

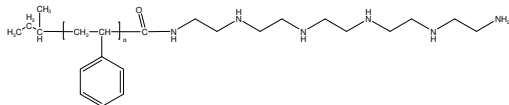
Sample Name:

Pentaethyl Hexamine Terminated Polystyrene

Sample #: P18881-SPEHA-Dialysed polymer

Against water

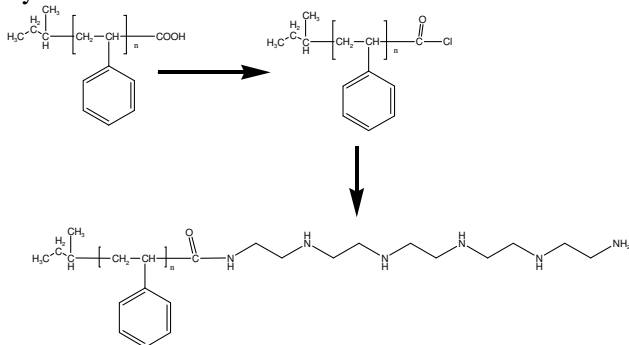
Structure:



Composition:

Mn x 10 ³	PDI
2.2	1.08 (COOH) (1.3)
Functionality %	>96%

Synthesis Procedure:



Characterization:

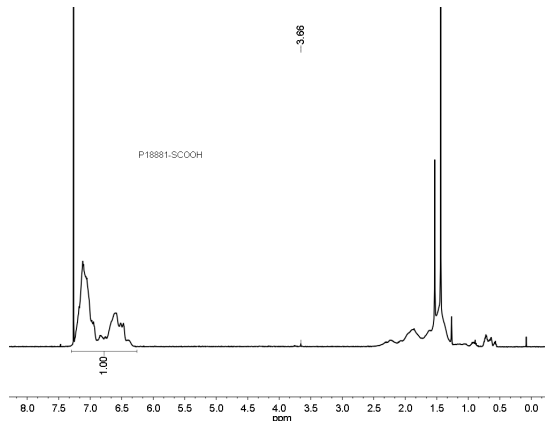
The molecular weight and polydispersity index of this polymer were determined before and after addition of the CO₂H function, by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. Polymer COOH functionality was determined by titration with NaOH using phenolphthalein as the indicator.

After end capping of Pentaethylen hexamine, Ppolymer SEC chromatogram shows some broadening, it may be due to adsorption of polymer with column packing material.

Solubility:

Polymer is soluble in toluene, THF, CHCl₃ and can be precipitated in water and cold methanol.

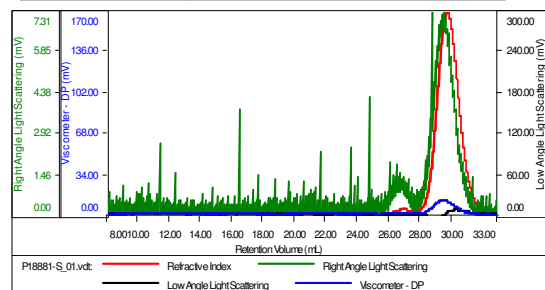
H NMR:



SEC of Sample

Sample ID: P18881-S Before termination with CO2

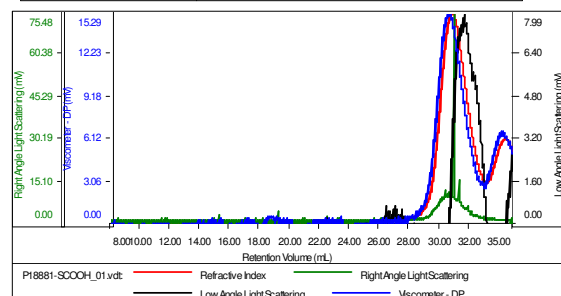
Concentration (mg/mL)	5.5172
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-0903-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P18881-S_01.vdt	2,185	2,353	2,277	1.077	0.0867

Sample ID: P18881-S after termination with CO2

Concentration (mg/mL)	9.6880
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-0903-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P18881-S-COOH_01.vdt	2,266	2,335	2,415	1.030	0.0698