# Sample Name:

Poly(4-Methoxy styrene-b-Methylmethacrylate)

## Sample #: P18294-4MeOSMMA

#### Structure:

$$H_3C$$
 $CH_3$ 
 $H_2$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 
 $CH_3$ 

#### Composition:

Mn x 10 <sup>3</sup> 4MeOS-b-MMA	Mw/Mn (PDI)
22.0-b-74.0	1.15

#### Synthesis Procedure:

Poly(4- methoxy styrene-b-MMA) is prepared by living anionic polymerization by sequence addition of 4-methoxyl styrene followed by methylmethacrylate.

**Characterization B**lock was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from <sup>1</sup>H-NMR spectroscopy by comparing the peak area of the 4 methoxy styrene protons at 6.3-7.2 ppm with the peak area of 4-methoxy styrene at 3.7ppm and MMA –Methyl ester at 3.6 ppm .

Solubility: Polymer is soluble in THF, acetone

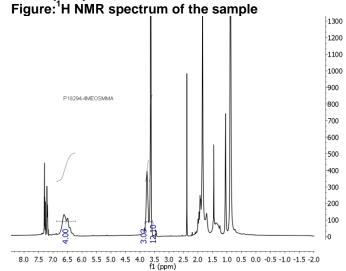
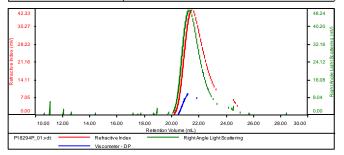


Figure: SEC profile of the block copolymer

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Concentration (mg/mL)	3.1640
Sample dn/dc (mL/g)	0.1170
Method File	PS80K-NOV25-2013-0002.vcm
Column Set	3x PL 1113-6300
System	System 1



s	ample	Mn	Mw	Мр	Mw/Mn	IV
Р	18294P_01.vdt	94,674	109,115	124,085	1.153	0.4003

