



## 1-Substance Identity and Company Contact Information

### **ELISA Kits**

Quansys Biosciences  
365 North 600 West  
Logan, Utah 84321  
Telephone: 888-782-6797  
Facsimile: 435-750-6869  
[www.quansysbio.com](http://www.quansysbio.com)

## 2-Composition/Data on components

Solutions in the ELISA kit are multicomponent mixtures in water. Only BSA and trehalose exceed the 1% concentration for non-extremely hazardous substances (EHS) outlined in 40CFR Part §370.14(c).

### **Hazardous Components:**

Bronidox L, CAS# 30007-47-7 Concentration: <.001%.

Kathon GC/ICP, Mixture, Concentration: 0.1%.

- 5-Chloro-2-methyl-4-isothiazolin-3-one, CAS# 26172-55-4. Concentration 1.1 - 1.25%.
- 2-Methyl-4-isothiazolin-3-one, CAS# 2682-20-4. Concentration: 0.3 - 0.45%.
- Magnesium Chloride, CAS# 7786-30-3. Concentration: .5-.1%.
- Magnesium nitrate, CAS# 10377-60-3. Concentration: 21-23.5%.
- Water, CAS# 7732-18-5. Concentration: 74-77%.

Trehalose, CAS# 6138-23-4. Concentration: < 4 w/v %.

Pluronic F-68, CAS#9003-11-6, Concentration: ≤.05%.

Ethylene glycol tetraacetic acid (EGTA), CAS# Concentration: <0.04% w/v.

Tween-20, CAS# 9003-11-6, Concentration: 0.05%.

Bovine serum albumin, CAS# 9048-46-8. Concentration: <8%.

## 3-Hazard Identification

The following information is provided by our suppliers pertaining to undiluted full strength chemicals, not at the concentrations which are in the kit (see above concentrations). To the best of our knowledge, toxicological information at the concentrations found in this kit is not available.

- Kathon CG/ICP: Corrosive, causes severe eye/skin burns. May trigger sensitization with skin contact. Inhalational irritant.

1. Eyes: Can cause corrosion to eyes, and permanent eye injury.
  2. Skin: Can cause corrosion to the skin, burns, and sensitization insusceptible individuals.
  3. Ingestion: May be harmful if swallowed
  4. Inhalation: Inhalation may cause irritation of nose, throat, and lungs.
- Trehalose
    1. Eyes: May cause irritation.
    2. Skin: May cause irritation.
    3. Ingestion: Hazardous if ingested.
    4. Inhalation: May be hazardous.
  - Bovine serum albumin
    1. Eyes: May cause irritation.
    2. Skin: May cause skin sensitization.
    3. Ingestion: May cause gastro-intestinal upset
    4. Inhalation: Low hazard expected.

#### 4-First Aid Measures

**Inhalation:** Remove to fresh air. If there is difficulty breathing, seek medical attention. Give artificial respiration if breathing stops.

**Ingestion:** If conscious rinse mouth with water. Seek medical attention. Do not induce vomiting unless directed by a medical professional.

**Skin exposure:** Flush site of exposure with water. Cold water may be used. Wash site of injury with non-abrasive soap. Remove contaminated clothing and wash prior to re-wearing. Seek medical attention if irritation persists.

**Eye exposure:** Remove contact lenses (if applicable) and immediately flush with water for a minimum of 15 minutes. Seek medical attention if irritation persists.

#### 5-Fire Fighting Measures

**Flash Points:** Unknown

**Explosion limits:** Unknown

**Extinguishing media:** Use media appropriate to the surrounding fire.

**Specific hazard to fire fighting:** Unknown

#### 6-Accidental Release Measures

**Small spill and leak:** Using appropriate tools and protective equipment dispose of spilled solid or liquids in a waste disposal container according to applicable regulations. Clean contaminated surface with water.

#### 7-Handling and Storage

**Handling:** Avoid contact with skin and eyes. Avoid ingestion.

**Storage:** See insert for storage conditions. Do not store near food or feed.

## 8-Exposure Controls and Personal Protection

**Engineering controls:** Eyewash and shower.

**Personal Protective Equipment:** Gloves, lab coat, and eye protection recommended.

## 9-Physical and Chemical Properties

**Physical state and appearance:** Lyophilized pellets or liquids.

**Dispersion properties:** Not applicable.

**Solubility:** Liquids are water soluble.

**Odor:** No readily apparent odor.

**Taste:** Not tested.

**Color:** Liquids are clear to brownish in appearance.

## 10-Stability and Reactivity

**Stability and hazardous reaction:** Product is stable at recommended storage conditions.

**Materials to avoid:** Strong oxidizing agents.

**Conditions to avoid:** Heat over 600° F (316° C)

**Hazardous decomposition products:** dense smoke, carbon monoxide, carbon dioxide, styrene, benzene, and other hydrocarbons can be released at temperatures above 600 °F (316° C).

