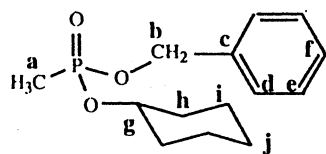


### BENZYLCYCLOHEXYL METHYLPHOSPHONATE



CAS number : unknown  
 MF :  $C_{14}H_{21}O_3P$   
 Solvent/Lock :  $CDCl_3/CDCl_3$   
 Nucleus :  $^{13}C$   
 Apparatus : Bruker AMX360  
 Frequency : 90.56 MHz  
 Temperature : 23°C  
 Concentration :  $\approx 40$  mg/ml

Reference :  $CDCl_3$  internal  
 Spectral width : 15150 Hz  
 Pulse Width : 4  $\mu s$  (90°)  
 Repetition Time : 1 s  
 Data points : FID = 32K, SPC = 64K  
 Line Broadning : No  
 Peak Width 1/2 height : peak 127.72 ppm 1.4 Hz

a :  $\delta = 12.23$  ppm ;  $J_{P-a} = 144.7$  Hz  
 b :  $\delta = 66.70$  ppm ;  $J_{P-b} = 6.0$  Hz  
 c :  $\delta = 136.52$  ppm ;  $J_{P-c} = 6.5$  Hz  
 d, e :  $\delta = 128.50, 127.72$  ppm ; f :  $\delta = 128.22$  ppm  
 g :  $\delta = 75.25$  ppm ;  $J_{P-g} = 6.9$  Hz  
 h :  $\delta = 33.70$  &  $33.65$  ppm ;  $J_{P-h} = 4.2$  &  $3.7$  Hz  
 i :  $\delta = 23.59$  ppm ; j :  $\delta = 25.05$  ppm