SAFETY DATA SHEET
Cat# K943 Sulforhodamine B Cell Cytotoxicity Assay Kit
SDS DATE: Sep 28, 2016

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Sulforhodamine B Cell Cytotoxicity Assay Kit
PRODUCT CODES: Cat# K943-100
MANUFACTURER: BioVision, Inc.
DIVISION:
ADDRESS: 155 S. Milpitas Blvd. Milpitas, CA 95035

EMERGENCY PHONE: 858-373-8066
CHEMTREC PHONE: 408-493-1800
FAX PHONE: 408-493-1801

SECTION 2: HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Volume</th>
<th>Safety Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixation Solution</td>
<td>Contains Trichloroacetic Acid</td>
<td>55 ml</td>
<td>See below</td>
</tr>
<tr>
<td>20X Washing Solution</td>
<td>Contains Acetic Acid</td>
<td>50 ml</td>
<td>See below</td>
</tr>
<tr>
<td>10X Solubilization Solution</td>
<td>Liquid</td>
<td>22 ml</td>
<td>No hazards</td>
</tr>
<tr>
<td>SRB Dye</td>
<td>SRB Dye</td>
<td>1 Vial</td>
<td>See below</td>
</tr>
<tr>
<td>20 mM Doxorubicin</td>
<td>Doxorubicin in DMSO</td>
<td>100 µl</td>
<td>No hazards</td>
</tr>
</tbody>
</table>

Acetic Acid:
Emergency Overview
Other hazards which do not result in classification: Explosive when dry.
GHS Classification: Skin corrosion (Category 1A), H314
Serious eye damage (Category 1), H318

GHS Label elements, including precautionary statements
Pictogram:

Signal word: Danger
Hazard statement(s): H314 Causes severe skin burns and eye damage.
Precautionary statement(s): P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P351 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P333 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification
- Health hazard: 3
- Chronic health hazard: *
- Flammability: 0
- Physical hazards: 0

NFPA Rating
- Health Hazard: 3
- Fire: 0
- Reactivity Hazard: 0

Potential Health Effects
- Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
- Skin: Harmful if absorbed through skin. May cause skin irritation.
- Eyes: Causes eye irritation.
- Ingestion: Harmful if swallowed.

DMSO:
Emergency Overview
OSHA Hazards: Combustible liquid, Target organ effect
Target Organs: Eyes, Skin
GHS Classification: Flammable liquids (Category 4)
GHS Label elements, including precautionary statements
Pictogram: none
Signal word: Warning
HAZARD STATEMENT(S): H227 Combustible liquid

Precautionary statement(s): none

HMIS Classification
- Health hazard: 0
- Chronic Health Hazard: *
- Flammability: 2
- Physical hazards: 0

NFPA Rating
- Health hazard: 0
- Fire: 2
- Reactivity Hazard: 0

Potential Health Effects
- Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
- Skin: May be harmful if absorbed through skin. May cause skin irritation.
- Eyes: May cause eye irritation.
- Ingestion: May be harmful if swallowed.

Aggravated Medical Condition: Avoid contact w/DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body.

Trihalomethylacetic acid:

Emergency Overview
- OSHA Hazards: Target organ effect, Corrosive, Carcinogen
- Target Organs: Central nervous system
- Other hazards which do not result in classification: Vesicant

GHS Classification:
- Acute toxicity, Oral (Category 5)
- Skin corrosion (Category 1A)
- Serious eye damage (Category 1)
- Acute aquatic toxicity (Category 1)
- Chronic aquatic toxicity (Category 1)

GHS Label elements, including precautionary statements

Pictogram: 

Signal word: Danger

Hazard statement(s): H303 May be harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s): P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.

HMIS Classification
- Health hazard: 3
- Chronic health hazard: *
- Flammability: 1
- Physical hazards: 0

NFPA Rating
- Health Hazard: 3
- Fire: 1
- Reactivity Hazard: 0

Potential Health Effects
- Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
- Skin: May be harmful if absorbed through skin. Causes skin burns.
- Eyes: Causes eye burns. Causes severe eye burns.
- Ingestion: May be harmful if swallowed.

