Gelatin Phosphate Buffer

M1359

Intended Use:

Recommended for toxin detection in food products when *Clostridium botulinum* is suspected

Composition**

Ingredients	Gms / Litre
Sodium dihydrogen phosphate	4.000
Gelatin	2.000
Final pH (at 25°C)	6.2±0.1

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 6.0 grams in 1000 ml purified / distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.

Principle And Interpretation

Botulinum toxin (botox) types A-G are produced by heterogeneous stains of *Clostridium botulinum*. Botox types A,B,E and F have caused serious and sometimes fatal, cases of food borne illness in humans. The vast majority of botulinum outbreaks in red meat and poultry products have involved either toxin A or B.

The current botulinum toxin test method is the mouse bioassay procedure (3). Gelatin Phosphate Buffer is one of the reagent used in this test method.

Type of specimen

Food samples

Specimen Collection and Handling:

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (4).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

N.A.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow coloured homogeneous coarse powder

Gelling

Semisolid comparable with 0.2% gelatine

Colour and Clarity of prepared medium

Colourless clear solution forms in tubes.

Reaction

Reaction of 0.6% w/v aqueous solution at 25°C. pH : 6.2±0.1

pH

6.10-6.30

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Gelatinase reaction
Clostridium botulinum ATCC 25763	50-100	good	Positive reaction

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
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. L. Victor Cook, Wei Hwa, Charles P. Lattuade and Gerri M. Ransom Methods for the detection of *Clostridium botulinum* toxins in meat and poultry products. USDA/FSIS Microbiolgy Laboratory Guidebook, 3rd edition, Chapter 14, 1998.
4. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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