CELL BIOLABS, INC.
Creating Solutions for Life Science Research

Safety Data Sheet

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Catalog Number: MET-5138
Product Name: Zinc Assay Kit (Colorimetric)
Recommended Use: Laboratory Research Reagents

MANUFACTURER:

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SECTION 2. HAZARDS IDENTIFICATION

Color Reagent (Part No. 51381B): One 16 mL amber bottle

Classification:
Acute toxicity, Oral, Category 4 (H302)
Eye irritation, Category 2A (H319)
Acute aquatic toxicity, Category 2 (H401)
Chronic aquatic toxicity, Category 2 (H411)

Pictogram	
Signal Word	Warning
Hazard Statements: Harmful if swallowed (H302), Causes serious eye irritation (H319), Toxic to aquatic life with long lasting effects (H411).	
Precautionary Statements: Wash skin thoroughly after handling (P264), Do not eat, drink, or smoke when using this product (P270), Avoid release to the environment (P273), Wear protective gloves/protective clothing/eye protection/face protection (P280), IF SWALLOWED: call a POISON CENTER if you feel unwell. Rinse mouth (P301 + P312 + P330), IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305 + P351 + P338), If eye irritation persists: get medical advice/attention (P337 + P313), Collect spillage (P391), Dispose of contents/container to an approved waste disposal plant (P501).	

Zinc Reagent (Part No. 51382B): One 4 mL amber bottle

Classification:
Acute toxicity, Oral Category 4 (H302)
Skin irritation, Category 2 (H315)
Eye irritation, Category 2A (H319)
Specific target organ toxicity, Category 3, Respiratory system (H335)
Short-term (acute) aquatic hazard, Category 2 (H401)
Long-term (chronic) aquatic hazard, Category 2 (H411)

Pictogram	
Signal Word	**Danger**
Hazard Statements: Harmful if swallowed (H302), Causes skin irritation (H315), Causes serious eye irritation (H319), May cause respiratory irritation (H335), Toxic to aquatic life with long lasting effects (H411)	
Precautionary Statements: Avoid breathing dust/fume/gas/mist/vapors/spray (P261), Wash skin thoroughly after handling (P264), Do not eat, drink or smoke when using this product (P270), Use only outdoors or in a well-ventilated area (P271), Avoid release to the environment (P273), Wear protective gloves/protective clothing/eye protection/face protection (P280), IF SWALLOWED: rinse mouth. Do NOT induce vomiting (P301 + P312 + P330), IF ON SKIN: Wash with plenty of soap and water. (P302 + P352), IF INHALED: remove person to fresh air and keep comforable for breathing. Immediately call a POISON CENTER/doctor. (P304 + P340 + P312), 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 (P305 + P351 + P338), If skin irritation occurs: Get medical advice/ attention (P332 + P313), If eye irritation persists: Get medical advice/ attention (P337 + P313), Take off contaminated clothing and wash before reuse (P362), Collect spillage (P391), Store in a well-ventilated place. Keep container tightly closed (P403 + P233), Store locked up (P405), Store in corrosive resistant stainless steel container with a resistant inner liner (P406), Dispose of contents/container to an approved waste disposal plant (P501).	

Zinc Standard (Part No. 51383B): One 100 µL vial at 10 mM concentration

Classification:
Acute toxicity, Oral Category 4 (H302)
Serious eye damage, Category 1 (H318)
Short-term (acute) aquatic hazard, Category 1 (H400)
Long-term (chronic) aquatic hazard, Category 1 (H410)

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Pictogram	
Signal Word	Danger
Hazard Statements: Harmful if swallowed (H302), Causes serious eye damage (H318), Very toxic to aquatic life with lasting effects (H410).	
Precautionary Statements: Wash skin thoroughly after handling (P264), Do not eat, drink or smoke when using this product (P270), Avoid release to the environment (P273), Wear protective gloves/protective clothing/eye protection/face protection (P280), IF SWALLOWED: rinse mouth. Do NOT induce vomiting (P301 + P312 + P330), IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305 + P351 + P338 + P310), Collect spillage (P391), Dispose of contents/container to an approved waste disposal plant (P501).	

Deproteinizing Solution (Part No. 51384B): One 10 mL amber glass bottle

Classification:
Skin corrosion, Category 1A (H314)
Serious eye damage, Category 1 (H318)
Carcinogenicity, Category 2 (H351)
Acute aquatic toxicity, Category 1 (H400)
Chronic aquatic toxicity, Category 1 (H410)

Pictogram	
Signal Word	Danger
Hazard Statements: Causes severe skin burns and eye damage (H314), Suspected of causing cancer (H351), Very toxic to aquatic life with long lasting effects (H410).	
Precautionary Statements: Obtain special instructions before use (P201), Do not handle until allsafety precautions have been read and understood (P202), Do not breathe dust or mist (P260), Wash skin thoroughly after handling (P264), Avoid release to the environment (P273), Wear protective gloves/protective clothing/eye protection/face protection (P280), IF SWALLOWED: Rinse mouth. Do NOT induce vomiting (P301 + P330 + P331), IF ON SKIN (or hair): Take off immediately all	

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contaminated clothing. Risne skin with water/shower (P303 + P361 + P353), IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor (P304 + P340 + 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 (P305 + P351 + P338 + P310), If exposed or concerned: get medical advice/attention (P308 + P313), Wash contaminated clothing before reuse (P363), Collect spillage (P391), Store locked up (P405), Dispose of contents/container to an approved waste disposal plant (P501).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Color Reagent (Part No. 51381B): One 16 mL amber bottle

