Condalab

Reference: 0832 **Technical Data Sheet**

Product: DG 18 METAL AGAR

Specification

Solid differential and low water activity medium used for the determination of xerophilic fungi in low moisture food and in indoor air supplemented with trace metals.

Presentation

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

Composition

Composition g:

Peptone	5.000
Glucose	10.000
Potassium dihydrogen Phosphate	1.000
Magnesium sulfate	0.500
Dichloran	0.002
Chloramphenicol	0.100
Agar	15.000
Glycerol	175 ml
Trace Metal Solution	1.00 ml
Distilled Water	1000 ml

(Final Volume: 1220 ml)

Description /Technique

Description:

Among the culture media for xerophilic fungi, those that have played a more successful role are the ones which include any agent that restrains the continuous growth of zygomycete fungal colonies. Dichloran (dichlorebenzalkonium chloride) and Rose Bengal are two of those inhibitors.

DG18 Agar formulation used is that proposed by Hocking & Pitt in 1980, and it includes Dichloran which limits the size of fungal colonies more efficiently than Rose Bengal. Chloramphenicol inhibits bacterial growth and its thermostability allows it to be included in the medium before sterilization.

The inclusion of 18% (w/w) of Glycerine gives the medium a water activity (aw) of 0,955 without causing any of the problems that generally occur when this water activity is provided by sodium chloride or sugar.

The metal trace complement the inhibition and esporulation.

Technique:

Mass inoculation is recommended by spread plating using an inoculation loop, a swab or by spreading the sample with a Drigaslky loop. Never use an inoculum volume greater than 0,1 mL.

According to the standardized technique, plates must be incubated at 22-25°C, with partial readings after 3 and 5 days, and definitive readings after 7-8 days. Results are expressed in xerophiles-CFU/g or mL of food sample or CFU/m3 of air.

Plates of DG18 Agar in bags will keep for up to one week at (5 ± 3)°C in the dark. Due to its extreme water activity (aw= 0.955), the plates must be rejected if any kind of dehydration is suspected.

Each laboratory must evaluate the results according to their specifications.

Presumptive isolation of any xerophile must be confirmed by further microbiological and biochemical tests.

Quality control

Physical/Chemical control

Color : Yellowish pH: 5.6 ± 0.2 at 25°C

Microbiological control

Inoculate: Practical range 100 ± 20 CFU; Min. 50 CFU (Productivity)/ 10^4-10^6 (Selectivity).
Aerobic.Incubation at 22.5 ± 2 flC until 5 days (moulds and yeast).

Microorganism	Growth
Aspergillus brasiliensis ATCC® 16404, WDCM 00053	Good
Escherichia coli ATCC® 25922, WDCM 00013	Inhibited
Bacillus subtilis ATCC® 6633, WDCM 00003	Inhibited
Candida albicans ATCC® 10231, WDCM 00054	Good

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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