Granada Agar Base

Cat. 2036

For the isolation and identification of Streptococcus agalactiae (Group B streptococci [GBS]) from clinical samples.

Practical information

Aplications	Categories
Selective isolation	Streptococcus agalactiae

Industry: Clinical

Principles and uses

Granada Agar Base is a selective and differential medium for the rapid detection of beta-hemolytic Streptococcus agalactiae (Lancefield group B streptococcus [BGS]) from clinical samples. The most straightforward method for detecting and identifying beta-hemolytic GBS is pigment detection.

Streptococcus agalactiae (Lancefield group B streptococcus [BGS]) is an important cause of perinatal and infant morbidity worldwide and can also cause serious infections in adults. The production of an orange carotenoid pigment is a unique characteristic of beta-hemolytic GBS isolated from humans and serves as the basis for several media for the detection and identification of GBS from clinical specimens.

Proteose peptone Nº 3 provide nitrogen, vitamins, minerals and amino acids essential for growth. Soluble starch in the medium acts as a growth factor, probably functioning like a colloid protector and neutralizes toxic products that form during the development of the organisms. It also enhances the pigment formation. Dextrose is the fermentable carbohydrate providing carbon and energy. Magnesium sulphate is a magnesium ion required in a big variety of enzymatic reactions, including DNA replication. MOPS Hemisodium salt and disodium phosphate anhydrous acts as a buffer system. Crystal violet inhibits gram positive bacteria. Bacteriological agar is the solidifying agent. Methotrexate, added to the mixture acts as a pigment enhancer. Colistin sulphate and metronidazole inhibits undesired flora.

Formula in g/L

Glucose	2,5	Bacteriological agar	10
Crystal violet	0,0002	Magnesium sulfate	0,2
Sodium pyruvate	1	Soluble starch	20
Peptone Proteose Nº3	25	MOPS Hemisodium Salt	11
Disodium phosphate anhydrous	8,5		

Preparation

Suspend 78,2 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 100 ºC for 7 minutes. Cool to 50-55 ºC and add 10 ml of a sterile solution (containing 6 mg of methotrexate, 5 mg of colistin sulfate and 10 mg of metronidazole in sterile water) and 50 ml of sterile horse serum. Mix well and pour into Petri dishes or tubes.

Instructions for use

Streak plate method:
- In a Petri dish, add 12-15 ml of molten agar and let it solidify.
- Inoculate 10 µl of the initial suspension and/or diluted sample.
- Extend the inoculum with a sterile loop on the agar surface.
- Incubate the plates in an inverted position at a temperature of 35±2 ºC for 18-24 hours.

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25ºC)
w/o rests	Fine powder	Light beige	Clear amber, slightly opalescent	7,4±0,2

Microbiological test

Incubation conditions: (35±2 ºC / 18-24 h).

Microorganisms	Specification	Characteristic reaction
Streptococcus agalactiae ATCC 13813	Good growth	Orange colonies

Storage

Temp. Min.:2 ºC
Temp. Max.:25 ºC

Bibliography

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