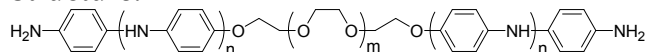


Sample Name:
Poly(aniline-b-ethylene glycol-b-aniline)

Sample #: P14227-ANIEGANI

Structure:

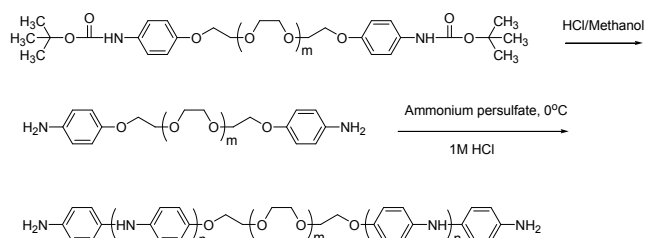


Composition:

Mn x 10 ³	PDI
12.4-b-2.0-b-12.4	1.10

Synthesis Procedure:

Poly(aniline-b-ethylene glycol-b-aniline) is prepared by chemical oxidative polymerization of aniline with the aniline-end capped PEG using ammonium persulfate as oxidizer in an acidic aqueous solution. The scheme of the reaction is illustrated below:



Characterization:

The molecular weight of this polymer was determined by ¹H NMR and polydispersity index was determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. Elution of the polymer in THF gives ambiguity results due to strong adsorption of the polymer with columns packing material. The Composition was calculated from HNMR.

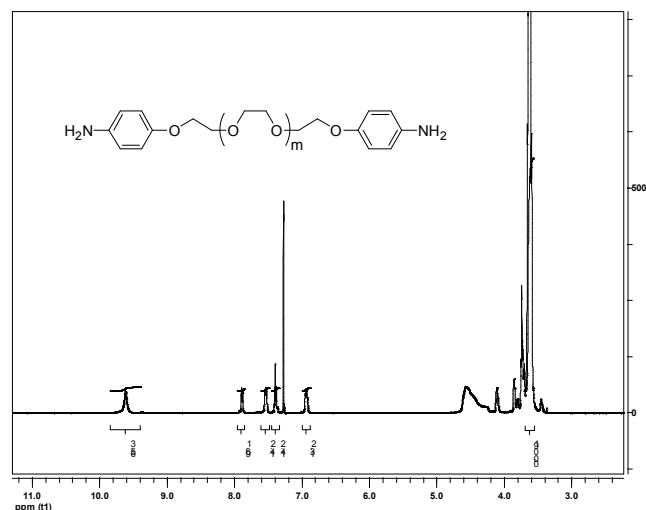
Thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

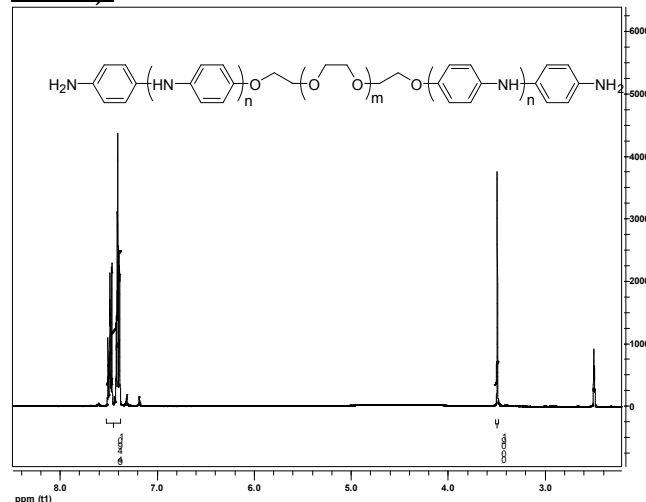
Solubility:

Polymer is soluble in water, DMSO, DMF and partially soluble in THF, CHCl₃.

¹HNMR of the aniline end capped PEG:



¹HNMR of the poly(aniline-b-ethylene glycol-b-aniline):



SEC of the poly(aniline-b-ethylene glycol-b-aniline):

P14227-ANIEGANI

