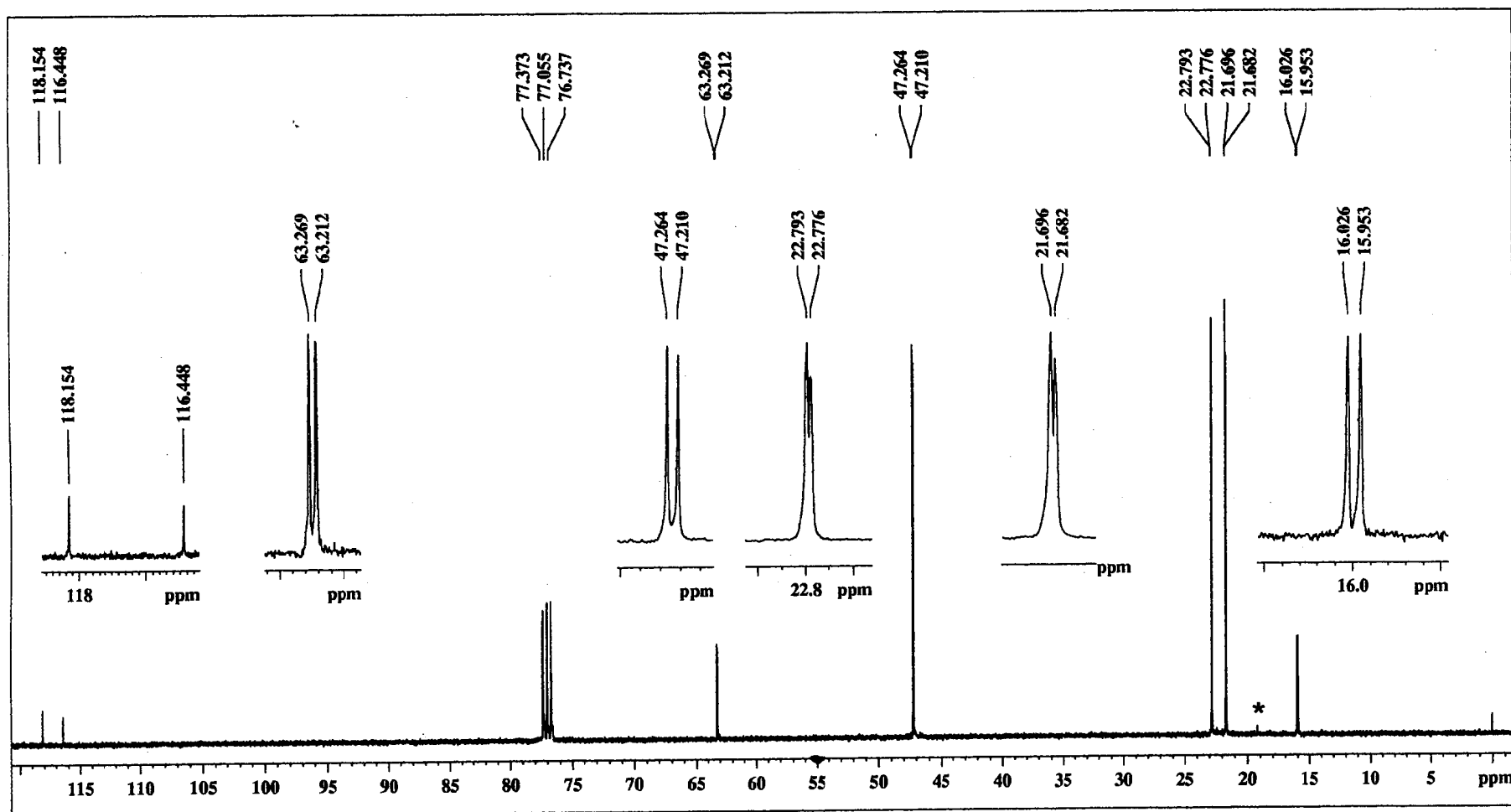
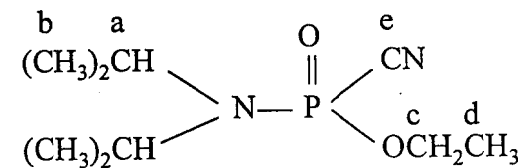


# ETHYL N,N -DIISOPROPYLPHOSPHORAMIDOCYANIDATE

<sup>13</sup>C{<sup>1</sup>H}-NMR



nuc.	δ [ppm]
a	47.24
b	22.78, 21.69
c	63.24
d	15.99
e	117.30

J <sub>a-P</sub>	5.43 Hz
J <sub>b-P</sub>	1.71, 1.41 Hz
J <sub>c-P</sub>	5.74 Hz
J <sub>d-P</sub>	7.35 Hz
J <sub>e-P</sub>	171.67 Hz

\* impurity

RES. FREQ. : 100.62 MHz  
 SOLVENT : CDCl<sub>3</sub>  
 TEMPERATURE : 22°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 : 4522

REP. TIME : 2.00 s  
 LINE BROAD : 0.10 Hz  
 RESOLUTION : 1.8 Hz [TMS]  
 INSTRUMENT : BRUKER DPX-400