



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Inositol Gelatin Medium

Product Code: DM 2161

Application: - Inositol gelatin medium is recommended for the cultivation of *Plesiomonas 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

Principle & Interpretation

Plesiomonas shigelloides, an opportunistic pathogen is commonly found in human waterborne diarrhoea. It is mainly isolated from fresh water, fresh water fish, shellfish and from many types of animals including goats, cattle, swine, dogs, cats, monkeys, vultures, snakes and toads. Human infections due to *P.shigelloides* has most common presentation is a watery diarrheal often found in individuals with a history of fresh water contact, seafood consumption, exposure to amphibia or reptiles or travel to developing countries ⁽¹⁾. 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 (DM2173) and Inositol Brilliant Green Bile Agar (DM1574) ⁽⁴⁾. Another 10 grams of the sample is inoculated into 90 ml of Tetrathionate Broth Base (DM1032). 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 (DM1021) and Inositol Gelatin Medium Butts (DM2161). Growth from M032 is streaked onto PL Agar (DM2173) and BGBA (DM1574).

Methodology

Suspend 140.05 grams of powder media in 1000 ml warm distilled water. Shake it well & heat to dissolve the medium completely. Dispense in tubes. Sterilize by autoclaving at 115°C for 15 minutes.

Quality Control

Physical Appearance

Light yellow to pink homogeneous free flowing powder

Gelling

Firm, comparable with 12.0% Gelatin gel

Colour and Clarity of prepared medium

coloured, clear gel forms in tubes as butts





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Reaction

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

pH Range 7.20-7.60

Cultural Response/ characteristics

DM2161: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth
<i>Plesiomonas shigelloides</i> ATCC 14029	50-100	luxuriant

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

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 Tenover F. C., (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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