

Technical Information

Liver Broth, Modified

Product Code: DM 2312

Application: - Liver Broth, Modified is recommended as a presumptive test and for the enrichment of Clostridia and other anaerobes from meat, foodstuffs and other materials.

Composition**

| • | | | | |
|---|-------------|--|--|--|
| Ingredients | Gms / Litre | | | |
| Liver granules | 50.000 | | | |
| Dextrose | 10.000 | | | |
| Disodium hydrogen phosphate | 2.000 | | | |
| Final pH (at 25°C) | 7.6±0.2 | | | |
| **Formula adjusted standardinal to suit performance personators | | | | |

^{*}Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Liver granules and dextrose provide the nitrogen, amino acids, vitamins and carbon sources. Disodium hydrogen phosphate buffers the medium, the development of liver granules to prepare this culture was initiated by the Bundesanstalt for Fleischforschung (1). This media was also found to be superior to other culture media for the isolation of *Vibrio fetus* (2).

For testing sample using Liver Broth, Modified, immerse a small piece of the material to be tested in hot Liver Both (appox. 80°C) and cover with a layer of sterilized paraffin. Incubate for 18-24 hours at 37°C. Gas production indicates that clostridia are probably present.

Methodology

Suspend 62.0 grams of dehydrated powder media in 1000 ml distilled water. Soak for 15 minutes with occassional stirring. Dispense the well-mixed, turbid broth in 18 mm tubes to a depth of 50 mm, so that the bottom of the tube is filled with liver tissues. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool, inoculate the specimen to be tested in hot liver broth, modified (at 80°C). Cover with a layer of Vaseline or paraffin.

Quality Control

Appearance

Brown coloured granules

Colour and Clarity

Medium amber coloured, clear to slightly opalescent supernatent over insoluble granules

Reaction

Reaction of 6.2% w/v aqueous solution at 25°C. pH: 7.6±0.2

pH Range

7.40-7.80

Cultural Response

DM 2312: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours (for *Clostridium* species incubate anaerobically).

| Organism | Inoculum (CFU) | Growth | Gas production |
|---|-------------------|--------|-------------------|
| Cultural Response Clostridium perfringens ATCC 10543 | 50-100 | good | positive reaction |





| Clostridium sporogenes ATCC 11437 | 50-100 | good | positive reaction |
|-----------------------------------|--------|------|-------------------|
| Escherichia coli ATCC 25922 | 50-100 | good | negative reaction |
| Staphylococcus aureus ATCC 25923 | 50-100 | good | negative reaction |

Storage and Shelf Life

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

Further Reading

- 1. Coretti K. 1962. Berl. Munch. Tierarztl. Wschr., 75:205.
- 2. Ullmann, U. 1975. Zbl. Bakt.I. Orig., A 230:480.

Disclaimer:

- User must ensure suitability of the product(s) in their application prior to use.
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