

California Raisins



California Raisins provide flavor, texture, and color to a wide variety of products. Their natural sweetness allows for reductions of the sugar levels in formulations, and their high water binding capacity helps to retain moisture in bakery products. Based on their numerous attributes, raisins are adaptable to a variety of other manufactured products appealing to the new and growing market for health conscious consumers.



Raisin Products

The California Raisin industry offers a variety of products that are suitable for both consumer and industrial usage. The vast majority of the products offered are of the "Vitis vinifera" Natural Seedless varietal type and are typically dried by the sun, whether it is on paper trays or dried on the vine. Natural (sun-dried) Seedless raisins include the Thompson seedless and other newer cultivars such as Fiesta, Selma Pete and DOVine.

California Golden Seedless and California Dipped Seedless Raisins are mechanically dried and processed. Other raisin varietal types include Zante Currant, Muscat, Monukka, Sultana and other Seedless.

CALIFORNIA RAISINS

California Raisins are prepared from clean, dried grapes that have had their stems and capstems removed, then sorted, cleaned and thoroughly washed to assure a wholesome product.



APPLICATIONS - Bakery • Bread • Cereals • Condiments • Confectionery • Dairy • Snacks

- Extends the shelf-life of bread products
- Sweetens and colors natural baked goods
- Natural preservative
- Sugar substitute
- Filling for hard candies and molded chocolates
- Controls breakage in crisp cookies and crackers
- Maintains moisture in chewy cakes, soft cookies
- Natural binding agent in cereal bars
- Natural syrup for yogurts and ice cream
- Enhances the color and flavor of chocolate milk and ice cream
- Enhances the flavors of sauces
- Natural coloring agent

CHARACTERISTICS

Physical Properties

Specific gravity

At 13-15% moisture	1.4-1.42
At 15-18% moisture	1.275
Weight per berry at 13-15% moisture	0.41-0.48g

Water activity at 25°C

At 13-15% moisture	0.51-0.56
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Loose and tapped bulky density

Poured density	0.6-0.7g/ml
Tapped density	0.66-0.78 g/ml

Shear strength

Maximum shear force	47-53 kg
Penetration force	151-171g

Chemical Properties

pH (2:1 dilution)	3.5-4.0
Acidity (as tartaric acid)	1.5-2.2%
Total reducing sugars	68-70g/100g
Glucose	31.7-33.1g/100g
Fructose	36.2-36.9g/100g
Sucrose	< 0.1g/100g
Fructose/Glucose	1.12-1.15

Microbiological Aspects

<i>E. coli</i> (MPN/g)	Negative
<i>Salmonella</i>	Negative

AVAILABILITY and STORAGE

California Raisins are shipped in poly-lined boxes or bulk packages of 30 lbs (13.6 kg) and other size cartons. A full container load of approximately 17 metric tons per 20-foot ocean container is 1,250 to 1,800 cases, depending on the carton size. California Raisins are available in a variety of snack and consumer size packs, too. Store in the original packaging at a temperature below 45°F (7.5°C) and a relative humidity of 45% to 55%. Close package tightly and/or provide airtight protection after opening.

COMPOSITION

Nutrients

Energy	299Kcal
Water	15.5g
Proteins (N x 6.25)	3.3g
Carbohydrates (total by difference)	79.3g
Dietary Fiber	4.5g
Ash	1.7g
Fat (total lipids)	0.3g

Minerals

Calcium	62mg
Copper	0.27mg
Iron	1.8mg
Magnesium	36mg
Manganese	0.28mg
Phosphorus	98mg
Potassium	744mg
Sodium	26mg
Zinc	0.36mg

Vitamins

Ascorbic Acid (Vitamin C)	2.3mg
Thiamin	0.11mg
Riboflavin (by microbiological assay)	0.13mg
Niacin (by microbiological assay)	0.77mg
Vitamin B ₆	0.17mg
Folate	5µg

Nutrients / 100g*; g = gram; mg = milligram;
µg = micrograms; Kcal = kilocalorie;
IU = International Unit

*100g serving size is for convenience of food manufacturers. Consumer serving size is 1/4 cup/40g. The consumer Nutrition Facts table is available [here](#)

CALIFORNIA RAISIN PASTE

Raisin Paste is made by extruding raisins through a fine mesh screen. This paste can be used to add visual appeal and flavor to many products.

