

Specification

Isotonic solution for the cellular suspensions according to ISO normative.

Presentation

20 Tubes
Tube 16 x 113 mm
with: $9 \pm 0,1$ ml

Packaging Details

1 box with 20 tubes, 16x113 mm glass tubes, ink
labelled and metal-Non injectable cap..

Shelf Life

12 months

Storage

8-25°C

Composition

Composition (g/l):

Sodium chloride..... 2.25

Potassium chloride..... 0.10

Calcium chloride..... 0.06

Sodium bicarbonate..... 0.05

Description /Technique

Description:

Isotonic saline solution for cellular suspensions and inocula adjustments, widely used in Microbiology, more balanced than the simple sodium chloride saline solution, and its formulation allows autoclaving without any precipitation.

For the routine work with bacteria the solution should be diluted one fourth (Ringer 1/4) and is employed to get cell suspensions or to prepare dilution banks.

Ringer solution does not act as a revitalizer. To dilute food samples or substances that have undergone thermal treatment, it is more advisable to use Peptone Water or Maximum Recovery Diluent (MRD) for the dilutions, They acts as a revitalizer.

Due to the low ionic strength of this medium, the pH range of the final value is extended.

Technique:

The sample is diluted in a ratio 1:10 with the Ringer and homogenized by a vortex mixer or Stomacher®. After a short period (10-15 minutes) of rest, a 1/10 dilution bank with the same diluent is prepared following standard procedures. Plates are inoculated using the range of different concentrations.

Quality control

Physical/Chemical control

Color : Colourless

pH: at 25°C

Microbiological control

Prepare tubes / Inoculate 10^3 - 10^4 (Productividad)/ subculture after holding at 20-25°C for 45 min. to 1 h.

Microbiological control according to ISO 11133:2014/ Adm 1:2018.

Aerobiosis. Incubation at $35 \pm 2^\circ\text{C}$, reading at 24-48 hours.

Microorganism

Escherichia coli ATCC® 8739, WDCM 00012

Staph. aureus ATCC® 25923. WDCM 00034

Growth

Good. Recovery $\pm 30\%$ T0 (original enumeration)

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Sterility Control

Incubation 48 hours at 30-35°C and 48 hours at 20-25°C: NO GROWTH

Check at 7 days after incubation in same conditions

Bibliography

- ISO 6887-1: 2017 Microbiology of food chain. Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 1: General rules for the preparation of the initial suspension and decimal dilutions - Part 2 (2003): Specific rules for the preparation of meat and meat products.
- ISO Standard 8199 (2018) Water Quality - General requirements and guidance for microbiological examinations by culture.
- ISO 8261: 2001 Standard. Milk and milk products - General guidance for the preparation of test samples, initial suspension and decimal dilution for microbiological examination.
- ISO Standard 10718:2015 Cork stoppers – Characterization of a low-in-germs stopper, through the enumeration of colony-forming units of yeasts, moulds and bacteria, capable of both being extracted and growing in alcoholic medium
- ISO Standard 11133:2014 Microbiology of food, animal feed and water. Preparation, production, storage, and performance testing of culture media.
- ANONYMOUS (1937) Bacterial Tests for Graded Milk. Memo 139-Foods. Dept. of Health and Social Security. London.
- DAVIS, J.G. (1956) Laboratory Control of Dairy Plant. Dairy Industries Ltd., London.