Safety Data Sheet

Cat. # 786-11X

CB-X™ Protein Assay (No BSA Standard)

Size: 500 Assays
SECTION 1: Identification

1.1. Identification

Product form: Mixture
Product name: CB-X
Product code: 113C
Formula: C3H6O
Synonyms: 2-propanon / 2-propanone / acetone / acetone NF / acetone oil / AI3-01238 / Caswell No.004 / chevron acetone / dimethyl formaldehyde / dimethyl ketone / dimethylketal / Dimethylketon / DMK (=dimethyl ketone) / FEMA No 3326 / ketone propane / KTI acetone / methyl acetyl / pyroacetic acid / pyroacetic ether / pyroacetic spirit / STEC 4908105
BIG No: 10001

1.2. Recommended use and restrictions on use

Use of the substance/mixture: Solvent
Cleansing product
Chemical raw material

1.3. Supplier

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
Saint Louis, 63132-1429 - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com · www.GBiosciences.com

1.4. Emergency telephone number

Emergency number: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification:
- Flammable liquids Category 2
- Serious eye damage/eye irritation Category 2
- Specific target organ toxicity (single exposure) Category 3

Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling:

Hazard pictograms (GHS US):

Signal word (GHS US): Danger

Hazard statements (GHS US):
- H225 - Highly flammable liquid and vapour
- H319 - Causes serious eye irritation
- H336 - May cause drowsiness or dizziness

Precautionary statements (GHS US):
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground/Bond container and receiving equipment
- P241 - Use explosion-proof electrical/ventilating/lighting equipment
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 - Wash hands, forearms and face thoroughly after handling.
- P271 - Use only outdoors or in a well-ventilated area.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
- P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses (if worn) and continue rinsing

Date of issue: 04/12/2016
Revision date: 05/11/2017
Version: 7.1

06/28/2019 EN (English US) Page 1
2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>chloroform</td>
<td>1,1,1-trichloromethane / chloroform / formyl trichloride / freon 20 / methane trichloride / methane, trichloro - / methenyl chloride / methenyl trichloride / methyl trichloride / R 20 refrigerant / R20 / TCM (=trichloromethane) / trichloroform / trichloromethane</td>
<td>(CAS-No.) 67-66-3</td>
<td>&lt; 0.05</td>
<td>Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 STOT RE 1, H372</td>
</tr>
<tr>
<td>hydrogen chloride, conc=36%, aqueous solution (Note B)</td>
<td>hydrochloric acid, conc=37%, aqueous solution</td>
<td>(CAS-No.) 7647-01-0</td>
<td>&lt; 0.05</td>
<td>Skin Corr. 1A, H314 STOT SE 3, H335</td>
</tr>
</tbody>
</table>
CB-X
Safety Data Sheet

Note B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: ‘nitric acid ... %’. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

Full text of hazard classes and H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first-aid measures


First-aid measures after inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact: Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Remove clothing before washing. Take victim to a doctor if irritation persists.

First-aid measures after eye contact: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.


4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms: Odour tolerance may develop. Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Repeated exposure may cause skin dryness or cracking. Non-toxic in contact with skin (LD50 skin> 5000 mg/kg). May cause drowsiness or dizziness. Non-toxic by inhalation (LC50 inh, rat > 50 mg/l/4h). Slightly irratant to respiratory organs. Causes serious eye irritation.

Symptoms/effects: May cause drowsiness or dizziness.


Symptoms/effects after skin contact: ON CONTINUOUS EXPOSURE/CONTACT: Dry skin. Cracking of the skin.

Symptoms/effects after eye contact: Irritation of the eye tissue.


4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


Unsuitable extinguishing media: Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

5.2. Specific hazards arising from the chemical

Fire hazard: DIRECT FIRE HAZARD: Highly flammable liquid and vapour. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD: May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard. Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard: DIRECT EXPLOSION HAZARD: Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD: Heat may cause pressure rise in tanks/drumms: explosion risk. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".

06/28/2019 EN (English US) 3/13
CB-X
Safety Data Sheet

5.3. Special protective equipment and precautions for fire-fighters

**Firefighting instructions**: Cool tanks/drum with water spray/remove them into safety. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion.

**Protection during firefighting**: Heat/fire exposure: compressed air/oxygen apparatus.

**SECTION 6: Accidental release measures**

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel


6.1.2. For emergency responders

**Protective equipment**: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

**For containment**: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapour with water curtain. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.

