eurofins | Technologies	**MATERIAL SAFETY DATA SHEET**	Version Nr. 2

Product:	**Aflatoxin M_1 ELISA**
Art. No.:	**HU0030083**

CONTENT

1. Company Name

Eurofins Technologies Hungary Kft.
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1047 Budapest
Hungary

2. Wash Buffer

The Wash Buffer contains no toxic or otherwise hazardous components.

3. Specific Antibody, Standard/Sample Diluent

3.1. Chemical Characterization / Information on Ingredients

Character	*aqueous, protein-containing mixture preserved with 0.01 % potassium tetraiodomercurate (K_2HgI_4, resulting complex of KI and HgI_2).*
CAS-No. (HgI_2)	*7774-29-0*
EINECS-No. (HgI_2)	*231-873-8*
Classification	*Very toxic, irritant.*

3.2. Hazards Identification

Warnings	*Toxic if swallowed. Irritates eyes, respiratory tract and skin. In case of breathing in or skin contact, a sensitisation may be possible. Because of a possible mutagenic effect, an irreversible defect is possible (affected organs are kidneys and CNS). In case of contact with acids, the development of toxic gases is possible.*

3.3. First Aid Measures

Eye Contact	*Promptly wash eyes with water for at least 15 minutes. Seek medical advice.*
Skin Contact	*Flush skin with copious amounts of water and soap.*
Ingestion	*Wash out mouth with water provided person is conscious. Seek medical advice.*
Inhalation	*Remove to fresh air. If breathing becomes difficult, seek medical advice.*
Changing Clothes	*In case of sever contamination.*

3.4. Fire-Fighting Measures

Extinguishing Media	*Water spray. Use carbon dioxide, dry chemical powder or appropriate foam.*
Special Fire Fighting Procedure	*Wear self-containing breathing apparatus and special protective clothes.*
Unusual Fire Fighting Procedure	*N/A.*
Thermal decomposition	*Emits toxic fumes under fire conditions.*

3.5. Accidental Release Measures

Personal Protection	*Protective glasses, rubber gloves and protective clothing.*
Steps after Spillage	*Remove spilled fluid onto an inert material. Ventilate area. Wash area with soap solution. Collect contaminated fluid and material in a special closable container.*
Absorbent material	*No restriction.*
Waste Disposal Method	*Consult a specialist for disposal or the spilled substance.*

3.6. Handling and Storage

Handling	*Wear protective clothing. Avoid contact with eyes, skin and clothes. Open and handle container carefully. Thoroughly washing after use is recommended.*
Storage	*Store between +2°C and +8°C.*

3.7. Exposure Controls / Personal Protection

TLV	*No.*
Personal Protection	*Protective glasses, rubber gloves and clothing. Thoroughly washing after use is recommended.*

3.8. Physical and Chemical Properties

Physical State	*Liquid*	Flash Point	*N/A*
Color	*Red*	Ignition Temperature	*N/A*
Odor	*N/A*	Explosion Limits	*N/A*
pH-Value	*6.2 – 6.7*	Vapor Pressure	*N/A*
Boiling Point	*100°C*	Solubility in Water	*complete*
Melting Point	*N/A*	Viscosity	*N/A*

3.9. Stability and Reactivity

Hazardous Decomposition Products	*Mercury.*
Hazardous Polymerisation	*Will not occur*

3.10. Toxicological Information

LD_{50} Oral (rat)	*18 mg/kg*	LD_{50} Skin (rat)	*75 mg/kg*
LD_{50} Oral (man)	*357 mg/mg*	LD_{50} Inhalation	*Not known*

3.11. Ecological Information

Water Hazard Class	*1 (own specification)*

4. Standards

4.1. Chemical Characterization / Information on Ingredients

Character	*Methanol*
EINECS-No.	*200-659-6*
CAS-No.	*67-56-1*
Classification	*Highly flammable, Toxic*

4.2. Hazards Identification

Warnings	*Highly flammable. Toxic by inhalation, in contact with skin, and if swallowed.*

4.3. First Aid Measures

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.*
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.*
Ingestion	*If swallowed, wash mouth with water provides person is conscious. Call a physician immediately.*
Inhalation	*If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.*

