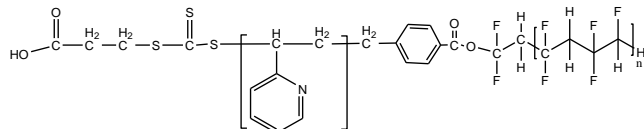


Sample Name:

**Poly(vinylidene difluoride-co-trifluoroethylene(about 25 %))-b-poly(2-vinyl pyridine)**

Sample #: **P41191B-VDFTFEran-2VP**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
34.0-b-35.0	1.17
Composition by HNMR	

**Synthesis:**

The polymer was synthesized by radical polymerization process using 4-chloromethyl benzoyl peroxide as an initiator.

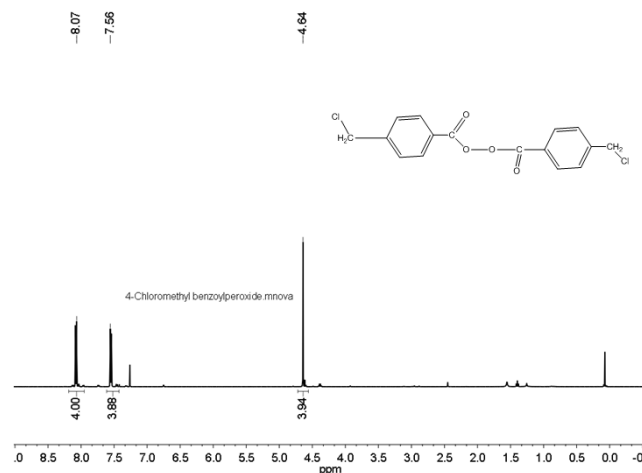
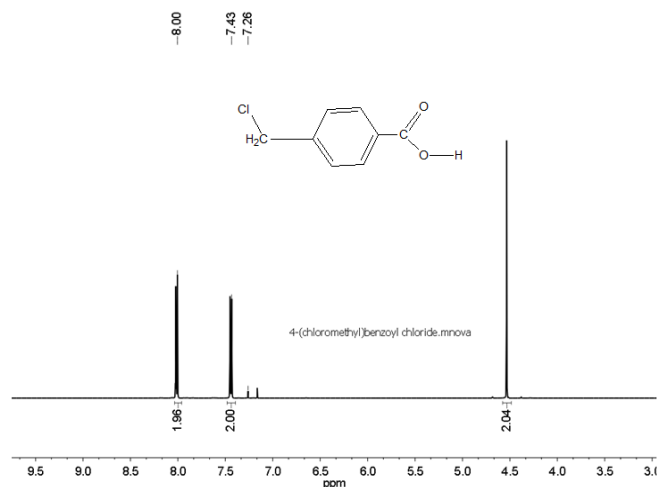
**Characterization:**

The product was characterized by size exclusion chromatography (SEC) runs in DMF as an eluant and <sup>1</sup>H NMR runs in Acetone.

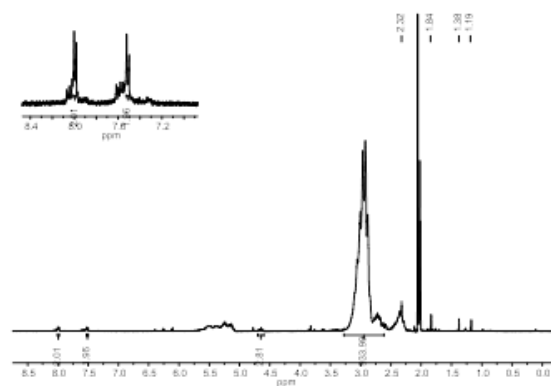
**Solubility:**

The polymer is soluble in dimethylformamide (DMF), Acetone and in THF.

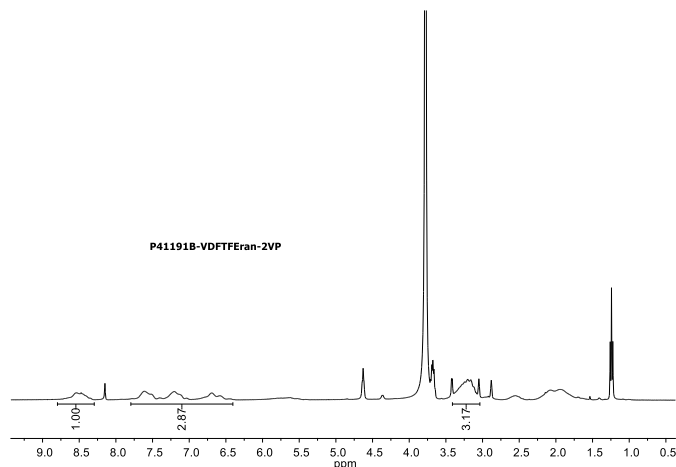
**<sup>1</sup>H NMR spectrum of the initiator and precursor:**



**HNMR spectrum of the PVDFTFE ran terminated vinyl benzyl group (macroinitiator):**



**HNMR spectrum of the Sample:**

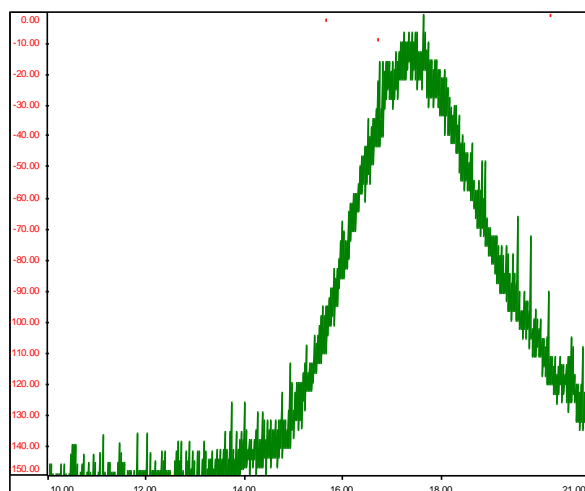


## SEC elugram of Macroinitiator of VDF and TFE random copolymer:

RI signal negative due to negative values of dn/dc

P41191-VDF-TFEran

Conc	0.2907
dn/dc	0.1650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS99K_2018-05-30-0000.vcm



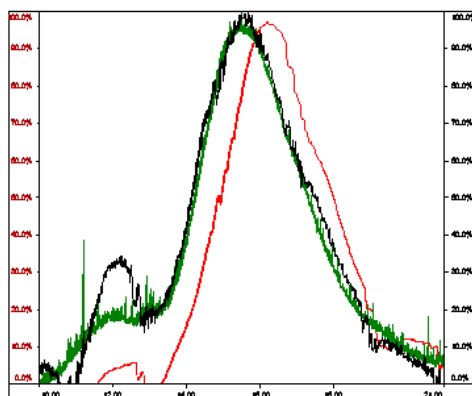
Sample	Mn	Mw	Mp	Mw/Mn	IV
P41191-VDFTFE_01.vdt	34,119	33,744	29,695	0.989	4.6062

## SEC elugram of the Sample:

Block copolymer showing RI signal (negative disappear showing formation of block copolymer)

P41191B-VDFTFE-2WP

Conc	0.56916
dn/dc	0.1530
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS99K_2018-05-30-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P41191_2-VDFTFE-2WP_01.vdt	30,410	33,969	29,259	1.1189	1.3589