Doxorubicin

Emergency Overview
- OSHA Hazards: Target organ effect, Harmful by ingestion, Irritant, Carcinogen
- Target Organs: Heart, bone marrow, blood, liver

GHS Classification:
- Acute toxicity, Oral (Category 4)
- Carcinogenicity (Category 1B)

GHS Label elements, including precautionary statements

Pictogram:

Signal word: Danger

Hazard statement(s): H302 Harmful if swallowed.
H350 May cause cancer.
Precautionary statement(s): 
P201  Obtain special instructions before use. 
P308+P313  IF exposed or concerned: Get medical advice/attention.

HMIS Classification
  Health hazard: 2
  Chronic health hazard: *
  Flammability: 0
  Physical hazards: 0

NFPA Rating
  Health Hazard: 2
  Fire: 0
  Reactivity Hazard: 0

Potential Health Effects
  Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
  Skin: Harmful if absorbed through skin. Causes skin irritation.
  Eyes: Causes eye irritation.
  Ingestion: Harmful if swallowed.

SRB Dye:
  Emergency Overview
  GHS Classification:
  Skin irritation (Category 2), H315
  Eye irritation (Category 2A), H319
  Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

GHS Label elements, including precautionary statements
  Pictogram:
  Warning
  Signal word:
  Hazard statement(s):
    H315 Causes skin irritation.
    H319 Causes serious eye irritation.
    H335 May cause respiratory irritation.

Precautionary statement(s): 
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ 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 POISON CENTER or doctor/ physician if you feel unwell.
P321 Specific treatment (see supplemental first aid instructions on this label).
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P332 Take off contaminated clothing and wash before reuse.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification
  Health hazard: 2
  Chronic health hazard: *
  Flammability: 0
  Physical hazards: 0

NFPA Rating
  Health Hazard: 2
  Fire: 0
  Reactivity Hazard: 0

Potential Health Effects
  Inhalation: May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.
  Skin: May be harmful if absorbed through skin. Causes skin irritation.
  Eyes: Causes eye irritation.
  Ingestion: May be harmful if swallowed.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>EC-No.</th>
<th>Molecular Weight</th>
<th>Chemical Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>DMSO</td>
<td>67-68-5</td>
<td>200-664-3</td>
<td>78.13</td>
<td>C2H6OS</td>
</tr>
<tr>
<td>Trichloroacetic acid</td>
<td>76-03-9</td>
<td>200-927-2</td>
<td>163.39</td>
<td>C2HCl3O2</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trichloroacetic acid:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichloroacetic acid</td>
<td>76-03-9</td>
<td>TWA</td>
<td>1 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td>Remarks:</td>
<td></td>
<td></td>
<td></td>
<td>Eye &amp; upper respiratory tract irritation. Confirmed animal carcinogen with unknown relevance to humans.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1 ppm 7 mg/m³</td>
<td>USA. OSHA – Table Z-1 Limits for Air Contaminants – 1910.1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1 ppm 7 mg/m³</td>
<td>USA. NIOSH recommended exposure limits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl sulfoxide</td>
<td>67-68-5</td>
<td>TWA</td>
<td>250 ppm</td>
<td>USA. Workplace Environmental Exposure Levels (WEEL)</td>
</tr>
</tbody>
</table>

