



DIAGNOSTIC AUTOMATION, INC.

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MATERIAL SAFETY DATA SHEET

Aflatoxin B1 ELISA TEST KIT

1. IDENTIFICATION OF THE PREPARATION AND COMPANY.

1.1. Identification of the product:

Product name: **Aflatoxin B1 ELISA TEST KIT**

Product classification: In-vitro diagnostics

Product number: 5120-8

1.2. Manufacturer identification

Company Name: **Diagnostic Automation, Inc.**

Address: 21250 Califa Street, Suite 102 and 116, Woodland Hills,
California 91367

Phone: (818) 591-3030 Fax: (818) 591-8383

E-mail: onestep@rapidtest.com

Website: <http://www.rapidtest.com>

Emergency Telephone number: Please contact the local hospitals.

2. Wash Buffer

The Wash Buffer contains no toxic or otherwise hazardous components

3. Specific Antibody

3.1 Chemical Characterization / Information on Ingredients

Character	<i>aqueous, protein-containing mixture preserved with 0.01 % potassium tetraiodomercurate (K_2HgI_4, resulting complex of KI and HgI_2).</i>
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	<i>Promptly wash eyes with water for at least 15 minutes. Seek medical advice.</i>
Skin Contact	<i>Flush skin with copious amounts of water and soap.</i>
Ingestion	<i>Wash out mouth with water provided person is conscious. Seek medical advice</i>
Inhalation	<i>Remove to fresh air. If breathing becomes difficult, seek medical advice.</i>
Changing Clothes	<i>In case of sever contamination.</i>

3.4 Fire-Fighting Measures

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

3.5 Accidental Release Measures

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

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	<i>Liquid</i>	Flash Point	<i>N/A</i>
Color	<i>Red</i>	Ignition Temperature	<i>N/A</i>
Odor	<i>N/A</i>	Explosion Limits	<i>N/A</i>
pH-Value	<i>6.2-6.7</i>	Vapor Pressure	<i>N/A</i>
Boiling Point	<i>100 °C</i>	Solubility in Water	<i>Complete</i>
Melting Point	<i>N/A</i>	Viscosity	<i>N/A</i>

3.9 Stability and Reactivity

Hazardous Decomposition Products *Mercury*
Hazardous Polymerization *Will not occur*

3.10 Toxicological Information

LD50 Oral (rat)	<i>18 mg/kg</i>	LD50 Skin (rat)	<i>75 mg/kg</i>
LD50 Oral (man)	<i>357 mg/mg</i>	LD50 Inhalation	<i>Not Known</i>

3.11 Ecological Information

Water Hazard Class 1 (own specification)

4. Standards

4.1 Chemical Characterization / Information on Ingredients

Character	<i>Methanol</i>
CAS-No.	<i>67-56-1</i>
EINECS-No.	<i>200-659-6</i>
Classification	<i>Highly flammable, Toxic</i>

4.2 Hazards Identification

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

4.3 First Aid Measures

Eye Contact	<i>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.</i>
Skin Contact	<i>In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.</i>
Ingestion	<i>If swallowed, wash mouth with water provides person is conscious. Call a physician immediately.</i>
Inhalation	<i>If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.</i>

4.4 Fire-Fighting Measures

Extinguishing Media	<i>Water spray. Use carbon dioxide, dry chemical powder or appropriate foam.</i>
Special Fire Fighting Procedure	<i>Wear self-contained breathing apparatus and special protective clothes to prevent contact with skin and eyes.</i>
Special risks	<i>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</i>

4.5 Accidental Release Measures

Personal Protection	<i>Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.</i>
Steps after Spillage	<i>Evacuate area. Shut off all sources of ignition.</i>
Environmental Precaution	<i>Do not allow material to enter drains or water courses</i>
Methods for cleaning up	<i>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.</i>

4.6 Handling and Storage

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

4.7 Exposure Controls / Personal Protection

Engineering Controls	<i>Safety shower and eye bath. Use non-sparking tools. Use only in a chemical fume hood.</i>
Personal Protection	<i>Protective glasses, rubber gloves and clothing. Thoroughly washing after use is recommended</i>

4.8 Physical and Chemical Properties

Physical State	<i>Liquid</i>	Autoignition Temperature	<i>385°C</i>
Color	<i>Colorless</i>	Explosion Limits	<i>Lower: 6% Upper: 36%</i>
Vapor Pressure	<i>97.68 mmHg</i>	Solubility in Water	<i>Miscible</i>
pH-Value	<i>N/A</i>	Solubility in.....	<i>N/A</i>
Boiling Point	<i>64-65 °C</i>		