**Polymerization:** Kits will not polymerize.

## 11-Toxicological Information

### **Kathon CG/ICP**

Acute:

- LD<sub>50</sub> Oral rat male 3350 mg/kg, oral rat female 2630 mg/kg.
- Rat inhalation LC<sub>50</sub> 4 hour .33 mg/l.
- Dermal: LD<sub>50</sub> rabbit >5000 mg/kg.
- Skin irritation: rabbit corrosive.
- Eye irritation: rabbit corrosive.
- Sensitization: guinea pig causes irritation.

Chronic: Not given.

Carcinogenicity: Non carcinogenic in rat oral and mouse dermal models.

Mutagenicity: None.

Teratogenicity: None.

Reproductive: None.

Developmental: Not given.

### **Trehalose**

Acute:

- LD<sub>50</sub> Oral rat male 4600 mg/kg.
- Inhalation: No data available. May be irritating if inhaled.
- Dermal: no human skin irritation after 48 hours. May be harmful if absorbed through the skin.
- Skin irritation: May cause irritation.
- Eye irritation: May cause irritation.
- Sensitization: May cause irritation.

Chronic: Not given.

Carcinogenicity: Not given.

Mutagenicity: Not given.

Teratogenicity: Not given.

Reproductive: OSHA reproductive hazard.

Developmental: Not given.

## **BSA**

Acute:

- Lethality: No data available.
- Inhalation No data available.
- Dermal: No data available.
- Skin irritation: No data available.
- Eye irritation: No data available.
- Sensitization: No data available.

Chronic: Not given.

Carcinogenicity: Not classified as carcinogenic.

Mutagenicity: No data available.

Teratogenicity: No data available.

Reproductive: No data available.

Developmental: No data available.

## 12-Ecological Information

Stability and Bioaccumulation: Unknown, plates unlikely to rapidly biodegrade.

Ecotoxicity: Unknown.

## 13-Disposal Considerations

All materials in this kit must be disposed of according to local, state, and federal regulations.

## 14-Transport Information

- DOT Proper shipping name: None
- These kits are shipped as non-hazardous.

## 15-Regulatory Information

- Kathon CG/CIP is considered hazardous under the OSHA hazard communication standard 29 CFR 1910.1200.
  1. Kathon CG/ICP is excluded from the supplier and labeling and material safety data sheet requirements of section 12 of the Canadian Hazardous Products Act as it is subject to regulation by the Pest Control Products Act (P.C.P. Act).
  2. SARA Title III, Section 311/312 Categorizations (40CFR370): Acute Health Hazard.
  3. SARA TITLE III, Section 313 Information (40CFR372): Magnesium nitrate CAS# 10377-60-3 is at or above *de minimis* concentrations.
  4. CERCLA (40CFR302.4): There is insufficient quantity in this kit of Kathon CG/ICP to attain the 100 lb reportable release quantity. Kathon CG/ICP is regulated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304. This material is or contains chemical(s) listed in 40 CFR Table 302.4 or nondesignated RCRA ICR substance(s)
  5. Kathon GC/ICP is exempt from the US Toxic Substances Control Act (TSCA) inventory listing requirements as it is subject to the US Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).
- Trehalose
  1. OSHA: Reproductive hazard.
  2. TSCA: On TSCA inventory.
  3. SARA Title III, Section 311/312 Categorizations (40CFR370): Chronic Health Hazard.
- BSA
  1. No known hazards or reporting requirements.

## 16-Other Information

Kathon: HMIS Health 3, Fire 0, Reactivity 0.

BSA: Health 0, Fire 1, Reactivity 0.

Trehalose: HMIS Health 1, Fire 0, Reactivity 0.

This product is sold for use by well trained laboratory personnel that are adept at avoiding spills, keeping hands clean, and not rubbing eyes in the laboratory. The information in this MSDS is believed to be correct but is not intended to be all inclusive and should only be used as a guide. Quansys Biosciences shall not be held liable for any damage that occurs from handling or contacting this product.



