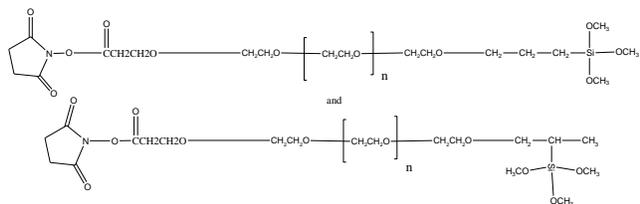


**Sample Name:**

**$\alpha$ -N-hydroxy succinimide,  $\omega$ -Trimethoxy Terminated Poly(ethylene glycol)**

**Sample #: P6550-EG-NHSTMS**

**Structure:**

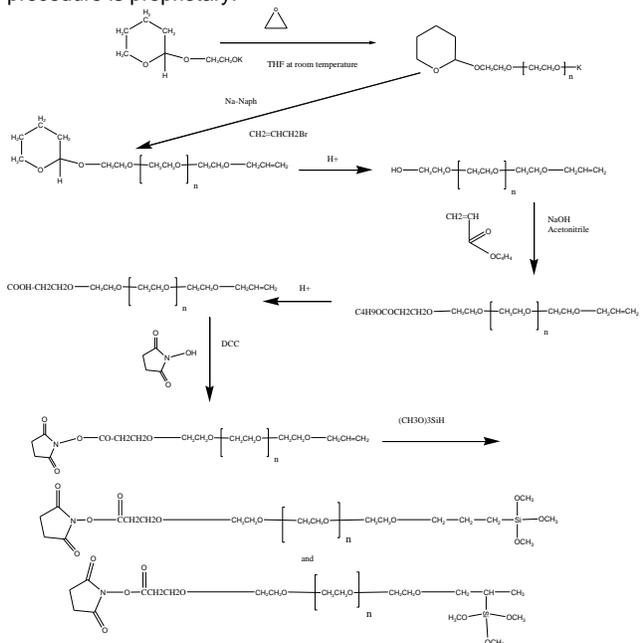


**Composition:**

Mn x 10 <sup>3</sup>	PDI
3.5	1.06
TMS end functionality	>90%
NHS end Functionality	>90%

**Synthesis Procedure:**

$\alpha$ -hydroxy succinimide,  $\omega$ -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.

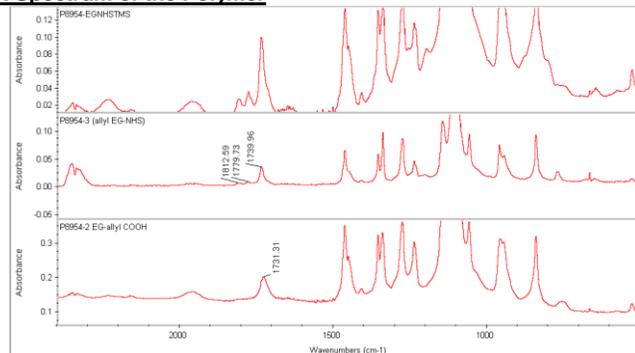
**Functionality:**

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

**Product Reaction monitor by FTIR:**

1. C=O in the EG-COOHallyl: 1731 cm<sup>-1</sup>
2. C=O shift to 1739 cm<sup>-1</sup> in N-hydroxy succinimidyl moiety and other 2 C=O at 1179 cm<sup>-1</sup> and 1812 cm<sup>-2</sup> from NHS carbonyl
3. After Hydrosilation: TMS peak at 1200 cm<sup>-1</sup>.

**FTIR Spectrum of the Polymer**



**Solubility:**

Polymer is soluble in CHCl<sub>3</sub>, THF, acetone, methanol and ethanol. It is precipitated out from cold hexane and ether.

**H NMR spectrum of the product at different stages of the reaction**