4.4. Fire-Fighting Measures

Extinguishing Media	*Water spray. Use carbon dioxide, dry chemical powder or appropriate foam.*
Special Fire Fighting Procedure	*Wear self-contained breathing apparatus and special protective clothes to prevent contact with skin and eyes.*
Special risks	*Specific hazards: Flammable liquid. Emits toxic fumes under fire conditions.* *Explosion hazards: Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions.*

4.5. Accidental Release Measures

Personal Protection	*Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.*
Steps after Spillage	*Evacuate area. Shut off all sources of ignition.*
Environmental Precaution	*Do not allow material to enter drains or water courses.*
Methods for cleaning up	*Cover with dry-lime, sand or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.*

4.6. Handling and Storage

Handling	*Do not breathe vapour. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.*
Storage	*Keep container closed. Keep away from heat, sparks and open flame.*

4.7. Exposure Controls / Personal Protection

Engineering Controls	*Safety shower and eye bath. Use non-sparking tools. Use only in a chemical fume hood.*
Personal Protection	*Use government approved respirator, compatible chemical resistant gloves and chemical safety eye-goggles.*

4.8. Physical and Chemical Properties

Physical State	*Liquid*	Autoignition Temperature	*385 °C*
Color	*Colorless*	Explosion Limits	*lower: 6 %*
Vapor Pressure	*97.68 mmHg*		*upper 36 %*
pH-Value	*N/A*	Solubility in Water	*miscible*
Boiling Point	*64-65 °C*	Solubility in	*N/A*
Melting Point	*-98 °C*	Viscosity	*N/A*
Flash Point	*11 °C*		

4.9. Stability and Reactivity

Hazardous Reactions	*Stable. Avoid acids, acid chlorides, acid anhydrides, oxidizing agents, alkali metals, reducing agents.*
Hazardous Decomposition Products	*Carbon monoxide, carbon dioxide.*
Hazardous polymerisation	*Will not occur.*

4.10. Toxicological Information

LD_{50} Oral (rat)	*5628 mg/kg*	LD_{50} Skin (rabbit)	*15800 mg/kg*
LDL0 Oral (man)	*6422 mg/kg*	LD_{50} Inhalation (rat)	*640000 ppm*

Signs and Symptoms of exposure	*Methyl alcohol may be fatal or cause blindness if swallowed. Cannot be made non-poisonsous. Ingestion can cause: nausea, headache and vomiting. Gastrointestinal disturbances. Dizziness. Weakness. Confusion. Drowsiness. Unconsciousness. May cause convulsions.*
Route of Exposure	*Causes skin irritation. Toxic if adsorbed through skin. Causes eye irritation. Toxic if inhaled. Material may be irritating to mucous membranes and upper respiratory tract. Toxic if swallowed.*
Target Organ Information	*Eyes. Kidneys. Liver. Heart. Central Nervous System.*

4.11. Ecological Information

Test Type	*LC50 Fish*
Species	*Onchorhynchus mykiss (Rainbow trout)*
Time	*96 h*
Value	*19000 mg/L*

Test Type	*LC50 Fish*
Species	*Cyprinus carpio*
Time	*48 h*
Value	*36000 mg/L*
Test Type	*EC50 Daphnia*
Species	*Daphnia magna*
Time	*48 h*
Value	*24500 mg/L*
Test Type	*EC100 Daphnia*
Species	*Daphnia magna*
Time	*24 h*
Value	*10000 mg/L*

5. Conjugate

5.1. Chemical Characterization / Information on Ingredients

Character	*aqueous, protein-containing mixture preserved with 0.01 % methylisothiazolone and 0.01 % bromonitrodioxane and 10 mg/l Proclin™300.*
CAS-No.	*not determined*

5.2. Hazards Identification

Warnings	*Though complete toxicity information on this conjugate buffer is not available, none of its components are known to be toxic or hazardous at use concentrations. The buffer contains the mercury-free preservatives methylisothiazolone (0.01 %), bromonitrodioxane (0.01 %) and Proclin™300, which can produce adverse health effects in their concentrated forms. For more specific toxicity information on these components, refer to the material safety data sheets available from the manufacturer (Boehringer Mannheim Corporation and Rohm and Haas, respectively).*

