Tributyrin Agar w/o Tributyrin

Intended Use
Tributyrin Agar w/o Tributyrin is used for detection of lipolytic microorganisms.

Summary
Lipolytic enzymatic activities of microorganisms are one of the most important causes for food spoilage and a limited shelf life. Tributyrin Agar was originally formulated by Anderson for the detection and enumeration of lipolytic microorganisms such as *Staphylococci*, *Clostridia*, marine *Flavobacteria* and *Pseudomonas* and moulds in foodstuffs and other materials. Tributyrin is the simplest triglyceride occurring in natural fats and oils. It is hydrolyzed by some microorganisms that do not hydrolyze other triglycerides or fats containing longer chain fatty acids. However, for screening purposes, to enumerate lipolytic microorganisms of potential importance in foods, it is the substrate of choice.

Principle
Peptic digest of animal tissue and yeast extract in the medium provide nutrients to the organisms. Tributyrin degradation by the microorganisms is indicated by clear zones surrounding the lipolytic colonies in the otherwise turbid culture medium.

Formula*
Ingredients	**g/L**
Peptic Digest of Animal Tissue	5.0
Yeast Extract	3.0
Agar	15.0
Final pH (at 25°C)	7.5 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Food and dairy samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 23.00 g of the powder in 990 mL purified / distilled water.
2. Add 10 mL of Tributyrin Supplement (204200750010).
3. Mix and heat to boiling to dissolve the powder completely.
4. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
5. Shake the flask and individual plate so as to maintain uniform turbidity.

Quality Control
Dehydrated Appearance: Cream to Yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Light yellow coloured, opalescent gel forms with oil droplets in petridishes.
Cultural Response: Cultural characteristics observed after an incubation of 24-48 hours at 35°C-37°C with added Tributyrin (under appropriate conditions).

Organism (ATCC)	Growth	Lipase activity
Clostridium perfringens (12924)	Good	-
Clostridium sporogenes (11437)	Good	+
Bacillus spizizenii (6633)	Good	+
Escherichia coli (25922)	Good	-
Staphylococcus aureus subsp. *aureus* (25923)	Good	+

Note: **+** - Positive, clear zone around colony
- - Negative, absence of zone around colony

Interpretation of Results

Lipolytic organisms render the medium transparent by converting the fat to water soluble butyric acid. The medium should have a uniform turbid emulsion for the effectiveness of the assay.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

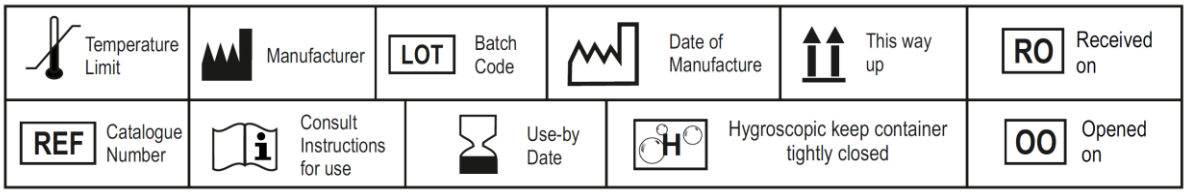
This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

References

1. Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington, D.C.
2. Anderson J. A., 1939, Ber, IIIrd Int. Mikrobiol. Kongress, 3 : 726
3. Innes A. G., 1956, J. Appl. Bacteriol., 19: 39 4. Willis A. T., 1960, J. Path. Bacteriol., 80 (2): 379
4. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201200160500	Dehydrated Culture Media	500 g



Revision: 0825/VER-03

Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.