

Food Science

Our major is food science. We learn methods of preserving, processing, nutrition, hygiene, about sea foods, and so on. For example, we learn about dangerous bacteria



Starch cannot dissolve when it is suspended in water. However, it absorbs water and expands when heated. As heating is continued, starch will finally change into gelatin. This phenomenon is called starch gelatinization. When it happens, water will enter and damage the micellar structure and starch will become easy to digest.

However, as time goes by, starch will become hard and the micellar structure will form again. This phenomenon is called starch-aging. Aged starch loses its viscosity and it is difficult to digest.

To prevent starch becoming aged, food plants usually dry starch products above 80°C, dehydrate them rapidly at 0°C or lower, reduce their moisture content to 10~15%, or add some water retentive materials like sugar to keep them moist.



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Most of you are usually eating fermented foods. For example, soy sauce, sake, natto, and miso. This fermentation is done by each fermented bacteria. In the subject of food science, you can learn about these bacteria and how to make fermented foods. There are many kinds of these bacteria. It is very interesting.

Moreover, you can learn the effect of fermented food. Fermented foods have 5 good effects. First, increasing umami and flavor. Second, it is very highly nutritious. Third, it is easy on our stomach. Fourth, it is highly preservable. And finally, it is good for our health. Fermented foods are indispensable to us. We learn the secret of them.



Sea food's methods of preserving and processing.

Almost all raw sea food goes bad soon, so there are many kinds of methods of keeping and preserving it all over the world. For example, freezing, bottled, dried fish and fermented food. Those all kill or can't grow bacteria, and they have continued since a long time ago. But now people eat raw fish, because it is trendy Japanese food. We are changing the methods of preserving.

That is needed to keep raw, so we need to keeps fish with few bacteria.



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