SUNSET YELLOW FCF

Prepared at the 28th JECFA (1984), published in FNP 31/1 (1984) and in FNP 52 (1992). Metals and arsenic specifications revised at the 59th JECFA (2002). An ADI of 0-2.5 mg/kg bw was established at the 26th JECFA (1982)

SYNONYMS CI Food Yellow 3, FD&C Yellow No. 6, Crelborange S, CI (1975) No. 15985, INS No. 110

DEFINITION Consists essentially of disodium 6-hydroxy-5-(4-sulfonatophenylazo)-2-naphthalene-6-sulfonate and subsidiary colouring matters together with sodium chloride and/or sodium sulfate as the principal uncoloured components.

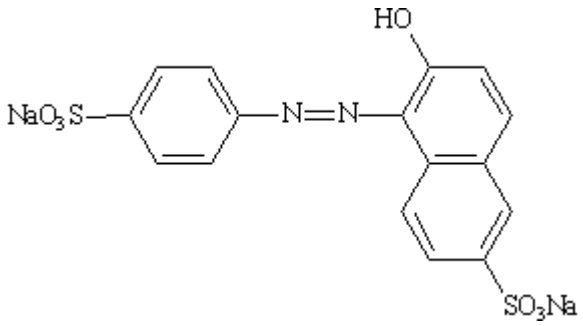
May be converted to the corresponding aluminium lake in which case only the *General Specifications for Aluminium Lakes of Colouring Matters* apply.

Chemical names Disodium 6-hydroxy-5-(4-sulfonatophenylazo)-2-naphthalene-sulfonate

C.A.S. number 2783-94-0

Chemical formula $C_{16}H_{10}N_2Na_2O_7S_2$

Structural formula



Formula weight 452.38

Assay Not less than 85% total colouring matters

DESCRIPTION Orange-red powder or granules

FUNCTIONAL USES Colour

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4) Soluble in water; sparingly soluble in ethanol

Identification of colouring matters (Vol. 4) Passes test

PURITY

Loss on drying at 135º (Vol. 4)	Not more than 15% together with chloride and sulfate calculated as sodium salts
Water insoluble matter (Vol. 4)	Not more than 0.2%
Lead (Vol. 4)	Not more than 2 mg/kg Determine using an atomic absorption technique appropriate to the specified level. The selection of sample size and method of sample preparation may be based on the principles of the method described in Volume 4, "Instrumental Methods."
Subsidiary colouring matters (Vol. 4)	Not more than 5% Not more than 2% shall be colours other than trisodium 2-hydroxy-1-(4-sulfonatophenylazo)naphthalene-3,6-disulfonate Use the following conditions: Developing solvent: No. 4 Height of ascent of solvent front: approximately 17 cm
Organic compounds other than colouring matters (Vol. 4)	Not more than 0.5%, sum of 4-amino-1-benzenesulfonic acid, 3-hydroxy-2,7-naphthalenedisulfonic acid, 6-hydroxy-2-naphthalenesulfonic acid, 7-hydroxy-1,3-naphthalenedisulfonic acid, 4,4'-diazoaminodibenzenesulfonic acid, 6,6'-oxydi-2-naphthalenesulfonic acid Use HPLC under the following conditions: HPLC elution gradient: 2 to 100% at 4% per min (linear) followed by elution at 100%.
Unsulfonated primary aromatic amines (Vol. 4)	Not more than 0.01% calculated as aniline
Ether extractable matter (Vol. 4)	Not more than 0.2%
METHOD OF ASSAY	Proceed as directed under *Total Content by Titration with Titanous Chloride* (see Volume 4), using the following: Weight of sample: 0.5-0.6 g Buffer: 10 g sodium citrate Weight (D) of colouring matters equivalent to 1.00 ml of 0.1 N $TiCl_3$: 11.31 mg