

Processed Frozen Washington Red Raspberries

Buyer's Guide





THE NEXT BIG THING

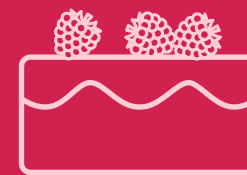
Red raspberries are prized for their sweet-tart flavor, beautiful color, and superior nutrition profile. Processed frozen red raspberries—individually quick frozen (IQF), puree, and concentrate—provide the same high quality and are readily available year-round for foodservice operators and food manufacturers to capitalize on consumer demand for and interest in health, flavor innovation, natural ingredients, and clean label foods.



CONDIMENTS



DRESSINGS



BAKERY



FILLINGS



GLAZES



CONFECTION



SNACK



BEVERAGE



CEREAL



DAIRY



ICE CREAM

PACKED AT THE PEAK OF FLAVOR AND NUTRITION: ALWAYS IN SEASON

Processed frozen raspberries maintain the sensory attributes most important to consumers: ruby red color, a rich fragrance and a flavorful fusion of sweet and tart. Consumers view raspberries positively, as something truly unique: a food that's both indulgent and healthful. The health halo surrounding raspberries is supported by their unique nutritional profile. Plus, processed raspberries add natural sweetness and real fruit to a variety of food products and on menus.



MARKET RESEARCH SUPPORTS POPULARITY *of* SWEET-TART RASPBERRIES

The National Processed Raspberry Council (NPRC) conducted consumer research and purchased foodservice and CPG usage data that revealed these insights.*



While it's clear that many people seek raspberries simply for their flavor, usage data suggests the trend to healthier eating is a significant factor.

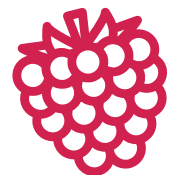
Of the many items made with raspberries that consumers wish to see on menus, **salads, dessert items, and ice cream** top the list.



More than
75%
of consumers

wish they could find more food and beverage items made with raspberries in grocery stores and on restaurant menus.

- Ice cream
- Muffins
- Yogurt
- Cereal
- Salad dressings
- Cakes and Pies



are a few of the items **grocery shoppers** would like to see made with raspberries.

*Consumer attitude and usage study among 758 primary grocery shoppers conducted by the National Processed Raspberry Council (NPRC) in late 2014.

MARKET RESEARCH SUPPORTS POPULARITY *of* SWEET-TART RASPBERRIES



Almost three-quarters of people who purchase frozen raspberries use them to make smoothies.

Nearly half use them in baked goods such as pastries and muffins, or on desserts like cheesecake and ice cream.

When shopping for packaged goods, consumers want anything with fruit in its name to be made with

———— **real fruit** ————

A majority of the time,

63%

check the label for ingredients.

Whether in energy bars or spoonable yogurt, the health benefits of raspberries were relevant, but **flavor remained the draw.**

*Consumer attitude and usage study among 758 primary grocery shoppers conducted by the National Processed Raspberry Council (NPRC) in late 2014.

RED RASPBERRIES APPEAR IN A MULTITUDE OF NEW PRODUCTS

Reviewing consumer packaged goods between

• 2009 – 2014 •

Mintel Global New Products Database (GNPD) shows that

**raspberry product launches
in the U.S. food and drink market
increased by 116%.**

Snacks, dairy, juice drinks, and chocolate confectionary categories had the most new raspberry products.

Of U.S. raspberry product launches,

- 67% were shelf-stable products,
- 10% were refrigerated and
- 14% were frozen.

Since 2011, smoothies have increased their usage of raspberries by 44%, while cocktail raspberry inclusion rose by 57%.

IN FOODSERVICE,

where raspberries currently have limited menu presence, they are predominantly featured in smoothies, cocktails, desserts and bakery items.

Added to indulgent categories like snacks and chocolate, processed raspberries can deliver on consumers' desire for both flavor and added health benefits.