**Acetic Acid, Doxorubicin, SRB Dye:**
Contains no substances with occupational exposure limit values.

**Personal protective equipment**

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye protection**
Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Acetic Acid</th>
<th>DMSO</th>
<th>Trichloroacetic acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>No data available</td>
<td>Clear liquid</td>
<td>White crystalline powder</td>
</tr>
<tr>
<td>pH:</td>
<td>No data available</td>
<td>No data available</td>
<td>1 at 81.7 g/l at 25 °C (77 °F)</td>
</tr>
<tr>
<td>Water Solubility:</td>
<td>No data available</td>
<td>Completely miscible</td>
<td>Completely soluble</td>
</tr>
<tr>
<td>Other Solubility:</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point (°C):</td>
<td>No data available</td>
<td>189 °C (372 °F)</td>
<td>196 °C (385 °F)</td>
</tr>
<tr>
<td>Melting Point (°C):</td>
<td>No data available</td>
<td>16-19 °C (61-66 °F)</td>
<td>54-58 °C (129-136 °F)</td>
</tr>
<tr>
<td>Flash Point (°C):</td>
<td>No data available</td>
<td>87 °C (189 °F)</td>
<td>&gt;113 °C (&gt;235 °F)</td>
</tr>
<tr>
<td>Ignition Temperature (°C):</td>
<td>No data available</td>
<td>301 °C (574 °F)</td>
<td>No data available</td>
</tr>
<tr>
<td>Density:</td>
<td>No data available</td>
<td>1.1 g/ml</td>
<td>1.62 g/cm³ at 25 °C (77 °F)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Doxorubicin</th>
<th>SRB Dye</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Orange-red powder</td>
<td>No data available</td>
</tr>
<tr>
<td>pH:</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility:</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Other Solubility:</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point (°C):</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting Point (°C):</td>
<td>216 °C (421 °F)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point (°C):</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Ignition Temperature (°C):</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Density:</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Acetic Acid</th>
<th>DMSO</th>
<th>Trichloroacetic acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability:</td>
<td>Stable under recommended storage conditions</td>
<td>Heat, Flames, Sparks</td>
<td>Exposure to moisture. Heat.</td>
</tr>
<tr>
<td>Conditions to avoid:</td>
<td>No data available</td>
<td>Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents</td>
<td>Strong oxidizing agents, strong bases, amines</td>
</tr>
<tr>
<td>Materials to avoid:</td>
<td>Strong oxidizing agents</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Hazardous decomposition products:</td>
<td>No data available</td>
<td>Carbon oxides, sulfur oxides</td>
<td>No data available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Doxorubicin</th>
<th>SRB Dye</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability:</td>
<td>Stable under recommended storage conditions</td>
<td>No data available</td>
</tr>
<tr>
<td>Conditions to avoid:</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Materials to avoid:</td>
<td>Strong oxidizing agents</td>
<td>Strong oxidizing agents</td>
</tr>
<tr>
<td>Hazardous decomposition products:</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 11: TOXICOLOGICAL INFORMATION

Acetic Acid:
Acute toxicity: no data available
Skin corrosion/irritation: no data available
Serious eye damage/eye irritation: No data available
Respiratory or skin sensitization: no data available
Germ cell mutagenicity: no data available
Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
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OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available
Teratogenicity: no data available
Specific target organ toxicity – single exposure (GHS): no data available
Specific target organ toxicity – repeated exposure (GHS): no data available
Aspiration hazard: no data available

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May cause Skin irritation.
Eyes: Causes severe eye irritation.
Ingestion: May be harmful if swallowed.

Signs and Symptoms of Exposure: Exposure may cause absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

Synergistic effects: no data available

Additional information: RTECS: not available

DMSO:
Acute toxicity: LD50 Oral – rat – 14,500 mg/kg
LC50 Inhalation – rat – 4 h – 40250 ppm
LD50 Dermal – rabbit – >5,000 mg/kg
Skin corrosion/irritation: Skin – rabbit – no skin irritation – 4h
Serious eye damage/eye irritation: Eyes – rabbit – mild eye irritation
Respiratory or skin sensitization: no data available
Germ cell mutagenicity: Genotoxicity in vitro – mouse – lymphocyte: Cytogenetic analysis
Genotoxicity in vivo – mouse – lymphocyte: Mutation in mammalian somatic cells
Genotoxicity in vivo – rat – Intraperitoneal: Cytogenetic analysis
Genotoxicity in vivo – mouse – Intraperitoneal: DNA damage
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Reproductive toxicity – rat – Intraperitoneal: Effects on fertility: abortion
Reproductive toxicity – rat – Intraperitoneal: Effects on fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants)
Reproductive toxicity – rat – Subcutaneous: Effects on fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants). Effects on fertility: litter size (e.g. # fetuses per litter; measured before birth)
Reproductive toxicity – mouse – Oral: Effects on fertility: post-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea). Effects on embryo/fetus: Fetotoxicity (except death, e.g. stunted fetus). Specific developmental abnormalities: musculoskeletal system.
Teratogenicity: Developmental toxicity – mouse – Intraperitoneal: Effects on embryo/fetus: Fetotoxicity (except death, e.g. stunted fetus).
Specific developmental abnormalities: musculoskeletal system
Specific target organ toxicity – single exposure (GHS): no data available
Specific target organ toxicity – repeated exposure (GHS): no data available
Aspiration hazard: no data available

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.

