



Blueberry Formats to Meet Manufacturer Needs

PRODUCT	PROCESS	PACKAGING	CHARACTERISTICS	STORAGE
FRESH				
FRESH	Fresh blueberries ▶ packaged.	Consumer packs: plastic clam shells, cello packs. Cartons: 2-1/2 lb., 5 lb. (2.3 kg.), 10 lb. (4.5 kg.), 20 lb.	Available almost year round. Fresh or glazed topping for cakes.	32° to 34°F (-0.6° to 1°C) 90-95% relative humidity
FROZEN				
IQF (INDIVIDUALLY QUICK FROZEN)	*Fresh blueberries ▶ individually quick frozen ▶ packaged.	Consumer packs: poly bags. Bulk: poly-lined corrugated cartons 10 -1500 lb. (4.5 - 681 kg.). Poly-lined metal drums: 270 lb. (122.5 kg.).	Individual fresh fruit identity. Any formulation where fruit identity is important.	0° to -10°F (-18° to -23°C)
STRAIGHT PACK OR BLOCK FROZEN	*Fresh blueberries ▶ packaged ▶ flash frozen.	Poly-lined corrugated cartons: 30-50 lb. (13.6 - 22.7 kg.) Poly-lined metal drums: 350 lb. (158.8 kg.).	High amount of fruit in a box; base ingredient for making toppings, syrups, fillings and soups.	0° to -10°F (-18° to -23°C)
DRIED				
DEHYDRATED	* Fresh or frozen blueberries ▶ air dehydrated to around 11-18 % moisture ▶ further processed to dried fruit specs: i.e. oil coated, diced etc.	Poly-lined corrugated boxes: 5, 10, 25 lb.	Moisture: 11-18 % Water Activity: 0.5-0.6	Shelf stable in a cool, dry place.
DEHYDRATED INFUSED	* Fresh or frozen blueberries are infused with a syrup ▶ dehydrated to 11-18% moisture ▶ further processed to dried fruit specs: i.e., oil coated, diced, etc.	Poly-lined corrugated boxes: 5, 10, 25 lb.	Moisture: 11-18 % Water Activity: 0.5-0.6	Shelf stable in a cool, dry place.
FREEZE DRIED	* Fresh or frozen blueberries ▶ flash frozen ▶ moisture removed in vacuum chamber ▶ sealed in moisture proof bags.	Poly-lined corrugated boxes (10 lb.) and other custom sizes.	Moisture Level: Unsweetened: 0-2 % Sweetened: 9-14%	Stable at room temperature for 3 months, after that store at 40°F (4°C).
OSMOTICALLY PRESERVED	Fresh or frozen blueberries ▶ vacuum chamber ▶ natural infusion process with syrup solution and stabilizers ▶ dried to preserve color and flavor.	Poly-lined corrugated boxes, plastic pails (20, 25 lb.) and other custom sizes.	Water Activity: 0.5 – 0.87 Moisture: 40% maximum	Shelf stable in a cool, dry place. Best used within 10 months.
DRUM DRIED/POWDERS	* Fresh or frozen blueberries or purée ▶ drum dried ▶ ground into powder or flakes to specifications.	Poly-lined corrugated boxes, (10 lb.) and other custom sizes.	Moisture: 3-5% Available in various screen sizes and granule consistency. Use in confections, drink mixes, bakery mixes.	Store in cool, dry place 70°F (21°C) or less, away from direct sunlight.

* Sweetening optional

Contact your blueberry supplier for product specifications.

