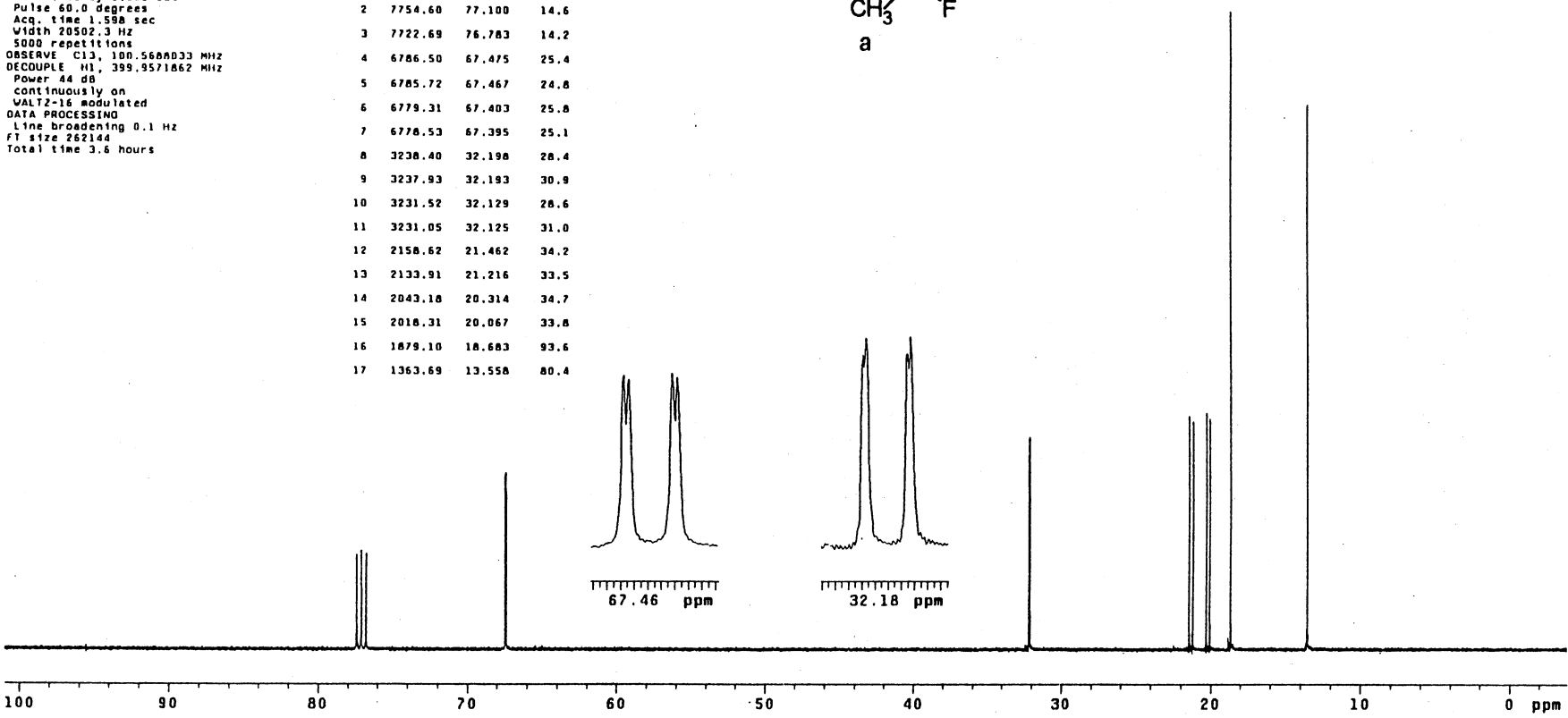
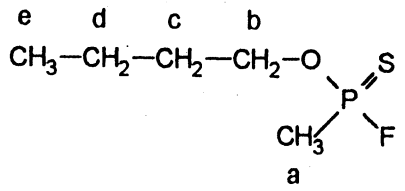


13C-NMR c1107b(1H)
 n-butylmethylthiophosphonofluoridate
 in ca 0.7ml CDCl3
 214195126.006 Jrn.342;131/200
 Solvent: CDCl3
 Temp: 30.0 C / 303.1 K
 User: pal
 File: c1107b
 VXR-400S "palvvr"
 PULSE SEQUENCE
 Relax. delay 1.000 sec
 Pulse 60.0 degrees
 Acq. time 1.598 sec
 Width 20502.3 Hz
 5000 repetitions
 OBSERVE C13, 100.560033 MHz
 DECOUPLE H1, 399.9571862 MHz
 Power 44 dB
 continuously on
 WALTZ-16 modulated
 DATA PROCESSING
 Line broadening 0.1 Hz
 FT size 262144
 Total time 3.6 hours

SPECTRAL LINES for th=7.8
 rfl= 8396.1 rfp= 7754.6
 CDCl3 internal=77.1ppm

nr	Hz	ppm	intensity
1	7786.51	77.417	13.9
2	7754.60	77.100	14.6
3	7722.69	76.783	14.2
4	6786.50	67.475	25.4
5	6785.72	67.467	24.8
6	6779.31	67.403	25.8
7	6776.53	67.395	25.1
8	3238.40	32.198	28.4
9	3237.93	32.193	30.9
10	3231.52	32.129	28.6
11	3231.05	32.125	31.0
12	2158.62	21.462	34.2
13	2133.91	21.216	33.5
14	2043.18	20.314	34.7
15	2016.31	20.067	33.8
16	1879.10	18.683	93.6
17	1363.69	13.558	80.4



n-Butyl methylthiophosphonofluoridate
 CAS 4241-36-5
 Nucleus : ¹³C {1H}
 Frequency : 100.6 MHz
 Concentration : ca. 75 mg/0.7 ml CDCl₃
 Ref. CDCl₃ internal 77.1 ppm. Res. : 0.8 Hz (13.6 ppm)
 Instrument : Varian VXR 400S

Temperature : 30 °C
 Spectral width : 20502.3 Hz
 Data point (FID) : 64 K
 Pulse angle : 13.0 μs (60°)
 Number of pulses : 5000
 Repetition time : 2.6 s
 Line broadening : 0.1 Hz
 Data points (spec) : 256 K

a: 20.8 ppm J(aP) : 115.5 Hz J(aF) : 24.8 Hz
 b: 67.4 ppm J(bP) : 7.2 Hz J(bF) : 0.8 Hz
 c: 32.1 ppm J(cP) : 6.9 Hz J(cF) : 0.5 Hz
 d: 18.7 ppm
 e: 13.6 ppm

OPCW Code:6-3-259 (p1/1)