**Methods for cleaning up**: Take up liquid spill into inert absorbent material, e.g.: sand, earth, vermiculite. Scoop absorbed substance into closing containers. Spill must not return in its original container. Carefully collect the spill/leftovers. Damaged/cool tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

**Other information**: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

**SECTION 7: Handling and storage**

7.1. Precautions for safe handling

**Precautions for safe handling**: Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly. Work under local exhaust/ventilation. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Keep container tightly closed.

**Hygiene measures**: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

**Technical measures**: Ground/bond container and receiving equipment.

**Storage conditions**: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

**Storage temperature**: 15 - 20 °C

**Heat-ignition**: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

**Information on mixed storage**: KEEP SUBSTANCE AWAY FROM: oxidizing agents. reducing agents. (strong) acids. (strong) bases. halogens. amines.

**Storage area**: Store in a cool area. Keep out of direct sunlight. Store in a dry area. Store in a dark area. Ventilation at floor level. Fireproof storeroom. Provide for an automatic sprinkler system. Provide for a tub to collect spills. Provide the tank with earthing. Meet the legal requirements.

**Special rules on packaging**: SPECIAL REQUIREMENTS: closing. with pressure relief valve. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
PACKAGING MATERIALS
SUITABLE MATERIAL: steel, stainless steel, carbon steel, aluminium, iron, copper, nickel, bronze, glass. MATERIAL TO AVOID: synthetic material.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH TWA (ppm)</th>
<th>ACGIH STEL (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>acetone (67-64-1)</td>
<td>250 ppm</td>
<td>500 ppm</td>
</tr>
<tr>
<td>chloroform (67-66-3)</td>
<td>10 ppm</td>
<td></td>
</tr>
<tr>
<td>hydrogen chloride, conc=36%, aqueous solution (7647-01-0)</td>
<td>No additional information available</td>
<td></td>
</tr>
<tr>
<td>2-propanol (67-63-0)</td>
<td>200 ppm</td>
<td>400 ppm</td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls
Appropriate engineering controls: Ensure good ventilation of the work station.
Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Materials for protective clothing:
GIVE GOOD RESISTANCE: butyl rubber, tetrafluoroethylene. GIVE LESS RESISTANCE: chlorosulfonated polyethylene, natural rubber, neoprene, polyurethane. PVA, styrene-butadiene rubber. GIVE POOR RESISTANCE: nitrile rubber, polyethylene. PVC, viton, nitrile rubber/PVC

Hand protection:
Gloves

Eye protection:
Safety glasses

Skin and body protection:
Head/neck protection. Protective clothing

Respiratory protection:
Full face mask with filter type AX at conc. in air > exposure limit

SECTION 9: Physical and chemical properties

9.1. Information on basic 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>Appearance</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odor</td>
<td>Aromatic odour Sweet odour Fruity odour</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>7 (10 g/l)</td>
</tr>
<tr>
<td>Melting point</td>
<td>-95 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
</tbody>
</table>
### Boiling point
- 56 °C

### Critical temperature
- 235 °C

### Critical pressure
- 47010 hPa

### Flash point
- -17 °C (Closed cup)

### Relative evaporation rate (butyl acetate=1)
- 6

### Relative evaporation rate (ether=1)
- 2

### Flammability (solid, gas)
- Not applicable.

### Vapor pressure
- 247 hPa (20 °C)

### Vapor pressure at 50 °C
- 828 hPa

### Relative vapor density at 20 °C
- 2

### Relative density
- 0.79

### Relative density of saturated gas/air mixture
- 1.2

### Specific gravity / density
- 786 kg/m³

### Molecular mass
- 58.08 g/mol

### Solubility

### Log Pow
- -0.24 (Test data)

### Auto-ignition temperature
- 465 °C

### Decomposition temperature
- No data available

### Viscosity, kinematic
- 0.417 mm²/s

### Viscosity, dynamic
- No data available

### Explosion limits
- 2 - 12.8 vol %
- 60 - 310 g/m³
- Lower explosive limit (LEL): 2 vol %
- UEL: 12.8 vol %

### Explosive properties
- No data available

### Oxidizing properties
- No data available

### Other information

#### Specific conductivity
- 6000000 pS/m (25 °C)

#### Saturation concentration
- 589 g/m³

#### VOC content
- 100 %

#### Other properties

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity
Violent to explosive reaction with many compounds. Prolonged storage: on exposure to light: release of harmful gases/vapours.

#### 10.2. Chemical stability
Unstable on exposure to light.

#### 10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid
Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

#### 10.5. Incompatible materials
No additional information available

#### 10.6. Hazardous decomposition products
Hazardous decomposition products.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects
