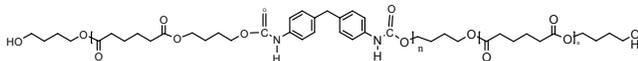


Sample Name:

Poly urethane based on Adipic acid, Butane diol and 4, 4'-Methylenebis (phenyl isocyanate) MDI-based polyurethanes

Sample #: P19233A-PU

Structure:



Composition:

Composition:

M _w x 10 ³	M _w /M _n (PDI)	Composition Adipic acid: Butanediol:MDI	T _g (°C)
13.5	1.35	1:1:1	-14.1

Mn of Oligomers around 2,000

Synthesis Procedure:

Polyurethane is prepared in two-step procedure A:oligomerization of Adipic acid with Butane diol and then B reaction with MDI.

Characterization:

An aliquot of the copolymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The chemical composition was verified by ¹H-NMR spectroscopy, which is run in deuterated chloroform at 500MHz. The glass-transition temperature was measured by DSC.

Solubility:

Chloroform	THF	DMF	DMSO
(y)	(Y)	(Y)	(Y)

Figure: ¹H NMR spectrum

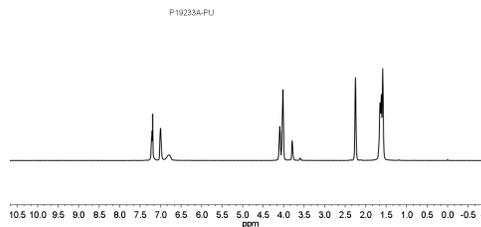
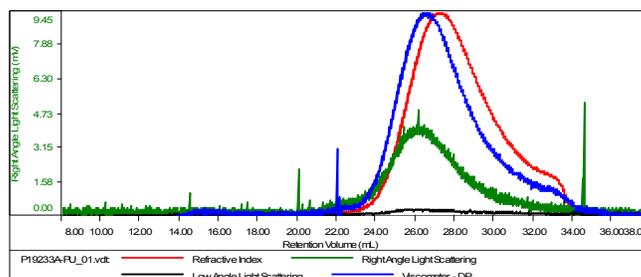


Figure: SEC profile of the polyurethane
Sample ID: P19233A-PU

Concentration (mg/mL)	1.6264
Sample ch/c: (mL/g)	0.1300
Method File	PS80K-April13-2015-0000.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)
P19233A-PU_01.vdt	9,974	13,314	12,747	1.335	0.7729

DSC Thermogram:

