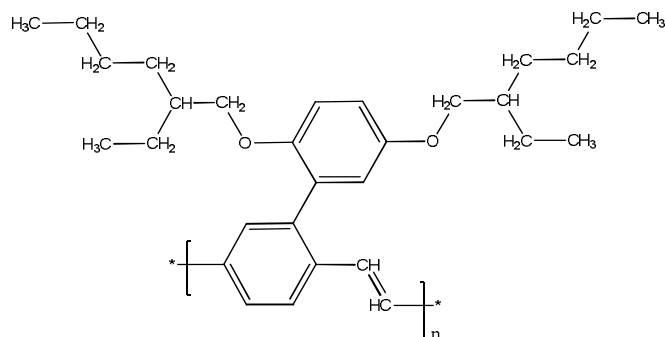


Sample name: Poly[2-(2',5'-bis(2''-ethylhexyloxy) phenyl) -1,4-phenylenevinylene]

Sample #: P19793-BEHP-PPV

CAS No: 160894-98-4

Structure:

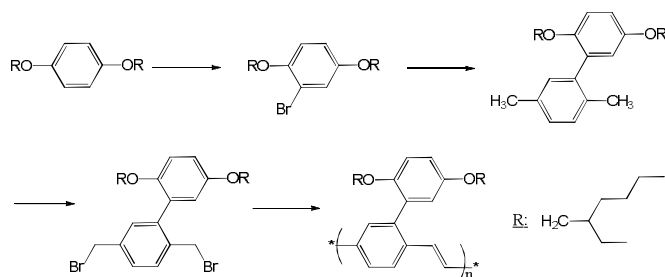


Composition:

$M_n \times 10^3$	PDI
87.0	1.9

Synthesis procedure:

Scheme of the polymer synthesis is presented below:



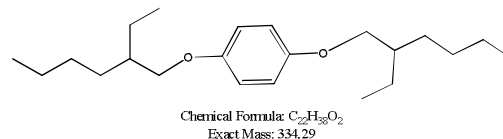
Characterization:

The molecular structure of the polymer was confirmed by ^1H NMR spectroscopy. The molecular weight and polydispersity index were obtained by size exclusion chromatography (SEC) using THF as an eluent. It was observed that RI signal is weak in spite of concentration of polymer solution was 10 mg/mL. Light scattering signal was taken into account to determine molecular weights using dn/dc for polystyrene.

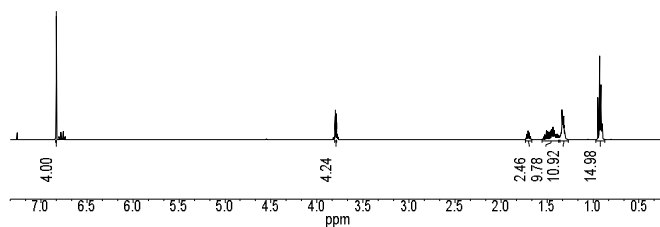
Solubility:

BEHP-PPV polymer is soluble in THF, CHCl_3 , xylene.

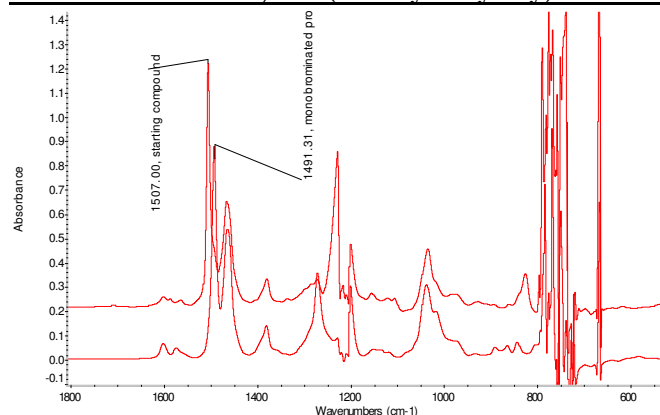
^1H NMR of 1,4-bis((2'-ethylhexyloxy) benzene:



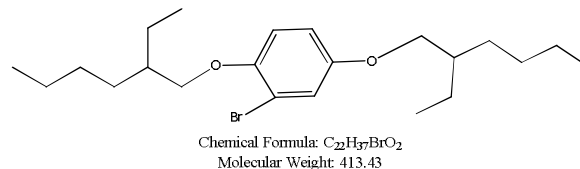
Chemical shift:	Protons:	Peak:
0.9 ppm	12H	multiplet
1.3–1.5 ppm	16H	multiplet
1.7 ppm	2H	multiplet
3.8 ppm	4H	doublet
6.8 ppm	4H	singlet



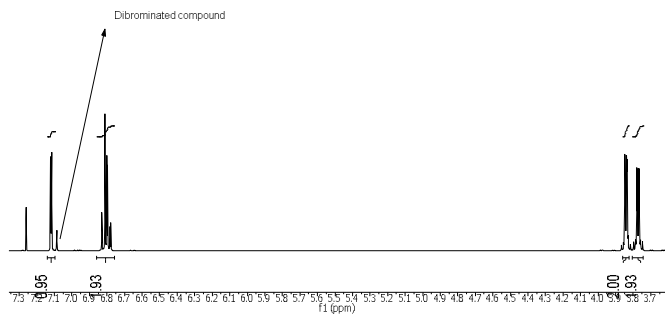
FT-IR of 2-bromo-1,4-bis(2'-ethylhexyloxy)benzene:



