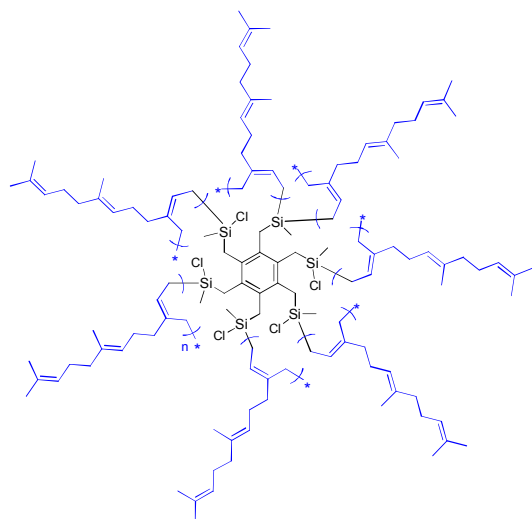


Sample Name:

7-Arm Star 1,4-POLYFARNESENE

Core: 1,2,3,4,5,6-hexakis[(methylsilyl)methyl]benzene

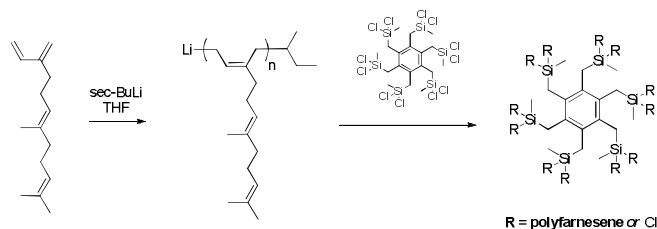
Sample # P18583-7-Farne



M _n (arm), g/mol	M _n (total), g/mol	M _w /M _n
8.0 × 10 ³	55.0 × 10 ³	1.13

Synthesis:

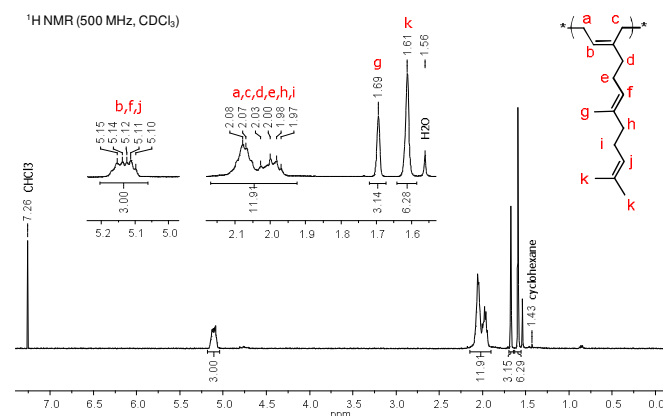
1,4-polyfarnesene (PF) was synthesized by anionic living polymerization of β -farnesene in cyclohexane using *sec*-BuLi as an initiator. The obtained product was coupled with 1,2,3,4,5,6-hexakis[(dichloro(methyl)silyl)methyl]benzene resulted in star polyfarnesene.



Characterization:

The absolute molecular weight and polydispersity index (M_w/M_n) 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 PF arm.

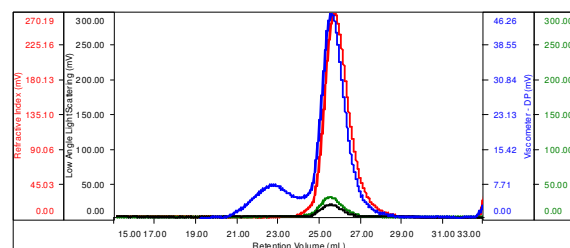


SEC elugrams: (a) PF arm, (b) star PF.

(a)

P18583-branch

Concentration (mg/mL)	7.1848
Sample dn/dc (mL/g)	0.1270
Method File	PS80K-March13-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1

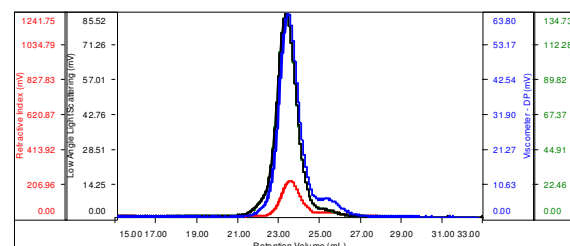


Sample	M _n	M _w	M _p	M _w /M _n	IV
P18583-IARN_BRANCH_01.vdt	8,081	9,607	9,630	1.189	0.1782

(b)

P18583-star

Concentration (mg/mL)	4.7326
Sample dn/dc (mL/g)	0.1270
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
P18583_01(230).vdt	55,136	62,056	58,244	1.126	0.3127