

## Safety Data Sheet

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

Catalog Number: STA-330  
 Product Name: OxiSelect™ TBARS Assay Kit (MDA Quantitation)  
 Recommended Use: Laboratory Research Reagents

**MANUFACTURER:**

Cell Biolabs, Inc.  
 7758 Arjons Drive  
 San Diego, CA 92126

**EMERGENCY CONTACT:**


+1 858 271 6500  
 info@cellbiolabs.com

### SECTION 2. HAZARDS IDENTIFICATION

MDA Standard (Part No. 233001): One 1.0 mL amber vial of 1.0 mM Malondialdehyde bis(dimethyl acetal)

**Classification:**


Flammable liquids, Category 3 (H226)

<b>Pictogram</b>	
<b>Signal Word</b>	Warning
<b>Hazard Statements:</b> Flammable liquid and vapor (H226).	
<b>Precautionary Statements:</b> Keep away from heat/sparks/open flames/hot surfaces. No smoking (P210), Keep container tightly closed (P233), Ground/bond container and receiving equipment (P240), Use explosion-proof electrical/ventilating/lighting/equipment (P241), Use only non-sparking tools (P242), Take precautionary measures against static discharge (P243), Wear protective gloves/protective clothing/eye protection/face protection (P280), IF ON SKIN (or hair): Remove / take off immediately all contaminated clothing. Rinse skin with water/shower (P303 + P361 + P353), In case of fire: use dry sand, dry chemical or alcohol-resistant foam to extinguish (P370 + P378), Store in a well-ventilated place. Keep cool (P403 + P235), Dispose of contents/container to an approved waste disposal plant (P501).	

SDS Lysis Solution (Part No. 233003): One 20 mL bottle

**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)  
 Acute aquatic toxicity, Category 2 (H401)  
 Chronic aquatic toxicity, Category 3 (H412)

<b>Pictogram</b>	
<b>Signal Word</b>	Danger
<p><b>Hazard Statements:</b> Flammable (H228), Harmful if swallowed or inhaled (H302 + H332), Causes skin irritation (H315), Causes serious eye damage (H318), May cause respiratory irritation (H335), Toxic to aquatic life (H401), Harmful to aquatic life with long lasting effects (H412).</p>	
<p><b>Precautionary Statements:</b> Keep away from heat/sparks/open flames/hot surfaces. No smoking (P210), Ground/bond container and receiving equipment (P240), Use explosion-proof electrical/ventilating/lighting/equipment (P241), 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: call a POISON CENTER / doctor if you feel unwell. Rinse mouth (P301 + P312 + P330), IF ON SKIN: wash with plenty of soap and water (P302 + P352), IF INHALED: remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER / doctor if you feel unwell (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 + P310), If skin irritation occurs: get medical advice/attention (P332 + P313), Take off contaminated clothing and wash before reuse (P362), In case of fire: use dry sand, dry chemical or alcohol-resistant foam to extinguish (P370 + P378), Store in a well-ventilated place. Keep container tightly closed (P403 + P233), Store locked up (P405), Dispose of contents/container to an approved waste disposal plant (P501).</p>	

2X TBA Acid Diluent (Part No. 233004): One 25 mL bottle

**Classification:**

Flammable liquids, Category 3 (H226)  
 Skin corrosion, Category 1A (H314)  
 Serious eye damage, Category 1 (H318)

<b>Pictogram</b>	
<b>Signal Word</b>	Danger
<b>Hazard Statements:</b> Flammable liquid and vapor (H226), Causes severe skin burns and eye damage (H314).	
<b>Precautionary Statements:</b> Keep away from heat/sparks/open flames/hot surfaces. No smoking (P210), Keep container tightly closed (P233), Ground/bond container and receiving equipment (P240), Use explosion-proof electrical/ventilating/lighting/equipment (P241), Use only non-sparking tools (P242), Take precautionary measures against static discharge (P243), Wash skin thoroughly after handling (P264), 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 contaminated clothing Rinse 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), Wash contaminated clothing before reuse (P363), In case of fire: use dry sand, dry chemical or alcohol-resistant foam to extinguish (P370 + P378), Store in a well-ventilated place. Keep cool (P403 + P235), Store locked up (P405), Dispose of contents/container to an approved waste disposal plant (P501).	