Blueberry Formats



PRODUCT	PROCESS	PACKAGING	CHARACTERISTICS	STORAGE
LIQUID				
SINGLE STRENGTH PURÉE	*Fresh blueberries ▶ crushed ▶ finished ▶ pasteurized or cold filled in containers ▶ frozen.	Plastic pails: 5 gal. (18.9 l.) 28, 30, 55 lb.(12.7, 13.6, 25 kg.) Poly-lined corrugated cartons: 28, 30, lb. (12.7, 13.6, kg.) Poly-lined metal drums: 55 gal. (208 l.) 400 lb. (181 kg.)	Brix: 8.0 -13.0 pH: 2.8 -3.5 >Used in, sauces, flavorings and fillings.	0° to -10°F (-18° to -23°C)
PURÉE CONCENTRATE	*Fresh blueberries ▶ crushed ▶ heat/enzyme treated ▶ vacuum concentrated ▶ pasteurized ▶ packaged ▶ frozen.	Plastic pails: 4, 6 gal. (15.1, 22.7 l.) 28, 30, 60 lb. (12.7, 13.6, 27.2 kg.) Poly-lined metal drums filled to desired Brix levels.	Brix Ranges: 20, 37, 40, 45 pH: 2.8 - 3.5 >Juices, sauces, blends.	0° to -10°F (-18° to -23°C)
SINGLE STRENGTH JUICE	Fresh berries ▶ crushed ▶ pressed ▶ filtered ▶ pasteurized ▶ packaged ▶ frozen.	Plastic pails: 5, 6 gal. (18.9, 22.7 l.) 28, 30, 60 lb. (12.7, 13.6, 27.2 kg.) Poly-lined metal drums filled to desired Brix levels.	Brix: 8.0 - 13.0 pH: 2.8 - 3.4 >All natural fruit juices.	0° to -10°F (-18° to -23°C)
JUICE CONCENTRATE	Fresh blueberries ▶ crushed ▶ heat/enzyme treated ▶ vacuum concentrated ▶ packaged ▶ frozen.	Plastic pails: 5, 6 gal. (18.9, 22.7 l.) 50, 66 lb. (22.7, 29.9 kg.) Poly-lined metal drums filled to desired Brix levels.	Brix: 45.0, 65.0 pH: 2.1 - 2.7 >Used in fruit juices and also as sauce flavor.	0° to -10°F (-18° to -23°C)
OTHER FORMATS				
CANNED (PACKED IN SYRUP) (PACKED IN WATER)	Fresh or frozen blueberries ▶ placed in cans ▶ light or heavy syrup added ▶ sealed ▶ heated. Fresh or frozen blueberries ▶ placed in can ▶ water added ▶ sealed ▶ heated.	Cans: #300, #2, #2-1/2 #10, other sizes	Various levels of fruit content depending on supplier and application.	Shelf stable in a cool, dry place.
BAKERY FRUIT FILLINGS	Fresh or frozen blueberries and/or other forms ▶ sweetener and starch /gum based slurry added ▶ heated ▶ packaged to specifications.	Plastic and foil pouches, 5 gal. plastic pails (18.9 l.) and 55 gal. drums.(208.2 l.)	Various levels of fruit content. > Used in Danish, fruit fillings and toppings.	Shelf stable in a cool, dry place.
ESSENCE	Volatile flavor components distilled off from juice and concentrate process ▶ packaged.	Plastic pails: 5, 6 gal. (18.9, 22.7 l.) and other sizes.	Intensive blueberry flavor found in no artificial flavoring. >Used to boost blueberry flavor in tandem with berries. Also brewing flavor.	Tightly closed container at 32°F (0°C) or lower
OTHER	Real fruit bits and chips are formulated out of a blend of purée and other ingredients. * Sweetening optional	10 lb. boxes and other custom sizes.	Fruit Content: 30-40 % > Used in baking and snack applications.	Shelf stable in a cool, dry place.

Contact your blueberry supplier for product specifications.

Blueberry Juice and Purée

Blueberry juice and blueberry purée provide luscious color, smooth texture, and distinctive flavor. Available year round, blueberry juice and blueberry purée are excellent choices in new and existing food product formulations. Made from fresh or frozen berries, juice and purée stock may be produced to meet manufacturer specifications. Because the characteristics of blueberries vary from season to season and according to variety, many suppliers tailor blend to suit manufacturer needs. The information shown is a guide. Contact your blueberry supplier for specifics.

