

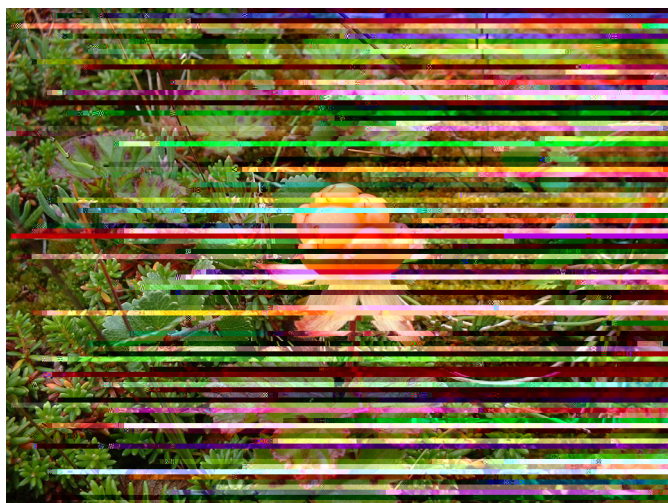
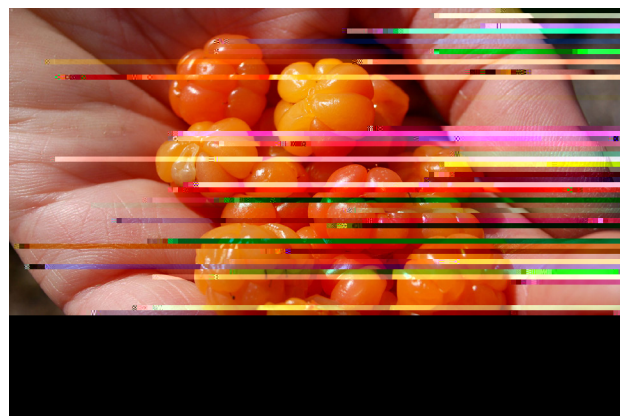
Cloudberries



The small, rosy peach-colored cloudberry (*Rubus chamaemorus* L.) is known in Alaska by several common names — low-bush salmonberry, aqpiq, baked apple berry and cloudberry. However, cloudberry is the name most often used throughout North America and in international botanical references. This berry grows almost exclusively in circumpolar regions and is prized in cultures and cuisines in Scandinavia, Russia, Canada and throughout Alaska.

Though related botanically to red raspberry (*Rubus idaeus* L.) and salmonberry (*Rubus spectabilis*), the cloudberry plant most closely resembles another highly sought arctic berry, nagoonberry (*Rubus arcticus* L.). In contrast to the prickly, tall canes of raspberries and salmonberries, cloudberries grow on very slender stems not more than two to eight inches high in boggy, open tundra and forest. Each stem has two to three circular leaves with rounded lobes and toothed edges and a single white, five-petaled flower.

The berry is composed of six to eight drupelets, forming a small roundish berry. Unripe cloudberries are hard, sour and red; as the berries ripen, they soften, sweeten and lighten to a rosy peach or amber hue.



Cloudberries are an excellent source of vitamin C, containing more than twice the amount per serving than a glass of orange juice and more than any other Alaska berry. They also provide a small amount of vitamin A. Historical references document early use of cloudberries to prevent and treat scurvy as well as the medicinal use of the roots and leaves of the plant. Although nutrient values reported for cloudberries vary depending upon the source and perhaps upon the exact location and growing conditions of the berries, all references indicate that they are a rare, rich source of vitamin C in the Arctic. Table 1 provides a comparison of the vitamin C and A levels with levels found in commercial blueberries.

Table 1. Vitamin A and C levels for commercial blueberries and wild cloudberries

Berry	Vitamin C (mg)	Vitamin A (IU)	Vitamin E
Blueberries	9.7	54	
Cloudberries	158	210	4

In addition to vitamin C, vitamin A and vitamin E, cloudbberries contain a number of other antioxidant plant compounds, including carotenoids and ellagitannins. Antioxidants are a group of bioactive compounds that prevent cellular damage from free radicals, which are highly charged oxygen- or nitrogen-containing compounds. Research has found that free radicals contribute to aging by damaging healthy cells — berry compounds such as ellagitannins seem to protect against premature aging and cancer at least partially because of the antioxidant effects.

Since they ripen in late July through early August, the best time to gather cloudbberries is mid- to late summer, depending upon the region. Ripe berries are very soft and amber-colored with a pink blush; they come off the stem very easily. Place picked berries in shallow containers so that they are not damaged.

Mature cloudbberries are very juicy and can be eaten raw or made into jams, jellies and syrups. Recipes from Scandinavia use the berries to make a “cloudberry cream” by mixing berries or prepared jam with sweetened whipped cream. They can also be used to make a western Alaska treat, “agutak.” Jam can be spread on cake layers or used in thumbprint cookies. The cloudberry flavor combines well with vanilla or citrus. Seeds may toughen after cooking, so some recipes suggest removing seeds prior to use by pressing softened berries through a food mill or sieve.

