

SAFETY DATA SHEET (SDS)

SDS DATE : Apr, 2021

Section 1. Product And Company Identification

1. Product identifier

- 1.1. Product Name : OxiTec™ DPPH Antioxidant Assay Kit (Colorimetric)
- 1.2. Product Code : BO-DPH-200, BO-DPH-500

2. Details of the supplier of the safety data sheet

- 2.1. Company: BIOMAX, Inc.,
- 2.2. Address : Keumkang Penterium IX Tower CORE-C 7F, 46, Galmaesunhwan-ro 166beon-gil, Guri-si, Gyeonggi-do, Republic of Korea
- 2.3. Telephone: +82-2-3296-3158
- 2.4. Emergency Phone : +82-2-3296-3159
- 2.5. FAX: +82-2-973-2858

3. Product use

- 3.1. For research use only.

Section 2. Hazard identification

Component	Description	Volume	Safety Information
DPPH Reagent	Powder	BO-DPH-200 : 2 vial BO-DPH-500 : 5 vial	See below
Assay Buffer	Liquid	BO-DPH-200 : 20 ml BO-DPH-500 : 50 ml	No hazards
Trolox Standard (1 mg)	Powder	BO-DPH-200 : 2 vial BO-DPH-500 : 5 vial	See below

1.1 DPPH:

Emergency Overview

GHS Classification

Respiratory Sensitization, Category 1

Skin Sensitization, Category 1

GHS Label elements, including precautionary statements

Pictogram:



Signal word: Danger

Hazard statement(s): H317: May cause an allergic skin reaction.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statement(s): P261 Avoid breathing dust/fumes/gas/mist/vapors/spray.

P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P285: In case of inadequate ventilation wear respiratory protection.

P302+352: IF ON SKIN: Wash with plenty of soap and water.

P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P333+313: If skin irritation or rash occurs, seek medical advice/attention.

P342+311: If experiencing respiratory symptoms call a POISON CENTER or doctor/physician.

P362+364: Take off contaminated clothing and wash it before reuse.

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. Causes respiratory tract irritation.

Skin: Harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

Ingestion: Harmful if swallowed.

Trolox:

Emergency Overview:

GHS Classification

Acute toxicity, Oral (Category 4), H302

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS Label elements, including precautionary statements

Pictogram:



Signal word: Warning

Hazard statement(s): H302 Harmful if swallowed.

Precautionary statement(s): P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

P501 Dispose of contents/ container to an approved waste disposal plant.

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. Causes respiratory tract irritation.

Skin: Harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

Ingestion: Harmful if swallowed.

Section 3. Composition/Information on ingredients

Component	CAS Number	EC-No.	Molecular Weight	Formula
DPPH Reagent	1898-66-4	217-591-8	394.3	C ₁₈ H ₁₂ N ₅ O ₆
Trolox	53188-07-1	-	250.29	C ₁₄ H ₁₈ O ₄

Section 4. First Aid Measures

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.

In case of eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation occurs.

If swallowed: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water

Section 5. Fire-fighting Measures

DPPH:

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

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

Special protective equipment for fire fighters: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Trolox:

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

Unsuitable extinguishing media: For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture: Carbon oxides; Combustible

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

Section 6. Accidental Release Measures

DPPH:

Personal precautions: Avoid raising and breathing dust, and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves)

Environmental precautions: Do not let product enter drains.

Methods for cleaning up: Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

Trolox:

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapors can accumulate in low areas

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and 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

DPPH:

Precautions for safe handling: Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure. Keep away from sources of ignition.

Trolox:

Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature 2 - 8 °C Keep in a dry place. Store under inert gas. Air sensitive. Keep in a dry place.

Storage class (TRGS 510): 11: Combustible Solids

Section 8: Exposure Controls/Personal Protection

Control parameters

Contains no substances with occupational exposure limit values.

Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Hand protection

Wear protective gloves conforming to EU Directive 89/686/EEC and European Standard EN374. Gloves must be inspected prior to use.

Avoid skin contact with this product when remove gloves. Dispose of contaminated gloves safely after use.

Eye protection

Wear safety glasses with side-shields conforming to European Standard EN166.

Skin and body protection

Wear laboratory coat or impervious clothing. Choose appropriate body protection according to the amount and concentration of the substance at the work place

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke.

Wash hands, forearms and face after handling.

Section 9: Physical And Chemical Properties

Property	DPPH	Trolox
Appearance:	powder	powder
pH:	No data available	No data available
Water Solubility:	No data available	No data available
Other Solubility:	10 mg/ml in EtOH & DMF	No data available
Boiling Point (°C):	No data available	No data available
Melting Point (°C):	No data available	187 - 189 °C
Flash Point (°C):	No data available	No data available
Ignition Temperature (°C):	No data available	No data available
Density:	No data available	No data available

Section 10: Stability And Reactivity

Property	DPPH	Trolox
Chemical Stability:	Stable under recommended storage conditions	
Conditions to Avoid:	No data available	No data available
Materials to Avoid:	oxidizing agents strong bases	Strong oxidizing agents
Hazardous decomposition: products:	carbon dioxide; carbon monoxide; nitrogen oxides	Under fire conditions. Carbon oxides

Section 11: Toxicological Information

DPPH:

The toxicological effects of this product have not been thoroughly studied.

Trolox:

Acute toxicity: LD50 Oral - Mouse - 1,630 mg/kg Dermal: 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. Causes respiratory tract irritation.

Skin: Harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

Ingestion: 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: DJ2273000

Section 12: Ecological Information

DPPH:

Persistence and degradability: no data available

Toxicity: Avoid release into the environment. Runoff from fire control or dilution water may cause pollution

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

Trolox:

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

Section 13: Disposal Considerations

DPPH:

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

Trolox:

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging: Dispose of as unused product.

Section 14: Transport Information

DPPH:

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

Trolox:

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

Section 15: Regulatory Information

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 [REACH], as amended by Commission Regulation (EU) No 453/2010.

Safety, health and environmental regulations / legislation specific for the substance or mixture : No information available

Chemical Safety Assessment : No information available

Section 16: Other information

OTHER INFORMATION:**PREPARATION 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.

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