Safety Data Sheet

Revision Date: 6/18/2015

SDS # SDS-10277-02

Histo, Activator Solution

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:	**Product Code**
Histo, Activator Solution	71-00-01

Hazardous Reagent
Histo, Activator Solution

Hazardous Reagent Product code
Catalog No. listed above

Recommended Use Reagent

Contact Manufacturer KPL, Inc.
910 Clopper Road
Gaithersburg, Maryland 20878
USA

Phone #: 1-301-948-7755
Fax #: 1-301-948-0169
Web: www.kpl.com
Email: kplmsds@seracare.com

Emergency Telephone Numbers:

AUSTRALIA – POISONS INFORMATION CENTER	Telephone: 13 11 26	Hours: 24 hours
CANADIAN TRANSPORT EMERGENCY CENTER	Telephone: (1) 613 996 6666	Hours: 24 hours/day, 7 days/week
UK – THE NATIONAL FOCUS	Telephone: (44) 029 2041 6388	Hours: 09:00-17:00 GMT
USA- NATIONAL RESPONSE CENTER	Telephone: (1) 800 424 8802	Hours: 24 hours/day, 7 days/week

CHEMTREC: CHEMTREC Customer Number:- CCN12505*
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 CCN12505 or
+1 703-527-3887 (collect calls accepted)

2. HAZARD IDENTIFICATION

Hazard Type Health, Fire and Environmental Hazard

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Classification
Eye irritation, Category 2; H319
Acute Tox. 4 H302
Aquatic Acute 1: H400

Hazard Statement
H301: Toxic if swallowed.
H319: Causes serious eye irritation.
H400: Very toxic to aquatic life.

Precautionary Statement
P210: Keep away from heat/ sparks/ open flames/ hot surfaces. — No smoking.
P220: Keep/ Store away from clothing/ combustible materials.
P221: Take any precaution to avoid mixing with combustibles
P280: Wear protective gloves/ protective clothing/ P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Symbols of Danger GHS06

GHS09
Dgr: Danger

Data for 100% Hazardous Chemical

ROUTES OF EXPOSURE:	The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.
INHALATION RISK:	Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.
SHORT-TERM EXPOSURE	The substance is irritating to the eyes . The substance may cause effects on the cardiovascular system and blood , resulting in lower blood pressure and the formation of methaemoglobin. Exposure may result in death. The effects may be delayed. Medical observation is indicated.
LONG-TERM EXPOSURE:	Not Available

The product is a Mixture. It May Cause the following symptoms.

EYES: Redness. Pain.

SKIN: Not Available

INHALATION: Blue lips or finger nails. Blue skin. Confusion. Convulsions. Dizziness. Headache. Nausea. Unconsciousness.

INGESTION: Rapid pulse. (See Inhalation).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CHEMICAL	% Weight	CAS #:
Histo, Activator Solution	Sodium Nitrite	2%	7632-00-0

Classification

Eye irritation, Category 2; H319
Acute Tox. 4 H302
Aquatic Acute 1: H400

4. FIRST AID MEASURES

Data for 100% Hazardous Chemical

Ingestion First Aid:	Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Give plenty of water to drink. Refer for medical attention.
Inhalation First Aid:	Fresh air, rest. Artificial respiration if indicated. Refer for medical attention.
Skin First Aid:	First rinse with plenty of water, then remove contaminated clothes and rinse again.
Eye First Aid:	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

5. FIRE FIGHTING MEASURES

Data For 100% Hazardous Chemical

Fire Acute Hazard:	Fire Prevention:	Fire Fighting:
Not combustible but enhances combustion of other substances. Many reactions may cause fire or explosion. Gives off irritating or toxic fumes (or gases) in a fire.	NO contact with combustible substances.	In case of fire in the surroundings: use appropriate extinguishing media.

Explosion Acute Hazard:		
Not Available	Not Available	Not Available

CHEMICAL DANGERS: May explode on heating above 530°C. The substance decomposes on contact with acids producing toxic fumes (nitrogen oxides). The substance is a strong oxidant and reacts with combustible and reducing materials causing fire and explosion hazard. The solution in water is a weak base. Reacts with aluminium , ammonium compounds, amines .

PHYSICAL DANGERS: Not Available

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Take care to maintain clean working place.
The substance must not be present at workplaces in quantities above that required for work to be progressed.
Do not leave container open.
Use leak-proof equipment with exhaust for refilling or transfer.
Avoid spillage.
Fill only into labelled container.
Avoid any contact when handling the substance.
Avoid rising dust.
Do not transport together with incompatible substances.
Use an appropriate exterior vessel when transporting in fragile containers.

