TM 2138 – IRON SULPHITE AGAR MODIFIED (ISO 15213:2003)

INTENDED USE
For the enumeration of sulfite – reducing bacteria growing under anaerobic conditions.

PRODUCT SUMMARY AND EXPLANATION
Iron Sulphite Agar, Modified is recommended by ISO for the enumeration of sulphite reducing bacteria. Most Clostridia possess sulfite reductase in their cytoplasm but they are unable to expel them to the exterior. So when H_2S is produced from sulfite, the colony becomes dark due to the formation of precipitates of iron sulfide from citrate.

COMPOSITION

Ingredients	Gms / Ltr
Enzymatic digest of casein	15.000
Soya peptone	5.000
Yeast extract	5.000
Disodium disulfite	1.000
Ferric ammonium citrate	1.000
Agar	15.000

PRINCIPLE
The medium consists of Enzymatic digest of casein and soya peptone provides carbon, nitrogen compounds, vitamins, minerals and amino acids necessary for the growth of organism. Yeast extract serves as a rich reservoir of vitamins especially B-complex vitamins. Ferric citrate ammonium citrate and Disodium sulfite serves as are H2S indicators, wherein Clostridium perfringens reduces the sulfite to sulfide which in turn reacts with the iron and forms a black iron sulfide precipitate, seen as black colonies. Agar is the solidifying agent.

INSTRUCTION FOR USE
- Dissolve 42 grams in 1000 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense as desired and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
- Mix well and dispense into sterile tubes or pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS
Appearance of Powder : Light yellow to brownish yellow homogeneous free flowing powder.
Appearance of prepared medium : Yellow coloured, slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.6±0.2

INTERPRETATION
Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation temperature	Incubation Period

Clostridium botulinum	25763	50-100	Luxuriant	>=70%	Black	36-38°C	24-48 Hours
Clostridium butyricum	13732	50-100	Luxuriant	>=70%	Black	36-38°C	24-48 Hours
Clostridium sporogenes	19404	50-100	Luxuriant	>=70%	Black	36-38°C	24-48 Hours
Clostridium perfringens	13124	50-100	Luxuriant	>=70%	Black	36-38°C	24-48 Hours
Clostridium perfringens	12916	50-100	Luxuriant	>=70%	Black	36-38°C	24-48 Hours
Desulfotomaculum nigrificans	19998	50-100	Luxuriant	>=70%	Black	36-38°C	24-48 Hours
Escherichia coli	25922	50-100	Good	40-50%	No blackening	36-38°C	24-48 Hours
Escherichia coli	8739	50-100	Good	40-50%	No blackening	36-38°C	24-48 Hours

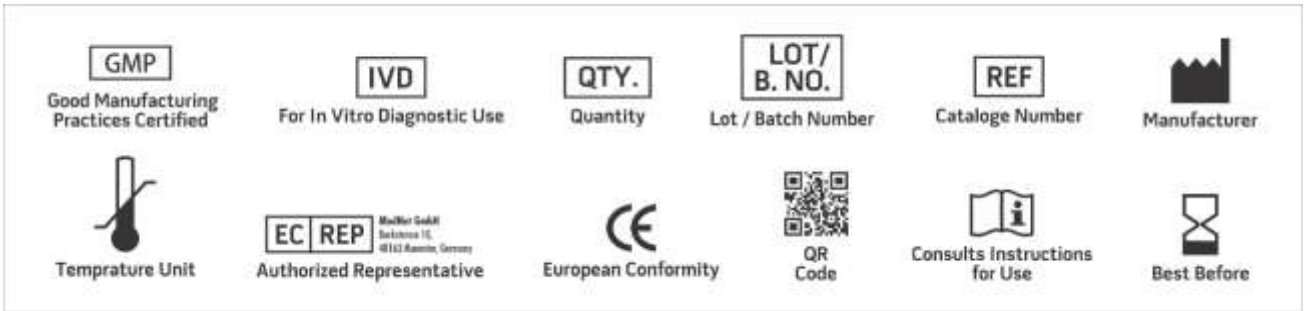
PACKAGING:
In pack size of 500 gm bottles.

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. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Microbiology of food and animal feeding stuffs- Horizontal method for the enumeration of sulphite reducing bacteria growing under anaerobic conditions, ISO 15213.



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

***For Lab Use Only**

Revision: 08 Nov., 2019