## Specification

Solid culture medium in compliance with the ISO 13559:2002 / IDF 153:2002 standard for the enumeration of contaminating microorganisms in butter, fermented milks and fresh cheeses, by the technique of colonial count at 30 °C.

## Formula * in g/L

Gelatin peptone.....7.5
Casein Peptone.....7.5
Sodium chloride..... 5.0
Agar.....15.0

Final pH 7,5 ±0,1 at 25 ºC

* Adjusted and /or supplemented as required to meet performance criteria

## Directions

Suspend 35 g of powder in 1 L of distilled water and let it soak. Bring to the boil and distribute into suitable containers. Sterilize by autoclaving at 121ºC for 15 minutes.

## Description

This medium is recommended for the detection of contaminants in dairy products since its slightly alkaline pH and the absence of sugars in its composition strongly inhibits growth of the common microorganisms of dairy products and favors the development of contaminants.
ISO 13559: 2002 and the IDF 153: 2002 define contaminating microorganisms such as no-lactic bacteria and molds and yeasts that are enumerable colonies under the conditions specified in those rules. However, it should be noted that certain types of fermented milk products include non-lactic bacteria and / or molds and yeasts involved in its characteristically production.

## Technique

Each laboratory should establish protocols best suited to their products according to internationally accepted standards (ISO 8266 and IDF 122: 2001 Milk and milk products - General guidance for the preparation of samples for testing, initial suspensions and decimal dilutions for microbiological examination).
The assay is performed by seeding, in duplicate, 0.1 ml aliquots of the initial suspension and of each dilution on the surface of the agar plates of Sugar Free Medium . Reading of results is performed after incubation for 72 ± 2 hours at 30° C.
Pin-point colonies should be neglected.

## Quality control

**Incubation temperature:** 30 º C ± 1 **Incubation time:** 72±2h

**Inoculum:** Practical range 100 ± 20 CFU. Min. 50 CFU (Productivity) according to ISO 11133:2014/Amd 1:2018 .

| Microorganism | Growth | Remarks |
|---|---|---|
| *Staphylococcus aureus* ATCC® 25923 | Productivity > 0.70 | - |
| *Enterococcus faecalis* ATCC® 19433 | Productivity > 0.70 | - |
| *Bacillus cereus var. mycoides* ATCC® 11778 | Productivity > 0.70 | - |
| *Escherichia coli* ATCC® 25922 | Productivity > 0.70 | - |
| *Pseudomonas aeruginosa* ATCC® 27853 | Productivity > 0.70 | - |
| *Candida albicans* ATCC® 10231 | Productivity > 0.70 | - |

## References

· FIL-IDF (1991) International Standard 153. Butter, Fermented milk and cheese. Contaminant counting.
. ISO 11133:2014/ Adm 1:2018. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
· ISO 13559 IDF 153 Standard (2002) Butter, fermented milks and fresh cheese - Enumeration of contaminating microorganisms - Colony count technique at 30ºC.
· PASCUAL ANDERSON, M. R. (1982) Técnicas para el análisis microbiológico de alimentos y bebidas. CeNAN. Madrid.
· THOMAS, S.B. (1969) Methods of assessing the psychrotrophic bacterial content at milk. J. Appl. Bact. 32:269-296.

## Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 ºC to 30 ºC).