

TM 165 – LITMUS MILK (LITMUS SM BROTH)

INTENDED USE

For determination and maintenance of Lactobacli.

PRODUCT SUMMARY AND EXPLANATION

Milk contains the carbohydrate lactose along with three main proteins i.e. casein, lactalbumin and lactoglobulin. Therefore, an organism may exhibit one or several of the following metabolic properties in litmus milk, each specific for a particular species aiding bacterial identification. The various metabolic functions are lactose fermentation, litmus reduction, clot formation, peptonization (digestion) and gas formation. Litmus Milk is a differential medium used to determine different metabolic functions. Litmus Milk is also useful in the maintenance and propagation of lactic acid bacteria.

Litmus Milk is the most useful medium in dairy industry as it is a reliable indicator of bacterial action on milk. For detection of *Clostridium perfringens* in water, inoculate freshly heated tubes of Litmus Milk with various quantities of water and heat at 80°C for 10-15 minutes to destroy non-spore-forming organisms. Examine after every 24 hours for positive Stormy Clot reaction at 35°C for up to 5 days. Anaerobiosis in Litmus Milk can be obtained by adding a small heated iron nail or 0.1 gram of reduced iron to the medium.

COMPOSITION

Ingredients	Gms / Ltr
Skim milk powder	100.000
Litmus	0.500
Sodium sulphite	0.500

PRINCIPLE

This medium consists of Skim milk which is the substrate, metabolized by particular species of bacteria in different ways. Litmus is a good indicator of acidity, alkalinity and its oxidation-reduction potential is useful in milk media with lower toxicity to microorganisms than bromocresol purple. Addition of 1% w/v dextrose and/or 5% w/v yeast extract to Litmus Milk accelerates the growth of some organisms, which cannot grow in plain Litmus Milk.

INSTRUCTION FOR USE

- Dissolve 101.0 grams in 1000 ml purified/distilled water, agitating continuously.
- Dispense 10 ml amounts into 15 x 150 mm tubes and sterilize by autoclaving at 15 psi pressure (121°C) for 5 minutes. AVOID OVERHEATING.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Pinkish purple to grey homogeneous free flowing powder may contain minute to small particles.
Appearance of prepared medium	: Light purple coloured opaque milky solution.
pH (at 25°C)	: 6.8 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Reaction	Incubation Temperature	Incubation Period
<i>Clostridium perfringens</i>	13124	50-100	Good-luxuriant	Stormy fermentation (gas)	35-37°C	Upto 14 Days
<i>Lactobacillus acidophilus</i>	11506	50-100	Good-luxuriant	Acid clot (pink)	35-37°C	Upto 14 Days
<i>Pseudomonas aeruginosa</i>	27853	50-100	Good-luxuriant	Peptonization (clearing)	35-37°C	Upto 14 Days

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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 GMP Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 Lot / Batch Number	 Consults Instructions for Use	 QR Code	

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

***For Lab Use Only**

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