Pseudomonas CFC Agar Base ISO

Cat. 1356

For the isolation and enumeration of Pseudomonas spp from meat, meat products and clinical samples.

Practical information

Aplications	Categories
Selective enumeration	Pseudomonas
Selective isolation	Pseudomonas

Industry: Clinical / Food

Regulations: ISO 11133 / ISO 13720

CE IVD

Principles and uses

Pseudomonas Agar Base, with CFC Supplement (Cat. 6036) added, is a selective medium recommended by ISO 13720 for the enumeration of Pseudomonas spp in meat and meat products, including poultry.

Gelatin peptone and enzymatic digest of casein provide nitrogen, vitamins, minerals and amino acids essential for growth and permits the growth of a great number of Pseudomonas species. The quantities of potassium sulfate and magnesium chloride favor the formation of pigmentation (production of pyocyanin). The addition of CFC Supplement (Cat. 6036) makes the medium more selective for Pseudomonas spp. including Burkholderia cepacia, previously known as Pseudomonas cepacia. Cetrimide, fucidin and cephaloridine inhibit Gram-positive bacteria and support the growth of Pseudomonas spp, (including P. aeruginosa), whilst inhibiting most other Gram-negative bacteria.

The colonies of Pseudomonas spp. presuntives are confirmed by the oxidase test (positive).
- The colonies change to violet color after 5-10 s. Positive oxidase.
- There is no change of color. Negative oxidase.

Formula in g/L

Enzymatic digest of casein	10	Bacteriological agar	13
Gelatin peptone	16	Potassium sulfate	10
Magnesium chloride	1,4		

Preparation

Suspend 25,2 grams of the medium in 500 ml of distilled water. Add 5 ml of glycerol. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121 ºC for 15 minutes. Cool to 47±2 ºC and aseptically add one vial of the CFC Supplement (Cat. 6036), previously reconstituted in 5 ml of sterile distilled water. Homogenize gently and dispense into Petri dishes.

Instructions for use

» For clinical diagnosis, the type of sample is any clinical sample, and especially those that have a possible contamination with normal flora.
- Inoculate on the surface making parallel striae with the handle or swab.
- Incubate in aerobic conditions at 25±1 ºC for 44±4 hours.
- Reading and interpretation of the results.

» For other uses not covered by the CE marking:
For the isolation and enumeration of Pseudomonas spp. according to ISO 13720:
- An initial suspension and decimal dilutions are prepared from the sample for analysis.
- Inoculate a plate of the Psedomonas Agar with 0,1 ml of the initial suspension. Repeat the process with the dilutions.
- Incubate the plates in an incubator (with the caps facing down) at a temperature of 25±1 ºC for 44±4 h.
- Count the colonies of each plate and keep those that have less than 150 colonies. Choose 5 random colonies to perform the confirmation test.
- Collect the selected colonies with the inoculating loop and place them on a filter paper humidify with the oxidase reagent.

Quality control

Solubility	Appareance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25ºC)
w/o rests	Fine powder	Beige	Amber, slightly opalescent	7,1±0,2

Microbiological test

According to ISO 11133:
Incubation conditions: (25±1 ºC / 44±4 h).
Inoculation conditions: Productivity quantitative (100±20. Min. 50 CFU) / Selectivity (10^4-10^6 CFU).

Microrganisms	Specification
Pseudomonas fluorescens ATCC 13525	Good growth >50%
Pseudomonas fragi ATCC 4973	Good growth >50%
Escherichia coli ATCC 8739	Total inhibition (0)

Storage

Temp. Min.:2 ºC
Temp. Max.:25 ºC

Bibliography

Goto, S., and S. Enomoto. 1970. Nalidixic Acid Cetrimide Agar. A New Selective Plating Medium for the Selective Isolation of Pseudomonas aeruginosa. Japan. J. Microbiol. 14: 65 - 72.
Mead, G.C., and B.W. Adams. 1977. A selective medium for the rapid isolation of Pseudomonas associated with poultry meat spoilage. Br. Poult. Sci. 18: 661 670.
ISO 13720. Meat and meat products - Enumeration of Pseudomonas spp.