

# DRIED HONEY PRODUCTS

## An introduction

Dried honey products available commercially for industrial use are derived from pure liquid honey (1) to which have been added processing aids and other ingredients, (2) which has been dried to a low moisture content, and (3) which in most cases has been converted to a free-flowing product.

Processing aids and other ingredients are added (1) to keep the dried honey free-flowing and (2) to modify and enhance the functionality of the product. In commercial applications and for labeling purposes, both “dried honey” and “dry honey” are used interchangeably. However, the term “dried honey” is used to mean honey that has been dehydrated in which edible drying aids and processing adjuncts may be included to facilitate processing and improve product stability.

## What forms of dried honey are available?

Dried honey products are available commercially in several forms including powders, flakes, granules

and crystals. The vast majority of commercial dried honey products are formulated and processed to be free-flowing.

The technology exists to remove water from honey and form lozenges or tablets that contain no other added ingredients. Dry honey use is currently very limited in the food industry.

## How is dried honey made?

Most commercial processes convert liquid honey through a drum/roller or spray-drying process. Other technologies such as microwave vacuum/freeze drying are also used.

## Does dried honey contain ingredients other than honey?

Yes, virtually all dried honey products available commercially do contain other ingredients. Honey is rich in fructose (which is very hygroscopic) and it tends to make dried honey products “cake.” For this reason, processing aids are used in the formulation of most dried honey products to keep the product free-flowing or to modify its functionality.

## What other ingredients are used in dried honey products?

The following ingredients are commonly used by manufacturers:

- Sweeteners: Corn syrup, high fructose corn syrup, maltodextrins, non-nutritive sweeteners, sugar, sugar syrup.

- Processing aids, drying aids, bulking agents, anticaking agents: Calcium stearate, bran, dextrins, lecithin, soy flour, wheat starch.

Some dried honey products do not contain added sweeteners. Some are custom-manufactured with other ingredients such as fibers, proteins, vitamins, etc. Many manufacturers offer custom processing.

## How much honey do dried honey products contain?

Dried honey products vary in their honey content. Honey content means the percentage of honey solids in the dried honey product. Dried honey formulations typically contain 50%, 65%, 70% or more honey.

## Is honey content an indication of quality?

Because honey is generally the most expensive ingredient used in dried honey products, formulations which contain high levels of honey generally cost more. There are other quality factors which manufacturers may consider such as type of honey used, overall product consistency, compositional or microbiological standards and variations allowed, etc.

## Are there all-natural dried honey products available commercially?

Yes, some products contain only honey and cereal-based ingredients such as flour or bran,

and no manufactured additives. These forms of dried honey can be used in all-natural products.

### How does the flavor of dried honey products compare with that of liquid honey?

Dried honey products should have a typical honey flavor and not contain ingredients which are used intentionally to imitate the flavor of honey. As a rule, products with a high honey content will have a stronger honey flavor. Dried honey products, however, do not offer the wide variety of flavors found in liquid monofloral honeys and do not have a comparable aroma. Because most dried honey manufacturers use blends of honey, dried honey products tend to be very consistent in flavor.

### What is the color of dried honey?

Commercial dried honey products may vary in color from light to golden yellow or tan/brown. This depends upon the original color of the honey used, the manufacturing process and the nature and amount of ingredients added to the formulation. Color is not an indication of quality or of honey content.

Commercial dried honey products are formulated and processed to ensure color consistency and regularity.

### What are some of the advantages of using dried honey?

A key advantage is the product's low moisture content (2-3.5% -- a maximum of 2.5% is a frequent specification) which allows its use directly into dry mixes, seasonings or dry coatings. Dried honey can be easily blended with other dry ingredients. Another advantage which is common to most commercial products is

consistency of texture, flavor and color.

In some manufacturing sectors, other advantages may include: convenience, free-flow, ease of handling and weighing, reduced storage space, ease of cleaning and sanitary aspects.

### How much dried honey should be used?

It depends upon the product formulation. Because many commercial dried honey products contain other ingredients than honey, consider the honey solids content of the dried honey product when formulating. For example, if a dried honey product contains 50% honey, you may want to use twice as much as you would use liquid honey to obtain similar results.

Application-specific information is available from the National Honey Board's monograph collection. Suppliers also offer usage recommendations and substitution information.

### What are typical microbiological specifications for dried honey?

Please contact suppliers for this information.

