



>>Entry Name: Guanidine, 9CI

Synonym(s): Carbamidine. Iminourea. Aminoformamidine. Aminomethanamidine. Carbamamidine

CAS Registry Number: 113-00-8

Related CAS Registry Numbers(s): 5150-56-1 5423-23-4 10199-21-0 10308-84-6 19227-70-4 19244-98-5 25215-10-5 50979-18-5 52470-25-4

$\text{HN}=\text{C}(\text{NH}_2)_2$

Molecular Formula: CH_5N_3

Molecular Weight: 59.071

Accurate Mass: 59.048347

Percentage Composition: C 20.33%; H 8.53%; N 71.14%

Use/Importance: Organic base used to form extractable ion-pairs with anionic complexes. Enhances acetylcholine release from nerve endings. Used to treat botulism and other muscle weakness states

Physical Description: Deliquescent cryst. mass

Melting Point: Mp 50°

Solubility: Sol. H_2O , EtOH, acids aq. solns.

pKa Value: $\text{p}K_{\text{a}1}$ 13.59; $\text{p}K_{\text{a}2}$ -11 (25°)

Other Data: Strong base, absorbs CO_2 from air

Hazard & Toxicity: LD₅₀ (mus, ipr) 350 mg/kg

>>Derivative: Hydrochloride

CAS Registry Number: 50-01-1

Physical Description: Powder

Melting Point: Mp 183°

Other Data: Hygroscopic

Aldrich: 17725-3

Fluka: 50950

Sigma: G4755

>>Derivative: Carbonate salt (2:1)

CAS Registry Number: 593-85-1

Extra CAS Registry Numbers(s): 3425-08-9 100224-74-6

Melting Point: Mp 197°

Aldrich: G1165-9

Fluka: 50930

Sigma: G4885

>>Derivative: Sulfate (2:1)

CAS Registry Number: 594-14-9

Extra CAS Registry Numbers(s): 1184-68-5

Melting Point: Mp 290-293 dec.°

>>Derivative: Acetate salt

CAS Registry Number: 34771-62-5

Melting Point: Mp 229-230°

>>Derivative: Nitrate salt

CAS Registry Number: 506-93-4

Melting Point: Mp 214°

Hazard & Toxicity: May explode during prepn.

Aldrich: 23424-9

Fluka: 50970

Sigma: G8514

>>Derivative: Tetraphenylborate