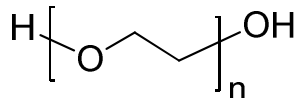


Sample name: Poly(ethylene glycol)

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

Sample # I-0012-PEG

Structure:



Molecular weight, $M_n \times 10^3$ (g/mol):	30.0
Polydispersity, M_w/M_n	1.02
CAS number:	25322-68-3
Appearance:	flakes
Colour:	white
Melting point, T_m :	68 °C
Glass transition temperature, T_g :	-48 °C

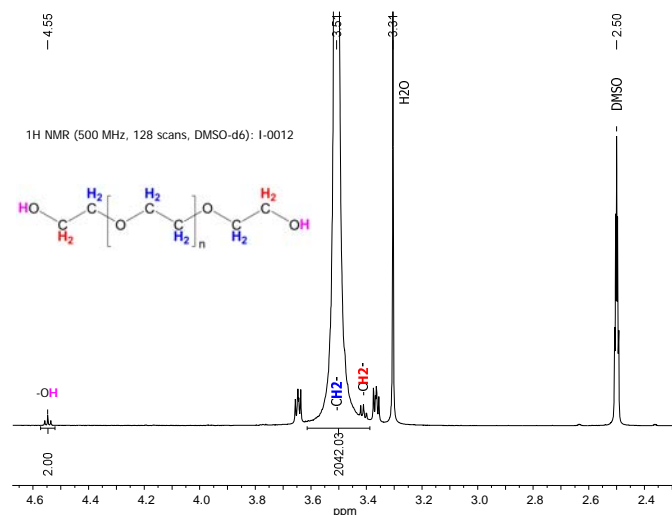
Characterization methods:

The molecular weight and polydispersity index were determined by size exclusion chromatography (SEC) using triple detector, two columns, and 0.023 M LiBr solution in DMF as an eluent.

The molecular weight of the polymer was calculated from ^1H NMR data recorded on Bruker Avance III 500 NMR spectrometer and compared to SEC data. Dimethyl sulfoxide- d_6 was used as a solvent.

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.

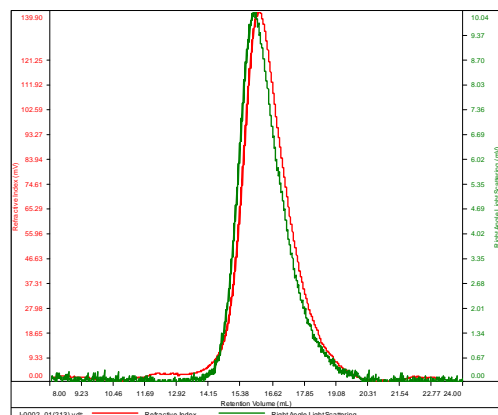
^1H NMR spectrum of PEG in DMSO- d_6 :



SEC chromatogram:

I-0012-PEG in DMF

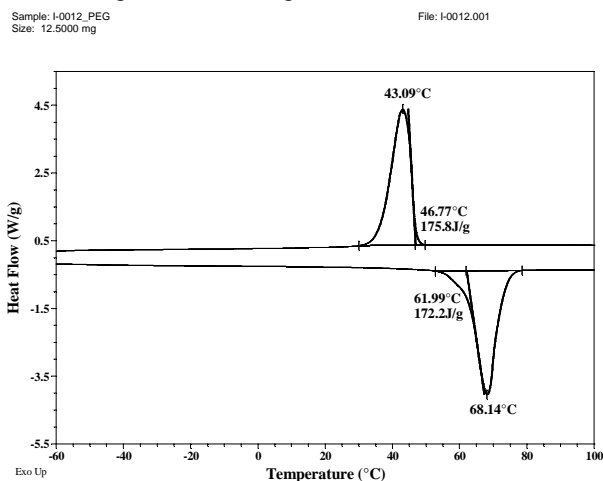
Conc	25.5304
dn/dc	0.0440
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS-80k_2018-04-02-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
I-0002_01(213).vdt	30,720	31,358	30,994	1.021	0.4072

DSC thermogram:

- 2nd cooling and 2nd heating scans (both 10°C/min):



- 2nd heating scan (10°C/min):

