

## What if my cheese curds are warm and is it ok to eat/use them?

**Simple answer:** ABSOLUTELY, in fact we want them to be a little warm. Get them in the refrigerator right away and stretch within **24 hours** for best results!

**Long answer:** This is probably the most common question we receive, so we wanted to give you a little cheesemaking lesson to help you understand why your curds are a little warm when they arrive...

At Caputo Brothers Creamery we pride ourselves in sourcing the absolute highest quality milk available from our local dairy farms. To supply us with milk, a dairy must pass a rigorous evaluation and certification process. First and foremost, our farms must obtain an Animal Welfare Approved certification, which is a third-party audit from the fine folks at A Greener World. Not only must they meet high standards of care for their animals, but those animals must also have a diet that is based on pasture with any supplemental nutrition offered coming in the exclusive form of Non-GMO. In addition, the milk must be extremely clean from the time it is harvested to the time we pump it into our milk tank. We monitor this through an aggressive testing protocol that ensures we have the cleanest milk possible going into our cheesemaking process. If a farm can pass and maintain all of the testing and certifications, we reward them by paying a fair price for their milk. Right now, that means that our farms are earning more than double what the commodity milk market pays.

Once the milk arrives at our facility we pasteurize the milk. Though highly unlikely due to our clean milk standards, we want to make sure that any possible harmful bacteria that might exist in the milk has been killed. Think of it as belts and suspenders...it is also required by Federal law since our cheese is not aged more than 60 days.

After the pasteurizing is complete, we temper the milk to about 100 degrees Fahrenheit. This is the perfect temperature for our cultures (good bacteria that love to eat lactose, the milk sugar) to thrive so that they can start the fermentation process. These cultures are responsible for consuming the lactose and converting it into lactic acid. The lactose is the food source in the milk and once we remove it, the likelihood of food safety issues reduces significantly. In fact, most styles of real cheeses are completely lactose free.

This fermentation process is how we make the curds in our cheesemaking facility. Curds ARE cheese, they are just our way of saying “unfinished cheese”, “incomplete cheese”, or even “young cheese”. A cheddar cheese curd, for example, would just mean it had not been pressed or aged. What makes mozzarella cheese unique is that it must be stretched with hot water to be considered “finished”.

With mozzarella you have a very narrow window of pH (acidity) for which to stretch and finish the cheese. That window is 5.2-4.8 pH. If the pH is higher or lower than that range, the cheese will not give an optimal stretch.

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For those of you that love science here is how it works:

pH	Description
6.8	Fresh, clean milk straight from the cow.
6.5	The pH of the milk once it is transported and pasteurized. Also when we introduce the cultures to start fermentation.
Above 5.3	The pH of the curd when we pause the fermentation by freezing the curds. This makes the cultures go completely dormant so that we do not lose stretchability. The curd leaves our facility frozen with 4 lbs of frozen refrigerant. The goal is for it to arrive to you thawed and slightly warm within three days. Fedex is supposed to guarantee 2 days, but we have learned that about 10% of the packages take an extra day, so we designed the curd to withstand the extra day.
5.2 - 4.8	As the curd thaws and warms up it gets back into the temperature range we want it to be in so that cultures restart the fermentation process. This will allow the cheese to come into the necessary range to be properly stretched into mozzarella. That is right, we WANT the cheese to be warm when it arrives. The cultures we use thrive between 85-105 degrees. If your curd arrived a little cooler it is ok, it just means that you might have more time within the optimal stretching range.

We place the curds in reduced oxygen packaging with a vacuum seal so that no other cultures can work on the cheese in transit. Simply place your sealed cheese pouch in the refrigerator immediately upon arrival. As it comes down in temperature, the fermentation process will slow down and it should be in the perfect range for a good stretching experience. There is no food safety issue. In fact, quite the opposite. The live cultures in the cheese are much like yogurt in that they are good for your gut health!

Maybe the best example we can give you is Parmigiano Reggiano in Italy, widely known to the world as the King of cheeses. This is a raw milk cheese, meaning it never goes through pasteurization, and it is aged at room temperature for as long as 10 years! That's right, the first time that cheese sees refrigeration is when it gets to grocery store, and maybe not even then (think about the domestic Parmesan in the green shaker cans). Removing the lactose removes the food source for the really bad bacteria that exist in the world, and adding salt or reduced-oxygen packaging gives that belt and suspenders effect we mentioned earlier. We understand that there is not a tremendous knowledge of cheesemaking in the world and you might have questioned the safety of warm cheese. Hopefully this information will help answer those questions!