SPECIFICATIONS	PROCESSING	PHYSICAL CHARACTERISTICS	PACKAGING / STORAGE RECOMMENDATIONS
SINGLE STRENGTH JUICE	Blueberries are crushed, heated, enzyme treated and pasteurized.	Appearance: bluish, purple liquid. Brix: 8.0 -13.0	<ul style="list-style-type: none"> • Plastic pails: 5 gal. • Poly-lined metal drums: 47 - 55 gal. • 0° to -10°F (-18° to -23°C)
JUICE CONCENTRATE	Blueberries are crushed, heated, enzyme treated, pressed, filtered and vacuum concentrated.	Appearance: dark bluish, purple liquid. Brix: 45 - 65 pH: 2.1 - 2.7 Titratable Acidity: 4.55 -4.90% (citric acid)	<ul style="list-style-type: none"> • Plastic pails: 5 gal. • Poly-lined metal drums: 47 - 55 gal. • 0° to -10°F (-18° to -23°C)
SINGLE STRENGTH PURÉE	Blueberries are crushed, heated, passed through a series of screens and pasteurized.	Appearance: bright dark blue-purple liquid. Brix: 8.0 - 13.0 pH: 2.8 - 3.5	<ul style="list-style-type: none"> • Plastic pails: 4 gal. • Poly-lined metal drums: 55 gal. • 0° to -10°F (-18° to -23°C)
PURÉE CONCENTRATE	Blueberries are crushed, heated, put through a series of screens, vacuum concentrated and pasteurized.	Appearance: dark blue to a deep purple-red color, with a smooth consistency. Brix: 20 to - 40 pH: 2.5 -3.5 Titratable Acidity: 2.5 - 3.5% (citric acid)	<ul style="list-style-type: none"> • Plastic pails: 4, 5 gal. • Poly-lined metal drums: 400 lb. • 0° to -10°F (-18° to -23°C)

Contact supplier for additional options.

Product Applications

Liquid blueberry co-products have many applications. In the beverage industry uses include: juices, juice blends, carbonated drinks, flavored waters, smoothies, and alcoholic beverages. Applications in other processing areas include: confectionery fillings, salad dressings, marinades, syrups, frozen desserts, ice creams and yogurts, and baby foods. Some unique uses for these co-products include their addition in tortillas, bagels, muffins and bread products.

Blueberry juice and blueberry purée give formulators a range of consistencies to work with. Whether the product is a liquid, a paste or something in between, these blueberry products contribute color, flavor and body to finished products. The interest in "natural" over "artificial" ingredients has food manufacturers looking for real fruit sources. Use blueberry juice concentrate and purée as coloring and flavoring agents. The low pH range of blueberry juice and blueberry purée provides tangy flavor and helps improve storage stability.

Dried Blueberries

One pound of dried blueberries is equivalent to approximately six to seven pounds of fresh! Dehydrated blueberries are shelf stable, easy to handle, and convenient to store. A number of formats are available. Check with your supplier regarding manufacturing specifics.

PRODUCT	PROCESS	PACKAGING	CHARACTERISTICS	STORAGE
DEHYDRATED	*Fresh or frozen blueberries ▶ air dehydrated to 11-18 % moisture ▶ further processed to dried fruit specs: i.e. oil coated, diced etc.	Poly-lined corrugated boxes: 5, 10, 25 lb.	Moisture: 11-18 % Water Activity: 0.5-0.6	Shelf stable in a cool, dry place.
DEHYDRATED INFUSED	*Fresh or frozen blueberries are infused with a syrup>dehydrated to 11-18% moisture ▶ further processed to dried fruit specs: i.e. oil coated, diced, etc.	Poly-lined corrugated boxes: 5, 10, 25 lb.	Moisture: 11-18 % Water Activity: 0.5-0.6	Shelf stable in a cool, dry place.
FREEZE DRIED	*Fresh or frozen blueberries ▶ flash frozen ▶ moisture removed in vacuum chamber ▶ sealed in moisture proof bags.	Poly-lined corrugated boxes (10 lb.) and other custom sizes.	Moisture (unsweetened): 0-2 % Moisture (sweetened): 9-14%	Stable at room temperature for 3 months, after that store at 40°F.
OSMOTICALLY PRESERVED	Fresh or frozen blueberries ▶ placed in vacuum chamber ▶ undergo a slow natural infusion process with syrup solution and stabilizers ▶ carefully dried to preserve color and flavor.	Poly-lined corrugated boxes (25 lb.) and other custom sizes.	Water Activity: 0.5 – 0.87 Moisture: 40% maximum	Shelf stable in a cool, dry place. Best used within 10 months.
DRUM DRIED/ POWDERS	*Fresh or frozen blueberries or purée ▶ drum dried ▶ ground into powder or flakes to specifications. * Sweetening optional	Poly-lined corrugated boxes (10 lb.) and other custom sizes.	Moisture: 3-5% Available in various screen sizes and granule consistency. Use for dusting confections and baked goods, drink mixes, bakery mixes.	Store in cool, dry place 70°F (21°C) or less, away from direct sunlight.