In addition to their desirable flavor profile, raspberries are high in fiber and vitamin C, a powerful antioxidant. Raspberries have 6g of fiber per cup, or 21% of the Daily Value.

*Mintel, January 2015, Raspberry Usage in Retail and Foodservice



RED RASPBERRY PRODUCT FORMS AND PACK STYLES

A range of product forms offer convenience for countless applications. Minimal waste, ample supply and endless uses make red raspberries the perfect fruit to add flavor, color, texture, nutrition, and consumer appeal.

The processed frozen red raspberry product forms listed here are widely available. Most processors have the ability to customize orders for specific needs or unique applications.

Frozen red raspberries are prepared from fully ripened fresh fruit; may be packed with or without packing media; and are frozen and stored at temperatures necessary for the preservation of the product (-4° to -9°F / -20° to -23°C).

The grade of processed frozen red raspberries, for consumer, foodservice and manufacturing, is based on: color, absence of defects, and character (percentage of crumbles/broken pieces).

RED RASPBERRY PRODUCT FORMS AND PACK STYLES



Product Formats	Pack Form	Pack Size
IQF RASPBERRIES (Individually Quick Frozen) <ul style="list-style-type: none">Red raspberries are quick frozen to between -22° and -31°F/-30° to -35°C. The fruit may or may not be sweetened. Product specs vary by supplier.	Grade A fruit not for manufacturing includes less than 10% broken pieces by weight.*	Retail poly bag: 11 to 30 oz
	Grade B fruit not for manufacturing includes not more than 20% broken pieces by weight.*	Case: 10 to 25 lbs

**United State Standards for Grades of Frozen Raspberries published in the Federal Register of May 22, 1957, (22 FR 35435)*

RED RASPBERRY PRODUCT FORMS AND PACK STYLES



Product Formats	Pack Form	Pack Size
WHOLE AND BROKEN	Grade A fruit for manufacturing includes not more than 25% broken pieces by weight.*	Case: 10 to 25 lbs
	Grade B fruit for manufacturing includes not more than 50% broken pieces by weight.	Case: 20 to 25 lbs Drum: 250 to 400 lbs

**United State Standards for Grades of Frozen Raspberries published in the Federal Register of May 22, 1957, (22 FR 35435)*

RED RASPBERRY PRODUCT FORMS AND PACK STYLES



Product Formats	Pack Form	Pack Size
STRAIGHT PACK, BLOCK	Whole red raspberries and broken pieces frozen in their own juice, with or without sugar.	Pail: approx. 35 lbs Drum: 440 to 450 lbs

RED RASPBERRY PRODUCT FORMS AND PACK STYLES



Product Formats	Pack Form	Pack Size
PUREE, SIEVED <ul style="list-style-type: none">• Sieved red raspberries pass through a screen to remove seeds, and the screen size determines smoothness of puree and amount of seeds in the finished product.• Pureed raspberries, without seeds, may be pasteurized or unpasteurized before freezing at -5°F.• Brix for single strength puree averages 8° to 12°.• Brix for puree concentrate averages 20° to 28°.	.125-inch sieved puree contains 100% seeds.	Tub: 6.5 lbs
	.033-inch sieved puree contains no seeds.	Pail: approx. 35 lbs Drum: 400 to 450 lbs

RED RASPBERRY PRODUCT FORMS AND PACK STYLES



Product Formats	Pack Form	Pack Size
JUICE/CONCENTRATE <ul style="list-style-type: none">• Red raspberries are crushed, pressed, pasteurized, and concentrated.• Raspberry concentrate is available as concentrate or concentrate with essence.	Single Strength Juice averages 8° to 12° Brix.	Pail: 25 to 28 lbs Drum: 375 to 450 lbs
	Juice Concentrate (water partially extracted from single strength juice); degrees Brix averages 65°.	
	Juice Stock	

RASPBERRIES DELIVER LESS SUGAR AND MORE FIBER

Red raspberries deliver nutrients and health benefits naturally. 100 grams of frozen red raspberries have only 56 calories, 6.4g sugars, and 4.3g of fiber. Compared to other berries, raspberries are one of the lowest in natural sugar content and one of the highest fiber berries.

