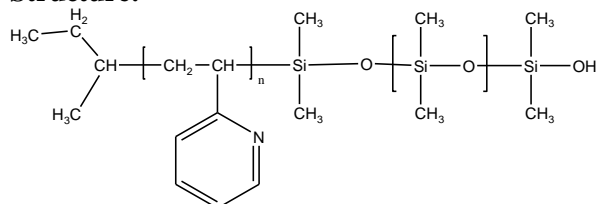


Sample Name: Poly(2-vinyl pyridine-b-dimethylsiloxane)

Sample #: P18684A-2VPDMS

By controlled radical process

Structure:



Composition:

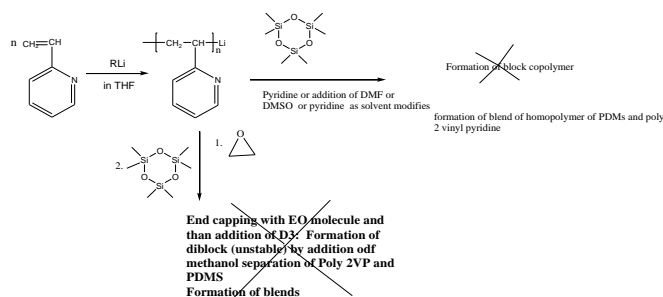
$M_n \times 10^3$ 2VP-b-DMS	Mw/Mn
98.0-b-1.0	1.2

Synthesis Procedure:

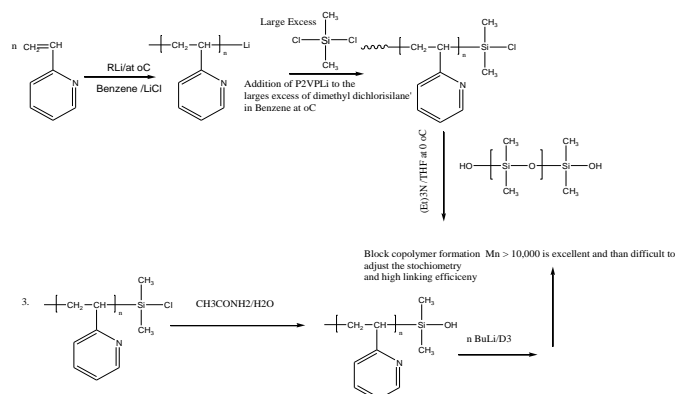
Poly(2-vinyl pyridine-b-dimethylsiloxane) is synthesized by one of the following routes.

Different routes for the synthesis of poly 2 vinyl pyridine with polydimethyl siloxane:

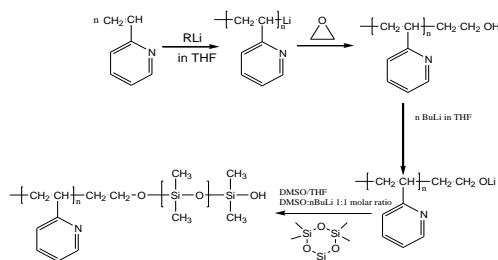
1. Direct Anionic Polymerization by sequential addition of 2VP followed by D3 monomer



2. From the linking reaction of end functionalized polymer: For the synthesis of Block copolymer > Mn 10,000

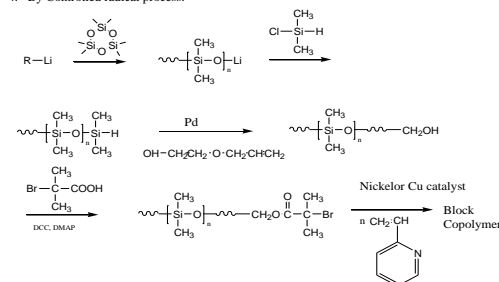


3. Formation of first Poly 2vinyl pyridine OH terminated polymer than reacting the isolated P2VPOH polymer with n BuLi followed by addition of D3 in the presence of DMSO equimolar amount with nBuLi



High purity diblock copolymer formation

4. By Controlled radical process:



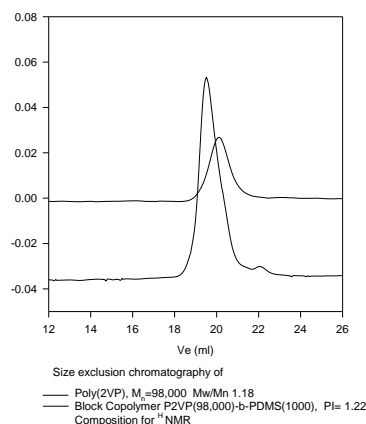
Characterization:

Polymers were analyzed by size exclusion chromatography (SEC) and 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(2-vinyl pyridine-b-dimethyl siloxane) is soluble in THF, CHCl₃ and toluene

P18684A-2VPDMS



¹H NMR for the polymer:

