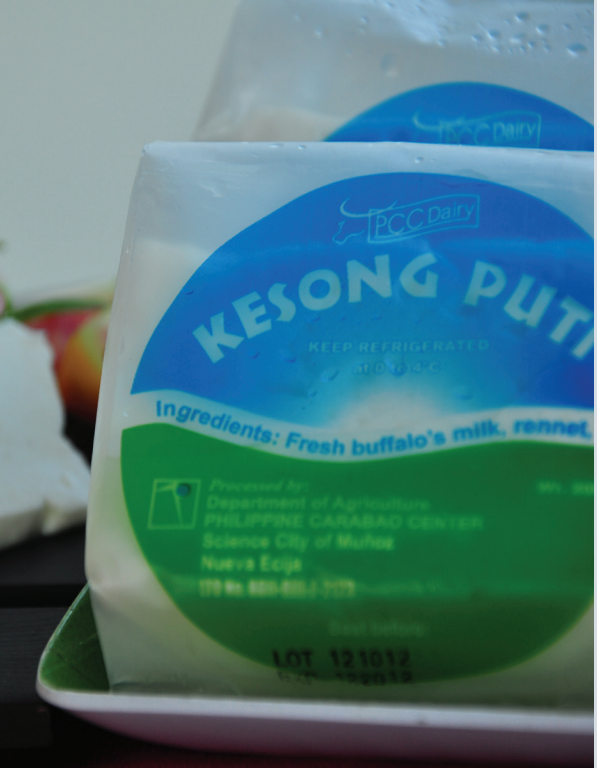

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FACTORS AFFECTING THE YIELD RECOVERY AND QUALITY OF KESONG PUTI

Proper heat treatment yields more cheese with firmer texture.

Kesong Puti is a traditional fresh soft white cheese made from buffalo's milk that originated from the provinces of Bulacan, Cebu, Laguna, Bacolod and Samar. There are two ways in producing kesong puti. Traditionally, vinegar is used in coagulating the milk yielding a slightly sour cheese and not-so-firm texture. On the other hand, using rennet as a coagulant can eliminate the sour taste and yields a firmer texture, which is crucial in cheese making.

Heat introduced in the milk for cheese production is important. Casein, a milk protein, is stable to heat treatment. High heat treatment of milk causes denaturation or changes the nature of whey proteins and interactions among denatured protein, casein micelles, minerals and fat globules. Interaction of whey protein with casein micelles interferes with the rennet coagulation process, resulting in long coagulation time and weak curd structure. B-lactoglobulin can form a layer over the casein micelle during high temperature treatments that prevents curd formation in cheese.

Problem

Long coagulation of curd yielding very soft and/or low percent recovery of kesong puti.

Solution

Heat treatment. Heat or pasteurize buffalo's milk at 72-75°C for 15 seconds to destroy pathogenic bacteria.

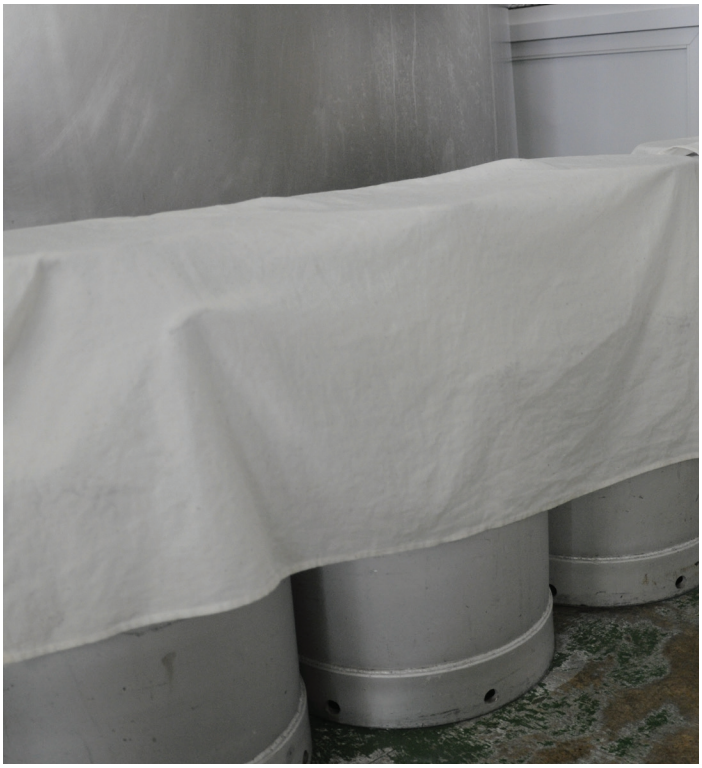
- High heat treatment can cause long to no coagulation time and weak curd structure due to denaturation of whey proteins or its interaction with casein micelles.

