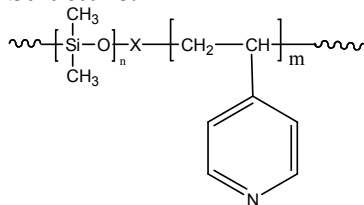


Sample Name:

Poly(4-vinyl pyridine-b-dimethylsiloxane)

Sample #: **P40473A-4VPDMS**

Structure:



Composition:

$M_n \times 10^3$ 4VP-b-DMS	Mw/Mn
18.0-b-2.0	1.14

Synthesis:

Poly (4-vinyl pyridine-b-dimethylsiloxane) was synthesized by RAFT Process.

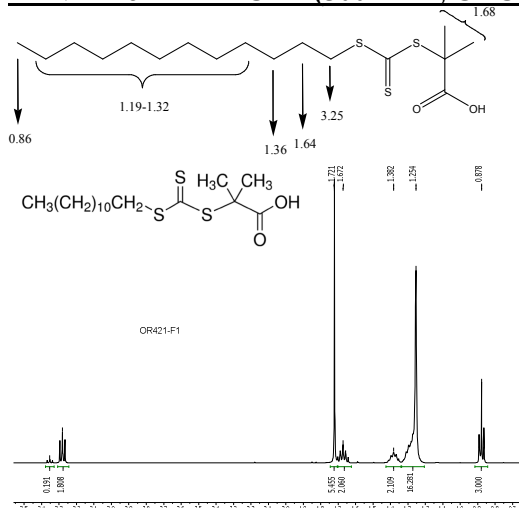
Characterization:

Polymers were analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The block copolymer composition was then calculated from ¹H-NMR spectroscopy by comparing the peak area of the 2-vinyl pyridine proton at about 8.2 ppm with the dimethyl siloxane protons at 0.08 ppm. Copolymer PDI is determined by SEC.

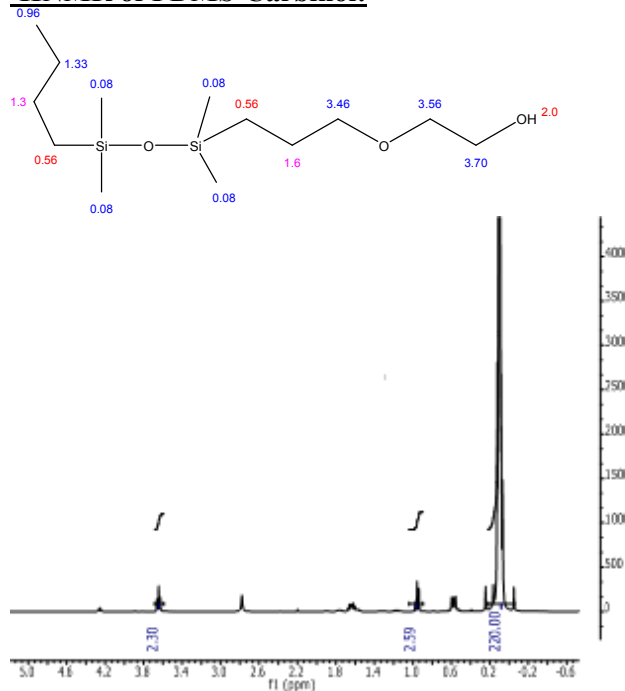
Solubility:

Poly(4-vinyl pyridine-b-dimethyl siloxane) is soluble in THF, CHCl₃ and toluene.

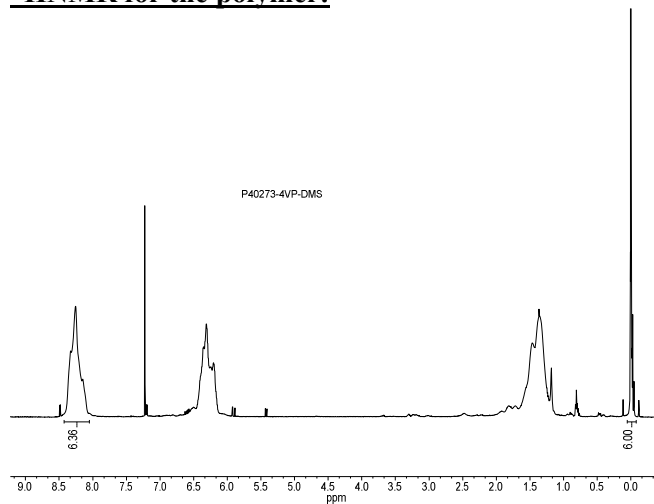
¹H NMR of RAFT CTA (500 MHz, CDCl₃):



¹H NMR of PDMS-Carbinol:

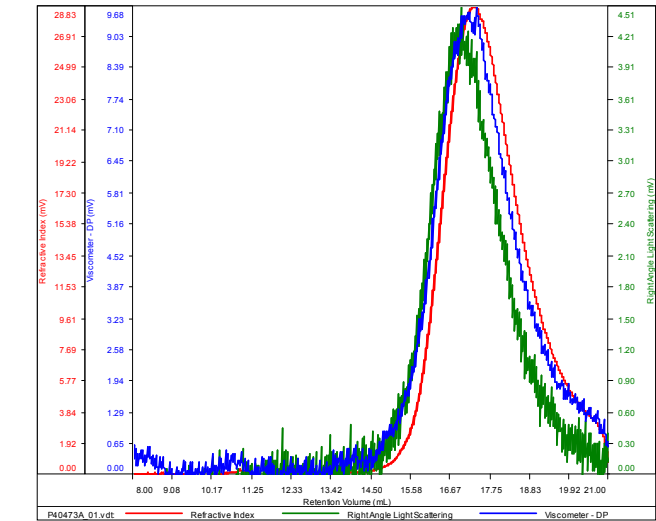


¹H NMR for the polymer:



SEC of the Polymer:
P40473A-4VPDMS

ID	P40473A
Conc	3.4084
Recovery	340.8425
dn/dc	0.1300
Method	PS80K_December-2016-0004.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40473A_01.vdt	20,355	23,206	23,125	1.140	0.0792

FTIR: The Composition of the polymer was also checked by FTIR.

Relationship between weight fraction & FTIR peak area of 2VP in DMS

