

Supporting Information File 3

for

A novel family of (1-aminoalkyl)(trifluoromethyl)- and - (difluoromethyl)phosphinic acids – analogues of α -amino acids

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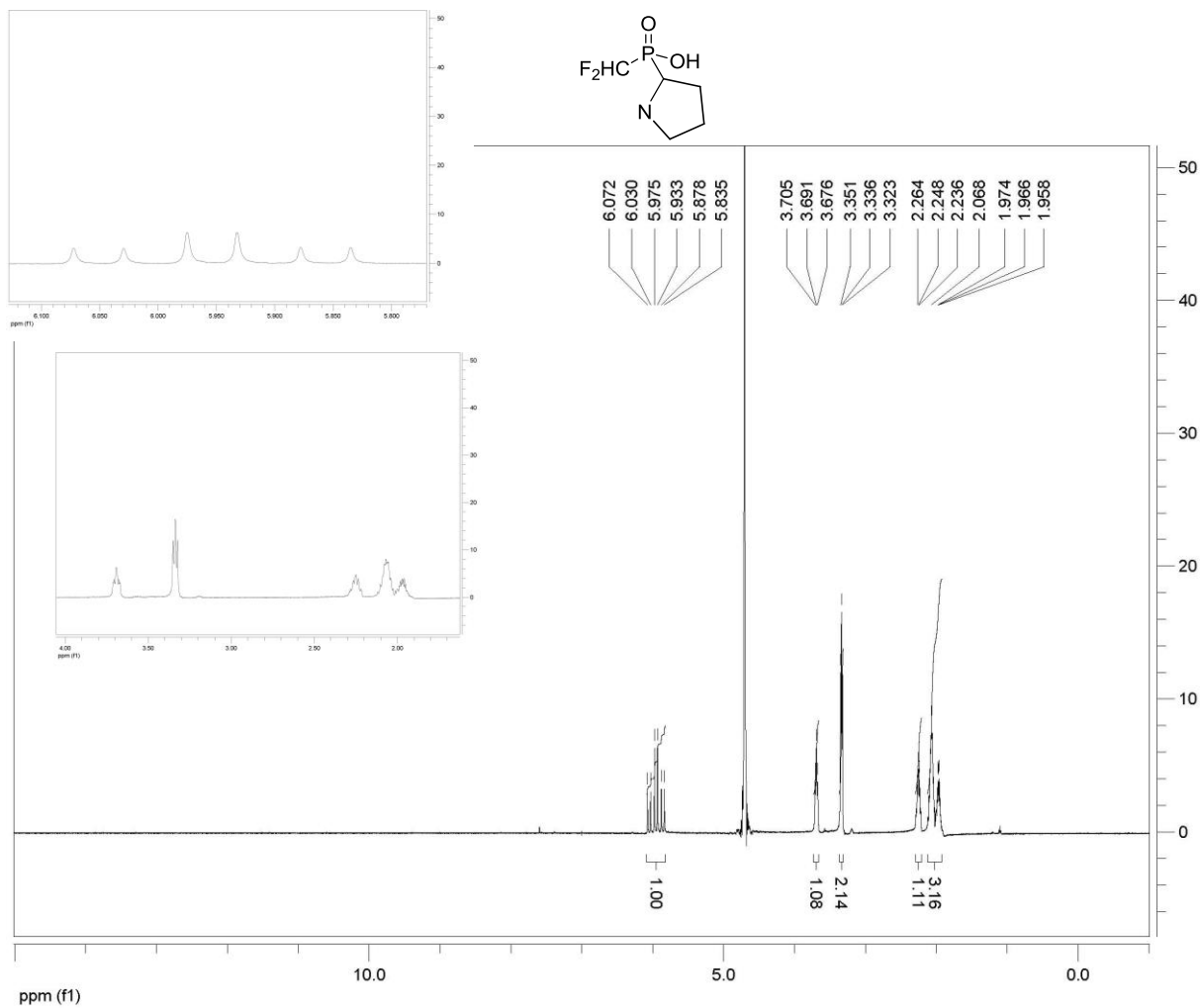
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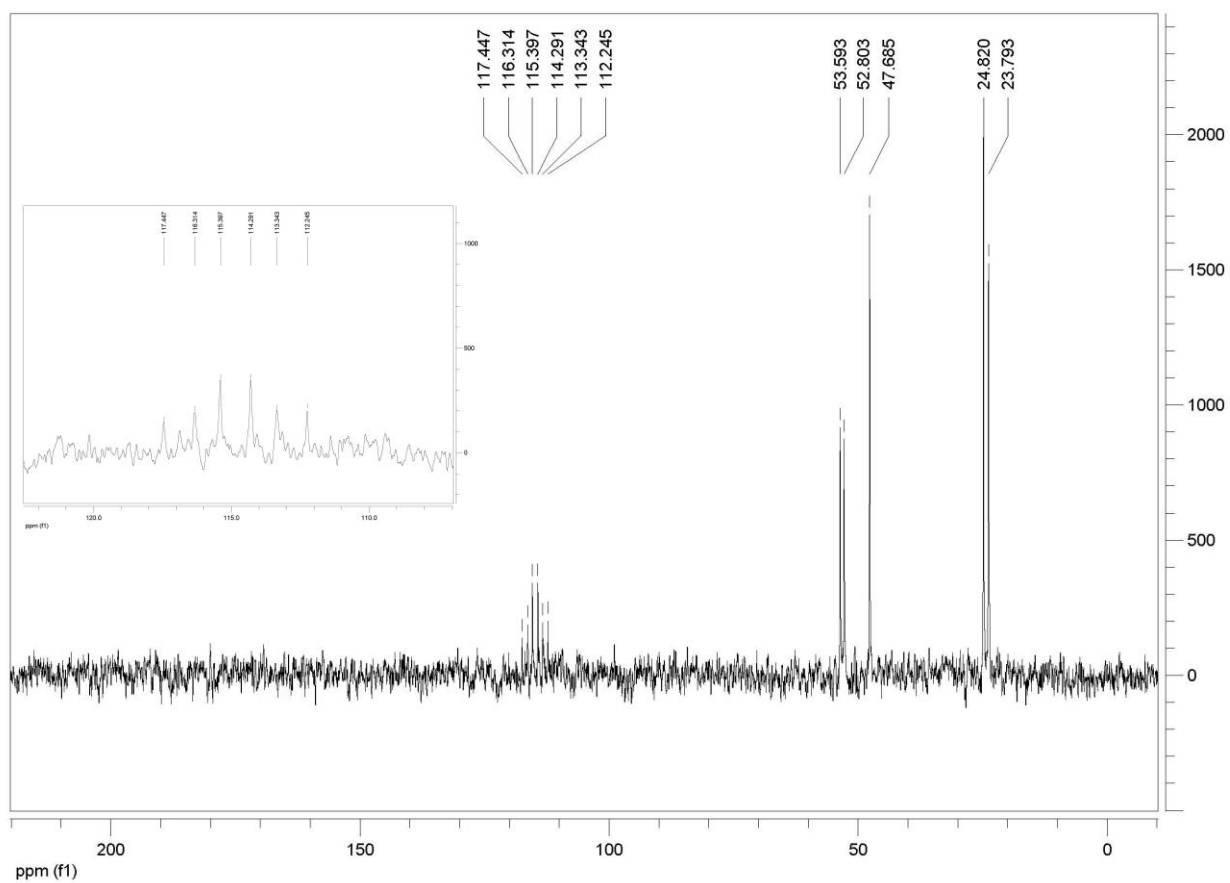
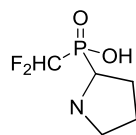
NMR spectra of the most typical compounds (continuation).