### What is the texture of dried honey?

Most dried honey products are drum- or spray-dried and then converted to a free-flowing, fine powder. Some manufacturers offer other forms such as flakes and crystals. The following table is a general guide.

Powders	98-99% through 20 mesh 30-50% through 60 mesh 10-30% through 100 mesh
Flakes	≥ 30% through 20 mesh ≤ 10% through 40 mesh
Granules	≤ 50% through 60 mesh ≤ 25% through 120 mesh

Please contact suppliers for more information.

### Are dried honey products soluble?

Honey itself is soluble but other ingredients used in commercial dried honey products may not be. Formulations that contain only soluble ingredients may be specified.

### How does the density of dried honey compare with that of liquid honey?

The bulk density of dried honey products is approximately 30-40 lb./cubic foot for flakes and 40-60 lb./cubic foot for powders. Liquid honey density is a characteristic which varies in a predictable manner with the moisture content or solids content of the honey.

A standard U.S. gallon (3.79 liters) of liquid honey will weigh 11.85 pounds (4.42 kilograms) on the average. No precise weight can be given without the exact moisture content.

**Are there USDA Standards for dried honey?**

No. Please check with suppliers for detailed specifications.

**What is the shelf-life of dried honey?**

The shelf-life will depend upon the type and quantity of added ingredients, storage conditions and packaging type. Most products should be stored in closed containers in a cool and dry environment and keep over one year when stored according to manufacturer's instructions. Please contact your supplier for specific information.

**Does dried honey function like liquid honey in food products?**

Generally because dried honey products contain other ingredients, their functionality is somewhat different from that of pure liquid honey (depending on the nature and amount of other ingredients or additives present). The functionality and advantages of both liquid and dried honeys are increasingly well documented.

National Honey Board studies that used dried honey and studied its functionality and advantages include:

- The Use of Honey for Injection and Tumble-processed Poultry Products
  - Development, Optimization and Shelf-stability of a Product Containing Peanut Butter and Honey
  - The Role of Honey in Quality Improvement of Oil-free Potato Chips
  - Honey in Frozen Doughs
- Monographs and research summaries are available from the Honey Hotline.

Many dried honey manufacturers also offer formulation advice and technical support.

**If I use dried honey, what should I list on the ingredients' label?**

List "dried honey" where it belongs in the ingredient list, followed by a parenthesis listing the ingredients in order of quantity.

Example: dried honey (honey, sugar, bran).

**Can I use the word "honey" in the name of my product?**

Yes, you can.

**For nutritional labeling purposes, what composition data can I use?**

Please contact your supplier for that information.

# Manufacturers of Dried Honey Products

This list is provided for your general information. It does not constitute an endorsement or guarantee by the National Honey Board, and it may not be comprehensive. For more information, please consult the "suppliers guide" published by trade journals.

**Absolute Quality Ingredients**

6710 N Calle Zella  
Tucson, AZ 85718  
PH: (520) 490-9995  
FX: (520) 297-0464  
[www.AQIngredients.com](http://www.AQIngredients.com)

**ADM Milling Company**

8000 W. 110th Street  
Overland Park, KS 66210  
PH: (800) 422-1688  
FX: (913) 491-0035  
[www.adm.com/en-US/Milling/drysweeteners/](http://www.adm.com/en-US/Milling/drysweeteners/)

**GloryBee Foods Inc**

PO Box 2744  
Eugene, OR 97402  
PH: (800) 456-7923  
FX: (541) 689-2007  
[www.GloryBeeHoney.com](http://www.GloryBeeHoney.com)

**Groeb Farms, Inc.**

10464 Bryan Hwy  
Onsted, MI 49265  
PH: (517) 467-2065  
FX: (517) 467-2840  
[www.groebfarms.com](http://www.groebfarms.com)

**Pure Foods Inc**

PO Box 989  
Sultan, WA 98294  
PH: (360) 793-2241  
FX: (360) 793-2485  
[www.purefoodsinc.com](http://www.purefoodsinc.com)

**Pure Sweet Honey Farm**

514 Commerce Pky  
Verona, WI 53593  
PH: (608) 845-9601  
FX: (608) 845-9628  
[www.puresweethoney.com](http://www.puresweethoney.com)

**Specialty Products & Technology, Inc.**

5720 Green Circle Drive  
Minnetonka, MN 55343  
PH: (800) 833-3704  
FX: (952) 933-3050  
[www.specialtyprod.com](http://www.specialtyprod.com)

**Visit us on the World  
Wide Web at  
[www.honey.com](http://www.honey.com)**