SDS DATE: MAY 29, 2023

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Glycogen Assay Kit**
PRODUCT CODES: **Cat# MA-0136**
RESTRICTIONS ON USE: **For laboratory research purposes. Not for drug or household use.**
MANUFACTURER: **AkrivisBio, Inc.**
DIVISION:
ADDRESS: **48511 Warm Springs Blvd #213, Fremont, CA 94539**
EMERGENCY PHONE: **408-739-9315**
CHEMTREC PHONE:
OTHER CALLS:
FAX PHONE:

SECTION 2: HAZARDS IDENTIFICATION

Component	Description	Volume	Safety Information
Hydrolysis Buffer	Proprietary Buffer (contains Tergitol)	15 ml	See below
Development Buffer	Proprietary Buffer (contains Tergitol)	25 ml	See below
Amyloglucosidase	enzyme	lyoph	No hazards
Glucose dehydrogenase	Enzyme	lyoph	No hazards
NAD/WST8 Mix	Lyophilized (Contains NAD & WST-8)	-----	See Below
Glycogen Standard (DMSO)	In DMSO	100 µl	See below

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: Warning
Hazard statement(s): 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.
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.

HMIS Classification
- **Health hazard:** *3
- **Flammability:** 0
- **Physical hazards:**

NFPA Rating
- **Health Hazard:** 3
- **Fire:** 0
- **Reactivity Hazard:** 0

DMSO:

Emergency Overview

OSHA Hazards: Combustible liquid, Target organ effect

Target Organs: Eyes, Skin

GHS Classification: Flammable liquids (Category 4)

GHS Label elements, including precautionary statements

Pictogram: none

Signal word: Warning

Hazard statement(s): H227 Combustible liquid

Precautionary statement(s): none

HMIS Classification
- **Health hazard**: 0
- **Chronic Health Hazard**: *

Flammability: 2
Physical hazards: 0

NFPA Rating

Health hazard: 0
Fire: 2
Reactivity Hazard: 0

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.
Aggravated Medical Condition: Avoid contact w/DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula
Tergitol	84133-50-6	617-534-0	--	--
DMSO	67-68-5	200-664-3	78.13	C_2H_6OS
NAD	20111-18-6	--	685.41	$C_{21}H_{26}N_7NaO_{14}P_2$
WST-8	193149-74-5	693-016-8	600.5	$C_{20}H_{13}N_6O_{11}S_2 \bullet Na$

SECTION 4: FIRST AID MEASURES

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact: Wash off with soap and plenty of water. Consult a physician.
In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed: DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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.
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 firefighting clothing (includes firefighting 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. 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 firefighting 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

DMSO:
Suitable extinguishing media: For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.
Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.
Hazardous combustion products: Hazardous decomposition products formed under fire conditions – see section 10.
Further information: Use water spray to cool unopened containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Tergitol:
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.

NAD (Beta-Nicotinamide Adenine Dinucleotide, Sodium Salt):
Personal precautions: Avoid dust formation. Avoid breathing vapors, mist, gas, or dust.
Environmental precautions: Do not let product enter drains.
Methods for cleaning up: Sweep up and shovel. Keep in suitable, closed containers for disposal

WST-8:
Personal precautions: Wear protective equipment. Keep unprotected persons away
Environmental precautions: Do not allow to enter sewers/ surface or ground water.
Methods for cleaning up: Use neutralizing agent. Dispose contaminated material as waste according to section 13. Ensure adequate ventilation.

Personal precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods for cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Tergitol:
Handling: Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Spills of these organic materials on hot fibrous insulations may lead to lowering of the Autoignition temperatures possibly resulting in spontaneous combustion.
Storage: No specific requirements. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact. The shelf life given is for unopened containers stored under moderate temperature conditions

NAD (Beta-Nicotinamide Adenine Dinucleotide, Sodium Salt):
Precautions for safe handling: Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: -20 ºC.

WST-8:
Precautions for safe handling: Thorough dedusting.
Conditions for safe storage: Keep container tightly closed. Store in accordance with information listed on the product insert.
recautions for safe handling
Avoid inhalation of vapor or mist. Avoid contact with skin and eyes.
Conditions for safe storage
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

DMSO:

Components	CAS-No.	Value	Control parameters	Basis
Poly(ethylene oxide)		TWA	10 mg/m3	US WEEL
Dimethyl sulfoxide	67-68-5	TWA	250 ppm	USA. Workplace Environmental Exposure Levels (WEEL)

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

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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).

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

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	DMSO	WST-8	Tergitol	NAD
Appearance:	Clear liquid	Crystalline solid	Liquid	White solid
pH:	No data available	No data avaialble	7.2	No data available
Water Solubility:	Completely miscible	No data available	< 0.5 %	50 mg/ml
Other Solubility:	No data available	PBS, DMSO	No data available	No data available
Boiling Point (°C):	189 °C (372 °F)	No data available	No data available	No data available
Melting Point (°C):	16-19 °C (61-66 °F)	No data available	> 200 °C (> 392 °F)	No data available
Flash Point (°C):	87 °C (189 °F)	No data available	No data available	No data available
Ignition Temperature (°C):	301 °C (574 °F)	No data available	218 °C (424 °F) ASTM D 93 closed cup	No data available
Density:	1.1 g/ml	No data available	No data available	No data available
		No data available	1.027 at 20 °C (68 °F) / 20 °C	No data available

SECTION 10: STABILITY AND REACTIVITY

Property	WST-8	Tergitol	NAD	DMSO
Chemical stability:	Stable under recommended storage conditions			Stable under recommended storage conditions
Conditions to avoid:	No data available	Strong heating	No data available	Heat, flames, sparks
Materials to avoid:	Strong oxidizing agents	Strong acids, Strong bases, Strong oxidizing agents	Strong oxidising agents	Acid chlorides, phosphorus halides, strong acids, strong oxidizing agents, strong reducing agents
Hazardous decomposition products:	carbon oxides, hydrogen sulfide, nitrogen oxides	Carbon oxides(fire condition)	No data available	Carbon oxides, sulfur 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:

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
Additional information: RTECS: Not available.