(Difluoromethyl)pyrrolidin-2-ylphosphinic acid (**20e**) (Table 2, entry 5).

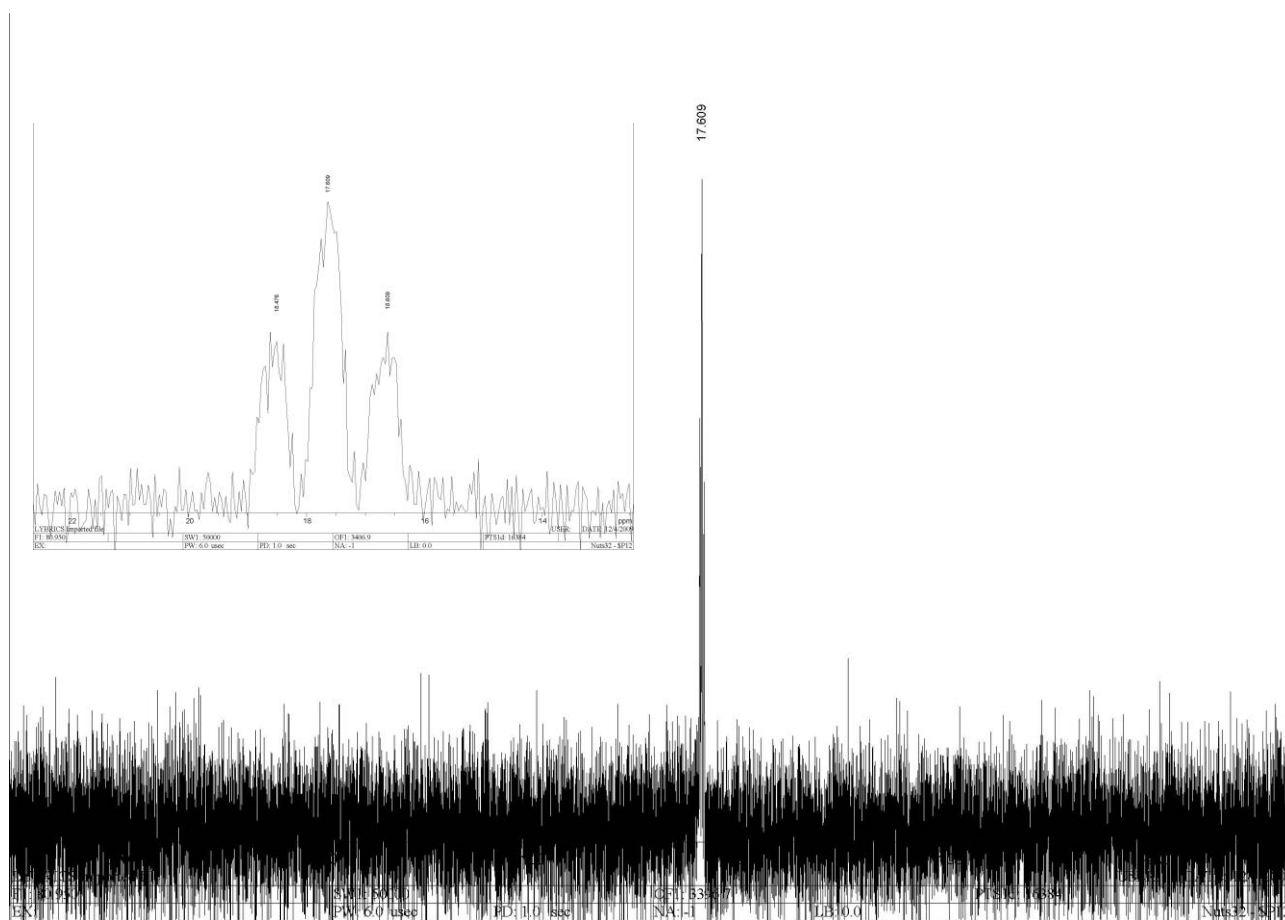
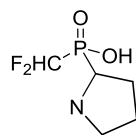
^1H (500 MHz), D_2O