Contact supplier for additional options.

Highbush Blueberries + Shelf Stability = Versatility

- Free flowing dried blueberries are easy to integrate into dry goods such as breakfast cereals and intermediate moisture products.
- Use in products where fruit size and individual piece identity is needed, such as confections, cookies and muffins.
- Powders may be used as a coating, such as in chocolate confectionery or in cereals and bars.
- Freeze dried products provide crisp flavor notes, tang and real fruit flavor bursts.
- Osmotically preserved blueberry products provide fruit size typical of a fresh, whole plump berry. The blueberries are moist without the appearance of a typical dried fruit. Use when fresh fruit is not available.

Frozen Blueberries

Frozen blueberries provide the freshness of blueberries with the convenience of year round availability. Two formats are available. Straight pack product is often used in processes when whole cases are required. Filling, jam/jelly, sauce and dressing processors use block-frozen blueberries. IQF blueberries are free flowing, providing individual fruit piece identity. IQF blueberries do not need to be thawed prior to use. They can be poured into batters, quickly incorporated into mixes, or used as a topping. Contact your blueberry supplier for specifics.

PRODUCT	PROCESS	PACKAGING	CHARACTERISTICS	STORAGE
IQF (INDIVIDUALLY QUICK FROZEN)	*Fresh blueberries ► individually quick frozen ► packaged.	Consumer packs: poly bags Bulk: Poly-lined corrugated cartons 10-1500 lb. (4.5 - 681 kg.) Poly-lined metal drums: 270 lb. (122.5 kg.)	Individual fresh fruit identity. Any formulation where fruit identity is important.	0° to -10°F (-18° to -23°C)
STRAIGHT PACK OR BLOCK FROZEN	*Fresh Blueberries ► packaged ► flash frozen. * Sweetening optional	Poly-lined corrugated cartons: 30-50 lb. (13.6 - 22.7 kg.) Poly-lined metal drums: 350 lb. (158.8 kg.)	High amount of fruit in a box, base ingredient for making toppings, syrups, fillings and soups.	0° to -10°F (-18° to -23°C)

Anthocyanins, Phenolics, Quercetin, Ellagic Acid, Chlorogenic Acid...

The blueberry has been part of the human diet for centuries. Known to early inhabitants across North America, Scotland, and Russia, the fruit was believed to possess medicinal properties. Today, as scientists study and document substances found in blueberries, many benefits revered by the ancients are ringing true.

Blueberries contain a spectrum of anthocyanins, which fall within the phytochemical class known as flavonoids. (1, 2, 3, 4, 5) Previously some thought only European bilberries and lowbush blueberries contained anthocyanins. In analyzing highbush varieties (cultivated), lowbush varieties (wild), and European bilberries, anthocyanins were found in all of the blueberries studied. (6) Blueberries, all blueberries, are sources of anthocyanins and should be included in the diet.

The Produce for Better Health Foundation's "Five-a-Day the Color Way" (7) lists blueberries in the Blue/Purple category of fruits and vegetables that provide varying amounts of health-promoting phytochemicals such as anthocyanins and phenolics. Specifically they note that boosting the level of blue/purple in a low-fat diet helps lower the risk of some cancers and may promote urinary tract health, memory function, and healthy aging.

Quercetin, ellagic acid and chlorogenic acid are some of the other flavonoids found in blueberries. Overall data suggest that these flavonoids may play a dual protective role in carcinogenesis by reducing the bioavailability of carcinogens and by interfering with their biotransformation in the liver. (8)

Blueberries contain two carotenoids: alpha- and beta-carotene. Beta-carotene is the most well known of the carotenoids. It functions as a Vitamin A precursor in biological systems. Epidemiological studies have shown that an increase in the consumption of beta-carotene-rich

fruits lowers the incidence of certain cancers (lung, stomach, esophageal). The addition of beta-carotene to the diet also has been shown to enhance certain immune responses in laboratory studies. This is thought to be related to beta-carotene's ability to inactivate free radicals. (9)

Resveratrol, a potential anticancer agent, is under investigation as well. Agricultural Research Service, Rutgers University (New Jersey) and AgCanada (Kentville, Nova Scotia) are studying resveratrol. (10) (11) A listing of substances contained in blueberries may be found in the USDA-ARS Phytochemical and Ethnobotanical database compiled by Dr. James Duke. (12)