5.3. First Aid Measures

Eye Contact	*Promptly wash eyes with water or normal saline, lifting the upper and lower lids occasionally, until no evidence of chemical remains (approximately 15 minutes). Seek medical advice.*
Skin Contact	*Wash thoroughly with water and soap.*
Ingestion	*Wash out mouth with water provided person is conscious. Drink one cup of water or milk to dilute in the stomach. Seek medical advice.*
Inhalation	*No special first aid measures necessary; inhalation or aspiration unlikely.*

5.4. Fire-Fighting Measures

Flash point	*Non-flammable*
Extinguishing Media	*No restriction.*
Special Fire Fighting Procedure	*No special procedures are required. As with any fire, wear full protective clothing and self-contained breathing apparatus.*
Unusual Fire Fighting Procedure	*None*

5.5. Accidental Release Measures

Personal Protection	*Protective glasses, rubber gloves and special protective clothing.*
Steps after Spillage	*Absorb spill with an absorbent cloth, then wash the area thoroughly with soap and water.*
Waste Disposal Method	*Observe all federal, state and local laws when considering waste disposal methods.*

5.6. Handling and Storage

Handling	*Wear protective clothing. Avoid contact with eyes, skin and clothes. Open and handle container carefully. Thoroughly washing after use is recommended.*
Storage	*Store between +2°C and +8°C.*

5.7. Exposure Controls / Personal Protection

Personal Protection	*Protective glasses, rubber gloves and clothing.* *Thoroughly washing after use is recommended.*

5.8. Physical and Chemical Properties

Physical State	*Liquid*	Flash Point	*N/A*
Color	*Red*	Ignition Temperature	*N/A*
Odor	*N/A*	Explosion Limits	*N/A*
pH-Value	*6.2 – 6.7*	Vapor Pressure	*N/A*
Boiling Point	*100°C*	Solubility in Water	*complete*
Melting Point	*N/A*	Viscosity	*N/A*

5.9. Stability and Reactivity

Stability	*Chemically stable*
Incompatibilities	*None known*
Hazardous Polymerisation	*Will not occur*

Hazardous Decomposition Products	*Toxic fumes and carbon monoxide, carbon dioxide, nitrogen oxides*

5.10. Toxicological Information

N/A

5.11. Ecological Information

N/A

6. TMB (Substrate for HRP Conjugate)

6.1. Chemical Characterization / Information on Ingredients

Character	*Product contains 0.05 % Tetramethyl Benzidine (TMB)*
CAS-No	*54827-17-7*
Classification	*Hazardous. Irritant*

6.2. Hazards Identification

Warnings	*Toxic if swallowed. Irritant, handle with care.*

6.3. First Aid Measures

Eye Contact	*Promptly wash eyes with water for at least 15 minutes. Seek medical advice.*
Skin Contact	*Flush skin with copious amounts of water.*
Ingestion	*Wash out mouth with water provided person is conscious. Seek medical advice.*
Inhalation	*N/A*
Changing Clothes	*In case of severe contamination.*

6.4. Fire-Fighting Measures

Extinguishing Media	*Water spray, carbon dioxide, dry chemical powder or appropriate foam.*
Special Fire Fighting Procedure	*N/A*
Unusual Fire Fighting Procedure	*Emits toxic fumes under fire conditions.*
Thermal Decomposition	*Dangerous decomposition is not anticipated.*

6.5. Accidental Release Measures

Personal Protection	*Protective glasses, gloves and clothing*
Steps after Spillage	*Remove spilled fluid onto an inert material. Wash area with soap solution.*
Absorbent Material	*No restriction*
Waste Disposal Method	*Consult a specialist for disposal of the spilled substance.*

6.6. Handling and Storage

Handling	*Wear protective clothing. Open and handle container carefully.*
Storage	*Store between +2°C and +8°C.*
Other Precautions	*N/A*