**LI-COR, Inc.**  
4647 Superior Street  
P.O. Box 4425  
Lincoln, NE 68504 USA

Phone: (402) 467-0700  
Toll Free: (800) 447-3576  
Fax: (402) 467-0819  
www.licor.com

## MATERIAL SAFETY DATA SHEET

Part No. 926-32230, 926-32231

**24 Hour Phone (CHEMTREC) (800)424-9300**  
**(CHEMTREC is for chemical emergencies)**  
**Information Phone (215)781-9255**

### 1. PRODUCT IDENTIFICATION

IRDye® 800CW Streptavidin  
IRDye® 680CW Streptavidin

### 2. COMPOSITIONS AND INFORMATION ON INGREDIENTS

Chemical Name	CAS#	W/V%	EXPOSURE LIMITS IN AIR-OSHA			
			PEL	STEL	IDLH	OTHER
NE = NOT ESTABLISHED			mg/m <sup>3</sup>	mg/m <sup>3</sup>	mg/m <sup>3</sup>	mg/m <sup>3</sup>
<b>As reconstituted with Deionized Water</b>						
<b>COMPONENTS:</b>						
Potassium Chloride	7447-40-7	<1	NE	NE	NE	NE
Sodium azide	26628-22-8	<.005	NE	NE	NE	NE
Dye labeled proteins	N/A	<1	NE	NE	NE	NE
Sodium Chloride	7647-14-5	<1	NE	NE	NE	NE
Phosphate buffer	N/A	<1	NE	NE	NE	NE

### 3. HAZARD IDENTIFICATION

**Emergency Overview:** None of the components in this mixture have an established exposure limit, or contribute significantly to the hazards associated with the product. All hazard information pertinent to this product has been provided in the Material Safety Data Sheet per requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Symptoms of Over-Exposure by Route of Exposure:** No major adverse health effects should occur from routine occupation use of this material in the manner specified by the manufacturer's instruction. The only likely symptom of exposure would be reddening or inflammation after accidental injection.

### 4. FIRST AID MEASURES

**Skin Exposure:** Basic hygiene should prevent any problems. If contact with this product leads to reddening, inflammation or irritation, flush the exposed area with running water. Remove any contaminated clothing, taking care not to contaminate eyes.

**Eye Exposure:** If liquids or vapors of this product's components enter the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes.

**Inhalation:** If vapors, mists or sprays of the products components are inhaled, causing irritation, remove victims to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.

**Ingestion:** If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is *unconscious, having convulsion, or unable to swallow*.

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to physician or health professional with victim.

## 5. FIRE-FIGHTING MEASURES

**Unusual Fire And Explosion Hazards:** When involved in a fire, this material may decompose and produce irritating fumes and toxic gases (including carbon monoxide, carbon dioxide and oxides of nitrogen).

**Flash Point, °C:** N/A

**Auto ignition Temperature, °C:** N/A

**Flammable Limits (In Air By Volume, %):** N/A

**Fire Extinguishing Materials:** Use suppression methods for surrounding materials.

## 6. ACCIDENTAL RELEASE MEASURES

**Spill And Leak Response:** For small releases, treat the product as water, but take basic hygiene precautions. Lightweight gloves, a lab coat, and eye protection should be worn. Absorb spilled material with paper towels. Wash contaminated area with soap and water, absorb with paper towels and rinse with water. Trained personnel using pre-planned procedures would respond to large releases that are not immediately controlled. Proper protection equipment should be used. In case of a spill, clear the affected area, protect people and respond with trained personnel.

In the event of a non-incident, minimum release, Personal Protective Equipment should be:

**Level D: lab gloves, chemical resistant apron, boots and splash goggles. Respiratory protection should not be necessary.** Absorb spilled liquid with poly pads or other suitable absorbent materials. Decontaminate the area thoroughly. Place all spill residues in a suitable container and seal. Dispose of in accordance with Federal, State and local hazardous waste disposal regulation.

## 7. HANDLING and STORAGE

**Work Practices And Hygiene Practices:** As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash hands after handling this product. Avoid splashing or spraying this product. Do not eat or drink while handling this product.

**Storage And Handling Practices:** All employees who handle this material should be trained to handle it safely. Avoid breathing vapors or mists generated by this product. Ensure that containers of this product are properly labeled. Open containers slowly on a stable surface. Store vials as directed in the product insert. Keep vials tightly closed when not in use. Store away from incompatible materials. Inspect vials containing this product for leaks or damage. Prior to use, read instruction provided with product.

**Protective Practices During Maintenance Of Contaminated Equipment:** Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely, as applicable. Always use this product in areas where adequate ventilation is provided. Decontaminate equipment using soapy water before maintenance begins. Collect all rinsates and dispose of according to applicable Federal, State or Local procedures.

