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MATERIALS SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING:

Product Name: Rat Alpha GST EIA

Cat No. BIO64RT

USE: Rat Alpha GST EIA is an enzyme immunoassay for the quantitative estimation of rat alpha Glutathione S-Transferase (α GST) in biological fluids such as serum, urine and tissue culture supernatants.

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2. COMPOSITION / INFORMATION ON INGREDIENTS:

<u>Reagent</u>	<u>Content</u>
<u>Coated Strips:</u>	12 x 8 well strips coated with IgG directed against rat α GST.
<u>Enzyme Conjugate:</u>	12mL of anti rat α GST IgG conjugated to horseradish peroxidase. Contains Thiomersal and Triton X100.
<u>αGST Calibrator:</u>	200 μ L purified rat α GST (YaYc isoform) in stabilising diluent. Contains Thiomersal and Sodium Azide.
<u>Positive Control:</u>	500 μ L purified rat α GST in stabilising diluent. Contains Thiomersal and Sodium Azide.
<u>Sample Diluent:</u>	55mL of ready to use diluent. Contains 1% Triton X100 and Sodium Azide.
<u>Wash Concentrate:</u>	55mL of a concentrated buffer (25x). Contains Thiomersal and 6% Trizma Base
<u>Substrate:</u>	11mL of Tetramethylbenzidine (TMB) solution
<u>Stop Solution:</u>	11mL of 0.5M (4.9% w/w) Sulphuric Acid H₂SO₄
<u>Rat Urine Stabilisation Buffer:</u>	10mL of stabilising buffer. Contains Sodium Azide and Thiomersal



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HAZARDS IDENTIFICATION:

Thiomersal is toxic by inhalation, in contact with skin and if swallowed. Is irritating to eyes, respiratory system and skin. It is a possible mutagen which may affect kidneys and nerves.

Sodium Azide is an irritant. Avoid contact with components containing azide. Do not ingest or inhale. Harmful if swallowed. Contact with acids liberates very toxic gas.

Sulphuric acid is corrosive. Avoid contact with the skin and eyes. If contact occurs rinse immediately with water and seek medical advice.

TMB (3,3',5,5' – tetramethylbenzidine) may irritate the skin and mucous membranes. Any substrate that comes in contact with the skin should be rinsed off with water.

Trizma Base is irritating to eyes, respiratory system and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Triton X100 is harmful. Risk of serious damage to eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

3. FIRST AID MEASURES: Applicable for all kit components

Inhalation: If exposure is severe remove to fresh air

Skin: Wash skin with copious amounts of water.

Eye: Flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing of the eyes by separating the eyelids. If any irritation persists, obtain medical assistance.

Ingestion: Wash out mouth with copious amounts of water. Give plenty of water to drink. Obtain medical attention if large quantity is ingested.

4. FIRE FIGHTING MEASURES:

Precautions during fire: Avoid inhalation of fumes

Suitable extinguishing media: Dry chemical powder. Do not use water on sodium azide containing components.

Special exposure hazards: Some components may decompose and emit toxic fumes under fire conditions (Sodium Azide, TMB, Thiomersal).



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Special procedures:

Self-contained breathing apparatus may be required if heavy fumes are emitted. It is advisable for protective clothing to be worn to prevent contact with skin and eyes.

5. ACCIDENTAL RELEASE MEASURES:

Environmental precautions: The Positive Control, Sample Diluent, Calibrator and Urine Stabilisation Buffer contain sodium azide which may form potentially explosive metal azides with lead and copper plumbing. For disposal these reagents should be flushed with large volumes of water to prevent azide build up.

Methods for cleaning up: Wipe up spills with absorbent paper, then clean area with a concentrated chlorine solution, 0.5% (for example 0.5% hypochlorite). Discard all materials used to wipe up spills using biohazard waste facilities.

6. HANDLING AND STORAGE:

Handling: For all reagents – wear gloves and avoid contact with the skin

Storage: Store all reagents and coated strips at 2-8°C
Positive Control and αGST Calibrator concentrate store at -20 °C

7. EXPOSURE CONTROLS:

Some of the reagents in this kit contain toxic or irritant components (Refer to section 3). Wear protective clothing, disposable latex gloves and eye protection while handling specimens and performing the assay. Wash hands thoroughly when finished.

8. PHYSICAL AND CHEMICAL PROPERTIES:

Not Applicable

9. STABILITY AND REACTIVITY:

The stop solution (0.5M H₂SO₄) is incompatible with water and bases.

The Urine Stabilisation Buffer, Sample Diluent, Calibrator and Positive Control contain sodium azide which may form potentially explosive metal azides with lead and copper plumbing. Sodium azide explodes when heated and may form hazardous combustion or decomposition products.

Substrate (TMB solution) is incompatible with strong oxidizing agents. Thiomersal is incompatible with strong oxidising agents, strong acids and strong bases.



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10. TOXICOLOGICAL INFORMATION:

Some reagents contain Thiomersal and/or Sodium Azide both of which are toxic by inhalation, in contact with skin and if swallowed. Thiomersal may be fatal if inhaled / swallowed. TMB has shown a possible mutagenic effect in experimental animals. Material may be irritating to the respiratory system.

11. ECOLOGICAL INFORMATION:

TMB is toxic to aquatic organisms, miscible with water, may cause long term adverse effects in the aquatic environment. Avoid emptying into waters or drains. H₂SO₄ is harmful to aquatic life in very low concentrations. It may be dangerous if it enters water intakes. Thiomersal is highly toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment. Do not allow to enter waters, waste water or soil.

12. DISPOSAL / CONSIDERATIONS

Dispose of all clinical specimens, infected or potentially infected material in accordance with good laboratory practice. All such materials should be handled and disposed of as if potentially infectious. Chemical residues are generally classified as special waste, and such are covered by regulations which vary according to location. Contact your local waste authority for advice, or pass to a registered chemical disposal company. Observe all local, state and federal regulations.

13. TRANSPORT INFORMATION:

This manufactured product is not subject to International Air Transport Association Dangerous Goods Regulations.

14. REGULATORY INFORMATION AND CONSIDERATIONS:

European Union Directive 67/548/EEC;
European Union Directive 1999/45/EC;
EU Regulation 1907/2006
Products are manufactured using GMP


15. OTHER INFORMATION:

Training: This product should only be handled by individuals technically qualified in handling potentially biohazardous material.

The contents of this MSDS should be known before use.



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Approved: 
Health and Safety Officer

Date: 31/03/09

Approved: 
Senior Management Team Member

Date: 31/03/09