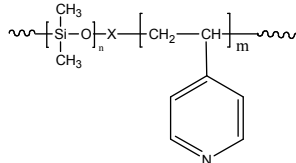


Sample Name: Poly(4-vinyl pyridine-b-dimethylsiloxane)

Sample #: P40472-4VPDMS

Structure:



Composition:

$M_n \times 10^3$ 4VP-b-DMS	Mw/Mn
1.4-b-5.0	1.2

Synthesis Procedure:

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

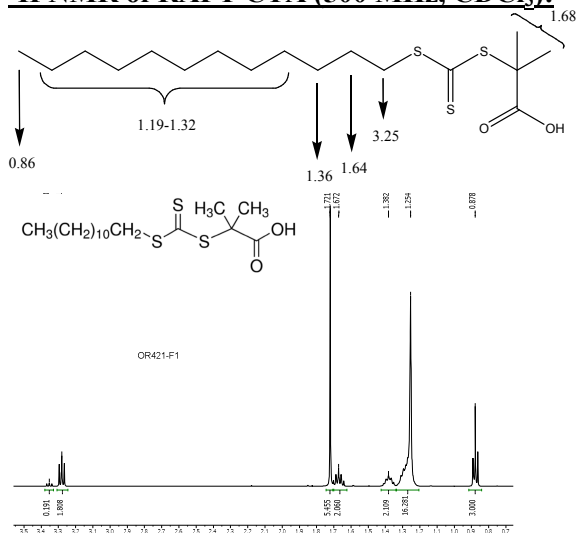
Characterization:

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.

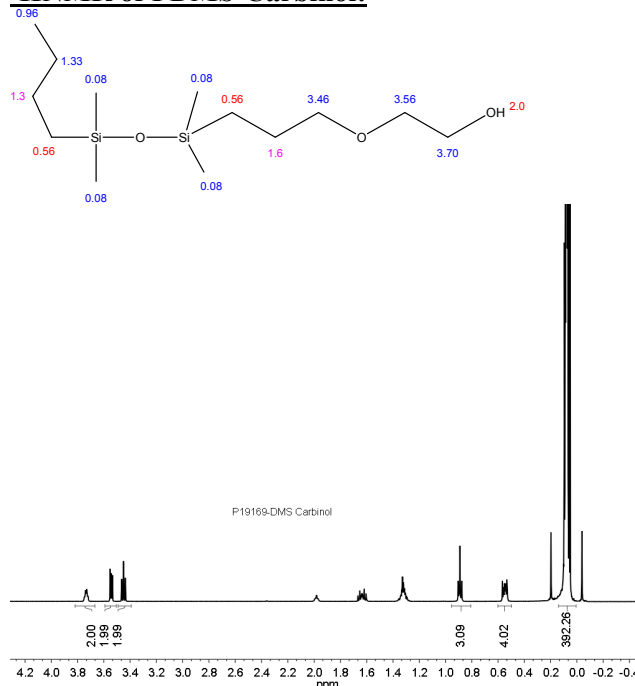
Solubility:

Poly(4-vinyl pyridine-b-dimethyl siloxane) is soluble in THF, CHCl_3 and toluene.

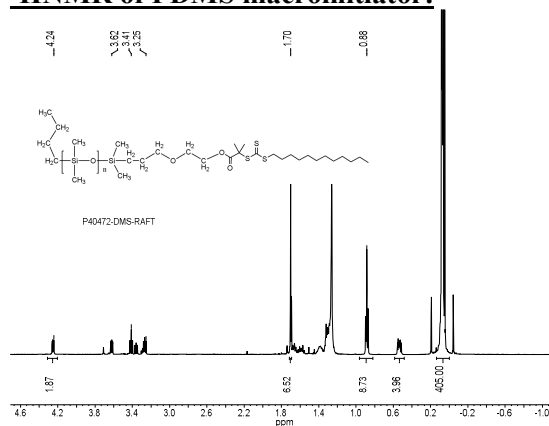
$^1\text{H NMR}$ of RAFT CTA (500 MHz, CDCl_3):



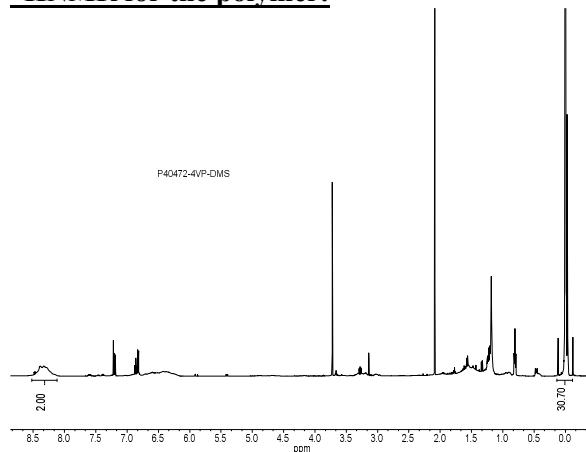
$^1\text{HNMR}$ of PDMS-Carbinol:



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

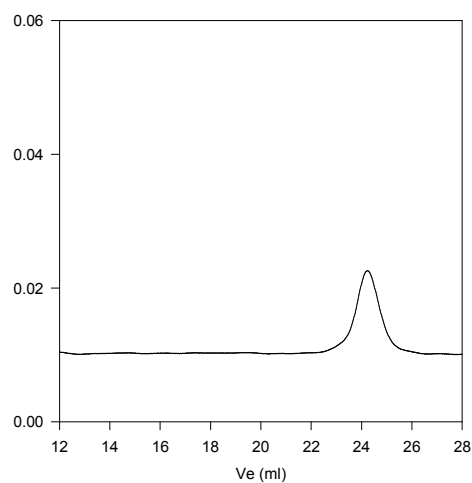


$^1\text{HNMR}$ for the polymer:



SEC of the Polymer:

P40472-4VPDMS



Block Copolymer P4VP(1400)-b-PDMS(5000), PI= 1.2
run in CHCl₃
Composition for ¹H NMR

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

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