APPLICATIONS - Bakery • Bread • Cereals • Condiments • Confectionery • Dairy • Snacks

- Humectant
- Natural mold inhibitor
- Enhances and is compatible with other flavors
- Natural ingredient
- Compatible with a variety of flavors
- Adds visual appeal
- Sweetens naturally
- Low microbiological counts, low pH
- Low moisture activity, shelf stable
- 4.5g Fiber per 100g serving

CHARACTERISTICS

Physical Properties *

Specificgravity

At 13-15% moisture 1.4-1.42

At 15-18% moisture 1.275

Weight per berry at 13-15% moisture 0.41-0.48g

Water activity at 25°C Low - 0.51 - 0.62

Moisture content Greatly influences its spreading and handling characteristics.

Texture Very fine and smooth product or coarse paste. Blends without liquids.

Chemical Properties

pH (2:1 dilution) 3.5-4.0
Acidity (as tartaric acid) 1.5-2.2%
Total reducing sugars 68-70g/100g
Glucose 31.7-33.1g/100g
Fructose 36.2-36.9g/100g
Sucrose < 0.1g/100g
Fructose/Glucose 1.12-1.15

Microbiological Aspects

E. coli (MPN/g) Negative
Salmonella Negative

AVAILABILITY and STORAGE

Raisin Paste is available in 22.7 kg (50 lb.) poly lined cartons. Store raisin paste at temperatures between 15°C and 21°C (60°F and 70°F). Do not expose to air for extended periods. Provide cold storage and protection from insects for extended storage.

COMPOSITION

Nutrients *

Energy 299Kcal
Water 15.5g
Proteins (N x 6.25) 3.3g
Carbohydrates (total by difference) 79.3g
Dietary Fiber 4.5g
Ash 1.7g
Fat (total lipids) 0.3g

Minerals

Calcium 62mg
Copper 0.27mg
Iron 1.8mg
Magnesium 36mg
Manganese 0.28mg
Phosphorus 98mg
Potassium 744mg
Sodium 26mg
Zinc 0.36mg

Vitamins

Ascorbic Acid (Vitamin C) 2.3mg
Thiamin 0.11mg
Riboflavin (by microbiological assay) 0.13mg
Niacin (by microbiological assay) 0.77mg
Vitamin B₆ 0.17mg
Folate 5µg

*Nutrients / 100g**; g = gram; mg = milligram;
µg = micrograms; Kcal = kilocalorie;
IU = International Unit

* Values are the same as for raisins since the paste is 100% raisins with nothing added.

RAISIN JUICE CONCENTRATE

Raisin Juice Concentrate is a pure extract of raisins evaporated to produce a self-preserving concentrate.

APPLICATIONS - Bakery • Bread • Cereals • Condiments • Confectionery • Dairy • Snacks

- Extends the shelf-life of bread products
- Sweetens and colors natural baked goods
- Natural preservative
- Sugar substitute
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- Controls breakage in crisp cookies and crackers
- Maintains moisture in chewy cakes, soft cookies
- Natural binding agent in cereal bars
- Natural syrup for yogurts and ice cream
- Enhances the color and flavor of chocolate milk and ice cream
- Enhances the flavors of sauces
- Natural coloring agent

CHARACTERISTICS

Color	Amber to dark brown
Flavor	Inherent fruity flavor
Viscosity	260-500 cp at 21°C (70°F)
Weight	1.35 kg/liter (11.25 lbs/gallon) at 70° Brix
Specific gravity	1.348
pH	2.0 to 3.5
Tartaric acid	2%
Propionic acid	about 500-600ppm
Reducing sugars	85 to 90% of dry solids

