

Risk Factors of Food Additives

Green - nutritious; **Yellow** - acceptable; **Red** - unacceptable

Food Additive or Ingredient	DDRF risk factor	Link
Agar,	3	http://en.wikipedia.org/wiki/Agar
Agar-agar	3	http://en.wikipedia.org/wiki/Agar
Acacia gum	3	http://en.wikipedia.org/wiki/Gum_arabic
Acerola extract	2	http://en.wikipedia.org/wiki/Malpighia_emarginata
Acesulfame potassium	8	http://en.wikipedia.org/wiki/Acesulfame_potassium
Active Cultures	2	http://www.aboutyogurt.com/index.asp?bid=28
Adipic acid	5	http://en.wikipedia.org/wiki/Adipic_acid
Alkalized cocoa - see also Cocoa processed	3	http://en.wikipedia.org/wiki/Dutch_process_chocolate
Ammonium bicarbonate	3	http://en.wikipedia.org/wiki/Ammonium_bicarbonate
Annatto Color	4	http://en.wikipedia.org/wiki/Annatto
Apples	2	http://en.wikipedia.org/wiki/Apple
Artificial Flavor	6	http://en.wikipedia.org/wiki/Flavor
Ascorbic Acid	3	http://en.wikipedia.org/wiki/Ascorbic_acid
Aspartame	8	http://en.wikipedia.org/wiki/Aspartame_controversy
Autolyzed yeast	4	http://en.wikipedia.org/wiki/Yeast_extract
Baking Soda	3	http://en.wikipedia.org/wiki/Sodium_bicarbonate
Banana Puree	2	http://en.wikipedia.org/wiki/Banana
Beeswax	3	http://en.wikipedia.org/wiki/Beeswax
Benzoic acid	6	http://en.wikipedia.org/wiki/Benzoic_acid
Beta carotene	3	http://en.wikipedia.org/wiki/Beta-Carotene
BHT	6	http://en.wikipedia.org/wiki/Butylated_hydroxytoluene
Biotin	2	http://en.wikipedia.org/wiki/Biotin
Black pepper	3	http://en.wikipedia.org/wiki/Black_pepper

Blackstrap Molasses	4	http://en.wikipedia.org/wiki/Molasses
Blueberries	2	http://en.wikipedia.org/wiki/Blueberry
Blue 1	10	http://en.wikipedia.org/wiki/Brilliant_Blue_FCF
Blue 1 Lake	10	http://en.wikipedia.org/wiki/Brilliant_Blue_FCF
Blue 2	8	http://en.wikipedia.org/wiki/Indigo_dye
Blue 2 Lake	8	http://en.wikipedia.org/wiki/Indigo_dye
Brominated vegetable oil	15	http://en.wikipedia.org/wiki/Brominated_vegetable_oil
Brown rice syrup	4	http://en.wikipedia.org/wiki/Brown_rice_syrup
Buttermilk Solids	2	http://en.wikipedia.org/wiki/Buttermilk
Caffeine	6	http://en.wikipedia.org/wiki/Caffeine
Calcium chloride	3	http://en.wikipedia.org/wiki/Calcium_chloride
Calcium disodium EDTA	6	http://en.wikipedia.org/wiki/Ethylenediaminetetraacetic_acid
Calcium Lactate	2	http://en.wikipedia.org/wiki/Calcium_lactate
Calcium pantothenate (Vitamin B 5)	2	http://en.wikipedia.org/wiki/Pantothenic_acid
Canola oil	3	http://en.wikipedia.org/wiki/Canola
Cane Sugar	4	http://en.wikipedia.org/wiki/Sugarcane
Caramel color	7	http://en.wikipedia.org/wiki/Caramel_color
Carbonated Water	2	http://en.wikipedia.org/wiki/Carbonated_water
Carmine color	5	http://en.wikipedia.org/wiki/Carmine
Carnauba wax	3	http://en.wikipedia.org/wiki/Carnauba_wax
Carotene	3	http://en.wikipedia.org/wiki/Carotene
Carrageenan	3	http://en.wikipedia.org/wiki/Carrageenan
Cellulose gum	3	http://en.wikipedia.org/wiki/Carboxymethyl_cellulose
Cheddar Cheese	2	http://en.wikipedia.org/wiki/Cheddar_cheese
Cherries	2	http://en.wikipedia.org/wiki/Cherry
Chocolate liquor	3	http://en.wikipedia.org/wiki/Chocolate_liquor
Chromium picolinate	6	http://en.wikipedia.org/wiki/Chromium(III)_picolinate
Cinnamon	4	http://en.wikipedia.org/wiki/Cinnamon