## 8. EXPOSURE CONTROLS-PERSONAL PROTECTION

**Ventilation And Engineering Controls:** Use with adequate ventilation. Use a mechanical fan or vent area to outside, if necessary. Eye-wash stations should be available near location where his product is used.

**Respiratory Protection:** Respiratory protection is generally not needed when using this product. Maintain airborne contaminant concentration below limits listed in Section 2. (Composition and Information on Ingredients). If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134 or applicable State regulations. Use supplied air respiration protection if oxygen levels are below 19.5% or are unknown.

**Eye Protection:** Splash goggles or safety glasses.

**Hand Protection:** Wear butyl rubber gloves for routine industrial use.

**Body Protection:** Use body protection appropriate for task, such as a lab coat.

## 9. PHYSICAL and CHEMICAL PROPERTIES

**Relative Vapor Density (Air =1):** N/A

**Specific Gravity (Water=1):** N/A

**Solubility In Water:** Soluble

**Appearance And Color:** N/A

**How To Detect This Substance:** There are no unusual warning properties associate with these solutions.

**Evaporation Rate:** N/A

**Freezing/melting Point:**

N/A

**Boiling Point:** N/A

**Ph:** N/A

## 10. STABILITY and REACTIVITY

**Stability:** Stable

**Decomposition Products:** Carbon dioxide, carbon monoxide, ammonia, hydrogen chloride, oxides of nitrogen.

**Hazardous Polymerization:** Will not occur

**Conditions To Avoid:** Any conditions which are incompatible with water, incompatible chemicals.

## 11. TOXICOLOGICAL INFORMATION

### **Toxicity Data:**

**Suspected Cancer Agent:** The chemicals in the product's solutions are not found on the following lists: NTP, IARC, Federal OSHA Z-list and CAL-OSHA, and therefore are not considered to be, nor suspected by these agencies, to be cancer causing agents.

**Irritancy Of Product:** Although not tested, the other components of this product are not expected to cause irritancy to the skin. Mild eye irritation may occur if the other components of this product enter the eye.

**Sensitization To The Product:** The chemicals in this product's solutions are not know to be sensitizer with prolonged or repeated use.

**Reproductive Toxicity Information:** Listed below is information concerning the effects of this product and its components on the human reproductive system.

**Mutagenicity:** This product is not reported to produce mutagenic effects in humans.

**Embryo toxicity:** This product is not reported to cause human teratogenic effects. Refer to the following paragraph for additional information.

**Teratogenicity:** This product is not reported to cause human teratogenic effects.

**Reproductive Toxicity:** This product is not reported at this time to cause adverse reproductive effects in humans.

**Medical Condition Aggravated By Exposure:**No specific medical conditions are known to be aggravated by exposure to other solutions of this product.

**Recommendation To Physicians:** This product is not expected to cause clinical symptoms. If symptoms occur, treat the symptoms and eliminate over-exposure.

**Biological Exposure Indices (BEI's):** Currently, there are no Biological Exposure Indices (BEI's) applicable to the components of this product.

## 12. ECOLOGICAL INFORMATION

**Environmental Stability:** The chemicals in this product's solutions will degrade in the environment into organic and inorganic constituents.

**Effect Of Material On Plants Or Animals:** No unusual effects on plants or animals are expected if this product is released into the environment. See Section 11 (Toxicological Information) for further information regarding the effects of chemicals in this product's solutions on test animals.

## 13. DISPOSAL CONSIDERATIONS

**Preparing Wastes For Disposal:** Waste Disposal must be in accordance with appropriate Federal, State and local regulation. This product, if altered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

**EPA Waste Number:** Not applicable to this product.

## 14. TRANSPORTATION INFORMATION

**This material is not hazardous as defined by 49 CFR 172.101 by the U.S. Department of Transportation. This material is not considered as Dangerous Goods.**

**Proper Shipping Name:** N/A

**Hazard Class Number And Description:** N/A

**UN Identification Number:** N/A

**Packing Group:** N/A

## 15. REGULATORY INFORMATION

**SARA Reporting Requirements:** These chemicals are not subject to Sections 302, 304, and 313 reporting requirements under the Superfund Amendment and Reauthorization Act.

Chemical	SARA 302	SARA 304	SARA 313
SARA Threshold Planning Quantity:	N/A		
TSCA Inventory Status:	N/A		
CERCLA Reportable Quantity (RQ):	N/A		

**Other Federal Regulations:** N/A

## 16. OTHER INFORMATION

**Created:** 09/06/05

**Revised:** 03/24/09

**Prepared By LI-COR, Inc.**  
**Safety and Compliance Department**  
**4647 Superior Street, Lincoln, NE 68504**  
**(402) 467-0700**