

Safety Data Sheet

The content and format of this SDS is accordant with GHS standard.

1. Identification of the substance/preparation and of the company/undertaking

Product name: **N**-Histofine[®] New Fuchsin substrate kit

Product code: 415161F

Recommended use of the chemical and restrictions on use: Research product. Immunohistochemical staining kit. For professional use.

Restrictions on use: Do NOT use it in an application which may contaminate food or do harm to human health.

Manufacturer/Supplier: NICHIREI BIOSCIENCES INC.

Address: 6-19-20, Tsukiji, Chuo-ku, Tokyo, 104-8402, Japan

Tel.: +81-3-3248-2207

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Further information obtainable from: NICHIREI BIOSCIENCES INC.

Information in case of emergency:

Tel.: +81-3-3248-2207

2. Hazards identification

GHS classification:

Physical hazards	Health hazards	Environmental hazards
Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures -not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-not classified	Acute toxicity (oral)- 5 Acute toxicity (dermal)-not classified Acute toxicity (inhalation)-not classified Skin corrosion/irritation- 2 Serious eye damage/eye irritation -2A Respiratory sensitizer-1 Skin sensitizer-not classified Germ cell mutagenicity- not classified Carcinogenicity-not classified Toxic to reproduction- 2 Effects on or via lactation-not classified Specific target organ toxicity following single exposure-1 (respiratory organs) Specific target organ toxicity following repeated exposure-1 (tooth, respiratory organs) -2 (blood) Aspiration hazard- not classified	Acute hazards to the aquatic environment-2 Chronic hazards to the aquatic environment-not classified Hazard to the ozone layer-not classified

Signal word: Danger

Symbol:



Hazard Statement:

H303: May be harmful if swallowed.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H361: Suspected of damaging fertility or the unborn child.

H370: Causes damage to organs (respiratory organs).

H372: Causes damage to organs (tooth, respiratory organs) through prolonged or repeated exposure.

H373: May cause damage to organs (blood) through prolonged or repeated exposure.

Precautionary Statements:

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P260: Do not breathe dust/fume/gas/mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P273: Avoid release to the environment.

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

P281: Use personal protective equipment as required.

P285: In case of inadequate ventilation wear respiratory protection.

Response Precautionary Statements:

P302+P352: IF ON SKIN: Wash with soap and water

P321: Specific treatment (see specific information on this label).

P362: Take off contaminated clothing and wash before reuse.

P304+P341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

P305+P351+P338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do-continue rinsing.

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

P308+P313: IF exposed or concerned: Get medical advice/attention.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

Storage precautionary statements :

P405: Store locked up.

Disposal precautionary statements :

P501: Dispose of contents/container to relevant local and national regulations.

3. Composition/information on ingredients

Product description: substance (); preparation/mixture (√)

(1) Reagent A: New Fuchsin solution concentrate

Ingredient (s)	CAS#	EC#	Official Notice Reference Number (Japan)	% by weight
Water	7732-18-5	231-791-2	6-2045	92.503%
Hydrogen chloride	7647-01-0	231-595-7	1-215	7.00%
Fuchsin, new	3248-91-7	221-831-7	5-1970	0.50%

(2) Reagent B: Activating reagent concentrate

Ingredient (s)	CAS#	EC#	Official Notice Reference Number (Japan)	% by weight
Water	7732-18-5	231-791-2	6-2045	99.00%
Sodium nitrite	7632-00-0	231-555-9	1-483	1.00%

(3) Reagent C: Substrate buffer concentrate

Non-hazardous

(4) Reagent D: Substrate solution concentrate

Non-hazardous

4 First aid measures

Persons using this product should consult a physician or other medical professional if an accident involving this product results in injury. Specific first-aid measures are as follows:

Eyes Contact: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact: Immediately remove contaminated clothing and wash before reuse. Wash with water and soap. If skin irritation occurs: Get medical advice/attention.

Inhalation: If discomfort occurs after inhaling vapour from processing, remove to a place where air is fresh and keep at rest in a position comfortable for breathing. If discomfort persists, get medical attention.

Ingestion: Rinse mouth. Do not induce vomiting without doctor's instruction. If discomfort occurs, get medical attention.

Acute effect and delayed effect: Acute effect: It causes serious irritation to eyes and skin irritation. If inhaling concentrated vapour of this product, symptoms may include and the upper airway edema, respiratory tract inflammations, necrosis, and a lung blister. Delayed effect: It causes damage to organs (tooth, respiratory organs) through prolonged or repeated exposure. It may affect blood.

