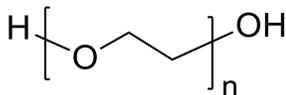


Sample name: Poly(ethylene glycol)

Other names: Poly(ethylene oxide), PEG, PEO

Sample # I-0011-PEG

Structure:



Molecular weight, $M_n \times 10^3$ (g/mol):	9.2
Polydispersity index, $M_w/M_n$ :	1.02

CAS number:	25322-68-3
Appearance:	flakes
Colour:	white
Melting point, $T_m$ :	67 °C

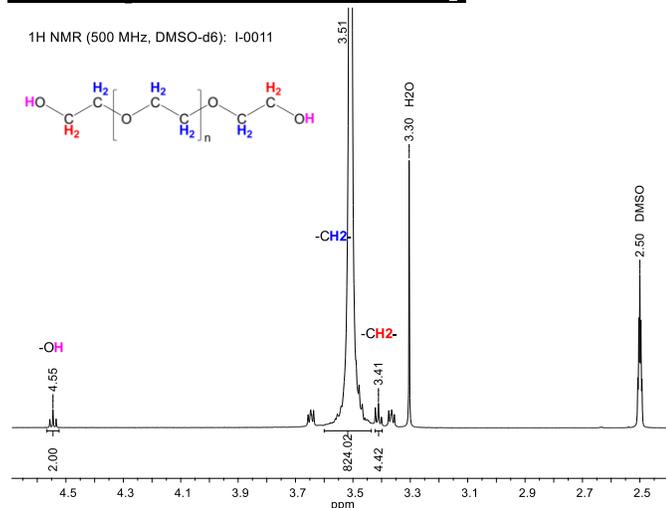
#### Characterization methods:

The molecular weight and polydispersity index of the PEG were obtained by size exclusion chromatography (SEC) performed on Agilent 1260 Infinity II multi-detector GPC/SEC system equipped with three columns and using 2% acetic acid aqueous solution as an eluent.

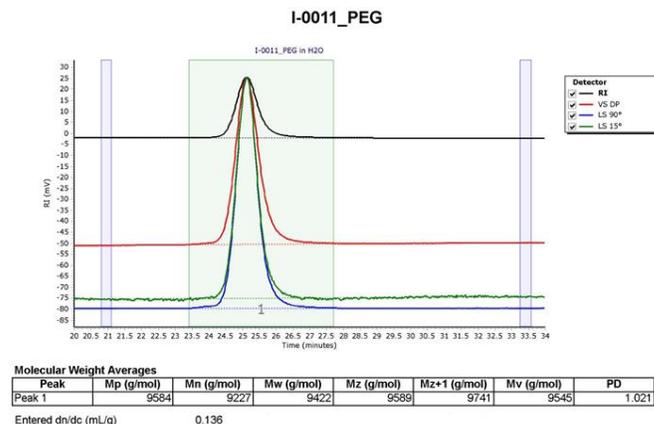
The molecular weight of the PEG was also calculated from  $^1\text{H}$  NMR data recorded on Bruker Avance III 500 NMR spectrometer using dimethyl sulfoxide- $d_6$  as a solvent, and is in good correlation with SEC results.

Thermal analysis was performed on TA Instruments Q100 differential scanning calorimeter (DSC) under a nitrogen atmosphere. The melting point ( $T_m$ ) of the polymer was measured at a scan rate of 10°C/min shortly after creating thermal history of the sample.

#### $^1\text{H}$ NMR spectrum of PEG in DMSO- $d_6$ :



#### SEC chromatogram of PEG in water:



**DSC thermogram:** 2<sup>nd</sup> cooling scan (top, 10°C/min) and 2<sup>nd</sup> heating scan (bottom, 10°C/min)

