



Product Information

MUG MACCONKEY AGAR (4-METHYLUMBELLIFERYL β-D GLUCURONIDE)

Product Number **M1803**

Product Description

MUG MacConkey Agar is used for the selective isolation and detection of lactose fermenting coliform organisms by a fluorogenic procedure. MUG MacConkey Agar helps to detect the presence of the enzyme β-glucuronidase and thereby, rapidly identifying *Escherichia coli* in a mixed clinical specimens.

The peptic digest of animal tissue provides essential nitrogen compounds for the growth of coliforms. Lactose is the fermentable, carbohydrate source. Bile salts and crystal violet inhibit the growth of gram-positive bacteria. Neutral red is the pH indicator. MUG is cleaved by the enzyme glucuronidase to release the end product 4-methylumbelliferone which produces a visible greenish-blue fluorescence under long wave UV light.

Components

Item	g/L
Peptic Digest of Animal Tissue	20.00
Lactose	10.00
Bile Salt Mixture	1.50
Sodium Chloride	5.00
Neutral Red	0.03
Crystal Violet	0.001
4-Methylumbelliferyl β-D Glucuronide (MUG)	0.10
Agar	15.00

Final pH (at 25 °C) 7.1 ± 0.2

Precautions and Disclaimer

For laboratory use only. Not for drug, household or other uses.

Preparation Instructions

Suspend 51.63 grams of MUG MacConkey Agar in 1000 mls of distilled water. Boil to dissolve the medium

completely. Sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 minutes. Mix well before pouring.

Storage

Store the dehydrated medium at 2-4 °C and the prepared medium at 2-8 °C.

Product Profile

Appearance	Pinkish yellow colored, homogeneous, free flowing powder.
Gelling	Firm.
Color and Clarity	Red with purplish tinge, clear to slightly opalescent gel forms in petri plates.
Cultural Response	Cultural characteristics are observed after 18-24 hours at 35-37 °C.

Organisms (ATCC)	Growth	Fluorescence
<i>Escherichia coli</i> (25922)	luxuriant	+
<i>Enterobacter aerogenes</i> (13048)	luxuriant	-

Key: + = fluorescence at 366 nm

References

1. Trepeta, R.W., et al., (1984). J. Clin. Microbiol. 19 (2), 172.
1. MacFaddin, J.F., (1985). Media for Isolation-Cultivation-Identification Maintenance of Medical Bacteria. Vol. 1. Williams and Wilkins. Baltimore, Maryland.
2. American Type Culture Collection, Manassas, Va., U.S.A.

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