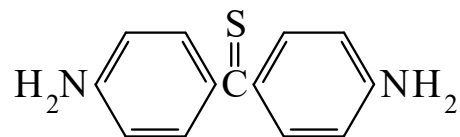




>>Entry Name: Bis(4-aminophenyl)methanethione

Synonym(s): 4,4'-Diaminothiobenzophenone



CAS Registry Number: 59142-17-5

Molecular Formula: C₁₃H₁₂N₂S

Molecular Weight: 228.317

Accurate Mass: 228.072118

Percentage Composition: C 68.39%; H 5.30%; N 12.27%; S 14.04%

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

Synonym(s): 4,4'-Bis(dimethylamino)thiobenzophenone, 8Cl. Bis[4-(dimethylamino)phenyl]methanethione, 9Cl. Michler's thioketone. Thio-Michler's ketone

CAS Registry Number: 1226-46-6

Molecular Formula: C₁₇H₂₀N₂S

Molecular Weight: 284.424

Accurate Mass: 284.134718

Percentage Composition: C 71.79%; H 7.09%; N 9.85%; S 11.27%

Use/Importance: Used as a 0.03% soln. in 2-methoxyethanol (+ 0.02% aq. HCl) for photometric detn. of NO₂⁽⁻⁾; as 1mM soln. in DMF or in EtOH for photometric detn. of Ag ($\lambda_{\max}$ 530 nm, ϵ 140000, DMF), Au ($\lambda_{\max}$ 525-560 nm, ϵ 50000), Hg, Pd, Pt

Physical Description: Dark red cryst. (EtOH)

Melting Point: Mp 195-202 dec.°

Solubility: Sol. EtOH, C₆H₆; insol. H₂O

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

Synonym(s): Bis[4-(diethylamino)phenyl]methanethione, 9Cl. 4,4'-Bis(diethylamino)thiobenzophenone, 8Cl

CAS Registry Number: 25642-33-5

Molecular Formula: C₂₁H₂₈N₂S

Molecular Weight: 340.532

Accurate Mass: 340.197318

Percentage Composition: C 74.07%; H 8.29%; N 8.23%; S 9.42%

Use/Importance: Used as 0.08% EtOH soln. for sensitive photometric detn. of Pt(IV) ($\lambda_{\max}$ 500 nm)

Physical Description: Dark red cryst. (EtOH)

Solubility: Sol. EtOH; insol. H₂O

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Dougherty, J.A. *et al.*, *Anal. Chem.*, 1975, **47**, 1130, (*N,N'*-Di-Me, *use*)

Cheng, K.L. *et al.*, *Handbook of Analytical Chemistry*, CRC Press, Boca Raton, 1982, 425, (*use*)

Ardjunan, P. *et al.*, *Acta Cryst. C*, 1984, **40**, 552, (*N,N'*-Di-Me, *cryst struct*)

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