

Giolitti-Cantoni Broth



Medium used for the isolation and cultivation of *Staphylococcus aureus*.

• CONTENTS (Liter)

Tryptone	10.0 g
Beef Extract	5.0 g
Yeast Extract	5.0 g
D-Mannitol	20.0 g
Lithium Chloride	5.0 g
Sodium Chloride	5.0 g
Glycine	1.2 g
Sodium Pyruvate	3.0 g
Polysorbate 80	1.0 g
Final pH = 6.9 ± 0.2 at 25°C	

• PROCEDURE

Suspend 55.2 G of powder in 1 L of distilled or deionized water. Sterilize by autoclave at 121°C for 15 minutes. Cool to 15 - 30°C and aseptically add 11 mL of Potassium Tellurite 1% supplement (MB-P1842). If necessary, add more Potassium Tellurite 1% supplement. Mix well. Pour into tubes. This medium should be used immediately after preparation.

Potassium Tellurite 1% supplement

1 vial contents

Potassium Tellurite	0.1 g
---------------------	-------

• INTERPRETATION

Giolitti-Cantoni Broth is a medium used for the isolation and cultivation of *Staphylococcus aureus*. Tryptone, beef extract and yeast extract provide nitrogen, carbon, vitamins and minerals. Mannitol is the carbohydrate and energy source. Lithium chloride inhibits the Gram-negative organisms. Gram-positive organisms other than staphylococci are suppressed by glycine and potassium tellurite. Sodium chloride maintains the osmotic balance. High concentration of mannitol, glycine, sodium pyruvate and polysorbate 80 stimulate the growth of staphylococci.

• TECHNIC

Inoculate 1 G or 1 mL of test sample (0.1 G or 0.1 mL when testing meat or meat products) to 9 mL of Giolitti Cantoni Broth. For inhibition of *Micrococcus luteus*, overlay each tube with sterile molten paraffin wax (Vaseline oil, MB-80278) to an approximate height of 2 cm. (or incubate under anaerobic condition). Incubate at 35 ± 2°C for 40 - 48 hours and examine daily. If blackening occurs, subculture on Baird Parker Agar (MB-B1004), which confirms the isolation of *Staphylococcus aureus*. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: beige

Prepared medium

Appearance: clear to slightly opalescent

Color: light amber

Incubation conditions: $35 \pm 2^{\circ}\text{C}$ / 40 - 48 hours

then subculture onto Baird Parker Agar / $35 \pm 2^{\circ}\text{C}$ / 18 - 24 hours up to 48 hours

Microorganism	ATCC	Inoculate CFU	Growth	Characteristics
<i>Staphylococcus aureus</i>	25923	50-100	good	blackening
<i>Staphylococcus aureus</i>	6538	50-100	good	blackening
<i>Micrococcus luteus</i>	10240	$\geq 10^3$	inhibited	-
<i>Escherichia coli</i>	25922	$\geq 10^3$	Inhibited	-

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Prepared medium should be used immediately after preparation.

• REFERENCES

1. Giolitti, G., and C. Cantoni. (1996). A medium for the isolation of staphylococci from foodstuffs. J. Appl. Bacteriol. 29: 395-398.
2. International Dairy Federation. (1978). IDF Standard 60A.
3. ISO 6888-3: 2003. Microbiology of food and animal feeding stuffs- Horizontal medium for the enumeration of coagulase - positive staphylococci (*Staphylococcus aureus* and other species).

• PACKAGE

Cat. No : MB-G1100 Giolitti-Cantoni Broth	500 G
--	-------