

# Testing Fermented Dairy Products with MicroSnap Coliform

The MicroSnap test platform is a rapid bioluminogenic method for detection and enumeration of specific organisms. MS2-COLIFORM & MS2-ECOLI tests are designed to specifically detect Coliform and *Escherichia coli* in less than 8 hours.

Tests consist of an Enrichment Device containing a specific growth media and a Detection Device containing a bioluminogenic substrate in which the detection reaction is measured using a small portable luminometer. In Step 1 (enrichment), sample is incubated in growth media in order to increase the number of bacteria. As the number of bacteria increase, more of the diagnostic enzymes are created (beta-galactosidase and beta-glucuronidase), which are required for the bioluminogenic reaction.

Incubation time of sample is determined by the level of sensitivity required. After incubation, a small amount of sample is transferred to Detection Device. In Step 2, Detection Device is activated and incubated for 10 minutes.

At this time, a specific substrate reacts with diagnostic enzymes to produce light. Light is measured in a luminometer in seconds. Light output is directly proportional to initial starting inoculum.

MicroSnap Coliform and *E. Coli* are an excellent system for measuring microbial content in samples. It is able to measure surface, solid food, and liquid samples directly and give a calculated CFU and/or RLU value that can be directly compared to industry standards to food safety testing.

## Testing Fermented Dairy Products

Testing a cheese or other product of dairy fermentation causes abnormally high RLU readings in MicroSnap Coliform or *E.Coli*.

This can be due to a number of issues due to the way the tested enzymes are expressed in the target organisms. These enzymes are not limited to coliforms and *e. coli*, and a number of other bacteria can also produce them, namely *Lactobacilli* or *Lactococcus*. These bacteria are used in the manufacture and

natural fermentation of dairy products into cheese. Some strains of *Shigella* Sonnei will also cause abnormally high readings and produce false positives.

To mitigate the effect from other organisms, the 9ml Enhanced enrichment broth ([MS1-N-BROTH-9ML](#)) can be used as the enrichment media instead of the MS1-CEC enrichment device. The enhanced broth is a selective media, and it will inhibit the growth of background lactic acid bacteria. The broth was developed specifically for dairy samples.

## **Contact Hygiena Technical Support for further assistance.**

- Phone: 1-888-HYGIENA (1-888-494-4362, option 2)
- Email: [techsupport@hygiena.com](mailto:techsupport@hygiena.com)
- [Submit a Support Ticket](#)
- [Schedule a Microsoft Teams meeting with support](#)