

FD-DVS pHageControl™ R-700 Culture Series

Product Information

- Description** Mesophilic Homofermentative Culture, type O.
Chr. Hansen's pHage Control culture system provides phage resistant mesophilic defined strains for continuous DVS (direct vat set) use. These cultures contain special strains of *Lactococcus lactis* subsp. *cremoris* and *Lactococcus lactis* subsp. *lactis* selected for their phage resistance and ability to produce lactic acid quickly and do not produce CO₂. Freeze-dried pHage Control cultures are packed in a convenient freeze-dried form.
- Application** The culture is primarily applied in the production of cheeses with a closed texture, eg Cheddar, Feta and Cottage Cheese. The culture can be applied in other fermented dairy products, in combination or not with other lactic cultures.
- Availability** Available freeze-dried pHage control cultures include R-703, R-704, R-707 and R-708.
- Packing**
- | Description | Item no
10 x 50U | Item no
25 x 200U | Item no
20 x 500U | Item no
10 x 1000U |
|-------------|---------------------|----------------------|----------------------|-----------------------|
| R-703 | 100095 | 100122 | 100156 | |
| R-704 | 100096 | 100123 | 100157 | 100200 |
| R-707 | 100097 | 100124 | 100158 | 100201 |
| R-708 | 100098 | 100125 | 100159 | |
- Storage and shelf life** Freeze-dried cultures should be stored at -18°C (0°F) or below. If the cultures are stored at -18°C (0°F) or below, the shelf life is at least 24 months. At +5°C (41°F) the shelf life is at least 6 weeks.
- Instructions for use** Remove the cultures from the freezer just prior to use. **DO NOT THAW THESE CULTURES.** Sanitize the top of the pouch with chlorine. Open the pouch and pour the freeze-dried granules directly into the pasteurized product using slow agitation. Agitate the mixture for 10-15 minutes to distribute the culture evenly.
- Dosage** Recommended dosage of freeze-dried DVS cultures **in units to liters:**

| DVS inoculation percentage | Amount of milk to be inoculated | | | |
|-------------------------------|---------------------------------|---------|----------|----------|
| | 1,000 l | 5,000 l | 10,000 l | 15,000 l |
| 1000U/5000 l | 200U | 1000U | 2000U | 3000U |
| 500U/5000 l | 100U | 500U | 1000U | 1500U |
| 250U/5000 l | 50U | 125U | 500U | 750U |

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Recommended dosage of freeze-dried cultures in units to US lbs:

| DVS inoculation percentage | Amount of milk to be inoculated | | | |
|----------------------------|---------------------------------|------------|------------|------------|
| | 2,270 lbs | 11,350 lbs | 22,700 lbs | 34,000 lbs |
| 1000U/11,350 lbs | 200U | 1000U | 2000U | 3000U |
| 500U/11,350 lbs | 100U | 500U | 1000U | 1500U |
| 250U/11,350 lbs | 50U | 125U | 500U | 750U |

As a principal rule 1000U of freeze-dried DVS culture will correspond to 100 l of active bulk starter. However, specific usage rates should be determined experimentally before a new application.

Incubation temperature

Recommended incubation temperature is 22-30°C (95-113°F). For more information please use Chr. Hansen's suggested recipes.

Kosher status

pHage Control cultures are Kosher approved (Circle K D) for year-round use, excluding Passover.

Technical information

- Flavor and gas production

| | R-703 | R-704 | R-707 | R-708 |
|--------|-------|-------|-------|-------|
| Flavor | - | - | - | - |
| Gas | None | None | None | None |

- Salt sensitivity

| | R-703 | R-704 | R-707 | R-708 |
|-----------------|------------|------------|------------|------------|
| 50% inhibition | 5.0% NaCl | 5.5% NaCl | 5.3% NaCl | 5.7% NaCl |
| 100% inhibition | >6.0% NaCl | >6.0% NaCl | >5.8% NaCl | >6.0% NaCl |