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3. Satue-Gracia MT, Heinonen M, Frankel EN. Anthocyanins as antioxidants on human low-density lipoprotein and lecithin-liposome systems. J Agric Food Chem 45:3362-3367, 1997.
4. Wang H, Cao G, Prior RL. Total antioxidant capacity of fruits. J Agric Food Chem 44:701-705, 1996.
5. Wang H, Cao G, Prior RL. Oxygen radical absorbing capacity of anthocyanins. J Agric Food Chem 45:304-309, 1997.
6. Prior R.L., Cao G., Martin A., Sofic E., McEwen J., O'Brien C., Lischner N., Ehlenfeldt M., Kalt W., Krewer G., Mainland C.M. Antioxidant capacity as influenced by total phenolic and

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- for Optimum Health. Hyperion Books, 2002.
7. Produce for a Better Health Foundation. 5 A Day the Color Way. (http://www.5aday.com/html/colorway/colorway_home.php#blue)
8. Medical College of Ohio, 1989.
9. Nutrition and Food Service. 1991.
10. Becker, H. Berries May Protect Against Cancer and Heart Disease. ARS News and Information, Feb. 27, 2001. (www.ars.usda.gov)
11. Human Nutrition, ARS Quarterly Report, October-December 2000. (<http://www.ars.usda.gov/is/qtr/q400/hn400.htm>)
12. Dr. Duke's Phytochemical and Ethnobotanical Database, USDA, Agricultural Research Service. <http://www.ars-grin.gov/duke/plants.html>

Other Blueberry Formats

Blueberry formats come in a range of options to meet large and small manufacturing needs. Products are conveniently packed and add new usage opportunities in nouveau product arenas. Contact your blueberry supplier for specifics.

PRODUCT	PROCESS	PACKAGING	CHARACTERISTICS	STORAGE
CANNED (PACKED IN SYRUP)	Fresh or frozen blueberries > placed in cans > light or heavy syrup added > sealed > heated.	Cans: #300, #2, #2-1/2, #10, other sizes.	Various levels of fruit content depending on supplier and application.	Shelf stable in a cool, dry place.
CANNED (PACKED IN WATER)	Fresh or frozen blueberries>placed in cans>water added>sealed>heated.			
BAKERY FRUIT FILLINGS	Fresh or frozen blueberries and/or other forms > sweetener and starch/gum based slurry added > heated > packaged to specifications.	Plastic and foil pouches, 5 gal. plastic pails (18.9 l.) and 55 gal. drums.(208.2 l.).	Various levels of fruit content depending upon supplier and end use. > Used in Danish, fruit fillings and toppings.	Shelf stable in a cool, dry place.
ESSENCE	Volatile flavor components are distilled off from juice and concentrate process.	Plastic pail: 5 and 6 gal.	Appearance: colorless liquid Specific gravity: 0.982 – 0.997 at 60°F	Tightly closed container at 32°F (0°C) or lower.
OTHER	Real fruit bits and chips are formulated out of a blend of purée and other ingredients.	10 lb. boxes and other custom sizes.	Fruit Content: 30-40 % > Used in cookies and other baking and snack applications.	Shelf stable in a cool, dry place.

Applications

- Canned blueberry products keep for extended periods of time and provide year round availability. Use this product format for pie fillings, tarts and as a cake and pastry filling. Canned blueberries are also used as an ice cream topping and layered in dessert creations. Canned product is available both in heavy syrup as well as water packed. The heavy syrup pack can easily be opened and used as is for pies and in pastry fillings. No additional preparation is required. The shelf stability of this product makes it very convenient to store and to have on hand as needed.
- Bakery fruit fillings are perfect for the retail baker. Blueberry fruit fillings may come ready-to-use in a plastic pastry bag. Just open and portion out as desired.
- If a product needs blueberry flavor without the color, as with clear beverages, blueberry essence is available.
- Real fruit bits are products that contain a percentage of real blueberries. Gums, starches and other additives are used along with blueberries in proprietary manufacturing processing that desires to market a real fruit identity while maintaining automated and programmed efficiency.
- Other usage applications are also feasible including food supplements and cosmetics.

Tips For Bakers

Following are tips for successfully using blueberries in baked products. These ideas were gathered from professional bakers.

