# A green and blue logo  Description automatically generated

**Dextrose Tryptone broth**

Recommended for enrichment and cultivation of mesophilic and thermophilic organisms in food.

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| --- | --- |
| REF: V.1/DTB01.100 100 GramREF: V.1/DTB01.500 500 Gram | REF: V.1/DTB01.250 250 Gram |

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## CLINICAL SIGNIFICANCE

## Canned foods are most often prone to flat-sour spoilage due to contamination by either mesophilic or thermophilic aerobic spore-formers. Inadequate heat processing is commonly responsible for flat-sour spoilage since spores of mesophilic bacteria are moderately resistant to moist heat. Also Bacillus stearothermophilus is the typical species responsible for this type of spoilage (5, 6). Bacillus coagulans, Bacillus thermoacidurans, a soil organism of canned tomato and dairy products. In flat sour spoilage, carbohydrates are fermented with the production of lower fatty acids, which sour the product. The small amount of gas produced does not affect the flat appearance of the ends of container. Williams (12) evolved Dextrose Tryptone Agar, a suitable medium for cultivation and enumeration of the thermophilic bacteria. It is also recommended for general cultural studies by Cameron (4) and other associations (1, 2, 3, 9, 10). Dextrose Tryptone Agar is also useful for enumeration of mesophiles and thermophiles in cereal and cereal products, dehydrated fruits, vegetables and spices (11). Dextrose Tryptone Broth is similar in composition to Dextrose Tryptone Agar, with the exclusion of agar.

## METHOD PRINCIPLE

## Tryptone provides nitrogeneous and carbonaceous compounds, long chain amino acids and vitamins nutrients to the organisms. Dextrose serves as an energy source while bromocresol purple is a pH indicator. Acid producing organisms produce yellow coloured medium. The tubes should be incubated at 55°C for 48 hours in a humid incubator. One to two grams of test sample is inoculated into 10 ml of broth media.

## MEDIA COMPOSITION

|  |  |
| --- | --- |
| Item | Formula per literof medium |
| * Tryptone
* Dextrose
* Bromocresol purple
 | 10.00 gm5.000 gm0.040 gm  |

***Final pH at 6.7 + 0.2 at 25 °C***

**PRECAUTIONS AND WARNINGS**

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

* Wearing personnel protective equipment (overall, gloves, glasses,).
* Do not pipette by mouth.
* In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
* Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental contamination.

S61: avoid release in environment.

For further information, refer to the Dextrose Tryptone broth material safety data sheet.

## STORAGE AND STABILITY

**Lab.Vie**. Dextrose Tryptone broth should be stored between 10-30°C in a firmly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a 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.

## PREPARATION

* Suspend 15.04 grams in 1000 ml purified / distilled water.
* Adjust pH to 6.7 + 0.2 at 25 °C
* Heat if necessary to dissolve the medium completely.
* Dispense in tubes or flasks as desired. Sterilize by autoclaving at 15 lbs.pressure (121°C) for 15 minutes.
* Cool to 45-50°C.

**Deterioration**

The color of **Lab.Vie**. Dextrose tryptone broth is Light yellow to greenish yellow homogeneous free flowing powder. Prepared medium Purple coloured, clear solution in tubes. If there are any physical changes for powder or signs of deterioration (shrinking, cracking, or discoloration), and contaminations for hydrated media, discard the medium.

## EQUIPMENT REQUIRED NOT PROVIDED

* Sterile cups
* Sterile petri-dishes
* Incubator

## SPECIMEN

Food samples

## PERFORMANCE CHARACTERISTICS

Cultural characteristics observed after an incubation at 54-56°C for 36-48 hours.

|  |  |  |
| --- | --- | --- |
| Organism | Growth | Colony Characteristic |
| Bacillus brevis ATCC 8246 | Good-luxuriant (with or without dextrose fermentation) | Yellow |
| Bacillus coagulans ATCC 8038 | Good-luxuriant | Yellow |
| Bacillus stearothermophilus ATCC 7953 | Good-luxuriant | Yellow |

## QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact **Lab.Vie**. technical support.

## REFERENCES

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| SYMBOLS IN PRODUCT LABELLING |
| Caution |  | Batch Code/Lot number |  **LOT** |
| Do not use if package is damaged |  | Catalogue Number |  **REF** |
| Consult Instruction for use |  | Temperature Limitation |   |
|  |  |  Expiration Date |   |
|  |  | Manufactured by |  |