>>**Derivative:** *N*-Ac
Synonym(s): Acetanilide. *N*-Phenylacetamide, 9CI. Antifebrin

CAS Registry Number: 103-84-4

Molecular Formula: C_8H_9NO
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 C_6H_6 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. (H_2O)
Melting Point: Mp 115-116°
Boiling Point: Bp 306°
Solubility: Sol. EtOH, Et_2O, Me_2CO, C_6H_6, toluene, $CHCl_3$, 4-methyl-2-pentanone, EtOAc
Hazard & Toxicity: Fl. p. 169/174°, autoignition temp. 530/545°. Causes methaemoglobinaemia by ingestion. LD_{50} (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: $C_8H_8N_2O_2$
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 $PhN_2^{(+)}$ ions and phenyl radicals
Physical Description: Pale-yellow cryst. (petrol)
Melting Point: Mp 51 dec.°
Hazard & Toxicity: Solns. ppt. PhN_2OAc, may explode on warming. Explosive reactions with piperidine and with thiophene

>>**Derivative:** *N,N*-Di-Ac
Synonym(s): *N*-Acetyl-*N*-phenylacetamide, 9CI. Diacetanilide

CAS Registry Number: 1563-87-7
Molecular Formula: $C_{10}H_{11}NO_2$
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: Bp_{11} 142°

>>**Derivative:** *N*-Chloroacetyl
Synonym(s): *N*-Chloroacetanilide

CAS Registry Number: 579-11-3
Molecular Formula: C_8H_8ClNO
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. ($CHCl_3$/petrol)
Melting Point: Mp 91°

>>**Derivative:** *N*-Acetoacetyl

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