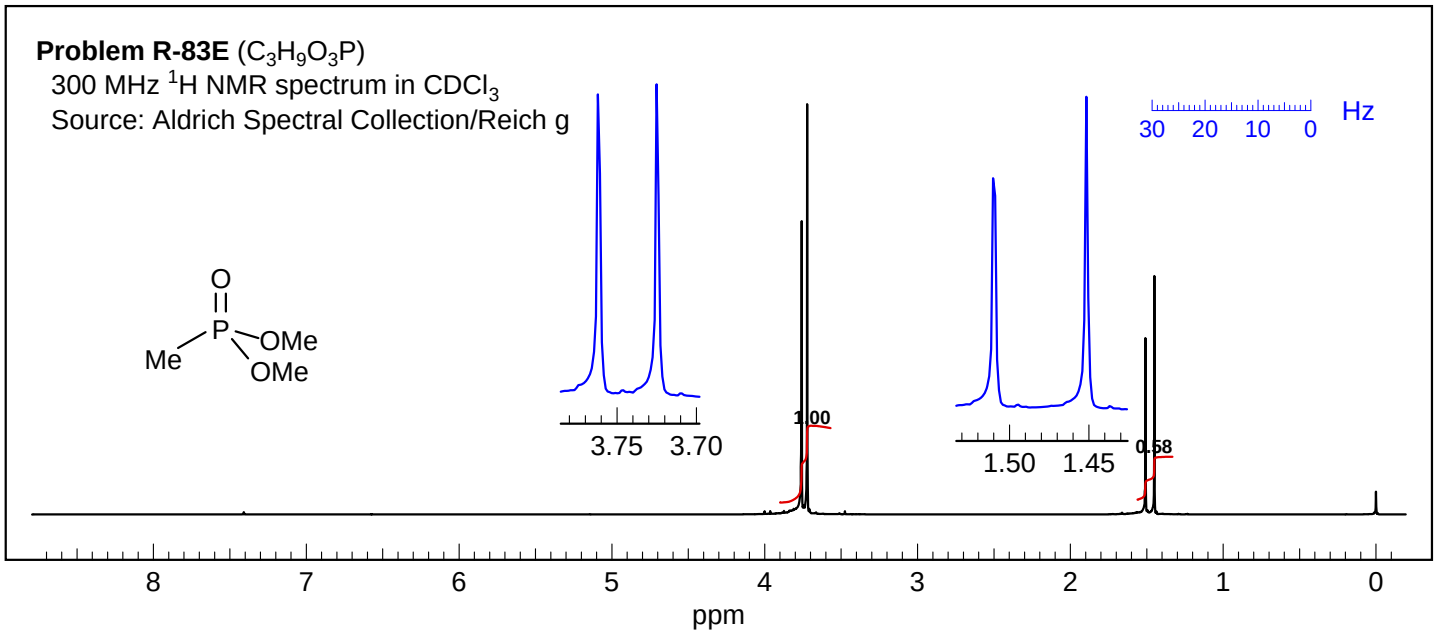
Problem R-83E ($C_3H_9O_3P$)

