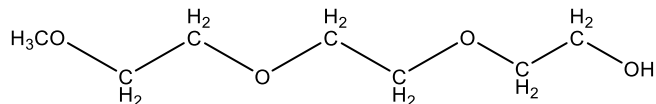


**Sample Name:** Poly (ethylene glycol) methyl ether or Triethyleglycol methylether

**Sample #:** P43724-EGOCH3

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
0.16	1.09

**Synthesis Procedure:**

Poly (ethylene glycol) is obtained by living anionic polymerization and the reaction.

**Characterization:**

The polymer was characterized by size exclusion chromatography (SEC) in DMF and <sup>1</sup>H NMR.

**Purification of the obtained polymer:**

Purification of the obtained polymer was carried out rigorously as follows to ensure the removal of the catalyst side product:

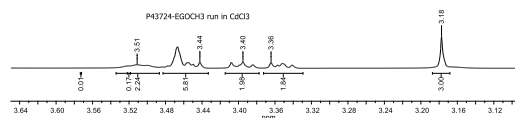
1. Dissolved the polymer in de-ionized distilled water to remove the any insoluble organic catalyst side product.
2. Polymer extracted from water with dichloromethane.
3. Polymer solution in dichloromethane was dried over anhydrous sodium sulfate.
4. Solution filtered and then passed through a column packed with basic Al<sub>2</sub>O<sub>3</sub>.
5. Solution concentrated on rota-evaporator
6. Solution precipitated in cold diethyl ether.
7. Dried under vacuum for 48h at 38 °C.

**Solubility:**

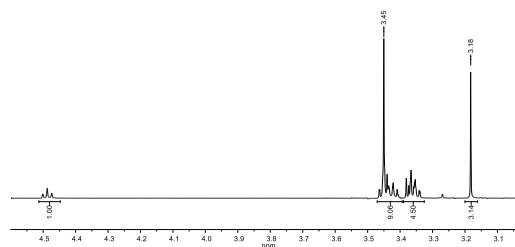
Poly (ethyl glycol) is soluble in toluene, THF, water and CHCl<sub>3</sub>. The polymer is insoluble in hexane, ether, cold isopropanol and ethanol.

**<sup>1</sup>H NMR spectrum for mPEG Sample:**

A. For mPEG



B. For mPEG run in DMSO;



**SEC elugram of the polymer:**