Signs and Symptoms of Exposure: Effects due to ingestion may include: nausea, fatigue, and/or headache.

Additional information: RTECS: PV6210000

Trichloroacetic acid:
Acute toxicity: LD50 Oral – rat – 3,320 mg/kg
Skin corrosion/irritation: no data available
Serious eye damage/eye irritation: Eyes – rabbit – severe eye irritation – 5 s
Respiratory or skin sensitization: no data available
Germ cell mutagenicity: no data available
Carcinogenicity:
IARC: 3 – Group 3: Not classifiable as to its carcinogenicity to humans (Trichloroacetic acid)
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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Potential Health Effects

Aspiration hazard:
Specific target organ toxicity
Reproductive toxicity:
Teratogenicity:
Carcinogenicity:
Germ cell mutagenicity:
Respiratory or skin sensitization:
Serious eye damage/eye irritation:
Skin corrosion/irritation:

Acute toxicity
SRB Dye

Additional information

Doxorubicin:

Acute toxicity: LD50 Oral – mouse – 698 mg/kg
Skin corrosion/irritation: no data available
Serious eye damage/eye irritation: no data available
Respiratory or skin sensitization: no data available
Germ cell mutagenicity: no data available
Carcinogenicity:
This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.
Possible human carcinogen.
IARC: No component of the product present at levels greater than or equal to 0.1% is identified as probable, or possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available
Specific target organ toxicity – single exposure (GHS): no data available
Specific target organ toxicity – repeated exposure (GHS): no data available
Aspiration hazard: no data available

Potential Health Effects

Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin: May be harmful if absorbed through skin. Causes skin burns.
Eyes: Causes eye burns. Causes severe eye burns.
Ingestion: May be harmful if swallowed.

Signs and Symptoms of Exposure: Exposure may cause burning sensation, cough, wheezing, laryngitis, shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonia, pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Additional information: RTECS: AJ7875000

SRB Dye:

Acute toxicity: LD50 Oral – rat – 475 mg/kg  Remarks: Behavioral: Altered sleep time (including change in righting reflex). Behavioral:
Acute toxicity: no data available
Skin corrosion/irritation: no data available
Serious eye damage/eye irritation: No data available
Respiratory or skin sensitization: no data available
Germ cell mutagenicity: no data available
Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available
Teratogenicity: no data available
Specific target organ toxicity – single exposure (GHS): no data available
Specific target organ toxicity – repeated exposure (GHS): no data available
Aspiration hazard: no data available
Potential Health Effects

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Inhalation: May be harmful if inhaled. May cause respiratory tract irritation. 
Skin: Harmful if absorbed through skin. May cause skin irritation. 
Eyes: Causes eye irritation. 
Ingestion: Harmful if swallowed. 

Signs and Symptoms of Exposure: Exposure may cause absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. 
Synergistic effects: no data available 
Additional information: RTECS: not available 

SECTION 12: ECOLOGICAL INFORMATION

DMSO: 
Elimination information (persistence and degradability): no data available 
Ecotoxicity effects: Toxicity to fish: LC50 - Pimephales promelas (fathead minnow) - 34,000 mg/l - 96 h 
LC50 - Oncorhynchus mykiss (rainbow trout) - 35,000 mg/l - 96 h 
Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia pulex (Water flea) - 27,500 mg/l 
Toxicity to algae: EC50 - Lepomis macrochirus (Bluegill) - > 400,000 mg/l - 96 h 
Further information on ecology: no data available 

Trichloroacetic acid: 
Persistence and degradability: Biodegradability (Zahn-Wellens Test) ➔ Result: 5% - not readily biodegradable 
Toxicity: Toxicity to fish ➔ LC50 – Pimephales promelas (fathead minnow) – 2,000 mg/l – 96 h 
Toxicity to daphnia and other aquatic invertebrates ➔ EC50 – Daphnia magna (Water flea) – 1,460-2,000 mg/l – 48 h 
Bioaccumulative potential: no data available 
Mobility in soil: no data available 
PBt and vPvB assessment: no data available 
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects. 

