Safety Data Sheet (SDS)

1. Product and Company Information

Product name: Reagent A (SialoCapper-ID Kit Mega) P/N 241-22335-01

[Isopropylamine hydrochloride + 1-Hydroxybenzotriazole hydrate in dimethyl sulfoxide]

Company name: Shimadzu Corporation

Address: 1 Nishinokyo Kuwabara-cho, Nakagyo-ku, Kyoto 604-8511, Japan

Responsible department:

MALDI Group

Diagnostics Management Department,

Analytical & Measuring Instruments Division

Telephone number: 075-823-1351

Fax number: 075-823-1364

Recommended use and restrictions on use: Research reagent

2. Hazards Identification

GHS Classification:

Flammable liquids: Category 4

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2

Specific target organ toxicity (single exposure): Category 2 (respiratory system)

GHS Label Elements:

Pictogram: 

Signal word: Warning

Hazard statements:

H227 Combustible liquid

H315 Causes skin irritation

H319 Causes serious eye irritation

H371 May cause damage to the respiratory system

Precautionary statements:

[Prevention]

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash exposed skin such as face and hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

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

[Response]

IF ON SKIN: Wash with plenty of soap and water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If exposed or concerned: Get medical advice/attention.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Wash contaminated clothing before reuse.

In case of fire: Use carbon dioxide, dry chemical powder, or foam for extinction.

[Storage]

Store in a well-ventilated place.

Store locked up.

[Disposal]

Dispose of contents/container at an approved waste disposal facility.

[Other hazards]

No data available

3. Composition / Information on Ingredients

Substance/Mixture: Mixture

Chemical name

	Content (%)	Chemical formula	CAS No.	CSCL No.	ISHL No.
Isopropylamine hydrochloride	15–23%	C3H9N·HCl	15572-56-2	N/A	N/A
1-Hydroxybenzotriazole hydrate	5–9%	C6H5N3O·H2O	80029-43-2	(5)-3579 (5)-3603	Existing chemical substance
Dimethyl sulfoxide	68–80%	C2H6OS	67-68-5	(2)-1553	Published

Impurities or stabilizing additives: Not applicable

4. First-Aid Measures

If inhaled: Move the person to fresh air. If symptoms persist, contact a physician.

If on skin: Immediately wash with soap and plenty of water. If symptoms persist, contact a physician.

If in eyes: Rinse cautiously for several minutes. If wearing contact lenses and they can be easily removed, remove them, then continue rinsing. Immediate medical attention is required.

If swallowed: Rinse mouth. Never give anything by mouth to an unconscious person. Immediately contact a physician or poison control center. Do not induce vomiting unless instructed by a physician.

Protection of first-aiders: Wear personal protective equipment.

5. Fire-Fighting Measures

Suitable extinguishing media: Carbon dioxide (CO2), foam, dry chemical powder, sand

Specific hazards arising from the chemical: Thermal decomposition may release irritating and toxic gases and vapors. Vapors may form explosive mixtures with air.

Specific extinguishing methods: No information available.

Unsuitable extinguishing media: No information available.

Special protective equipment for firefighters: Wear personal protective equipment. Firefighters should wear self-contained breathing apparatus and firefighting gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: For indoor spills, ensure sufficient ventilation until cleanup is complete. Restrict entry to unauthorized personnel by roping off the area, etc. Wear appropriate protective equipment during cleanup to avoid skin contact with splashes and inhalation of gas. Work from upwind and evacuate people downwind.

Environmental precautions: Prevent spilled product from being discharged into rivers or otherwise causing environmental impact. Prevent contaminated wastewater from being released into the environment without proper treatment.

Methods and materials for containment and cleaning up: Absorb with dry sand, soil, sawdust, cloth, etc., and collect in a tightly closable container.

Prevention of secondary hazards: Thoroughly clean contaminated objects and areas in accordance with environmental regulations.

