EXBERRY® Blue, Green, Lavender and Black Natural Colors-US Market

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WIDER NATURAL COLOR SELECTIONS ARE NOW POSSIBLE

- GNT has offered red, pink, purple, yellow, orange and brown colors for 30+ years under the EXBERRY® brand
- GNT has offered blue and green colors outside of the US for 20+ years
- The FDA granted permission to use **spirulina** in a wide range of applications in 2014, which has expanded the color range offered in the US
- GNT’s colors are manufactured with minimal processing and no solvents to ensure a truly natural product
• Made from Spirulina – an edible blue-green algae that occurs naturally in freshwater and marine habitats
• Typical use level: 1-5%
• Recommended language in ingredient line: “Spirulina extract for color”
• Regulation: Title 21 CFR, Part 73, Section 73.530 (spirulina)
• Made from spirulina and yellow colors
• Typical use level: 1-5%
• Recommended language in ingredient line: “Spirulina extract for color”, “Fruit juice for color”, “Vegetable juice for color”
• Regulations
  • Title 21 CFR, Part 73, Section 73.530 (spirulina)
  • Title 21 CFR, Part 73, Section 73.250 (fruit juice)
  • Title 21 CFR, Part 73, Section 73.260 (vegetable juice)
NATURAL LAVENDER COLOR

• Made from spirulina and red colors
• Typical use level: 1-5%
• Recommended language in ingredient line: “Spirulina extract for color”, “Vegetable juice for color”
• Regulations
  • Title 21 CFR, Part 73, Section 73.530 (spirulina)
  • Title 21 CFR, Part 73, Section 73.260 (vegetable juice)
• Made from spirulina, yellow color and purple color
• Typical use level: 1-5%
• Recommended language in ingredient line: “Spirulina extract for color”, “Fruit juice for color”, “Vegetable juice for color”
• Regulations
  • Title 21 CFR, Part 73, Section 73.530 (spirulina)
  • Title 21 CFR, Part 73, Section 73.250 (fruit juice)
  • Title 21 CFR, Part 73, Section 73.260 (vegetable juice)
APPROVED COLOR APPLICATIONS FOR SPIRULINA

- 2013
  - Candy and gum

- 2014
  - Frostings
  - Ice cream and frozen desserts
  - Dessert coatings and toppings
  - Beverage mixers and powders
  - Yogurts
  - Custards and puddings
  - Cottage cheese
  - Gelatin
  - Bread crumbs
  - Ready-to-eat cereals (excluding extruded cereals)
CONSUMER EXPECTATION OF INGREDIENTS

CONSUMER RESEARCH STUDY - FINDINGS

• Consumers want to easily recognize and trust the ingredients they see on a package

• We asked: “What is ‘natural’ to you?”
  • “Left in natural state or form.”
  • “Unprocessed. Not manipulated or modified. Pure.”
  • “Not changed through chemical processes.”
HOW WOULD YOU MAKE A NATURAL COLOR?
THE RESPONDENTS’ VIEW

Starts with a fresh vegetable or fruit

Ingredients would be boiled

Then cooked Ingredients mashed

Then pureed...

..strained...

“You expect it to be the color if you squeezed a fruit... an orange would be the color that the juice comes out... or a blackcurrant would be purple”

Colored Naturally with Fruit, Vegetables and Edible Plants

91% of respondents in the UK, and 85% of respondents in Germany agree that this is the most natural way to color food
FDA’S APPROVAL OF SPIRULINA HAS GREATLY INCREASED THE PRODUCT DEVELOPER’S COLOR CHOICES

- GNT now has natural blue, green, lavender and black colors that are approved for use in the US in a variety of food applications
- GNT has over 20 years of experience with spirulina
- Color from fruits, vegetables and edible plants provide a platform to connect with consumers
- Color from fruits, vegetables and edible plants meet global regulatory demands
- Color from fruits, vegetables and edible plants meet industry and consumer expectations for a clean label
- Not all natural colors are equal – look for a supplier with high quality, consistent supply and stable pricing through vertical integration