Environmental Precautions

Severe hazard to waters. Inform the responsible authorities when only small quantities get into water, drainage, sewer, or the ground.

Method of Containment

Collection of small amounts of substance:
Do not put/place waste into sink or dust bin.
Place in a collection container for salt solutions, adjust for a pH value of 6-8.
Collection vessels must be clearly labelled with a systematic description of their contents. Store the vessels in a well-ventilated location. Entrust them to the appropriate authorities for disposal.

Methods of Clean-up

Clean daily.
Use protective equipment while cleaning if necessary.
Avoid dust formation. Dust formation that cannot be avoided must be collected regularly.
Use a tested industrial vacuum cleaner or suction device.
Do not raise dust while cleaning.
Use of a blower for cleaning is not permitted.
Alternative: clean damp.
Only conduct maintenance and other work on or in the vessel or closed spaces after obtaining written permission.

Other Information

Not Available

Data for 100% Hazardous Chemical

SPILLAGE DISPOSAL	Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment. (Extra personal protection: P3 filter respirator for toxic p

7. HANDLING AND STORAGE

Handling:

Wear appropriate PPE. Keep away from open flames. Observe the smoking prohibition! Absolutely no welding in the working area. Only work with vessels and lines after these have been thoroughly rinsed. Work done with fire or open flame should only be carried out with written permission if the risk of fire or explosion cannot be completely eliminated. Keep away from combustible materials.
Filter the solutions only with glass wool, glass chips, or ceramic filters. Do not use any filtration materials made of paper which risks ignition after drying. Do not leave any cleaning rags lying in the open. Empty bags containing any remnants tend to self ignite.

Storage:

Store tightly capped at 2-8°C.

Data for 100% Hazardous Chemical

STORAGE	Separated from combustible and reducing substances, acids. Dry. Well closed.

8. EXPOSURE CONTROL

Data for 100% Hazardous Chemical

•INHALATION	Local exhaust or breathing protection.
•EYES	Safety spectacles.
•SKIN	Protective gloves.
•INGESTION	Do not eat, drink, or smoke during work. Wash hands before eating.

Engineering Controls Ensure adequate ventilation, especially in confined areas

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance The solution should appear clear and may have a slight yellow tint.

Physical State Liquid **pH:** Not Available

Data for 100% Hazardous Chemical

Decomposes at 320°C
Decomposes at 280°C
Density: 2.2 g/cm³
Solubility in water, g/100ml at 20°C: 82
Octanol/water partition coefficient as log Pow: -3.7

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions

Incompatibility Materials to Avoid Separated from combustible substances, reducing agents and acids.

Hazardous Decomposition Products Data for 100% Sodium Nitrite: At temperatures above 320 deg.C: nitrogen monoxide; nitrogen dioxide; disodium oxide

Hazardous Polymerization Not Available.

Data for 100% Hazardous Chemical

CHEMICAL DANGERS:	May explode on heating above 530°C. The substance decomposes on contact with acids producing toxic fumes (nitrogen oxides). The substance is a strong oxidant and reacts with combustible and reducing materials causing fire and explosion hazard. The solution in water is a weak base. Reacts with aluminium , ammonium compounds, amines .
PHYSICAL DANGERS:	Not Available

11. TOXICOLOGY MEASURES

Acute Toxicity

The toxicological risks are minor due to the low concentration of hazardous ingredients. The following toxicological information is for the hazardous ingredient in pure form.

LD50 Oral Data for 100% Sodium Nitrite: LD50 oral rat

Value: 180 mg/kg
Reference: American Industrial Hygiene Association Journal. Vol. 30, Pg. 470, 1969.

LD50 Dermal Not Available

LC50 Inhalation Data for 100% Sodium Nitrite: LC50 inhalation rat

Value: 0,0055 mg/l/4 h
Reference: Gigiena Truda i Professional'nye Zabolevaniya. Labor Hygiene and Occupational Diseases. Vol. 16(10), Pg. 36, 1972.

Chronic Toxicity

Carcinogenicity Not Available

Irritation	Eye irritation, Category 2; H319
Corrosivity	Not Available
Sensitization	Not Available
Neurological Effects	Not Available
Mutagenic Effects	Not Available
Reproductive Effects	Not Available
Developmental Effects	Not Available
Target Organ Effects	Skin, Eyes, Gastrointestinal Tract
Other adverse effects	Acute toxicity, Category 3, oral; H301: : Toxic if swallowed.

