Condalab

Reference: 0945 **Technical Data Sheet**

Product: # BACILLUS CEREUS SELECTIVE AGAR (MYP)

Specification

Selective solid medium, according to Mossel, for the isolation and identification of Bacillus cereus from food samples according to ISO standards.

Presentation

	Packaging Details	Shelf Life	Storage
20 Prepared plates 90 mm with: 21 ± 2 ml	1 box with 2 packs of 10 plates/pack. Single cellophane.	3 months	2-14°C

Composition

Composition (g/l):

Peptone from casein	10.000
Mannitol	10.000
Sodium chloride	10.000
Meat extract	1.000
Phenol red	0.025
Agar	12.000
Polymixin B Sulphate	100,000IU
Egg Yolk	100 ml

Description /Technique

Description

Mossel's formulation is developed to detect and enumerate B. cereus in any food stuff. It is both selective and differential for this microorganism. Polymyxin addition inhibits most of accompanying bacteria, but does not affect the growth of *B. cereus*. This bacterium does not ferment mannitol and thus there is no change in the colour of the indicator around the colonies. The lecithinase activity of *B. cereus* produces a halo or zone of white precipitate around the colonies.
A count of *B. cereus* over 100.000 cells/g of food sample is considered hazardous, since the accumulated phosphoril-choline may cause toxic symptoms in children. For this reason a viable enumeration must be performed to evaluate the real population of cells.

Technique

For plate inoculation follow the laboratories standard methods or the applicable norms (spiral plating method, econometric methods, streak plating, dilution banks, spread plating with drigralsky rod, among them).
According to the authors, dehydrated or dry samples must be treated in the following way: 20 g of sample is mixed with 90 mL of Tryptone Water for a minimum period of 1 hour, at room temperature. Afterwards, add an additional 90 mL of Tryptone Water and homogenize. If necessary dilute 1:10. Proceed to a 1/10 serial dilution bank using Tryptone water as the diluent if necessary. With a Drigalsky loop, spread aliquots of 0,1 mL over the surface of the agar plates and let the agar medium absorb the aliquots. Incubate the plates at 30°C for 18-24 hours to allow spore germination before giving definite results.
Suspected colonies have the following appearance: irregular borders, pink colour becoming purple in the centre, with a halo of white precipitate (mannitol +). Colonies with yellow halos must be discounted (mannitol -).
Confusion with other colonies of Gram positive bacilli is possible, and hence, confirmation tests must be carried out i.e. glucose fermentation, gelatine degradation and nitrate reduction.

Quality control

Physical/Chemical control

Color : Orange pH: 7.2 ± 0.2 at 25°C

Microbiological control

Inoculate: Practical range 100 ± 20 CFU; Min. 50 CFU (Productivity)/ 10^4-10^6 (Selectivity).
Microbiological control according to ISO 11133:2014/ Adm 1:2018.

Aerobiosis. Incubation at 30 ± 1°C, read after 24-48 h

Microorganism	Growth
Bacillus cereus ATCC® 11778, WDCM 00001	Good-pink colonies with halo of precipitation
Escherichia coli ATCC® 25922, WDCM 00013	Inhibited
Bacillus subtilis ATCC® 6633, WDCM 00003	Yellow colonies without halous

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

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