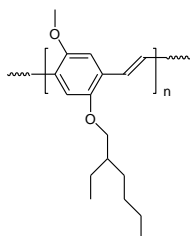


Sample Name: Poly(2-methoxy-5-[2'-ethylhexyloxy]-1,4-phenylenevinylene)

Sample #: P14996B-MEHPV

Structure:

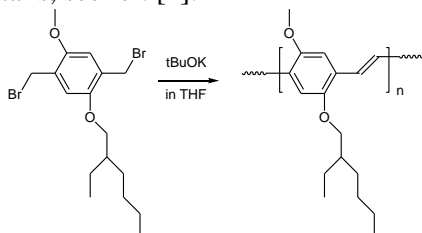


Composition:

Mn x 10 ³	PDI
490.0	1.9

Synthesis procedure:

MEH-PPV was obtained by polymerization of a,a'-dihalo-2-methoxy-5-(2-ethylhexyloxy)xylene under the base condition using tert-butoxypotassium salt. The scheme of the reaction is illustrated below. The molecular weight of the resulting polymer was controlled by adding appropriate amount of 4-methoxyphenol and by rate of addition of the monomer. The resulting polymer was precipitated in methanol. For further details, see ref. [1].



Purification of the polymer:

The obtained homopolymer contained a small fraction of crosslinked polymer, which was removed by dissolving the polymer in THF (about 1–2% solution) and centrifugation at over 3000 rpm. The resulting clear red solution was filtered through membrane under pressure. The obtained clear red solution was precipitated in cold methanol and dried under vacuum at room temperature.

Characterization:

The molecular weight and polydispersity index (PDI) were obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Two SEC columns from Supelco (G6000-4000- HXL) were used with triple detectors from Viscotek Co.

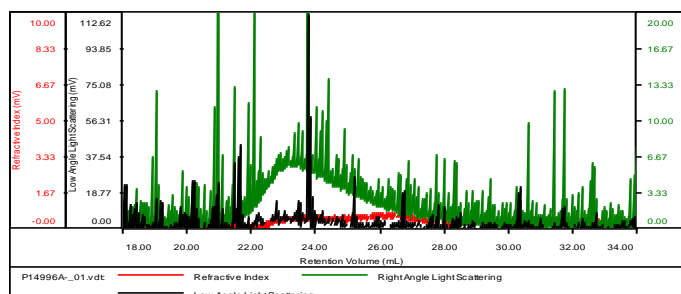
Solubility:

Poly(MEHPV) is soluble in THF, chloroform; and it precipitates from methanol.

SEC elugram of the polymer:

Sample ID-P14996B-MEHPV

Concentration (mg/mL)	0.0101
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-March2016-0001.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	IV (dL/g)	Rh (nm)	Ret Vol (mL)
P14996A-.01.v dt	489,459	918,160	1.876	1.0000	29.50	26.000

Reference:

[1] C. J. Neef and J. P. Ferraris; *Macromolecules*, **2000**, 33, 2311–2314.