

# TM 682 – BRUCELLA SELECTIVE MEDIUM BASE

## **INTENDED USE**

For isolation and identification of Brucella species.

# **PRODUCT SUMMARY AND EXPLANATION**

Brucellosis is a zoonotic disease with a domestic animal reservoir. It is an occupational disease of veterinarians, microbiologists, farmers etc. The route of infections is genital, nasopharyngeal, gastrointestinal, conjunctival, respiratory and through abraded skin. Brucellosis in humans has a variable incubation period, an insidious or abrupt onset and no pathognomic symptoms or signs. Brucella Agar was designed for cultivating *Brucella* species from diagnostic specimens. With the incorporation of blood or other nutritious substances, it facilitates the cultivation of variety of fastidious anaerobic organisms. However, Brucella Medium is supplemented with antibiotics to prevent overgrowth of other accompanying organisms. Brucella Agar Base w/ 1.0 % Dextrose was originally developed by Jones and Morgan for preparations of serum-dextrose-antibiotic medium used for the isolation and cultivation of *Brucella* species. Addition of antibiotics (as FD) makes the medium highly selective for Brucella species. Ethyl violet and circulin, which were recommended initially, are no longer used

# COMPOSITION

Ingredients	Gms / Ltr	
Beef heart, infusion from	500.000	
Tryptose	10.000	
Sodium chloride	5.000	
Gelatin	1.000	
Dextrose (Glucose)	2.500	
Agar	15.000	

### PRINCIPLE

The medium contains Beef heart, infusion and tryptose, which facilitates cultivation of variety of fastidious anaerobic organisms; by providing essential nutrients. Gelatin serves as a source of nutrients. Glucose serves as source of energy.

## **INSTRUCTION FOR USE**

- Dissolve 21.75 grams in 500 ml 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 and aseptically add sterile 10% v/v Sheep blood.
- Also add rehydrated contents of one vial of Brucella Selective Supplement.
- 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	: Light yellow coloured, clear to slightly opalescent gel forms in Petri plates On addition of 10% v/v sterile sheep blood cherry red coloured opalescent gel forms in Petri plates.
pH (at 25°C)	: 7.4±0.2

f (0) in 🔰



2

f (ơ) in 5



# INTERPRETATION

Cultural characteristics observed after incubation in presence of 10% Carbon dioxide atmosphere with added sterile 10%v/v sheep blood and Brucella Selective Supplement.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Brucella melitensis	4309	50-100	Luxuriant	>=70%	35-37°C	24-48 Hours
Brucella suis	4314	50-100	Luxuriant	>=70%	35-37°C	24-48 Hours
Escherichia coli	25922	50-100	Luxuriant	>=70%	35-37°C	24-48 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	Inhibited	>=70%	35-37°C	24-48 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. Alton G. G. and Jones L. M., 1967, Lab Technique in Brucellosis, WHO, Geneva.

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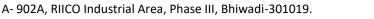
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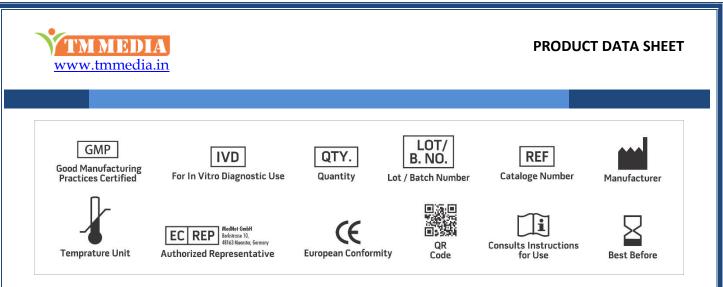
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5. Jones Lois M. and Brinley Morgan W. J., 1958, Bull. Wld. Hlth. Org., 19:200-203

6. Murray P. R., Baron E. J., Jorgensen J. H., Pfaller M. A., Yolken R. H., (Eds.), 8th Ed., 2003, Manual of Clinical Microbiology, ASM, Washington, D.C.

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NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices. \*For Lab Use Only Revision: 08 Nov., 2019

