

Material 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 DAB-3S kit

Product Number: 415192F: 500 tests, 415194F: 1500 tests

Relevant identified uses of the substance or mixture and uses advised against: For immunohistochemical use.

Manufacturer/Supplier: NICHIREI BIOSCIENCES INC.

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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)- not classified Acute toxicity (dermal)-not classified Acute toxicity (inhalation)- not classified Skin corrosion/irritation-3 Serious eye damage/eye irritation-2B Respiratory sensitizer-not classified Skin sensitizer-not classified Germ cell mutagenicity- not classified Carcinogenicity-not classified Toxic to reproduction-1B Effects on or via lactation-not classified Specific target organs/systemic toxicity following single exposure -1 (Central nervous system, kidney, heart and respiratory organs) Specific target organs/systemic toxicity following repeated exposure -1 (Central nervous system, heart and respiratory organs) -2 (Lung and blood) Aspiration hazard- not classified	Acute hazards to the aquatic environment-3 Chronic hazards to the aquatic environment-not classified

Signal word: Danger

Symbol :



.Hazard Statement:

H316: Causes mild skin irritation.

H320: Causes eye irritation.

H360: May damage fertility or the unborn child.

H370: Causes damage to organs (Central nervous system, kidney, heart and respiratory organs).

H372: Causes damage to organs (Central nervous system, heart and respiratory organs) through prolonged or repeated exposure.

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

H402: Harmful to aquatic life.

Prevention 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/vapour/spray.

P264: Wash hands thoroughly after handling.

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

P273: Avoid release to the environment.

P281: Use personal protective equipment as required.

Response Precautionary Statements:

P333+P313: If skin irritation or a rash occurs: Get medical advice/attention.

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.

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

P314: Get Medical advice/attention 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) DAB Reagent A

Ingredient (s)	CAS#	EC#	Official Notice Reference Number (Japan)	% by weight
3,3'-Diaminobenzidine hydrochloride	7411-49-6	231-018-9	--	<2.50%
Aqueous salt solution	--	--	--	>97.50%

(2) DAB Reagent B

Non-hazardous

(3) DAB Reagent C

Ingredient (s)	CAS#	EC#	Official Notice Reference Number (Japan)	% by weight
Hydrogen peroxide	7722-84-1	231-765-0	--	<0.6%
Water	--	--	--	>99.40%

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: Remove contact lenses if present and easy to do, continue rinsing. If irritation persists, seek medical care.

Skin Contact: Wash with soap and water. If skin irritation or a rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion: Rinse mouth. Do not induce vomiting without professional instruction. Do not give unconscious persons anything to eat. Call a POISON CENTER or doctor/physician if you feel unwell.

Acute effect and delayed effect: Acute effect: It causes irritation to eyes and mild irritation to skin. Inhaling or swallowing this product can cause adverse effects on central nervous system, kidney, heart and respiratory organs.

Delayed effect: It causes damage to central nervous system, heart and respiratory organs through prolonged or repeated exposure. It may cause damage to lung and blood through prolonged or repeated exposure.

Personal protective equipment : Wear protective gloves (e.g. rubber gloves) /protective clothing (clothing made of antistatic synthetic fiber) /eye protection/face protection.Wear respirators and safety goggles when exposure limits are exceeded or liquid may splash.

Indication of any immediate medical attention and special treatment needed: Treat symptoms as they occur.

5. Fire-fighting measures

Extinguishing Media: This product is not combustible. As for fire caused by other ignition sources, choose appropriate extinguishing media according to fire types. Recommend seeking advice from local brigade.

Unsuitable Extinguishing Media: Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

Special 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.

Cool surrounding facilities, etc. with water spray.

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.

Unusual Fire and Explosion Hazards: It may present explosive danger if the container is heated.

6. Accidental release measures

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

Measures for Cleaning/Collection:

Do NOT touch spilled material without any hand protection.