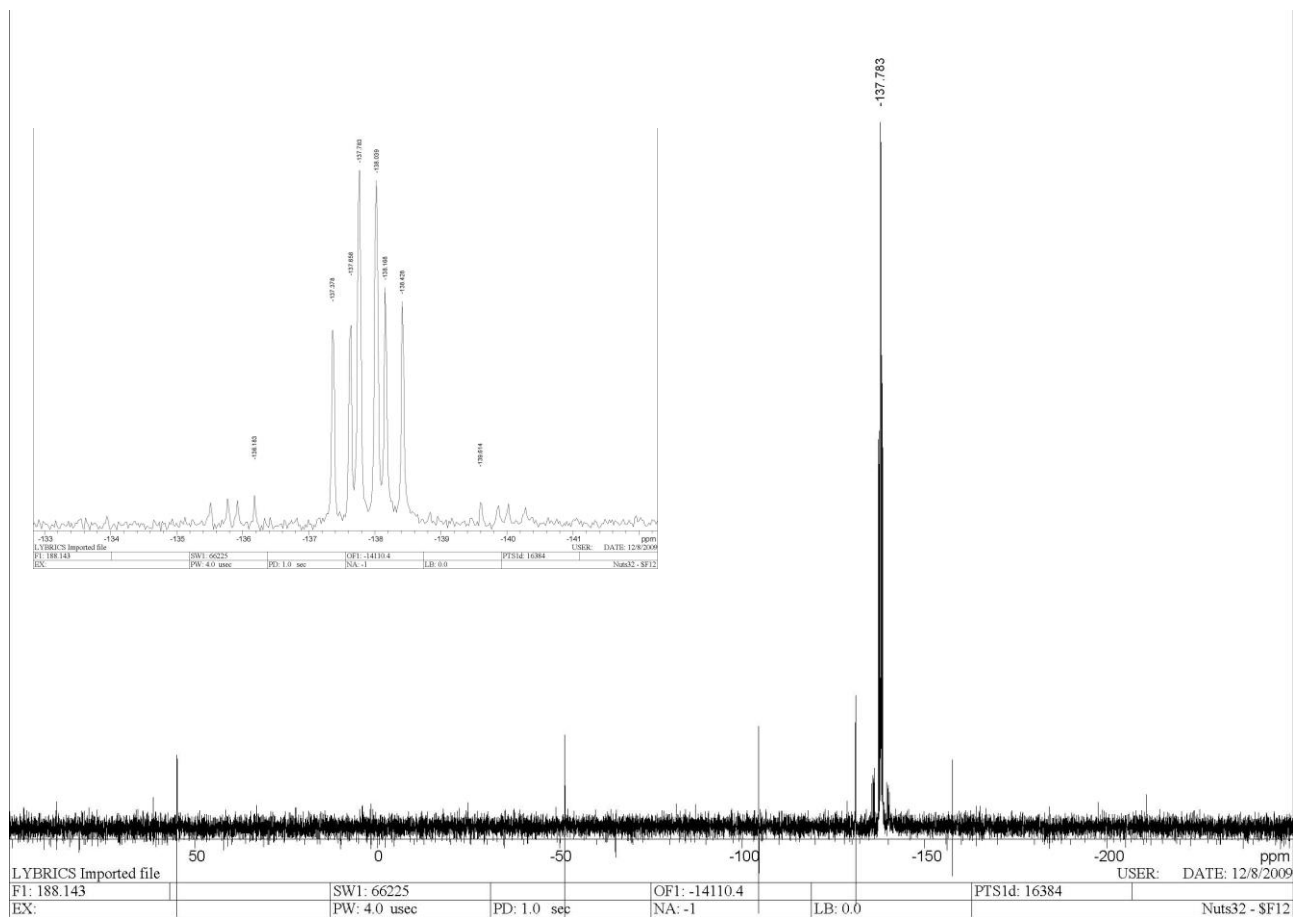
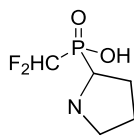


