

**1. PRODUCT AND COMPANY IDENTIFICATION**

Trade Name: QuantiChrom™ Gluthathione S-Transferase Assay Kit  
 Item Number: DGST-100  
 Manufacturer: BioAssay Systems  
 3191 Corporate Place  
 Hayward, CA 94545. USA  
 Tel: 510-782-9988; Fax: 510-782-1588  
 Email: info@bioassaysys.com

*Special firefighting procedures:* wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

*Unusual fire and explosion hazards:* emits toxic fumes under fire conditions.

**2. HAZARDS IDENTIFICATION**

**GHS Classification**

Acute toxicity, Oral (Category 3), H301  
 Acute toxicity, Inhalation (Category 3), H331  
 Acute toxicity, Dermal (Category 2), H310  
 Serious eye damage (Category 1), H318  
 Specific target organ toxicity - repeated exposure (Category 2), H373  
 Chronic aquatic toxicity (Category 1), H410

**GHS Label elements, including precautionary statements**

*Pictogram*

Signal word: Danger



*Hazard statements*

H301 + H331 Toxic if swallowed or if inhaled  
 H310 Fatal in contact with skin.  
 H318 Causes serious eye damage.  
 H373 May cause damage to organs through prolonged/repeated exposure.  
 H410 Very toxic to aquatic life with long lasting effects.

*Precautionary statements*

P210 Keep away from heat/sparks/open flames/hot surfaces.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/clothing and eye/face protection.  
 P302 + P352: *If on skin:* Wash with plenty of soap and water.  
 P304 + P340: *If inhaled:* Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P305 + P351 + P338: *If in eyes:* Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P312 Call a doctor/ physician if you feel unwell.  
 P332 + P313: If skin irritation occurs: Get medical advice/ attention.  
 P337 + P313: If eye irritation persists: Get medical advice/ attention.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

This product contains the following components and mixture of the following substances with non-hazardous additions.

**Assay Buffer: 25 mL Liquid**

Non-hazardous.

**Glutathione: <20 mg powder**

Non-hazardous.

**CDNB: 120 µL Liquid**

Contains 0.1-0.5% 1-Chloro-2,4-dinitrobenzene (CAS #: 97-00-7) and 99% dimethyl sulfoxide (CAS#: 67-68-5).

**4. FIRST AID MEASURES**

*Eye:* Eye irritation. Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get immediate medical attention.

*Skin:* Itching or burning of the skin. Immediately flush the skin with plenty of water while removing contaminated clothing and shoes. Get immediate medical attention. Wash contaminated clothing before reuse.

*Inhalation:* Remove exposed person from source of exposure to fresh air. If not breathing, clear airway and start cardiopulmonary resuscitation (CPR). Avoid mouth-to-mouth resuscitation.

*Ingestion:* Get immediate medical attention. Do not induce vomiting unless directed by medical personnel.

**5. FIRE FIGHTING MEASURES**

*Extinguishing media:* water spray, carbon dioxide, dry chemical powder or appropriate foam.

**6. ACCIDENTAL RELEASE MEASURES**

Keep unnecessary people away; isolate hazard area and deny entry. Small spills: Take up with sand or other noncombustible absorbent material and place into containers for later disposal. Large spills: Dike far ahead of liquid spill for later disposal. Do not flush to sewer or waterways. Prevent release to the environment if possible.

**7. HANDLING AND STORAGE**

Keep receptacles tightly sealed and store according to the instructions in the assay protocol.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Follow standard laboratory safety procedures, including wearing chemical safety goggles, face shield, gloves, NIOSH approved respiratory protection and protective clothing. Wash and dry hands.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Refer to 3. Composition/Information On Ingredients.

**10. STABILITY AND REACTIVITY**

*Thermal Decomposition:* no decomposition if used according to specifications. *Dangerous Products of Decomposition:* nitrogen and sulfur oxides. *Dangerous Reactions:* none.

**11. TOXICOLOGICAL INFORMATION**

The toxicological effects of this product have not been thoroughly studied. We recommend handling all chemicals with caution.

1-Chloro-2,4-dinitrobenzene - Acute toxicity Oral LD50 rat, 640 mg/kg; Inhalation: no data available; Dermal LD50 rabbit, 130 mg/kg; Skin corrosion/irritation: rabbit, severe skin irritation-24h; Serious eye damage/eye irritation: rabbit, severe eye irritation-24h.

Dimethyl sulfoxide - Acute toxicity Oral LD50 rat, 14,500 mg/kg; Inhalation LC50 rat 4h: 40250ppm. Dermal LD50 rabbit: >5,000 mg/kg; Other information on acute toxicity: no data available.

**12. ECOLOGICAL INFORMATION**

Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

**13. DISPOSAL INFORMATION**

Dispose in accordance with local, state or national regulations.

**14. TRANSPORT INFORMATION**

Proper Shipping Name: Chemical Kit, UN 3316

DOT (US) - Not dangerous goods.

IMDG - Not dangerous goods.

IATA - Not dangerous goods.

*Additional Transport Information:* transport in accordance with local, state and national regulations.

**15. REGULATORY INFORMATION**

*OSHA Hazards:* Target Organ Effect.

*SARA 311/312 Hazards:* Chronic Health Hazard.

**16. OTHER INFORMATION**

*The above information is believed to be accurate, but does not purport to be all inclusive and shall be used only as a guide. BioAssay Systems makes no warranty, express or implied, and assumes no responsibility as to the accuracy or suitability of such information or application to the User's intended purpose or for consequences of its use. The Users should make independent decisions regarding the completeness of information based on all sources available.*