Technical Information

Gelatin Phosphate Buffer

Product Code: DM 2359

Application: -Gelatin Phosphate buffer is used 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

Principle & 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 (1). Gelatin Phosphate Buffer is one of the reagent used in this test method.

Methodology

Suspend 6.0 grams of dehydrated media powder in 1000 ml distilled water. Mix thoroughly & heat to boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.

Quality Control

Appearance
Cream to yellow coloured homogeneous coarse powder

Gelling
Semisolid comparable with 0.2% gelatine

Colour and Clarity
Colourless clear solution forms in tubes.

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

pH Range
6.10-6.30

Cultural Response
DM2359: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

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

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use freshly prepared medium. Use before expiry date on the label.
Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. 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.

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