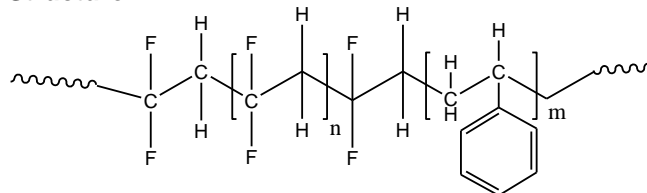Sample Name:
Poly (**Vinylidene difluoride-b-Styrene)**

Sample # P18638D-VDFS

Structure:
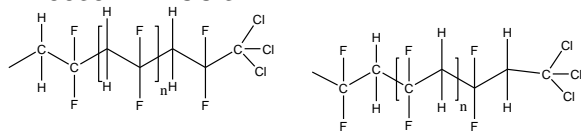

Composition:

Mn x 10^3	PDI
11.5-b-50.0	2.0

Synthesis Procedure:
Synthesis of
Trichloromethyl Terminated Vinylidene difluoride
P 18638-VDF-CCl3

Head to Tail arrangement

Head to Tail arrangement

Radical process using CHCl$_3$ as chain transfer reagent in emulsion polymerization.

**Block copolymerization with styrene using ATRP process**

Characterization:
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) in DMF and by HNMR. In DMF it gives negative response because of low dn/dc. It only provide Mw/Mn of the polymer and Mn calculated from its HNMR analysis using end group analysis. GPC of the final polymer with respect to polystyrene as reference material gives much higher values then determine by HNMR analysis. We only consider Mw/Mn of the polymer using this analysis.
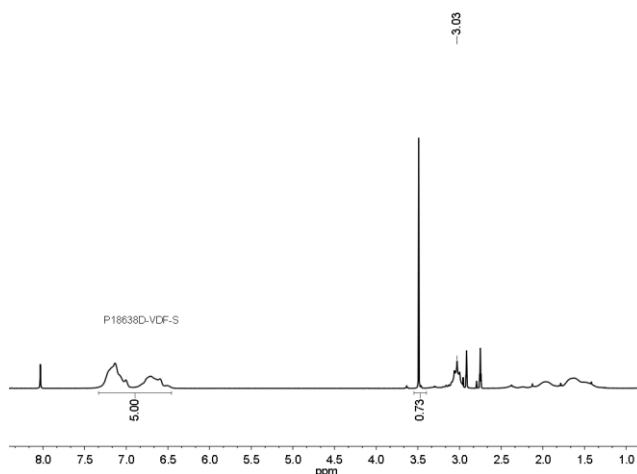
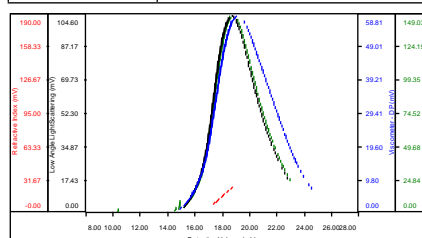**Solubility:** Polymer is soluble in DMF, THF
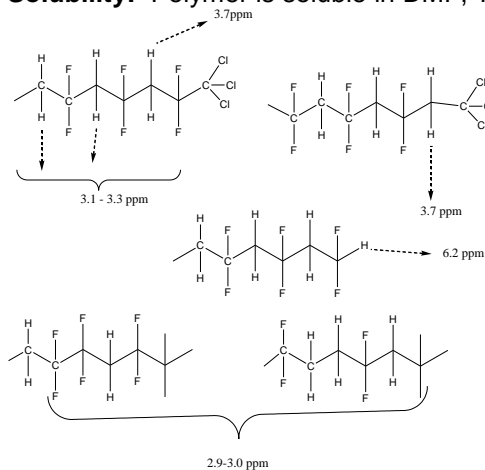
H NMR:
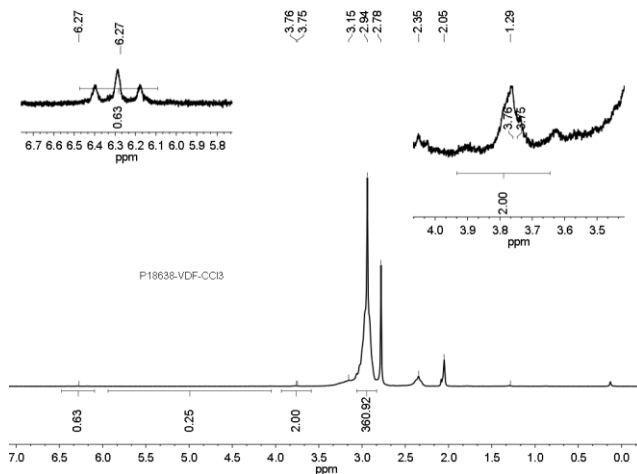
VDF-b-S Run in DMF

Sample ID: P18638D-VDFS

Concentration (mg/mL)	10.4175
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-Apr15-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1

Sample	Mn	Mw	Mp	Mw/Mn	IV
P18638D-VDF-S_01.vdt	120,934	244,319	247,202	2.020	0.5462