DMSO:
Acute toxicity: LD50 Oral – rat – 14,500 mg/kg
LC50 Inhalation – rat – 4 h – 40250 ppm
LD50 Dermal – rabbit – >5,000 mg/kg
Skin corrosion/irritation: Skin – rabbit – no skin irritation – 4h
Serious eye damage/eye irritation: Eyes – rabbit – mild eye irritation
Respiratory or skin sensitization: no data available
Germ cell mutagenicity: Genotoxicity in vitro – mouse – lymphocyte: Cytogenetic analysis

Genotoxicity in vitro – mouse – lymphocyte: Mutation in mammalian somatic cells
Genotoxicity in vivo – rat – Intraperitoneal: Cytogenetic analysis
Genotoxicity in vivo – mouse – Intraperitoneal: DNA damage
Carcinogenicity: Carcinogenicity – rat – Oral→ Tumorigenic: equivocal tumorigenic agent by RTECS criteria. Skin and appendages: other: tumors.
Carcinogenicity – mouse – Oral→ Tumorigenic: equivocal tumorigenic agent by RTECS criteria. Leukemia skin and appendages: other: tumors.

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: Reproductive toxicity – rat – Intraperitoneal→ Effects on fertility: abortion
Reproductive toxicity – rat – Intraperitoneal→ Effects on fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants)
Reproductive toxicity – rat – Subcutaneous→ Effects on fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants). Effects on fertility: litter size (e.g. # fetuses per litter; measured before birth)
Reproductive toxicity – mouse – Oral→ Effects on fertility: post-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea). Effects on embryo/fetus: Fetotoxicity (except death, e.g. stunted fetus). Specific developmental abnormalities: musculoskeletal system.
Teratogenicity: Developmental toxicity – mouse – Intraperitoneal: Effects on embryo/fetus: Fetotoxicity (except death, e.g. stunted fetus). Specific developmental abnormalities: musculoskeletal system
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.
Aggravated Medical Condition: Avoid contact w/DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body.
Signs and Symptoms of Exposure: Effects due to ingestion may include: nausea, fatigue, and/or headache.
Additional information: RTECS: PV6210000

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

DMSO:
Persistence and degradability: no data available
Toxicity: Toxicity to fish→ LC50 - Pimephales promelas (fathead minnow) - 34,000 mg/l - 96 h
LC50 - Oncorhynchus mykiss (rainbow trout) - 35,000 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates→ EC50 - Daphnia pulex (Water flea) - 27,500 mg/l
Toxicity to algae→ EC50 - Lepomis macrochirus (Bluegill) - > 400,000 mg/l - 96 h
Bioaccumulative potential: no data available
Mobility in soil: no data available
PBT and vPvB assessment: no data available
Other adverse effects: no data available

SECTION 13: DISPOSAL CONSIDERATIONS

Tergitol:
Product: Waste material must be disposed of in accordance with the national and loc No mixing with other waste.

NAD (Beta-Nicotinamide Adenine Dinucleotide, Sodium Salt):
Product: Observe all federal, state, and local environmental regulations.
Contaminated packaging: Dispose of as unused product.

WST-8:
Product: Must not be disposed of together with household garbage. Do not allow product to reach sewage system
Contaminated packaging: Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION

Tergitol:
Product: Waste material must be disposed of in accordance with the national and loc No mixing with other waste.

NAD (Beta-Nicotinamide Adenine Dinucleotide, Sodium Salt):
Product: Observe all federal, state, and local environmental regulations.
Contaminated packaging: Dispose of as unused product.

WST-8:
Product: Must not be disposed of together with household garbage. Do not allow product to reach sewage system
Contaminated packaging: Disposal must be made according to official regulations.

DMSO:
DOT (US): UN-Number: 1993, Class: CBL, Packing group: III; Proper shipping name: Combustible liquid, n.o.s. (Dimethyl sulfoxide); Marine pollutant: No; Poison Inhalation Hazard: No
IMDG: Not dangerous goods.
IATA: Not dangerous goods.

SECTION 15: REGULATORY INFORMATION

OSHA Hazards: DMSO: Combustibile liquid, Target organ effect
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 III, Section 313.
SARA 311/312 HazardsDMSO: Fire Hazard, Chronic Health Hazard
Massachusetts Right To Know Components: No components are subject ot the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components: Dimethyl sulfoxide, CAS-No. 67-68-5
New Jersey Right To Know Components: Dimethyl sulfoxide, CAS-No. 67-68-5
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

Component	Risk Phrases	Safety Phrases
DMSO	R10, R36/37/38	S24/25, S36/37/39, S45
Tergitol	--	--
NAD (Beta-Nicotinamide Adenine Dinucleotide, Sodium Salt)	--	--
WST-8	--	--

SECTION 16: OTHER INFORMATION

DISCLAIMER:
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