Sodium Hydroxide Solution (Part No. 233005): One 5 mL bottle


**Classification:**

Corrosive to metals, Category 1 (H290)

Skin corrosion, Category 1A (H314)

Serious eye damage, Category 1 (H318)

Acute aquatic toxicity, Category 3 (H402)


<b>Pictogram</b>	
<b>Signal Word</b>	Danger
<b>Hazard Statements:</b> May be corrosive to metals (H290), Causes severe skin burns and eye damage (H314), Causes serious eye damage, (H318), Harmful to aquatic life (H402).	
<b>Precautionary Statements:</b> Keep only in original container (P234), Do not breathe	

dust/fume/gas/mist/vapors/spray (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 contaminated clothing Rinse 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), Wash contaminated clothing before reuse (P363), Absorb spillage to prevent material damage (P390), 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).

100X BHT Solution (Part No. 233006): One 1.0 mL vial of 5% Butylated hydroxytoluene (BHT) in methanol

**Classification:**

- Flammable liquids, Category 2 (H225)
- Acute toxicity, Oral, Category 3 (H301)
- Acute toxicity, Dermal, Category 3 (H311)
- Acute toxicity, Inhalation, Category 3 (H331)
- Specific target organ toxicity - single exposure, Category 1 Eyes, Central nervous system, (H370)
- Acute aquatic toxicity, Category 1 (H400)
- Chronic aquatic toxicity, Category 1 (H410)

<b>Pictogram</b>	
<b>Signal Word</b>	<b>Danger</b>
<p><b>Hazard Statements:</b> Highly flammable liquid and vapor (H225), Toxic if swallowed, in contact with skin or if inhaled (H301 + H311 + H331), Causes damage to organs (Eyes, Central nervous system) (H370), Very toxic to aquatic life with long lasting effects (H410).</p>	
<p><b>Precautionary Statements:</b> Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking (P210), Keep container tightly closed (P233), Ground/bond container and receiving equipment (P240), Use explosion-proof electrical/ ventilating/ lighting/ equipment (P241), Use only non-sparking tools (P242), Take precautionary measures against static discharge (P243), Do not breathe mist or vapors (P260), 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/ eye protection/ face protection (P280), IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth (P301 + P310 + P330), IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower (P303 + P361 + P353), IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p>	

Call a POISON CENTER/ doctor (P304 + P340 + P311), IF exposed: Call a POISON CENTER or doctor/ physician (P307 + P311), Take off contaminated clothing and wash before reuse (P362), In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish (P370 + P378), Collect spillage (P391), Store in a well-ventilated place. Keep container tightly closed (P403 + P233), Store in a well-ventilated place. Keep cool (P403 + P235), Store locked up (P405), Dispose of contents/container to an approved waste disposal plant (P501).

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MDA Standard (Part No. 233001): One 1.0 mL amber vial of 1.0 mM Malondialdehyde bis(dimethyl acetal)

CHEMICAL NAME	CONCENTRATION	CAS #
<b>1,1,3,3-Tetramethoxypropane</b>	<b>1 mM</b>	<b>102-52-3</b>

SDS Lysis Solution (Part No. 233003): One 20 mL bottle

CHEMICAL NAME	CONCENTRATION	CAS #
<b>Sodium dodecyl sulfate</b>	<b>10 %</b>	<b>151-21-3</b>

2X TBA Acid Diluent (Part No. 233004): One 25 mL bottle

CHEMICAL NAME	CONCENTRATION	CAS #
<b>Acetic Acid</b>	<b>20 %</b>	<b>64-19-7</b>

Sodium Hydroxide Solution (Part No. 233005): One 5 mL bottle

CHEMICAL NAME	CONCENTRATION	CAS #
<b>Sodium Hydroxide</b>	<b>10 N</b>	<b>1310-73-2</b>

100X BHT Solution (Part No. 233006): One 1.0 mL vial of 5% Butylated hydroxytoluene (BHT) in methanol

CHEMICAL NAME	CONCENTRATION	CAS #
<b>Butylated hydroxytoluene</b>	<b>5%</b>	<b>128-37-0</b>
<b>Methanol</b>	<b>95%</b>	<b>67-56-1</b>

### 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 CO<sub>2</sub>
- 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: 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
- Oxidizing properties: no data available