300 MHz ^{1}H NMR spectrum in $CDCl_3$

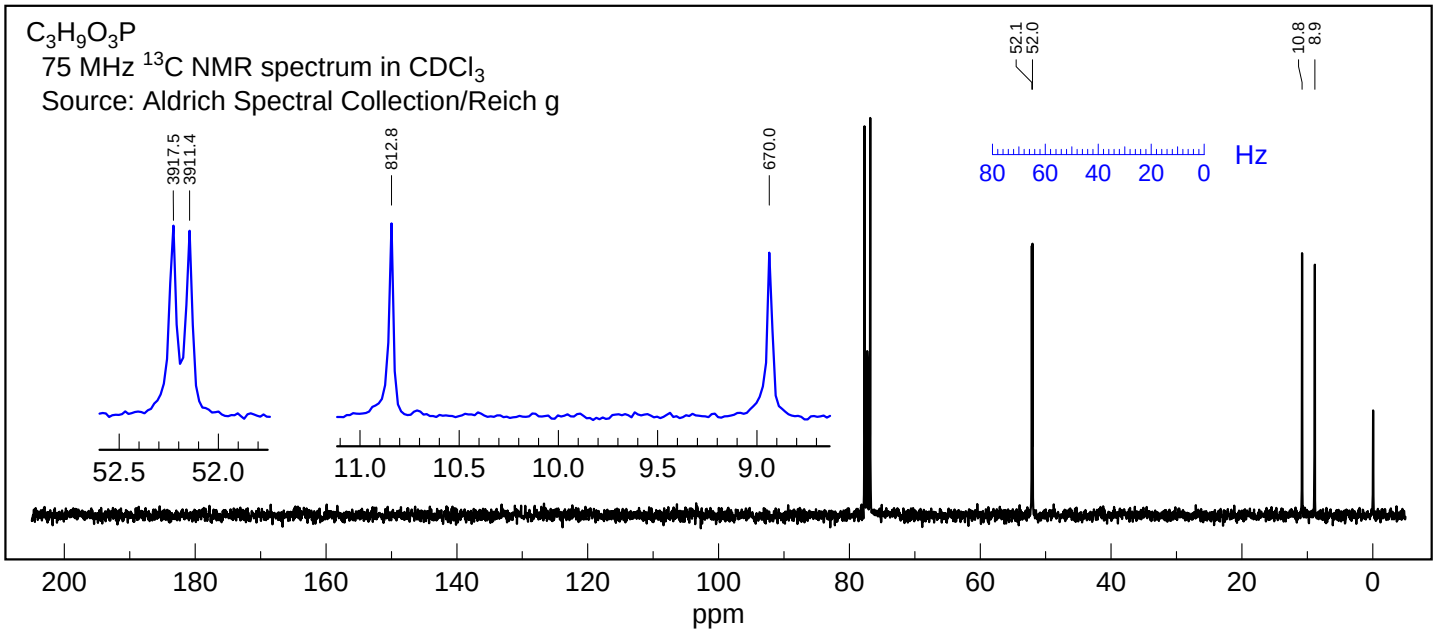
Source: Aldrich Spectral Collection/Reich g



