

SAFETY DATA SHEET

SDS DATE: August 4, 2021



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: LDH-Cytotoxicity Colorimetric Assay Kit II
PRODUCT CODES: Cat# K313-500
RESTRICTIONS ON USE: For laboratory research purposes. Not for drug or household use.
MANUFACTURER: BioVision, Inc.
ADDRESS: 155 S. Milpitas Boulevard, Milpitas, CA 95035
EMERGENCY PHONE: 858-373-8066
OTHER CALLS: 408-493-1800
FAX PHONE: 408-493-1801
EMAIL: sds@biovision.com

SECTION 2: HAZARDS IDENTIFICATION

Component	Description	Volume	Safety Information
WST Substrate Mix	Proprietary (contains NAD & WST-8)	1 Bottle	See Below
LDH Assay Buffer	Proprietary buffer	50 ml	No hazards
Cell Lysis Solution	Liquid (contains Tergitol)	5 ml	See Below
Stop Solution	Liquid (contains SDS)	5 ml	See below
LDH (Positive Control)	--	Lyophilized	No hazards

Tergitol:

Emergency Overview

GHS Classification: Skin irritation (Category 2), H315
Skin sensitization (Sub-category 1A), H317
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410

GHS Label elements, including precautionary statements



Pictogram:

Signal word:

Hazard statement(s):

Warning
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.
Precautionary statement(s): P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P391 Collect spillage.
P501 Dispose of contents/ container to an approved waste disposal plant

HMIS Classification

Health hazard: 0

Chronic health hazard:

Flammability: 0

Physical hazards: 0

NFPA Rating

Health hazard: 0

Fire: 0

Reactivity hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. Material is irritating to the tissue of the mucous membranes and upper respiratory tract. Harmful; if inhaled. May cause allergy or asthma symptoms or breathing difficulties.

Skin: May be harmful if absorbed through skin. May cause an allergic skin reaction.

Eyes: Causes eye irritation.

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Ingestion: Harmful if swallowed.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated

NAD(Beta-Nicotinamide Adenine DiNucleotide Sodium Salt):

Emergency Overview:

GHS Classification: Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

GHS Label elements, including precautionary statements



Pictogram:

Signal word:

Warning

Hazard statement(s):

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statement(s):

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ eye protection/ face protection.

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

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lens] if present and easy to do. Continue rinsing.

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

P321 Specific treatment (see on this label).

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

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

P362 Take off contaminated clothing and wash before reuse.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.

HMIS Classification

Health hazard: 2

Flammability: 0

Physical hazards: 0

NFPA Rating

Health Hazard: 2

Fire: 0

Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: Harmful if absorbed through skin. May cause skin irritation.

Eyes: Cause eye irritation.

Ingestion: Harmful if swallowed.

WST-8:

Emergency Overview:

GHS Classification: H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

GHS Label elements, including precautionary statements



Pictogram:

Signal word:

Danger

Hazard statement(s):

H314 Causes severe skin burns and eye damage

Precautionary statement(s):

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection

If swallowed: Rinse mouth. Do NOT induce vomiting.

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

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lens] if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.

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

Wash contaminated clothing before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.

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HMIS Classification

Health hazard: *3

Flammability: 0

Physical hazards:

NFPA Rating

Health Hazard: 3

Fire: 0

Reactivity Hazard: 0

Sodium dodecyl sulfate (SDS):

Emergency Overview

GHS Classification: Flammable solids (Category 2), H228

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Short-term (acute) aquatic hazard (Category 2), H401

Long-term (chronic) aquatic hazard (Category 3), H412

GHS Label elements, including precautionary statements

Pictogram:



Signal word:

Danger

Hazard statement(s):

H228 Flammable solid.
H302 + H332 Harmful if swallowed or if inhaled.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H401 Toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s):

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard:

Chronic Health Hazard:

Flammability:

Physical hazards:

NFPA Rating

Health hazard:

Fire:

Reactivity Hazard:

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC.No.	Molecular weight	Chemical Formula	Concentration
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Tergitol	84133-50-6	617-534-0	--	--	≤10%
NAD	20111-18-6	--	685.41	C ₂₁ H ₂₆ N ₇ NaO ₁₄ P ₂	<90%
WST-8	193149-74-5	693-016-8	600.5	C ₂₀ H ₁₃ N ₆ O ₁₁ S ₂ • Na	<15%
SDS	151-21-3	205-788-1	288.38	CH ₃ (CH ₂) ₁₁ OSO ₃ Na	<2%

SECTION 4: FIRST AID MEASURES

General advice: : First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

If inhaled: Move person to fresh air; if effects occur, consult a physician.

In case of skin contact: Immediately flush skin with water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Contaminated leather items such as shoes should be disposed of properly. Safety shower should be located in immediate work area.

In case of eye contact: : Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Eye wash fountain should be located in immediate work area.

