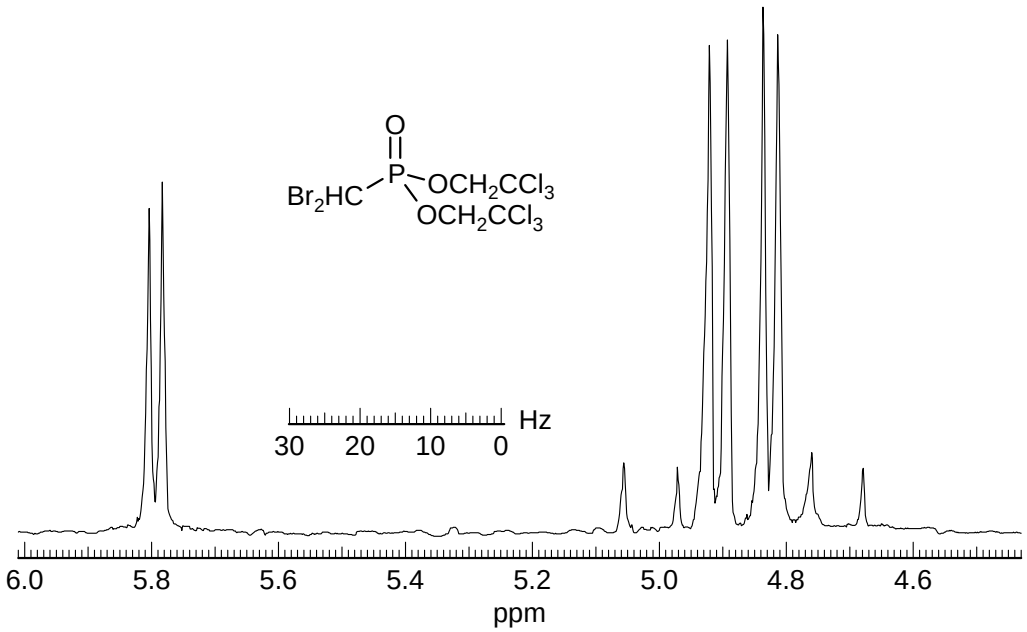
Problem R-99N ($C_5H_5Br_2Cl_6O_3P$)
90 MHz ^{1}H NMR spectrum
Source: *Synth. React. Inorg. Met.-Org Chem.*, **1979**, *9*, 479



(a) Analyze and assign the signals at δ 5.8.

(b) Analyze the signals from δ 4.6-5.1. Draw a coupling tree, and report the J and δ values below.

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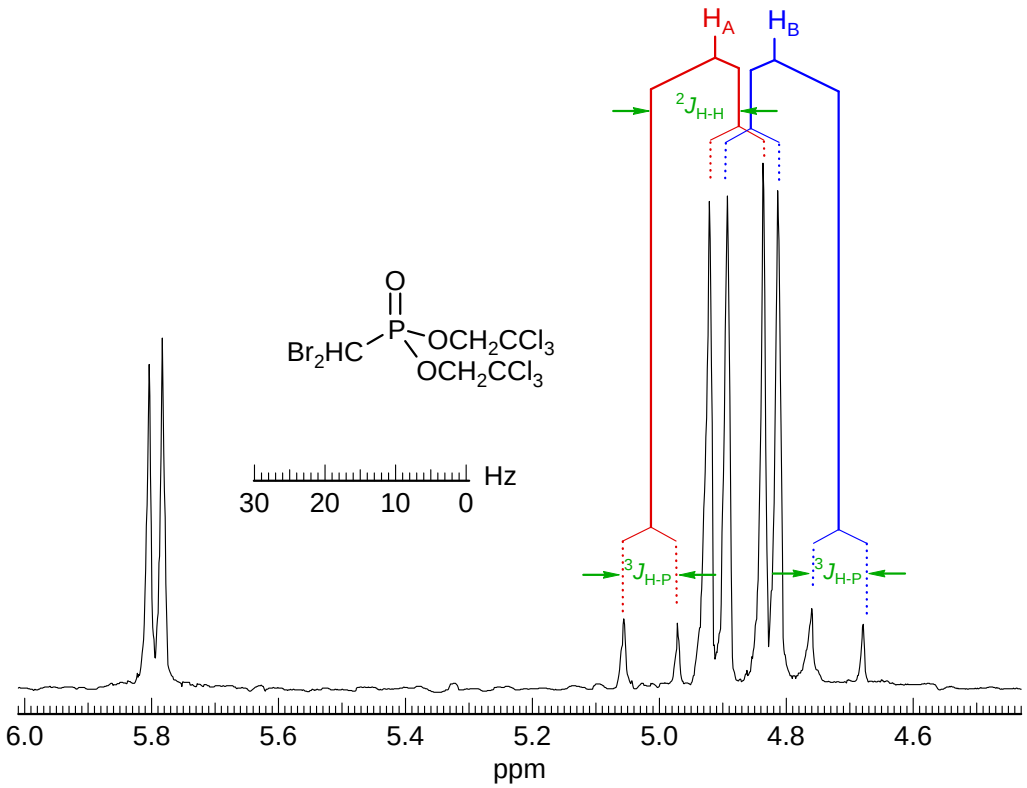

(a) Analyze and assign the signals at δ 5.8.

This is the Br_2C-H proton
δ 5.8, $^2J_{H\text{-}P}$ = 2 Hz

(b) Analyze the signals from δ 4.6-5.1. Draw a coupling tree, and report the J and δ values below.

This is the AB part of an ABX pattern, diastereotopic CH_2 group, X = ^{31}P

δ_A ca 4.91, J_{AX} = 8.5 Hz
δ_B ca 4.82, J_{BX} = 8.5 Hz