12. ECOLOGICAL MEASURES

Ecotoxicity

Data for 100% Sodium Nitrite: Very toxic to aquatic organisms
LC50 Fish (96 hours)

Minimum: 0,048 mg/l
Maximum: 1260 mg/l
Median: 0,675 mg/l

Study number: 106

Reference for median:

Wedemeyer, G.A., and W.T. Yasutake 1978. Prevention and Treatment of Nitrite Toxicity in Juvenile Steelhead Trout (Salmo gairdneri). J.Fish.Res.Board Can.35(6):822-827 (Personal Communication Used); Russo, R.C., R.V. Thurston, and K. Emerson 1981. Acute Toxicity of Nitrite to Rainbow Trout (Salmo gairdneri): Effects of pH, Nitrite Species, and Anion Species. Can.J.Fish.Aquat.Sci. 38:387-393

LC50 Crustaceans (48 hours)

Minimum: 1,1 mg/l
Maximum: 2660 mg/l
Median: 35,1 mg/l

Study number: 10

Reference for median:

Chen, J.C., and T.S. Chin 1988. Acute Toxicity of Nitrite to Tiger Prawn, Penaeus monodon, Larvae. Aquaculture 69(3/4):253-262; Meade, M.E., and S.A. Watts 1995. Toxicity of Ammonia, Nitrite, and Nitrate to Juvenile Australian Crayfish, Cherax quadricarinatus. J.Shellfish Res. 14(2):341-346

Persistence/Degradability	Readily Degradable
Mobility in Environmental Media	Not Available
Bioaccumulation/ Accumulation	Data for 100% Sodium Nitrite: Log Pow = -3,7 | BCF = 11

13. DISPOSAL MEASURES

Waste Disposal Method:	Collection of small amounts of substance: Do not put/place waste into sink or dust bin. Place in a collection container for salt solutions, adjust for a pH value of 6-8. Collection vessels must be clearly labelled with a systematic description of their contents. Store the vessels in a well-ventilated location. Entrust them to the appropriate authorities for disposal.
Contaminated Packaging:	Avoid contact with skin and clothing. Place contaminated packaging in a break proof outer vessel and dispose on in compliance with national and local regulations.

US EPA Waste Number: Not Available

14. TRANSPORTATION MEASURES

DOT: Potassium nitrate and sodium nitrite mixtures 5.1
UN1487

IATA: Not Available

ADR (road)/ RID (rail): Not Available

IMDG (sea): Not Available

General Transport Regulations Not Available

15. REGULATORY MEASURES

This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only those as required by 29 CFR 1910.1200 g 2.C1.

SARA 313

Sodium nitrite CAS 7632-00-0 CERCLA RQ: 100 Section 313: 313

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (See 40 CFR 61)

Not Listed

State Regulations

California Proposition 65:

This product contains the following Proposition 65 chemicals: None Listed

State Right to Know Act

Chemical Name	**Sodium Nitrite**
New Jersey	Listed
Pennsylvania	Listed
New York	Listed
Rhode Island	Listed

International Inventories

Chemical Name	**Sodium Nitrite**
TSCA	Listed
DSL	Listed
NDSL	Not Listed
EINECS	Listed
CHINA	Listed
KECL	Listed
JAPAN:	Listed
AICS	Listed

EU Regulations

Annex I Index#	Annex I Index# : 007-010-00-4 Substance Name in Annex 1 : sodium nitrite
Classification	Eye irritation, Category 2; H319 Acute Tox. 4 H302 Aquatic Acute 1: H400
Risk Phrases	H301: Toxic if swallowed. H319: Causes serious eye irritation. H400: Very toxic to aquatic life.
Safety Phrases	P210: Keep away from heat/ sparks/ open flames/ hot surfaces. — No smoking. P220: Keep/ Store away from clothing/ combustible materials.

P221: Take any precaution to avoid mixing with combustibles
P280: Wear protective gloves/ protective clothing/ P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Symbols and Indications of Danger	GHS06 GHS09 Dgr: Danger
Specific Concentration Limits	Not Available.

16. OTHER INFORMATION

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. KPL shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes. This material is sold for research purposes and is intended as laboratory reagents only. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals.

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