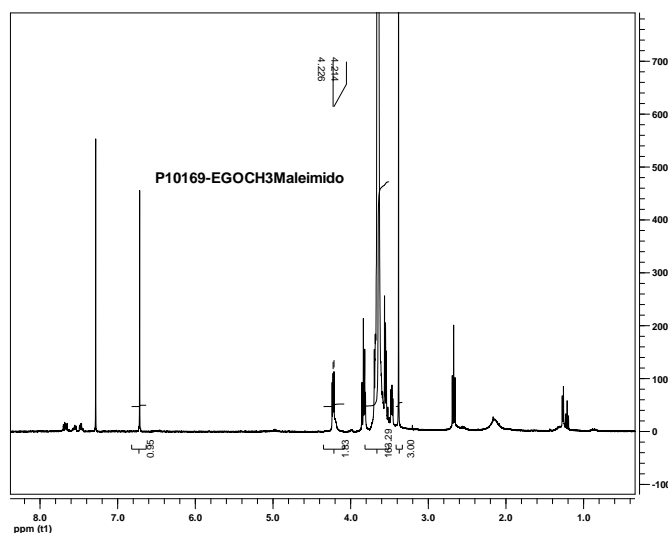
Characterization:

Polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The end functionality was calculated from ¹H-NMR spectroscopy.

Solubility:

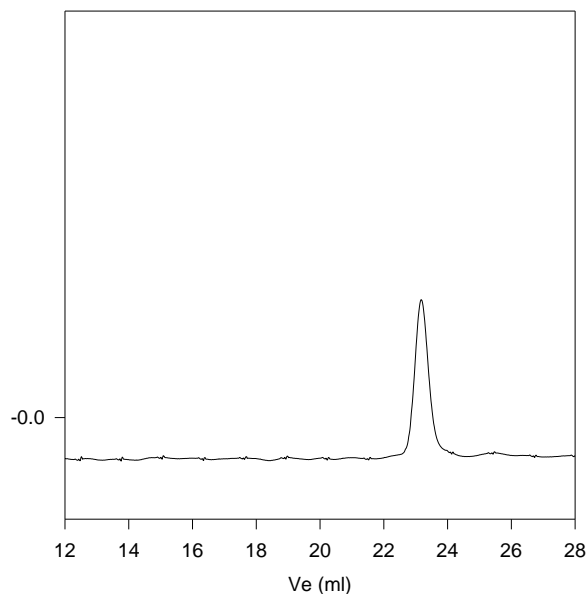
Functionalized poly(ethylene oxide) is soluble in CHCl₃, THF, and precipitated out from cold diethyl ether.

NMR of α -Methoxy ω -Maleimido end functionalized PEG:



SEC of the polymer

P10169-EG-OCH3-Maleimido



Size exclusion chromatography of poly(ethylene glycol methyl ether) before converting terminal OH group to ester group :

M_n=2000, M_w=2200, PI=1.10