SECTION 13: DISPOSAL CONSIDERATIONS

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 
Contaminated packaging: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

Acetic Acid: 
DOT (US) 
UN number: 2790 Class: 8 Packing group: III 
Proper shipping name: Acetic acid solution 
Reportable Quantity (RQ): 
Poison Inhalation Hazard: No 
IMDG 
UN number: 2790 Class: 8 Packing group: III EMS-No: F-A, S-B 
Proper shipping name: ACETIC ACID, SOLUTION 
IATA 
UN number: 2790 Class: 8 Packing group: III 
Proper shipping name: Acetic acid solution 

DMSO: 
DOT (US): UN-Number: 1993 Class: CBL Packing group: III; Proper shipping name: Combustible liquid, n.o.s. (Dimethyl sulfoxide); Marine pollutant: No; Poison Inhalation Hazard: No 
IMDG: Not dangerous goods. 
IATA: Not dangerous goods. 

Trichloroacetic acid: 
DOT (US): UN-number: 1839, Class: 8, Packing group: II; Proper shipping name: Trichloroacetic acid; Marine pollutant: No; Poison inhalation hazard: No 
IMDG: UN-number: 1839, Class: 8, Packing group: II; EMS-No: F-A, S-B; Proper shipping name: TRICHLOROACETIC ACID; Marine pollutant: No 
IATA: UN-number: 1839, Class: 8, Packing group: II; Proper shipping name: Trichloroacetic acid 

Doxorubicin & SRB Dye: 
DOT (US): Not dangerous goods. 
IMDG: Not dangerous goods. 
IATA: Not dangerous goods. 

SECTION 15: REGULATORY INFORMATION

SARA 302 Components: SARA 302: No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.
SAFETY DATA SHEET

Cat# K943 Sulforhodamine B Cell Cytotoxicity Assay Kit

SARA 313 Components: The following components are subject to reporting levels established by SARA Title II, Section 313:
- Hydrochloric acid; CAS-No. 7647-01-0; Revision Date: 1993-04-24

SARA 311/312 Hazards:
- Acetic Acid: Acute Health Hazard, Chronic Health Hazard
- DMSO: Fire Hazard, Chronic Health Hazard
- Trichloroacetic acid: Acute Health Hazard, Chronic Health Hazard
- Doxorubicin: Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components:
- Hydrochloric acid; CAS-No. 7647-01-0; Revision Date: 1993-04-24
- Trichloroacetic acid; CAS-No. 76-03-9; Revision Date: 2007-03-1

Acetic Acid, CAS-No. --

Pennsylvania Right To Know Components:
- Acetic Acid, CAS-No. --
- Dimethyl sulfoxide CAS-No. 67-68-5; Revision Date: 2007-03-01
- Trichloroacetic acid; CAS-No. 76-03-9; Revision Date: 2007-03-1

Doxorubicin, CAS-No. --

SRB Dye, CAS-No. --

New Jersey Right To Know Components:
- Acetic Acid, CAS-No. --
- Dimethyl sulfoxide CAS-No. 67-68-5; Revision Date: 2007-03-01
- Trichloroacetic acid; CAS-No. 76-03-9; Revision Date: 2007-03-1

Doxorubicin, CAS-No. --

SRB Dye, CAS-No. --

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

EU regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Risk Phrases</th>
<th>Safety Phrases</th>
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<td>S35</td>
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<tr>
<td>DMSO</td>
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<td>S24/25, S36/37/39, S45</td>
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<tr>
<td>Trichloroacetic acid</td>
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<td>S26, S36/37/39, S45, S60, S61</td>
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<tr>
<td>Doxorubicin</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SRB Dye</td>
<td>R22, R36/38</td>
<td>S22</td>
</tr>
</tbody>
</table>

SECTION 16: OTHER INFORMATION

Disclaimer:
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.