Microbiological Aspects

<i>E. coli</i> (MPN/g)	Negative
<i>Salmonella</i>	Negative

AVAILABILITY and STORAGE

Raisin Juice Concentrate is available in 18.9-liter pails (5 gallons), 208-liter drums (55 gallons) and tank cars. For 18.9 liter pail: Net weight: 26.5 kg (59 lbs) Gross shipping weight: 28 kg (62 lbs).

Low pH, high sugar and soluble solids content make raisin juice concentrate self-preserving. Store at temperatures between 15°C and 21°C (60°F to 70°F). Although, extended storage may affect its color and flavor, this change is slow.

COMPOSITION

Nutrients

Energy	282Kcal
Carbohydrates (total by difference)	68.4g
Sugar (reducing sugar)	54.2g
Protein (N x 6.25)	2.0g
Ash	0.7g
Fat	0.1g
Fiber	0.9g
Total Acid (tartaric)	0.7g

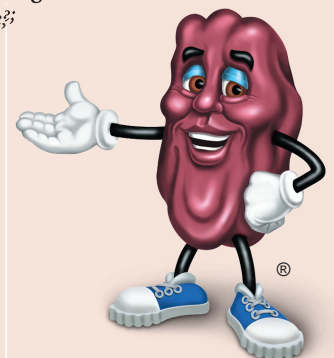
Minerals

Sodium	37.2mg
Potassium	141mg
Calcium	49.4mg
Magnesium	53.7mg
Phosphorus	124mg
Iron	5.2mg

Vitamins

Niacin (by microbiological assay)	0.82mg
Riboflavin (by microbiological assay)	0.09mg
Thiamin	0.08mg

Nutrients / 100g*; g = gram; mg = milligram;
µg = micrograms; Kcal = kilocalorie;
IU = International Unit



RAISINS FROM CALIFORNIA

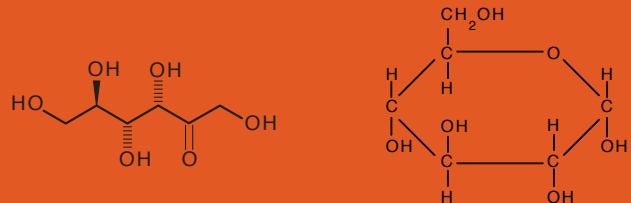
California Raisins are a clean, quality assured product from the United States.

- California Raisins are grown and processed to meet USDA standards for the U. S. food supply.
- Some raisins are imported and are grown without the high quality standards set by the U.S. and California.
- California Raisins are the lowest cost, value-added dried fruit and the supply is abundant.
- California Raisins can be custom packed to meet your company's exacting requirements.

Now that you know the facts, why not change your specifications from “raisins and currants” to “California Raisins and Currants?” It is your assurance of receiving the safest, highest quality dried fruit.

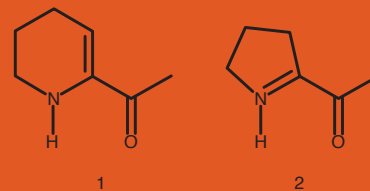
Naturally Sweet.

California raisin growers pick Natural Seedless grapes when they have a high Brix of 20° to 23°, percent sugar, at the very peak of ripeness. When dried, raisins contain natural fruit sugars and are plump and chewy. California Raisins do not require sugar infusions for weight like some specialty variety fruits.



Natural Color.

California Raisins are naturally brown due to the Maillard reaction that occurs after picking and as they dry. This appealing dark color is fixed and will not bleed or discolor food products. No artificial food colorants or additives are used in the production of California Raisins.



California Raisins have antimicrobial properties to extend shelf life and clean up labels.