## **SECTION 10. STABILITY AND REACTIVITY**

- Stability: no data available
- Reactivity: no data available
- Conditions to avoid: no data available
- Incompatible materials: no data available
- Decomposition products: no data available

## **SECTION 11. TOXICOLOGICAL INFORMATION**

- Acute toxicity
  - Malondialdehyde bis(dimethyl acetal): LD50 Oral 2.44 mg/kg (rat)
  - Methanol: LD50 oral 5.528 mg/kg (rat), LC50 inhalation 4h 64000 ppm (rat), LC50 inhalation 4h 87,6 mg/L (rat), LD50 dermal 15.800 mg/kg (rabbit)
  - Sodium dodecyl sulfate: LD50 Oral 1.288 mg/kg (rat); LC50 Inhalation >3.9 mg/m<sup>3</sup> (rat); LD 50 Dermal 580 mg/kg (rabbit)
  - Acetic acid: LD50 Oral 3.31 mg/kg (rat); LC50 Inhalation 5620 ppm (mouse); LC50 Inhalation 11.4 mg/L (rat); LD50 Dermal 1.112 mg/kg (rabbit)
  - Sodium hydroxide: no data available
  - Butylated hydroxytoluene: LD Oral 890 mg/kg (rat)
- Skin corrosion/irritation
  - Malondialdehyde bis(dimethyl acetal): None (rabbit)
  - Methanol: no skin irritation (rabbit)
  - Sodium dodecyl sulfate, Sodium hydroxide, Butylated hydroxytoluene: Irritation (rabbit)
  - Acetic acid: no data available
- Serious eye damage/irritation
  - Malondialdehyde bis(dimethyl acetal): None (rabbit)
  - Methanol: no eye irritation (rabbit)
  - Sodium dodecyl sulfate, Sodium hydroxide: Risk of serious damage (rabbit)
  - Acetic acid: Corrosive (rabbit)
  - Butylated hydroxytoluene: Eye irritation (rabbit)
- Respiratory or skin sensitization:
  - Malondialdehyde bis(dimethyl acetal), Sodium hydroxide, Butylated hydroxytoluene: no data available
  - Methanol: does not cause skin sensitization (guinea pig)
  - Sodium dodecyl sulfate: May cause respiratory irritation
  - Acetic acid: may cause skin sensitization

- Germ cell mutagenicity: no data available
- Carcinogenicity: no data available
- Reproductive toxicity: no data available

## SECTION 12. ECOLOGICAL INFORMATION

- Ecotoxicity
  - Malondialdehyde bis(dimethyl acetal): EC50 100 mg/L in 48 hrs (water flea)
  - Methanol: Toxicity to fish: LC50 19.000,00 mg/L 96h (Oncorhynchus mykiss), mortality LC50 15.400 mg/L 96h (Lepomis macrochirus); Toxicity to Daphnia and other aquatic invertebrates: EC50 24.5000,00 mg/L 48h (Daphnia magna), EC100 10.000,00 mg/L 24h (Daphnia magna); Toxicity to algae: Growth inhibition EC50 22.000 mg/L 96h (Scenedesmus capricornutum).
  - Sodium dodecyl sulfate: LC50 3.6 mg/L in 96 hrs (rainbow trout); mortality NOEC 19.5 mg/L in 96 hrs (rainbow trout); mortality LOEC 4.6 mg/L in 8 days (fathead minnow); growth inhibition LOEC 2.68 mg/L in 6 days (algae)
  - Acetic acid: LC50 1.0 mg/L in 96 hrs (rainbow trout); EC50 300.82 mg/L in 48 hrs (water flea)
  - Sodium hydroxide: LC50 125 mg/L in 96 hrs (mosquito fish); EC50 40.38 mg/L in 48 hrs (water flea)
  - Butylated hydroxytoluene: LC50 5.3 mg/L in 48 hrs (Oryzias latipes); EC50 1.44 mg/L in 48 hrs (water flea)
- Mobility: no data available
- Biodegradation:
  - Methanol: rapidly biodegradable
  - Sodium hydroxide, Butylated hydroxytoluene: no data available
  - All other hazardous components: 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.

## SECTION 14. TRANSPORT INFORMATION - IATA

- Hazard Class: 8
- Subsidiary Class: none
- Packing Group: II
- UN-No: UN2790

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).

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