

A close-up photograph of several scoops of vanilla ice cream on a white plate. The scoops are arranged in a row, with the one in the foreground being the most prominent. The ice cream is topped with a square piece of dark chocolate. To the left of the scoops, there are several cinnamon sticks. The background is a soft, out-of-focus light yellow. The text "Ice cream" is overlaid in a large, black, italicized font, and "TIAME" is overlaid in a smaller, grey, sans-serif font below it.

# *Ice cream*

TIAME

# About Ice cream

- Ice cream (derived from earlier iced cream or cream ice) is a sweetened frozen food typically eaten as a snack or dessert. It is usually made from dairy products, such as milk and cream, and often combined with fruits or other ingredients and flavors. It is typically sweetened with sugar or sugar substitutes. Typically, flavourings and colourings are added in addition to stabilizers..

- The mixture is stirred to incorporate air spaces and cooled below the freezing point of water to prevent detectable ice crystals from forming. The result is a smooth, semi-solid foam that is solid at very low temperatures ( $<35\text{ }^{\circ}\text{F}$  /  $2\text{ }^{\circ}\text{C}$ ). It becomes more malleable as its temperature increases.



- The meaning of the phrase "ice cream" varies from one country to another. Phrases such as "frozen custard", "frozen yogurt", "sorbet", "gelato" and others are used to distinguish different varieties and styles. In some countries, such as the United States, the phrase "ice cream" applies only to a specific variety, and most governments regulate the commercial use of the various terms according to the relative quantities of the main ingredients, notably the amount of cream. the various terms according to the relative quantities of the main ingredients, notably the amount of cream. Products that do not meet the criteria to be called ice cream are labelled "frozen dairy dessert" instead. In other countries, such as Italy and Argentina, one word is used for all variants.



- Ice cream may be served in dishes, for eating with a spoon, or in cones, which are licked. Ice cream may be served with other desserts, such as apple pie. Ice cream is used to prepare other desserts, including ice cream floats, sundaes, milkshakes, ice cream cakes and even baked items, such as the Baked Alaska.

# Production

- Before the development of modern refrigeration, ice cream was a luxury reserved for special occasions. Making it was quite laborious; ice was cut from lakes and ponds during the winter and stored in holes in the ground, or in wood-frame or brick ice houses, insulated by straw. Many farmers and plantation owners, including U.S. Presidents George Washington and Thomas Jefferson, cut and stored ice in the winter for use in the summer. Frederic Tudor of Boston turned ice harvesting and shipping into a big business, cutting ice in New England and shipping it around the world.

- Ice cream was made by hand in a large bowl placed inside a tub filled with ice and salt. This was called the pot-freezer method. French confectioners refined the pot-freezer method, making ice cream in a sorbetière (a covered pail with a handle attached to the lid). In the pot-freezer method, the temperature of the ingredients is reduced by the mixture of crushed ice and salt. The salt water is cooled by the ice, and the action of the salt on the ice causes it to (partially) melt, absorbing latent heat and bringing the mixture below the freezing point of pure water. The immersed container can also make better thermal contact with the salty water and ice mixture than it could with ice alone.



- The hand-cranked churn, which also uses ice and salt for cooling, replaced the pot-freezer method. The exact origin of the hand-cranked freezer is unknown, but the first U.S. patent for one was issued to Nancy Johnson on 9 September 1843. The hand-cranked churn produced smoother ice cream than the pot freezer and did it quicker. Many inventors patented improvements on Johnson's design.





# Retail sales

- Ice cream can be mass-produced and thus is widely available in developed parts of the world. Ice cream can be purchased in large cartons (vats and squounds) from supermarkets and grocery stores, in smaller quantities from ice cream shops, convenience stores, and milk bars, and in individual servings from small carts or vans at public events. In 2015, US produced nearly 900 million gallons of ice cream.

# Specialty job

- Today, jobs specialize in the selling of ice cream. The title of a person who works in this speciality is often called an 'ice cream man', however women also specialize in the selling of ice cream. People in this line of work often sell ice cream on beaches. On beaches, ice cream is either sold by a person who carries a box full of ice cream and is called over by people who want to purchase ice cream, or by a person who drives up to the top of the beach and rings a bell. In the second method, people go up to the top of the beach and purchase ice cream straight from the ice cream seller, who is often in an ice cream van.

# Physical properties



Ice cream is considered as a colloidal system. It is composed by ice cream crystals and aggregates, air that does not mixes with the ice cream by forming small bubbles in the bulk and partially coalesced fat globules. This dispersed phase made from all the small particles is surrounded by an unfrozen continuous phase composed by sugars, proteins, salts, polysaccharides and water.