

MOTILITY NITRATE MEDIUM, BUFFERED
TM 792

For isolation and detection of *Clostridium perfringens* on the basis of motility and nitrate test

Composition

Ingredients	Gms/Ltr.
Peptic digest of animal tissue	5.00
Galactose	5.00
Potassium nitrate	5.00
Agar	3.00
Beef extract	3.00
Disodium phosphate	2.50

* Dehydrated powder, hygroscopic in nature, store, in a dry place in tightly- sealed containers below 25°C and protect from direct Sunlight.

Instructions for Use

Dissolve 23.50gms in 1000ml of purified water or distilled water with added 5% glycerol. Gently heat to boiling with gentle swirling and dissolve the medium completely. Dispense in test tubes upto half full. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes. Cool to room temperature under running water and allow standing the test tubes in an upright position.

Appearance: Light amber colour, clear to slightly opalescent

pH (at 25°C): 7.1 ± 0.2

Principle

MOTILITY NITRATE MEDIUM, BUFFERED is used for isolation and detection of *Clostridium perfringens* on the basis of motility and nitrate test. This medium is recommended as formulated by FDA and APHA. Medium contains Peptic digest of animal tissue, Beef extract and Galactose provide essential nutrients for growth such as nitrogen, carbon and vitamins. Potassium nitrate is the substrate for nitrate reduction. The presence of less agar in the medium makes it semisolid which allows for the detection of motility. Disodium phosphate acts as buffering agents.

Interpretation

Cultural characteristics observed after inoculating (10³CFU/ml), on incubation at 35 ± 2°C anaerobically for 18-24 hours.

Microorganisms	ATCC	Inoculum (CFU/ml)	Motility	Nitrate reduction
<i>Clostridium perfringens</i>	13124	10 ³	-ve	+ve
<i>Clostridium sporogenes</i>	19404	10 ³	+ve	-ve
<i>Clostridium absonum</i>	27555	10 ³	Variable (±)	Variable (±)
<i>Pseudomonas aeruginosa</i>	27853	10 ³	No growth	No growth

References

1. Bacteriological Analytical Manual, Food and Drug Administration. 8th Edition. AOAC International, USA. (1995).
2. International Organization for Standardization (ISO), Draft ISO/DIS 7937. (1985).