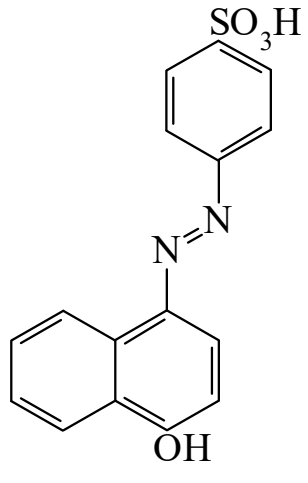
>>**Entry Name: Orange I**

Synonym(s): 4-[(4-Hydroxy-1-naphthalenyl)azo]benzenesulfonic acid, $_{9Cl}$. 4-(4-Sulfophenylazo)-1-naphthol. C.I. Acid Orange 20. α-Naphthol orange. Tropaeolin 000. C.I. 14600



CAS Registry Number: 523-44-4

Molecular Formula: $C_{16}H_{12}N_2O_4S$
Molecular Weight: 328.348
Accurate Mass: 328.051778
Percentage Composition: C 58.53%; H 3.68%; N 8.53%; O 19.49%; S 9.77%

Use/Importance: Dye. Used as acid-base indicator (pH range: 7.6-8.9)
Physical Description: Reddish-brown powder giving orange soln. (Na salt)
Solubility: Na salt sol. H_2O; sl. sol. EtOH; insol. common org. solvs.
Other Data: Banned by the FDA for food use

References:

Whitmore, W.F. *et al.*, *J.A.C.S.*, 1937, **59**, 1501
Fierz-David, H.E. *et al.*, *Helv. Chim. Acta*, 1946, **29**, 1718
Colour Index, 3rd Ed., 1971, **4**, 4065, *(rev)*
IARC Monog., 1975, **8**, 173; *Suppl.* 7, 69, *(rev, tox)*
Holzbecher, Z.*, Handbook of Organic Reagents in Inorganic Analysis*, Horwood, Chichester, 1976, *(use, ind)*
Lewis, R.J.*, Sax's Dangerous Properties of Industrial Materials, 8th edn., Van Nostrand Reinhold*, 1992, FAG010