PROXIMATES

Raspberries, Unsweetened**	140 g	Unit
Food energy	78.4	kcal
Protein	1.61	g
Total lipid (fat)	1.13	g
Cholesterol	0	mg
Carbohydrate by difference	17.57	g
Fiber, dietary	6.02	g
Sugars, total	9.16	g

MINERALS



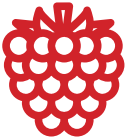


Raspberries, Unsweetened**	140 g	Unit
Calcium, Ca	33.6	mg
Iron, Fe	1.06	mg
Magnesium, Mg	32.2	mg
Phosphorous, P	42	mg
Potassium, K	257.6	mg
Sodium, Na	5.6	mg
Zinc, Zn	0.43	mg

VITAMINS

Raspberries, Unsweetened**	140 g	Unit
Vitamin C, total ascorbic acid	24.64	mg
Thiamin	0.12	mg
Riboflavin	0.14	mg
Niacin	0.95	mg
Vitamin B-6	0.09	mg
Folate	39.2	µg
Vitamin B-12	0	µg
Vitamin A, (mcg RAE)	5.6	µg
Vitamin E (alpha-tocopherol)	1.05	mg
Vitamin D	0	IU
Vitamin K	0	µg

**USDA National Nutrient Database for Standard Reference Release 27 (<https://fdc.nal.usda.gov/fdc-app.html#/food-details/168209/nutrients>)

FROZEN BERRY COMPARISON¹

Description		Carbohydrate (g)	Fiber (g)	Sugar (g)	Vitamin C (mg)
	Blackberries Frozen, Unsweetened	23.7	7.6	16.1	4.7
	Blueberries Frozen, Unsweetened	18.9	4.2	13.1	3.9
	Raspberries Frozen, Unsweetened	17.6	6.0	9.2	24.6
	Strawberries Frozen, Unsweetened	13.6	3.1	6.8	61.4
	Cranberries Raw, unsweetened	12.0	3.6	4.3	14.0

EXCELLENT SOURCE OF VITAMIN C

A one-cup serving of frozen red raspberries provides 28% of the recommended daily allowance of vitamin C, an important nutrient. Humans do not have the ability to make vitamin C and must obtain vitamin C from the diet. Vitamin C functions as an antioxidant and as an enzyme cofactor.

¹ Data from USDA Nutrient Database SR 27, accessed June 2015

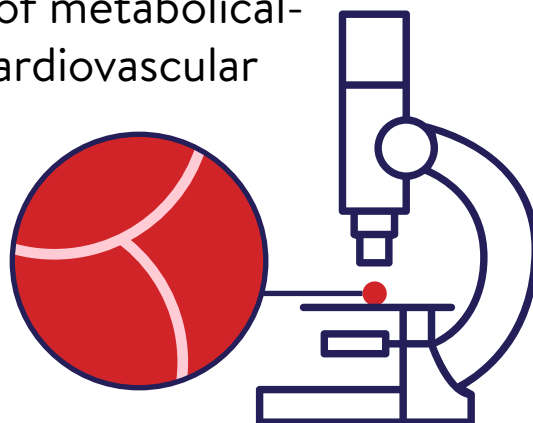
² Linus Pauling Institute Micronutrient Information Center, Oregon State University. <http://lpi.oregon-state.edu/mic/vitamins/vitamin-C>

HEALTH PROMOTING POTENTIAL OF RED RASPBERRIES

Phytochemicals are individual compounds from plants found in fruits and vegetables. Raspberries are among the few plant foods that provide a source of the phytochemicals ellagitannin and anthocyanin in the same package. According to a comprehensive review of the available scientific literature published in the January 2016 issue of *Advances in Nutrition*³, evidence suggests that the action of vitamin C (an antioxidant), fiber, and phytochemicals in red raspberries may be the key to their health promoting properties, including:

- anti-inflammatory
- anti-oxidative
- metabolic stabilizing activity

These properties shed light on the potential role of red raspberries in helping to reduce the risk of metabolically-based chronic diseases, including cardiovascular disease, diabetes mellitus, obesity, and Alzheimer's disease: all of which share critical metabolic, oxidative, inflammatory links. However, more research is needed, especially through human clinical trials.



