



SAFETY DATA SHEET

Section 1: Identification

Product Identifier: Malate Acid Colorimetric Assay Kit (#MAES0281)

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

Recommended Use: For Research Use Only

Uses Advised against: No information

Company:

Assay Genie
25 Windsor Place
D02VY42
Dublin 2
Ireland
+353 (01) 8879802

For information about this SDS, please contact: techsupport@assaygenie.com

Section 2: Hazard(s) Identification

Hazards Identification:

According to GHS

Physical hazards: Not Hazardous

Health hazards: Not Hazardous

Environmental hazards: Not Hazardous

Section 3: Composition/ Information on Ingredients

Items	Component	Physical form	Hazardous Ingredient	Concentration	CAS No.
Reagent 1	Buffer Solution	Odorless and colorless, liquid	No hazards	-	-
Reagent 2	Enzymatic Reagent	Odorless and colorless, liquid	No hazards	-	-
Reagent 3	Chromogenic Agent	Odorless and red, liquid	No hazards	-	-
Reagent 4	Substrate	Odorless and white, powder	No hazards	-	-
Reagent 5	0.5 mmol/L Standard Solution	Odorless and colorless, liquid	No hazards	-	-

Section 4: First-Aid Measures

- Classification according to GHS

4.1 General advice

- Consult a physician. Show this safety data sheet to the doctor in attendance.

4.2 If inhaled

- If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

4.3 In case of skin contact

- Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

4.4 In case of eye contact

- Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

4.5 If swallowed

- Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5: Fire-Fighting Measures

5.1 Suitable extinguishing media

- **Suitable:** Water spray, alcohol-resistant foam, dry chemical, carbon dioxide or appropriate foam.
- For small fires, use media such as "alcohol" foam, dry chemical or carbon dioxide.
- For large fires, apply water from as far as possible. Use large quantities of water applied as a mist or spray. Solid streams
- of water may be ineffective. Cool affected containers with flooding quantities of water.

5.2 Special precautions for fire-fighters

- **Protective Equipment:** Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and
- eyes.

5.3 Special hazards arising from the substance or mixture

- Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas.

Section 6: Accidental Release Measures

6.1 Person-related safety precautions

- Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources
- of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors
- can accumulate in low areas.

6.2 Measures for environmental protection

- Prevent further leakage or spillage if safe to do so. Do not let enter drains. Discharge into the environment must be
- avoided.

6.3 Measures for containment and cleaning

- Contain spillage, and then collect with non-combustible absorbent material (eg. sand, diatomaceous earth, vermiculite).
- Place in a container for disposal according to local regulations. Pick up and arrange disposal without creating dust. Sweep

- up and shovel. Keep in suitable, closed containers for disposal. Sweep up and shovel. Contain spillage, and then collect
- with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local
- regulations (see section 13). Keep in suitable, closed containers for disposal.

Section 7: Handling and Storage

7.1 Handling

- Wear appropriate protective clothing and safety gloves.
- Avoid inhalation.
- Avoid contact with eyes, skin and clothing.
- Mechanical exhaust required.
- Keep away from ignition sources, heat and flame.
- No smoking at working site.
- **Incompatibilities:** Strong oxidizing agents, Strong acids. Handling and unloading should be light, to prevent packaging broken,
- damp and cause losses.
- Working place should be equipped with appropriate varieties and quantities of fire fighting equipment and leakage
- emergency treatment equipment.

7.2 Storage

- Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
- Keep away from heat, sparks and flame.
- Keep away from sources of ignition.
- **Incompatible:** Strong oxidizing agents, Strong acids.
- Storage place should be equipped with appropriate varieties and quantities of fire fighting equipment and leakage
- emergency treatment equipment.

Section 8: Exposure Controls/Personal Protection

8.1 Engineering Controls

- Mechanical exhaust required. Safety shower and eye bath.

8.2 Personal Protective Equipment

- **Respiratory:** Government approved respirator if needed.
- **Eye/face:** Chemical safety goggles if needed.
- **Clothing:** Wear appropriate protective clothing.
- **Hand/skin:** Protective gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- **Body protection:** Wear suitable protective clothing according to the concentration and amount of the substance at the
- workplace.

8.3 Other Protect

- No smoking, drinking and eating at working site. Wash thoroughly after handling.

Section 9: Physical and Chemical Properties

- **Appearance:** No data available
- **Odour:** No data available
- **Odour threshold:** No data available
- **Evaporation rate:** No data available
- **Flammability (solid, gas):** No data available
- **Upper/lower flammability or explosive limits:** No data available
- **Vapour pressure:** No data available
- **Vapour density:** No data available
- **Relative density:** No data available
- **Water solubility:** No data available
- **Partition coefficient:** No data available
- **Auto-ignition temperature:** No data available
- **Decomposition temperature:** No data available
- **Viscosity:** No data available
- **Explosive properties:** No data available
- **Oxidizing properties:** No data available

Section 10: Stability and Reactivity

10.1 Reactivity

- No data available

10.2 Chemical stability

- Stable under recommended storage conditions

10.3 Possibility of hazardous reactions

- No data available

10.4 Conditions to avoid

- Heat, flames and sparks

10.5 Incompatible materials

- Strong oxidizing agent, Light sensitive, Alcohols, Organic materials, Heavy metals, Powdered metals, Strong reducing agents, Amines, Mercaptans.

10.6 Hazardous decomposition products

- **Other decomposition products:** No data available
- **Hazardous decomposition products formed under fire conditions:** Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides,
- Hydrogen chloride gas.

Section 11: Toxicological Information

- **Acute toxicity:**
- There is no evidence available indicating acute toxicity.

Section 12: Ecological Information

- Ecotoxicity
- No data available
- Persistence and degradability
- No data available

- Bioaccumulative potential
- No data available
- Mobility in soil
- No data available
- Results of PBT and vPvB assessment
- No data available
- Other adverse effects
- No data available

Section 13: Disposal Considerations

13.1 Disposal methods

- Dispose of waste in accordance to applicable national, regional, or local regulations. Burn in a chemical incinerator
- equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed
- disposal company. Contact a licensed professional waste disposal service to dispose of this material.

13.2 Contaminated packaging

- Dispose in the same manner as unused product.

Section 14: Transport Information

- **RID/ADR:** Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.
- **IATA:** Non-Hazardous for Air Transport.
- **IMO:** Non-Hazardous for Sea Transport.

Section 15: Regulatory Information

This material safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008 and its amendments.

Section 16: Other Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislation. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

Last reviewed: 07/2026

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End Of MSDS