BACGro™ Culture Media

GOLD STANDARD DIAGNOSTICS

MacConkey Agar - Instructions for Use

Intended Use

BAC*Gro*™ MacConkey Agar, when prepared as directed, is used as a selective media for Gram-negative bacteria and further differentiates between lactose and non-lactose fermenters. It is not intended for use in diagnosis, treatment, or prevention of disease in humans. BAC*Gro*™ MacConkey Agar conforms to harmonized USP/EP/JP requirements.

Product Summary

The formulation of BAC*Gro*™ MacConkey Agar includes multiple peptones for nutrient sources. A combination of crystal violet and bile salts inhibits the growth of Gram-positive organisms, particularly Enterococci and Staphylococci species. Lactose-fermenters will utilize the provided lactose to trigger a color change resulting in pink/red colonies due to neutral red. Non-lactose fermenters will appear beige/colorless.

MacConkey Agar conforms to the Harmonized United States Pharmacopeia (USP)[1], European Pharmacopeia (EP)[2] and Japanese Pharmacopeia (JP)[3] Standards.

Formulation (per Liter)*

Gelatin Peptone	17.0 g
Casein Peptone	1.5 g
Peptic Digest of Animal Tissue	1.5 g
Lactose	10.0 g
Bile Salts	1.5 g
Sodium Chloride	5.0 g
Neutral Red	0.03 g
Crystal Violet	0.001 g
Agar	13.5 g
Total	50.0 g/L

*Formula may be supplemented and/or adjusted as required to meet performance criteria

Directions

1. Add 50 g of MacConkey Agar powder to 1 L of deionized water.
2. Stir while heating. Bring to a brief boil to dissolve completely.
3. Autoclave at 121 degrees Celsius for 15 minutes.
4. Pour plates and allow to solidify.

Precautions

This product is for laboratory use only and should only be used by qualified, trained laboratory personnel. Personnel should always use proper aseptic technique and observe all biohazardous precautions. All microbiological cultures should be presumed to be infectious.

Avoid ingestion, inhalation, or contact with skin and mucous membranes. If contact occurs, flush the area with clean water.

Quality Control Specifications

Gold Standard Diagnostics tests each lot of manufactured BAC*Gro*™ culture media utilizing appropriate control organisms and specifications as documented on the Certificate of Analysis. End users should perform quality control testing in accordance with government regulatory requirements and accreditation guidelines. The following specifications are routinely used for testing:

Appearance (dehydrated): Pink-beige, homogenous, free flowing powder, free of debris.

Appearance (prepared): Red-purple and slightly opalescent.

pH (prepared): 6.9 – 7.3 at 25°C

Organism Performance:

Strain ID	Inoculum	Incubation			Result
		Time	Temp.	Environment	
E. coli (ATCC® 8739)	<100 CFU	18 – 72 hr.	35° C	Aerobic	Growth, Pink colonies
P. mirabilis (ATCC® 12453)	<100 CFU	18 – 72 hr.	35° C	Aerobic	Growth, Colorless colonies
S. enterica ser. Typhimurium (ATCC® 14028)	<100 CFU	18 – 72 hr.	35° C	Aerobic	Growth, Colorless colonies
S. aureus (ATCC® 6538)	<10,000 CFU	18 – 72 hr.	35° C	Aerobic	No Growth
E. faecalis (ATCC® 29212)	<10,000 CFU	18 – 72 hr.	35° C	Aerobic	No Growth

Limitations of the Procedure

This product is not labeled for use as a medical device, and is not intended to diagnose, treat, or prevent disease.

Due to variation in nutritional requirements, some species or strains may be encountered that grow poorly in this medium.

Further biochemical or serological testing is required for the identification of organisms grown in this medium.

Storage and Expiration

BAC*Gro*™ MacConkey Agar should be stored at 2 – 30 degrees Celsius. Because of the hygroscopic nature of dehydrated culture media, it should be stored in a dry place and the lid should remain tightly sealed. Media should be discarded if it is not free flowing or shows discoloration.

The expiration date printed on the label is applicable to media stored as directed.

Catalog Numbers

DCM4501 – MacConkey Agar, 500g
DCM4505 – MacConkey Agar, 5kg
DCM4510 – MacConkey Agar, 10kg

[1] United States Pharmacopeial Convention. *United States Pharmacopoeia and National Formulary (USP-NF)*.

[2] Directorate for the Quality of Medicines and the Council of Europe. *The European Pharmacopoeia*.

[3] Pharmaceuticals and Medical Devices Agency, Ministry of Health, Labor, and Welfare. *Japanese Pharmacopoeia.*

Revision History:

Revision	Description	Effective Date
03	Added part number DCM4505	23-AUG-2023
02	Created part number DCM4510	16-NOV-2021
01	Document creation	18-DEC-2020