^{13}C (125 MHz), D_2O



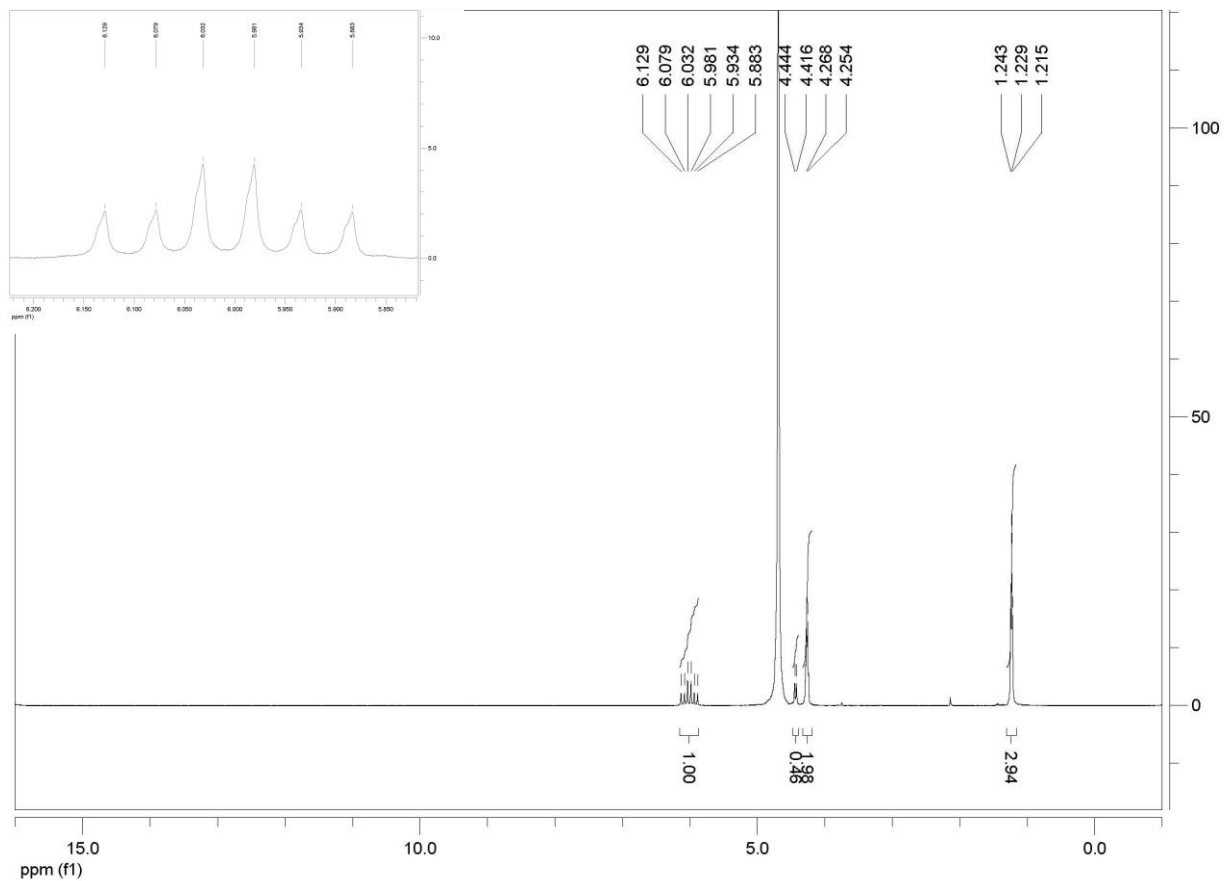
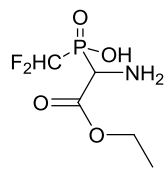
^{31}P (81 MHz), D_2O



