



# ACCEPTABLE DYES LIST DIAPERS

Dye/pigment	Color index	Synonym(s)	EWG restrictions
Algal Carotenes	75130	CI Food Orange 5	No more than Lead 2 ppm; No more than natural tocopherols in edible oil 0.3% 1 ; No more than loss of weight on drying 0.2%, residue on ignition 0.2%, Arsenic 3 ppm 4
Alkali extracted Annatto	75120	CI Natural Orange 4	No more than Arsenic 3 ppm, Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm 3
Allura Red AC	16035	CI Food Red 17; FD&C Red No. 40	No more than Arsenic 3 ppm, Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm; No more than water insoluble matter 0.2%, subsidiary coloring matters 3.0%, 6-hydroxy-2- naphthalene sulfonic acid, sodium salt 0.3%, 4-amino-5-methoxy-2-methyl- benzene sulfonic acid 0.2%, 6,6-oxybis (2-naphthalene sulfonic acid) disodium salt 1.0%, unsulfonated primary aromatic amines 0.01% (calculated as aniline), ether extractable matter 0.2 % (from a solution of pH 7) 3 ; No more than sum of volatile matter (at 135 °C.) and chlorides and sulfates (calculated as sodium salts) 14%, higher sulfonated subsidiary colors (as sodium salts) 1%, lower sulfonated subsidiary colors (as sodium salts) 1%, disodium salt of 6-hydroxy-5-[(2-methoxy-5-methyl-4-sulfophenyl) azo] -8-(2-methoxy-5-methyl-4-sulfophenoxy)-2-naphthalenesulfonic acid 1%; No less than total color 85% 5
Aluminum	77000	CI Pigment Metal	No more than Arsenic 3 ppm, Lead 10 ppm, Mercury 1 ppm, Cadmium 1 ppm; No more than loss on drying 0.5 % (105 °C, to constant weight) 3; Not less than aluminum 99% 4
Ammonia caramel		Caramel III	No more than Arsenic 1 ppm, Lead 2 ppm, Cadmium 1 ppm, 4-methylimidazole 200 ppm, 2-acetyl-4-tetrahydroxy-butylimidazole 10 ppm; No more than color bound by DEAE cellulose 50%, ammoniacal nitrogen 0.3%, total sulfur 0.2%; Color bound by phosphoryl cellulose more than 50%; Absorbance ratio of color bound by phosphoryl cellulose between 13 and 35; Color intensity between 0.08 and 0.36; Total nitrogen between 0.7% and 3.3% 3; No more than Mercury 0.1 ppm 4
Ammonium manganese(3+) diphosphate	77742	Manganese violet	No less than Ash (at 600 °C) 81%; No more than volatile matter (at 135 °C for 3 hours) 1%, water soluble substances 6 %, total color (based on Mn content in "as is" sample) 93 % Lead 20 ppm, Arsenic 3 ppm, Mercury 1 ppm; pH of filtrate of 10 grams color additive (shaken occasionally for 2 hours with 100 milliliters of freshly boiled distilled water) between 4.7 and 2.5 4
Anthocyanin (from grape extract)			No more than Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm, Sulfur dioxide 1,000 ppm per percent pigment, Methanol 50 ppm, Ethanol 200 ppm 3; No more than Arsenic 1 ppm; No more pesticide residues than permitted in or on grapes by regulations promulgated under section 408 of the Federal Food, Drug, and Cosmetic Act. 4
Beta-apo-8'-carotenal (C 30)	40820	CI Food Orange 6	No more than Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm; No more than sulfated ash 0.1%, subsidiary coloring matters 3.0% of total coloring matter (carotenoids other than β- apo-8'-carotenal) 3; No more than Arsenic 1 ppm, residue on ignition 0.2%, loss of weight on drying 0.2% 4
Beta-Carotene	40800	CI Food Orange 5	No more than Lead 2 ppm; No more than sulfated ash 0.1%, subsidiary coloring matters 3% of total coloring matters (carotenoids other than beta-carotene) 3; No more than Arsenic 3 ppm, residue on ignition 0.2%, loss of weight on drying 0.2% 4
