



>>Entry Name: 4-Amino-4'-hydroxydiphenylamine

**Molecular Formula:** C<sub>12</sub>H<sub>12</sub>N<sub>2</sub>O

**Molecular Weight:** 200.24

**Accurate Mass:** 200.094963

**Percentage Composition:** C 71.98%; H 6.04%; N 13.99%; O 7.99%

**Physical Description:** Plates (H<sub>2</sub>O or toluene)

**Melting Point:** Mp 166°

**pKa Value:** pK<sub>a1</sub> 6.6 (5.9)

>>Derivative: Sulfate (2:1)

**Synonym(s):** C.I. Azoic diazo compound 35. C.I. 37255

**Use/Importance:** Used as 1% aq. soln. as redox indicator

**pKa Value:** pK<sub>a1</sub> 6.6 (30°)

**Other Data:** E° +0.712 V (30°)

>>Derivative: Me ether

**Synonym(s):** *N*-(4-Methoxyphenyl)-1,4-benzenediamine, 9Cl. 4-Amino-4'-methoxydiphenylamine. Variamine blue. Variamine blue B

**CAS Registry Number:** 101-64-4

**Molecular Formula:** C<sub>13</sub>H<sub>14</sub>N<sub>2</sub>O

**Molecular Weight:** 214.266

**Accurate Mass:** 214.110613

**Percentage Composition:** C 72.87%; H 6.59%; N 13.07%; O 7.47%

**Use/Importance:** Used as 0.1-1% aq. soln. as a metallochromic indicator for titrimetric detn. of Cd, Cu, Fe(*III*), Pb, V(*V*), Zn; redox indicator

**Physical Description:** Needles (petrol)

**Melting Point:** Mp 102°

**Boiling Point:** Bp<sub>12</sub> 238°

>>Derivative: Me ether, hydrochloride

**CAS Registry Number:** 3566-44-7

**Melting Point:** Mp 245 dec.°

**Aldrich:** 21702-6

**Sigma:** A0647

**Other:** PB M09180

>>Derivative: Et ether

**Synonym(s):** *N*-(4-Ethoxyphenyl)-1,4-benzenediamine. 4-Amino-4'-ethoxydiphenylamine

**CAS Registry Number:** 60457-49-0

**Molecular Formula:** C<sub>14</sub>H<sub>16</sub>N<sub>2</sub>O

**Molecular Weight:** 228.293

**Accurate Mass:** 228.126263

**Percentage Composition:** C 73.66%; H 7.06%; N 12.27%; O 7.01%

**Physical Description:** Needles (petrol)

**Melting Point:** Mp 98-99°

**References:**

Jacobson, P. *et al.*, *Ber.*, 1893, **26**, 693

Ullmann, F. *et al.*, *Ber.*, 1909, **42**, 1080

Willstätter, R. *et al.*, *Ber.*, 1909, **42**, 4139

Erdey, L. *et al.*, *Fresenius' Z. Anal. Chem.*, 1953, **137**, 140, (*use*)

Flaschka, H., *Mikrochim. Acta*, 1954, 361, (*detn, Fe*)

Wehber, P., *Mikrochim. Acta*, 1955, 927, (*detn, Cu*)

Erdey, L. *et al.*, *Anal. Chim. Acta*, 1957, **17**, 458, (*detn, Cd, Pb, Zn*)

Jach, Z. *et al.*, *Fresenius' Z. Anal. Chem.*, 1957, **154**, 185, (*use*)

Nakasaka, N. *et al.*, *Anal. Chim. Acta*, 1966, **36**, 422, (*detn, Fe*)

Tanaka, M. *et al.*, *Anal. Chim. Acta*, 1966, **36**, 515, (*detn, V*)

Bishop, E., *Indicators*, Pergamon, Oxford, 1972