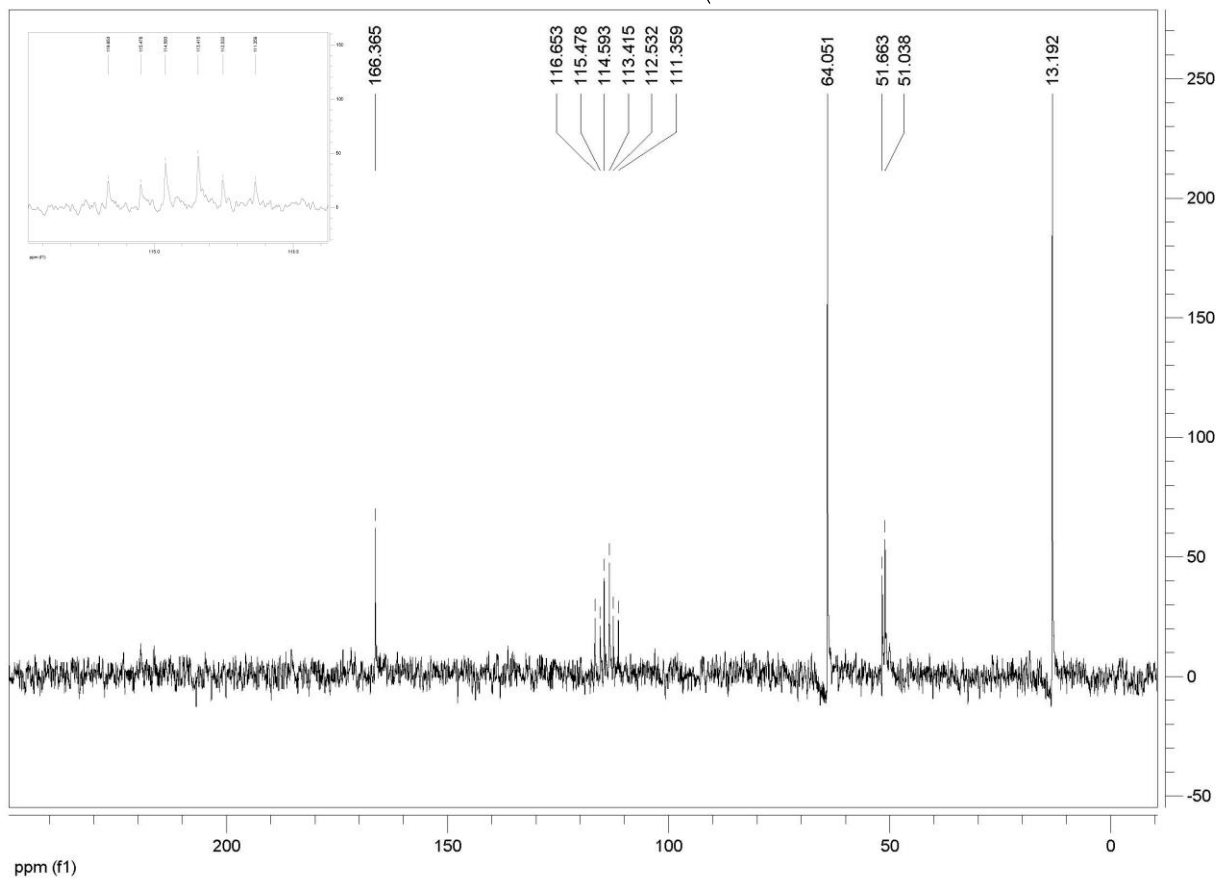
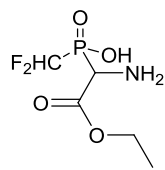
^{19}F (188 MHz), D_2O 

(1-Amino-2-ethoxy-2-oxoethyl)(difluoromethyl)phosphinic acid (**24**).

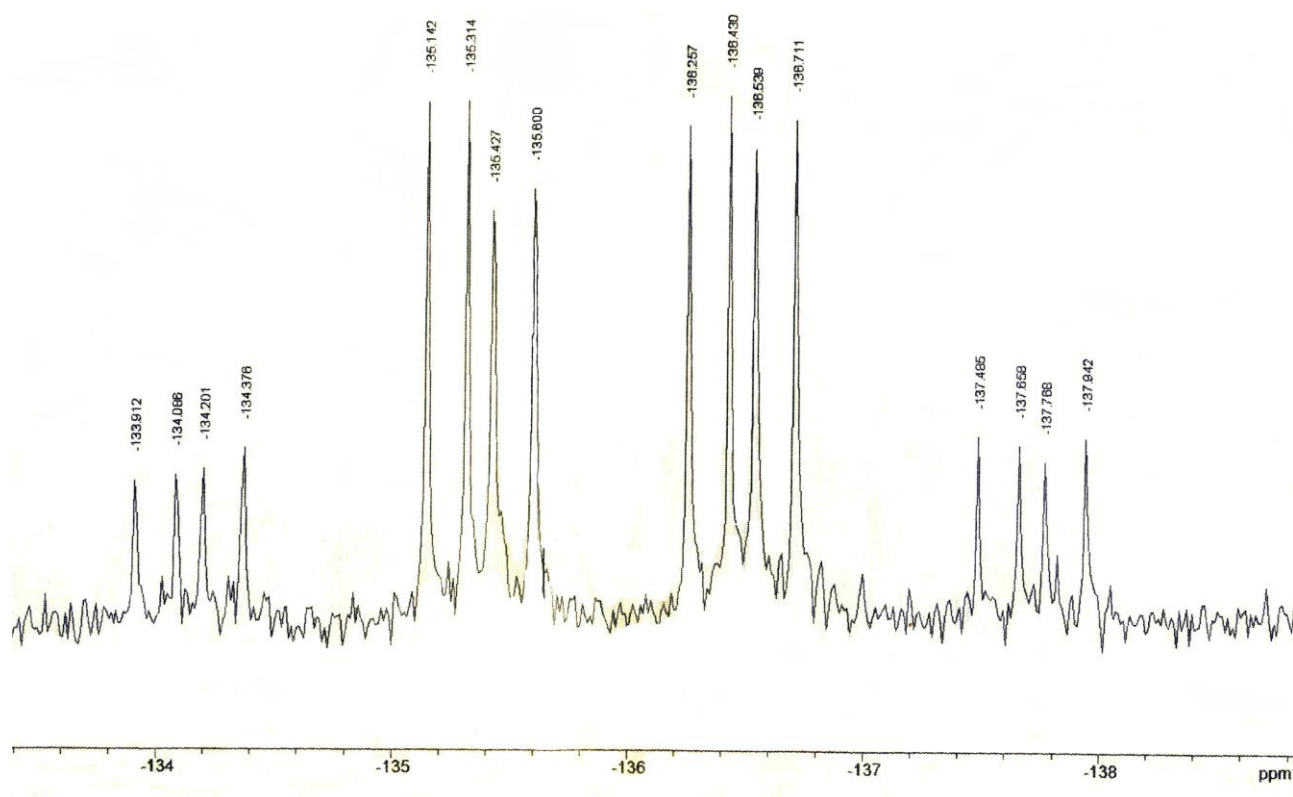
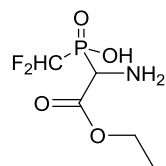
^1H (500 MHz), D_2O



