>>**Entry Name: Thiourea,** 9CI
ENTRY UNDER REVIEW
Synonym(s): Thiocarbamide. Thiocarbonic diamide

CAS Registry Number: 62-56-6

H_2NCSNH_2

Molecular Formula: CH_4N_2S
Molecular Weight: 76.122
Accurate Mass: 76.009518
Percentage Composition: C 15.78%; H 5.30%; N 36.80%; S 42.12%

Use/Importance: Photographic fixer. Forms separable inclusion complexes. Used in heterocyclic synth. Used as 10% aq. soln. for photometric detn. of Bi (λ_{max} 470 nm, ε 9000), Os, Ru, Re, Se, Te; reducing agent
Physical Description: Rhombohedra or needles (EtOH)
Melting Point: Mp 175-177°. Mp 180°
Solubility: Sol. H_2O, EtOH; spar. sol. Et_2O
pKa Value: pK_a –1.19 (20°, H_2SO_4 aq.)
Hazard & Toxicity: Possible human carcinogen. Adverse haemopoietic effects reported by ingestion. LD_{50} (rat, orl) 125 mg/kg. Exp. carcinogen and teratogen. Exp. reprod. effects. Hepatotoxic

Aldrich: 24025-7
Fluka: 88810
Sigma: T8656

>>**Derivative:** Hydrochloride

Melting Point: Mp 136-137°

>>**Derivative:** *N*-Ac
Synonym(s): *N*-(Aminothioxomethyl)acetamide, 9CI. 1-Acetyl-2-thiourea, 8CI

CAS Registry Number: 591-08-2
Use/Importance: Reagent for synth. of thiols
Physical Description: Needles
Melting Point: Mp 165°
Hazard & Toxicity: LD_{50} (rat, orl) 50 mg/kg

Aldrich: A2285-8
Fluka: 1485

>>**Derivative:** *N*,*S*-Di-Ac

Molecular Formula: $C_5H_8N_2O_2S$
Molecular Weight: 160.196
Accurate Mass: 160.030648
Percentage Composition: C 37.49%; H 5.03%; N 17.49%; O 19.97%; S 20.02%
Physical Description: Yellow prisms (AcOH aq.)
Melting Point: Mp 153°

>>**Derivative:** *N*-Benzoyl

>>**Derivative:** *N*-Me

>>**Derivative:** *N*,*N*-Di-Me

>>**Derivative:** *N*,*N*'-Di-Me

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