Melting Point	-98°C	Viscosity	N/A
Flash Point	11°C		

4.9 Stability and Reactivity

Hazardous Reactions	<i>Stable. Avoid acids, acid chlorides, acid anhydrides, oxidizing agents, alkali metals, reducing agents.</i>
Hazardous Decomposition Products	<i>Carbon monoxide, carbon dioxide.</i>
Hazardous Polymerization	<i>Will not occur</i>

4.10 Toxicological Information

LD50 Oral (rat)	5628 mg/kg	LD50 Skin (rabbit)	15800 mg/kg
LD50 Oral (man)	6422 mg/kg	LD50 Inhalation (rat)	640000 ppm

Signs and Symptoms of exposure	<i>Methyl alcohol may be fatal or cause blindness if swallowed. Cannot be made non-poisonous. Ingestion can cause: nausea, headache and vomiting. Gastrointestinal disturbances. Dizziness. Weakness. Confusion. Drowsiness. Unconsciousness. May cause convulsions.</i>
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Route of Exposure	<i>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.</i>
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Target Organ Information	<i>Eyes. Kidneys. Liver. Heart. Central Nervous System.</i>
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4.11 Ecological Information

Test Type	<i>LC50 Fish</i>
Species	<i>Onchorhynchus mykiss (Rainbow trout)</i>
Time	<i>96 h</i>
value	<i>19000 mg/L</i>

Test Type	<i>LC50 Fish</i>
Species	<i>Cyprinus carpio</i>
Time	<i>48h</i>
value	<i>36000mg/L</i>

Test Type	<i>EC50 Daphnia</i>
Species	<i>Daphnia magna</i>
Time	<i>48h</i>
value	<i>24500 mg/L</i>

Test Type	<i>EC50 Daphnia</i>
Species	<i>Daphnia magna</i>
Time	<i>24h</i>
value	<i>10000 mg/L</i>

5. Standard / Sample Diluent

5.1 Chemical Characterization / Information on Ingredients

Character	<i>Product contains 0.02 % Thimerosal (Merthiolate, C₉H₉HgNaO₂S)</i>
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CAS-No.	54-64-8
EINECS-No.	200-210-4
EC Index No.	080-004-00-7
Classification	Toxic, irritant, possibly mutagenic.

5.2 Hazards Identification

Warnings: *Thimerosal may enter the body through the skin, is toxic, alters genetic material, may be irritating to the eyes and causes allergic reactions. Effects of exposure may include numbness of extremities, fetal changes, decreased offspring survival and lung tissue changes*

Routes if entry: *Inhalation and skin absorption*

Effects of overexposure: *Topical allergic dermatitis has been reported. Thimerosal contains mercury. Mercury poisoning may occur and topical hypersensitivity reactions may be seen. Early signs of mercury poisoning in adults are nervous system effects, including narrowing of the visual field and numbness in the extremities. Exposure of mercury in utero and in children may cause mild to severe mental retardation and mild to severe motor coordination impairment. Based on animal data, may be irritating to the eyes*

5.3 First Aid Measures

Eye Contact	<i>Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Seek medical advice.</i>
Skin Contact	<i>Thimerosal is intended for topical application to the skin. However in case of unintentional exposure, especially of large areas of skin, wash with soap and water. If symptoms develop seek medical advice.</i>
Ingestion	<i>Call a physician or poison control centre. Drink one or two glasses of water and give 1-2 tablespoons syrup of ipecac to induce vomiting. Do not induce vomiting or give anything by mouth to an unconscious person. Use of chelating agents such as BAL may be needed to treat ingestion of mercury. Immediately transport to a medical care facility and see a physician.</i>
Inhalation	<i>Remove to fresh air. If breathing becomes difficult, seek medical advice. If not breathing, provide artificial respiration assistance (mouth-to-mouth) and call a physician immediately.</i>
Changing Clothes	<i>In case of sever contamination</i>

5.4 Fire-Fighting Measures

Extinguishing Media	<i>Water spray. Use carbon dioxide, dry chemical powder or appropriate foam.</i>
Special Fire Fighting Procedure	<i>Wear self-containing breathing apparatus and special protective clothes.</i>
Unusual Fire Procedure	<i>Thimerosal as pure substance may form dust mixtures in air which could explode in subjected to an ignition source.</i>
Thermal decomposition	<i>Emits toxic mercury fumes when heated to decomposition.</i>

5.5 Accidental Release Measures

Spills *Wear protective equipment, including eye protection, to avoid exposure. Vacuum material with appropriate dust collection filter in place. Be aware of potential of dust explosion when using electrical equipment. If vacuum is not available, lightly mist material and remove by sweeping or wet wiping.*

