



## Dextrose Tryptone Broth

Liquid culture medium for detection of thermophilic organisms in food.

### DESCRIPTION

Dextrose Tryptone Broth (DTB) is a liquid medium used for the detection and cultivation of different organisms causing spoilage in foods and other products.

This medium complies with the recommendations of the American Public Health Association (APHA) for the microbiological examination of low and medium-acid canned foods (pH 4.5 and above).

TYPICAL FORMULA*	(g/l)
Tryptone	10.0
Dextrose	5.0
Bromocresol Puple	0.04
Final pH 6.7 ± 0.2 at 25°C	

\*Formula may be adjusted and/or supplemented as required to meet performance specifications;  
Grams per litre of purified water.

### METHOD PRINCIPLE

Tryptone provides nitrogen, vitamins, minerals and amino acids for organisms growth. Dextrose is the fermentable carbohydrate providing carbon and energy. Bromocresol purple is the pH indicator.

### PREPARATION

Dehydrated medium Suspend 15.04 g of the powder in 1 liter of distilled or deionized water. Dissolve by heating with frequent agitation. Mix well and distribute into final containers. Sterilize in autoclave at 121°C for 15 minutes.

### TEST PROCEDURE

Inoculate 9 ml of the broth with 1-2 g of solid material or 1-2 ml of liquid sample.

Incubate duplicate sets of tubes at 35°C for 96-120 hours and at 55°C for 24-48 hours. Check for growth at frequent intervals up to maximum time of incubation.

NOTE: It is recommended to perform aerobic cultivation in DTB in parallel with anaerobic cultivation in other media, such as Liver Broth (ref. 610143) or Cooked Meat Medium (ref. 24071).

### INTERPRETING RESULTS

A colour change of the medium from purple to yellow indicates production of acid by microorganism which ferment dextrose.

Plates are streaked from positive tubes to obtain pure isolates.

Consult appropriate references for specific procedures.

### STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store the prepared broth below 25°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

### SHELF LIFE

Dehydrated medium: 4 years.

Medium in tubes: 2 years.

**QUALITY CONTROL**

**Appearance of Dehydrated Medium:** Free-flowing, homogeneous, light greenish-beige.

**Appearance of Prepared Medium:** Clear, purple.

**Expected Cultural Response:**

Control strain		Inoculum	Incubation	Specification
<i>Bacillus stearothermophilus</i>	ATCC 7953	≤ 100 CFU	24-48 h/ 55 ± 2°C	Good growth, yellow medium

Please refer to the actual batch related Certificate of Analysis (CoA).

**WARNING AND PRECAUTIONS**

**For professional use only.** Operators must be trained and have certain experience in the laboratory methods. Please read the instructions carefully before using this product. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this document.

Consult the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

**DISPOSAL OF WASTE**

Disposal of waste must be carried out according to national and local regulations in force.











**BIBLIOGRAPHY**

1. BAM Chapter 21A: Examination of Canned Foods. <https://www.fda.gov/food/laboratory-methods-food/bam-chapter-21a-examination-canned-foods>
2. André S, Vallaevs T, Planchon S (2017) Spore-forming bacteria responsible for food spoilage. Res Microbiol; 168(4):379-387. <https://doi.org/10.1016/j.resmic.2016.10.003>
3. American Public Health Association (1976) Compendium of Methods for the Microbiological Examination of Foods. APHA Washington DC.
4. Ashton DH and Busta FF (1968) Milk Components Inhibitory to *Bacillus stearothermophilus*. J Dairy Science; 51(6):842-847. [https://www.journalofdairyscience.org/article/S0022-0302\(68\)87090-0/pdf](https://www.journalofdairyscience.org/article/S0022-0302(68)87090-0/pdf)
5. Baumgartner JG and Hersom AC (1956) `Canned Foods' 4th ed., Churchill Ltd. London, pp. 229-230 and 247.

Product	Format	Packaging	Ref.
Dextrose Tryptone Broth	Tube	100 x 9 ml	26487
Dextrose Tryptone Broth	Powder	500 g	610376

There may be additional product ref. numbers as well. For an updated listing of available products, visit [liofilchem.com](http://liofilchem.com)

**TABLE OF SYMBOLS**

	Batch code
	Catalogue number
	Manufacturer
	Use by
	Fragile, handle with care
	Temperature limitation
	Contains sufficient for <n> tests
	Consult Instruction For Use
	Do not reuse
	Keep away from light

This IFU document and the SDS are available from the online Support Center:

[liofilchem.com/ifu-sds](http://liofilchem.com/ifu-sds)



**LIOFILCHEM® s.r.l.**

Via Scozia, 64026 Roseto degli Abruzzi (TE) Italy  
 Tel. +39 0858930745 Fax +39 0858930330

[www.liofilchem.com](http://www.liofilchem.com)

[liofilchem@liofilchem.com](mailto:liofilchem@liofilchem.com)