Personal protective equipment: Wear protective gloves/clothing/safety glasses/respirators when necessary.

Indication of immediate medical attention and treatment needed, if necessary: Treat according to symptoms.

5. Fire-fighting measures

Extinguishing Media: This product is not combustible, as for fire caused by other ignition sources, use appropriate extinguishing media according to fire types. Seek advice from local fire-fighting authority.

Specific Hazards Arising from the Chemical: It may release irritating and hazardous fume/gas from thermal decomposition.

Fire Fighting Method:

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Firefighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

Fire Fighting Equipment: Firefighters must wear self-contained breathing apparatus and full protective equipment.

6. Accidental release measures

Personal precautions: Use proper personal protective equipment as indicated in Section 8.

Measures for Cleaning/Collection:

Small Spill:

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

Large Spill:

Seek professional advice from companies dealing with waste disposal if necessary.

Isolate contaminated area and set up a warning board. The persons handling emergency are recommended wearing protective clothing. Do NOT touch spilled material. Build up dike or dig pit for collection. Collect the spilled material into a labeled container and keep it tightly sealed.

Environmental Precautions: Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

7. Handling and storage

Handling:

Workers must wear proper protective equipment and must operate strictly according to relative rules.

Do not breathe vapour or fume that may be evolved during processing.

Information about fire- and explosion protection:

No special requirement for this product.

Storage:

Requirements to be met by storerooms: Store it in a well-ventilated, cool and dry store room. Avoid long-time direct sunlight. Store locked up.

Additional Information: The storeroom should be equipped with proper facilities for accidental leakage and fire.

8. Exposure controls/personal protection

Occupational Exposure Limits:

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA	Japan Industry & Health Association-PELs
Hydrogen chloride (CAS : 7647-01-0)	5 ppm	2 ppm	5 ppm

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Personal Protective Equipment (For workers) :

Protection of Hands:

Wear protective gloves. (e.g. impermeable rubber gloves)



Protection of Eyes:

No special requirements under normal conditions. Wear safety glasses when liquid may contact eyes.



Respiratory Protection: Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.



Protection of Body:

Recommend wearing uniforms made of antistatic synthetic fiber



General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and skin.

Wash contaminated clothing before reuse.

9. Physical and chemical properties

General Information	
Form	Liquid
Colour	New Fuchsin solution concentrate (Reagent A): Ocher The other reagents except above: Colorless and transparent
Odour	Odourless
pH Value	No data available
Boiling Range	No data available
Melting point/Melting range	No data available
Flash point	No data available
Flammable/Explosive Limits-Lower Vol %	Not applicable
Flammable/Explosive Limits-Upper Vol %	Not applicable
Density	No data available
Relative Vapor density	No data available
Vapor pressure	No data available
Solubility in/Miscibility with Water	Soluble in water.
n-octanol/Water Partition Coefficient	No data available
Self-igniting	Not applicable
Decomposition Temperature	Not data available
Odor Threshold Value	No data available
Evaporation Rate	No data available
Flammability (solid, gas, etc.)	This product is not classified as flammable liquid.

10. Stability and reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Hazardous Reactions: Not found.

Materials to avoid: Cyanide, metal powder, alkalis, etc.

Hazardous Decomposition Products: It may release irritating and hazardous fume/gas from thermal decomposition.

Conditions to Avoid: Long-time exposure to sunlight.

11. Toxicological information

Product Toxicity Data: The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, the toxicity of this product is extremely low. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50 /LC 50 (Median lethal dose)
Hydrogen chloride	7647-01-0	Acute toxicity (Oral) LD50: 238-277mg/kg, 700 mg/kg (rat) Acute toxicity (Dermal) LD50 > 5010mg/kg (rabbit) Acute toxicity (Inhalation: vapour) LC50: 4.2, 4.7, 283

		mg/L/60min Acute toxicity (Inhalation: aerosol) LC50: 1.68 mg/L/1h
Sodium nitrite	7632-00-0	Acute toxicity (Oral)LD50:85 mg/kg,180mg/kg (rat) Acute toxicity (Inhalation: dust, mist) LC50: 0.0055mg/L/4H (5.5mg/m ³ /4H)

Serious eye damage/eye irritation: This product is classified into Category 2- skin irritation.

