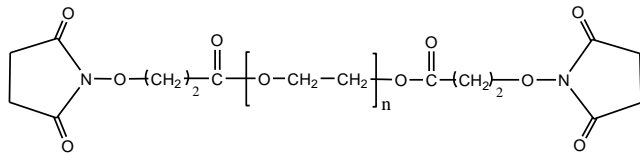


Sample Name:

**$\alpha$ ,  $\omega$ -Disuccinimidyl Succinate Terminated Poly(ethylene glycol)**

Sample #: P40691-EGSS2

**Structure:**

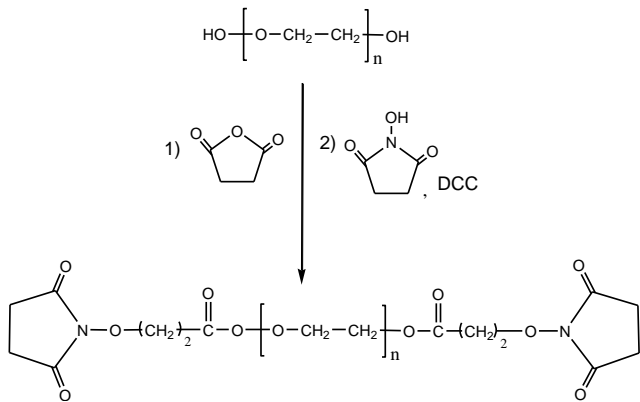


**Composition:**

Mn x 10 <sup>3</sup>	PDI
3.4	1.10

**Synthesis Procedure:**

$\alpha$ ,  $\omega$ - N-Hydroxy disuccinimidyl succinate terminated poly(ethylene glycol) was synthesized by anionic living polymerization of ethylene oxide using ethylene glycol/potassium salt as an initiator. The hydroxyl endgroups were converted into carboxyl groups by reacting them with succinic anhydride. The final polymer with succinimidyl succinate endgroups was prepared by reacting with N-hydroxysuccinimide in presence of DCC. The reaction is illustrated as below Scheme:



**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.

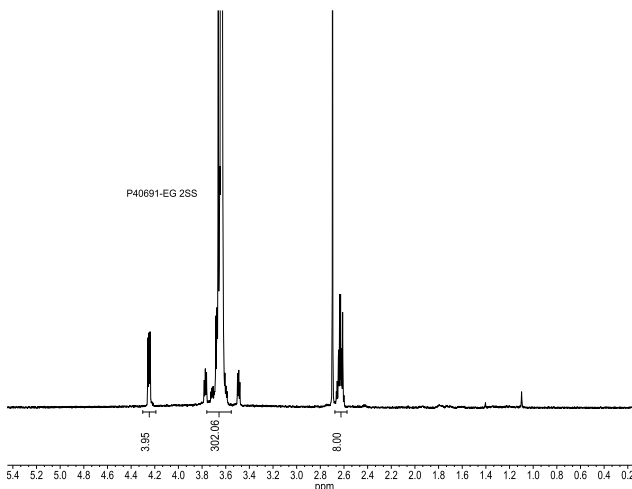
**Functionality:**

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

**Solubility:**

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

**HNMR spectrum of the Polymer:**



**SEC elugram of Sample:**

**P40691-EGSS2**