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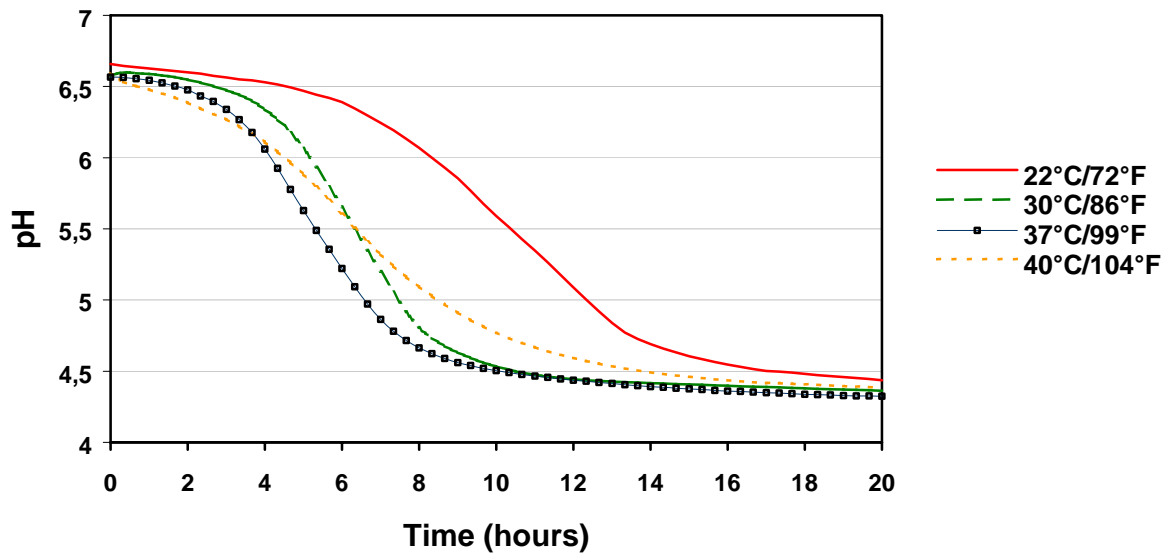
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Figures 1-4. The effect of temperature on acidification

Fermentation conditions:
Lab milk 9.5% T.S.: 140°C/8 sec. - 100°C/30 min
500U/5000 l inoculation

