CM 20755 - SUCROSE SALICIN AGAR (GILLIES AGAR NO. 2)

INTENDED USE

For detection ofmotility, hydrogen sulphide, indole production, fermentation of sucrose and salicin during identification of Salmonella and Shigella species.

PRODUCT SUMMARYANDEXPLANATION

Enterobacteriaceae genera consist of gram-negative bacilli and are widely distributed in nature. It includes pathogens such as Salmonella, Shigella, Yersinia, diarrheagenic E. coli and others. These bacteria cause multitude of diseases in humans and are frequently isolated from clinical specimens. Detection and identification of the bacteria are of importance both from clinical and epidemiological point of view. The other enterobacteria are essentially commensals or saprophytes. Gillies Agar No. 2, a modification of Kohns Medium is recommended for detection of motility, hydrogen sulphide, indole production and fermentation of sucrose and salicin. This medium is a reliable substitute for the conventional method of determining the biochemical identity of non-lactose fermenting colonies prior to confirmation by serological typing. Fermentation of sucrose and salicin leads to acid production that causes the pH indicator dye, bromothymol blue, to change from blue to yellow. The accompanying gas production during fermentation causes bubbles to form, which appears in varying degrees from a slight splitting along the wire track to disruption of the medium. Non-motile organisms grow only along the line of inoculation whereas motile species show either a diffuse even growth spreading from the inoculum or more rarely localized outgrowths, which are usually fan shaped or occasionally nodular. Hydrogen sulphide production causes blackening of the lead acetate paper and the formation of indole gives a red colour in the Kovacs reagent strips. The specimen is inoculated into a preliminary enrichment medium such as Fluid Tetrathionate Broth Base. After incubation at 35-37°C for 18-24 hours, this enriched culture is subcultured on a differential media such as Wilson and Blair Medium or MacConkey Agar. Presumptive colonies are purified and pure cultures are used to inoculate the tubes of Gillies Agar No. 2.
Gillies Medium No. 2 is used by stab inoculating one half the depth of the medium using a straight needle. Kovacs reagent strips and lead acetate papers can be suspended from the cap or with the cotton plug over the medium but not touching the surface of the medium.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	10.000
Tryptone	10.000
Sodium chloride	5.000
Disodium hydrogen phosphate	0.250
Sucrose	10.000
Salicin	10.000
Bromothymol blue	0.010
Sodium thiosulphate	0.025
Agar	3.000

PRINCIPLE

Peptone and tryptone serve as sources of essential nutrients for bacterial growth. Sodium chloride maintains the osmotic equilibrium of the medium. Sucrose and salicin are the fermentable carbohydrates with bromothymol blue as the pH indicator. Sodium thiosulphate aids in the production of hydrogen sulphide.

INSTRUCTION FORUSE

Dissolve 48.28 gramsin 1000 ml purified / distilled water.
Heat to boiling to dissolve the medium completely.
Distribute in tubes and sterilize by autoclaving at 118° - 121°C for 15 min (12-15 psi pressure).
Allow the tubes to cool to 45-50°C in an upright position.
Suspend Kovacs reagent strips and lead acetate papers from the cap or the cotton plug over the medium but not touching the surface of the medium.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Light yellow to light green homogeneous free flowing powder.
Appearance of prepared medium	: Green coloured, clear to slightly opalescent gel forms in tubes as butts.
pH (at 25°C)	: 7.4±0.2

INTERPRETATION

Culturalcharacteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	H_2S	Indole	Motility	Sucrose/Salicin	Incubation Temperature	Incubation Period
Proteus vulgaris	13315	50-100	Luxuriant	Weak reaction	Weak reaction	Positive,growth awayfrom stablinecausing turbidity	Positive reaction, yellow colouration of the medium	35 - 37°C	18 - 24 Hours
Salmonella Typhi	6539	50-100	Luxuriant	Weak reaction	Negative Reaction, no colour development/ cloudy ring	Positive,growth awayfrom stablinecausing turbidity	Negative reaction	35 - 37°C	18 - 24 Hours
Shigella sonnei	25931	50-100	Luxuriant	Negative Reaction	Negative Reaction, no colour development/ cloudy ring	Negative growthalong the stabline, surrounding Medium remains clear	Negative reaction	35 - 37°C	18 - 24 Hours

PACKAGING:

Inpacksizeof100 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

Afteruse,prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
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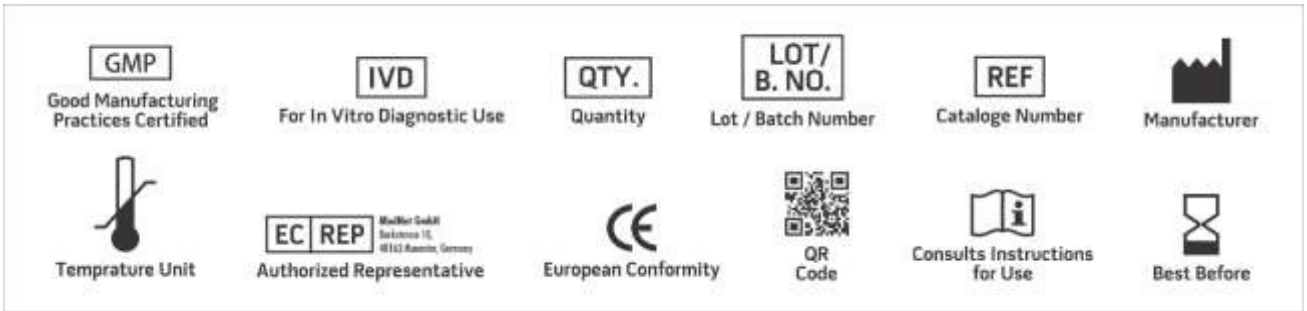

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For LabUse Only