Citric acid	4	http://en.wikipedia.org/wiki/Citric_acid
Cocoa butter	3	http://en.wikipedia.org/wiki/Cocoa_butter
Cocoa processed	3	http://en.wikipedia.org/wiki/Cocoa_bean
Confectioner's Glaze	5	http://en.wikipedia.org/wiki/Pharmaceutical_glaze
Corn Flour	2	http://en.wikipedia.org/wiki/Cornmeal
Corn oil	3	http://en.wikipedia.org/wiki/Corn_oil
Corn syrup	4	http://en.wikipedia.org/wiki/Corn_syrup
Corn Syrup Solids	4	http://wiki.answers.com/Q/What_are_corn_syrup_solids
Cornstarch	3	http://en.wikipedia.org/wiki/Corn_starch
Cottonseed oil	4	http://en.wikipedia.org/wiki/Cottonseed_oil
Cucumbers	2	http://en.wikipedia.org/wiki/Cucumber
Cultured Grade A Milk	2	http://en.wikipedia.org/wiki/Milk
Cultured Organic Whole Milk	2	http://en.wikipedia.org/wiki/Milk
Cyanocobalamin - see also Viramin B 12	2	http://en.wikipedia.org/wiki/Cyanocobalamin
DATEM	3	http://en.wikipedia.org/wiki/DATEM
Dextrin	3	http://en.wikipedia.org/wiki/Dextrin
Dextrose - see glucose	3	http://en.wikipedia.org/wiki/Glucose
Dipotassium phosphate	3	http://en.wikipedia.org/wiki/Dipotassium_phosphate
Disodium inosinate	3	http://en.wikipedia.org/wiki/Disodium_inosinate
Disodium phosphate	3	http://en.wikipedia.org/wiki/Disodium_phosphate
EDTA	6	http://en.wikipedia.org/wiki/Ethylenediaminetetraacetic_acid
Eggs	2	http://en.wikipedia.org/wiki/Egg_%28food%29
Emulsifier	6	http://en.wikipedia.org/wiki/Emulsion
Enriched Bleached Wheat Flour	3	http://www.youtube.com/watch?v=h4AHe9C_alA
Enriched Flour	3	http://www.youtube.com/watch?v=h4AHe9C_alA
Erythorbic Acid	4	http://en.wikipedia.org/wiki/Erythorbic_acid
Erythritol	3	http://en.wikipedia.org/wiki/Erythritol
Ester gum	5	http://en.wikipedia.org/wiki/Glycerol_ester_of_wood_rosin