Beta-Carotene from Blakeslea trispora	40800	CI Food Orange 5	No more than Lead 2 ppm; No more than 0.8% singly or in combination of the following: Ethyl acetate, Ethanol; No more than Isobutyl acetate 1.0%, Propan-2-ol 0.2%, subsidiary coloring matters 3% of total coloring matters (carotenoids other than beta-carotene), sulfated ash 0.2% 1; No more than Arsenic 3 ppm, residue on ignition 0.2%, loss of weight on drying 0.2% 4
Calcium carbonate	77220	CI Pigment White 18; Chalk	No more than Arsenic 3 ppm, Lead 3 ppm, Cadmium 1 ppm, Fluoride 50 ppm; No more than loss on drying 2.0 % (200 °C, 4 hours), Acid-insoluble substances 0.2%, Magnesium and alkali salts 1%; No more than 100 ppm singly or in combination of the following: Antimony, Copper, Chromium, Zinc, Barium 3
Canthaxanthin	40850	CI Food Orange 8	No more than Arsenic 3 ppm, Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm; No more than sulfated ash 0.1%, subsidiary coloring matters 5.0% of total coloring matter (carotenoids other than canthaxanthin) 3; No more than loss on drying 0.2%, residue on ignition 0.2% 4
Carminic acid, Carmines	75470	CI Natural Red 4	No more than Arsenic 1 ppm, Lead 1.5 ppm, Mercury 0.5 ppm, Cadmium 0.5 ppm, Ethanol 150 ppm, Methanol 50 ppm; Matter insoluble in dilute ammonia: no more than carmine 1%; No more than 4-aminocarminic acid 3 % relative to carminic acid; Total ash: no more than Carminic acid 5%, Carmine 12%; Protein (N x 6.25): Carminic acid 2.2%, Carmine 25% 3; No more than volatile matter 20% (at 135 °C. for 3 hours) 4
Caustic sulphite caramel		Caramel II	No more than Arsenic 1 ppm, Lead 2 ppm, Cadmium 1 ppm; More than color bound by DEAE cellulose 50%, sulfur bound by DEAE cellulose 40%; No more than total nitrogen 0.3%, sulfur dioxide 0.2%; Absorbance ratio of color bound by DEAE cellulose between 19 and 34; Color intensity between 0.05 and 0.13; Total sulfur between 0.3% and 3.5%; Absorbance ratio (A280/560) greater than 50 3; No more than Mercury 0.1 ppm 4
Copper complexes of chlorophyllins	75815	Sodium Copper Chlorophyllin; Potassium Copper Chlorophyllin; CI Natural Green 5	No more than Arsenic 3 ppm, Lead 5 ppm, Cadmium 1 ppm, Copper ions 200 ppm, Dichloromethane 10 ppm; No more than total copper pheophytins 8.0%; No more than 50 ppm singly or in combination of the following: Acetone, Methyl Ethyl ketone, Methanol, Ethanol, Propan-2-ol, Hexane 1; No more than Mercury 0.5 ppm, moisture 5%; Total copper between 4% and 6%; Ratio of absorbance at 405 nanometers (nm) to absorbance at 630 nm between 3.4 and 3.9; No less than total copper chlorophyllins 95% (dried at 100 °C for 1 hour) 4
Curcumin	75300	CI Natural Yellow 3; Turmeric Yellow; Diferoyl Methane	No more than Arsenic 3 ppm, Lead 10 ppm, Mercury 1 ppm, Cadmium 1 ppm, Dichloromethane 10 ppm; No more than 50 ppm singly or in combination of the following: Ethylacetate, Acetone, n-butanol, Methanol, Ethanol, Hexane, Propan-2-ol 3
Disodium 2,2'-(9,10-dioxoanthracene-1,4-diylidimino)bis(5-methylsulphonate)	61570	D&C Green No. 5	No more than sum of volatile matter (at 135 °C) and chlorides and sulfates (calculated as sodium salts) 20%, water-insoluble matter 0.2%, 1,4-Dihydroxyanthraquinone 2%, total sulfonated toluidines 0.2%, p-Toluidine 0.0015%, sum of monosulfonated D&C Green No. 6 and Ext. D&C Violet No. 2 3%, Lead 20 ppm, Arsenic 3 ppm, Mercury 1 ppm; No less than total color 80% 5