Skin corrosion/irritation: This product is classified into Category 2A-serious eye irritation.

Respiratory /Skin sensitizer: This product is classified as respiratory sensitizer.

Germ cell mutagenicity: No classification for this product.

Carcinogenicity: No classification for this product.

Reproductive Toxicity: This product is classified into Category 2- suspected of damaging fertility or the unborn child.

STOT SE/RE:

single exposure-1 (respiratory organs)

repeated exposure-1 (tooth, respiratory organs); -2 (blood)

Aspiration hazard: No classification for this product.

12. Ecological information

Ecotoxicity: No relevant data for the whole product, the data shown below is of the ingredient.

Hydrogen chloride (CAS : 7647-01-0):

48-hour EC50=0.492mg/L of Crustacea (Daphnia magna) (SIDS, 2005).

Sodium nitrite (CAS: 7632-00-0):

96 hours LC50: 0.54mg/L of the fish (Rainbow trout) (SIDS, 2006)

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available

Mobility in Soil: Due to its liquid status, it can move in soil.

13. Disposal considerations

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

14. Transport Information

DOT/Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG:

Proper Shipping Name: Not regulated.

Hazard Class: Not classified.

UN Code: Not regulated.
Packing Group: Not classified
Packing Group Symbol: Not classified.
Marine Pollutant (Yes/No): No
EMS NO.: Not regulated.

Note:
Check whether the package is completed or sealed before transporting; make sure there are no damage and no falling down of packages during transporting; the transport vehicle should be equipped with fire-fighting equipment and emergency facilities for handling with release; do NOT transport this product together with incompatible substances.

15. Regulatory information

Japanese Laws and Regulations:

Industry Safety and Health Law:

It is classified as a hazardous chemical but it may have potential hazard to health. As for prevention for hazard, please see Article 20 to Article 36 of this law. As for the classification criteria of hazardous and dangerous chemicals, please see Article 55 to Article 58 of this law.

Notified information of hazardous and dangerous substances under this law:

Ingredients	Range (%by weight)	Law or government ordinance
Hydrogen chloride (CAS : 7647-01-0)	≥0.1	Government ordinance No.18.2-No.98 in table 9

Poisonous and Deleterious Substances Control Law: As for the whole product, no relevant classification according to this Law.

PRTR: None of the ingredients of this product are listed as specified chemicals under this law.

Fire-Fighting Law: It is not combustible. No relevant classification.

Safety of Ships Law: It is classified into class 9 (Environmentally hazardous substances, liquid (containing hydrogen chloride). Comply with relevant provisions of this law.

Aviation Law: It is classified into class 9 (Environmentally hazardous substances, liquid (containing hydrogen chloride). Comply with relevant provisions of this law.

The Law of Ocean Pollution Prevention: Hazardous waste. Avoid release to environment.

International Laws and Regulations:

TSCA (Toxic Substance Control Act): All ingredients of this products are listed in the U.S. Toxic Substances Control Act Chemical Substance Inventory List.

67/548/EECAnnex I :

Ingredients	Risk phrases	Safety phrases
Hydrogen chloride (CAS : 7647-01-0)	R: 23-35	S: (1/2-)9-26-36/37/39-45
Sodium nitrite (CAS: 7632-00-0)	R: 8-25-50	S: (1/2-)45-611

Clean Water Act:

Hydrogen chloride (CAS : 7647-01-0) and Sodium nitrite (CAS: 7632-00-0) are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

Carcinogenicity categories: Not listed by EPA, IARC and NTP.

16. Other information

DISCLAIMER: Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

References:

GHS Technical Documents (Version 4 and Version 5)
JIS Z 7253: 2012
JIS Z 7250-2010
Industry Safety and Health Law
PRTR
Poisonous and Deleterious Substances Control Law

Full description of some acronyms:

GHS-Globally Harmonized System of Classification and Labelling of Chemicals
CAS-Chemical Abstracts Service
EINECS-European Inventory of Existing Commercial Chemical Substances
ACGIH- American Conference of Governmental Industrial Hygienists
OSHA-Occupational Safety and Health Administration
IARC- International Agency for Research on Cancer
NTP- The National Toxicology Program
IMO-International Maritime Organization
IMDG-International Maritime Dangerous Goods
IATA-International Air Transport Association
ICAO-International Civil Aviation Organization
TSCA-Toxic Substance Control Act

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*****The End*****