7. Handling and Storage

Handling

Technical measures: Keep away from fire. Avoid hot materials, sparks, and contact with strong oxidizing agents. Use local exhaust ventilation. Do not subject containers to rough handling such as tipping, dropping, impact, or dragging. Prevent leakage, overflow, and scattering, and do not unnecessarily generate vapors. Keep container tightly closed after use. Wash hands and face thoroughly and gargle after handling. Do not eat, drink, or smoke except in designated areas. Do not bring contaminated gloves or other protective equipment into rest areas. Prohibit entry of unauthorized personnel into handling areas.

Precautions: Take necessary measures to avoid electrostatic discharge (which may ignite organic vapors). Wear personal protective equipment. Avoid contact with skin, eyes, and clothing.

Incompatible materials: Strong oxidizing agents

Hygiene measures: Wash hands and face thoroughly and gargle after handling.

Storage

Suitable storage conditions: Store in a tightly closed container, protected from light, in a well-ventilated and as cool a place as possible. Store locked up.

Suitable container/packaging material: Glass

8. Exposure Controls / Personal Protection

Engineering controls: For indoor use, enclose the source or provide local exhaust ventilation. Install a safety shower, hand-washing, and eyewash facilities near the handling area, and clearly indicate their locations.

Exposure limits: This supplied product does not contain hazardous substances with occupational exposure limits established by regional regulatory authorities.

Personal protective equipment

Respiratory protection: Organic gas respirator (JIS T 8152)

Hand protection: Chemical protective gloves (JIS T 8116)

Eye protection: Safety glasses with side shields (or goggles/full-face protection as necessary) (JIS T 8147)

Skin and body protection: Long-sleeved work clothing

Appropriate hygiene measures: Handle in accordance with industrial hygiene and safety standards. For products classified as chemicals causing skin disorders, use appropriate protective equipment for prevention of skin disorders in accordance with manuals issued by the Ministry of Health, Labour and Welfare, etc.

9. Physical and Chemical Properties

Physical state: Liquid

Color: Colorless to almost colorless

Odor: Almost odorless

Melting point / freezing point: No data available

Boiling point, initial boiling point and boiling range: No data available

Flammability: No data available

Explosive limits (lower/upper flammability limit): No data available

Flash point: 93.0°C (Tag closed cup method)

Auto-ignition temperature: No data available

Decomposition temperature: No data available

pH: No data available

Kinematic viscosity: No data available

Solubility: No data available

n-Octanol/water partition coefficient (log value): No data available

Vapor pressure: No data available

Density and/or relative density: No data available

Relative gas density: No data available

Particle characteristics: No data available

Other data (radioactivity, bulk density, combustion sustainability): No data available

10. Stability and Reactivity

Reactivity: No data available

Chemical stability: May deteriorate upon exposure to light.

Possibility of hazardous reactions: Decomposes on burning, producing toxic or corrosive gases and fumes.

Conditions to avoid: High temperature and direct sunlight, heat, flame, sparks, static electricity, spark discharge

Incompatible materials: Strong oxidizing agents

Hazardous decomposition products: Carbon monoxide (CO), carbon dioxide (CO2), nitrogen oxides (NOx)

11. Toxicological Information

Acute toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Isopropylamine hydrochloride	N/A	N/A	N/A
1-Hydroxybenzotriazole hydrate	N/A	N/A	N/A
Dimethyl sulfoxide	14500 mg/kg (Rat)	40000 mg/kg (Rat)	>5330 mg/m3 (Rat), 4 h

Acute toxicity (oral): Not classified

Based on NITE GHS classification.

Acute toxicity (dermal): Not classified

Based on NITE GHS classification.

Acute toxicity (inhalation: gas): Not applicable to classification

Not a gas according to the GHS definition.

Acute toxicity (inhalation: vapor): Classification not possible

Cannot be classified due to insufficient data.

Acute toxicity (inhalation: dust/mist): Classification not possible

Based on NITE GHS classification.

Skin corrosion/irritation: Category 2

Based on NITE GHS classification.

Serious eye damage/eye irritation: Category 2

Based on NITE GHS classification.

Respiratory sensitization: Classification not possible

Cannot be classified due to insufficient data.

Skin sensitization: Classification not possible

Based on NITE GHS classification.

Germ cell mutagenicity: Classification not possible

Based on NITE GHS classification.

Carcinogenicity: Classification not possible

Cannot be classified due to insufficient data.