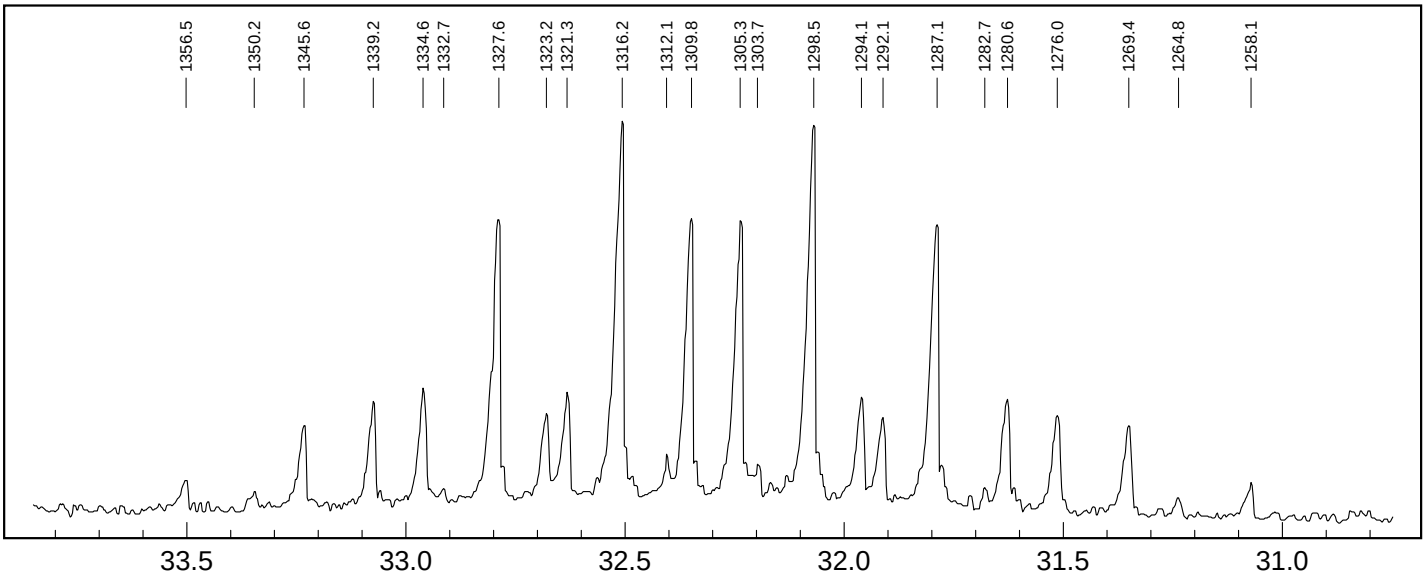
$C_3H_9O_3P$

75 MHz ^{13}C NMR spectrum in $CDCl_3$

Source: Aldrich Spectral Collection/Reich g



40.5 MHz ^{31}P NMR spectrum

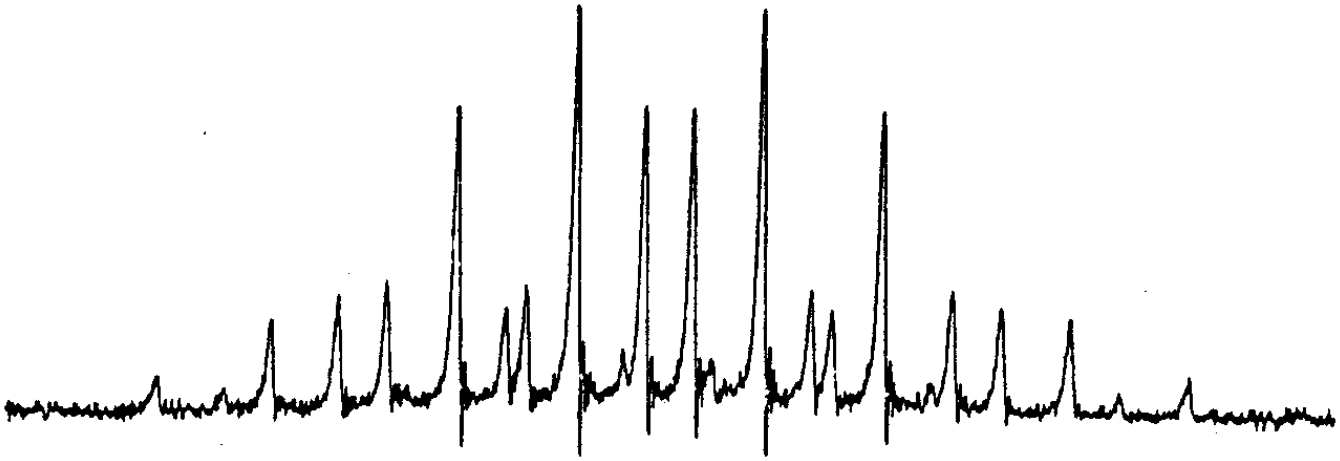


PLT pr-080-to-86.plt

Problem R-83E ($C_3H_9O_3P$). The ^{31}P NMR spectrum of CH_3-P(O)$(OCH_3)_2$ is shown below. The theoretical number of lines is: _____

Is J(PCH_3) or J($POCH_3$) larger?

Mark distances on the spectrum corresponding to these quantities, and show the origin of the lines in a coupling "tree".



PLT pr-080-to-86.plt

Problem R-83E ($C_4H_9O_3P$). The ^{31}P NMR spectrum of CH_3-P(O)$(OCH_3)_2$ is shown below. The theoretical number of lines is: q sept = 4x7 = 28 lines

Is J(PCH_3) or J($POCH_3$) larger? $^2J(PCH_3)$

Mark distances on the spectrum corresponding to these quantities, and show the origin of the lines in a coupling "tree".

One expects a quartet of septets for the ^{31}P NMR spectrum: