



Say Cheese

Investigating the cheese-making process.

Mozzarella Recipe

California is a leading producer of Mozzarella cheese. Mozzarella is a fresh cheese that originated in Italy and is commonly used on pizzas and in pastas. The recipe makes approximately 12-14 ounces of fresh mozzarella cheese and takes 30-60 minutes.

1. Pour milk into stainless steel pot, add citric acid and stir gently to blend. Heat milk over medium-low heat to 88-90°F.
2. Remove from heat, add rennet and stir for 30-60 seconds to blend. Cover and let sit for five minutes. Continue to heat to 105°F as curd and whey separate.
3. Line colander with cheesecloth. Gently pour curds (solids) and whey (liquid) into colander to strain. Place curds in microwave-safe bowl. Whey can be retained for other baking projects like bread.
4. Microwave curds for 30-60 seconds on high. Remove from microwave and gently press curds with hands (draining off additional whey). Repeat process two to three more times, microwaving in 20-30 second intervals. Press curds together while cheese is warm (almost too warm to handle) and knead cheese like bread dough until it is smooth and pliable (like pulling taffy). If needed, microwave cheese in 10 seconds intervals to keep cheese warm and pliable. Then, knead in salt.
5. Cheese is done when it is smooth. Form cheese into a ball and place in cold water to cool. When cheese is cold, remove from water and place in plastic wrap and refrigerate. Eat within one week.



Adapted from "30 Minute Fresh Mozzarella" by Utah Education Network.

Materials

- ¼ teaspoon liquid or ¼ tablet rennet (dilute in ¼ cup water)
- 6-8 quart stainless steel pot (not aluminum)
- 1 gallon of whole milk
- 1 ½ teaspoons citric acid (dilute in 1 cup water)
- Dairy thermometer
- Colander
- Cheesecloth
- Microwave-safe bowl
- 1-2 teaspoons salt
- Food-grade rubber gloves

Tip

Take a virtual tour of California dairies and meet dairy farmers at RealCaliforniaMilk.com

Classroom Activities

Science

- Have students record observations throughout the cheese-making process including descriptions of how the ingredient properties changed and the temperatures at which they observed phase changes. Have students identify the catalyst and describe the role it played in cheese making.
- Instruct students to categorize mozzarella cheese into a food group, list the number of recommended servings of that food group per day and the nutritional facts of mozzarella cheese.

English Language Arts

- Have students work in groups to create their own mozzarella cheese brand name, slogan, logo, and informational advertisement that persuades shoppers to purchase their product. Students can present this material to their classmates using a poster, PowerPoint, or video.

California Standards

Grades 9-12

ELA CC: W.9-12.1, 4, 6;

SL.9-12.1, 2, 4, 5; WHST.9-12.1, 7

NGSS: HS-PS1-1, 2, 4, 5



This is one in a series of Ag-Bites developed by CFAITC. Ag-Bites meet the standards of the California Department of Education. 2600 River Plaza Drive, Suite 220, Sacramento, CA 95833-3292 • (800) 700-AITC • info@LearnAboutAg.org • LearnAboutAg.org © 2019 California Foundation for Agriculture in the Classroom



Look for the Seal

California Milk Advisory Board