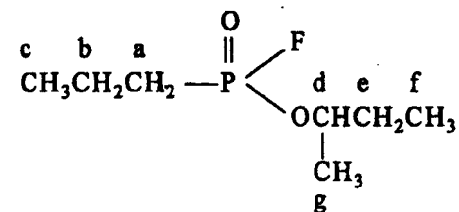
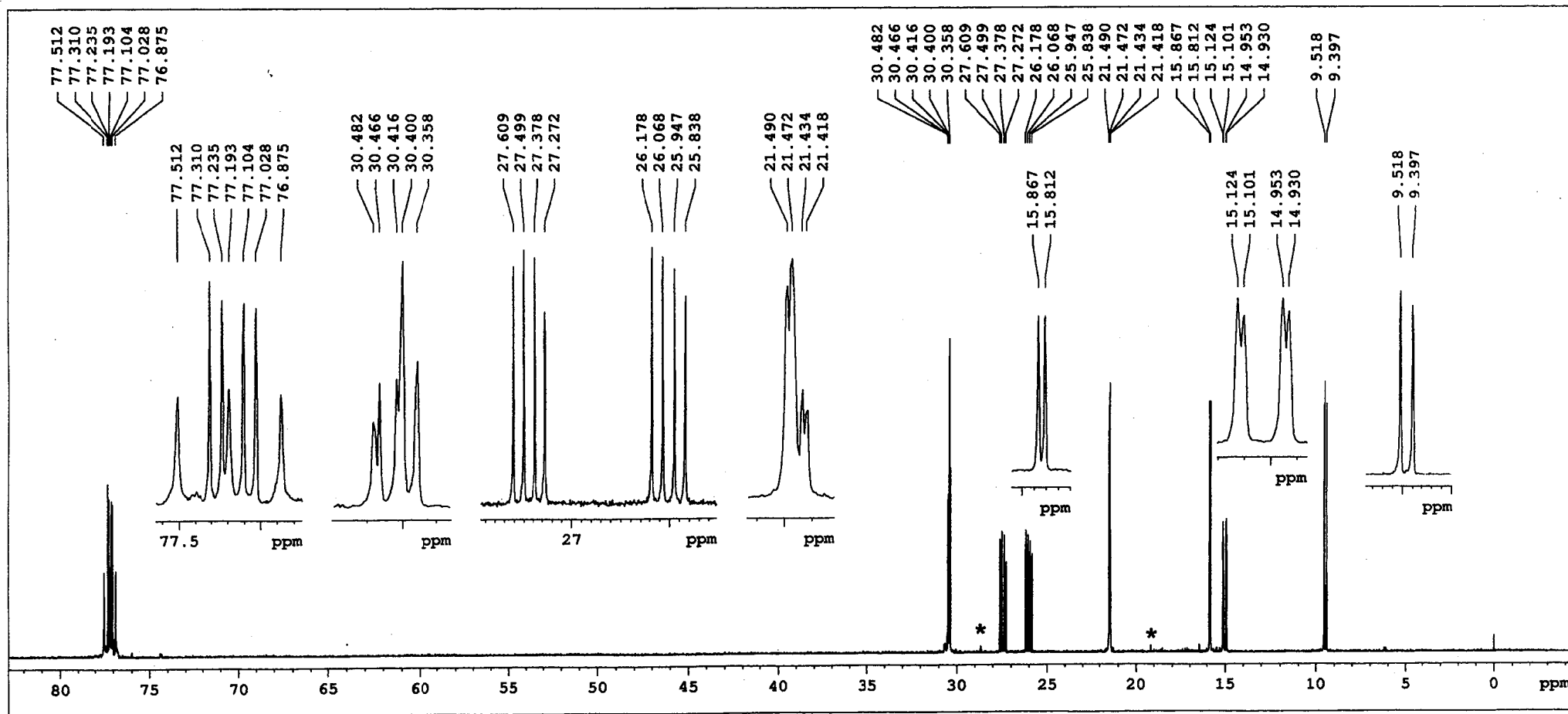


SEC-BUTYL PROPYLPHOSPHONOFUORIDATE



¹³C{H}-NMR



RES. FREQ. : 100.62 MHz
 SOLVENT : CDCl₃
 TEMPERATURE : 24°C
 CONCENTRATION : 100 mg/ml
 REFERENCE : TMS [INT.]
 SPECTRAL WIDTH : 20080.32 Hz
 DATA POINTS [FID] : 65 K

DATA POINTS [SPEC.] : 32 K
 PULSE WIDTH : 6.00 μs [90°]
 NUMBER OF SCANS : 4000
 REP. TIME : 2.00 s
 LINE BROAD : not used
 RESOLUTION : 1.2 Hz [TMS]
 INSTRUMENT : BRUKER DPX-400

a : δ = 26.84, 26.61 ppm J_{a-P} = 143.99, 144.14 Hz J_{a-F} = 23.24, 22.99 Hz
 b : δ = 15.84 ppm J_{b-P} = 5.53 Hz
 c : δ = 15.04, 15.02 ppm J_{c-P} = 17.21 Hz
 d : δ = 77.27, 77.07 ppm J_{d-P} = 7.55, 7.65 Hz
 e : δ = 30.45, 30.38 ppm J_{e-P} = 6.64, 4.23 Hz J_{e-F} = 1.61 Hz
 f : δ = 9.52, 9.40 ppm
 g : δ = 21.48, 21.45 ppm J_{g-P} = 5.4, 1.6 Hz J_{g-F} = 1.7 Hz

mixture of diastereomers *impurities