

TM 1031 - MUG PLATE COUNT AGAR

INTENDED USE

For determination of plate count of microorganisms in milk and other dairy products by fluorogenic method.

PRODUCT SUMMARY AND EXPLANATION

Plate Count Agar is a general-purpose cultivation medium used for a wide variety of organisms and is recommended by APHA and AOAC.

MUG Plate Count Agar, which is Plate Count Agar supplemented with MUG, is used for determining plate count of microorganisms in milk and other dairy products by fluorogenic method. The medium does not contain any inhibitor or pH indicator. It is used to determine the total microbial count of milk, dairy products, water and other materials. Organism like *Escherichia coli* can be identified by the formation of fluorescent colonies visualized on exposure to UV light (366nm).

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	5.000
Yeast extract	2.500
Dextrose (Glucose)	1.000
4-Methylumbelliferyl β -D-Glucuronide (MUG)	0.100
Agar	15.000

PRINCIPLE

Tryptone, yeast extract provides nitrogenous compounds and vitamin B complex. Dextrose serves as energy source. MUG is cleaved by the enzyme β -glucuronidase to release 4-methylumbelliferone, which produces a visible fluorescence under long wave UV light.

INSTRUCTION FOR USE

- Dissolve 23.6 grams in 1000 ml purified/distilled water.
- Heat gently to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Pour in sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Yellow coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Fluorescence (under UV)	Incubation Temperature	Incubation Period
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<i>Escherichia coli</i>	25922	50-100	Luxuriant	>=70 %	Positive	35-37°C	18-24 Hours
<i>Staphylococcus aureus subsp. aureus</i>	25923	50-100	Luxuriant	>=70 %	Negative	35-37°C	18-24 Hours
<i>Bacillus subtilis subsp. spizizenii</i>	6633	50-100	Luxuriant	>=70 %	Negative	35-37°C	18-24 Hours
<i>Streptococcus pyogenes</i>	19615	50-100	Luxuriant	>=70 %	Negative	35-37°C	18-24 Hours
<i>Enterococcus faecalis</i>	29212	50-100	Luxuriant	>=70 %	Negative	35-37°C	18-24 Hours
<i>Lactobacillus casei</i>	9595	50-100	Luxuriant	>=70 %	Negative	35-37°C	18-24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 2-8°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.

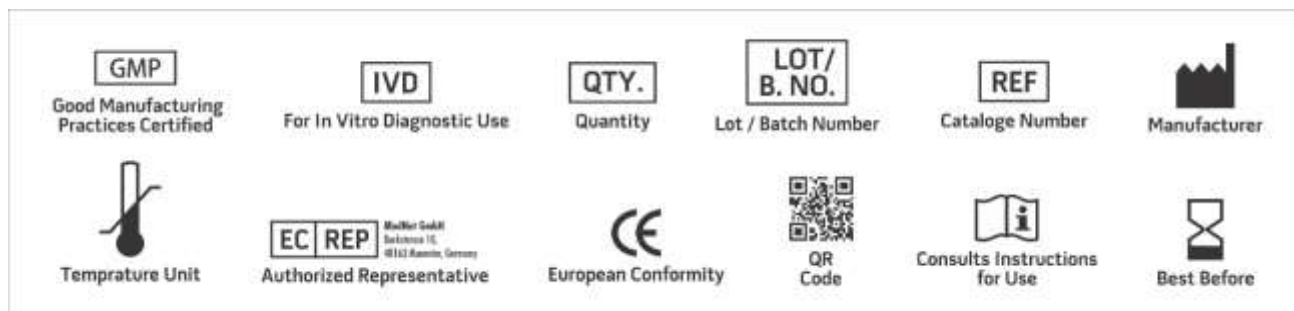
DISPOSAL

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

REFERENCES

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- Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
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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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