



>>Entry Name: Azidoformic acid

Synonym(s): Carbonazidic acid, 9Cl. Azidocarbonic acid

CAS Registry Number: 4472-05-3

N_3COOH

Molecular Formula: CHN_3O_2

Molecular Weight: 87.038

Accurate Mass: 87.006877

Percentage Composition: C 13.80%; H 1.16%; N 48.28%; O 36.76%

>>Derivative: Me ester

Synonym(s): Methyl azidoformate

CAS Registry Number: 1516-56-9

Molecular Formula: $\text{C}_2\text{H}_3\text{N}_3\text{O}_2$

Molecular Weight: 101.065

Accurate Mass: 101.022527

Percentage Composition: C 23.77%; H 2.99%; N 41.58%; O 31.66%

Boiling Point: Bp_{16} 18°

Hazard & Toxicity: Explosive

>>Derivative: Et ester

Synonym(s): Ethyl azidoformate

CAS Registry Number: 817-87-8

Molecular Formula: $\text{C}_3\text{H}_5\text{N}_3\text{O}_2$

Molecular Weight: 115.091

Accurate Mass: 115.038177

Percentage Composition: C 31.31%; H 4.38%; N 36.51%; O 27.80%

Use/Importance: Versatile synthetic reagent

Boiling Point: Bp_{20} 28°

Hazard & Toxicity: Heat-sensitive explosive

>>Derivative: *tert*-Butyl ester

Synonym(s): *tert*-Butyl azidoformate

CAS Registry Number: 1070-19-5

Molecular Formula: $\text{C}_5\text{H}_9\text{N}_3\text{O}_2$

Molecular Weight: 143.145

Accurate Mass: 143.069477

Percentage Composition: C 41.95%; H 6.34%; N 29.35%; O 22.35%

Use/Importance: Reagent for *N*-protection of amino acids

Boiling Point: Bp_{70} 73-74°

Other Data: Unstable above 80°

Hazard & Toxicity: Shock-and heat-sensitive explosive

>>Derivative: 4-Methoxybenzyl ester

CAS Registry Number: 25474-85-5

Molecular Formula: $\text{C}_9\text{H}_9\text{N}_3\text{O}_3$

Molecular Weight: 207.188

Accurate Mass: 207.064392

Percentage Composition: C 52.17%; H 4.38%; N 20.28%; O 23.17%

Physical Description: Needles

Optical Rotation: $[\alpha]_{\text{D}}$ +32

>>Derivative: Diphenylmethyl ester

Synonym(s): Diphenylmethyl azidoformate. Benzhydryl azidoformate

Molecular Formula: $\text{C}_{14}\text{H}_{11}\text{N}_3\text{O}_2$

Molecular Weight: 253.26

Accurate Mass: 253.085127

Percentage Composition: C 66.40%; H 4.38%; N 16.59%; O 12.63%

Use/Importance: *N*-Protecting reagent for peptide synth., esp. for synth. of unsymmetrical cystine peptides

Physical Description: Stable cryst.

Melting Point: Mp 37-39°