

Specification

General purpose medium with neutralisers for isolation and enumeration microorganisms in surfaces.

Presentation

	Packaging Details	Shelf Life	Storage
30 Contact Plates			
Contact Plates - Double Wrapping	1 box with 5 blisters (PET laminated and PPBO bag)	6 months	2-25 °C
with: 15 ± 2 ml	with 6 contact plates/blister.		

Composition

Composition (g/l):

Peptone from casein	5.0
Yeast extract.....	2.5
D(+) Glucose.....	1.0
Histidin.....	1.0
Lecithine.....	0.7
Polysorbate 80.....	5.0
Sodium thiosulfate.....	0.5
Agar.....	15.0
TTC sterile 1% solution.....	5 ml

Description /Technique

Description:

The Plate Count Agar formulation is according to that of Buchbinder *et al.* as recommended in their study of media for the plate count of microorganisms.

The original formulation of the standardized agar for dairy microbiology has been modified in order to avoid the addition of milk. This new composition allows the growth of most microorganisms without any further additions.

This medium's formulation is equivalent to that described by the 'Standard Methods for the Examination of Dairy products', the USP's 'Tryptone Glucose Yeast Agar', the 'Deutsche Landwirtschaft' and to the APHA and AOAC's Plate Count Agar. This is the medium of choice for the plate count of any type of sample.

1% 2-3-5-triphenyl-2H-tetrazolium chloride sterile solution. Is used as an additive for culture media to indicate biological activity. The colourless form is hydrogenated or reduced to a red insoluble pigment: triphenyl-formazan, which may be easily observed.

The addition of the neutralizing agents TLHTh (Tween 80 - Lecithin - Histidine - Sodium Thiosulphate) may inactivate a variety of disinfectants.

* The combination of lecithin, polysorbate 80 and histidine neutralizes aldehydes and phenolic compounds.

* The combination of lecithin and polysorbate 80 neutralizes the quaternary ammonium compounds.

* The polysorbate 80 neutralizes hexachlorophene and mercurial derivatives.

* Sodium thiosulphate neutralizes halogen compounds.

* Lecithin neutralizes chlorhexidine.

* Histidine neutralizes formaldehyde.

Technique

Contact plates are used in the microbiological control of disinfection and cleaning of surfaces. It acts simultaneously as a sampler and incubation culture medium without the need for any other intermediate steps.

The plates come in a form appropriate for this function and can be used with different culture media depending on the type of microbe that needs to be controlled. On average the plates provide a contact surface of approximately 25 cm².

To use, remove the cover and gently press the culture medium on the surface to be controlled, ensuring contact between the two surfaces. The Contact plate is removed and covered with the lid to prevent air contamination. It is advisable that the lid is secured with adhesive tape and the bottom labelled with the sampling data (place, date and time).

If the sample surfaces are rough, the contact plates will not make good contact, even when the pressure is increased. In these cases it is advisable to delineate a sample surface area of 25 cm squared and rub this area vigorously with a wet sterile swab and then rub the swab over the Contact plate.

If verifying the effectiveness of a cleaning or disinfection process, contact plates should be used within two hours after the end of the process, ensuring that the sample surface is dry. It is advisable to always include positive controls, sampling the area before disinfection or dirty areas beside the disinfected area.

The technician will determine the frequency of sampling and disinfection according to performance criteria. Apply the agar directly onto surface to be monitored ensuring that the pressure is distributed over the whole plate for 10 seconds. Clean the surface where the sample was collected in order to remove any traces of agar.

The inoculated plates are incubated at 30 ° C for 48-72 hours and examined daily.

After incubation, enumerate all the dark red colonies that have appeared onto the surface of the agar.

Note: Contact plates are used for monitoring the microbiological contamination of surface and air inside cleanrooms, isolators, RABS, food industries and hospitals. The double/triple irradiated wrapping ensures that the package itself doesn't contaminate the environment as the first wrapper is removed just before entering the clean area.

The plates must be kept in their original packaging (blisters) to guarantee their stability at the end of their expiration date.

Quality control**Physical/Chemical control**

Color : Yellowish

pH: 7.0 ± 0.2 at 25°C

Microbiological control

Inoculate: Practical range 100 ± 20 CFU. Min. 50 CFU (Productivity).

Analytical methodology according to ISO 11133:2014/A1:2018; A2:2020.

Aerobiosis. Incubation at 30 ± 1 °C, reading at 72 ± 3h

Microbiological control according to ISO 11133:2014/A1:2018.

Microorganism*Bacillus subtilis* ATCC® 6633, WDCM 00003*Escherichia coli* ATCC® 8739, WDCM 00012*L. monocytogenes* ATCC® 35152, WDCM 00109*Staphylococcus aureus* ATCC® 6538, WDCM 00032**Growth**

Good- dark red colonies

Good- dark red colonies

Good - White to light pink colonies

Good- dark red colonies

Sterility control

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

Check at 7 days after incubation in same conditions.

Bibliography

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