



# Mozzarella Processing: Food Safety and Shelf Life

Discover the art and science of mozzarella production. Learn about food safety practices, shelf life considerations, and the sensory qualities that make this cheese a culinary favorite.

# Materials and Equipment

## Equipment

- Pot and stove
- Thermometer
- Water bath
- Slotted spoon
- Cheesecloth
- Colander

## Ingredients

- 3 liters whole milk
- 10 g citric acid
- 2 ml rennet extract
- Non-iodized table salt



# Mozzarella Production Process

1

## Heating the Milk

Heat milk to 32°C, maintain temperature in water bath at 34-36°C.

2

## Acidification

Add citric acid solution to warmed milk, stir gently.

3

## Adding Rennet

Add diluted rennet, stir, let sit for 10 minutes at 32°C.

4

## Cutting and Draining

Cut curds, heat to 45°C, drain excess whey.

# Mozzarella Production Process (Continued)

1

## Kneading and Salting

Knead curds, add salt, improve elasticity with hot whey if needed.

2

## Forming

Shape into small balls after thorough kneading.

3

## Cooling

Immerse cheese balls in cold water or ice bath to set shape.





# Food Safety in Mozzarella Processing

## Pasteurized Milk

Eliminates harmful pathogens, reducing contamination risks.

## Controlled Acidification and Temperature

Maintain proper temperatures during production stages.

## Hygienic Practices

Sterilize equipment, handle ingredients with clean utensils.

## Cold Storage

Store at or below 4°C immediately after production.



# Shelf Life of Mozzarella

## Unopened Shelf Life

- 1-2 weeks in brine
- 2-3 weeks when vacuum-sealed

## Opened Shelf Life

- 3-4 days in fresh brine
- 2-3 days if wrapped tightly

## Influencing Factors

- Proper sealing
- Refrigeration
- Moisture content



# Spoilage Risks



## Microbial Spoilage

Mold or yeast growth can occur if exposed to air or contaminated utensils.



## Oxidation

Lipid oxidation can lead to off-flavors if not stored in airtight conditions.



## Temperature Abuse

Avoid leaving mozzarella at room temperature for more than 2 hours.





# Best Practices for Storage

1

## Submerge in Brine

Store mozzarella in fresh brine to maintain moisture and flavor.

2

## Seal Tightly

Use airtight containers or vacuum-sealed packaging to prevent oxidation.

3

## Refrigerate Promptly

Keep mozzarella refrigerated at or below 4°C to slow bacterial growth.





# Sensory Qualities of Mozzarella

Attribute	Description
Flavor	Mildly tangy with a fresh dairy taste
Texture	Smooth, elastic, slightly fibrous
Aroma	Fresh milk aroma with no off-smells
Appearance	Bright white color with a moist surface



# Key Takeaways: Food Safety

## 1 Pasteurization

Use pasteurized milk to eliminate harmful pathogens.

## 2 Hygienic Practices

Maintain cleanliness throughout the production process.

## 3 Temperature Control

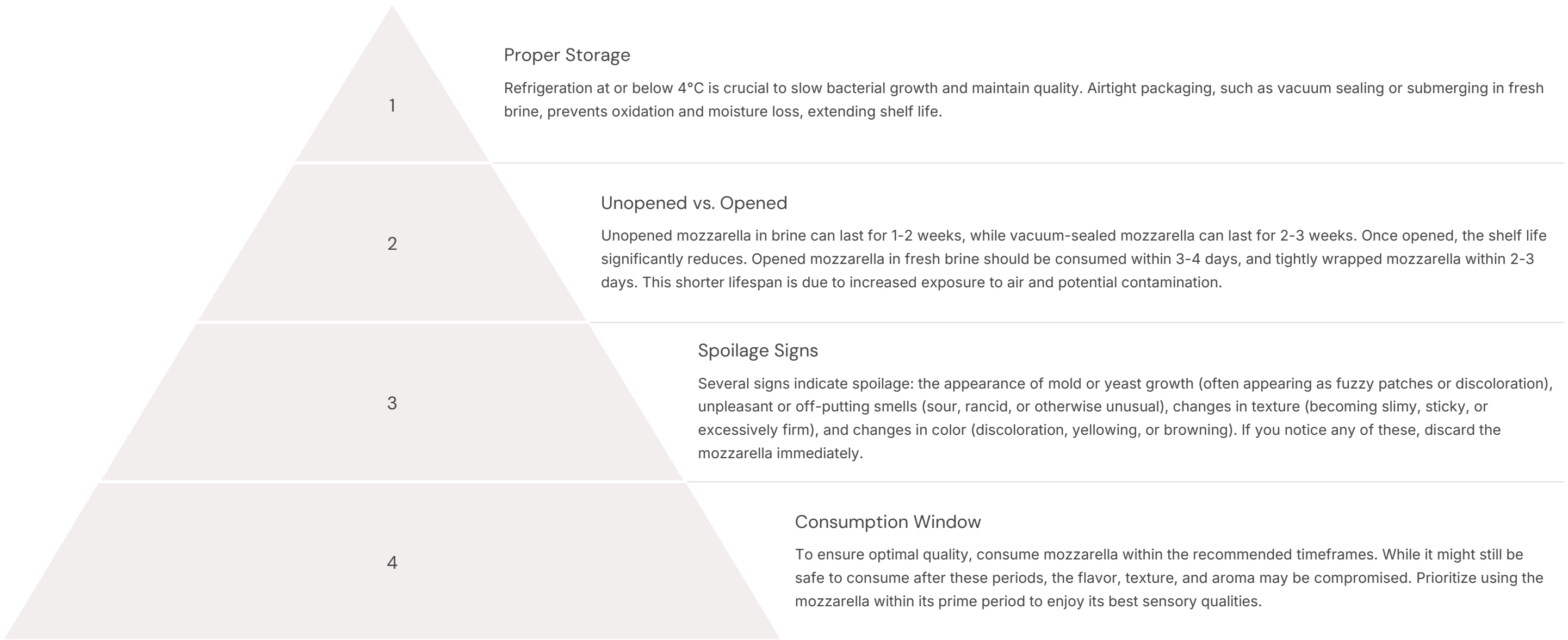
Monitor and maintain proper temperatures during production and storage.

## 4 Proper Storage

Store mozzarella in brine or vacuum-sealed packaging under refrigeration.



# Key Takeaways: Shelf Life



# Key Takeaways: Sensory Excellence

1

## Flavor Profile

Achieve a balanced, mild tangy taste.

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2

## Texture Perfection

Ensure smooth, elastic consistency through proper kneading.

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3

## Visual Appeal

Maintain bright white color and moist appearance.

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4

## Aroma Quality

Preserve fresh milk scent without off-odors.



# Versatility in Culinary Applications





# Conclusion

Mozzarella processing combines tradition with modern food safety practices. By adhering to hygiene standards and understanding spoilage risks, producers ensure a safe, fresh product for various culinary applications.