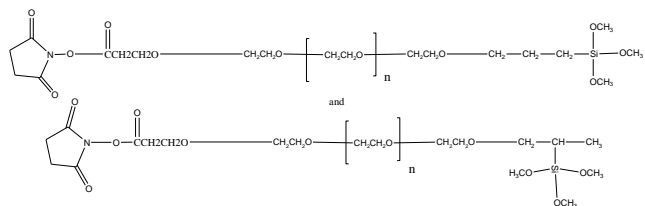


Sample Name:

α -N-hydroxy succinimide, ω -Trimethoxy
Terminated Poly(ethylene glycol)

Sample #: P8085-EG-NHSTMS

Structure:

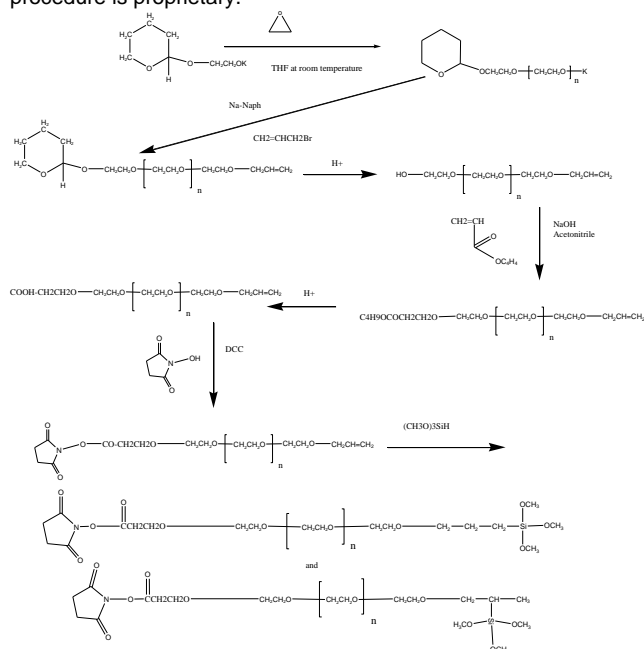


Composition:

Mn x 10 ³	PDI
1.10	1.18

Synthesis Procedure:

α -hydroxy succinimide, ω -trimethoxy silyl terminated poly(ethylene glycol) was synthesized by anionic living polymerization of ethylene oxide. The hydrosilation was carried out in the presence of a catalyst (Pt O) and the degree of hydrosilation was found over 98% as evidenced from H NMR spectroscopy. The procedure is proprietary.



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.

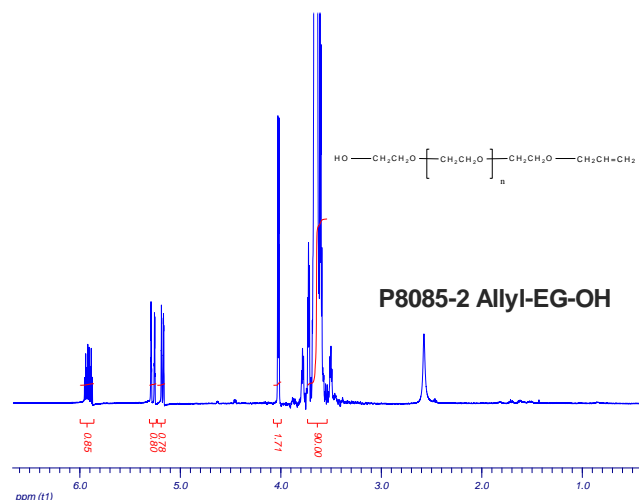
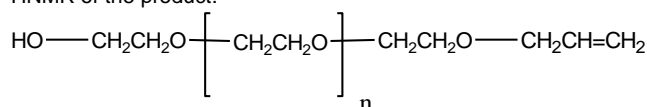
Functionality:

Functionality of the polymer was determined by H NMR analysis or FT-IR spectroscopy.

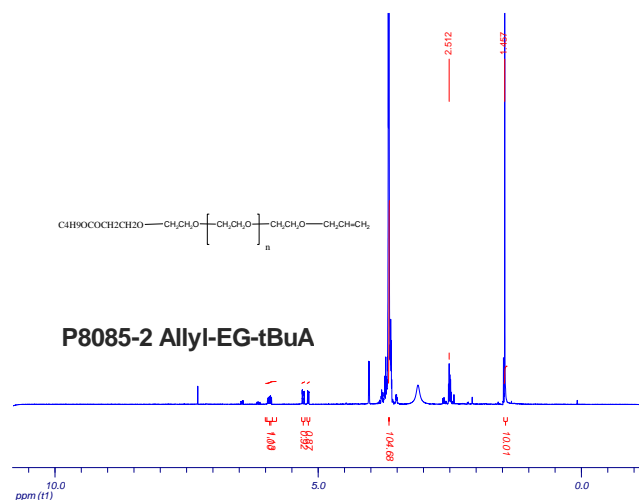
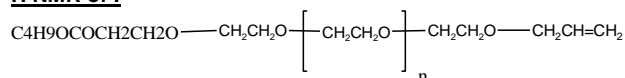
Solubility:

Polymer is soluble in CHCl_3 , THF, acetone, methanol and ethanol. It is precipitated out from cold hexane and ether.

HNMR of the product:



H NMR of :



$$\text{Cyclopentane-1,3-dione ring}-\text{N}-\text{O}-\text{C}(=\text{O})\text{CH}_2\text{CH}_2\text{O}-\text{CH}_2\text{CH}_2\text{O}-\left[\text{CH}_2\text{CH}_2\text{O}\right]_n-\text{CH}_2\text{CH}_2\text{O}-\text{CH}_2\text{CH}=\text{CH}_2$$
$$\begin{array}{c}
 \text{O} \\
 \parallel \\
 \text{C} \\
 \diagup \quad \diagdown \\
 \text{N} \text{---} \text{O} \text{---} \text{C} \text{---} \text{CH}_2 \text{CH}_2 \text{O} \text{---} \text{CH}_2 \text{CH}_2 \text{O} \left[\text{CH}_2 \text{CH}_2 \text{O} \right]_n \text{CH}_2 \text{CH}_2 \text{O} \text{---} \text{CH}_2 \text{---} \text{CH}_2 \text{---} \text{CH}_2 \text{---} \text{Si} \begin{array}{l} \text{OCH}_3 \\ \text{---} \text{OCH}_3 \\ \text{OCH}_3 \end{array} \\
 \parallel \\
 \text{O}
 \end{array}$$

and

$$\begin{array}{c}
 \text{O} \\
 \parallel \\
 \text{C} \\
 \diagup \quad \diagdown \\
 \text{N} \text{---} \text{O} \text{---} \text{C} \text{---} \text{CH}_2 \text{CH}_2 \text{O} \text{---} \text{CH}_2 \text{CH}_2 \text{O} \left[\text{CH}_2 \text{CH}_2 \text{O} \right]_n \text{CH}_2 \text{CH}_2 \text{O} \text{---} \text{CH}_2 \text{---} \text{CH} \text{---} \text{CH}_3 \\
 \parallel \\
 \text{O}
 \end{array}
 \begin{array}{c}
 \text{H}_3\text{CO} \text{---} \text{C} \text{---} \text{OCH}_3 \\
 \diagup \quad \diagdown \\
 \text{OCH}_3
 \end{array}$$