If swallowed: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Notes to physician: Maintain adequate ventilation and oxygenation of the patient. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient

SECTION 5: FIRE-FIGHTING MEASURES

Tergitol:

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable Extinguishing Media: Do not use direct water stream. May spread fire.

Special hazards arising from the substance or mixture: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Advice for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Further information: Keep people away. Isolate fire and deny unnecessary entry. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

NAD(Beta-Nicotinamide Adenine DiNucleotide Sodium Salt):

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products: Hazardous decomposition products formed under fire conditions— see section 10

WST-8:

Suitable extinguishing media: Use fire fighting measures that suit the environment. A solid water stream may be inefficient.

Special protective equipment for fire fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products: No further relevant information available

Sodium dodecyl sulfate (SDS):

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Carbon oxides, Sulphur oxides, Sodium oxides

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Use water spray to cool unopened containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Spilled material may cause a slipping hazard. Refer to section 7, Handling, for additional precautionary measures.

Environmental precautions: : Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Sand. Dirt. Collect in suitable and properly labeled containers. Do not use water for cleanup. See Section 13, Disposal Considerations, for additional information.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Avoid inhalation of vapor or mist. Avoid contact with skin and eyes.

Conditions for safe storage

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Keep container tightly closed in a dry and well-ventilated place.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: -20 °C

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Tergitol:

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Poly(ethylene oxide)	US WEEL	TWA aerosol	10 mg/m3

Engineering Controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Personal protective equipment:

Respiratory Protection

Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Hand protection

Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber, Chlorinated polyethylene, Polyethylene.

Eye protection

Use chemical goggles.

Skin and body protection

Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task

NAD(Beta-Nicotinamide Adenine DiNucleotide Sodium Salt):

Personal protective equipment

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with 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.

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substance, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

General industrial hygiene practice

WST-8:

Control parameters

Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

Exposure controls

Personal protective equipment

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with 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.

Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Control of environmental exposure

Do not let product enter drains. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated

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clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes. Avoid contact with the eyes and skin

Sodium dodecyl sulfate (SDS):

Control parameters:

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with 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

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	WST-8	Tergitol	NAD	SDS
Appearance:	Crystalline solid	Liquid	White solid	White Rods
pH:	No data available	7.2	No data available	9.1 at 10 g/l
Water Solubility:	No data available	< 0.5 %	50 mg/ml	Soluble
Other Solubility:	PBS, DMSO	No data available	No data available	No data available
Specific Gravity (g/ml):	No data available	No data available	No data available	No data available
Boiling Point (°C):	No data available	> 200 °C (> 392 °F)	No data available	No data available
Melting Point (°C):	No data available	No data available	No data available	204 - 207 °C (399 - 405 °F) - lit.
Flash Point (°C):	No data available	218 °C (424 °F) ASTM D 93 closed cup	No data available	170 °C (338 °F)
Ignition Temperature (°C):	No data available	No data available	No data available	310.5 °C (590.9 °F)
Density	No data available	1.027 at 20 °C (68 °F) / 20 °C	No data available	0.370 g/cm3

SECTION 10: STABILITY AND REACTIVITY

Property	WST-8	Tergitol	NAD	SDS
Chemical stability	Stable under recommended storage conditions			
Conditions to avoid:	No data available	Strong heating	No data available	Heat, flames and sparks.
Materials to avoid:	Strong oxidizing agents	Strong acids, Strong bases, Strong oxidizing agents	Strong oxidising agents	Oxidizing agents
Hazardous decomposition products:	carbon oxides, hydrogen sulfide, nitrogen oxides	Carbon oxides(fire condition)	No data available	Carbon oxides, Sulphur oxides, Sodium oxides

SECTION 11: TOXICOLOGICAL INFORMATION

Tergitol:

Acute toxicity: No data available

Skin corrosion/irritation: Mixture causes skin irritation.

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitization: Mixture may cause an allergic skin reaction.

Germ cell mutagenicity: No data available

Carcinogenicity:

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- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: No data available
Specific target organ toxicity – single exposure (GHS): No data available
Specific target organ toxicity – repeated exposure (GHS): No data available
Aspiration hazard: No data available
Synergistic effects: No data available
Additional information: RTECS: No data available

NAD(Beta-Nicotinamide Adenine DiNucleotide Sodium Salt):

- Acute toxicity:** No data available
Skin corrosion/irritation: No data available
Serious eye damage/eye irritation: No data available
Respiratory or skin sensitization: No data available
Germ cell mutagenicity: No data available
- Carcinogenicity:**
- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: No data available
Teratogenicity: No data available
Specific target organ toxicity – single exposure (GHS): No data available
Specific target organ toxicity – repeated exposure (GHS): No data available
Aspiration hazard: No data available

Potential Health Effects

- Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: No data available
Additional information: RTECS: Not available

WST-8:

- Acute toxicity:** No data available
Skin corrosion/irritation: No data available
Serious eye damage/eye irritation: No data available
Respiratory or skin sensitization: No data available
Germ cell mutagenicity: No data available
- Carcinogenicity:**
- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: No data available
Teratogenicity: No data available
Specific target organ toxicity – single exposure (GHS): No data available
Specific target organ toxicity – repeated exposure (GHS): No data available
Aspiration hazard: No data available

Potential Health Effects

- Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: No data available

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Additional information: RTECS: Not available.



