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MATERIAL SAFETY DATA SHEET

Prod. No. : V01008402 / Zebrafish vitellogenin ELISA-kit
V01003402 / Carp vitellogenin ELISA-kit

Hazards identified with this product are those associated with the following components. Refer to the material safety data sheets for the listed items.

Component name:

Phosphate buffered saline (PBS) tablets
Phosphate buffered saline (PBS) with Tween 20
Urea Hydrogen Peroxide tablet
OPD buffered substrate tablet

Multiple component spill or leak procedures

Steps to be taken if material is released or spilled

Evacuate area
Wear self-contained breathing apparatus, chemical safety goggles, rubber boots and heavy rubber gloves.
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.

Waste disposal method

Contact a licensed professional waste disposal service to dispose of this material.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Observe all federal, state and local environmental regulations.

Label precautionary statements

Harmful by inhalation and in contact with skin.
Toxic if swallowed.
Irritating to eyes.
Limited evidence of carcinogenic effect.
May cause sensitization by skin contact.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of irreversible effects.

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.

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

Other information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Biosense laboratories AS shall not be held liable for any damage resulting from handling or from contact with the above product.

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MATERIAL SAFETY DATA SHEET

Phosphate buffered saline (PBS) tablets

Section 1. Chemical Identification

Product name: Phosphate buffered saline (PBS) tablet

Section 2. Composition/ Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
PHOSPHATE BUFFERED SALINE	None	None	None

Section 3. Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Not hazardous according to Directive 67/548/EC.

Section 4. First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT

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.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Section 5. Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6. Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP

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. Handling and Storage

HANDLING

Directions for Safe Handling: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Store in cool dry place

Section 8. Exposure controls/Personal protection

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Wear dust mask.

Hand Protection: Protective gloves.

Eye Protection: Chemical safety goggles.

Section 9. Physical and Chemical Properties

Appearance and odor: Tablet

Section 10. Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents, Strong acids, Reacts violently with bromine trifluoride and lithium.

Conditions to avoid: Exposure to direct sunlight. Exposure to water or moisture.

HAZARDOUS DECOMPOSITION PRODUCTS

Nature of decomposition products not known
HAZARDOUS POLYMERIZATION
Will not occur

Section 11. Toxicological information

ACUTE TOXICITY

Low order of acute toxicity.
Oral LD50 (rat) > 2000 mg/kg
Dermal LD50 (rabbit) > 2000 mg/kg
Inhalation LC50 (rat) >20 mg/litre/4h

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.

Section 12. Ecological information

No data available

Section 13. Disposal considerations

Nonhazardous waste. Dispose according to all federal, state and local applicable regulations. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate.

Section 14. Transport information

RID/ADR

Non-hazardous for road transport.

IMDG

Non-hazardous for sea transport.

IATA

Non-hazardous for air transport.

Section 15. Regulatory information

Not hazardous according to Directive 67/548/EC.

Section 16. Other information

WARRANTY

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MATERIAL SAFETY DATA SHEET

Phosphate buffered saline (PBS) with Tween 20

Section 1. Chemical Identification

Product name: Phosphate buffered saline (PBS) with Tween 20.

Section 2. Composition/ Information on Ingredients

CAS #: None

Hazardous ingredients

Sodium chloride,	CAS # 7647-14-5
Sodium phosphate, dibasic,	CAS # 7558-79-4
Potassium phosphate, monobasic	CAS # 7778-77-0
Potassium chloride	CAS # 7447-40-7
Tween 20	CAS # 9005-64-5

Section 3. Hazards Identification

May be harmful by inhalation, ingestion or skin absorption.
Irritating to eyes, respiratory system and skin.

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 breathing becomes difficult, call a physician.
In case of skin contact, immediately wash skin with soap and copious amounts of water.
In case of contact with eyes, flush eyes 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

Extinguishing media:

Noncombustible.

Use extinguishing media appropriate to surrounding fire conditions.

Special fire-fighting procedures:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual fire and explosions hazards:

Emits toxic fumes under fire conditions.

Section 6. Accidental Release Measures

Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves.

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. Handling and Storage

Precautions To Be Taken in Handling and Storing:

Avoid contact with eyes, skin, and clothing.

Avoid inhalation.

Avoid ingestion.

Avoid prolonged or repeated exposure.

Wash hands thoroughly after handling.

Keep tightly closed.

Store in a cool dry place.

Section 8. Exposure controls/Personal protection

Ventilation:

Mechanical exhaust required.

Eye Protection:

Safety glasses.

Protective Gloves:

Compatible chemical-resistant gloves.

Other Protective Clothing:

Lab coat .

NIOSH/MSHA-approved respirator.

Work/Hygienic/Maintenance Practices:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Section 9. Physical and Chemical Properties

Appearance and odor: Solid, odourless.

Section 10. Stability and Reactivity

Stability:

Stable.

Incompatibilities:

Strong oxidising agents.

Strong acids.

Hazardous combustion or decomposition products:

Nature of decomposition products not known.

Hazardous polymerization:

Will not occur.

Section 11. Toxicological information

Acute effects:

May be harmful by inhalation, ingestion or skin absorption.

Causes eye irritation.

Causes skin irritation.

Material is irritating to mucous membranes and upper respiratory tract.

To the best of our knowledge, the chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

Section 12. Ecological information

Data not yet available.

Section 13. Disposal considerations

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Observe all federal, state and local environmental regulations.

Section 14. Transport information

Contact Biosense Laboratories AS for transportation information.

