

TM 1081 - SALINE AGAR

INTENDED USE

For alpha-toxin detection in *Clostridium perfringens*.

PRODUCT SUMMARY AND EXPLANATION

A heat-labile enterotoxin produced only by sporulating cells induces the major symptoms of diarrhea in perfringens poisoning. The enterotoxin appears to be released in vivo in the intestine by the sporulating organisms. Hence alpha toxin can be used as an index for detecting the presence of *Clostridium perfringens* in food. However, the viability of *C. perfringens* cells are lost if the suspected food samples are frozen.

COMPOSITION

Ingredients	Gms / Ltr
Sodium chloride	8.500
Agar	15.000

PRINCIPLE

Saline Agar Base with blood is used to measure the haemolytic activity of alpha toxin. Sodium chloride provides essential ions. Red blood cells are added in the medium to examine haemolytic reactions, which indirectly helps in detection of alpha toxin.

INSTRUCTION FOR USE

- Dissolve 23.5 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- After cooling to 50°C, add blood to give final concentration of 5 % v/v.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : White to light yellow homogeneous free flowing powder.

Appearance of prepared medium : Basal Medium yields light yellow coloured, clear gel. On addition of red blood cells, red coloured opaque gel forms in Petri plates.

pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after an incubation with added red blood cells.

Microorganism	ATCC	Inoculum (CFU/ml)	Haemolysis	Incubation Temperature	Incubation Period
<i>Clostridium perfringens</i>	12924	50-100	Positive reaction	35-37°C	18-24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Duncan C. L., 1973, J. Bacteriol., 113:932.
2. Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington, D.C.
3. Harmon S. M., Kantler D. A., 1970, Method for Estimating the presence of Clostridium perferingens in Food.
4. Hall H. E., 1968, J. Asst office Agar. Chem: 51: 1338-134.
5. Noyes N. E. and Easterling R., 1967, J. Bacteriol., 93:1254-1261.
6. Sheldon D. R., Moskowitz M. and Daercerell M. W., 1958, J. Bacteriol., 77:375 - 382.
7. Dr. Williams Horwitz, (Ed.), 2000, Official Methods of Analysis of AOAC International, Maryland.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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