

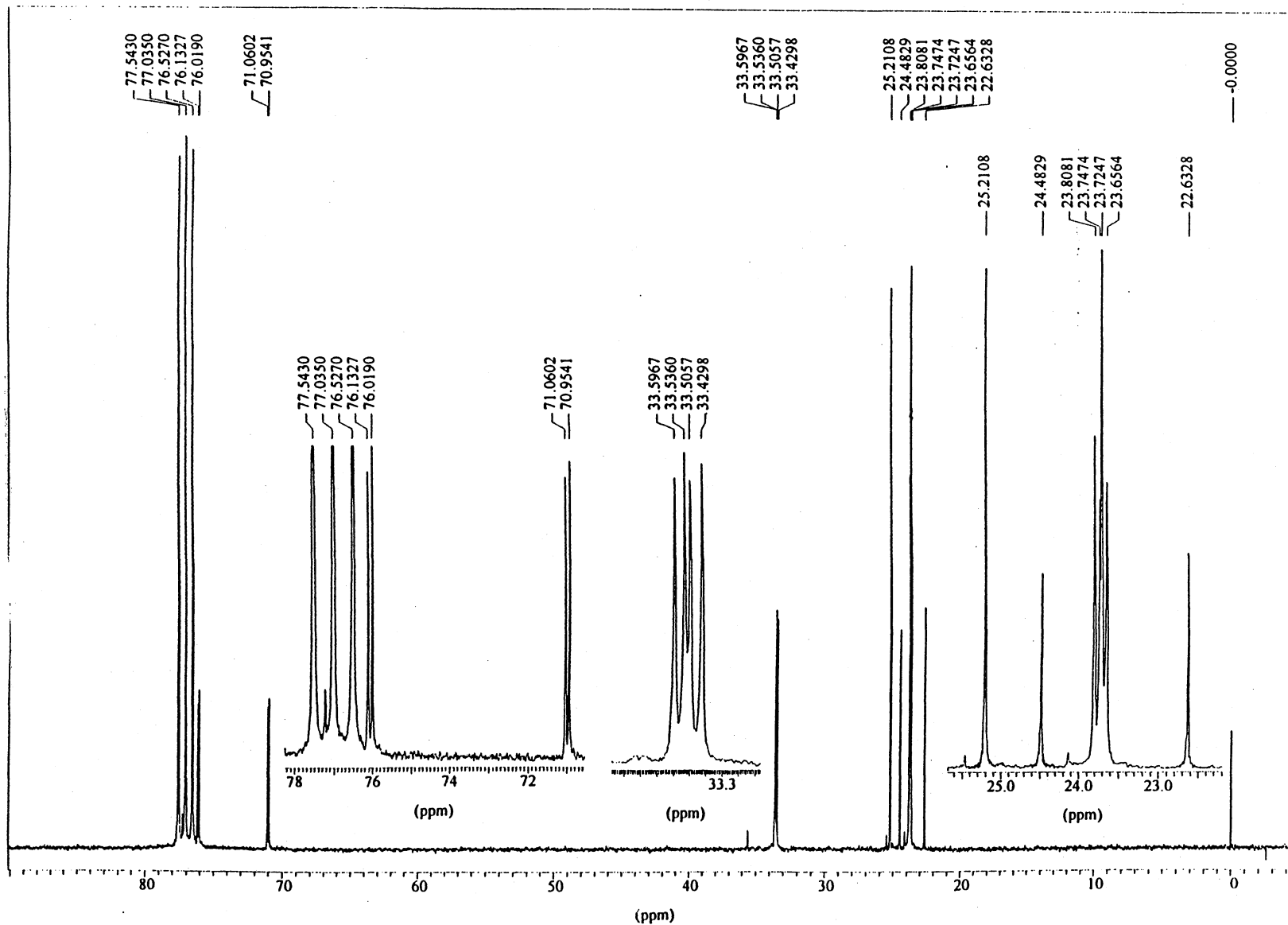
# CYCLOHEXYL ISOPROPYL METHYLTHIOPHOSPHONATE

CAS RN 62507-66-8

14-3-11

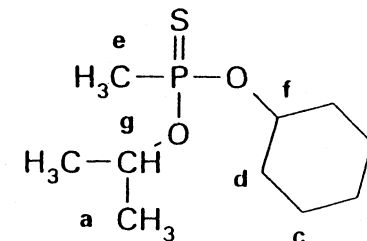
Instrument: Bruker AC-250  
Nucleus:  $^{13}\text{C}\{^1\text{H}\}$   
Frequency: 62.89 Hz

Solvent:  $\text{CDCl}_3$   
Concentration: 23 mg/ml  
Temperature: 23°C  
Reference: TMS (int.)  
Spectral width: 15 625 Hz  
Pulse width: 2.3  $\mu\text{s}$  (45°)  
Repetition time: 2.1 s  
Data points  
FID/Spectrum: 32 K/32 K  
Scans: 30 000  
Line broadening: 0.5 Hz (exp.)  
Resolution: 0.9 Hz (TMS)



## Assignments

- a:  $\delta = 23.77$ ;  $J = 5.2$  Hz
- b:  $\delta = 25.21$
- c:  $\delta = 23.66, 23.75$
- d:  $\delta = 33.47(\text{d})$ ;  $J = 4.8$  Hz.  
 $\delta = 33.57(\text{d})$ ;  $J = 3.8$  Hz
- e:  $\delta = 23.56(\text{d})$ ;  $J = 116.4$  Hz
- f:  $\delta = 76.08(\text{d})$ ;  $J = 7.2$  Hz
- g:  $\delta = 71.01(\text{d})$ ;  $J = 6.7$  Hz



OPCW Code: 14-3-11 (p/11)