

**AZIDE BLOOD AGAR BASE****TM 028**

For selective isolation and cultivation of *Staphylococci* & *Streptococci* from mixed bacterial flora

Composition

Ingredients	Gms/Ltr.
Agar	15.00
Peptone, special	10.00
Sodium chloride	5.00
Beef extract	3.00
Sodium azide	0.20

* Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight.

Instructions for Use

Dissolve 33.2gms in 1000ml distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15psi (121°C) for 15 minutes. Cool to 40°- 50°C. For preparing blood agar plates under aseptic conditions, add 5% sterile defibrinated blood. Mix well and pour into sterile Petri plates.

Appearance: Light amber colour, when add blood cherry red opalescent

pH (at 25°C): 7.2 ± 0.2

Principle

AZIDE BLOOD GAR BASE is used for the selective isolation of *Streptococci* and *Staphylococci* sp. from mixed bacterial flora contaminated with Gram-negative flora. Peptone special and Beef extract are the sources of carbon, nitrogen and essential growth factors. Agar is a solidifying agent. Sodium chloride helps to maintain the osmotic balance of the medium. Sodium azide acts as a selective agent by suppressing the growth of gram-negative bacteria. It also prevents the swarming of *Proteus*. It is used as a selective media for *Streptococci* sp. with sodium azide base; this substance has a bacteriostatic effect on a number of bacterial species, particularly Gram-negative ones (probably by blocking the metallo-porphyrinic enzymatic systems: catalase, cytochrome C oxidase). The surface of the plate should be kept under examination, or included into the agar mass. Some strains of *Streptococci* sp. grow better when oxygen presence is reduced. Appearance of haemolysis in Azide Blood Agar plates is as follows under standard microscope, as well as with biochemical and serological examination: α-haemolysis: with greenish-brown ring, sometimes surrounded by a light zone; under the microscope the red cells appear discoloured but intact. β-haemolysis: with transparent red ring.

Interpretation

Cultural characteristics observed after inoculating (10³CFU/ml), on incubation at 35 - 37°C for 18 – 24 hours.

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Haemolysis
<i>Streptococcus pneumoniae</i>	6603	10 ³	Luxuriant	≥50%	Alpha
<i>Escherichia coli</i>	25922	10 ³	None-poor	≤10%	None
<i>Enterococcus faecalis</i>	29212	10 ³	Luxuriant	≥50%	Alpha/gamma

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<i>Staphylococcus epidermidis</i>	12228	10 ³	Luxuriant	>=50%	None
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References

1. Hartman. P.A. Beinbold, G.W. & Saraswat D.S. - Adv. Appl. Micr. 8, 253-289. (1966).
2. Moody, M.D. - Old and new techniques for rapid identification of Group A *Streptococci*. (1972).