



Liver Broth, Modified

M1312

Used 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, standardized to suit performance parameters

Directions

Suspend 62.0 grams in 1000 ml distilled water. Soak for 15 minutes with occasional 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.

Principle And 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 (approx. 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.

Quality Control

Appearance

Brown coloured granules

Colour and Clarity of prepared medium

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

Reaction

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

pH

7.40-7.80

Cultural Response

M1312: 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			
<i>Clostridium perfringens</i> ATCC 10543	50-100	good	positive reaction
<i>Clostridium sporogenes</i> ATCC 11437	50-100	good	positive reaction
<i>Escherichia coli</i> ATCC 25922	50-100	good	negative reaction
<i>Staphylococcus aureus</i> ATCC 25923	50-100	good	negative reaction

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

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

Revision : 1 / 2011



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