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	<i>Liquid</i>	Flash Point	<i>N/A</i>
Color	<i>Colorless</i>	Explosion Limits	<i>N/A</i>
Odor	<i>N/A</i>	Vapor Pressure	<i>N/A</i>
pH-Value	<i>7.0-7.5</i>	Solubility in Water	<i>complete</i>
Boiling Point	<i>100°C</i>	Ignition Temperature	<i>N/A</i>
Melting Point	<i>-N/A</i>	Viscosity	<i>N/A</i>

5.9 Stability and Reactivity

Stability *Stable at normal temperatures and pressures*

Incompatibility *May react with strong oxidizing agents (e.g. peroxides, permanganates, nitric acid etc.)*

Hazardous Decomposition Products *May emit toxic mercury fumes when heated to decomposition.*

Hazardous Polymerization *Will not occur*

5.10 Toxicological Information

Acute exposure

Oral *Rat, median lethal dose 73 mg/kg, reduced activity, drooping eyelids, weakness.*

Skin *No applicable information found.*

Inhalation *No applicable information found.*

Intravenous *Rat, median lethal dose estimated greater than 45 mg/kg, mortality.*

Skin Contact *Rabbit, nonirritant.*

Eye Contact *Rabbit irritant.*

Chronic exposure

Target organ effects *Kidney effects (tubule necrosis), lung effects (tissue changes).*

Other effects *Decreased weight gain.*

Reproduction *Decreased offspring survival.*

Sensitization *No applicable information found.*

Mutagenicity *Mutagenic in mammalian cells. Not mutagenic in bacterial cells.*

5.11 Ecological Information

Water Hazard Class 1 (own specification)

6. Conjugate

6.1 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*

6.2 Hazard 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).*

6.3 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.*

6.4 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*

6.5 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.

6.6 Handling and Storage

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

6.7 Exposure Controls / Personal Protection

Personal Protection	<i>Protective glasses, rubber gloves and clothing. Thoroughly washing after use is recommended</i>
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6.8 Physical and Chemical Properties

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

6.9 Stability and Reactivity

Stability	<i>Chemically stable</i>
Incompatibility	<i>None known</i>
Hazardous Decomposition Products	<i>Toxic fumes of carbon monoxide, carbon dioxide, and nitrogen oxides</i>
Hazardous Polymerization	<i>Will not occur</i>

6.10 Toxicological Information

N/A

6.11 Ecological Information

N/A

7. TMB (Substrate for HRP Conjugate)

7.1 Chemical Characterization / Information on Ingredients

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

7.2 Hazard Identification

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

7.3 First Aid Measures

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

7.4 Fire-Fighting Measures

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

7.5 Accidental Release Measures

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

7.6 Handling and Storage

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

7.7 Exposure Controls / Personal Protection

TLV	<i>No</i>
Personal Protection	<i>Protective glasses, gloves and clothing.</i>

7.8 Physical and Chemical Properties

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

7.9 Stability and Reactivity

Hazardous Reactions	N/A
Hazardous Decomposition Products	<i>Toxic fumes of carbon monoxide, carbon dioxide, and nitrogen oxides</i>

7.10 Ecological Information

LD50 Oral	<i>Not Known</i>	LD50 Skin	<i>Not Known</i>
LD50	<i>Not Known</i>	LD50 Inhalation	<i>Not Known</i>

7.11 Toxicological Information

Water Hazard Class	1 (own specification)
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Chemical Characterization / Information on Ingredients

Character	<i>Product contains 0.5 M Sulfuric Acid (H₂SO₄)</i>
CAS-No.	<i>7664-93-9</i>
EINECS-No.	<i>213-639-5</i>
Classification	<i>Very caustic, toxic, possible carcinogen</i>

8.2 Hazards Identification

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

8.3 First Aid Measures

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

8.4 Fire-Fighting Measures

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

8.5 Accidental Release Measures

Personal Protection	<i>Protective glasses, gloves and clothing.</i>
Steps after Spillage	<i>Remove spilled fluid onto an inert material. Ventilate area. Wash area with soap solution. Collect contaminated fluid and material in</i>

Absorbent Material *a special closable container.*
Waste Disposal Method *No restriction*
Consult a specialist for disposal of the spilled substance.

8.6 Handling and Storage

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

8.7 Exposure Controls /Personal Protection

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

8.8 Physical and Chemical Properties

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

8.9 Stability and Reactivity

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

8.10 Toxicological Information

LD50 Oral	<i>2140 mg/ kg</i>	LD50 Skin	<i>Not Known</i>
LDL0	<i>135 mg/ kg</i>	LD50 Inhalation (rat)	<i>510 mg/m³ (2h)</i>

8.11 Ecological Information

Water Hazard Class *1 (own specification)*

9. Disposal Considerations

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

10. Transport Information


N/A



11. Regulatory Information

N/A

12. 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.

Date Adopted	2017-02-07
 5120-8	Aflatoxin B1 ELISA TEST KIT

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