

Why does the country stipulate that the standard storage temperature of quick-frozen food is -18 °C ?

Detail Introduction :

Overview: The water and juice in food tissues will not be lost at -18°C, and at such a low temperature microorganisms will not multiply, and food safety is guaranteed, but changes in food taste and flavor are unavoidable. What's more, after quick freezing, the fat in the food will be slowly oxidized, and the vitamins will be slowly broken down.

Usually, when quick-freezing fresh food, the quick-freezing temperature is -30°C to -35°C. In daily life, food processed by cold storage and freezer is generally frozen under -18 °C to -23 °C, so the freezing time is relatively long, often more than 90 minutes. To be precise, this kind of food is called slow-frozen food.

The histological diagram of fresh vegetables can compare the difference between the quick-freezing treatment and the slow-freezing treatment before and after the freezing treatment. After the quick-freezing treatment of fresh vegetables, the moisture of the tissue condenses into small crystals, which are evenly distributed in the whole tissue. By magnifying the image, it can be seen that the cells are not deformed, and the water and juice in the food tissue are not lost. Food quality remains unchanged.

The production, processing, transportation, and sales of quick-frozen food have strict requirements on storage temperature and must be kept at -18°C for various activities.

Food experts believe that the main reason for keeping the temperature at -18°C is that all kinds of bacteria are in a state of complete inhibition. Various enzymes in the bacteria are also in a state of complete inhibition, and protein will not be decomposed. Including trace elements, macro elements, and vitamins will be preserved. Compared with other methods, this method of quick-frozen food is the best.

The consumption level of quick-frozen food reflects a country and region's economic development status and eating habits. Generally speaking, in economically developed countries and regions, the consumption of quick-frozen food is also high, the pace of life is fast, and the diet is fast. This is the trend of modern living standards, and it also makes quick-frozen food have huge market potential.