

FOOD ANALYSIS / MILK AND DAIRY PRODUCTS

The use of HettCube incubators and cooled incubators to detect the presence of coliform bacteria in milk and dairy products

Coliform bacteria are facultative pathogens and can cause systemic infections in people whose immune systems are weakened. They are also important in quality control and as indicators of the sanitary quality of facilities and food products.

— Methods of detection

Coliform bacteria can be demonstrated in either liquid or solid media in accordance with DIN 10 172-1 and 172-3. A liquid selective medium is inoculated with the diluted sample and is incubated in a test tube containing a Durham tube. The evolution of gas inside the Durham tube indicates the presence of coliform bacteria. As an alternative, the diluted sample can be mixed in a Petri dish with a selective medium that is liquefied and cooled to 47 °C. As soon as the mixture has solidified it is incubated. Coliform bacteria appear as typical dark red colonies.

Importance of the demonstration of coliform bacteria in milk and dairy products

Milk and dairy products are tested for the presence of coliform bacteria at regular intervals by manufacturers and the regulatory authorities to verify that the procedures adopted during production processes and distribution meet hygiene requirements.

	Temperature	Duration
Liquid medium:	30 °C	48 ± 2h
Solid medium	30 °C	22 ± 2h

— Advantages of HettCube incubators

- Maximal validated usable space on a small footprint
- 4.3 inch touch display for intuitive operation
- Very homogeneous and stable temperature, as well as precise temperature control
- True "one-hand-operation" and flexible positioning of the shelves
- Minimal energy consumption of < 0.06 kW/h at 37 °C
- Low noise level of ≤ 44 dB(A)
- Optimized loading capacity through unique accessories and options



Fig. 1: Demonstration of coliform bacteria on selective agar

Hettich solution

Model Cat. No.

HettCube 200	62000
HettCube 400	64000
HettCube 600	66000
HettCube 200 R	62005
HettCube 400 R	64005
HettCube 600 R	66005

Model without IVD Cat. No.

HettCube 200	62001
HettCube 400	64001
HettCube 600	66001
HettCube 200 R	62006
HettCube 400 R	64006
HettCube 600 R	66006