

## TM 611 – CASMAN BROTH BASE

### INTENDED USE

For isolation of fastidious bacteria from clinical samples under reduced oxygen tension.

### PRODUCT SUMMARY AND EXPLANATION

Fastidious microorganisms such as *Haemophilus* and *Neisseria* require the addition of X and V- growth factors for in vitro cultivation. Casman described a blood-enriched medium for cultivation of *Haemophilus* and gonococci. The medium was developed to replace the previously described formulations that required time-consuming preparations using fresh and heated blood and meat infusion to supply the essential nutrients for growth of these fastidious organisms. Blood supplies factor-X (hemin) and factor-V (Nicotinamide Adenine Dinucleotide), which is required for growth of *Haemophilus influenzae*. Sheep blood lacks factor-V due to NADase, an enzyme that destroys factor- V. Horse and rabbit blood supplies both the factor X and factor V, and are relatively free of NADase activity, therefore it is preferred over sheep blood. Nicotinamide is added to medium to inhibit nucleotidase of erythrocytes that may destroy factor V.

### COMPOSITION

Ingredients	Gms / Ltr
Proteose peptone	10.000
Tryptose	10.000
Beef extract	3.000
Dextrose (Glucose)	0.500
Corn starch	1.000
Sodium chloride	5.000
Nicotinamide	0.050
p-Amino benzoic acid (PABA)	0.050

### PRINCIPLE

Proteose peptone, tryptose and beef extract provide amino acids and other complex nitrogenous nutrients. Dextrose improves growth of pathogenic cocci. Corn starch prevents fatty acids from inhibiting the growth of *Neisseria gonorrhoeae*, without interfering with haemolytic reaction. Corn starch also neutralizes the inhibitory action of dextrose. Inoculate the medium as soon as the specimen arrives at the laboratory.

### INSTRUCTION FOR USE

- Dissolve 29.6 grams in 1000 ml purified / distilled water.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add 0.15% v/v sterile waterlysed blood (water:blood :: 3:1) of 5% sterile blood.
- Alternatively add 5% partially lysed blood. Mix well and dispense as desired.

### 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 solution. After addition of blood: Cherry red coloured opalescent solution in tubes.
pH (at 25°C)	: 7.2±0.2



## INTERPRETATION

Cultural characteristics observed after incubation with added water-lysed blood.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
<i>Haemophilus influenzae</i>	35056	50-100	Good-luxuriant	35-37°C	40-48 Hours
<i>Neisseria meningitidis</i>	13090	50-100	Luxuriant	35-37°C	40-48 Hours
<i>Streptococcus mitis</i>	9895	50-100	Luxuriant	35-37°C	40-48 Hours
<i>Streptococcus pneumoniae</i>	6303	50-100	Luxuriant	35-37°C	40-48 Hours
<i>Streptococcus pyogenes</i>	19615	50-100	Luxuriant	35-37°C	40-48 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. Casman, 1947, Am. J. Clin. Pathol., 17:281.
2. Casman, 1942, J. Bact., 43:33. 3. Casman, 1947, J. Bact., 53:561.
3. Krunveide and Kuttner, 1938, J. Exp. Med., 67:429.



 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP MedNet GmbH Barkstrasse 10, 49163 Muenster, Germany Authorized Representative	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

**\*For Lab Use Only**  
**Revision: 08 Nov., 2019**