

CYBERTONGUE®

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Analytics Beyond Measure

ppb
technology™

AprX Protease Test™



Measure Protease in Raw Milk

"Laboratory quality results in minutes™"

- Measure Pseudomonas and Bacillus proteases in the dairy supply chain
- Optimise batching and streaming of raw milk
- Check raw milk quality for UHT production
- Find biofilms on farm, in tankers or at the factory



**GOOD
DESIGN
AWARD®**
BEST IN CLASS

Do you need to clean up your raw milk supply?

Pseudomonas bacteria are present in all raw milk. UHT kills these bacteria but it does not remove all of their protease activity. Some protease always remains. The longest shelf-life is achieved by those who control the protease levels in their milk supply.

Proteases cause two types of problems. Which do you have?

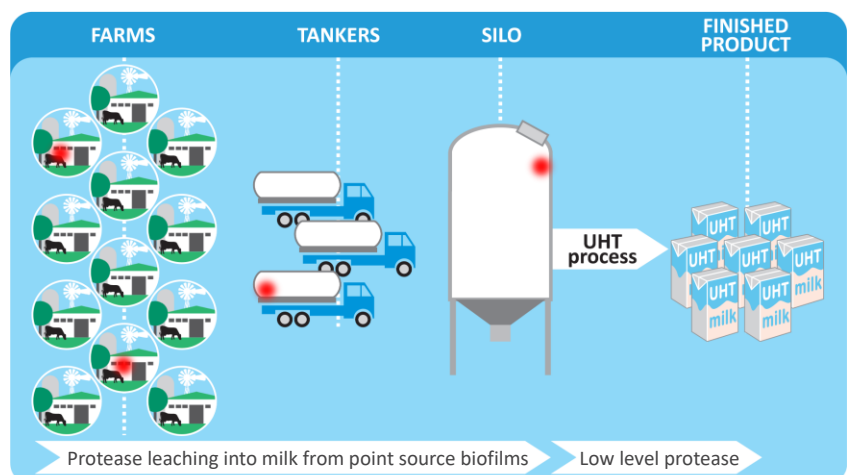


Problem 1 – Catastrophic Failure

If raw milk is held for too long, or at too high a temperature, *Pseudomonas* grows to very high levels. The bacteria switch on production of an alkaline protease (AprX). In just a few hours, AprX activity reaches levels that will cause catastrophic failure.

Problem 2 – Shelf-Life Erosion

Unrecognised *Pseudomonas* **biofilms** throughout the milk supply chain act as point sources, leaching AprX into the milk. UHT shelf-life may be reduced to between 2 and 9 months.



Fast, easy, sensitive on-site bacterial protease measurements

Bacterial proteases from *Pseudomonas fluorescens* (AprX) and *Bacillus spp.* (alcalase), lead to bitterness, particle formation and gelation of UHT milk. Customers complain about off flavours and sweet curdling. Proteases can also affect the yield and flavour of cheese.



The CYBERTONGUE® solution

CYBERTONGUE® Technology consists of a device and pre-mixed reagent tubes; the CYBERTONGUE® AprX test measures ultra-low levels of *Pseudomonas* protease directly in raw milk. Using this test, you can substantially reduce your risk of experiencing a product failure or recall as well as potentially saving money on existing mitigation measures.

- Easy-to-use standard, sensitive and ultrasensitive tests*
- Just add milk - the sample does not need to be "worked up"
- Reagents have up to 12 months shelf life in the fridge
- Minimal wastage of test reagents
- Results at research laboratory standards
- Technology supported by extensive research (Dacres *et al.* 2023 *Analyt. Chim. Acta*: **1270**: 341401)

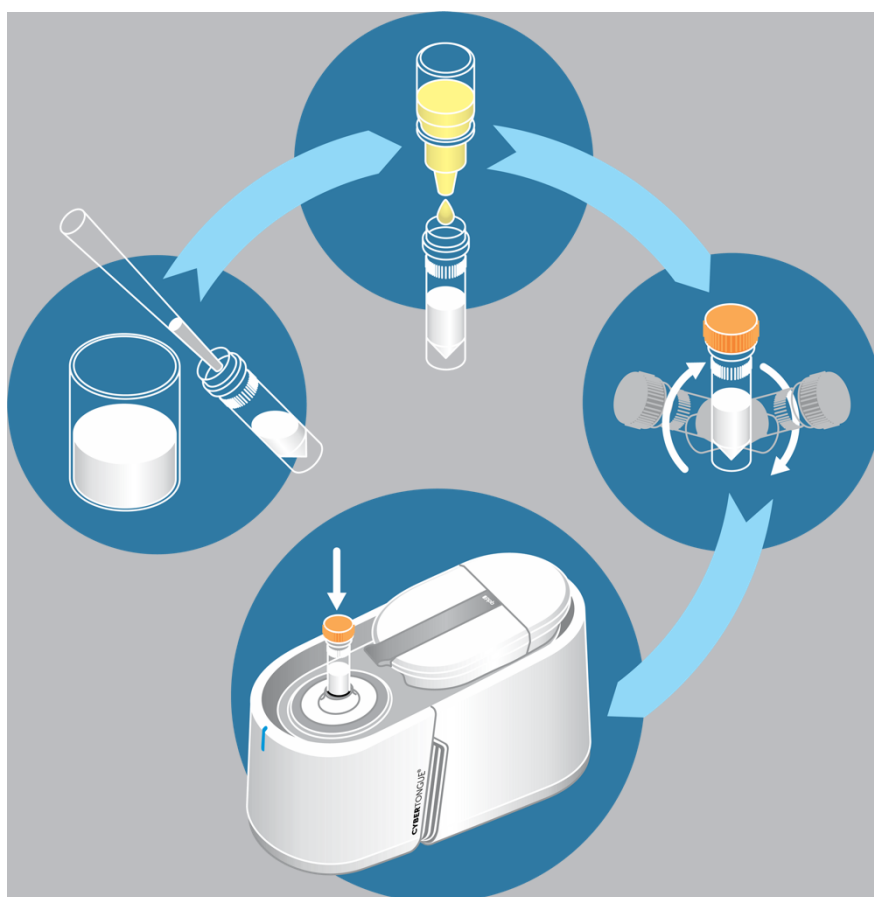
*Sensitive assay requires 60 minute preincubation, Ultrasensitive requires 120 minutes preincubation but no further additional effort

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The AprX test is currently in use in Australia, NZ and Europe.
Contact us to find out how it can help your bottom line.



Standard test:

- Fill – add sample
- Activate – add reagent
- Shake – to mix
- Load – into device

See video:



To purchase, or to discuss how CYBERTONGUE® AprX testing
can help you contact:

Email : info@ppbtechnology.com.au
marketing@Indifoss.com

Contact number - 079 4005 4705/06

For more information visit:

IndiFOSS Analytical Pvt. Ltd.
F-1,2,3 Science Square, Nr. Bank of Baroda,
Science City Road, Sola, Ahmedabad -380060. Gujarat