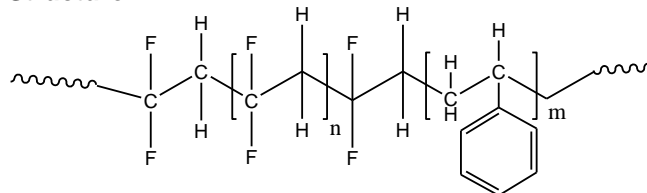


Sample Name:
Poly (Vinylidene difluoride-b-Styrene)

Sample # P18638C-VDFS

Structure:

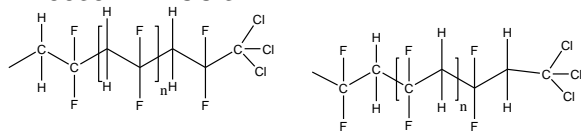


Composition:

| | |
|----------------------|------|
| Mn x 10 ³ | PDI |
| 11.5-b-125.0 | 1.28 |

Synthesis Procedure:

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



Head to Tail arrangement

Head to Tail arrangement

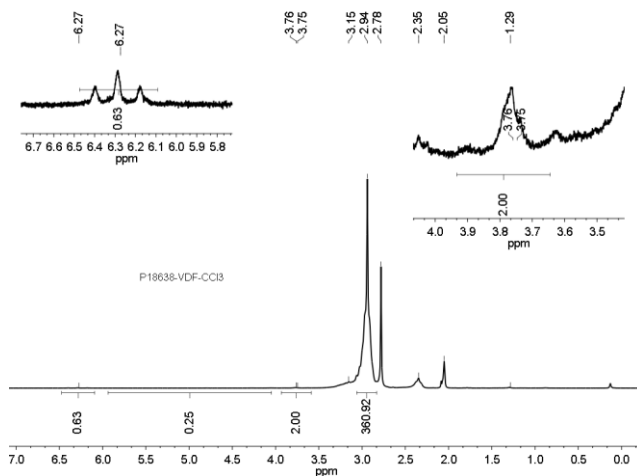
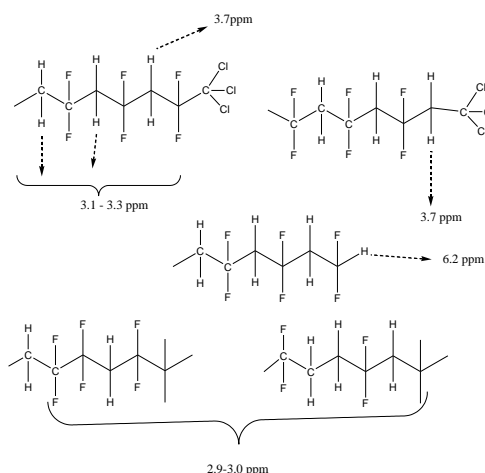
Radical process using CHCl₃ as chain transfer reagent in emulsion polymerization.

Block copolymerization with styrene using ATRP process

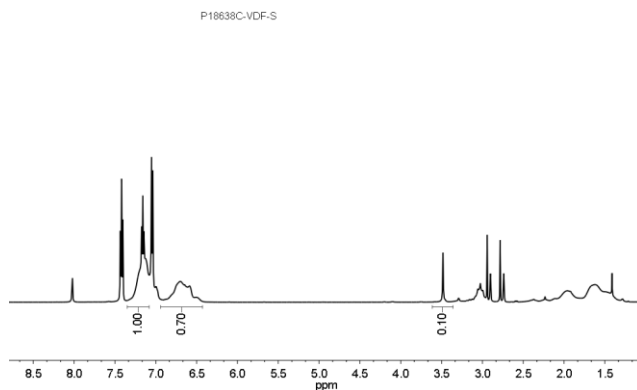
Characterization:

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



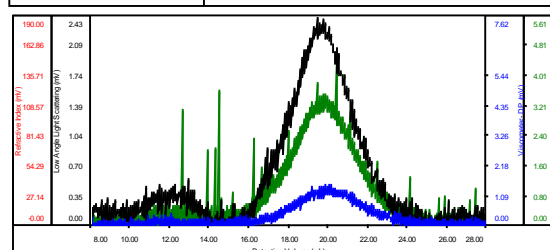
VDF-b-S Run in DMF



From GPC we only indicate Mw/Mn . These values are w.r.to Polystyrene as reference material.

Sample ID: P18638C-VDFS

| | |
|-----------------------|---------------------------|
| Concentration (mg/mL) | 0.3800 |
| 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 |
|---------------------|---------|---------|---------|-------|--------|
| P18638C-VDFS_01.vdt | 101,718 | 129,930 | 108,640 | 1.277 | 0.9973 |

