



>>Entry Name: Benzoylthiourea
Synonym(s): Benzoylthiocarbamide

CAS Registry Number: 614-23-3
PhCONHC(S)NH2

Molecular Formula: C8H8N2OS
Molecular Weight: 180.23
Accurate Mass: 180.035733
Percentage Composition: C 53.31%; H 4.47%; N 15.54%; O 8.88%; S 17.79%
Use/Importance: Used to enhance brightness in copper plating
Physical Description: Prisms (EtOH)
Melting Point: Mp 172°

>>Derivative: *N,N*-Di-Ph
Synonym(s): *N,N*-Diphenyl-*N'*-benzoylthiourea

CAS Registry Number: 70989-46-7

Molecular Formula: C20H16N2OS
Molecular Weight: 332.425
Accurate Mass: 332.098333
Percentage Composition: C 72.26%; H 4.85%; N 8.43%; O 4.81%; S 9.65%
Use/Importance: Used as toluene soln. for extraction separation of Pd(*II*)
Physical Description: Cryst. (EtOH)
Melting Point: Mp 151°
Solubility: Sol. toluene, C6H6, EtOH

>>Derivative: *N,N*-Dihexyl
Synonym(s): *N,N*-Dihexyl-*N'*-benzoylthiourea

CAS Registry Number: 80457-30-3

Molecular Formula: C20H32N2OS
Molecular Weight: 348.552
Accurate Mass: 348.223533
Percentage Composition: C 68.92%; H 9.25%; N 8.04%; O 4.59%; S 9.20%
Use/Importance: Used as toluene soln. for extraction separation of Pd, Pt, Ru, Rh
Physical Description: Cryst. (EtOH)
Melting Point: Mp 59°
Solubility: Sol. toluene, C6H6, EtOH, CHCl3, decane
Fluka: 12953

>>Derivative: *N*-Ph, *N'*-Thiobenzoyl
see N-[(Phenylamino)thioxomethyl]benzenecarbothioamide, [KMP14-N](#)

>>Derivative: *N*-(2-Pyridyl), *N'*-Benzoyl
see N-Benzoyl-*N'*-(2-pyridyl)thiourea, [KML90-N](#)

References:

Chocholousek, J. *et al.*, *CA*, 1962, 57; 9587b, (*use*)
Bhattacharya, A.K., *J. Indian Chem. Soc.*, 1966, **43**, 742; *CA*, **67**, 21554g, (*synth*)
Koenig, K.H. *et al.*, *Fresenius' Z. Anal. Chem.*, 1985, **321**, 457, (*synth, use*)
Vest, P. *et al.*, *Fresenius' Z. Anal. Chem.*, 1989, **335**, 759, (*derivs, synth, detn, Pd*)