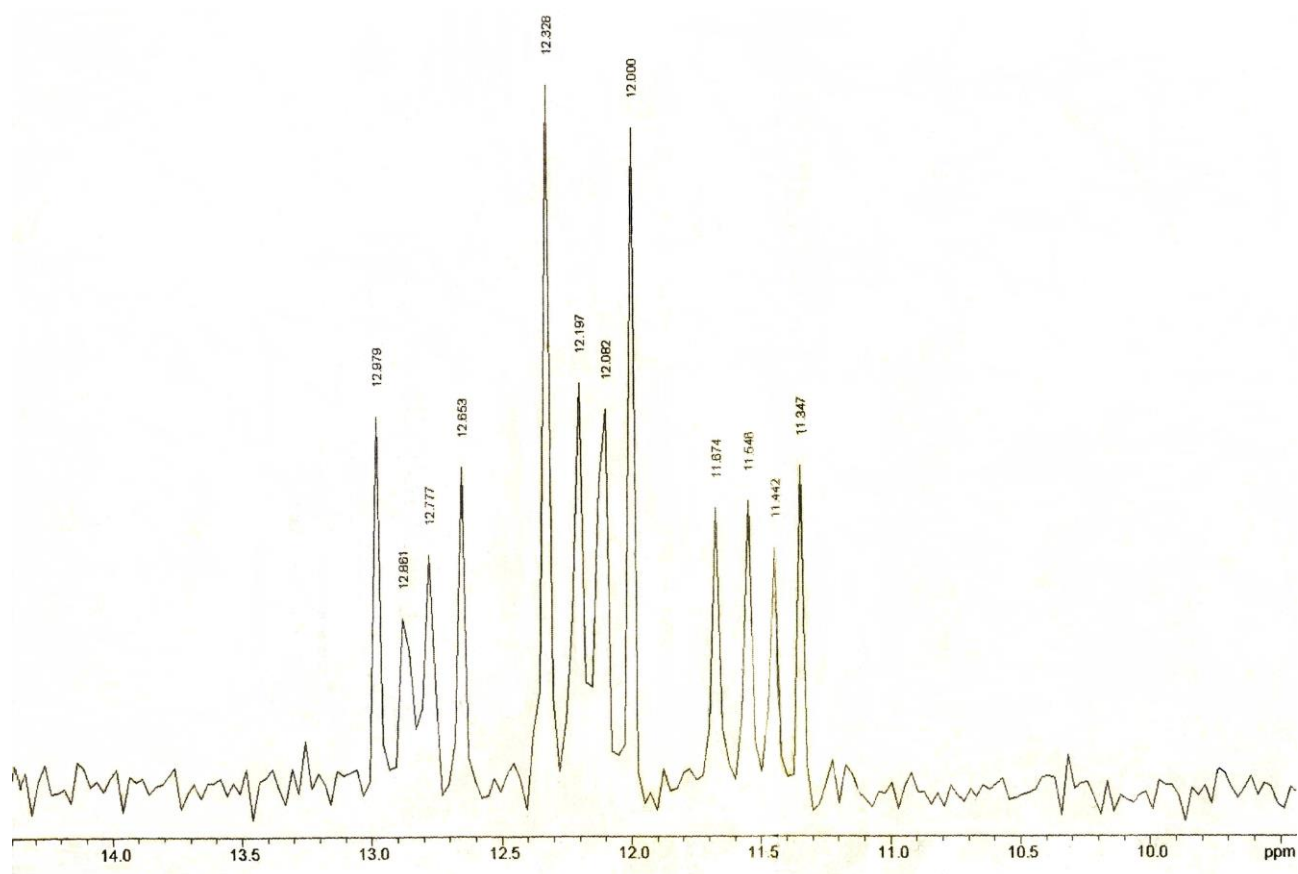
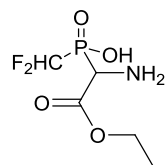
^{13}C (125 MHz), D_2O



