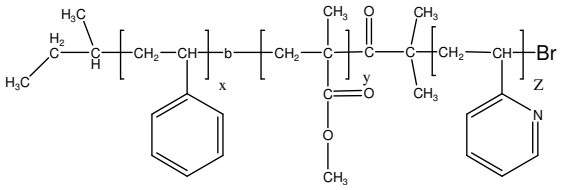
Sample Name: Poly(styrene-b-methylmethacrylate-b-2 Vinyl Pyridine)

Sample #: P18746A-SMMA2VP

Structure:



Composition:

Mn x 10^3 S-b-MMA-b-2VP	PDI
5.2-b-13.0-b-9.0	1.3
T_g for MMA block: 129°C	Not detected

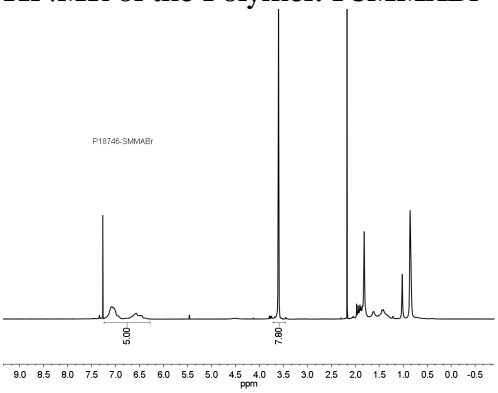
Synthesis Procedure:

By living anionic polymerization with sequence addition of styrene, methyl methacrylate (MMA) to get bromo-terminated SMMABr. This product was used to initiate 2VP monomer by ATRP and the product was fractionated to remove unreacted SMMA diblock copolymer.

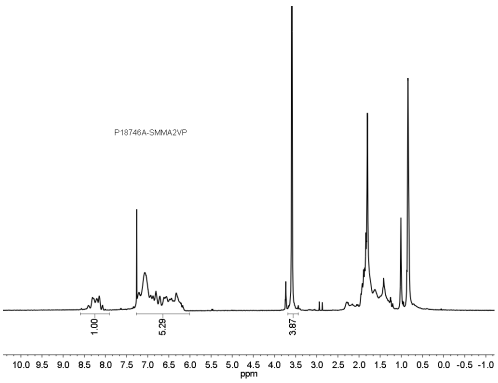
Characterization:

By Size exclusion chromatography (SEC). Chemical composition was extracted from proton NMR, which was recorded from Varian 500MHz instrument using $CDCl_3$ as solvent.

HNMR of the Polymer: PSMMABr



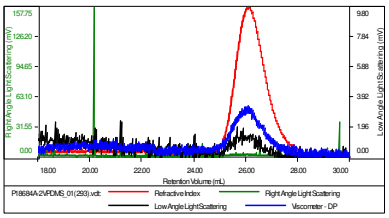
SMMA2VP:



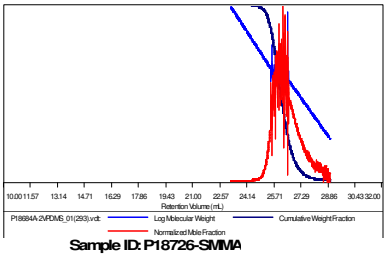
SEC of Sample:

Sample ID: P18726–S

Concentration (mg/mL)	1.5232
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-Apr15-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF

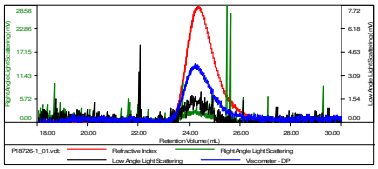


Sample	Mn	Mw	Mp	Mw/Mn	IV
P18684A-2VPDMS_01(293).vdt	5,129	6,703	5,999	1.307	0.0504

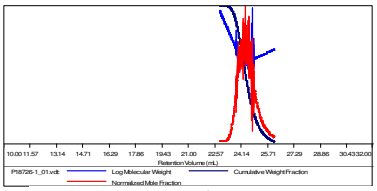


Sample ID: P18726-SMMA

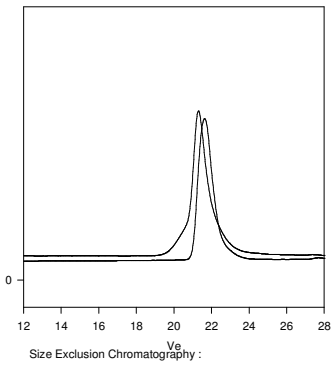
Concentration (mg/mL)	0.9459
Sample dn/dc (mL/g)	0.1450
Method File	PS80K-Apr15-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18726-1_01.vdt	18,846	20,081	21,845	1.066	0.0861



P18746A-SMMA2VP



Size Exclusion Chromatography :

PS-MMA, diblock PS(5200)-b-PMMA(13000), M_w/M_n=1.10

Triblock PS(5200)-b-PMMA(13000) -b-P2VP(9000) M_w/M_n=1.3