BRILLIANT BLUE 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 0-12.5 mg/kg bw was established at the 13th JECFA (1969).

SYNONYMS CI Food Blue 2, FD&C Blue No.1, CI (1975) No. 42900, INS No. 133

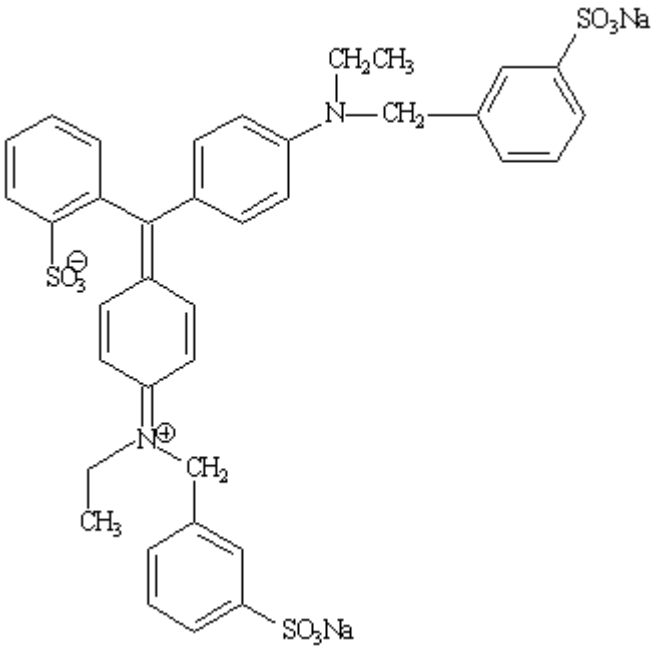
DEFINITION Consists essentially of Disodium 3-[N-ethyl-N-[4-[[4-[N-ethyl-N-(3-sulfonatobenzyl)-amino] phenyl] (2-sulfonatophenyl)methylene]-2,5-cyclohexadiene-1-ylidene] ammoniomethyl] benzenesulfonate and its isomers and subsidiary colouring matters together with sodium chloride and/or sodium sulfate 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 3-[N-ethyl-N-[4-[[4-[N-ethyl-N-(3-sulfonatobenzyl)-amino]phenyl](2-sulfonatophenyl)methylene]-2,5-cyclohexa-diene-1-ylidene]ammoniomethyl]-benzenesulfonate;
Disodium I-[4-(N-ethyl-3-sulfonatobenzylamino)phenyl]-I- [4-(N-ethyl-3-sulfonatobenzyliminio)cyclohexa-2,5-dienyli-dene]toluene-2-sulfonate (an alternative chemical name)

C.A.S. number 3844-45-9

Chemical formula $C_{37}H_{34}N_2Na_2O_9S_3$

Structural formula



Formula weight 792.86

Assay	Not less than 85% total colouring matter

DESCRIPTION Blue powder or granules

FUNCTIONAL USES Colour

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4)	Soluble in water; slightly soluble in ethanol
Identification of colouring matters (Vol. 4)	Passes test

PURITY

Loss on drying (Vol. 4)	Not more than 15% at 135° 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 2mg/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.”
Chromium (Vol. 4)	Not more than 50 mg/kg
Subsidiary colouring matters (Vol. 4)	Not more than 6% Use the following conditions: Developing solvent: No. 4 Develop chromatogram for approximately 20 hours
Organic compounds other than colouring matters (Vol. 4)	Not more than 1.5%, sum of 2-, 3- and 4-formylbenzenesulfonic acids Not more tan 0.3% 3-[[N-ethyl-N-(4-sulfophenyl) amino] methyl] benzenesulfonic acid Proceed as directed under *Column Chromatography* The following absorptivities may be used: 3-formylbenzenesulfonic acid: 0.0495 mg/L/cm at 246 nm in dilute HCl 3-[[N-ethyl-N-(4-sulfophenyl)amino] methyl] benzenesulfonic acid: 0.078 mg/L/cm at 277 nm in dilute ammonia.
Leuco base (Vol. 4)	Not more than 5% Weigh accurately 120±5 mg of sample and proceed as directed under *Leuco Base in Sulfonated Triarylmethane Colours* Absorptivity (a) = 0.164 mg/L/cm at approximately 630 nm Ratio = 0.9706

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,* Volume 4, using the following: Weight of sample: 1.8 - 1.9 g Buffer: 15 g sodium hydrogen tartrate Weight (D) of colouring matters equivalent to 1.00 ml of 0.1 N $TiCl_3$: 39.65 mg