^{19}F (282 MHz), D_2O

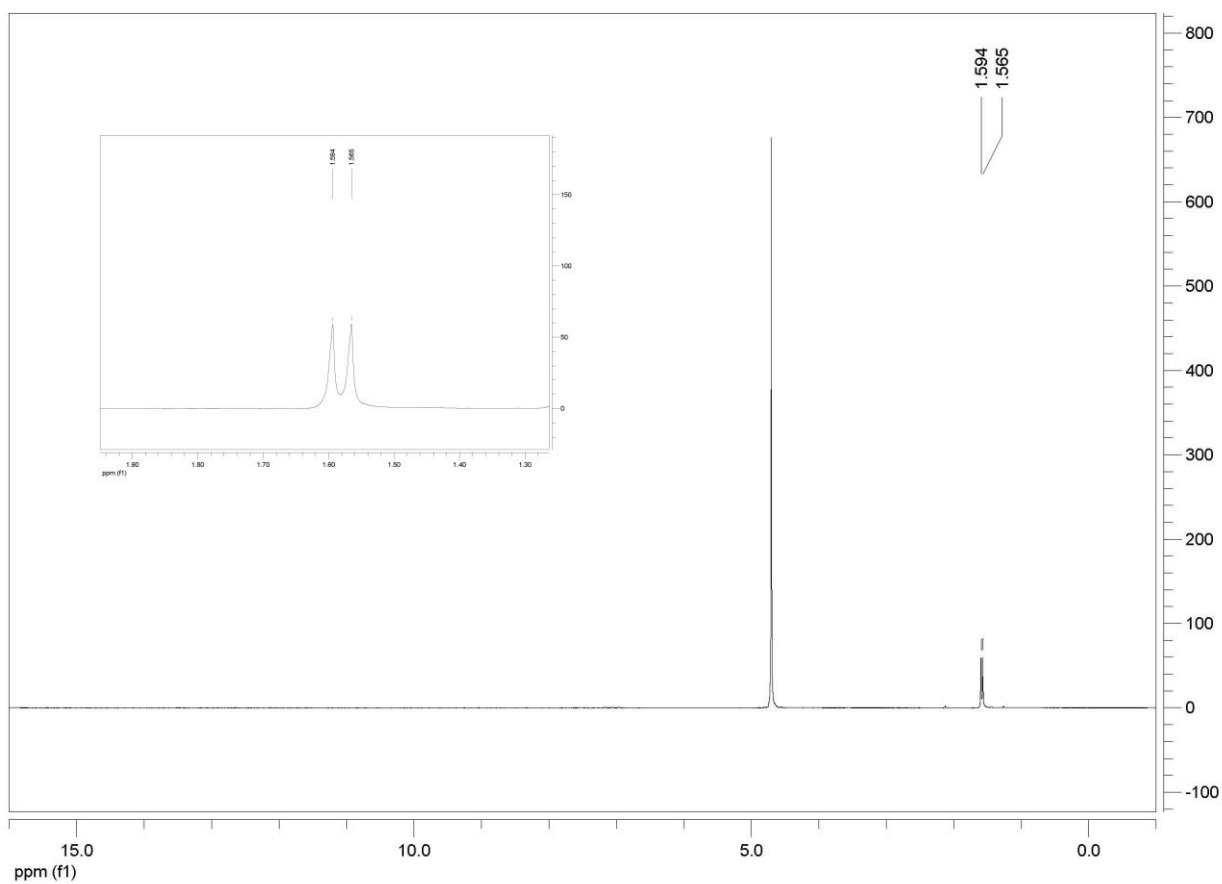
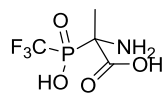