Section 15. Regulatory information

European information

CAUTION: Substance not yet fully tested.

Irritant.

R 36/37/38

Irritating to eyes, respiratory system and skin.

S 26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36

Wear suitable protective clothing.

Section 16. Other information

For research use only, not for human or veterinary clinical use.

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MATERIAL SAFETY DATA SHEET

Urea Hydrogen Peroxide tablet

Section 1. Chemical Identification

Product name: Phosphate-citrate buffer with urea hydrogen peroxide
Tablet

Section 2. Composition/ Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
PHOSPHATE-CITRATE BUFFER WITH UREA HYDROGEN PEROXIDE TABLETS	None	None	None

Section 3. Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Irritating to eyes, respiratory system and skin.

Section 4. First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Section 5. Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6. Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

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. Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed, light sensitive.
Store at 2-8°C

Section 8. Exposure controls/Personal protection

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

Section 9. Physical and Chemical Properties

Appearance and odor: Tablet

Section 10. Stability and Reactivity

STABILITY

Stable

Materials to Avoid: Strong oxidizing agents, strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS

Nature of decomposition products not known.

HAZARDOUS POLYMERIZATION

Will not occur

Section 11. Toxicological information

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes eye irritation.

Inhalation: Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

Section 12. Ecological information

No data available

Section 13. Disposal considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Observe all federal, state, and local environmental regulations.

Section 14. Transport information

RID/ADR

Non-hazardous for road transport.

IMDG

Non-hazardous for sea transport.

IATA

Non-hazardous for air transport.

Section 15. Regulatory information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES INDICATION OF DANGER: Xi

Irritant.

R-PHRASES: 36/37/38

Irritating to eyes, respiratory system and skin.

S-PHRASES: 26/36

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

Section 16. Other information

WARRANTY

This MSD information is based on MSDS from the manufacturer Sigma-Aldrich. 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. It does not represent any guarantee of the properties of the product. Biosense Laboratories AS shall not be held liable for any damage resulting from handling or from contact with the above product.

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MATERIAL SAFETY DATA SHEET

OPD buffered substrate tablet

Section 1. Chemical Identification

Product name: *o*-phenylenediamine (OPD) buffered substrate tablet

Section 2. Composition/ Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
1,2-PHENYLENEDIAMINE DIHYDROCHLORIDE	615-28-1	210-418-7	612-146-00-8
Formula	C ₆ H ₈ N ₂ ·2ClH		
Molecular Weight	181.07 AMU		
Synonyms	USAF EK-678		

Section 3. Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Harmful by inhalation and in contact with skin.

Toxic if swallowed.

Irritating to eyes.

Limited evidence of a carcinogenic effect.

May cause sensitization by skin contact.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of irreversible effects.

Carc. Cat.3 Muta. Cat.3

Section 4. First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes.
Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

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.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

Section 5. Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6. Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

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. Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.

Store at 2-8°C

Section 8. Exposure controls/Personal protection

ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator. Hand Protection: Compatible chemical-resistant gloves. Eye Protection: Chemical safety goggles.

Section 9. Physical and Chemical Properties

Appearance and odor: Tablet
Melting point/ range 258°C

Section 10. Stability and Reactivity

STABILITY

Stable.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, Carbon dioxide, Nitrogen oxides, Hydrogen chloride gas.

HAZARDOUS POLYMERIZATION

Will not occur

Section 11. Toxicological information

RTECS NUMBER: ST0175000

ACUTE TOXICITY

LD50

Intraperitoneal

Rat

290 MG/KG

LD50

Intraperitoneal

Mouse

200 MG/KG

SENSITIZATION

Skin: May cause allergic skin reaction.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: Harmful if absorbed through skin.

Eye Contact: Causes eye irritation.

Inhalation: Harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: Toxic if swallowed.

TARGET ORGAN INFORMATION

Liver. Bladder.

CHRONIC EXPOSURE - CARCINOGEN

Rat

Route of Application: Oral

Exposure Time: 78W

Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Liver: Tumors.

Mouse

Route of Application: Oral

Exposure Time: 78W

Result: Tumorigenic: Carcinogenic by RTECS criteria. Liver: Tumors.

Mouse

Route of Application: Oral

Exposure Time: 78W

Result: Tumorigenic: Carcinogenic by RTECS criteria. Liver: Tumors.

Section 12. Ecological information

No data available

Section 13. Disposal considerations

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14. Transport information

RID/ADR

UN#: 2811

Class: 6.1

PG: III

Proper Shipping Name: Toxic solid, organic, n.o.s.

IMDG

UN#: 2811

Class: 6.1

PG: III

Proper Shipping Name: Toxic solid, organic, n.o.s.

Marine Pollutant: No

Severe Marine Pollutant: No

Technical Name: Required

IATA

UN#: 2811

Class: 6.1

PG: III

Proper Shipping Name: Toxic solid, organic, n.o.s.

Inhalation Packing Group I: No

Technical Name: Required

Section 15. Regulatory information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 612-146-00-8

INDICATION OF DANGER: T N

Toxic. Dangerous for the environment.

R-PHRASES: 20/21 25 36 40 43 50/53 68

Harmful by inhalation and in contact with skin. Toxic if swallowed. Irritating to eyes.

Limited evidence of a carcinogenic effect. May cause sensitization by skin contact.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of irreversible effects.

S-PHRASES: 28 36/37 45 60 61

After contact with skin, wash immediately with plenty of soap-suds. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

SWITZERLAND

SWISS POISON CLASS: 3

Section 16. Other information

WARRANTY

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