Product Data Sheet

STAPHYLOCOCCUS AGAR NO.110 (GELATIN MANNITOL SALT AGAR)
Product No. GB-DCM-00233-1A

INTENDED USE
For selective isolation and differentiation of Staphylococci.

PRODUCT SUMMARY
Staphylococci are widespread in nature though they are mainly found living on the skin, skin glands and mucous membrane of mammals and birds. These organisms are also associated with staphylococcal food poisoning. Staphylococcus Agar No. 110 also known as Stone Gelatin Agar is used for the selective isolation of pathogenic Staphylococci on the basis of pigment production, mannitol fermentation and gelatin liquefaction. These properties are few of the characteristics of pathogenic Staphylococci. Staphylococcus Agar No. 110 is recommended by APHA and AOAC. The medium can be used with Egg Yolk Emulsion to study the egg yolk reactions. Mannitol fermentation can be visualized as yellow colouration by addition of a few drops of bromothymol blue to the areas of the plates where colonies have been removed. Gelatin liquefaction can be seen when the plates are flooded with a saturated aqueous solution of ammonium sulphate. On incubation at 35-37°C for 10 minutes, clear zone is observed. Enterococcus faecalis may grow on this medium as small colonies with slight mannitol fermentation.

Product Specifications

Ingredients	Gms / Ltr
Tryptone	10.000
Yeast extract	2.500
Gelatin	30.000
Lactose	2.000
D-Mannitol	10.000
Sodium chloride	75.000
Dipotassium hydrogen phosphate	5.000
Agar	15.000

PRINCIPLE

Tryptone and yeast extract serve as sources of carbon, nitrogen and other essential nutrients and growth factors including vitamins. D-Mannitol is the fermentable carbohydrate with lactose being an additional source of carbon. Sodium chloride maintains the osmotic equilibrium while phosphate buffers the medium. Gelatin serves as the substrate for gelatin liquefaction.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Mannitol fermentation	Pigment Production	Gelatinase Production	Incubation Temperature	Incubation Period
Staphylococcus aureus subsp. aureus	25923	50-100	Good-luxuriant	>=50%	Positive reaction	Positive	Positive reaction	35-37°C	48 Hours
Staphylococcus epidermidis	12228	50-100	Good-luxuriant	>=50%	Variable reaction	Negative	Positive reaction	35-37°C	48 Hours
Enterococcus faecalis	29212	50-100	None-poor	0-10%	Slight reaction	Negative	Variable reaction	35-37°C	48 Hours
Escherichia coli	25922	>=10^3	Inhibited	0%	-	-	-	35-37°C	48 Hours

INSTRUCTION FOR USE

- Dissolve 149.5 grams in 1000 ml of distilled water.
- Mix thoroughly, heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Dissolve the precipitate by gentle agitation to avoid bubbles and pour the plates while the medium is hot. Alternatively, cool the medium to 45 - 50°C and add blood or egg yolk if desired. This medium may also be used without sterilization; it should be boiled for 5 minutes and used at once.

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QUALITY CONTROL SPECIFICATIONS

Appearance of Powder:	Cream to yellow homogeneous free flowing powder
Appearance of prepared medium	Light amber coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) :	7.2 ± 0.2

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.

This product is for research use only.

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