

Safety Data Sheet

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

Catalog Number: STA-345
 Product Name: OxiSelect™ ORAC Activity Assay
 Recommended Use: Laboratory Research Reagents

MANUFACTURER:

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SECTION 2. HAZARDS IDENTIFICATION

Free Radical Initiator (Part No. 234503): One 0.5 g bottle

Classification:

Self-reactive substances and mixtures, Type D (H242)
 Acute toxicity, Oral, Category 4 (H302)
 Skin sensitization, Category 1 (H317)
 Acute aquatic toxicity, Category 3, (H401)
 Chronic aquatic toxicity, Category 2 (H411)


Pictogram	
Signal Word	Danger
<p>Hazard Statements: Heating may cause a fire (H242), Harmful if swallowed (H302), May cause an allergic skin reaction (H317), Toxic to aquatic life with long lasting effects (H411).</p>	
<p>Precautionary Statements: Keep away from heat/sparks/open flames/hot surfaces - Not smoking (P210), Keep/store away from clothing and combustible materials (P220), Keep only in original container (P234), Avoid breathing dust/fumes/gas/mist/vapor/spray (P261), Wash skin thoroughly after handling (P264), Do not eat, drink, or smoke when using this product (P270), Contaminated work clothing should not be allowed out of the workplace (P272), 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 (P301 + P312), IF ON SKIN: wash with plenty of soap and water (P302 + P352), Rinse mouth (P330), If skin irritation or rash occurs: get medical advice/attention (P333 + P313), Wash contaminated clothing before reuse (P363), In case of fire: use</p>	

dry sand, dry chemical or alcohol-resistant foam for extinction (P370 + P378), Collect spillage (P391), Store in a well-ventilated place. Keep cool (P403 + P235), Store away from other materials (P420), Dispose of contents/container to an approved waste disposal plant (P501).

Antioxidant Standard (Trolox™) (Part No. 234504): One 100 µL vial of a 1 mM solution

Classification:

Flammable liquids, Category 2 (H225)
Acute toxicity, Oral Category 3 (H301)
Acute toxicity, Dermal Category 3 (H311)
Skin irritation, Category 2 (H315)
Eye irritation, Category 2A (H319)
Acute toxicity, Inhalation (Category 3), H331
Specific target organ toxicity - single exposure, Category 3, Respiratory system (H335)
Specific target organ toxicity - single exposure Category 1 Eyes (H370)

Pictogram	
Signal Word	Warning
<p>Hazard Statements: Causes skin irritation (H315), Causes serious eye irritation (H319), May cause respiratory irritation (H335), Highly flammable liquid and vapour (H225), Toxic if swallowed (H301), Toxic in contact with skin (H311), Toxic if inhaled (H331), Causes damage to organs (H370).</p>	
<p>Precautionary Statements: 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 dust or mist (P260), Avoid breathing dust/fumes/gas/mist/vapor/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), Wear protective gloves/protective clothing/eye protection/face protection (P280), IF SWALLOWED: immediately call a POISON CENTER or doctor/physician. Rinse mouth. (P301 + P310 + P330), IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower (P303 + P361 + P353), IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physican. (P304 + P340 + P311), IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305 + P351 + P338), Call a POISON CENTER or doctor is you feel unwell (P312), IF exposed: Call a POISON CENTER or doctor/physician (P307 + P311), 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), 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 +</p>	

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

Free Radical Initiator (Part No. 234503): One 0.5 g bottle

CHEMICAL NAME	CONCENTRATION	CAS #
2,2'-Azobis(2-methylpropionamide) dihydrochloride (AAPH)	200 mM	2997-92-4

Antioxidant Standard (Trolox™) (Part No. 234504): One 100 µL vial of a 1 mM solution

CHEMICAL NAME	CONCENTRATION	CAS #
(±)-6-Hydroxyl-2,5,7,8-tetramethylchromane-2-carboxylic acid (Trolox)	1 mM	53188-07-1
Methanol	100%	67-56-1

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:
 - 2,2'-Azobis(2-methylpropionamidine) hydrochloride (AAPH): granular
 - (\pm)-6-Hydroxyl-2,5,7,8-tetramethylchromane-2-carboxylic acid (Trolox): powder
- 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

- 2,2'-Azobis(2-methylpropionamidine) hydrochloride (AAPH): LD50 Oral (rat) - 410 mg/kg, LD50 Dermal (rat) - > 5.900 mg/kg
- (±)-6-Hydroxyl-2,5,7,8-tetramethylchromane-2-carboxylic acid (Trolox): LD50 Oral (rat) - 4.300 mg/kg
- 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)
- Skin corrosion/irritation
 - Methanol: no skin irritation (rabbit)
 - 2,2'-Azobis(2-methylpropionamidine) hydrochloride (AAPH): Mild skin irritation (rabbit)
 - (±)-6-Hydroxyl-2,5,7,8-tetramethylchromane-2-carboxylic acid (Trolox): no data available
- Serious eye damage/irritation: no data available
 - Methanol: no eye irritation (rabbit)
- Respiratory or skin sensitization
 - Methanol: does not cause skin sensitization (guinea pig)
 - 2,2'-Azobis(2-methylpropionamidine) hydrochloride (AAPH): May cause allergic skin reaction
 - (±)-6-Hydroxyl-2,5,7,8-tetramethylchromane-2-carboxylic acid (Trolox): no data available
- Germ cell mutagenicity: no data available
- Carcinogenicity: no data available
- Reproductive toxicity: no data available

SECTION 12. ECOLOGICAL INFORMATION

- Ecotoxicity
 - 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)
 - 2,2'-Azobis(2-methylpropionamidine) hydrochloride (AAPH):
 - Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96h
 - Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 4,84 mg/l - 48 h
 - (±)-6-Hydroxyl-2,5,7,8-tetramethylchromane-2-carboxylic acid (Trolox): no data available
- Mobility: no data available
- Biodegradation: Methanol: rapidly biodegradable
- Bioaccumulation: Methanol: Cyprinus carpio 72d at 20C 5mg/L, bioconcentration factor (BCF): 1,0

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: Not Hazardous

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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