THAW SMARTS:

For optimal defrost, thaw block frozen blueberries under refrigerated conditions. Once thawed, store product in an airtight container. Never re-freeze thawed fruit.

ADDING BLUEBERRIES TO THE BATTER:

Carefully fold fresh or frozen blueberries into batter at the end of the mix cycle to minimize streaking. Incorporate IQF berries into batters while frozen and avoid over mixing to prevent breakage and bleeding. Bake immediately to prevent color leaching. One way to minimize blue color in the batter is to deposit half of the batter into the pan. Place blueberries on batter in pan, then deposit the remaining batter and top with blueberries. Some bakers coat blueberries with flour or starch to soak up juices before adding to the batter.

HOW TO AVOID SINKING BERRIES:

If berries sink to the bottom of the cake pan during baking, the specific gravity may be too low or too much air has been incorporated into the batter. If your formula is proven, be careful during the first stage of creaming. This is the stage where most unwanted air is incorporated. To increase specific gravity, use a thicker, denser batter.

KEEP THE BEAUTIFUL BLUES:

Acids, such as lemon juice and vinegar, affect berry color causing the blue pigment to turn reddish. In an alkaline environment, such as a batter with too much baking soda, a greenish-blue tinge can result. The secret to beautiful colored berries is proper pH.



Blueberry-Maple Bake

Blueberries add color and provide lovely fruit identity to this rich and wonderful bread pudding. Serve warm or cold.

YIELD: 16 (3.5 OZ/109 G) PORTIONS

	US	METRIC
Bread, egg or other white bread	14 oz.	398 g.
Cream cheese, reduced fat	4 oz.	114 g.
Highbush blueberries, fresh or IQF frozen	10.5 oz.	473 mL
Eggs, beaten	13 oz.	369 g.
Milk	13 oz.	355 mL
Maple syrup*	2.8 oz.	60 mL
Butter, melted	1.8 oz.	60 mL

PROCEDURE:

Remove crusts from bread; cut in 1-inch cubes (makes about 10 cups/2.37 liters). Cut cream cheese in small cubes (makes about 1 cup/236 mL). Grease 9 x 9 x 2 inch (23 x 23 x 5 cm.) bake trays. Place half of the bread cubes in the dish. Scatter cream cheese cubes and half the blueberries over the bread. Top with remaining bread cubes and blueberries. Combine eggs, milk, syrup and butter in a bowl. Carefully pour over bread mixture. Bake at 350°F (177°C) until done, about 1 hour. Cut into squares.

* For an ultra-blueberry treat replace maple syrup with blueberry syrup.

Blueberry-Flax Bars

These blueberry and flax bars contain 0.6 g. dietary fiber, 510. mg omega-3 fatty acid, and 946 TE antioxidant value!

YIELD: 18 DOZEN COOKIE BARS

INGREDIENT	% FLOUR	GRAMS	LB.	OZ.
Granulated sugar	89	1815	4	0
Butter	51	1049	2	5
Vanilla	(to taste)			
Salt	0.6	14		1/2
Pastry flour	100	2041	4	8
Milled flaxseed	21	510	1	0
Macaroon coconut	44	907	2	0
Cultivated blueberry pie filling	133	2722	6	0
Sanding sugar	22	454	1	0

PROCEDURE:

1. Cream together sugar, butter, vanilla and salt.
2. Add flour, milled flaxseed and coconut. Mix by hand to form crumbly mixture.
3. Spread 3 lb. 12 oz. (1584 g.) of mixture on each of two sheet pans (18 x 26 inch, 46 X 66 cm.). Flatten with small rolling pin.
4. Spread 3 lb. (1360 g.) pie filling on top of each prepared sheet pan.
5. Sprinkle remaining mixture evenly over top of both pans.
6. Sprinkle 8 oz. (227 g.) sanding sugar on each sheet.
7. Bake at 370°F (190°C), 25 minutes.
8. When cool, cut into 2 x 2 inch (5. x 5 cm.) pieces. One Serving = 43 g. (1.5 oz.).

FILLINGS AND FINISHES:

Incorporate blueberries into lusher fillings. Decorate with fresh blueberries. Swirl blueberries in a swirl. Add visual excitement to a variety of products. Bakers should ask for fillings with substantial amounts of blueberries, so the fruit is visible. Dehydrated blueberries, dices or whole, are ideal in mixes. Blueberry powders and other formats work well in rice cakes, snack bars, and savory treats.



