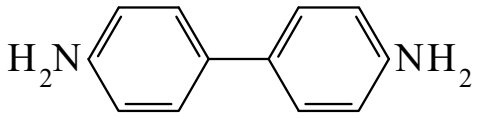
>>**Entry Name: 4,4'-Diaminobiphenyl**
Synonym(s): [1,1'-Biphenyl]-4,4'-diamine, 9CI. Benzidine, 8CI. *p*,*p*'-Bianiline



CAS Registry Number: 92-87-5

Molecular Formula: $C_{12}H_{12}N_2$
Molecular Weight: 184.24
Accurate Mass: 184.100048
Percentage Composition: C 78.23%; H 6.56%; N 15.20%
Source/Synthesis: Manuf. by reduction of corresponding nitro compound or by benzidine rearrangement of hydrazobenzene
Use/Importance: Used for pptn. of $SO_4^{2(-)}$, $WO_4^{2(-)}$; gives colour reactions with Au(*III*), Tl(*III*), Cl_2; used for photometric detn. of $CN^{(-)}$, $NO_2^{(-)}$, $ClO_3^{(-)}$, $SO_4^{2(-)}$ (indirectly). Use now resticted due to carcinogenicity. Monomer for polyamides and polyimides
Physical Description: Cryst. (H_2O or EtOH)
Melting Point: Mp 128°
Boiling Point: Bp_{740} 400°
Solubility: Sol. EtOH, Et_2O; sl. sol. H_2O
pKa Value: pK_{a1} 4.95; pK_{a2} 3.85 (25°)
Other Data: There are also two metastable forms, Mps 122° and 125°
Hazard & Toxicity: Human carcinogen. Use prohibited in the UK under the Control of Substances Hazardous to Health Regulation 1988. Occup. use associated with development of bladder cancer. Exp. carcinogen. Other systemic effects on blood, liver and kidneys

Fluka: 12115
Sigma: B3503
Supelco: 4-8504

>>**Derivative:** Hydrochloride (1:2)

CAS Registry Number: 531-85-1
Physical Description: Leaflets
Solubility: Sol. H_2O

Fluka: 12125
Rare Chemicals Library: S44008-6
Sigma: B0386

>>**Derivative:** Sulfate

CAS Registry Number: 531-86-2
Physical Description: Scales
Solubility: Prac. insol. H_2O, EtOH

Fluka: 12130
Rare Chemicals Library: S56355-2

>>**Derivative:** Picrate (1:2)

CAS Registry Number: 41412-45-7
Physical Description: Yellow powder (C_6H_6)
Melting Point: Mp 230 dec.°

>>**Derivative:** *N*-Ac

CAS Registry Number: 3366-61-8
Molecular Formula: $C_{14}H_{14}N_2O$
Molecular Weight: 226.277
Accurate Mass: 226.110613
Percentage Composition: C 74.31%; H 6.24%; N 12.38%; O 7.07%
Physical Description: Needles (EtOH aq.)
Melting Point: Mp 204.5-205.5° (199°)