Stop leakage if it can be done without risk.

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

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:

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

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

Do not breathe vapour or fume from processing.

Avoid damage of packaging or containers during handling.

Information about fire- and explosion protection:

As for this product, no special measures are required for fire and explosion protection. Considering good industrial practice, keep ignition sources away. Do not smoke in workplace.

Storage:

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

Control parameters:

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA	Japan Industry & Health Association-PELs (2012-2013)
Hydrogen peroxide CAS: 7722-84-1	1.4mg/m ³	1.4mg/m ³	No data available

Engineering Controls:

If user operations generate vapour or fume, use ventilation to keep exposure to airborne contaminants below the exposure limit.

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 impermeable working clothing.



General protective and hygienic measures:

Do not breathe vapour or fume from processing.

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	DAB Reagent A: Pink to violet 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	Not applicable
Flammable/Explosive Limits-Lower Vol %	Not applicable
Flammable/Explosive Limits-Upper Vol %	Not applicable
Density	No data available
Relative Vapour density	No data available
Vapour pressure	No data available
Solubility in/Miscibility	Soluble in water.
n-octanol/Water Partition Coefficient	4.62(at 25°C)
Self-igniting	Not applicable
Decomposition Temperature	Not available
Odour Threshold Value	Not available
Evaporation Rate	Not 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: No special requirements.

Hazardous Decomposition Products: It may generate irritating and hazardous fume or vapour from thermal decomposition.

Conditions to Avoid: Long-time direct sunlight and high temperature.

11. Toxicological information

Product Toxicity Data: The toxicity data of this product has not been determined by testing, the toxicity data shown below is for reference only.

Ingredients	CAS	LD 50 /LC 50 (Median lethal dose)
Hydrogen peroxide	7722-84-1	Acute toxicity (Oral) LD50: 311 mg/kg (rat) Acute toxicity (Dermal) LD50: 4,060mg/kg (rat) Acute toxicity (Inhalation)LC50: 1438ppm (rat)

Serious eye damage/eye irritation: This product causes eye irritation and is classified into Category 2B per GHS criteria.

Skin corrosion/irritation: This product causes mild irritation to skin and is classified into Category 3 per GHS criteria.

Respiratory /Skin sensitizer: This product may cause an allergic skin reaction.

Germ cell mutagenicity: No classification for this product.

Carcinogenicity: No classification for this product.

Reproductive Toxicity: This product may damage fertility or the unborn child and classified into Category 1B per GHS criteria.

STOT SE (Single exposure):

Category 1 (Central nervous system, kidney, heart and respiratory organs)

STOT RE (Repeated exposure):

Category 1 (Central nervous system, heart and respiratory organs);

Category 2 (Lung and blood)

Aspiration hazard: No classification for this product.

12. Ecological information

Ecotoxicity: No data available.

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

Do not allow product to reach sewage system and any open bodies of water.

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

Choose a professional and legal company for waste disposal.

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. 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.

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

Fire-Fighting Law: There are no special requirements under this law as this product is not combustible.

The Law of Ocean Pollution Prevention: This product is classified as hazardous waste. Dispose it according to relevant local or national laws and regulations.

PRTR: None

International Laws and Regulations:

TSCA (Toxic Substance Control Act): 3,3'-Diaminobenzidine hydrochloride (CAS: 7411-49-6) is listed in the U.S. Toxic Substances Control Act Chemical Substance Inventory List.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

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

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

67/548/EEC Annex I :

Ingredient(s)	Risk-phrase	Safety-phrase
Hydrogen peroxide (CAS: 7722-84-1)	R5-8-20/22-35	S(1/2-)17-26-28-36/37/39-45

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 (4th and 5th Versions)

JIS Z 7253-2012

JIS Z 7250-2010

Industry Safety and Health Law

Poisonous and Deleterious Substances Control Law

Fire-Fighting Law

PRTR

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*****