



>>Derivative: *N*-Ac

Synonym(s): Acetanilide. *N*-Phenylacetamide, 9Cl. Antifebrin

CAS Registry Number: 103-84-4

Molecular Formula: C₈H₉NO

Molecular Weight: 135.165

Accurate Mass: 135.068414

Percentage Composition: C 71.09%; H 6.71%; N 10.36%; O 11.84%

Source/Synthesis: Manuf. by acetylation of aniline with Acetic acid [DFR91-W](#), Acetic anhydride [DFR94-Z](#) or acetyl chloride

Use/Importance: Used as 0.2*M* soln. in C₆H₆ for extraction-photometric detn. of Au(*III*) (λ_{max} 400 nm, ϵ 4300; bromide-5*M* HCl medium). Reference material used in elemental microanalysis. Dye intermediate and intermediate for sulfonamides

Biological Use/Importance: Antipyretic, analgesic

Physical Description: Cryst. (H₂O)

Melting Point: Mp 115-116°

Boiling Point: Bp 306°

Solubility: Sol. EtOH, Et₂O, Me₂CO, C₆H₆, toluene, CHCl₃, 4-methyl-2-pentanone, EtOAc

Hazard & Toxicity: Fl. p. 169/174°, autoignition temp. 530/545°. Causes methaemoglobinaemia by ingestion. LD₅₀ (rat, orl) 800 mg/kg

Aldrich: 11293-3

Fluka: 401

Rare Chemicals Library: S44621-1

Supelco: R52-5150

>>Derivative: *N*-Ac, *N*-nitroso

Synonym(s): *N*-Nitrosoacetanilide. *N*-Nitroso-*N*-phenylacetamide

CAS Registry Number: 938-81-8

Molecular Formula: C₈H₈N₂O₂

Molecular Weight: 164.163

Accurate Mass: 164.058578

Percentage Composition: C 58.53%; H 4.91%; N 17.06%; O 19.49%

Use/Importance: Source of PhN₂⁽⁺⁾ ions and phenyl radicals

Physical Description: Pale-yellow cryst. (petrol)

Melting Point: Mp 51 dec.°

Hazard & Toxicity: Solns. ppt. PhN₂OAc, may explode on warming. Explosive reactions with piperidine and with thiophene

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

Synonym(s): *N*-Acetyl-*N*-phenylacetamide, 9Cl. Diacetanilide

CAS Registry Number: 1563-87-7

Molecular Formula: C₁₀H₁₁NO₂

Molecular Weight: 177.202

Accurate Mass: 177.078979

Percentage Composition: C 67.78%; H 6.26%; N 7.90%; O 18.06%

Physical Description: Cryst. (petrol)

Melting Point: Mp 34-36°

Boiling Point: Bp₁₁ 142°

>>Derivative: *N*-Chloroacetyl

Synonym(s): *N*-Chloroacetanilide

CAS Registry Number: 579-11-3

Molecular Formula: C₈H₈ClNO

Molecular Weight: 169.61

Accurate Mass: 169.029441

Percentage Composition: C 56.65%; H 4.75%; Cl 20.90%; N 8.26%; O 9.43%

Physical Description: Cryst. (CHCl₃/petrol)

Melting Point: Mp 91°

>>Derivative: *N*-Acetoacetyl

see Acetoacetanilide, [KNP12-S](#)

>>Derivative: *N*-Benzoyl

see Benzanilide, [BRH28-U](#)