Evaporated Cane juice	4	http://en.wikipedia.org/wiki/Sugarcane_juice
Ferric orthophosphate	3	http://en.wikipedia.org/wiki/Iron(III)_phosphate
Fish Oil	3	http://en.wikipedia.org/wiki/Fish_oil
Food-starch modified	3	http://en.wikipedia.org/wiki/Modified_starch
Fractionated palm kernel oil	3	http://www.fitsugar.com/Fractionated-Palm-Kernel-Oil-Explained-1500333
Fructose	6	http://en.wikipedia.org/wiki/Fructose
Fruit and vegetable juice	2	http://en.wikipedia.org/wiki/Vegetable_juice
Fumaric acid	4	http://en.wikipedia.org/wiki/Fumaric_acid
Garcinia cambogia rind extract	4	http://en.wikipedia.org/wiki/Gambooge
Garlic Powder	2	http://en.wikipedia.org/wiki/Garlic
Gellan Gum	3	http://en.wikipedia.org/wiki/Gellan_gum
Gelatin	3	http://en.wikipedia.org/wiki/Gelatin
Ginkgo biloba leaf extract	3	http://en.wikipedia.org/wiki/Ginkgo_biloba
Glycerin	3	http://en.wikipedia.org/wiki/Glycerol
Glycerol ester of rosin	5	http://en.wikipedia.org/wiki/Glycerol_ester_of_wood_rosin
Glyceryl monostearate	3	http://en.wikipedia.org/wiki/Glycerol_monostearate
Grape juice concentrate	2	http://en.wikipedia.org/wiki/Grape_juice
Green 3	10	http://en.wikipedia.org/wiki/Fast_Green_FCF
Ground vanilla beans	2	http://en.wikipedia.org/wiki/Vanilla
Gum acacia	3	http://en.wikipedia.org/wiki/Gum_arabic
Guar gum	3	http://en.wikipedia.org/wiki/Guar_gum
Guarana extract	4	http://en.wikipedia.org/wiki/Guarana
Gum Arabic	3	http://en.wikipedia.org/wiki/Gum_arabic
Gum Tragacanth	4	http://en.wikipedia.org/wiki/Tragacanth
HFCS	6	http://en.wikipedia.org/wiki/High-fructose_corn_syrup
High fructose corn syrup	6	http://en.wikipedia.org/wiki/High-fructose_corn_syrup
High Oleic Canola Oil	3	http://answers.yahoo.com/question/index?qid=20100710105406AAl4oY
Honey	3	http://en.wikipedia.org/wiki/Honey

Hydrogenated Palm Kernel Oil	4	http://en.wikipedia.org/wiki/Palm_oil
Inositol	3	http://en.wikipedia.org/wiki/Inositol
Inverted sugar	4	http://en.wikipedia.org/wiki/Inverted_sugar_syrup
Isomalt	4	http://en.wikipedia.org/wiki/Isomalt
Kosher Gelatin	3	http://en.wikipedia.org/wiki/Gelatin
Lactic acid	3	http://en.wikipedia.org/wiki/Lactic_acid
Lactose	3	http://en.wikipedia.org/wiki/Lactose
Leavening	9	http://en.wikipedia.org/wiki/Leavening_agent
L-Carnitine	3	http://en.wikipedia.org/wiki/Carnitine
L-Cysteine Hydrochloride	3	http://en.wikipedia.org/wiki/Cysteine
Locust Bean	3	http://en.wikipedia.org/wiki/Locust_bean_gum
Locust Bean gum	4	http://en.wikipedia.org/wiki/Locust_bean_gum
Magnesium oxide	3	http://en.wikipedia.org/wiki/Magnesium_oxide
Magnesium stearate	3	http://en.wikipedia.org/wiki/Magnesium_stearate
Magnesium carbonate	3	http://en.wikipedia.org/wiki/Magnesium_carbonate
Malic acid	4	http://en.wikipedia.org/wiki/Malic_acid
Malt syrup	3	http://en.wikipedia.org/wiki/Barley_malt_syrup
Maltitol	4	http://en.wikipedia.org/wiki/Maltitol
Maltodextrin	3	http://en.wikipedia.org/wiki/Maltodextrin
Maple syrup	3	http://en.wikipedia.org/wiki/Maple_syrup
Margarine	4	http://en.wikipedia.org/wiki/Margarine
Menthol	3	http://en.wikipedia.org/wiki/Menthol
Methyl anthranilate	4	http://en.wikipedia.org/wiki/Methyl_anthranilate
Milk thistle extract	3	http://en.wikipedia.org/wiki/Milk_thistle
Methyl cellulose	4	http://en.wikipedia.org/wiki/Methyl_cellulose
Mineral Oil	6	http://en.wikipedia.org/wiki/Mineral_oil
Modified Corn Starch	4	http://en.wikipedia.org/wiki/Modified_starch
Modified Food Starch	4	http://en.wikipedia.org/wiki/Modified_starch

