>>**Entry Name: (Aminomethyl)phosphonic acid,** 9CI

CAS Registry Number: 1066-51-9

$H_2NCH_2P(O)(OH)_2$

Molecular Formula: CH_6NO_3P
Molecular Weight: 111.037
Accurate Mass: 111.008531
Percentage Composition: C 10.82%; H 5.45%; N 12.61%; O 43.23%; P 27.90%
General Statement: Free acid exists in dipolar form
Use/Importance: Metab. of Glyphosine DLC43-C and Glyphosate DLC41-A
Physical Description: Cryst.
Melting Point: Mp 308-310°
pKa Value: pK_{a1} 0.44; pK_{a2} 5.39; pK_{a3} 10.05 (25°,H_2O) pK_{a1} 1.85; pK_{a2} 5.35; pK_{a3} 10

Aldrich: 32481-7
Fluka: 8385
Sigma: A7759

>>**Derivative:** Di-Et ester
Synonym(s): Diethyl (aminomethyl)phosphonate
CAS Registry Number: 50917-72-1

Molecular Formula: $C_5H_{14}NO_3P$
Molecular Weight: 167.144
Accurate Mass: 167.071131
Percentage Composition: C 35.93%; H 8.44%; N 8.38%; O 28.72%; P 18.53%
Physical Description: Yellowish liq.
Other Data: Dec. on attempted distn.

>>**Derivative:** Diamide
see P-(Aminomethyl)phosphonic diamide, MLH97-P

>>**Derivative:** *N*-Ac, di-Me ester
Synonym(s): Dimethyl [(*N*-acetylamino)methyl]phosphonate

Molecular Formula: $C_5H_{12}NO_4P$
Molecular Weight: 181.128
Accurate Mass: 181.050396
Percentage Composition: C 33.16%; H 6.68%; N 7.73%; O 35.33%; P 17.10%
Physical Description: Solid
Melting Point: Mp 46-47°
Boiling Point: $Bp_{0.008}$ 117-120°

>>**Derivative:** *N*-Ac, di-Et ester
Synonym(s): Diethyl [(*N*-acetylamino)methyl]phosphonate

Molecular Formula: $C_7H_{16}NO_4P$
Molecular Weight: 209.181
Accurate Mass: 209.081696
Percentage Composition: C 40.19%; H 7.71%; N 6.70%; O 30.59%; P 14.81%
Physical Description: Solid
Melting Point: Mp 38-39°
Boiling Point: $Bp_{0.006}$ 122-123°