# TM 028 – AZIDE BLOOD AGAR BASE

## INTENDED USE
For selective isolation and cultivation of Staphylococci & Streptococci from mixed bacterial flora.

## PRODUCT SUMMARY AND EXPLANATION
Azide Blood Agar Base is recommended for the isolation and cultivation of *Streptococcus* species from clinical and non-clinical specimens. It is a modification of the broth medium originally formulated by Edwards for the detection of Streptococci from bovine mastitis cases. The original broth medium of Edwards was modified to a blood agar by Packer containing sodium azide and crystal violet.
The media can be supplemented with sterile defibrinated blood to prepare blood agar. Blood serves as an additional source of growth factors and it also helps to visualize the haemolytic pattern. The pH of the medium influences the inhibitory action of sodium azide. At pH 7.2, sodium azide does not interfere with the haemolytic reactions of Streptococci; however, haemolytic pattern of Streptococci is different on Azide Blood Agar as compared on nonselective blood agar. For best results, use light inoculum and incubate anaerobically for enhancement in haemolytic reaction. Different types of haemolysis can be visualized on blood agar plates.

## COMPOSITION

| Ingredients | Gms / Ltr |
|---|---|
| **Peptone, special** | 10.000 |
| **Beef extract** | 3.000 |
| **Sodium chloride** | 5.000 |
| **Sodium azide** | 0.200 |
| **Agar** | 15.000 |

## PRINCIPLE
Peptone special and beef extract are the sources of carbon, nitrogen and essential growth factors. Sodium azide acts as a selective agent by suppressing the growth of gram-negative bacteria. It also prevents the swarming of *Proteus*. Sodium chloride helps to maintain the osmotic balance of the medium.

## INSTRUCTION FOR USE
- Dissolve 33.2 grams in 1000 ml of purified/ distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
- For preparing Blood Agar plates, 5% v/v sterile defibrinated blood is added aseptically.
- Mix well and pour into sterile Petri plates.

## QUALITY CONTROL SPECIFICATIONS

| | |
|---|---|
| **Appearance of Powder** | : Cream to yellow homogeneous free flowing powder. |
| **Appearance of prepared medium** | : Basal medium: Yellow coloured, clear to slightly opalescent gel. After addition of 5%w/v sterile defibrinated blood : Cherry red coloured, opaque gel forms in Petri plates, which darkens on standing. |
| **pH (at 25°C)** | : 7.2±0.2 |

## INTERPRETATION
Cultural characteristics observed after incubation with added 5%w/v sterile defibrinated blood.

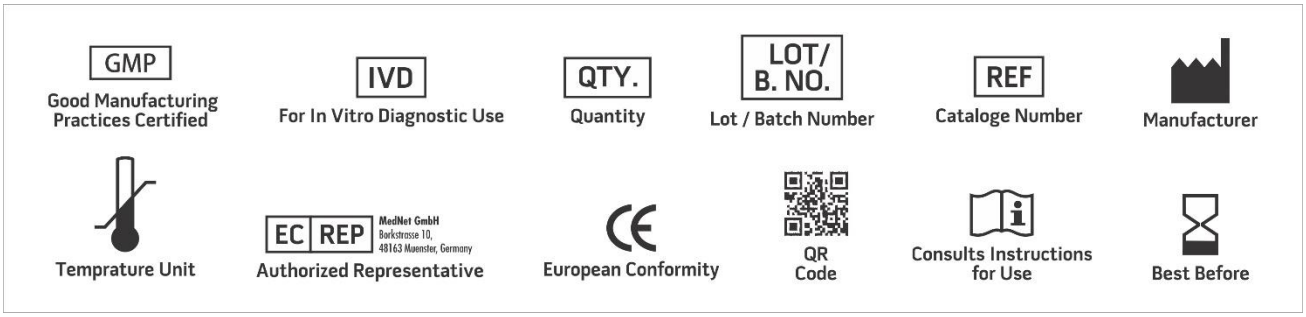
| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Recovery | Haemolysis | Incubation Temperature | Incubation Period |
|---|---|---|---|---|---|---|---|
| *Enterococcus faecalis* | 29212 | 50-100 | Luxuriant | >=70% | Alpha/ Gamma | 35-37°C | 18-24 Hours |
| *Escherichia coli* | 25922 | 50-100 | None-poor | 0-10% | None | 35-37°C | 18-24 Hours |
| *Staphylococcus epidermidis* | 12228 | 50-100 | Luxuriant | >=70% | None | 35-37°C | 18-24 Hours |
| *Streptococcus pyogenes* | 19615 | 50-100 | Good-luxuriant | >=50% | Beta | 35-37°C | 18-24 Hours |
| *Streptococcus pneumoniae* | 6303 | 50-100 | Luxuriant | >=70% | Alpha | 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. Edwards, 1933, J. Comp. Pathol. Therap., 46:211.
2. Isenberg, (Ed.), 1992, Clinical Microbiology Procedures Handbook, Vol. I., American Society for Microbiology, Washington, D.C.
3. Lichstein and Snyder, 1941, J. Bacteriol., 42:653.
4. Packer, 1943, J. Bacteriol., 1943, 46:343
5. Snyder and Lichstein, 1940, J. Infect. Dis., 67:113.



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

***For Lab Use Only**

**Revision: 08 Nov., 2019**