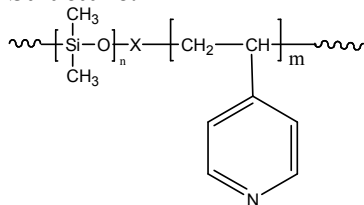


Sample Name:

**Poly(4-vinyl pyridine-b-dimethylsiloxane)**

Sample #: **P40473B-4VPDMS**

**Structure:**



**Composition:**

$M_n \times 10^3$ 4VP-b-DMS	Mw/Mn
22.5-b-8.0	1.12

**Synthesis:**

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

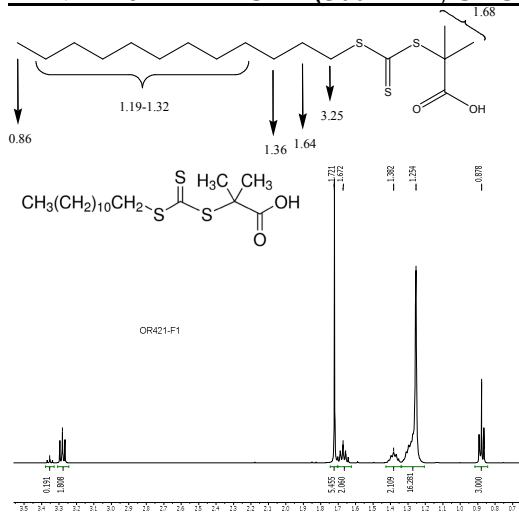
**Characterization:**

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  $^1\text{H-NMR}$  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.

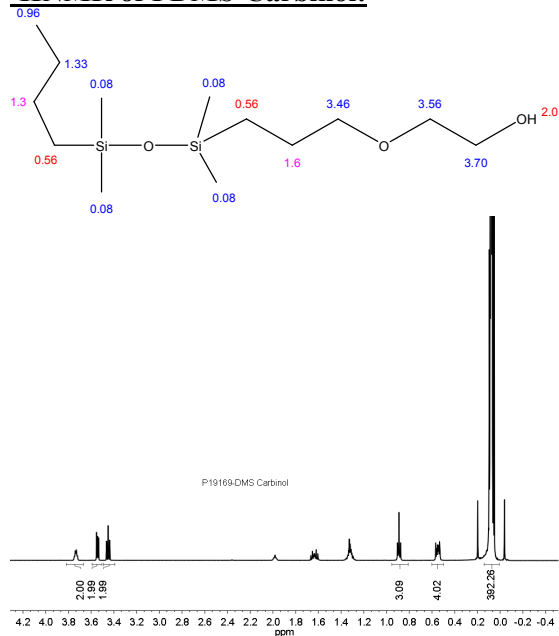
**Solubility:**

Poly(4-vinyl pyridine-b-dimethyl siloxane) is soluble in THF,  $\text{CHCl}_3$  and toluene.

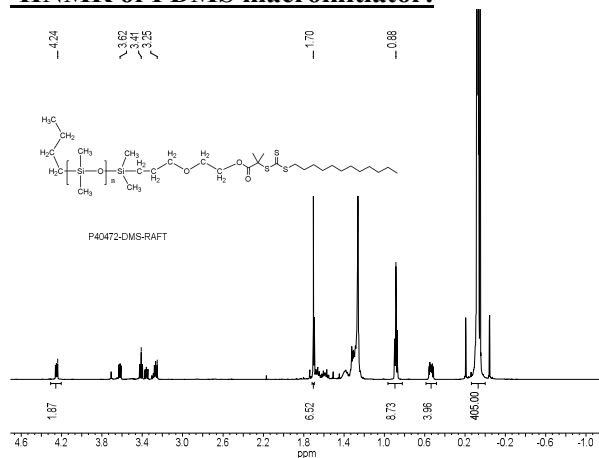
**$^1\text{H NMR}$  of RAFT CTA (500 MHz,  $\text{CDCl}_3$ ):**



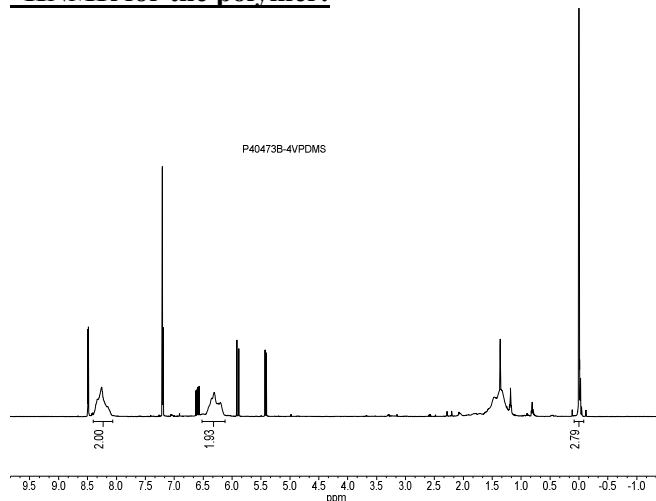
**$^1\text{HNMR}$  of PDMS-Carbinol:**



**$^1\text{HNMR}$  of PDMS macroinitiator:**

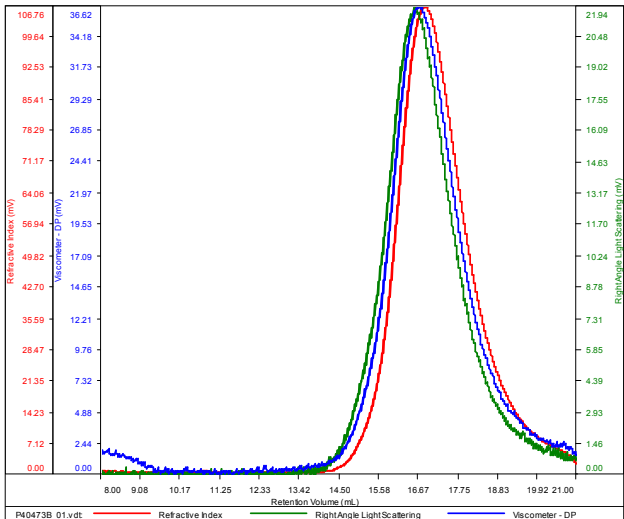


**$^1\text{HNMR}$  for the polymer:**



**SEC of the Polymer:**  
**P40473B-4VPDMS**

ID	P40473B
Conc	11.3066
Recovery	1130.6565
dn/dc	0.1300
Method	PS80k_December-2016-0004.vcm



Sample	Mn	Mw	Mp	MwMn	IV
P40473B_01.vdt	32,012	35,887	33,193	1.121	0.0819

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

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

