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

<table>
<thead>
<tr>
<th>Character</th>
<th>aqueous, protein-containing mixture preserved with 0.01 % potassium tetraiodomercurate (K_2HgI_4, resulting complex of KI and HgI_2).</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS-No. (HgI_2)</td>
<td>7774-29-0</td>
</tr>
<tr>
<td>EINECS-No. (HgI_2)</td>
<td>231-873-8</td>
</tr>
<tr>
<td>Classification</td>
<td>Very toxic, irritant</td>
</tr>
</tbody>
</table>

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 materials | 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

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

3.9 Stability and Reactivity

Hazardous Decomposition Products: Mercury
Hazardous Polymerization: Will not occur

3.10 Toxicological Information

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

3.11 Ecological Information

Water Hazard Class: 1 (own specification)

4. Standards

4.1 Chemical Characterization / Information on Ingredients

Character: Methanol
CAS-No.: 67-56-1
EINECS-No.: 200-659-6
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
Protective glasses, rubber gloves and clothing. Thoroughly washing after use is recommended.

4.8 Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoignition Temperature</td>
<td>385°C</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>Lower: 6%</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>97.68 mmHg</td>
</tr>
<tr>
<td>Upper: 36%</td>
<td></td>
</tr>
<tr>
<td>pH-Value</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Miscible</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>64-65 °C</td>
</tr>
<tr>
<td>Solubility in…….</td>
<td>N/A</td>
</tr>
</tbody>
</table>
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 Polymerization
Will not occur

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

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

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      | 48h        |
| value     | 36000 mg/L |

| Test Type | EC50 Daphnia |
| Species   | Daphnia magna |
| Time      | 48h         |
| value     | 24500 mg/L  |

| Test Type | EC50 Daphnia |
| Species   | Daphnia magna |
| Time      | 24h          |
| value     | 10000 mg/L   |

5. Standard / Sample Diluent

5.1 Chemical Characterization / Information on Ingredients

Character
Product contains 0.02 % Thimerosal (Merthiolate, C9H9HgNaO2S)
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 of 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**
Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Seek medical advice.

**Skin Contact**
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.

**Ingestion**
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.

**Inhalation**
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.

**Changing Clothes**
In case of severe contamination

5.4 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.

**Unusual Fire Procedure**
Thimerosal as pure substance may form dust mixtures in air which could explode in subjected to an ignition source.

**Thermal decomposition**
Emits toxic mercury fumes when heated to decomposition.

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

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>N/A</td>
</tr>
<tr>
<td>pH-Value</td>
<td>7.0-7.5</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>100°C</td>
</tr>
<tr>
<td>Melting Point</td>
<td>-N/A</td>
</tr>
</tbody>
</table>

Flash Point  
N/A

Explosion Limits  
N/A

Vapor Pressure  
N/A

Solubility in Water  
Complete

Ignition Temperature  
N/A

Viscosity  
N/A

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

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.

6.7 Exposure Controls / Personal Protection

Personal Protection

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

6.8 Physical and Chemical Properties

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

6.9 Stability and Reactivity

Stability

Chemically stable

Incompatibility

None known

Hazardous Decomposition Products

Toxic fumes of carbon monoxide, carbon dioxide, and nitrogen oxides

Hazardous Polymerization

Will not occur

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

<table>
<thead>
<tr>
<th>Character</th>
<th>Product contains 0.05 % Tetramethyl Benzidine (TMB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS-No.</td>
<td>54827-17-7</td>
</tr>
<tr>
<td>Classification</td>
<td>Hazardous. Irritant</td>
</tr>
</tbody>
</table>

7.2 Hazard Identification
Warnings: Toxic if swallowed. 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.

Ingestion
Wash out mouth with water provided person is conscious. Seek medical advice.

Inhalation
N/A

Changing Clothes
In case of severe contamination.

7.4 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

7.5 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.

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, gloves and clothing.

7.8 Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>N/A</td>
</tr>
<tr>
<td>pH-Value</td>
<td>N/A</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt; 100 °C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Ignition Temperature</td>
<td>N/A</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
</tbody>
</table>

7.9 Stability and Reactivity
Hazardous Reactions
Hazardous Decomposition Products
N/A
Toxic fumes of carbon monoxide, carbon dioxide, and nitrogen oxides

7.10 Ecological Information

LD50 Oral Not Known LD50 Skin Not Known
LD50 Not Known LD50 Inhalation Not Known

7.11 Toxicological Information

Water Hazard Class 1 (own specification)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Chemical Characterization / Information on Ingredients

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

8.2 Hazards Identification

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

8.3 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 Remove to fresh air. If breathing becomes difficult, seek medical advice.
Changing Clothes In case of severe contamination.

8.4 Fire-Fighting Measures

Extinguishing Media Water spray, 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

8.5 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
Absorbent Material: No restriction
Waste Disposal Method: 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: Liquid
- Color: Colorless
- Odor: N/A
- pH-Value: 1.0-3.0
- Flash Point: N/A
- Vapor Pressure: N/A
- Solubility in Water: Soluble
- Boiling Point: > 100 °C

8.9 Stability and Reactivity

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

8.10 Toxicological Information

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

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
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.

<table>
<thead>
<tr>
<th>Date Adopted</th>
<th>2017-02-07</th>
</tr>
</thead>
<tbody>
<tr>
<td>REF 5120-8</td>
<td>Aflatoxin B1 ELISA TEST KIT</td>
</tr>
</tbody>
</table>

DIAGNOSTIC AUTOMATION, INC.
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Tel: (818) 591-3030 Fax: (818) 591-8383
ISO 13485-2003

Revision Date: 2008-02-15