



**International
Agriculture
Group**

INTRODUCES

NuBana™ Green Banana Flours

A new premium line of dry banana fruit ingredients designed to provide functional and nutritional benefits and enhance the consumer appeal of your foods and supplements.

Consumers are getting more selective about their foods and the ingredients in those foods. They want natural ingredients that they can pronounce and/or can be found in their own kitchen. As the connection between diet and health grows stronger, consumers also want healthier versions of familiar foods that they know and love without changing the taste and texture.

NuBana™ Green Banana Flours are made from whole, peeled, green bananas and are labeled simply as *banana flour* or *green banana flour*. They are free flowing powders with smooth, appealing texture and a neutral aroma and taste profile—they do not taste like bananas and are not sweet.

Bananas are the only fruit with a large percentage of naturally occurring starch. Thus, NuBana™ Green Banana Flours have a high starch content compared to wheat flour and other grain-based flours, which gives them superior binding and adhesive capabilities. They also provide an excellent source of dietary fiber (as resistant starch), potassium and magnesium. Organic versions of NuBana™ Green Banana Flours are available upon request.

Key Properties of all NuBana™ Green Banana Flours

- Clean label
- Gluten free
- 100% Whole fruit
- All natural, non-GMO
- Nutrient dense
- High in potassium & magnesium
- Low in sodium, fat & protein
- No artificial colors or flavors

Performance Features

- Smooth, free-flowing powder
- Non-hygroscopic—it will not clump
- Neutral aroma and flavor
- Off-white to light beige color
- Very high starch content
- Neutral pH

Resistant starch, a type of dietary fiber, is starch that resists digestion in the small intestine. It reaches the large intestine, where it feeds the beneficial or good bacteria in the gut. It is insoluble, slowly fermented and does not cause digestive side effects (i.e., bloating and gas).

Potassium's Daily Reference Value (DRV) was just raised to 4,700 mg/day for adults. In addition, potassium was added as a mandatory micronutrient on the Nutrition Facts Panel beginning in 2018. Previously, the potassium DRV was 3,500 mg/day and its labeling had been voluntary.

The main textural benefits of green banana flour are water binding, thickening, anti caking, filling and adhesion. Green banana flour delivers superior performance with regards to water binding and thickening compared to other native starches due to its high concentration of amylopectin, and especially its high levels of long chain amylopectin. Its performance has been compared to a lightly cross-linked modified starch.



NuBana™ N100 Green Banana Flour

NuBana™ N100 Green Banana Flour delivers the processing benefits of a cook-up starch with the advantage of a consumer-friendly, gluten-free label declaration. NuBana™ N100 has unique pasting properties and behaves like a lightly cross-linked modified starch. When cooked, it contributes a tan or light brown color associated with healthier foods (i.e., whole wheat bread).

Features & Benefits

- Native banana starch
- High viscosity upon cooking
- Effectively replaces other thickeners in a wide variety of applications

NuBana™ N200 Green Banana Flour

NuBana™ N200 Green Banana Flour is carefully dried through a patent-protected process to preserve the high level of natural resistant starch and slowly digestible starch inherent within green bananas. The resistant starch is not isolated or extracted and labels as insoluble dietary fiber on the Nutrition Facts Panel. When replacing traditional flour, NuBana™ N200 has a minimal impact on the color or flavor of foods. Its high levels of amylopectin tend to retrograde quickly, contributing to the formation of slowly digestible starch and retrograded resistant starch after cooking.

Features & Benefits

- Native banana starch
- Very high levels (up to 70%) of resistant starch (raw)
- Insoluble dietary fiber
- High viscosity upon cooking

NuBana™ P500 Green Banana Flour

NuBana™ P500 Green Banana Flour is a pre-gelatinized flour that thickens without heat. It can replace gums in gluten-free muffins, cookies, breads, and has excellent expansion properties. It can also replace maltodextrin when stickiness is required.

Features & Benefits

- Pre-gelatinized banana starch
 - Can be dispersed in water to give instant viscosity
 - Replaces hydrocolloids and other thickening agents
 - Fat replacement
 - Increased moisture retention
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NuBana™

Advantages of NuBana™ Green Banana Flour

Gluten Free and Clean Label

NuBana™ Green Banana Flours are naturally gluten free and work very well in gluten free baking applications. They can replace some of the less nutrient dense gluten free flours (e.g., rice flour). Pre-gelatinized NuBana™ P500 also helps eliminate the need for xanthan gum or other hydrocolloids. The result is a healthier, cleaner label food product.

Health & Wellness

NuBana™ Green Banana Flours can be used for nutritional enhancements in food and supplement applications. They are high in many important nutrients, such as dietary fiber (resistant starch), potassium and magnesium, each shown to have important health benefits. They deliver 100% whole fruit, naturally contributing to the dietary requirements for servings of fruit.



Enrichment of:

- Dietary Fiber
- Resistant Starch
- Potassium
- Magnesium
- Fruit

Replacement of:

- Fat
- Gum & other Hydrocolloids

Metabolic Benefits:

- Reduced glycemic response
- Energy management with slowly digestible starch
- Blood sugar management with resistant starch
- Digestive Health

Sustainable Production

Fresh fruit has strict quality standards from grocery stores, with up to 20% of bananas discarded for being the wrong size or shape. International Agriculture Group utilizes all of the green bananas to produce its functional flour, which is better for the farmers and better for the planet.



Call Ken Billings, Vice President of Sales and Business Development for more information or to request a sample. He can be reached at 847-267-9907 or via e-mail at Ken@iagnubana.com.