>>**Entry Name: (Diazomethyl)phosphonic acid**
Synonym(s): Diazomethanephosphonic acid

$N_2CHP(O)(OH)_2$

Molecular Formula: $CH_3N_2O_3P$
Molecular Weight: 122.02
Accurate Mass: 121.98813
Percentage Composition: C 9.84%; H 2.48%; N 22.96%; O 39.34%; P 25.38%
Use/Importance: Esters act as carbene sources. They form anions which convert ketones into alkynes
Hazard & Toxicity: Esters are potentially carcinogenic and explosive

>>**Derivative:** Mono-Me ester
Synonym(s): Methyl(diazomethyl)phosphonate

CAS Registry Number: 89815-68-9
Molecular Formula: $C_2H_5N_2O_3P$
Molecular Weight: 136.047
Accurate Mass: 136.00378
Percentage Composition: C 17.66%; H 3.70%; N 20.59%; O 35.28%; P 22.77%
Physical Description: Yellow cryst. (as *tert*-butylammonium salt)
Other Data: *tert*-Butylammonium salt dec. at 125°. CAS no. refers to the salt

>>**Derivative:** Di-Me ester
Synonym(s): Dimethyl (diazomethyl)phosphonate

CAS Registry Number: 27491-70-9

Molecular Formula: $C_3H_7N_2O_3P$
Molecular Weight: 150.074
Accurate Mass: 150.01943
Percentage Composition: C 24.01%; H 4.70%; N 18.67%; O 31.98%; P 20.64%
Physical Description: Yellow oil
Boiling Point: $Bp_{0.1}$ 59°

>>**Derivative:** Di-Et ester
Synonym(s): Diethyl (diazomethyl)phosphonate

CAS Registry Number: 25411-73-8

Molecular Formula: $C_5H_{11}N_2O_3P$
Molecular Weight: 178.127
Accurate Mass: 178.05073
Percentage Composition: C 33.71%; H 6.22%; N 15.73%; O 26.95%; P 17.39%
Source/Synthesis: Used in synth. of cyclopentynes
Physical Description: Yellow oil
Boiling Point: $Bp_{0.35}$ 69-70°
Refractive Index: n_D^{20} 1.4534

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