>>**Entry Name: Hydroxyurea,** 9CI, BAN, USAN
Synonym(s): Carbamoylhydroxylamine. Carbamohydroxamic acid. *N*-(Aminocarbonyl)hydroxylamine. *N*-Carbamoylhydroxylamine. **Hydroxycarbamide,** INN. Hydura. Litalir. Onco-Carbide. Biosupressin. Hidrix. Hydrea. SQ 1089. NSC 32065

CAS Registry Number: 127-07-1

$HONHCONH_2$ << >> $HON=C(OH)NH_2$

Molecular Formula: $CH_4N_2O_2$
Molecular Weight: 76.055
Accurate Mass: 76.027278
Percentage Composition: C 15.79%; H 5.30%; N 36.83%; O 42.07%
Use/Importance: Antineoplastic agent. Inhibits DNA synthesis by inactivating ribonucleotide reductase. Radical scavenger
Physical Description: Cryst.
Melting Point: Mp 70-72 dec.°. Mp 141° (dimorph.)
Solubility: Insol. Et_2O, C_6H_6
Calculated Log P Data: Log P –1.8 (calc)
Hazard & Toxicity: Haemopoietic effects when used therapeutically. LD_{50} (mus, ipr) 5800 mg/kg. Exp. reprod. and teratogenic effects. Mutagenic props. Aq. solns. can show explosive thermal dec. at 70°

Aldrich: 11520-7
Fluka: 55291
Sigma: H8627

>>**Derivative:** N^1-Me
Synonym(s): *N*-Hydroxy-*N*-methylurea

CAS Registry Number: 7433-43-4
Molecular Formula: $C_2H_6N_2O_2$
Molecular Weight: 90.082
Accurate Mass: 90.042928
Percentage Composition: C 26.67%; H 6.71%; N 31.10%; O 35.52%
Use/Importance: DNA synthesis inhibitor, having about half the activity of hydroxyurea. Radical scavenger
Physical Description: Cryst.

>>**Derivative:** N^2-Me
Synonym(s): *N*-Hydroxy-*N*'-methylurea

CAS Registry Number: 7433-46-7
Molecular Formula: $C_2H_6N_2O_2$
Molecular Weight: 90.082
Accurate Mass: 90.042928
Percentage Composition: C 26.67%; H 6.71%; N 31.10%; O 35.52%
Use/Importance: DNA synthesis inhibitor having about half the activity of hydroxyurea. Radical scavenger
Physical Description: Tablets
Melting Point: Mp 127 dec.°
Solubility: V. sol. H_2O

>>**Derivative:** Me ether
Synonym(s): Methoxyurea

CAS Registry Number: 3272-27-3
Molecular Formula: $C_2H_6N_2O_2$
Molecular Weight: 90.082
Accurate Mass: 90.042928
Percentage Composition: C 26.67%; H 6.71%; N 31.10%; O 35.52%
Melting Point: Mp 84°
Rare Chemicals Library: S80299-9