Molasses	4	http://en.wikipedia.org/wiki/Molasses
Mono- and Diglycerides	3	http://en.wikipedia.org/wiki/Diglyceride
Mono calcium phosphate	4	http://en.wikipedia.org/wiki/Monocalcium_phosphate
Monopotassium phosphate	3	http://en.wikipedia.org/wiki/Monocalcium_phosphate
Monosodium glutamate	3	http://en.wikipedia.org/wiki/Monosodium_glutamate
Natural and artificial flavor	6	http://en.wikipedia.org/wiki/Flavor
Natural Flavor	4	http://en.wikipedia.org/wiki/Flavor
Non-fat milk	2	http://en.wikipedia.org/wiki/Milk
Nonfat milk solids	2	http://www.innovatewithdairy.com/Pages/Whatdoesthetermilk-solids-nonfatmean.aspx
Oligofructose	4	http://en.wikipedia.org/wiki/Fructooligosaccharide
Onion powder	2	http://en.wikipedia.org/wiki/Onion
Organic Banana Puree	2	http://en.wikipedia.org/wiki/Banana
Organic Beet Juice	3	http://en.wikipedia.org/wiki/Beet
Organic Flaxseed Concentrate	3	http://en.wikipedia.org/wiki/Flax
Organic Oat Bran	2	http://en.wikipedia.org/wiki/Bran
Organic Oat Flour	2	http://en.wikipedia.org/wiki/Oat
Organic Rice Flour	2	http://en.wikipedia.org/wiki/Rice_flour
Organic Strawberry Puree	2	http://en.wikipedia.org/wiki/Garden_strawberry
Organic Sugar	4	http://en.wikipedia.org/wiki/Sugar
Palm Oil	3	http://en.wikipedia.org/wiki/Palm_oil
Panax ginseng root extract	3	http://en.wikipedia.org/wiki/Ginseng
Partly hydrogenated soybean and cotton seed oil	4	http://en.wikipedia.org/wiki/Trans_fat
Pectin	3	http://en.wikipedia.org/wiki/Pectin
PGPR	6	http://en.wikipedia.org/wiki/Polyglycerol_polyricinoleate
Phosphoric acid	7	http://en.wikipedia.org/wiki/Phosphoric_acid
Polysorbate 60	7	http://en.wikipedia.org/wiki/Polysorbate
Polysorbate 80	7	http://en.wikipedia.org/wiki/Polysorbate
Potassium benzoate	6	http://en.wikipedia.org/wiki/Potassium_benzoate

Potassium citrate	3	http://en.wikipedia.org/wiki/Potassium_citrate
Potassium hexametaphosphate	4	http://en.wikipedia.org/wiki/Sodium_hexametaphosphate
Potassium phosphate	3	http://en.wikipedia.org/wiki/Potassium_phosphate
Potassium Sorbate	3	http://en.wikipedia.org/wiki/Potassium_sorbate
Propylene glycol monostearate	4	http://www.accessdata.fda.gov/scripts/fcn/fcnDetailNavigation.cfm?rpt=scogsListing&id=264
Purple carrot extract	4	http://en.wikipedia.org/wiki/Carrot
Purple sweet potato extractive	4	http://en.wikipedia.org/wiki/Sweet_potato
Pyridoxine - see Vitamin B6	2	http://en.wikipedia.org/wiki/Pyridoxine
Reb A (Stevia extract)	3	http://en.wikipedia.org/wiki/Stevia
Red 3	10	http://en.wikipedia.org/wiki/Erythrosine
Red 40	10	http://en.wikipedia.org/wiki/Allura_Red_AC
Red 40 Lake	10	http://en.wikipedia.org/wiki/Allura_Red_AC
Red and Green bell pepper powder	2	http://en.wikipedia.org/wiki/Bell_pepper
Reverse Osmosis water	1	http://en.wikipedia.org/wiki/Reverse_osmosis
Rice Flour	2	http://en.wikipedia.org/wiki/Rice_flour
Romano Cheese from Cow's milk	2	http://en.wikipedia.org/wiki/Romano_cheese
Salt	5	http://en.wikipedia.org/wiki/Salt
Sea salt	5	http://en.wikipedia.org/wiki/Sea_salt
Sodium Acid Pyrophosphate	4	http://en.wikipedia.org/wiki/Disodium_pyrophosphate
Sodium aluminum phosphate	4	http://en.wikipedia.org/wiki/Sodium_aluminium_phosphate
Sodium aluminum sulfate	4	http://en.wikipedia.org/wiki/Sodium_aluminium_sulfate
Sodium aluminosilicate	5	http://www.livestrong.com/article/272868-what-is-sodium-aluminosilicate/
Sodium Benzoate	6	http://en.wikipedia.org/wiki/Sodium_benzoate
Sodium Caseinate	2	http://en.wikipedia.org/wiki/Casein
Sodium Citrate	3	http://en.wikipedia.org/wiki/Trisodium_citrate
Sodium diacetate	3	http://en.wikipedia.org/wiki/Sodium_diacetate
Sodium erythorbate	3	http://en.wikipedia.org/wiki/Sodium_erythorbate
Sodium hexametaphosphate	3	http://en.wikipedia.org/wiki/Sodium_hexametaphosphate