CHEMICAL NAME	CONCENTRATION	CAS #
Triton X-100	**11%**	**9002-93-1**

Zinc Reagent (Part No. 51382B): One 4 mL amber bottle

CHEMICAL NAME	CONCENTRATION	CAS #
Salicylaldoxime	**2 mM**	**94-67-7**

Zinc Standard (Part No. 51383A): One 100 µL vial at 10 mM concentration

CHEMICAL NAME	CONCENTRATION	CAS #
Zinc Sulfate	**10 mM**	**7446-20-0**

Deproteinizing Solution (Part No. 51384B): One 10 mL amber glass bottle

CHEMICAL NAME	CONCENTRATION	CAS #
Trichloroacetic acid	**7%**	**76-03-9**

SECTION 4. FIRST-AID MEASURES

- IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
- IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN.
- IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media: Water spray, alcohol-resistant foam, dry chemical or CO2
- Special protective equipment: Self-contained breathing apparatus

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Evacuate area
- Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.
- Absorb with sand or vermiculite, sweep up, place in a bag and hold for waste disposal.
- Avoid raising dust.
- Ventilate area and wash spill site after material pickup is complete.

SECTION 7. SAFETY HANDLING AND STORAGE

- Should be handled by trained personnel observing good laboratory practices.
- Avoid breathing vapor.
- Avoid skin contact or swallowing.
- May cause allergic reaction in sensitized individuals.
- Store in properly labeled containers at temperature on label

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Engineering measures: Handle in accordance with good industrial hygiene and safety practices. Wash hands immediately after handling the product.
- Personal protective equipment: Face shield or safety glasses, gloves, protective clothing, suitable respiratory equipment in cases of inadequate ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Form:
    - Triton X-100: liquid
    - Salicylaldoxime: liquid
    - Zinc Sulfate: liquid
- Odor: no data available
- pH: no data available
- Boiling point / range: no data available
- Melting point / range: no data available
- Flash point: no data available
- Evaporation rate: no data available
- Vapor pressure: no data available
- Vapor density: no data available
- Relative density: no data available
- Water solubility: no data available
- Autoignition temperature: no data available
- Decomposition temperature: no data available
- Viscosity: no data available
- Explosive properties: no data available

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- Oxidizing properties: no data available

SECTION 10. STABILITY AND REACTIVITY

- Stability: no data available
- Reactivity: no data available
- Conditions to avoid: (Dimethylglyoxime) heat. flames, sparks.
- Incompatible materials: no data available
- Decomposition products: no data available

SECTION 11. TOXICOLOGICAL INFORMATION

- Acute toxicity
    - Triton X-100: LD50 oral 1.800 mg/kg (rat), LD50 dermal 8.000 mg/kg (rabbit)
    - Zinc Sulfate: LD50 Oral - Mouse - male - 926 mg/kg (OECD Test Guideline 401)
    - Trichloroacetic acid: LD50 oral-rat-3.320 mg/kg
- Skin corrosion/irritation: no data available
- Serious eye damage/irritation
    - Triton X-100: no data available, eyes-rabbit-mild eye irritation-24 h
    - Trichloroacetic acid: eyes-rabbit-severe eye irritation-5s
- Respiratory or skin sensitization: no data available
- Germ cell mutagenicity: no data available
- Carcinogenicity: no data available
- Reproductive toxicity: no data available

SECTION 12. ECOLOGICAL INFORMATION

- Ecotoxicity
    - Triton X-100: Toxicity to Daphnia and other aquatic invertebrates- EC50 26 mg/L-48h (Daphnia)
    - Salicylaldoxime: toxicity to fish: LC50-Pimephales promelas (fathead minnow)-3.23 mg/l-96h,
    - Zinc Sulfate: static test LC50 - Pimephales promelas (fathead minnow) - 0.330 mg/l - 96 h
    - Trichloroacetic acid: toxicity to fish: LC50-Pimephales promelas (fathead minnow)-2000 mg/l-96,0h; toxicity to Daphnia and other aquatic invertebrates: EC50-Daphnia magna (water flea)-1.460-2.000 mg/l-48h
- Mobility: no data available
- Biodegradation: no data available
    - Trichloroacetic acid: biodegradability: Zahn-Wellens Test-exposure time 27d, result 5%-not readily biodegradable
- Bioaccumulation: no data available

SECTION 13. DISPOSAL CONSIDERATIONS

For small quantities: Cautiously add to a large stirred excess of water. Adjust the pH to neutral. Flush the aqueous solutions down the drain with plenty of water.

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SECTION 14. TRANSPORT INFORMATION - IATA

- Hazard Class: 8
- Subsidiary Class: none
- Packing Group: II
- UN-No: UN1839

NOTE: THIS PRODUCT IS SHIPPED AS "DANGEROUS GOODS IN EXCEPTED QUANTITIES" UNDER IATA REGULATION 2.6.2.2.

SECTION 15. REGULATORY INFORMATION

- Safety, health and environmental regulations/legislation specific for the substance or mixture: no data available
- Chemical safety assessment: no data available

SECTION 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and should be used only as a guide for experienced personnel. Cell Biolabs, Inc. shall not be held liable for any damage resulting from the handling or from contact with the above product(s).

Revised 08/21/2023

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