

# TMV 071 – COLUMBIA BLOOD AGAR BASE (VEG.)

#### **INTENDED USE**

For preparation of various selective & identification media & isolation of organisms from clinical specimens.

#### **PRODUCT SUMMARY AND EXPLANATION**

These media are prepared by using Veg special peptone which is free from BSE/TSE risks. Columbia Blood Agar Base/ w/ 1% Agar Veg is the modification of Columbia Blood Agar Base/ w/ 1% Agar which was originally developed by Ellner et al. The media promotes typical colonial morphology, better pigment production and more sharply defined haemolytic activity. Columbia Blood Agar Base/ w/ 1% Agar. Veg is used as a base for preparing media containing blood and for selective media formulations in which different combinations of antimicrobial agents are used as additives. Sheep blood permits the detection of haemolysis and also provides heme (X factor) which is required for the growth of many fastidious bacteria. However, it is devoid of V factor (Nicotinamide adenine dinuellotide) and hence *Haemophillus influenzae* which needs both X and V factors, will not grow on this media. As these media has a relatively high carbohydrate content betahaemolytic Streptococci may exhibit a greenish haemolytic reaction which may be mistaken for alpha haemolysis therefore confirmatory tests for all the colonies should be carried out.

## COMPOSITION

Ingredients	Gms / Ltr		
Veg special peptone	23.000		
Corn starch	1.000		
Sodium chloride	5.000		
Agar	15.000		

#### PRINCIPLE

Media contains Veg special peptone to support luxurious growth of fastidious and non-fastidious organism. Corn starch serves as an energy source and also neutralizes toxic metabolites.

#### INSTRUCTION FOR USE

- Dissolve 44.0 grams of in 1000 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 before adding heat sensitive compounds.
- For Blood Agar: Add 5% v/v sterile defibrinated sheep blood to sterile cool base.
- For Chocolate Agar: Add 10% v/v sterile defibrinated sheep blood to sterile cool base. Heat to 80°C for 10 minutes with constant agitation. The medium can be made selective by adding different antimicrobials to sterile base.
- For *Brucella* species: Add rehydrated contents of 1 vial of Brucella Selective Supplement to 500 ml sterile molten base.
- For Campylobacter species: Add rehydrated contents of 1 vial of Campylobacter Supplement- I (Blaser-Wang) or Campylobacter Supplement- II, (Butzler) or Campylobacter Supplement- III (Skirrow) or Campylobacter Selective Supplement or Campylobacter Supplement- VI (Butzler) to 500 ml sterile molten base along with rehydrated contents of 1 vial of Campylobacter Growth Supplement and 5-7% v/v horse or sheep blood.
- For *Gardnerella* species: Add rehydrated contents of 1 vial of G.Vaginalis Selective Supplement to 500 ml sterile molten base.
- For *Cocci*: Add rehydrated contents of 1 vial of Staph-Strepto Supplement or Strepto Supplement or Streptococcus Selective Supplement to 500 ml sterile molten base.

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QUALITY CONTROL SPECIFICATIONS							
Appearance of Powder	: Light yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.						
Appearance of prepared medium	<ul> <li>Basal medium yields light amber coloured, clear to slightly opalescent gel.</li> <li>Addition of 5% sterile defibrinated blood to the basal medium gives cherry red opaque gel in petri plates.</li> </ul>						
pH (at 25°C)	: 7.3±0.2						

## INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	lnoculum (CFU/ml)	Growth	Recovery	Haemolysis	Incubation Temperature	Incubation Period
Neisseria meningitidis	13090	50-100	Luxuriant	>=70%	None	35-37°C	24-48 Hours
Staphylococcus aureus	25923	50-100	Luxuriant	>=70%	Beta/gamma	35-37°C	24-48 Hours
Staphylococcus epidermidis	12228	50-100	Luxuriant	>=70%	Gamma	35-37°C	24-48 Hours
Streptococcus pneumoniae	6303	50-100	Luxuriant	>=70%	Alpha	35-37°C	24-48 Hours
Streptococcus pyogenes	19615	50-100	Luxuriant	>=70%	Beta	35-37°C	24-48 Hours

#### PACKAGING:

In pack size of 100 gm and 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.

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## REFERENCES

1. Ellner, Stoessel, Drakeford and Vasi, 1966, Am.J. Clin. Pathol., 45:68.





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