Ferric Ammonium Ferrocyanide	77510		No detectable cyanide ions 2; No more than oxalic acid or its salts 0.1%, water soluble matter 3 %, total iron (as Fe corrected for volatile matter) between 33% and 39%, volatile matter 4 %; No more Lead 20 ppm, Arsenic 3 ppm, Nickel 200 ppm, Cobalt 200 ppm, Mercury 1 ppm 4
Fruit juice			--
Indigotine, Indigo carmine	73015	CI Food Blue 1, FD&C Blue No. 2	No more than Arsenic 3 ppm, Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm; No more than water insoluble matter 0.2%, subsidiary coloring matters 1.0% (excluding disodium 3,3'-dioxo-2,2'-bi-indolyldiene-5,7'-disulfonate), unsulfonated primary aromatic amines 0.01% (calculated as aniline), ether extractable matter 0.2 % (from a solution of pH 7); Total no more than 0.5% of the following: Isatin-5-sulfonic acid, 5-sulfoanthranilic acid, Anthranilic acid 3; No more than sum of volatile matter (at 135 °C) and chlorides and sulfates (calculated as sodium salts) 15%, disodium salt of 2-(1,3-dihydro-3-oxo-7-sulfo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-1H-indole-5-sulfonic acid 18%, sodium salt of 2-(1,3-dihydro-3-oxo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-1H-indole-5-sulfonic acid 2%; No less than total color 85% 5
Iron oxide	77489		No more than Arsenic 3 ppm, Lead 10 ppm, Mercury 3 ppm 4

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Iron oxides and hydroxides	77492, 77491, 77499	Iron Oxide Yellow: CI Pigment Yellow 42 and 43; Iron Oxide Red: CI Pigment Red 101 and 102; Iron Oxide Black: CI Pigment Black 11	No more than Arsenic 3 ppm, Lead 10 ppm, Mercury 1 ppm, Cadmium 1 ppm, Chromium 100 ppm, Copper 50 ppm, Nickel 200 ppm, Zinc 100 ppm (all by total dissolution); No more than water soluble matter 1.0% 3
Lazurite	77007		No more than Lead 20 ppm, Arsenic 3 ppm, Mercury 1 ppm 4
Litholrubine BK	15850:1	CI Pigment Red 57; Rubinpigment; Carmine 6B; D&C Red 7	No more than Arsenic 3 ppm, Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm; No more than subsidiary coloring matters 0.5%, 2-Amino-5-methylbenzenesulfonic acid, calcium salt 0.2%, 3-hydroxy-2-naphthalenecarboxylic acid, calcium salt 0.4%, unsulfonated primary aromatic amines 0.01% (calculated as aniline), ether extractable matter 0.2 % (from a solution of pH 7) 3 ; No more than sum of volatile matter (at 135 °C) and chlorides and sulfates (calculated as sodium salts) 10%, 1-[(4-methylphenyl)azo]-2-naphthalenol 0.015%, 3-Hydroxy-4-[(4-methylphenyl)azo]-2-naphthalenecarboxylic acid, calcium salt 0.5%, p-Toluidine, not more than 15 ppm; No less than total color 90% 5
Lycopene from red tomatoes	75125	Natural Yellow 27	No more than Arsenic 3 ppm, Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm; No more than 50 ppm singly or in combination of the following: Acetone, Ethylacetate, Methanol, Propan-2-ol, Hexane, Ethanol; No more than sulfated ash 1% 1 ; No less than lycopene oleoresin 5.5%, lycopene concentrate 60% 4
Oil extracted Annatto	75120	CI Natural Orange 4	No more than Arsenic 3 ppm, Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm 3
Paprika extract, capsanthin, capsorubin		Paprika Oleoresin	No more than Arsenic 3 ppm, Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm, Capsaicin 250 ppm, Dichloromethane 10 ppm; No more than 50 ppm singly or in combination of the following: Ethyl Acetate, Acetone, Methanol, Ethanol, Propan-2-ol, Hexane 3
