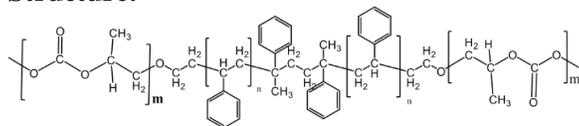


Sample Name:

Poly(propylene carbonate)-b-poly(styrene)-b-poly(propylene carbonate)

Sample#: **P43070A-PPCSPPC**

Structure:

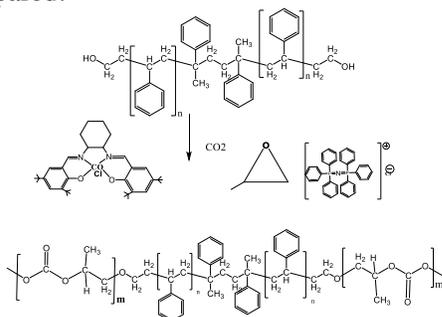


Composition:

Mn x 10 ³ PPC-b-S-b-PPC	PDI
9.0-11.5-9.0	1.10

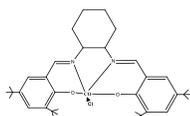
Synthesis Procedure:

The following reaction scheme shows how the product was prepared:



Purification:

The polymer was purified to remove homopolycarbonate fraction generated by Ionic polymerization of Propylene oxide by the following catalyst : (R,R)-N,N'-Bis(3,5-di-tert-butylsalicylidene)-1,2-cyclohexanediaminocobalt(II) chloride used in the synthesis:



Product was purified to remove:

1. Homopolystyrene if any
2. Homopoly propylene carbonate

Using solvent /non solvent mixture and the purification followed by SEC profile.

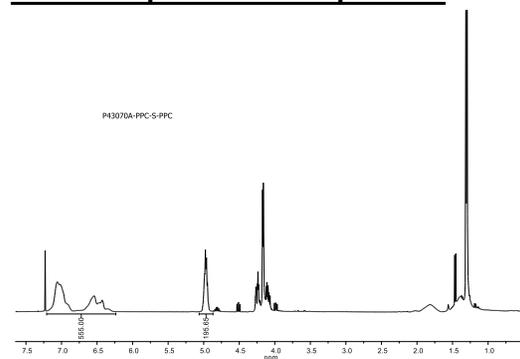
Characterization:

Polymer analyzed by size exclusion chromatography (SEC) and by ¹H-NMR data analysis.

Solubility:

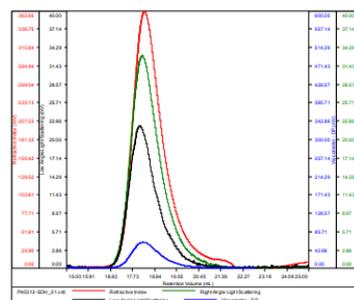
The polymer is soluble in THF, toluene, and CHCl₃.

¹H-NMR Spectrum of the product:



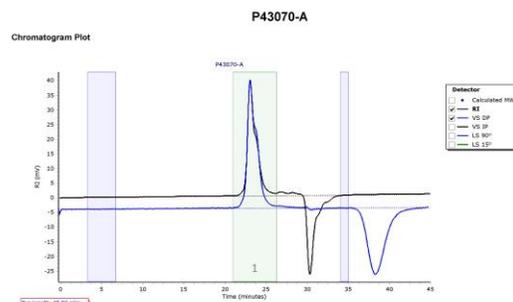
SEC elugram of the S2OH sample used:

Conc. (mg/mL)	10.7141
Flow. (mL/min)	0.1650
Method	PS80A_December2016.0004.vcm
Solvent	DMF w/ 0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mz	Mw/Mn	IV
P43070-S2OH_01.vcl	11,590	11,922	11,964	1.029	0.0461

SEC elugram of the polymer:



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mz (g/mol)	PD
Peak 1	37127	29544	32637	35256	37734	0	1.105

Workspace Details
Workspace name
Location
Comments
Created by
Calibration 2020-05-25
C:\ProgramData\Agilent Technologies\GPC\Workspaces\Calibration 2020-05-25
agilent2 at 10:50:19 AM on May-25-20