"Evaluation of Antioxidant Effects of Raisin Paste n Cooked Ground Beef, Pork, and Chicken"

Food Chemistry and Toxicology, M.N. Vasada and D.P. Cornforth

The objective of this study was to evaluate the possible antioxidant activity of raisin paste added to raw ground beef, pork, or chicken before cooking to 163°C. Addition of raisin paste lowered ($p < 0.05$) TBA values and decreased panel scores for rancid flavor of all meat samples in a concentration-dependent manner.

"Antimicrobial Properties of Raisins in Beef Jerky Preservation"

Journal of Food Science, C.K. Bower, K.F. Schilke, and M.A. Daeschel

Fruits and vegetables may contain components that exert antimicrobial effects. In this study, beef jerky formulated with 15% raisins produced conditions inhibitory to pathogenic bacteria by decreasing pH to 5.4 and a_w to 0.64. Raisins in ready-to-eat meats such as jerky produce a lower fat, higher fiber product with antimicrobial capability and increased antioxidant potential, thereby providing a potentially safer, healthier alternative to traditional meat snacks.

BENEFITS OF CALIFORNIA RAISINS

From their consistent color and flavor, to extending product shelf life, there are many advantages to using California Raisins in your products.

CHARACTERISTICS	VALUE	BENEFITS
Flavor Stability	The sweet and fruity flavor develops during the period of sun-drying which can be 2-8 weeks. It is stable for up to 15 months when stored in recommended conditions.	<ul style="list-style-type: none"> • A natural flavor that consumers recognize and value in food products • Does not change during storage • Not affected by manufacturing processes
Flavor Enhancement	California Raisins contain 2.2 percent tartaric acid, a flavor enhancer. They also contain precursors of the Maillard reaction, which occurs during the browning of sugars.	<ul style="list-style-type: none"> • Function as flavor enhancers • Flavor potentiators in roasted, baked and microwaveable products
Flavor Compatibility	California Raisins blend well with sweet flavors-vanilla, cinnamon and citrus. They also blend well with savory flavors-both mild and spicy.	<ul style="list-style-type: none"> • Excellent flavor background for savory dishes and ethnic foods • Compatible with all sweet foods
Texture/Fat Substitute	California Raisins are plump, fresh-tasting and have a soft “chew” that mimics fat and richness. Raisins act as a fat-substitute in baked goods without the addition of significant amounts of water.	<ul style="list-style-type: none"> • Offer pleasant chewiness in a wide range of products • Not gritty, typically free from large sugar crystals • Function well in fat-free baked goods, cookies and cakes
Texture/Skin Integrity	Their skin is not damaged by processing aids or by other processes. California Raisins retain their shape and integrity during manufacturing processes.	<ul style="list-style-type: none"> • Are not easily damaged during mixing • Fruit plumps and keeps its integrity during microwaving and baking • Will not collapse, builds volume
Texture/Binding	California Raisin sugars create a firm texture that can help bind dry ingredients.	<ul style="list-style-type: none"> • A base ingredient in bars, snacks, cookies and other products
Water Activity	At the same moisture content, California Raisins generally have a lower water activity than other dried vine fruits due to their intact skin and fructose and glucose content.	<ul style="list-style-type: none"> • Low water activity (A^w) allows use in low moisture snacks, confections and cereals • Easily conditioned for bakery products • Easy to formulate
Chemical Properties	Naturally occurring organic acids including tartaric, propionic and glutamic acids provide valuable benefits to manufacturers.	<ul style="list-style-type: none"> • Enhance flavors • Inhibit mold growth • Natural preservative
Consistency	Careful harvesting and state-of-the-art processing ensure a consistent product, crop year to crop year.	<ul style="list-style-type: none"> • Consistent color and flavor • Consistent chewiness • Meaty and firm
Quality Control	Quality backed by strict inspection procedures makes California Raisins best in the world.	<ul style="list-style-type: none"> • Aflatoxin negative • Low microorganism count