How to Make Cheese Logbook

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The Discovery of Cheese

Cheese was, believe it or not, an accidental discovery so when people put milk in animal bladders or stomachs and the rennet would cause the milk to curdle into cheese. Many bacteria cultures would also go into the cheese.These cheese curds are then eaten as a snack.The first country to make cheese (and know that it was cheese) was Egypt. Some evidence shows that the earliest known start of cheese was in 5500-5200 BCE in Poland and the coasts of Croatia.

Part 1: The Bacteria

When making cheese, you only want the ones that give you the taste and not the ones that make it go bad. Some types can be:

- Propionibacterium freudenreichii is the one that makes swiss cheese, It traps gas to make the “Eyes”
- Penicillium roqueforti makes the stinky blue cheese. They poke holes in the cheese to allow mold to grow.

  Ect.

Part 2: The Other Components

Other components to make cheese are:

- Milk: The base flavor for cheese
- Rennet: Enzymes in cows

These help make the cheese get its flavor.

Part 3: The Curds

After the milk reaches the right acidity, the rennet is added. The enzyme, chymosin makes the milk proteins called casein will start to coagulate. After some time, some of the milk will form into something called curds or whey.

Part 4: The Ageing

When aging, the curds go through two processes called:

Proteolysis: This is when the curds' proteins start turning into peptides and amino acids. This gives it a soft texture.

Lipolysis: The fats turn into fatty acids, this is responsible for the pungent taste of cheese.

Fun Fact!

Some cheeses cannot melt! Types like young cheddar and mozzarella can melt as they have high moisture.

Parmesan will simply get oily or grainy, this is because they are too dry to melt.

Cheeses that are acid-based cannot melt as they have a rigid protein structure. Making them able to withstand high temperatures.

The Pros and Cons

Cheese has less lactose than milk, edible longer, and lots of lots of flavors. It contains more nutrients. Even though it has more saturated fat, it does not increase cardiovascular diseases by a lot.

It does contain more calories than milk. Also, it has more sodium, making it slightly more unhealthy.

How cheese is made

1. Heat 1–2 gallons of whole cow's milk in a pot until it reaches the temperature called for in your recipe, usually between 86°F and 90°F.

2. Sprinkle the correct cheese culture (either mesophilic or thermophilic) evenly over the milk's surface. Let it absorb moisture for 2–5 minutes, then gently stir it in.

3. Cover the pot and let the milk rest for 30–60 minutes, or up to 15 hours for certain soft cheeses, so the bacteria can develop acidity.

4. Mix the rennet with cool, non-chlorinated water, then stir it into the milk for 1–2 minutes.

5. Let the milk sit for 45 minutes to 1 hour until it becomes firm like custard. Cut the curd into ¼-inch cubes using a long knife.

6. Slowly warm the curds, stirring gently for 30–45 minutes, until they reach about 100°F and release whey.

7. Transfer the curds into a cheesecloth-lined colander to drain. Add cheese salt, then shape or press the cheese as your recipe instructs.

Reason of this Topic

We feel like we want to understand how and why cheese can last for so long. We learned that cheese was an accidental discovery! Another reason is that cheese turns milk into a soft, chewy block of cheese. It seemed strange how it worked, but it turns out with science, you can make a snack!

This study was made to understand and learn about the science behind cheese!