

Apricots

Revised 2018

Thermal Properties

	English	Metric
Moisture, %	86.35	--
Protein, %	1.40	--
Fat, %	0.39	--
Carbohydrate, %	11.12	--
Fiber, %	2.40	--
Ash, %	0.75	--
Specific Heat Above Freezing	0.92 Btu/lb*°F	3.87 kJ/(kg*K)
Specific Heat Below Freezing	0.47 Btu/lb*°F	1.95 kJ/(kg*K)
Latent Heat of Fusion	124 Btu/lb	288 kJ/kg

Storage Conditions

	Fresh	Frozen	Canned	Dried
Temperature	31-32°F (-0.5 to 0°C)	0 to -5°F (-18 to -21°C)	60°F (16°C)	32-40°F (0-4°C)
Storage Period	1-2 weeks	1 year +	1 year +	1 year
Relative Humidity (or Packaging)	90-95%	In moisture-proof, air-tight container		In moisture- proof, air-tight container
Highest Freezing Point	30.1°F (-1°C)			

Fresh Storage

Fully ripe apricots are very perishable, do not store or ship well, and are easily bruised. For fresh market use, therefore, they are harvested before they are fully ripe. If they are sound and are promptly cooled to below 36°F (2°C), they can be held in good condition at 31-32°F (-0.5 to 0°C) for 1 to 3 weeks. If stored at 40-45°F (4-7°C), they will have less flavor and a more mealy texture when ripened. Some cultivars stored for processing benefit from controlled atmosphere (CA) storage in 2-5% oxygen and 10-15% carbon dioxide for up to 3-4 weeks, depending on the cultivar and maturity stage. CA storage of apricots for the fresh market is not recommended because it is not cost-effective. A ripening temperature of 65-

75°F (18-24°C) is satisfactory; the higher the temperature the faster the ripening. The most important cause of deterioration during handling or shipping of fresh apricots is decay, primarily by brown rot.

Diseases and Injuries

Blue Mold Rot	<p>Not so common on apricots, except very soft over-ripe ones: tissue becomes watery, soft and light brown; decayed mass separates readily from sound tissues; blue spores eventually appear on white, tufted fungus growth; skin easily separates from sound tissue.</p> <p>Control: Prevention of skin punctures and injuries is of prime importance. Rapid cooling to 32°F (0°C) is very helpful.</p>
Brown Rot	<p>Initially small, circular, light brown spots, which under favorable conditions (60 to 80°F = 16 to 27°C) enlarge very rapidly; spots never sunken and flesh remains firm; eventually yellowish-gray spore masses appear on surface.</p> <p>Control: Orchard spraying and sanitation are very important. Pre-cooling before loading for transport is very desirable. Refrigeration is the most commonly used method of control. A storage temperature of 32°F (0°C) is markedly better than 40°F (4°C) with regard to development of brown rot.</p>
Internal Breakdown	<p>Internal breakdown (chilling injury) in apricots appears as a browning around the seed and a softening of the flesh, much like that seen in peaches. It is likely to appear after 2 to 3 weeks at 31 to 32°F (-1 to 0°C) or 1 to 2 weeks at 36 to 40°F (2 to 4°C). A brown gel-like breakdown has been observed in apricots held in poly-lined boxes at high temperatures which were attributed to carbon dioxide levels above 5%.</p> <p>Control: Do not store fruit beyond 2 -3 weeks at optimum temperature and avoid high (>5%) CO₂ concentrations.</p>

Freezing

Some apricots are frozen whole for processing at a later time. Apricots are usually frozen as peeled halves; hence, if blanching or sulfuring has not been done, it is advisable to add ascorbic acid in the amount of 0.1% of weight of fruit to prevent browning. Sugar may also be added as a 40° Brix syrup or dry at a ratio of 3:1 or 4:1 of fruit to sugar. If dry sugar is used, adequate time should be allowed for the sugar to extract juice from the fruit to form its own syrup prior to freezing. It should be noted that the riper the fruit the better the flavor and color, and the higher the drained weight of the processed product. Overripe fruit is too mushy and may lack wholeness.

Apricots may be frozen in the package or before packaging on trays or wire mesh belts. Most of the apricots are packed in barrels or 30-lb. (13.6 kg) pails. To obtain good quality, these fruits should be frozen before packing.

Frozen apricots can discolor readily if exposed to elevated temperatures. Although a modest source of many nutrients, apricots are good source of vitamins A and C. A storage temperature below 0°F (-18°C) is sufficient to prevent discoloration for a year or longer, but can result in 25% loss of vitamin C in 6 months. To retain 75% of vitamin C for 12 months, frozen storage temperature must be reduced to -20°F (-29°C).

Canning

Preparation of apricots for canning is generally similar to their preparation for freezing. If they are handled promptly, and particularly if peeling is done by hot-lye or steam, blanching may be dispensed with. In contrast to the frozen product, most of the canned apricots are packed in small consumer-size containers.

Although canned apricots will not brown at elevated temperatures, the yellow pigments tend to fade with prolonged storage. These same pigments (carotenoids) are also the source of the major nutrient contribution of apricots (vitamin A). To assure not more than a 10% loss of this vitamin, canned apricots should be stored at temperatures below 60°F (16°C), if they are to be held for a year or longer.

Drying

Apricots are among the most popular dehydrated fruits. The usual drying method involves sulfuring and drying on trays in the sun or by hot air blast. They are then packed into flexible, moisture-proof film packages or coated boxes.

Although the high temperature drying process tends to destroy some nutrients, the sulfuring preserves most of them so that dried apricots are a good source of a number of nutrients. Thus, a 4-oz (113-g) serving of dried apricots can be expected to provide 10% of the daily requirements of calories, protein, calcium and riboflavin; 20% of the niacin and vitamin C, 50% of the iron and more than 100% of the recommended dietary allowance of vitamin A. To retain 90% of the nutrients in available form, dried apricots should be packaged in sealed, air-tight containers, preferably evacuated, and kept at temperatures below 60°F (16°C). If storage of longer than 6 months is contemplated, lower storage temperatures are needed. Dried apricots are easy to keep in refrigerated storage at 32-40°F (0-4°C) with 55 to 65% relative humidity. They remain in excellent condition for 1 year or more. Although low humidity is preferred, dried apricots can withstand 80% relative humidity at 32°F (0°C) if packed in moisture-proof containers.

WFLO is indebted to Dr. Adel Kader and Dr. Carlos H. Crisosto, Department of Plant Sciences, University of California, Davis, and Dr. Elhadi Yahia, Universidad Autonoma de Queretaro, for reviewing and revising this topic.