Inositol Gelatin Medium

M1161

Inositol gelatin medium is recommended for the cultivation of *Pleisomonas shigelloides* from food samples in accordance with APHA.

Composition**

Ingredients	Gms / Litre
Gelatin	120.000
Yeast extract	5.000
Disodium hydrogen phosphate	5.000
Inositol	10.000
Phenol red	0.050
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 140.05 grams in 1000 ml warm distilled water. Heat to boiling to dissolve the medium completely. Dispense in tubes. Sterilize by autoclaving at 115°C(10 lbs pressure) for 15 minutes.

Principle And Interpretation

Plesiomonas shigelloides , an opportunistic pathogen is commonly implicated in human waterborne diarrhoea. It is mainly isolated from fresh water, fresh water fish, and shellfish and from many types of animals including goats, cattle, swine, dogs, cats, monkeys, vultures, snakes and toads. Human infections attributed to *P.shigelloides* are almost exclusively restricted to two clinical settings (1). The most common presentation is a watery diarrheal illness most often found in individuals with a history of fresh water contact, seafood consumption, exposure to amphibia or reptiles or travel to developing countries. The second well-recognized syndrome associated with *P.shigelloides* is septicemia, often accompanied by meningitis (2). Inositol Gelatin Medium is recommended for the cultivation of *P.shigelloides* from food as recommended by APHA (3).

Yeast extract serves as source of B-complex nutrients. Disodium phosphate buffers the medium. *P.shigelloides* utilizes inositol for metabolic activity, producing only acid and no gas. This acid is detected by the phenol red indicator, which changes its colour from red to yellow. *P.shigelloides* also do not hydrolyze gelatin which acts as a solidifying agent.

Samples, depending upon consistency and expected numbers are diluted and directly streaked on PL Agar (M1173) and Inositol Brilliant Green Bile Agar (M574) (4). Another 10 grams of the sample is inoculated into 90 ml of Tetrathionate Broth Base(M032). Plates are incubated at 35-37°C and broth at 40°C. Following an incubation of 24 hours, presumptive *P.shigelloides* colonies are inoculated into TSI slants (M021) and Inositol Gelatin Medium Butts (M1161). Growth from M032 is streaked onto PL Agar (M1173) and BGBA (M574).

Quality Control

Appearance
Light yellow to pink homogeneous free flowing powder

Gelling
Firm, comparable with 12.0% Gelatin gel

Colour and Clarity of prepared medium
Red coloured, clear gel forms in tubes as butts

Reaction
Reaction of 14% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH
7.20-7.60

Cultural Response
M1161: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth
Cultural Response		
Plesiomonas shigelloides ATCC 14029	50-100	luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and prepared medium at 2-8°C. Use before expiry period on the label.

Reference

1.Brenden R. A., Miller M. A., and J. M., Janda, 1988, Rev. Infect. Dis. 10:303-316
2.Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
3.Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C.
4.Miller M. L and Koburger J. A., 1985, J. Food Prot., 48:449.

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