Sodium lactate	3	http://en.wikipedia.org/wiki/Sodium_lactate
Sodium nitrite	8	http://en.wikipedia.org/wiki/Sodium_nitrite
Sodium propionate	4	http://en.wikipedia.org/wiki/Sodium_propionate
Sodium stearoyl lactylate	4	http://en.wikipedia.org/wiki/Sodium_stearoyl_lactylate
Sorbic acid	4	http://en.wikipedia.org/wiki/Sorbic_acid
Sorbitol	3	http://en.wikipedia.org/wiki/Sorbitol
Soybean Oil	3	http://en.wikipedia.org/wiki/Soybean_oil
Soy lecithin	3	http://en.wikipedia.org/wiki/Lecithin
Spices	3	http://en.wikipedia.org/wiki/Spice
Strawberries	2	http://en.wikipedia.org/wiki/Garden_strawberry
Sucralose	7	http://en.wikipedia.org/wiki/Sucralose
Sucrose	4	http://en.wikipedia.org/wiki/Sucrose
Sucrose acetate isobutyrate	4	http://en.wikipedia.org/wiki/Sucrose_acetate_isobutyrate
Sugar	4	http://en.wikipedia.org/wiki/Sugar
Sulfites	8	http://en.wikipedia.org/wiki/Sulfite
Sulfiting Agent	8	http://www.fmi.org/media/bg/?fuseaction=sulfites
Sulfur dioxide	8	http://en.wikipedia.org/wiki/Sulfur_dioxide
Tapioca	3	http://en.wikipedia.org/wiki/Tapioca
Tapioca dextrin	3	http://en.wikipedia.org/wiki/Tapioca
Tapioca starch	3	http://en.wikipedia.org/wiki/Tapioca
Taurine	3	http://en.wikipedia.org/wiki/Taurine
Tea	3	http://en.wikipedia.org/wiki/Tea
TBHQ	6	http://en.wikipedia.org/wiki/Tert-Butylhydroquinone
Titanium Dioxide	6	http://en.wikipedia.org/wiki/Titanium_dioxide
Tocopherol	2	http://en.wikipedia.org/wiki/Tocopherol
Tomato powder	2	http://en.wikipedia.org/wiki/Sun-dried_tomato
Trisodium phosphate	3	http://en.wikipedia.org/wiki/Trisodium_phosphate
Turmeric color	3	http://en.wikipedia.org/wiki/Turmeric

