

# SAFETY DATA SHEET

## Section 1: Identification

**Product Identifier:** Malate Dehydrogenase Assay (Colorimetric) (#BA0131)

**Relevant Identified Uses of Substance or Mixture and Uses Advised Against:**

Recommended Use: For Research Use Only

Uses Advised against: No information

**Company:**

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## Section 2: Hazard(s) Identification

### GHS Classification

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Germ cell mutagenicity (Category 2), H341

Specific target organ toxicity (Category 3), Respiratory system, H335

### GHS Label elements, including precautionary statements



**Pictogram:**

**Signal word:** Warning

### Hazard statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H341 Suspected of causing genetic defects.

### Precautionary statements

P273 Avoid release to the environment.

P280 Wear protective gloves/clothing and eye/face protection.

P302 + P352: If on skin: Wash with plenty of soap and water.

P304 + P340: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a doctor/ physician if you feel unwell.

P332 + P313: If skin irritation occurs: Get medical advice/ attention.

P337 + P313: If eye irritation persists: Get medical advice/ attention.

### Section 3: Composition/ Information on Ingredients

| Component Name                                                           | CAS Number     |
|--------------------------------------------------------------------------|----------------|
| Assay Buffer: 10 mL liquid — Contains 0.1-5% L-glutamate                 | CAS#: 142-47-2 |
| Enzyme A: 120 µL liquid — Non-hazardous                                  |                |
| Enzyme B: 120 µL liquid — Non-hazardous                                  |                |
| NAD/MTT: 1 mL liquid — Contains 1-10% Thiazolyl Blue Tetrazolium Bromide | CAS#: 298-93-1 |
| Substrate: 600 µL liquid — Contains 0.1-5% L-malic acid                  | CAS#: 97-67-6  |
| Calibrator: 1.5 mL liquid — Non-hazardous                                |                |

### Section 4: First-Aid Measures

**Eye:** Eye irritation. Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get immediate medical attention.

**Skin:** Itching or burning of the skin. Immediately flush the skin with plenty of water while removing contaminated clothing and shoes. Get immediate medical attention. Wash contaminated clothing before reuse.

**Inhalation:** Remove exposed person from source of exposure to fresh air. If not breathing, clear airway and start cardiopulmonary resuscitation (CPR). Avoid mouth-to-mouth resuscitation.

**Ingestion:** Get immediate medical attention. Do not induce vomiting unless directed by medical personnel.

### Section 5: Fire-Fighting Measures

**Extinguishing media:** water spray, carbon dioxide, dry chemical powder or appropriate foam.

**Special firefighting procedures:** wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**Unusual fire and explosion hazards:** emits toxic fumes under fire conditions.

### Section 6: Accidental Release Measures

Keep unnecessary people away; isolate hazard area and deny entry.

Small spills: Take up with sand or other noncombustible absorbent material and place into containers for later disposal. Large spills: Dike far ahead of liquid spill for later disposal. Do not flush to sewer or waterways. Prevent release to the environment if possible.

### Section 7: Handling and Storage

Keep receptacles tightly sealed and store according to the instructions in the assay protocol.

### Section 8: Exposure Controls/Personal Protection

Follow standard laboratory safety procedures, including wearing chemical safety goggles, face shield, gloves, NIOSH approved respiratory protection and protective clothing. Wash and dry hands.

### Section 9: Physical and Chemical Properties

Refer to Section 3. Composition/Information on Ingredients.

### Section 10: Stability and Reactivity

**Thermal Decomposition:** no decomposition if used according to specifications.

**Dangerous Products of Decomposition:** nitrogen and sulfur oxides.

**Dangerous Reactions:** none.

### Section 11: Toxicological Information

The toxicological effects of this product have not been thoroughly studied. We recommend handling all chemicals with caution.

L-glutamate - LD50 Oral rat: 17.3 g/kg; Inhalation: no data available; LD50 Dermal rat: > 2,000 mg/kg; Skin corrosion/irritation rabbit: No skin irritation 4 h.

Thiazolyl Blue Tetrazolium Bromide (CAS#: 298-93-1) - Acute toxicity no data available; Inhalation: no data available; Dermal: no data available; no data available; Skin corrosion/irritation: no data available Serious eye damage/eye irritation; no data available.

L-Malic acid - Acute toxicity: no data available; Dermal: no data available; Skin corrosion/irritation: no data available; Serious eye damage/eye irritation: no data available.

### Section 12: Ecological Information

Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

### Section 13: Disposal Considerations

Dispose in accordance with local, state or national regulations.

### Section 14: Transport Information

DOT (US) - Not dangerous goods.

IMDG - Not dangerous goods.

IATA - Not dangerous goods.

Additional Transport Information: transport in accordance with local, state and national regulations.

### Section 15: Regulatory Information

**OSHA Hazards:** Target Organ Effect, Combustible Liquid.

**SARA 311/312 Hazards:** Fire Hazard, Chronic Health Hazard.

### Section 16: Other Information

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**Last reviewed: 07/2026**

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\*End Of MSDS\*