Numerous research studies have been conducted on the health benefits of eating more fruits and vegetables, including raspberries. For more information about red raspberry nutrition research and to review scientific papers, go to redrazz.org/health/research/

- 1 Nile SH, Park SW, Edible Berries: Bioactive Compounds and their effects on human health. *Nutrition* 2014 Feb; 30(2) 134-44
- 2 Rodriguez-Mateo A et al. Berry Polyphenols and Cardiovascular health. *Jour Food Chem* 2013 Oct 7.
- 3 Burton-Freeman, B: Red Raspberries and Their Bioactive Polyphenols: Cardiometabolic and Neuronal Health Links. *Adv Nutr* January 2016 *Adv Nutr* vol. 7: 44-65, 2016

RED RASPBERRY PRODUCTION AND HARVEST PRACTICES



The raspberry plant (*Rubus idaeus*) is a member of the rose family, and is native to Eurasia. Raspberries are caneberries, and as such are not true berries. In the botanical definition, berries are fruits that come from a single ovary. Raspberries are an aggregate. A single flower has from 50 to 150 ovaries, and each ovary makes a separate small drupelet, also called fruitlet. The drupelets are nourished through contact with the flower base and held together by the entanglement of small hairs born on their surface. Raspberries have one of the highest respiration rates of any fruit, making it the most delicate berry.

Raspberry canes thrive in climates with cool summers, mild winters, and a rain-free harvest season. Washington State is a good example of a perfect growing climate for red raspberries, where the soil is rich and well drained, and the climate provides a long, cool growing season.

The perennial nature of raspberries rewards good stewardship. Growing raspberries is labor intensive, as the canes require tending year-round.



Red raspberries grown for freezing are harvested at the peak of ripeness; the harvest season is short and fast, typically four to six weeks. Processors use unique flash-freezing methods to protect the fragile berry and to lock in the color, flavor, and nutrition assets.

Raspberries are harvested by hand or machine, and within hours of harvest the fruit is frozen at temperatures between -5° to -10°F / -30° to -35°C . This quick freezing seals in juices, maintains

the integrity of each berry and berry piece, and locks in peak flavor and nutrition. There's minimal waste during harvest because whole raspberries, broken pieces and crumbles are all processed for IQF (individually quick frozen), puree, and juice concentrate products.

The processed raspberry industry—from nursery to farm to freezer—grows, harvests, freezes, and ships the crop with a focus on sustainable practices.



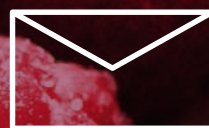
ABOUT THE WASHINGTON RED RASPBERRY COMMISSION

The Washington Red Raspberry Commission (WRRRC) was formed in 1976 to support and promote the raspberry industry. We are comprised of 9 grower board members who oversee programs that facilitate cultural and harvesting improvements, and regulate unfair trade practices within the industry.

We establish promotion plans and conduct programs for advertising, sales, promotion, and/or other programs for maintaining present markets and/or creating new or larger markets for raspberries. The Board also provides for research in the production and processing of raspberries.

There are over 40 different suppliers of red raspberry products who make up the Washington Red Raspberry Commission. Each company is committed to growing, harvesting and processing the highest quality berries in the world, and meeting the most stringent quality standards on the planet.

Our growers and processors are spread throughout southern Canada, the western part of Washington state and northern Oregon.



*For more information visit **redrazz.org**
or drop us a line at **info@redrazz.org***



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