

Jarlsberg – Dee Jays - Adapted from multiple recipes



Ingredients:

- 7 gallons pasteurized milk
- 3/4 teaspoon Probat 222
- 3/4 teaspoon Propionibacteria 50
- 1/4 teaspoon sodium nitrate
- 2 teaspoons calcium chloride
- 1 teaspoon vegetable Rennet

Procedure:

- Warm milk to 98°F.
- Add cultures and mix well. Let sit for 45 minutes. Target pH: 6.50 + 0.05
- Add calcium chloride to 1/4 cup of pure water. Mix well and add to milk.
- Add rennet to 1/4 cup of pure water. Mix well - setting time about 15 - 18 minutes. Coagulation time: 30 - 40 minutes.
- Cut curds to peas size stirring for 30 to 40 minutes.
- pH before washing: 6.40 - 6.45. Drain about 30% of the whey. (2.25 gallons)
- Add same amount of water as whey removed (30%) at about 140 °F. (2.25 gallons)
- Scalding temperature should be about 98 to 108 °F. Scald for 15 - 30 minutes stirring gently.
- Add curds to cheesecloth lined molds and press under whey for 10 minutes with 4 pounds of weight.
- Increase weight to 8 pounds and press for 15 minutes.
- Remove from whey and continue pressing over night.
- pH target before brine bath should be 5.40 +/- 0.2
- Brine in 1 gallon water and 1 pound of salt for 24 hours at 50°F. (20% brine?)
- pH after brine bath: 5.30 +/- 0.1
- Age at 66°F for 4 weeks.
- Package in special foil for large eye formation cheese, or coating

Ripening:

- Winter Cool Storage: 47 - 50 °F for 10 - 12 days
- Winter warm storage: 64 °F for 4 weeks
- Summer Cool Storage: 50 - 57 °F for 7 - 10 days
- Summer warm Storage: 68 - 72 °F for 4 - 5 weeks

Mild cheese has been aged 4 to 6 weeks. A Medium cheese has been aged 8 to 12 weeks. Eyes will begin to form after about 2 weeks.

Possibilities to enhance eye formation:

higher inoculation amount of propionic acid bacteria type 2

higher scalding temperature up to 104 - 105 °F

shorter salting time with a weaker salt concentration

higher pH after salting: not under pH 5.30 - 5.40

shorter ripening time in cool storage, with a higher temperature, e.g. 7 days at 52 - 57°F

longer ripening time in warm storage, e.g. 5 - 6 weeks at 72 - 75 °F

Raising the cooking temperature results in less whey in the cheese curd and this gives a harder cheese.

The addition of water to the cheese whey allows for regulation of the cheese acidity without simultaneously changing the level of moisture in the cheese.

After pressing and drying for 16 hours, the cheese is transferred to brine that is almost saturated with salt, usually 20%, at about 10°C.

As a result, cheese to which nitrate was added obtained a better score for general quality and eye formation than cheese made without nitrate addition. The aroma and taste of the cheese were superior, with intermediate levels of nitrate addition and whey dilution.

The addition of salt at an early stage in cheese making, for example to the whey, can therefore help control the growth and activity of butyric acid bacteria in the cheese.

The study also showed that it was possible to achieve maximal propionic acid fermentation by combining a particular level of whey dilution with a particular brining time.

The effect of whey dilution on the score for taste and aroma in the cheese followed similar trends on the whole, and the tendency to form cracks was clearly reduced by increasing dilution levels.