

TECHNICAL DATA SHEET

Gelatin Agar

Principle

Members of the genus *Vibrio* are facultative anaerobes. *Vibrio* species natural habitat is aquatic, in both fresh water and salt water. High concentrations of NaCl and alkaline pH have also been used to select certain *Vibrio* species, based on the ability of most *Vibrios* to grow in alkaline conditions (above pH 8.0) and NaCl concentrations of 3% or higher. Gelatin agar is formulated in accordance with APHA for the cultivation and identification of *Vibrio* species from water, food, and faeces samples. The gelatin agar consists of gelatin, tryptone, sodium chloride, and agar. Gelatin has been digested by bacteria using the gelatinase enzyme into amino acids and short-chain peptides. In a positive reaction, the areas around the streaking line will be clear when bacteria produce gelatinase. Tryptone provides nitrogen and amino acids. Sodium chloride maintains high alkaline conditions, and agar is used as a solidifying agent.

Use: For the cultivation and identification of *Vibrio* species.

Contents*

Ingredients	Gram/Litre
Gelatin	30.000
Tryptone	10.000
Sodium Chloride	10.000
Agar	15.000
pH at 25°C	7.2 ±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 65.0 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 min, cool it to 42-45 °C and distribute aseptically. Ensure complete solidification and inoculate test sample aseptically.

Specimens' types analyzed

Water and food samples and clinical samples (faeces)

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Precautions to be taken

All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige colored free flowing, homogeneous powder
Reaction of 6.5% solution	7.2 $\pm$ 0.2 at 25°C
pH	7.00 - 7.40
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Light yellowish to yellow colored and slightly opalescent
Growth Promotion properties	Best at $\leq$ 100 CFU at 33-37°C for 18-72 h
Indicative properties	Optimum at $\leq$ 100 CFU at 33-37°C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response: Cultural characteristics observed after incubation at 35 $\pm$ 2°C for 18-48 hours. Inoculum 50-100 CFU.

Organism	ATCC	Growth	Gelatin liquefaction
<i>Vibrio cholerae</i>	15748	Luxuriant	Clear zone around the colonies (Positive reaction)
<i>Vibrio parahaemolyticus</i>	17802	Luxuriant	Clear zone around the colonies (Positive reaction)

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Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

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5. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
6. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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