Cooling. Immediately cool milk to 40-45°C after pasteurization.

- Optimum temperature for rennet is 40-45°C. Above this temperature inactivates the rennet when added while lower temperature results in slower or no coagulation.

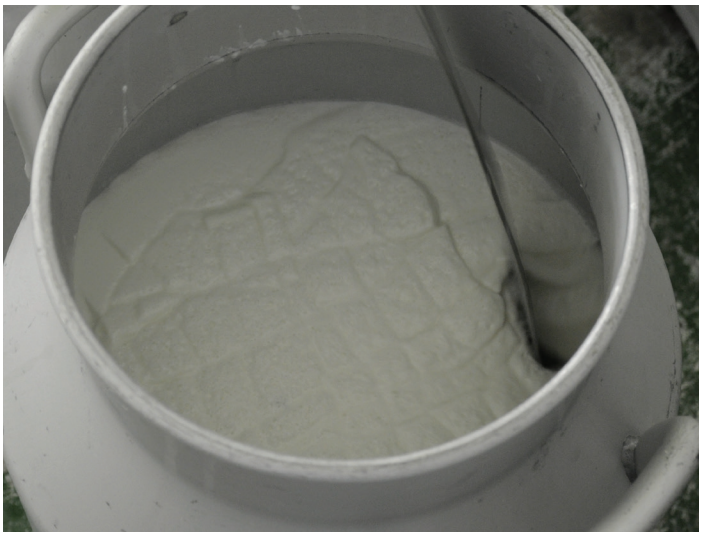
Renneting. Dissolve rennet in a small amount of water and add to the milk, then mix well.

Coagulation. After adding the rennet, leave the curd undisturbed for 30 minutes to one hour.



Cutting. Check for clean break. Cut in squares (1-2 in cubes) then let stand for 10 minutes. Cut again into smaller cubes. Let stand for 15 minutes.

- Size and set of curds are significant determinants of the type of cheese to produce simply because of the amount of moisture they contain. The more cuts done, the smaller the curds, and the more places there are that the water can escape from its casein. High water content cheeses are the soft cheeses, which have a larger curd cut.



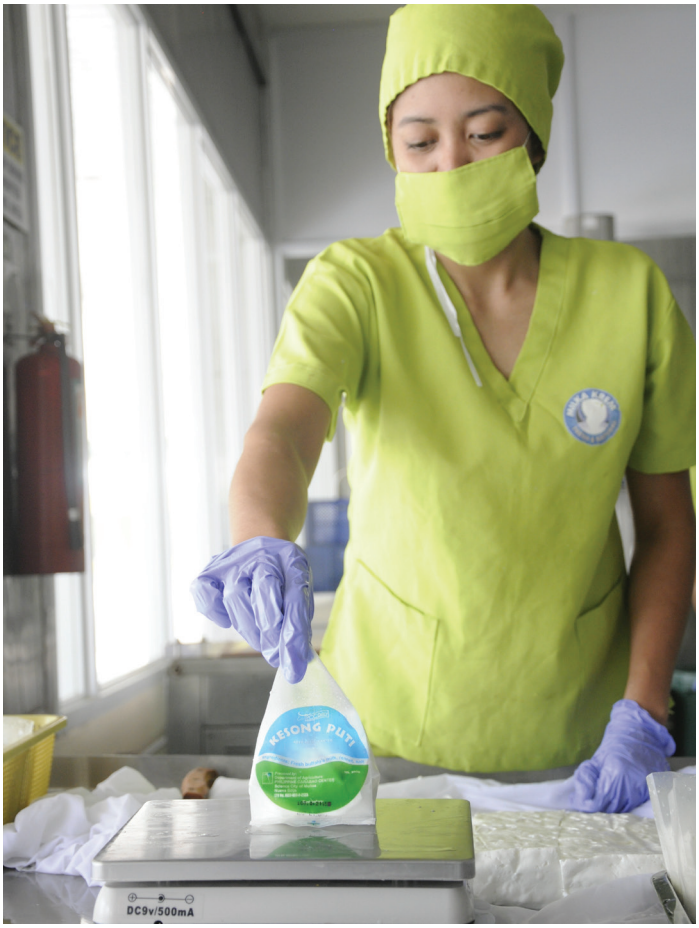
Scooping whey out. Scoop about 3-3.5L whey, which can be strained and pasteurized at 72°C for 15 seconds

- Whey, as a by-product in kesong puti making, can be used for making other dairy products.

