

CM 20757 -GIOLITTI-CANTONI BROTH BASE (ISO 6888-3:2003)

INTENDED USE

For selective enrichment of *Staphylococcus aureus* from foods.

PRODUCT SUMMARY AND EXPLANATION

Giolitti and Cantoni described a broth medium with added potassium tellurite and a test procedure for enriching small numbers of *Staphylococci* in foods. Mossel et al. recommended Giolitti-Cantoni Broth for detecting *Staphylococcus aureus* in dried milk and other infant foods where the organism should be absent from 1 g of test material. It is also recommended by the International Organization for Standardization and American Public Health Association recommend using Giolitti - Cantoni Broth in an MPN procedure for detecting *S. aureus*. The composition & performance criteria of this medium are as per the specifications laid down in ISO 6888-3:2003.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	10.000
Meat extract	5.000
Yeast extract	5.000
Mannitol	20.000
Sodium chloride	5.000
Lithium chloride	5.000
Glycine	1.200
Sodium pyruvate	3.000
Tween 80	1.000

PRINCIPLE

Medium contains Casein enzymic hydrolysate and Meat extract as sources of carbon, nitrogen, vitamins and minerals. Yeast extract supplies B-complex vitamins which stimulate bacterial growth. D-Mannitol is the carbohydrate source. Sodium pyruvate stimulates growth of *staphylococci*. Lithium chloride inhibits gram-negative bacilli. Added Tellurite Solution 1% supplies potassium tellurite, which in combination with glycine, inhibits gram-positive bacteria other than *staphylococci*. Tween 80 acts as an emulsifier. Sodium chloride maintains the osmotic balance.

INSTRUCTION FOR USE

- ☐ Dissolve 55.20 grams in 1000ml distilled water.
- ☐ Gently heat to boiling with swirling to dissolve the medium completely.
- ☐ Dispense 19 ml amounts in 20mmx200mm test tubes.
- ☐ Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- ☐ Cool rapidly to room temperature and aseptically add 0.1 ml of 1% Potassium Tellurite Solution (TS 003) to each tube.
- ☐ Add 0.03 ml for testing meat and meat products.
- ☐ Mix well before use.

Caution: Lithium chloride is harmful. Avoid bodily contact and inhalation of vapors. On contact with skin, wash with plenty of water immediately.



QUALITY CONTROL SPECIFICATIONS

Appearance of Dehydrated powder	: Cream to brownish yellow colour, homogeneous free -flowing powder
Appearance of Prepared medium	: Medium amber coloured, clear solution
pH (at 25°C)	: 6.9± 0.2

INTERPRETATION

Cultural characteristics observed after incubation with addition of 1% Potassium Tellurite Solution (TS 003).

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Tellurite reduction	Incubation Temperature	Incubation Period
Staphylococcus aureus	25923	50-100	Luxuriant	Positive, blackening of the medium	35-37°C	24-48 Hours
Escherichia coli	25922	≥1000	Inhibited	-	35-37°C	24-48 Hours
Micrococcus luteus	10240	≥1000	Inhibited	-	35-37°C	24-48 Hours

PACKAGING

In 500 gm packaging size.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°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 powder if they show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

DISPOSAL

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

REFERENCES

1. Giolitti and Cantoni. 1966. J. Appl. Bacteriol. 29:395.
2. Mossel, Harrewijn and Elzebroek. 1973. UNICEF.
3. International Organization for Standardization. 2003. Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of coagulase-positive staphylococci – Part 3: Detection and MPN technique for low numbers. ISO 6888-3, 2003- 03-15. ISO, Geneva, Switzerland.
4. Downes and Ito (ed.). 2001. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C

 Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 Lot / Batch Number	 Consults Instructions for Use	 QR Code	

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