Sodium dodecyl sulfate (SDS):

Acute toxicity: LD50 Oral - Rat - female - 977 mg/kg (OECD Test Guideline 401)

LD50 Dermal - Rabbit - > 2,000 mg/kg (OECD Test Guideline 404)

Skin corrosion/irritation: Skin - Rabbit; Result: Irritations; (OECD Test Guideline 404)

Serious eye damage/eye irritation: Eyes - Rabbit; Result: Irreversible effects on the eye (OECD Test Guideline 405)

Respiratory/skin sensitization: Maximisation Test Result: negative

Remarks: (IUCLID) Remarks: (in analogy to similar products); Maximisation Test - Rabbit

Germ cell mutagenicity: Ames test Salmonella typhimurium Result: negative Mutagenicity (mammal cell test):

Mouse lymphoma test Result: negative

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure: Inhalation - May cause respiratory irritation.

Acute oral toxicity - Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Teratogenicity: No data available.

Signs and Symptoms of Exposure: No data available

Additional Information: RTECS: WT1050000

SECTION 12: ECOLOGICAL INFORMATION

Tergitol:

Toxicity: No data available

Persistence and degradability: Readily biodegradable

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: No data available

NAD(Beta-Nicotinamide Adenine DiNucleotide Sodium Salt):

Persistence and degradability: No data available

Toxicity: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: No data available

WST-8:

Persistence and degradability: No data available

Toxicity: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: No data available

General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Sodium dodecyl sulfate (SDS):

Toxicity: Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) - 29 mg/l - 96 h (OECD Test Guideline 203) Toxicity to daphnia and other aquatic invertebrates LC50 - Daphnia dubia (water flea) - 5.55 mg/l - 48 h NOEC - Daphnia dubia (water flea) - 0.684 mg/l - 7 d Toxicity to algae Growth inhibition LOEC - Pseudokirchneriella subcapitata - 2.68 mg/l - 6 d static test EC50 - Desmodesmus subspicatus (green algae) - > 120 mg/l - 72 h

Persistence and degradability: Biodegradability aerobic - Exposure time 28 d Result: 95 % - Readily biodegradable. (OECD Test Guideline 301B) Ratio BOD/ThBOD 95.9 %

Bio accumulative potential: Bioaccumulation Cyprinus carpio (Carp) - 72 h (Sodium dodecyl sulphate) Bioconcentration factor (BCF): 3.9 - 5.3

Mobility in soil: No data available

PBT and vPvB assessment: No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

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Contaminated packaging: Dispose of as unused product.



SECTION 14: TRANSPORT INFORMATION

Tergitol:

DOT (US): Not dangerous goods

IMDG: UN number: 3082 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: Environmentally hazardous substance, liquid.
Marine pollutant : yes

IATA: UN number: 3082 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, liquid.

NAD(Beta-Nicotinamide Adenine DiNucleotide Sodium Salt):

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

WST-8:

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

Sodium dodecyl sulfate (SDS):

DOT (US): UN number: 1325 Class: 4.1 Packing group: III Proper shipping name: Flammable solids, organic, n.o.s. (Sodium dodecyl sulphate)
Reportable Quantity (RQ): Poison Inhalation Hazard: No

IMDG: UN number: 1325 Class: 4.1 Packing group: III EMS-No: F-A, S-G Proper shipping name: FLAMMABLE SOLID, ORGANIC, N.O.S.
(Sodium dodecyl sulphate)

IATA: UN number: 1325 Class: 4.1 Packing group: III Proper shipping name: Flammable solid, organic, n.o.s. (Sodium dodecyl sulphate)

SECTION 15: REGULATORY INFORMATION

SARA 302 Components: SARA 302: No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title II, Section 313.

SARA 311/312 Hazards: NAD: Acute Health Hazard, Chronic Health Hazard; SDS: Fire Hazard, Acute Health Hazard

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components: NAD: CAS-No. 20111-18-6; Sodium dodecyl sulphate CAS-No. 151-21-3 Revision Date;

New Jersey Right To Know Components: NAD: CAS-No. 20111-18-6; Sodium dodecyl sulphate CAS-No. 151-21-3 Revision Date;

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

EU regulations: This product is not classified according to the EU regulations.

Component	Risk Phrases	Safety Phrases
Tergitol	R36/37/38; R58	S36/37/39; S57
NAD(Beta-Nicotinamide Adenine DiNucleotide Sodium Salt)	R36/37/38	S36/37/39
WST-8	R34	S36/37/39
SDS	--	--

SECTION 16: OTHER INFORMATION

DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.