TM 118 - GIOLITTI-CANTONI BROTH BASE

INTENDED USE

For selective enrichment of *Staphylococcus aureus* from foods.

PRODUCT SUMMARY AND EXPLANATION

Giolitti-Cantoni Broth Base is a fluid medium employed for the recovery of low number of Staphylococci from foodstuffs as described by Giolitti and Cantoni. Giolitti- Cantoni Broth was also recommended by Mossel et.al. for detecting *Staphylococcus aureus* in dried milk, baby food and other food products. This medium was recommended as an enrichment medium by the International Dairy Federation and APHA for detecting *S. aureus* in dried milk and other foods stating that the organism should be absent in 1 gram of sample. ISO committee has also recommended this medium for examination of meat and meat products.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Beef extract	5.000
Yeast extract	5.000
Mannitol	20.00
Sodium chloride	5.000
Lithium chloride	5.000
Glycine	1.200
Sodium pyruvate	3.000

PRINCIPLE

Giolitti-Cantoni Broth Base contains tryptone, yeast extract and HM peptone B as sources of carbon, nitrogen, vitamins and minerals and B-complex vitamins. Mannitol and sodium pyruvate in the basal medium act as growth stimulants for *S. aureus.* Lithium chloride inhibits gram-negative lactose fermenting bacilli. Potassium tellurite and glycine inhibit gram-positive bacilli. Addition of sterile paraffin wax to the inoculated medium inhibits Micrococci due to creation of anaerobic conditions. Potassium tellurite concentration must be reduced as per the weight of test sample (0.1 - 0.01 gram).

INSTRUCTION FOR USE

- Dissolve 54.2 grams in 1000 ml purified/distilled water.
- Warm gently to dissolve the medium completely.
- Dispense 19 ml amounts in 20mm x 200mm test tubes.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool rapidly to room temperature and aseptically add 0.3 ml of 3.5% Potassium Tellurite Solution to each tube. Add 0.03 ml for testing meat and meat products.
- Mix well before use.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to brownish yellow homogeneous free flowing powder.
Appearance of prepared medium : Medium amber coloured, clear solution without any precipitate.
pH (at 25°C) : 6.9±0.2

INTERPRETATION

Cultural characteristics observed with added 3.5% PotassiumTellurite Solution, after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Tellurite reduction	Incubation Temperature	Incubation Period
Staphylococcus aureus subsp. *aureus*	25923	50-100	Good-luxuriant	Positive, Blackening at the bottom of the tubes or general blackening of the medium	35-37°C	24-48 Hours
Escherichia coli	25922	>=10^3	Inhibited	-	35-37°C	24-48 Hours
Micrococcus luteus	10240	>=10^3	Inhibited	-	35-37°C	24-48 Hours
Staphylococcus aureus subsp. *aureus*	6538	50-100	Good-luxuriant	Positive, Blackening at the bottom of the tubes or general blackening of the medium	35-37°C	24-48 Hours
Bacillus cereus	11778	>=10^3	Inhibited	-	35-37°C	24-48 Hours
Pseudomonas aeruginosa	27853	>=10^3	Inhibited	Variable reaction	35-37°C	24-48 Hours
Staphylococcus epidermidis	12228	50-100	Poor-fair	-	35-37°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

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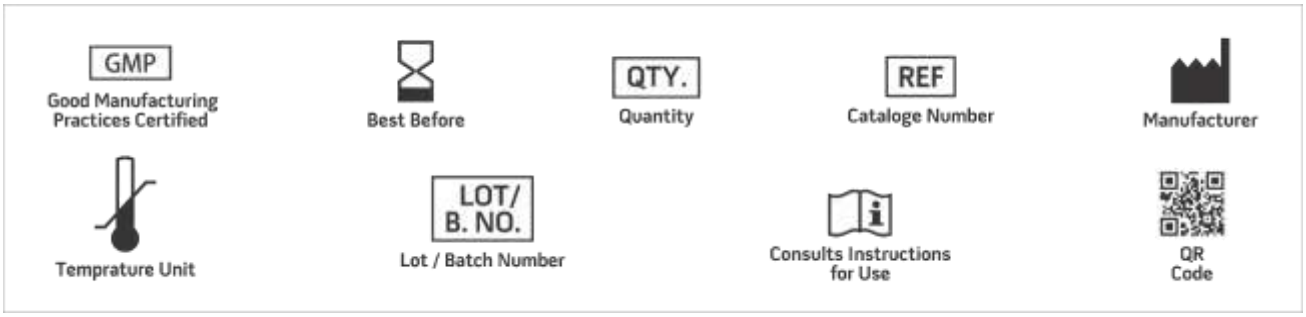

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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