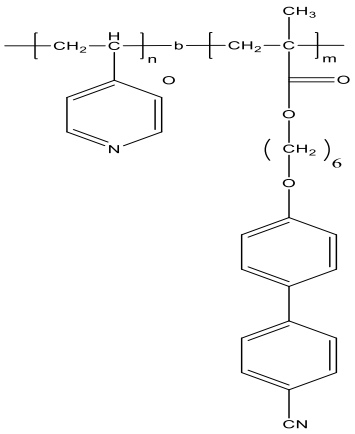
Sample Name:**Poly(4-vinylpyridine-b-6-(4'-cyanobiphenyl-4-yloxy)hexyl methacrylate**

Sample #: **P11261-4VP4CNBPHMA**

Structure:



Composition:

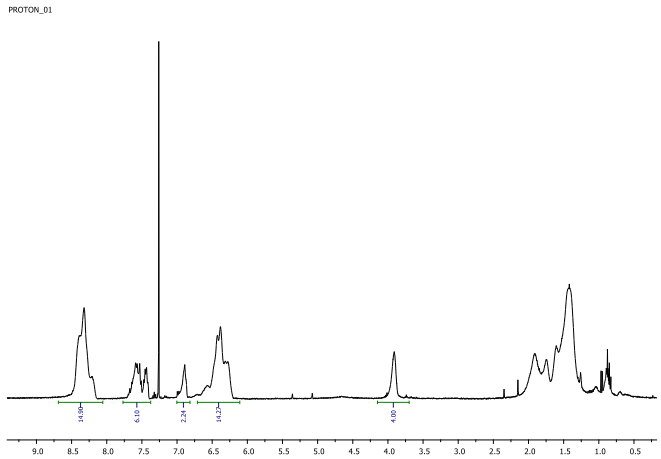
Mn x 10^3 P4VP-b-4CNBPHMA	PDI
12.0-b-6.0	1.26

Synthesis Procedure:
Polymer is synthesized by anionic polymerization process of 4-vinylpyridine with 6-(4'-cyanobiphenyl-4-yloxy)hexylmethacrylate) in THF.

Characterization:
Polymer was analyzed by size exclusion chromatography (SEC) using DMF as eluent to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from ^{1}H NMR spectroscopy by comparing the peak area of the 4VP aromatic protons at 8.0-8.5 ppm with the 4CNBPHMA protons (2 methylene groups) at 3.5-4.0 ppm.

Solubility:
Polymer is soluble in $CHCl_3$, THF and toluene. The polymer precipitated out from hexane.

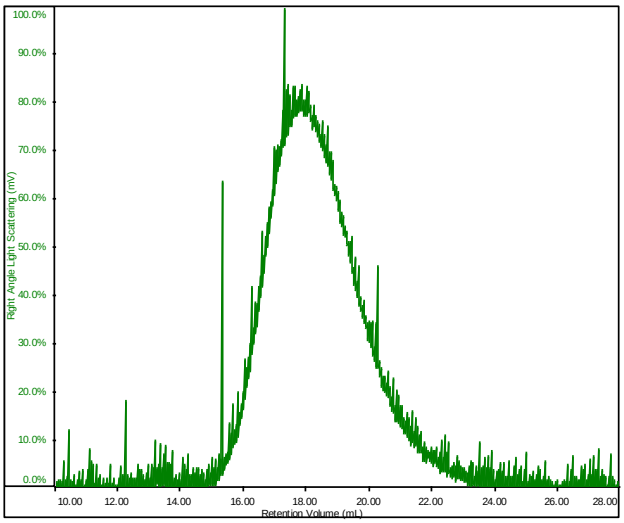
^{1}HNMR spectrum of the Product:



SEC elugram of the diblock copolymer:

P11261

Conc	1.1162
dn/dc	0.1530
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k_2018-04-02-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P11261_01.vdt	17,754	22,378	21,899	1.260	0.4852