

TECHNICAL DATA SHEET

Gelatin Phosphate Salt Agar (GPS Agar)

Principle

Gelatin Phosphate Salt Agar is a non-selective medium formulated as per APHA (2015) and used for plating enrichment cultures of *V. cholerae* obtained from sea foods or vegetables. The media is composed of the Gelatin, sodium chloride, Dipotassium phosphate and agar. Gelatin is source of nitrogen and gelatinase enzyme producing *Vibrio*'s degrade gelatin and form small colonies, which are transparent with a cloudy halo. Gelatinase negative organisms show a satellite growth and may surround the colonies of *V. cholerae* on this medium. Dipotassium phosphate buffers the medium while sodium chloride maintains osmotic balance. For confirmation the isolated colonies are re-inoculated on Thiosulfate Citrate Bile Sucrose Agar (TCBS) or Triphenyl tetrazolium Chloride Soya Tryptone Agar (TSAT) is subculture onto Saline Nutrient Agar followed by biochemical confirmation.

Use: For the cultivation and characterization of *Vibrio cholerae* from foods.

Contents*

Ingredients	Gram/Litre
Gelatin	10.000
Sodium chloride	10.000
Dipotassium phosphate	5.000
Agar	15.000
pH at 25°C	7.2 ±0.2

*** Formula adjusted for optimum performance and parameters**

Directions: Dissolve 40.00 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 in desired. Ensure complete solidification and inoculate test sample aseptically.

Specimens' types analyzed

Food and animal feed samples etc.

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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	Off white to yellow colored free flowing, homogeneous powder
Reaction of 4.0% 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	Pale yellow colored opalescent gel
Growth Promotion properties	Best at $\leq$ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at $\leq$ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Cultural characteristics observed after incubation at 33-37°C for 18- 24 hours.

Organism	ATCC	Inoculum	Growth	Colony
<i>Vibrio cholerae</i>	15748	50-100	Luxurious	Transparent colonies with a cloudy halo

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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

1. Bruno Gomez-Gil and Ana Roque, Isolation, Enumeration and Preservation of the Vibrionaceae, Thompson F. L., Austin B. and Swings J., The Biology of Vibrios, ASM press.
2. 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.
3. Salfinger Y., and Tortorello M.L. Fifth (Ed.), (2015), Compendium of Methods for the Microbiological Examination of Foods, American Public Health Association, Washington, D.C.

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