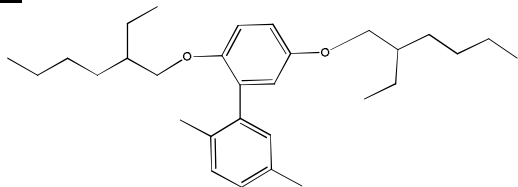
^1H NMR of 2-bromo-1,4-bis(2'-ethylhexyloxy) benzene:



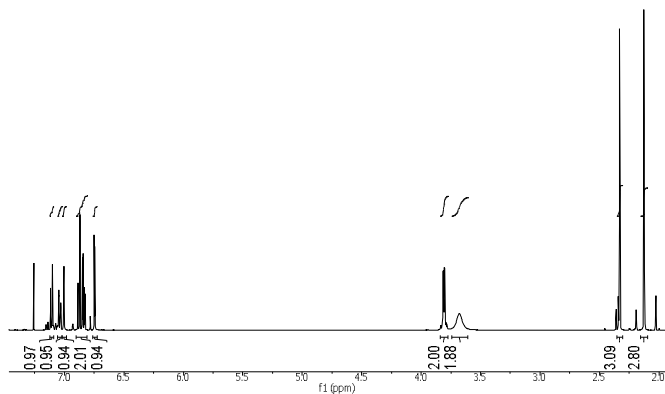
Chemical shift:	Protons:	Peak:
0.9 ppm	12H	multiplets
1.3–1.5 ppm	16H	multiplets
1.7 ppm	2H	multiplets
3.7 ppm	2H	doublet
3.8 ppm	2H	doublet
6.8 ppm	1H	doublet
6.8 ppm	1H	singlet
7.1 ppm	1H	doublet



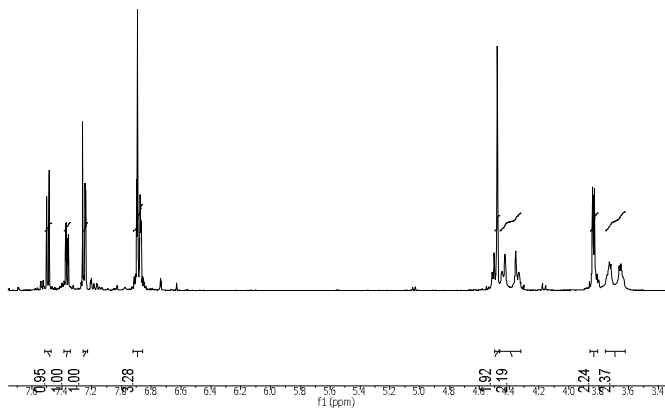
¹H NMR of 2-(1',4'-bis(2''-ethylhexyloxy)benzene)-p-xylene:



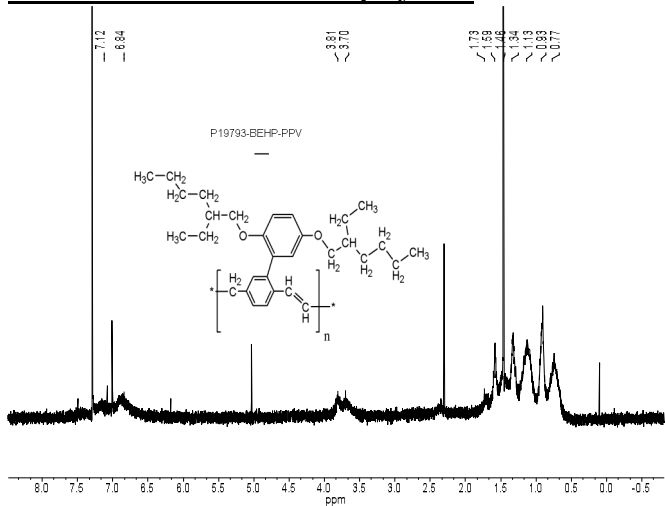
Chemical shift:	Protons:	Peak:
0.72	3H	t
0.80	3H	t
0.91	12H	m
1.1-1.2	7H	m
1.3-1.5	8H	m
1.70	1H	m
3.68	2H	dd
3.83	2H	dd
4.39	2H	dd (not clear)
4.48	2H	dd (not clear)
6.87	1H	s
6.89	2H	s
7.24	1H	d
7.36	1H	dd
7.49	1H	d



¹H NMR of 2-(1',4'-bis(2''-ethylhexyloxy)benzene)-1,4-bis(bromomethyl)benzene:

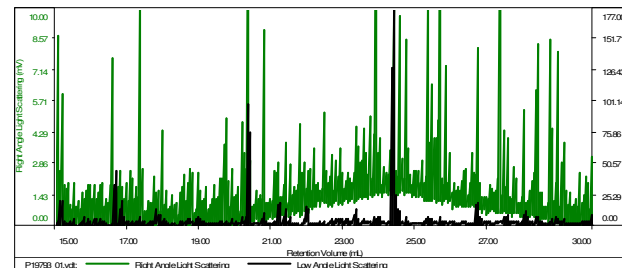


¹H NMR of the BEHP-PPV polymer:



SEC elugram of the BEHP-PPV polymer: Sample ID-P19793-BEHP-PPV

Concentration (mg/mL)	0.0254
Sample dn/dc (mL/g)	0.1650
Method File	PS80K-Merck2016-0001.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Phi (nm)	Ret Vol (mL)
P19793_01.vdt	87,062	139,583	1.603	1.0000	15.60	27.623