Unbleached Flour	2	http://www.livestrong.com/article/482413-is-unbleached-enriched-wheat-flour-good-for-you/
Vanilla extract	3	http://en.wikipedia.org/wiki/Vanilla
Vanillin	4	http://en.wikipedia.org/wiki/Vanillin
Vegetable oil	3	http://en.wikipedia.org/wiki/Vegetable_fats_and_oils
Vinegar	4	http://en.wikipedia.org/wiki/Vinegar
Vitamin A	2	http://en.wikipedia.org/wiki/Vitamin_A
Vitamin B12	2	http://en.wikipedia.org/wiki/Vitamin_B12
vitamin B3	2	http://en.wikipedia.org/wiki/Niacin
Vitamin B5	2	http://en.wikipedia.org/wiki/Pantothenic_acid
Vitamin B6	2	http://en.wikipedia.org/wiki/Vitamin_B6
Vitamin E	2	http://en.wikipedia.org/wiki/Vitamin_E
Vitamin C	2	http://en.wikipedia.org/wiki/Vitamin_C
Vitamin D3	2	http://en.wikipedia.org/wiki/Vitamin_D
Water	1	http://en.wikipedia.org/wiki/Water
Wheat Flour	2	http://en.wikipedia.org/wiki/Wheat_flour
Whey	2	http://en.wikipedia.org/wiki/Whey
Whey protein concentrate	2	http://en.wikipedia.org/wiki/Whey_protein
Whey protein isolate	2	http://en.wikipedia.org/wiki/Whey_protein
Whey protein lactose	3	http://en.wikipedia.org/wiki/Whey_protein
White mineral oil	6	http://en.wikipedia.org/wiki/Mineral_oil
Whole Corn	2	http://en.wikipedia.org/wiki/Whole_grain
Whole wheat flour	2	http://en.wikipedia.org/wiki/Whole-wheat_flour
Xanthan gum	4	http://en.wikipedia.org/wiki/Xanthan_gum
Yeast	3	http://en.wikipedia.org/wiki/Yeast
Yellow 5	7	http://en.wikipedia.org/wiki/Tartrazine
Yellow 5 Lake	7	http://en.wikipedia.org/wiki/Tartrazine
Yellow 6	8	http://en.wikipedia.org/wiki/Sunset_Yellow_FCF
Yellow 6 Lake	8	http://en.wikipedia.org/wiki/Sunset_Yellow_FCF

Zinc gluconate

4

http://en.wikipedia.org/wiki/Zinc_gluconate

LEGEND and calculation directions

Green – nutrient (necessary); **Yellow** – benign food additive (acceptable); **Red** – foreign food additive (no place in the human body). Basically, the greener DyeDiet diagram, the healthier the product is. Even single red segment signals that the food unsafe. The more red looks the diagram, the more risky and less healthy the product is.

DyeDiet Foreign (Food Additive) Impact, **DDFI** =
$$\frac{\text{Sum of all RED DDRFs}}{\text{Sum of all GREEN DDRFs}}$$

DyeDiet Nutritional Factor, **DDNF** =
$$\frac{\text{Sum of all GREEN DDRFs}}{\text{Sum of [all RED DDRFs + all YELLOW DDRFs]}}$$

As soon as you have DDFI and DDNF values calculated you can make your decision about a product.

- The RECOMMENDATION would be to *reject* any product with **DDFI > 0.9** ([exceeding 0.9](#), *high risks*) and **DDNF < 0.9** ([below 0.9](#), *low nutritional values*).
- The PREFERENCES would be **DDFI = 0 (zero)** when no foreign food additives present in a food (no red marked additives) and *highest possible DDNF*, say in **3 - 6 and higher** unit range, for instance.

Please note that the DyeDiet approach is only good for *processed* food products containing *at least one food additive* (either red or yellow) and it is *NOT applicable to the whole foods* for which DDNF values would have been impossible to calculate because the sum of “red” and “yellow” additives in the above DDNF equation turns 0 (zero). Indeed, when you eat whole food there is *no intrinsic toxicity* involved if you follow the “golden rule” of eating in [moderation](#) whereas benign (yellow) and especially foreign (red) food additives may pose health problems even if consumed in moderation for an extended time ([chronic toxicity](#)).

So good luck with using DyeDiet approach and making *less risky* food choices for you and your children!