Reproductive toxicity: Classification not possible

Cannot be classified due to insufficient data.

Effects on or via lactation: Classification not possible

Cannot be classified due to insufficient data.

Specific target organ toxicity (single exposure): Category 2 (respiratory system)

Based on NITE GHS classification.

Specific target organ toxicity (repeated exposure): Classification not possible

Based on NITE GHS classification.

Aspiration hazard: Classification not possible

Falls under “cannot be classified” because kinematic viscosity is unknown.

12. Ecological Information

Ecotoxicity:

Chemical name	Algae-Aquatic plants	Fish	Crustacea
Isopropylamine hydrochloride	N/A	N/A	N/A
1-Hydroxybenzotriazole hydrate	N/A	N/A	N/A
Dimethyl sulfoxide	N/A	LC50: Pimephales promelas 34000 mg/L, 96 h; LC50: Oncorhynchus mykiss 33–37 g/L, 96 h; LC50: Lepomis macrochirus >40 g/L, 96 h; LC50: Cyprinus carpio 41.7 g/L, 96 h	EC50: Artemia 6830 mg/L, 24 h

Hazardous to the aquatic environment, short-term (acute): Classification not possible

Based on NITE GHS classification.

Hazardous to the aquatic environment, long-term (chronic): Classification not possible

Based on NITE GHS classification.

Hazardous to the ozone layer: Classification not possible

Cannot be classified due to insufficient data.

Persistence/degradability: No information available

Bioaccumulative potential: No information available

Mobility in soil: No information available

13. Disposal Considerations

Residual waste: Disposal must be in accordance with applicable regional, national, and local laws and regulations.

Contaminated containers and packaging: Disposal must be in accordance with applicable regional, national, and local laws and regulations.

14. Transport Information

Precautions: Before transport, confirm that the container is not leaking, and load it so as to prevent overturning, dropping, or damage. Ensure prevention of cargo collapse.

IATA (Air): Not regulated

UN number: -

Proper shipping name: -

UN class: -

Subsidiary risk: -

Packing group: -

Environmentally hazardous: Not applicable

ADR/RID (Land): Not regulated

UN number: -

Proper shipping name: -

UN class: -

Subsidiary risk: -

Packing group: -

Marine pollutant: Not applicable

IMDG (Sea): Not regulated

UN number: -

Proper shipping name: -

UN class: -

Subsidiary risk: -

Packing group: -

Marine pollutant: Not applicable

Transport in bulk according to MARPOL 73/78 and the IBC Code: No information available

15. Regulatory Information

Fire Service Act: Hazardous material, Class 4, Third Petroleum Group, Hazard Rank III, water-soluble

Poisonous and Deleterious Substances Control Act: Not applicable

Industrial Safety and Health Act:

Substances required to be indicated by name, etc. (Article 57): Dimethyl sulfoxide

Substances required to be notified by name, etc. (Article 57-2): Dimethyl sulfoxide

Chemicals causing skin disorders, etc. (Ordinance Article 594-2, Paragraph 1): Dimethyl sulfoxide

CSCL: Not applicable

Regulations for the Carriage and Storage of Dangerous Goods by Ship: Not applicable

Civil Aeronautics Act: Not applicable

PRTR Act: Not applicable

Marine Pollution Prevention Act: Not applicable

Export Trade Control Order: Not applicable

Soil Contamination Countermeasures Act: Not applicable

16. Other Information

References

ISHL Chemical Substance Information (Safety and Health Information Center)

SDS Library https://sds.jcdb.jp/sdslibrary/i/Top

NITE website (search for chemical substances and regulations)

SDSs from reagent manufacturers belonging to the Japan Reagent Association (“Japan Reagent Association SDS Search” website)

Safety data sheets from raw material manufacturers

IATA Dangerous Goods Regulations, 63rd Japanese edition

This document may be revised due to legal amendments, new findings, acquisition of new information, testing, etc.

The content is prepared based on information from materials and literature available at the present time; however, no warranty is made regarding the stated content, concentrations, numerical values of physical and chemical properties, or evaluations. The precautions described are intended for normal handling. If special handling is required, please implement safety measures appropriate to the intended use and handling method before use.