TM 292 - SCHAEDLER BROTH

INTENDED USE
For cultivation of wide variety of microorganisms particularly from anaerobic blood cultures.

PRODUCT SUMMARY AND EXPLANATION
Schaedler Broth was originally formulated by Schaedler et al and modified by Mata et al with composition changes. It serves as an excellent basal medium to which blood or other enrichments can be added to enhance the recovery of fastidious anaerobic organisms. Stalons et al found this medium to be most effective medium for the growth of obligately anaerobic bacteria in an atmosphere of 5% carbon dioxide, 10% hydrogen and 85% Nitrogen. It can also be used to determine antibiotics MIC levels of anaerobic organisms. Fass et al used tube method for antibiotic MIC determination. Schaedler broth is highly nutritious medium due to tryptone, proteose peptone, soya peptone and yeast extract. Sodium Polyanethole Sulphonate (SPS) which is an anticoagulant in culture bottles promotes optimal recovery of organisms from blood. It acts to inhibit phagocytosis and to neutralize the antibacterial activity of fresh blood components.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	5.670
Proteose peptone	5.000
Soya peptone	1.000
Yeast extract	5.000
Dextrose (Glucose)	5.830
Sodium chloride	1.670
Dipotassium hydrogen phosphate	0.830
Tris (hydroxymethyl) aminomethane	3.000
L-Cystine	0.400
Hemin	0.010

PRINCIPLE
The combination of tryptone, proteose peptone and Soya peptone, Yeast extract and L-cystine provide nitrogenous growth factors, vitamins and other essential growth nutrients. Dextrose serves as energy source. Hemin and sheep blood stimulates the growth of fastidious microorganisms and stimulates growth of other Bacteroides species and gram-positive spore formers. Addition of Sodium Polyanethol Sulphonate is recommended when using this medium for blood culture. It inhibits phagocytosis and neutralizes the antibacterial activity of fresh blood components. Vitamin K1 enables the cultivation of *Bacteroides melaninogenicus* and stimulates growth of other *Bacteroides* species and gram-positive spore formers.

INSTRUCTION FOR USE
- Dissolve 28.41 grams in 950 ml distilled water.
- If desired 0.02-0.2% Agar can be added.
- 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 add 5% sterile defibrinated blood if desired.

- Mix well and dispense into tubes or flasks as desired. Avoid overheating and photooxidation of the medium as it will retard the growth of bacteria.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light amber coloured clear to slightly opalescent solution in in tubes.
pH (at 25°C) : 7.6±0.2

INTERPRETATION

Cultural characteristics observed after an incubation under anaerobic condition.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Bacteroides fragilis	25285	50-100	Luxuriant	35-37°C	18-48 Hours
Clostridium sporogenes	13732	50-100	Luxuriant	35-37°C	18-48 Hours
Clostridium perfringens	12924	50-100	Luxuriant	35-37°C	18-48 Hours
Clostridium sporogenes	11437	50-100	Luxuriant	35-37°C	18-48 Hours
Escherichia coli	25922	50-100	Luxuriant	35-37°C	18-48 Hours
Streptococcus pyogenes	19615	50-100	Luxuriant	35-37°C	18-48 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

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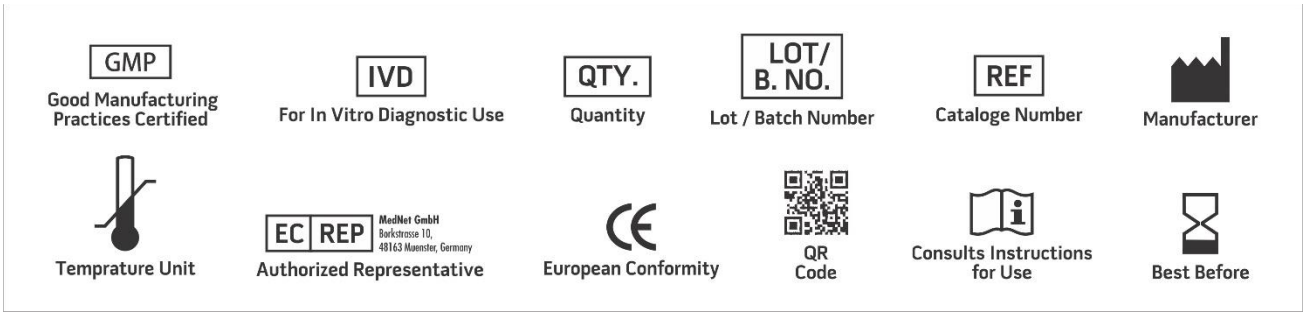

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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