^{31}P (121 MHz), D_2O

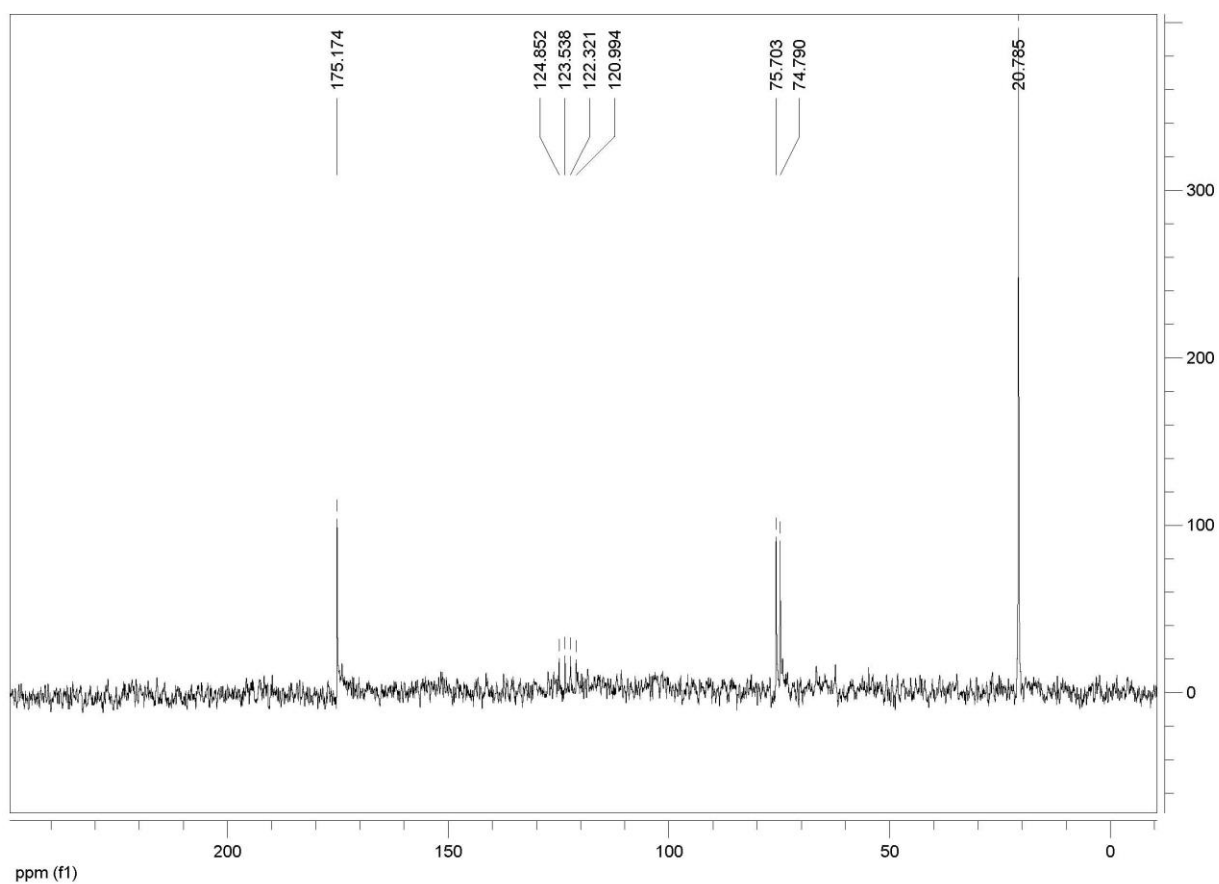
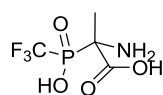


2-[Hydroxy(trifluoromethyl)phosphoryl]alanine (**32**).

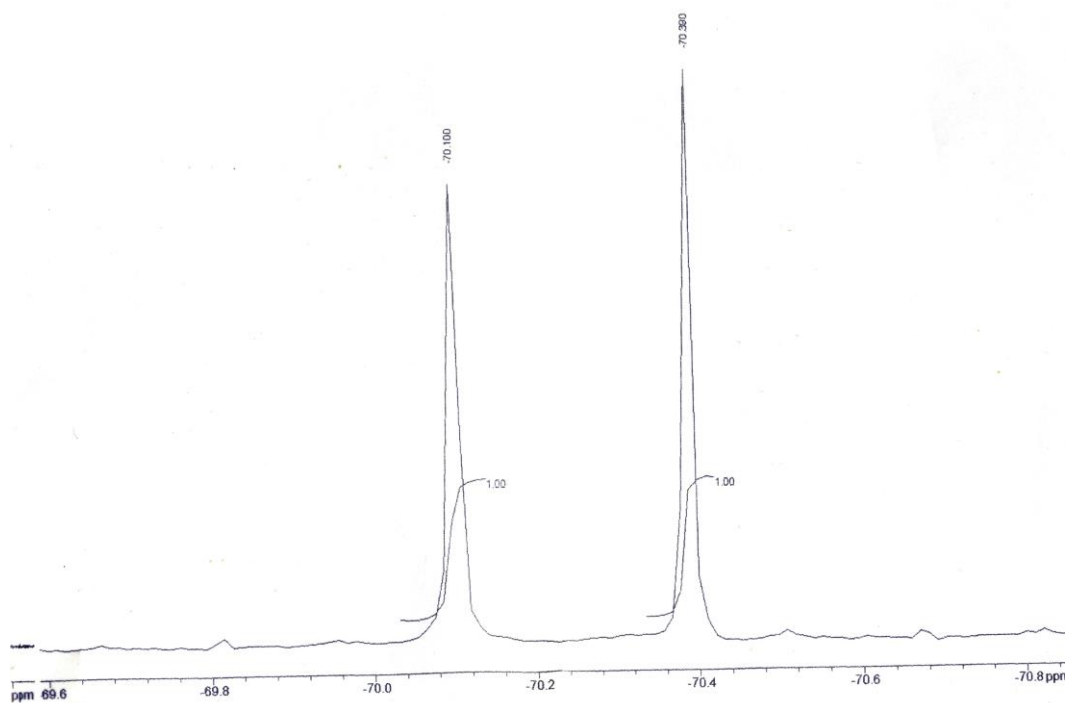
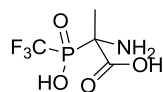
^1H (500 MHz), D_2O



^{13}C (125 MHz), D_2O



^{19}F (188 MHz), D_2O



^{31}P (81 MHz), D_2O

