TM 885 – TRIBUTYRIN AGAR BASE W/O TRIBUTYRIN

INTENDED USE
For detection of lipolytic microorganisms.

PRODUCT SUMMARY AND EXPLANATION
Many foods contain significant amount of fats that may be susceptible to hydrolysis. The free fatty acids (FFA) liberated by hydrolysis of fat can be responsible for unpleasant flavous or they may oxidize to compounds with undesirable flavour notes. Many of the problems of fat breakdowns in foods are non-microbial in origin, but numerous bacteria, yeasts and moulds produce lipolytic enzymes that are capable of causing both hydrolytic and oxidative deterioration of fats when present in food samples.
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.
Tributyrin degradation by the microorganisms is indicated by clear zones surrounding the lipolytic colonies in the otherwise turbid culture medium. 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.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	5.000
Yeast extract	3.000
Agar	15.000

PRINCIPLE
Peptone and yeast extract in the medium provide nutrients to the organisms. Agar present acts as a solidifying agent.

INSTRUCTION FOR USE
- Suspend 23 grams in 990 ml purified / distilled water.
- Add 10 ml of Tributyrin. Mix and heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

Note: For proper lipase activity, it is recommended to use glass plates instead of disposable plates. Hence USE ONLY GLASS PLATES. DO NOT USE PLASTIC PLATES.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light yellow coloured opalescent gel forms with oil droplets in Petri plates.
pH (at 25°C)	: 7.5±0.2

INTERPRETATION
Cultural characteristics observed after incubation with added tributyrin supplement.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Lipase activity	Incubation Temperature	Incubation Period

Clostridium perfringens	12924	50-100	Luxuriant	>=70%	Negative, absence of clear zone around colony	35-37°C	24-48 Hours
Clostridium sporogenes	11437	50-100	Luxuriant	>=70%	Positive, clear zone around colony	35-37°C	24-48 Hours
Bacillus subtilis subsp. spizizenii	6633	50-100	Luxuriant	>=70%	Positive, clear zone around colony	35-37°C	24-48 Hours
Escherichia coli	25922	50-100	Luxuriant	>=70%	Negative, absence of clear zone around colony	35-37°C	24-48 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	Luxuriant	>=70%	Positive, clear zone around colony	35-37°C	24-48 Hours

PACKAGING:
In pack size of 100 gm and 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
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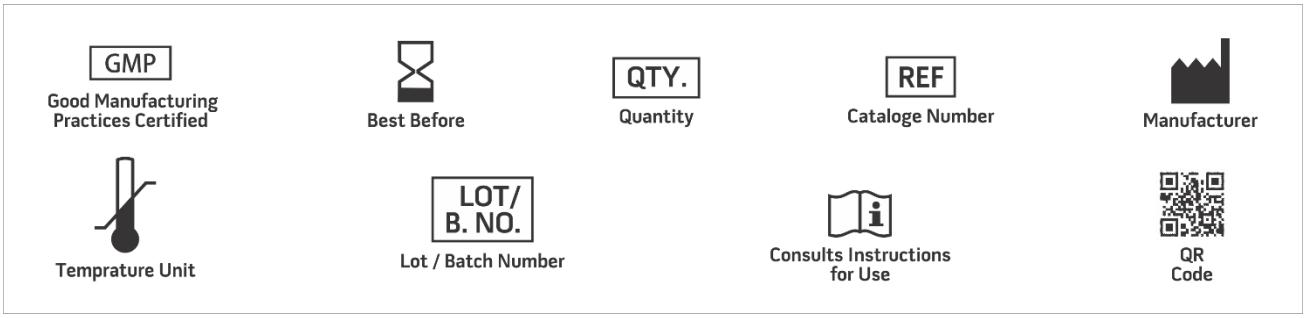

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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