FD-DVS R-703

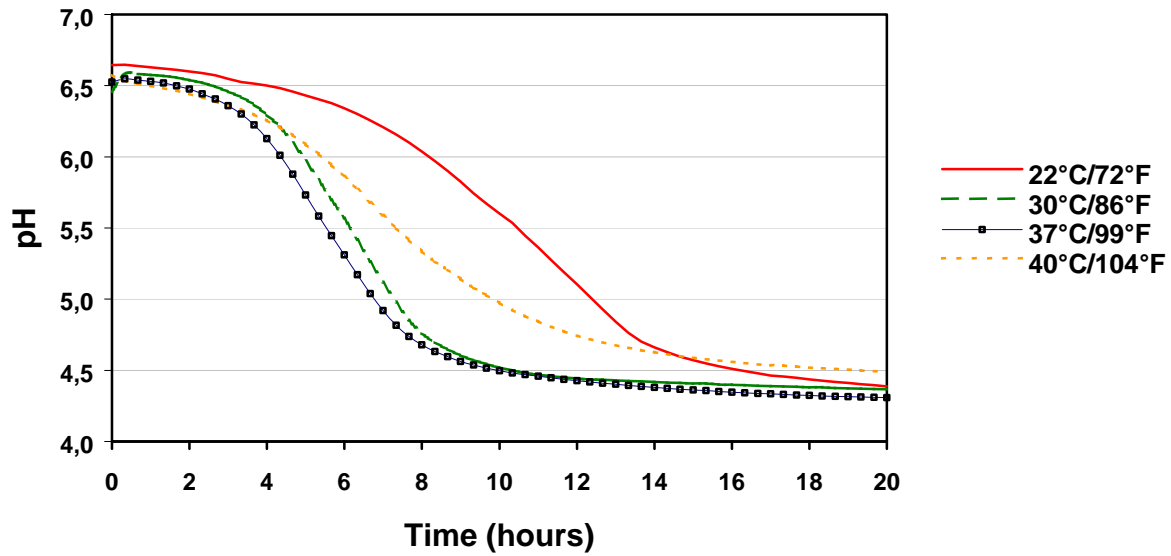


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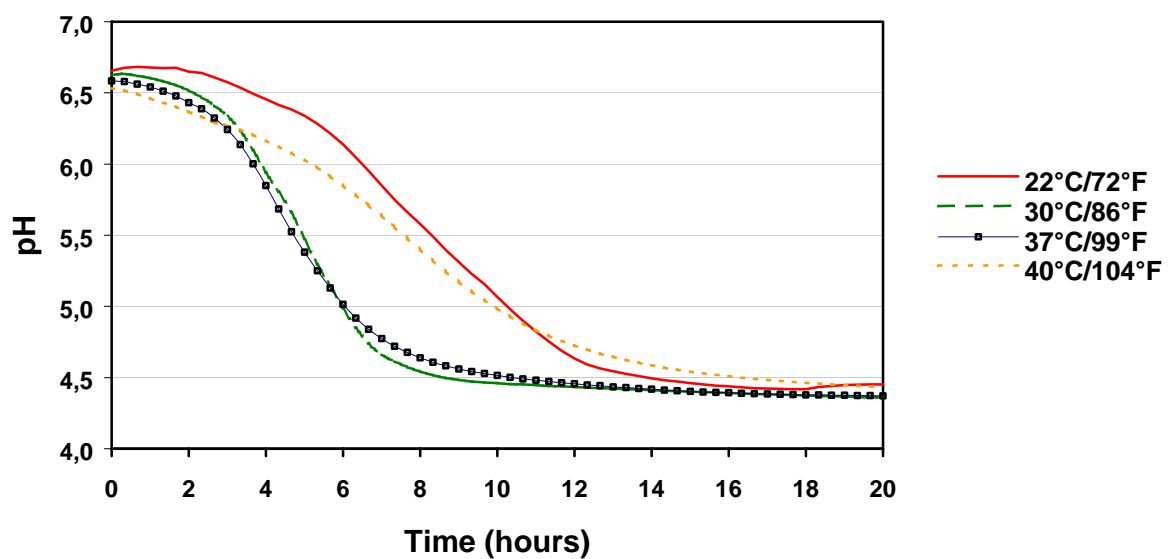
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FD-DVS R-704



FD-DVS R-707

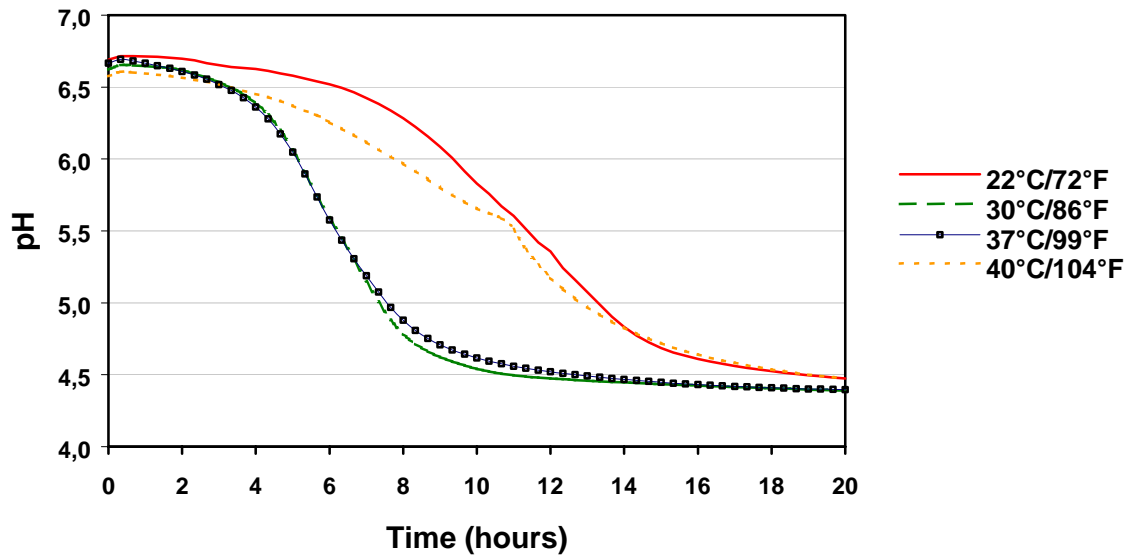


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FD-DVS R-708



NB: Note that the accuracy of these curves is relative and subject to experimental error.

Technical service

Chr. Hansen's worldwide facilities and the personnel of our application and technology center are at your disposal with assistance and instructions.

References

References and analytical methods are available upon request.

The information contained herein is to our knowledge true and correct and presented in good faith. However, no warranty, guarantee, or freedom from patent infringement is implied or inferred. This information is offered solely for your consideration and verification.

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