

## MACCONKEY AGAR (M203)

### Dehydrated Culture Media

**USE:** MacConkey Agar is used for the isolation and differentiation of Gram-negative enteric bacilli. This formula conforms to the US Pharmacopeia (USP) and P. Eur. (European Parliament).<sup>1,2</sup>

**DESCRIPTION:** MacConkey Agar is used for isolating and differentiating lactose-fermenting from lactose-nonfermenting gram-negative enteric bacilli. Formula modifications improved the growth of *Shigella* and *Salmonella* strains. These modifications included the addition of 0.5% sodium chloride, decreased agar content, and altered bile salts and neutral red concentrations. The formula improvements gave improved differential reactions between these enteric pathogens and the coliform group.

#### FORMULA:

Pancreatic Digest of Gelatin .....	17.0 g/L
Pancreatic Digest of Casein .....	1.5 g/L
Peptic Digest of Animal Tissue .....	1.5 g/L
Lactose .....	10.0 g/L
Bile Salts .....	1.5 g/L
Sodium Chloride .....	5.0 g/L
Agar .....	13.5 g/L
Neutral Red .....	0.03 g/L
Crystal Violet .....	1.0 mg/L
Total .....	50 g/L

Note: Medium may be adjusted and/or supplemented as required to meet performance criteria.

**Final pH:** 7.1 ± 0.2 at 25°C

#### PHYSICAL APPEARANCE:

Dehydrated Appearance – Pink to pinkish beige, free-flowing, homogeneous.

Prepared Appearance – Pinkish red, slightly opalescent.

**PROCEDURE:** Mix 50 grams of the medium in one liter of purified water. Autoclave at 121°C for 15 minutes.

**EXPECTED RESULTS:** Cultural response after 18-24 hours at 35°C, up to 48 hours for *E. coli* if necessary.

Microorganism	CFU	Growth	Colony Color	Bile ppt.
<i>E. faecalis</i> ATCC™ 29212	10 <sup>3</sup>	Inhibition	-	-
<i>E. coli</i> ATCC™ 25922	30-300	+	Pink to red	+
<i>P. mirabilis</i> ATCC™ 12453	30-300	+	Colorless	-
<i>S. enterica</i> ser. Typhimurium ATCC™ 14028	30-300	+	Colorless	-
<i>E. coli</i> ATCC™ 8739	<100	+	Pink to red	+

**STORAGE:** Store the product at 2-30°C protected from moisture for up to the expiration date.

**LIMITATIONS:** For laboratory use only. The dehydrated medium should be discarded if there are any changes in the color or if it is no longer free flowing.

**SIZES AVAILABLE:** 50 g, 500 g, 2 kg, 10 kg

**PACKAGING:** Additional configurations are available upon request.

#### REFERENCES:

1. United States Pharmacopeial Convention, Inc. 1995. The United States pharmacopeia, 23<sup>rd</sup> ed. The United States Pharmacopeial Convention, Rockville, MD.
2. European Parliament (Ph. Eur.). 2005. 5<sup>th</sup> ed. European Pharmacopoeia Commission.
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4. Murray, P.R., E.J. Baron, M.A. Pfaller, F.C. Tenover, and R.H. Tenover (eds.). Manual of clinical microbiology, 6<sup>th</sup> ed. American Society for Microbiology, Washington, D.C.
5. Marshall, R.T. (ed.). Standard methods for the examination of dairy products, 16<sup>th</sup> ed. American Public Health Association, Washington, D.C.
6. U.S. Food and Drug Administration. 1995. Bacteriological analytical manual, 8<sup>th</sup> ed., AOAC International, Gaithersburg, MD.
7. Vanderzant, C., and D.F. Splittstoesser (eds.). 1992. Compendium of methods for the microbiological examination of food, 3<sup>rd</sup> ed. American Public Health Association

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