



Natural Color Selection Guide

PRODUCT	SOURCE	FORM	21 CFR SECTION	SOL	SHADE	STRENGTH	TYPICAL USAGE LEVEL	LIGHT STABILITY	HEAT STABILITY	SUITABLE PH RANGE	TYPICAL APPLICATIONS
Vegetable Juice Color 1000 Series	Purple Sweet Potato	Liquid, Powder	73.260	WS	Pink/Raspberry Red to Violet	E1%=4-20	0.005-0.1%	Excellent	Excellent	2.0-4.5	Beverages, Fruit, Bases, Confections, Yogurt, Dessert Toppings
Vegetable Juice Color 2000 Series	Red Cabbage	Liquid, Powder	73.260	WS	Pink/Raspberry Red to Violet	E1%=8-20	0.005-0.1%	Excellent	Excellent	2.0-4.5	Beverages, Fruit, Bases, Confections, Yogurt, Dessert Toppings
Vegetable Juice Color 3000 Series	Black/Purple Carrot	Liquid, Powder	73.260	WS	Peach to Strawberry Red	E1%=3-30	0.01-0.2%	Very Good	Very Good	2.0-4.5	Beverages, Fruit, Bases, Confections, Yogurt, Dessert Toppings
Vegetable Juice Color 4000 Series	Red Beet	Liquid, Powder	73.260	WS OD	Pink to Red	0.3-1.7% betanin	0.001-0.3%	Fair	Fair	4.0-8.0	Powdered Beverages, Dairy Products, Frozen Desserts, Cereal, Chips
Grape Juice and Grape Skin Extract Color	Grape	Liquid, Powder	73.170 73.169	WS	Pink to Red	E1%=3-60	0.05-0.5%	Good	Good	2.0-4.0	Beverages, Fruit Bases, Jams, Confections
Fruit Juice Color Series	Elderberry	Liquid, Powder	73.250	WS	Peach to Strawberry Red	E1%=4-30	0.01-0.2%	Good	Good	2.0-4.5	Beverages, Fruit, Bases, Confections
Vegetable Juice Color 6000 Series	Radish	Liquid, Powder	73.260	WS	Yellowish-Red	E1%=3-30	0.001-0.05%	Excellent	Excellent	2.0-6.0	Beverages, Fruit, Bases, Yogurts
Tomato Lycopene	Tomato	Liquid	73.585	WD OD	Peach to Red Orange	1-10%	0.05-0.5%	Good	Good	3.0-9.0	Beverages, Confections, Ice Cream, Meat
Carmine, High Tint Carmine, Very High Tint Carmine, Hydrosoluble Carmine	Cochineal	Liquid, Powder	73.100 73.1100 73.2087	WS OD	Pink to Red	2-80% carminic acid	0.0005-0.1%	Excellent	Excellent	3.5-8.0	Beverages, Fruit, Bases, Confections, Casings, Cosmetics
Purple Carmine	Cochineal	Liquid, Powder	73.100 73.1100 73.2087	WS OD	Lavender to Purple	3-50% carminic acid	0.0005-0.1%	Excellent	Excellent	4.0-8.0	Beverages, Fruit, Bases, Confections, Cosmetics
Cochineal Extract / Carminic Acid	Cochineal	Liquid, Powder	73.100 73.1100	WS	Peach to Orange, Pink to Red	2-95% carminic acid	0.0005-0.1%	Excellent	Excellent	2.0-8.0	Beverages, Fruit, Bases, Confections, Casings, Sauces
Canthaxanthin¹	Canthaxanthin	Liquid, Powder	73.75 73.1075	WD OS	Peach to Reddish-Orange	E%=120	0.002-0.015%	Good	Very Good	2.0-8.0	Beverages, Surimi, Tomato Products



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Paprika 2000 Series	Paprika Oleoresin	Liquid, Powder	73.345	WD OS	Peach to Orange	225-5000 ASTA	0.001-0.05%	Good	Very Good	3.0-8.0	Beverages, Fruit Bases, Sauces, Spice Blends, Snack Foods
Annatto	Annatto Seed	Liquid, Powder, Paste	73.30 73.1030 73.2030	WS WD OS	Vanilla to Yellow-Orange to Orange	0.2-95% Bixin or Norbixin	0.001-0.2%	Fairly Good	Very Good	3.0-8.0	Yogurt, Cheese, Cosmetics, Ice Cream, Casings
B-Apo-8'-Carotenal¹	B-Apo-8'-Carotenal	Liquid	73.90	WD OS	Yellow-Orange to Orange	0.5-20%	0.001-0.015%	Good	Very Good	N/A	Cheese, Baked Goods, Salad Dressings, Candy, Beverages, Yogurt
Carrot Color 8000 Series	Carrot Oil	Liquid, Powder	73.300	WD OS	Vanilla to Orange-Yellow	E1%=25-38	0.01-0.1%	Fairly Good	Good	3.0-8.0	Dairy Products, Beverages, Dry Mixes, Noodles
B-Carotene¹	B-Carotene	Liquid, Powder	73.95 73.1095 73.2095	WD OS	Vanilla to Yellow to Orange	E1%=25-750	0.001-0.01%	Good	Very Good	3.0-8.0	Beverages, Dry Mixes, Oil, Egg Whites, Cheese
Riboflavin¹	Riboflavin	Liquid, Powder	73.450	OD WS	Vanilla to Yellow	1-10%	0.001-0.01%	Very Good	Very Good	N/A	Beverages, Tablets, Confections
Fruit Juice 6100 Series	Gardenia Fruit	Liquid, Powder	73.250	WS OD	Pale to Bright Yellow	E1%=6-60	0.001-0.05%	Excellent	Excellent	4.0-8.0	Beverages, Dry Mixes, Dairy Products
Curcumin Extract / Turmeric Oleoresin	Turmeric	Liquid, Powder	73.615	WD OS	Vanilla to Greenish-Yellow	1-95% Curcumin	0.005-0.1%	Fair	Very Good	2.5-8.0	Condiments, Dressings, Ice Cream, Cereals
Titanium Dioxide	Titanium Dioxide	Liquid, Powder	73.575 73.1575 73.2575	WD OD	White, Opacifier	1-100% TiO2	0.01-1.0%	Excellent	Excellent	1.0-14.0	Baked Goods, Cheese, Tablets, Cosmetics
Chlorophyll / Chlorophyllin	Alfalfa, Grass	Liquid, Powder, Paste	73.125 73.1125 73.2125 73.3110	OS WD	Pale to Dark Green Bluish-Green	E1%=5-810	0.001-0.1%	Good	Good	3.0-14.0	Cosmetics, Dry Citrus Drinks, Bone Cement, Dentrifices
Spirulina Extract	Spirulina	Liquid, Powder	73.530	WS OD	Pale to Sky Blue	E1%=3-20	0.001-0.1%	Fair	Fair	4.0-9.0	Frozen desserts, Tablets, Chewing Gum, Candy, Yogurt, Beverage Mixes

1. Some are natural and some are nature identical and/or synthetic colors labeled as exempt colors.