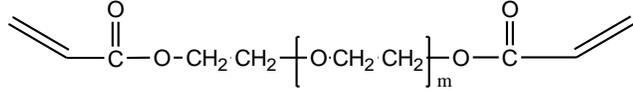


Sample Name:

α - ω diacrylate terminated Poly(ethylene glycol)

Sample #: P44513A-EG2Acrylate

Structure:



Composition:

Mn x 10 ³	PDI
4.7	1.08
Functionality	>99%

Synthesis Procedure:

Poly (ethylene glycol) is obtained by living anionic polymerization of ethylene oxide using di potassium salt of ethylene glycol. The obtained polymer was reacted with acryloyl chloride in an appropriate solvent to yield α - ω diacrylate terminated Poly (ethylene glycol).

Characterization:

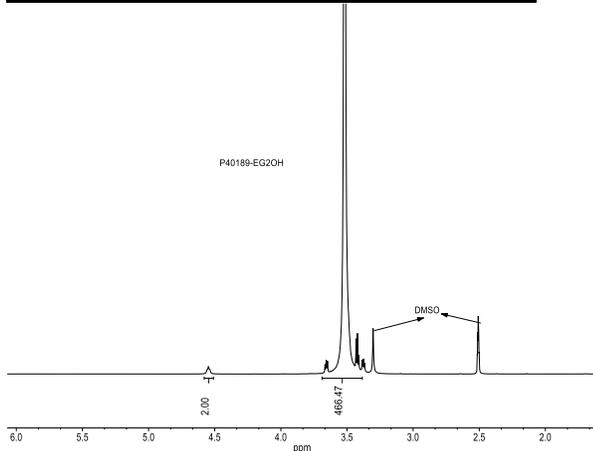
By GPC and by HNMR

Purification of the obtained polymer:

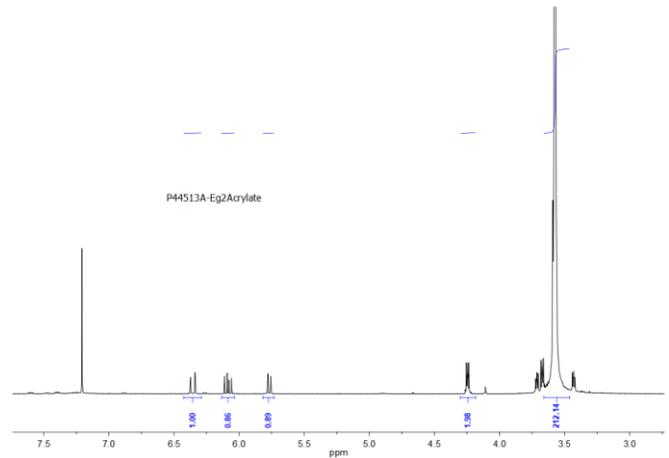
Purification of the obtained polymer was carried out rigorously as follows to ensure the removal of the catalyst side product:

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 Al₂O₃.
5. Solution concentrated on rota-evaporator
6. Solution precipitated in cold diethyl ether.
7. Dried under vacuum for 48h at 38°C.

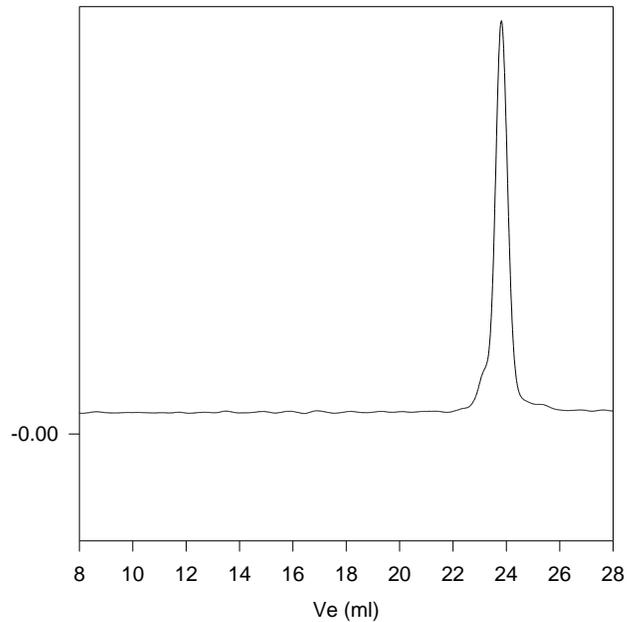
HNMR of the EG2OH: Lot # P40189 Used



HNMR of the product: Run in CdCl3



SEC of Sample: PEG-2 Acrylate run in THF;
P44520-mPEG



Size Exclusion Chromatography of Polyethylene glycol

M_n=4,700, M_w=5000, PI=1.08