Storage and Preservation

How to Clean and Store

With their naturally high benzoic acid content, cloudbberries may keep without spoiling or fermenting for longer than expected. However, for best flavor and keeping quality, pick cloudbberries at their peak ripeness and either eat or preserve the same day that they are picked.

Handle the soft cloudbberries gently and as little as possible. Unless they are exceptionally dusty, do not wash.

- **To sterilize canning jars**, boil in water for 5 minutes.
- **To prepare two-piece lids** (rings and tops), wash, rinse and keep in hot water until ready to use.
- **If less sugar is desired** in recipes calling for pectin, be sure to use no-sugar-needed pectin and follow the instructions on the box.
- **To use a boiling water canner**, see instructions on page 3.

Pick through the berries to remove any leaves or debris. Refrigerate cleaned berries in a shallow container.

How to Freeze

Spread cloudbberries in a single layer on a cookie sheet and place in the freezer. When frozen, transfer berries to freezer bags or containers. Properly frozen cloudbberries will last up to two years.

How to Dry

Drying is not recommended for cloudbberries as they are too seedy and slow to dry. Cloudberry puree may be used to make fruit leather.

How to Extract Juice

Combine 4 cups clean cloudbberries with 1 cup water. Bring to a simmer, cover and simmer for 10 minutes. Gently crush the simmering berries to release the juice. To separate the juice from the berries, pour the hot mixture into a jelly bag or use layers of cheesecloth placed in a colander. Let the juice drip into a bowl. For clear juice, do not twist or press the berries while they drain. For long-term storage, the juice should be frozen or canned. *Yield*: 2 cups

Hot pack for juice

USDA/NRCS (2012) 6.7 (y bizeu) 122 (ra) 19 (n)/MCID /LaLang (C(h)84 4262 -

To process in a boiling water canner, follow these steps:

Fill the canner halfway with water. Preheat water to a low boil. Place filled jars, fitted with lids, into the canner on the rack. Add more boiling water, if needed, so the water level is at least 1 inch above jar tops. Turn heat to its highest position until water boils vigorously. When the water boils, set a timer for the recommended processing time indicated in the recipe. Cover with the canner lid and lower heat setting to maintain a gentle boil throughout the processing time. Add more boiling water, if needed, to keep the water level above the jars.

When the jars have been boiled for the recommended time, turn off the heat and remove the canner lid. Using a jar lifter, remove the jars and place them on a towel, leaving at least 1 inch of space between the jars during cooling.

After cooling jars for 12 to 24 hours, remove the screw bands and test seals. Press the middle of the lid with a finger. If the lid springs up when finger is released, the lid is unsealed. If a lid fails to seal on a jar, remove the lid and check the jar-sealing surface for tiny nicks. If necessary, change the jar, add a new, properly prepared lid and reprocess within 24 hours using the same processing time. Alternately, adjust headspace to 1½ inches and freeze, or store in the refrigerator and use within 1

18 TD.8 (e)-6 (a)-4.9 (l)31a (em)4.1 (o)16 -9 (ces)



but do not push it completely to the sides. Leave a bit of plastic showing for easy removal.

• **Preparation:** at 140°F for 10 to 18 hours. Leave oven door slightly open so moisture can escape. Test periodically for dryness. Fruit leather dries from the outside edge toward the center. Test for dryness by touching the center of the leather; no indentation should be evident. Continue drying until pliable and leatherlike.

• **Quality Control:** To ensure a quality product follow manufacturer's directions. Standard instructions follow, but they may need to be adjusted according to variations among dehydrators.

Lightly oil plastic leather tray or spread the puree on parchment paper cut to fit the dryer rack. Do not push the puree completely to the sides. Dry at 140°F for 6 to 8 hours until puree is evenly dry and leathery. While warm, peel fruit leather from plastic and roll up; allow to cool. Wrap rolled fruit leather in plastic. Store at room temperature up to one month. Freeze tightly-wrapped rolls for storage up to one year. **Yield:** 1 sheet

Cloudberry Syrup

1 cup cloudberry juice
1 teaspoon lemon juice
2 cups sugar

Combine all ingredients in a medium saucepan. Using a candy thermometer, heat mixture to 160°F; do not boil.

The syrup is ready to use over waffles, pancakes, hot biscuits, ice cream and other desserts. The syrup will keep up to six months in the refrigerator.

• **Preparation:** Sterilize pint or half-pint jars and prepare lids. Immediately pour syrup into hot canning jars, leaving ¼ inch headspace. Wipe jar rims and add prepared two-piece lids. Process 5 minutes in a boiling water canner. **Yield:** 2 cups

• **Preparation:** For cloudberry-rhubarb syrup, use ¾ cup cloudberry juice and ¼ cup rhubarb juice to equal 1 cup juice.

UAF Cooperative Extension Service (UMD 37 AF6) 11 Oct 2011