Additions. Dissolve 400 grams salt in 5L water. Boil and cool to lukewarm temperature (35-40°C) before adding to cut coagulum. Mix and let stand for 20 minutes

Draining whey. Let the whey drain for 1-1.5 hours.

Packaging. Slice the curd at approximately 200g per pack.



Storage. Refrigerate at 0-4°C.

- Kesong Puti should not be stored frozen as it can form ice crystals in the cheese resulting in punctures on the curd and compromising the expected smooth texture.

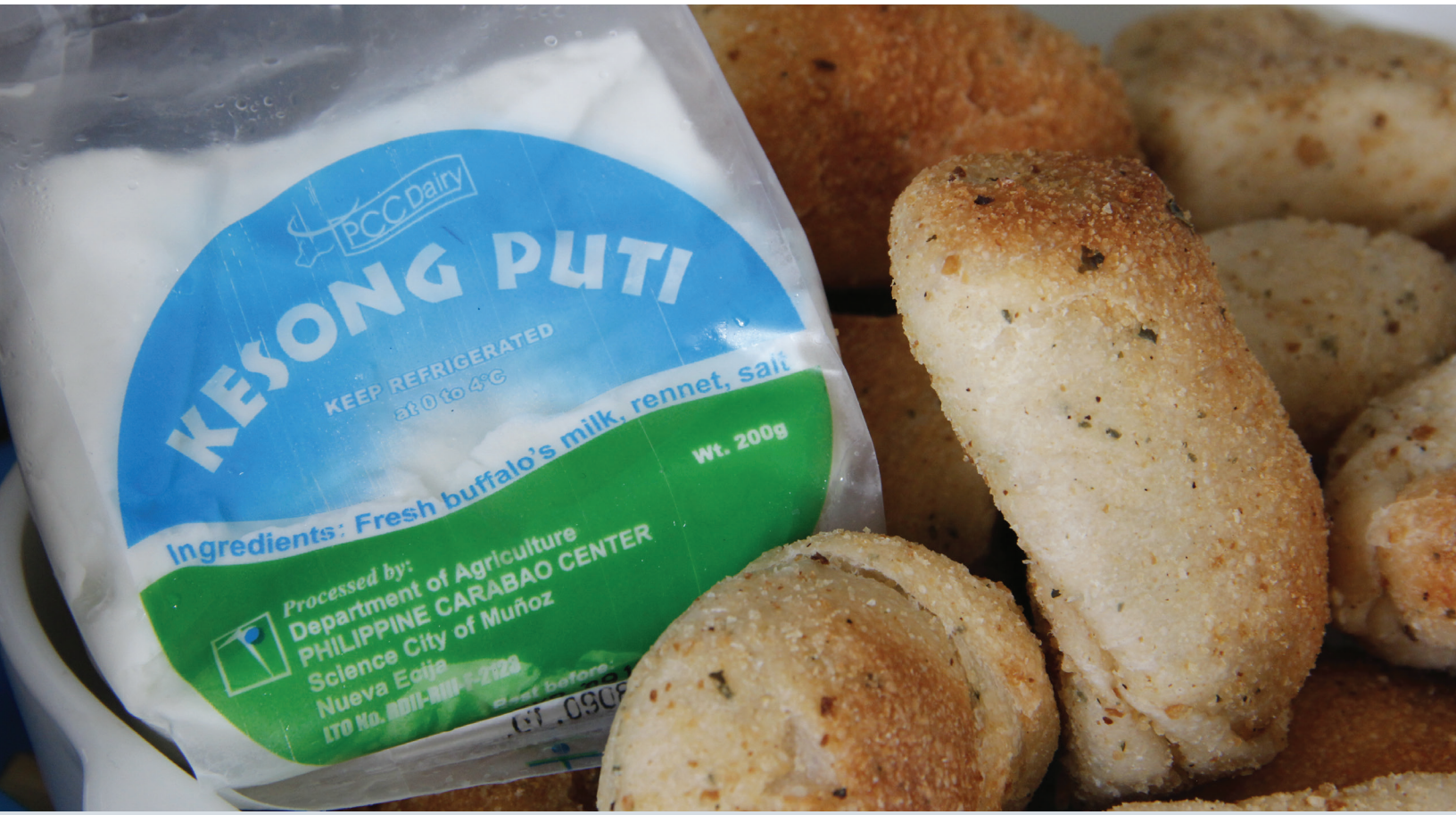
Results

Higher yield and a firmer texture could be attained with proper heat treatment.

Lesson Learned

When pasteurizing, ensure that it will not exceed the required temperature. Also, ensure clean break of curds before cutting into smaller cubes to avoid very soft to unformed kesong puti.

Keywords: *kesong puti, casein, rennet, pasteurization, coagulation*



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ABOUT THE MATERIAL

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