

Using Colorimeter in order to sort cheeses

Colorimeter is utilized very much both inside and outside the factory because of its portability.

Background

Process cheeses which we often see in shops are produced from natural cheeses such as cheddar, gouda, etc. Natural cheeses are cheeses in which live bacteria or enzymes remain in the cheese; such cheeses are mainly imported to Japan from overseas. Process cheeses are produced from natural cheese by stopping the ripening process using heat as shown below. This heat causes the cheese to turn brown. The degree of browning depends on the kind of natural cheese or the country and season in which was produced. To produce high-quality process cheese requires using natural cheese which does not brown easily.

Outline of the measurement process

A cheese factory has been using the Colorimeter to measure the degree of browning of the natural cheese in the selection process. The measuring method is as follows; (In this factory, plastic wrap is used to prevent the specimen from sticking to the Colorimeter.)

1. cut a specimen 15mm in length and 10cm in diameter from the natural cheese and set it on wax paper.
2. Heat the specimen to more than 120°C (248°F) to melt it.
3. After the specimen has cooled, wrap it in plastic wrap (to prevent the oil in the cheese from coming in contact with the Colorimeter) and take a measurement.

After the measurements, the process cheese is produced from natural cheeses which have been found resistant to browning. Besides measurements in the factory, the Colorimeter is used at Kobe port approximately once a month to measure the cheese in vinyl bags soon after it has been unloaded and before customs procedures.

Results

- Anyone can evaluate the browning of cheese (previously, it was evaluated by eye using a physical specimen for comparison).
- The portability allows one Colorimeter to be used anywhere, not only inside the factory.

[Production of process cheeses]

