



What's so hot about THERMODURICS?.....

Summertime is thermoduric bacteria time; most thermoduric grades happen between December and February. How much do you know about these pesky little critters?

Here are a few facts about thermodurics. Knowing these facts could help you to avoid getting into thermoduric trouble, or to find the cause if you *do* have a thermoduric problem.

- Thermodurics are bacteria that can tolerate heat. They survive pasteurisation, and cause spoilage in dairy products.
- Your hot water therefore won't kill thermodurics, although direct contact with your sanitiser will.
- Thermodurics like hard milk soil deposits, especially protein film in the receiver or vat (that's the blue-rainbow discolouration). However, you can also find them lurking deep within soft, thick milk soil deposits. Thermodurics don't smell nasty (like coliforms do), so using your nose to sniff them out is not going to work (it does work with coliforms).

Faulty rubberware is not the most likely cause of thermoduric grades.

1. The most likely cause is insufficient water at the far end(s) of the milkline, which leaves patches of soil on the upper surfaces because the contact is inadequate. Sanitiser doesn't touch these patches, but they do get hot, so most bacteria lurking there die anyway from

the heat. Except for any thermodurics; they survive and multiply.

Rubberware is not the second-most common cause of thermoduric grades.

2. The number 2 spot is held by protein deposits in the vat. These deposits are like a super hard skin which acts as a protective film, stopping the sanitiser from getting at any thermoduric bacteria hiding within the protein.

Rubberware is the third-most common cause of thermodurics.

3. Cracked and perished rubberware collects soil, which harbours and feeds bacteria. The wash water can't fully penetrate the soil-filled crevices, so the sanitiser can't get to all the bacteria. However, the rubberware does get hot, which generally kills all the regular bacteria. But not the thermodurics.

When the lab tests your milk for thermodurics, it takes 4 days before you get a result. That's because thermoduric plates have a long incubation time. This is the most frustrating thing about a thermoduric grade - it takes so long to get information back. So if you get a thermoduric grade, first carefully check the milkline, vat and receiver, and rubberware. Then again. Then everything else. Try not to miss anything on the first inspection, because if you do it will probably cost you at least four extra grading days!

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