Plain caramel		Caustic caramel; Caramel I	No more than Arsenic 1 ppm, Lead 2 ppm, Cadmium 1 ppm; No more than color bound by DEAE cellulose 50%, color bound by phosphoryl cellulose 50%, total nitrogen 0.1%, total sulfur 0.2%; Color intensity between 0.01 and 0.12 3; No more than Mercury 0.1 ppm 4
Plant Carotene	75130	CI Food Orange 5	No more than Lead 2 ppm, Dichloromethane 10 ppm; No more than 50 ppm singly or in combination of the following: Acetone, Methyl Ethyl ketone, Methanol, Propan-2-ol, Hexane, Ethanol 3; No more than loss of weight on drying 0.2%, residue on ignition 0.2%, Arsenic 3 ppm 4
Riboflavin		Lactoflavin	No more than Arsenic 3 ppm, Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm, Primary aromatic amines 100 ppm (calculated as aniline); No more than loss on drying 1.5% (105°C, 4 hours), sulfated ash 0.1% 3 ; No more than 9.3% residue on ignition 4
Riboflavin-5'-phosphate		Riboflavin-5'-phosphate sodium	No more than Arsenic 3 ppm, Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm, primary aromatic amines 70 ppm (calculated as aniline); No more than sulfated ash 25%, inorganic phosphate 1.0% (calculated as PO4 on the anhydrous basis), riboflavin (free) subsidiary coloring matters 6%, riboflavine diphosphate subsidiary coloring matters 6% 1; No more loss on drying 7%, residue on ignition 25%; pH of a 1 in 100 solution between 5.0 and 6.54
Saffron			--
Solvent-extracted Bixin and Norbixin	75120	CI Natural Orange 4	No more than Arsenic 3 ppm, Lead 2 ppm, Mercury 1 ppm, Cadmium 1 ppm, Dichloromethane 10 ppm; No more than 50 ppm singly or in combination of the following: Acetone, Methanol, Hexane 1
Spirulina extract			No more than Lead 2 ppm, Arsenic 2 ppm, Mercury 1 ppm; Negative for microcystin toxin 4
Sulphite ammonia caramel		Caramel IV	No more than Arsenic 1 ppm, Lead 2 ppm, Cadmium 1 ppm, 4-methylimidazole 250 ppm; Color bound by DEAE cellulose more than 50%; Color intensity between 0.10 and 0.60; No more than Ammoniacal nitrogen 0.6%, Sulfur dioxide 0.2%; Total nitrogen between 0.3% and 1.7%; Total sulfur between 0.8% and 2.5%; Nitrogen/sulfur ratio of alcohol precipitate between 0.7 and 2.7; Absorbance ratio of alcohol precipitate between 8 to 14; Absorbance ratio (A 280/560) no more than 50 3 ; No more than Mercury 0.1 ppm 4
Titanium dioxide	77891	CI Pigment White 6	No more than Arsenic 1 ppm, Lead 10 ppm, Mercury 1 ppm, Cadmium 1 ppm, Antimony 2 ppm (after an extraction with 0.5 N HCl for all metals listed); No more than loss on drying 0.5 % (105 °C, 3 hours), aluminium oxide and/or silicon dioxide 2.0% 3 ; No more than loss on ignition 0.5% (at 800 °C. after drying for 3 hours at 105 °C), water soluble substances 0.3%, acid soluble substances 0.5%; No less than TiO2 99.0% (after drying for 3 hours at 105 °C) 4
Vegetable juice			--
Zinc oxide	77947		No less than Zinc oxide 99 %; No more than loss on ignition 1% (at 800 °C), Cadmium 15 ppm, Mercury 1 ppm, Arsenic 3 ppm, Lead 20 ppm 4
<p>(1) <a href="#">Commission Regulation (EU) No 231/2012 of 9 March 2012 laying down specifications for food additives listed in Annex II and III to Regulation (EC) No 1825/2003</a></p> <p>(2) <a href="#">Regulation (EC) No 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products</a></p> <p>(3) <a href="#">Restrictions from both Commission Regulation (EU) No 231/2012 and Regulation (EC) No 1223/2009</a></p> <p>(4) <a href="#">CFR Title 21 - Food and Drugs: Part 73</a></p> <p>(5) <a href="#">CFR Title 21 - Food and Drugs: Part 74</a></p>			
Key:			
-- : Unrestricted			