


Effective date: 21/12/25	Hy-Labs Cat. No: PD032 DD002 DD057 DD003	MSDS FORMAT MATERIAL SAFETY DATA SHEET	
Doc. No: MSDS- PD032 DD002/ DD057/ DD003			Replace Doc: NA

1- Product and Company Identification

Product Name	MACCONKEY AGAR
Reference number	PD032 / DD002 / DD057 / DD003
Identified uses	MacConkey Agar is used for isolating and differentiating lactose-fermenting from lactose-nonfermenting gram-negative enteric bacilli.
Manufacturer	Hy-Laboratories Ltd. Park Tamar, Rehovot, 76326, Israel Tel: 972-8-9366475 Fax: 972-8-9366474

2- HAZARDS IDENTIFICATION

2.1 GHS Classification:

Not classified as hazardous under the Globally Harmonized System (GHS) when supplied and handled as intended.

2.2 Label Elements:

Signal Word: None

Hazard Statements: None

No signal word or pictogram is typically required specifically for sterile plates, but follow institutional policies.

2.3 Precautionary Statements:

Use appropriate personal protective equipment (PPE).

Avoid ingestion and contact with eyes or broken skin.

Handle in accordance with good laboratory and microbiological practices.

2.4 Other Hazards:

Contains bile salts and crystal violet, which may cause mild irritation upon prolonged contact.

After inoculation with microorganisms, plates must be treated as biohazardous material.

3- COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixture: Prepared agar-based culture medium.

Pancreatic Digest of Gelatin - 17.0 g/L

Peptones (meat and casein) - 3.0 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 (pH indicator) - 0.03 g/L

Crystal Violet (selective agent) - 1.0 mg/L

3.2 Hazardous Ingredients:

None present at concentrations requiring disclosure under GHS in the finished product.

4- First Aid Measures

4.1 For unused plates:

Inhalation:

Not an expected route of exposure. Remove to fresh air if irritation occurs, and seek medical advice if symptoms occur.

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Skin contact:

Wash thoroughly with soap and water. Seek medical attention if irritation develops.

Eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Get medical attention if irritation persists.

Ingestion:

Rinse mouth with water. Do not induce vomiting. Seek medical advice if discomfort occurs.

4.2 For used plates:

treat exposure as possible contact with pathogenic Gram-negative organisms (BSL-2).

4.3 General Advice: Seek medical attention if symptoms persist.

5- Fire Fighting Measures

5.1 Suitable Extinguishing Media:

Water spray, foam, dry chemical, or carbon dioxide (CO₂).

5.2 Combustion products:

CO, CO₂, nitrogen/organic fumes; chlorine-containing products may form from some components.
Protective equipment: Standard firefighting PPE with SCBA.

5.3 Specific Hazards:

Product is not flammable. Thermal decomposition may generate carbon oxides and nitrogen oxides.

6- Accidental Release Measures

6.1 General Precautions:

Personal Precautions: Wear appropriate laboratory PPE (gloves, lab coat, eye protection).

Environmental Precautions: Prevent release to drains or the environment.

Methods for Cleanup:

Collect solid material using disposable tools.

Clean and disinfect the affected area with a suitable laboratory disinfectant.

Dispose of waste in accordance with laboratory and local regulations.

6.2 Unused plates:

Pick up plates and fragments mechanically.

Place in appropriate waste container.

Clean area with water and mild detergent.

6.3 Used / inoculated plates:

Wear gloves, lab coat, and eye protection as needed.

Collect broken plates and agar into biohazard bag or sharps container.

Disinfect surface with suitable disinfectant (e.g., 0.1–1% sodium hypochlorite or 70% ethanol) following local biosafety procedures.

7- Handling and Storage

7.1 Handling – unused:


Use good microbiological practice.

Avoid unnecessary skin/eye contact and ingestion.

7.2 Handling – used:

Treat as potentially infectious material; use BSL-2 practices for clinical enteric isolates.

Avoid eating, drinking, or smoking in areas where the product is handled.

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7.3 Storage:

Store plates at 2–8 °C in original sleeves or sealed plastic bags.
 Protect from light (neutral red is light sensitive), drying, overheating, and freezing.
 Discard plates that are contaminated, show excessive dehydration, color change, or surface defects.
 Do not use beyond the expiration date.

8- Exposure Controls, Personal Protection

8.1 Exposure limits:

No occupational exposure limits (OEL) established for the mixture; bile salts and sodium chloride are present at low concentrations but can be irritant in dry form.

8.2 Engineering controls:

Adequate general laboratory ventilation for unused plates; use a biosafety cabinet when inoculating/manipulating clinical material.

8.3 Personal Protective Equipment (PPE):

Disposable gloves (nitrile or latex)
 Laboratory coat or gown
 Safety glasses or goggles

9- Physical and Chemical Properties

Appearance: Reddish-purple, slightly opalescent Prepared agar plate.

Odor: Mild

Physical State: Solid gel at room temperature; softens/melts >80–90 °C.

pH: 6.9 - 7.3

Solubility: Agar gel not truly soluble; disperses in hot water.

Flash Point: Not applicable

10- Stability and Reactivity

Chemical Stability: Stable under recommended storage conditions for stated shelf life.

Reactivity: No hazardous reactions under normal laboratory conditions.

Conditions to avoid: Excessive heat, freezing, dehydration, and contamination.

Incompatible materials: Strong oxidizers and strong acids.

Hazardous decomposition: CO, CO₂, chlorine-containing and nitrogenous fumes on combustion.

11- Toxicological Information

11.1 Acute Toxicity: Not expected to be toxic.

Unused plates:

Low acute toxicity anticipated.

Components such as bile salts can be irritating to eyes, skin, and respiratory tract in powder form; with plates this risk is much reduced but mild irritation is still possible.

No known sensitization at normal lab exposure levels.

Used plates:

Risk determined by organisms grown (e.g., Salmonella, Shigella, pathogenic E. coli) and must be managed under biosafety procedures.

Skin/Eye Irritation: Prolonged contact may cause mild irritation due to bile salts and dyes.

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Sensitization: Not expected under normal laboratory use.

Chronic Effects: No known chronic health effects associated with routine laboratory handling.

12- Ecological Information

12.1 Ecotoxicity:

Not expected to pose environmental hazards in small quantities.

12.2 Persistence and Degradability: Components are largely biodegradable and used in small quantities;

Used plates may contain pathogens and should not enter the environment untreated.

13- Disposal Information

13.1 Unused plates:

Dispose as non-hazardous laboratory waste if allowed by local rules, or autoclave then discard.

13.2 Used plates:

Autoclave or otherwise disinfect according to institutional biosafety procedures.

After decontamination, discard as regulated medical/infectious waste under local regulations.

14- Transport Information

14.1 Unused plates:

Not regulated as dangerous goods under ADR/RID, IMDG, IATA.

14.2 Used plates:

If containing infectious material, package and ship under applicable infectious substance regulations (e.g., UN 3373) as required.

UN Number: Not regulated

Proper Shipping Name: Not applicable

Hazard Class: Not applicable

Packing Group: Not applicable

15- Regulatory Information

15.1 Intended for laboratory and in vitro diagnostic use only.

Ready-to-use plates typically fall below hazardous thresholds but must follow local hazard-communication rules.

Product intended for professional laboratory / IVD use under relevant national regulations.

Not classified as hazardous under GHS, CLP Regulation (EC) No 1272/2008, or OSHA Hazard Communication Standard when supplied.

16- Other Information

The information in this MSDS is based on current and reliable sources but does not purport to be all inclusive and shall be used only as a guide.

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products.

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All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.