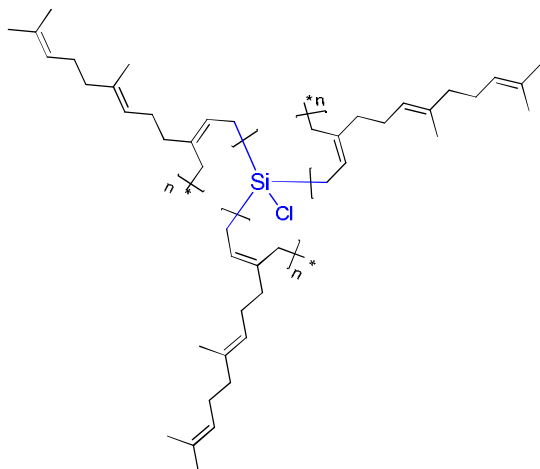


Sample Name:

3-Arm Star 1,4-POLYFARNESENE

Core: Chlorosilane

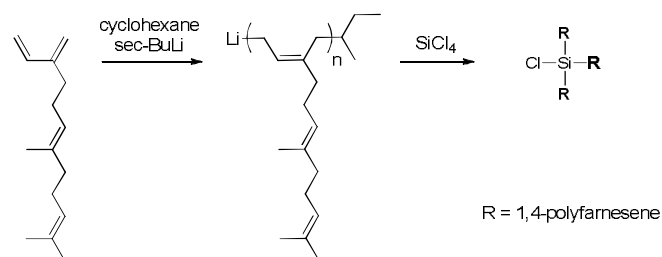
Sample # P18573-3-Farne



M_n (arm), g/mol	M_n (total), g/mol	PDI
6.0×10^3	17.5×10^3	1.14

Synthesis and Purification:

1,4-Polyfarnesene (PF) was synthesized by anionic living polymerization of β -farnesene in cyclohexane using *sec*-BuLi as an initiator; followed by PF coupling with tetrachlorosilane.



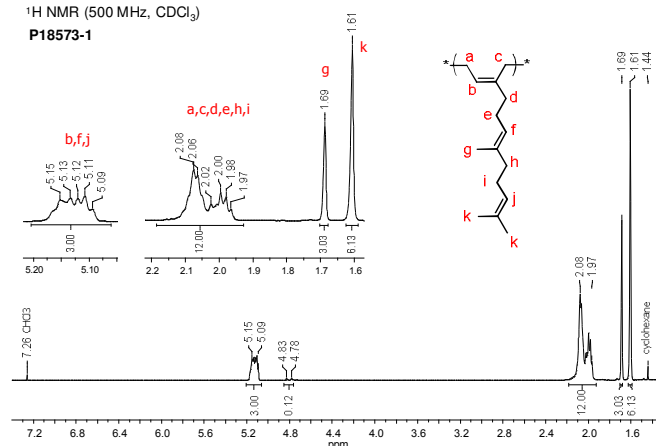
Characterization:

The absolute molecular weight and polydispersity index (PDI) were determined by size exclusion chromatography (SEC) using light scattering (LS) detector. SEC analysis was performed on a Varian ProStar liquid chromatograph equipped with UV-vis, RI and LS triple detector from Viscotec, three SEC columns from Supelco (G6000-4000-2000 HXL), and using THF as an eluent.

^1H NMR spectrum of polyfarnesene arm.

^1H NMR (500 MHz, CDCl_3)

P18573-1

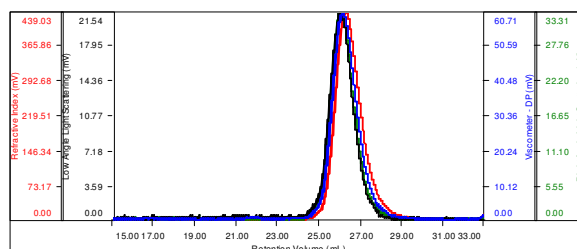


1,4-Polyfarnesene contains $\leq 6\%$ of 1,2-polyfarnesene.

SEC elugrams: (a) PF arm, (b) star PF.

(a) Sample ID: P18573-Farnesecene branch

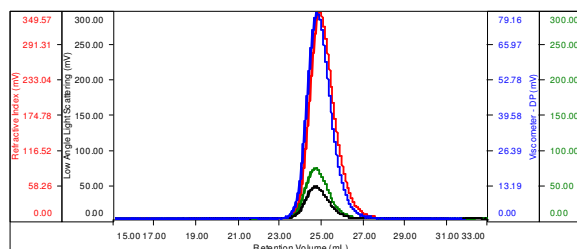
Concentration (mg/mL)	12.4872
Sample dn/dc (mL/g)	0.1270
Method File	PS80K-Feb25-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	M_n	M_w	M_p	M_w/M_n	IV
P18573-Fam_Branch_01.vdt	6,035	6,961	7,004	1.153	0.1393

(b) Sample ID: P18573-Farnesene star

Concentration (mg/mL)	9.1682
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-March13-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	M_n	M_w	M_p	M_w/M_n	IV
P18573_01.vdt	17,363	19,726	19,646	1.136	0.2245