Instructions For Use
ENGLISH

Milk Plate Count Agar

Medium for the enumeration of microorganisms in milk and dairy products, according to the APHA and ISO 4833.

DESCRIPTION

Milk Plate Count Agar is a nutrient medium used for the enumeration of bacteria in milk and dairy products.

The medium complies with the recommendations of the APHA, International Dairy Federation and ISO 4833 for the microbiological examination of milk and milk products.

TYPICAL FORMULA	(g/l)
Enzymatic Digest of Casein	5.0
Yeast Extract	2.5
Glucose	1.0
Skimmed Milk	1.0
Agar	10.0
Final pH 6.9 ± 0.1 at 25°C	

METHOD PRINCIPLE

Enzymatic digest of casein provides amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Yeast extract is a source of vitamins, particularly of B-group. Glucose is the fermentable carbohydrate. Skimmed milk is a source of casein also providing optimal conditions for bacteria which typically grow in milk. Agar is the solidifying agent.

PREPARATION

Dehydrated medium	Suspend 19.5 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat to boil shaking frequently until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes.
Medium in bottles	Melt the content of the bottle in a water bath at 100°C (loosing the cap partially removed) until completely dissolved. Then screw the cap and check the homogeneity of the dissolved medium, if it is the case turning the bottle upside down. Cool at 45-50°C, mix well avoiding foam formation and aseptically distribute into Petri dishes.

TEST PROCEDURE

1. Perform serial dilutions of the test sample in order to achieve a colony count of between 15 and 300 colonies per plate. Use a suitable diluent such as Buffered Peptone Water (ref. 24099) or Maximum Recovery Broth (ref. 20071).
2. Inoculate the medium by pour plating or spread plating method.
3. Incubation conditions may vary depending on the organisms under study. For a general aerobic count, incubate aerobically at 30°C for 72 hours.

INTERPRETING RESULTS

Count colonies on all plates containing 15-300 colonies. Report the count as CFU/ml of sample allowing for dilution factors.

APPEARANCE

Dehydrated medium: free-flowing, homogeneous, light beige.
Prepared medium: slightly opalescent, light amber.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store bottles and prepared plates at 10-25°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 bottles: 2 years.
Ready-to-use plates: 6 months.

Distribué par :
Z.A de Gesvrine - 4 rue Képler - B.P.4125
44241 La Chapelle-sur-Erdre Cedex - France
t. : +33 (0)2 40 93 53 53 | f. : +33 (0)2 40 93 41 00
commercial@humeau.com
www.humeau.com

QUALITY CONTROL

Plates are inoculated with the microbial strains indicated in the QC table.
Inoculum for productivity: 50-100 CFU
Incubation conditions: aerobically at 30 ± 1°C for 72 ± 3 hours.

QC Table.

Microorganism		Growth
Bacillus subtilis	WDCM 00003	Good
Escherichia coli	WDCM 00012	Good
Staphylococcus aureus	WDCM 00034	Good

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is intended for professional use and must be used only by properly trained operators.

DISPOSAL OF WASTE

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

BIBLIOGRAPHY

1. ISO 4833:2003. Microbiology of food and animal feeing stuffs – Horizontal method for the enumeration of microorganisms – Colony count technique at 30°C.
2. Marshall, R.T. (1993) Standard methods for the microbiological examination of dairy products, 16th ed. American Public Health Association, Washington D.C.
3. International Dairy Federation (1987) Milk and Milk Products: Enumeration of Microorganisms – Colony Count at 3°C. Provisional IDF Standard 100A. IDF, Brussels, Belgium.

PRESENTATION		Contents	Ref.
Milk Plate Count Agar	90 mm ready-to-use plates	20 plates	10433
Milk Plate Count Agar	90 mm ready-to-use plates	100 plates	10433*
Milk Plate Count Agar	Bottles	6 x 500 ml bottles	463120
Milk Plate Count Agar	Dehydrated medium	500 g of powder	610073
Milk Plate Count Agar	Dehydrated medium	100 g of powder	620073
Milk Plate Count Agar	Dehydrated medium	5 kg of powder	6100735

TABLE OF SYMBOLS

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

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Laboratoires Humeau

www.humeau.com