Blueberries Taste Good and Are Always in Good Taste

When it comes to ingredients, the titillating, fruity Highbush blueberry is a flavorful choice. Use in hot sauces, savory salsas, and sweet toppings. Pair with a range of herbs and spices. Group with a variety of grain based products and dairy foods. Use in finished desserts such as pies, cakes, and tarts. Add to meat products – sauces, jerky, fillings, and stuffing. Swirl into ice cream. Dress up salad dressings with whole blueberries.

BLUEBERRY FOOD FOR THOUGHT

Blueberries in Dairy

Traditionally appreciated in homemade ice cream and for sweetening yogurt and cottage cheese, today blueberry use has expanded into ultra-premium ice cream, sorbet, and drinkable yogurts. Use in whole, mixed and purée formats. Blueberries add color and texture while complementing smooth, creamy dairy ingredients. Use fillings with substantial amounts of blueberry so the fruit is visible. Use frozen natural blueberries, nothing added, nothing taken away. Frozen blueberries fit well into a variety of formulations. In Europe, sorbets are made with blueberries as a primary ingredient. Capitalize on the goodness of real blueberries and think Blue. There are very few real blue food products. Blueberries give formulators a natural way to add this appealing color to a variety of products.



Blueberry Vanilla Swirl
Chocolate Blueberry
Blueberry Rum
Blueberry Rice Pudding
Blueberry-Cherry

Blueberry Flan
Soft Cheese
with Blueberry Garnish
Blueberry Blue Cheese
Blueberry Cream Cheese

Blueberry Orange Sorbet
Blueberry Rocky Road
Blueberry Mint
Blueberry Coconut
Blueberry Yogurt Bar

Blueberries in Beverages

One of the first commercially produced beverages in North America likely contained blueberries. During the Civil War soldiers in the field subsisted on sweetened blueberry drinks. Blueberries have a sugar/acid ratio that makes them ideal for blending with other high-acid fruit juices. Fruit juice flavors typically contain 10-12% sugar and 0.6-0.7% acid. Most berries are low in sugar (4-8%) and high in acid (about 1%). Blueberry juice is an exception. It is high in sugar (about 12%) and low in acid (about 1.9%). Blueberry juice blends treated with pectin or commercial enzymes will result in a clearer final product, with less clouding. Integrate blueberry skins into the beverage mix, as this is where anthocyanins and beautiful color are located. A range of blueberry products, such as purée, juice and concentrate, are available. Be specific in your end product requirements, as terminologies differ!



Blueberry Jugo
Blueberry Toddy
Blueberry Smoothie
Dried Blueberry Tea
Blueberry Grog
Blueberry Soda
Blueberry Malt
Blueberry Ginger
Blueberry Mango

Blueberry Fizz
Blueberry Sip
Blueberry Lemonade
Blueberry Bubble Tea
Blueberry Crush
Blue-tini
Blueberry Squash
Blueberry Pulque
Blueberry Cola

Blueberry Breeze
Blueberry Zuma
Blueberry Horchada
Blueberry Julep
Blueberry Bebida
Blueberry Glögg
Blueberry Lychee
Blueberry Dacquiri
Blueberry Punch

Blueberry Dulce
Blueberry Eggnog
Blueberry Sling
Blueberry Kava
Blueberry Sangria
Blueberry Mojito
Blueberry Brandy
Blueberry Absolut
Blueberry Cappuccino



Blueberry Syrup

Blueberry syrup adds panache to pancakes and waffles. Spoon over ice cream or flan. The use of whole blueberries in the syrup provides excellent fruit identity.

YIELDS: 2-1/2 CUPS (591 ML)

	US	METRIC
Highbush blueberries Fresh or frozen	8 oz.	227 g.
Light corn syrup	12 oz	340 g.
Cornstarch	0.5 oz.	14 g.

PROCEDURE:

Place 5 oz. (142 g.) of the blueberries and corn syrup in blender container. Cover blend on high speed 30 seconds or until blueberries are fairly smooth. In saucepan gradually stir blueberry mixture into cornstarch. Stirring constantly, bring to boil over medium heat and boil 1 minute. Remove from heat; stir in remaining 3 oz. (85 g.) of blueberries. Cool. Store covered in refrigerator.