6.7. Exposure Controls / Personal Protection

TLV	*No*
Personal Protection	*Protective glasses, gloves and clothing.*

6.8. Physical and Chemical Properties

Physical State	*Liquid*	Ignition Temperature	*N/A*
Color	*Yellow*	Explosion Limits	*N/A*
Odor, pH-Value	*N/A*	Vapor Pressure	*N/A*
Solubility in Water	*Soluble*	Boiling Point	*> 100°C*
Flash Point	*N/A*	Viscosity	*N/A*

6.9. Stability and Reactivity

Hazardous Reactions	*N/A*
Hazardous Decomposition Products	*Toxic fumes of carbon monoxide, carbon dioxide and nitrogen oxides.*

6.10. Toxicological Information

LD_{50} Oral	*Not known*	LD_{50} Skin	*Not known*
LD_{50}	*Not known*	LD_{50} Inhalation	*Not known*

6.11. Ecological Information

Water Hazard Class	*1 (own specification)*

7. Stop-Solution (0.5 M Sulfuric Acid)

7.1. Chemical Characterization / Information on Ingredients

Character	*Product contains 0.5 M Sulfuric Acid (H_2SO_4)*
CAS-No of H_2SO_4	*7664-93-9*
EINECS-No.	*213-639-5*
Classification	*Very caustic, toxic, possible carcinogen*

7.2. Hazards Identification

Warnings	*Very caustic, toxic, possible carcinogen after inhalation, irritant, handle with care.*

7.3. First Aid Measures

Eye Contact	*Promptly wash eyes with water for at least 15 minutes. Seek medical advice.*
Skin Contact	*Flush skin with copious amounts of water and soap.*
Ingestion	*Wash out mouth with water provided person is conscious. Seek medical advice.*
Inhalation	*Remove to fresh air. If breathing becomes difficult, seek medical advice.*
Changing Clothes	*In case of severe contamination.*

7.4. Fire-Fighting Measures

Extinguishing Media	*Do not use water. Use carbon dioxide, dry chemical powder or appropriate foam.*
Special Fire Fighting Procedure	*Wear self-containing breathing apparatus and special protective clothes.*
Unusual Fire Fighting Procedure	*Emits toxic fumes under fire conditions.*
Thermal Decomposition	*N/A*

7.5. Accidental Release Measures

Personal Protection	*Protective glasses, gloves and clothing.*
Steps after Spillage	*Remove spilled fluid onto an inert material. Ventilate area. Wash area with soap solution. Collect contaminated fluid and material in a special closable container.*
Absorbent Material	*No restriction*
Waste Disposal Method	*Consult a specialist for disposal of the spilled substance.*

7.6. Handling and Storage

Handling	*Wear protective clothing. Open and handle container carefully.*
Storage	*Store between +2°C and +8°C.*
Other Precautions	*N/A*

7.7. Exposure Controls / Personal Protection

TLV	*No*
Personal Protection	*Protective glasses, rubber gloves and acid-resitant clothing; breathing apparatus in severe cases: thoroughly washing after use is recommended.*

7.8. Physical and Chemical Properties

Physical State	*Liquid*	Vapor Pressure	*N/A*
Color	*Colourless*	Boiling Point	*> 100°C*
Odor	*N/A*	Flash Point	*N/A*
pH-Value	1.0 - 3.0	Solubility in Water	*Soluble*

7.9. Stability and Reactivity

Hazardous Reactions	*Incompatibility with bases, halogenides and metals.*
Hazardous Decomposition Products	*Sulfur oxides.*

7.10. Toxicological Information

LD_{50} Oral	*2140 mg/kg*	LD_{50} Skin	*Not known*
LDL0	*135 mg/kg*	LD_{50} Inhalation (rat)	*510 mg/m^3 (2h)*

7.11. Ecological Information

Water Hazard Class	*1 (own specification), neutralization*

8. Disposal Considerations

Observe all Federal, State and Local laws concerning Health and Pollution.

9. Transport Information

N/A

10. Regulatory Information

N/A

11. Other Information

The information herein is believed to be correct as of the given data but is provided without warranty of any kind. The recipient of our products is responsible for observing any laws and guidelines applicable.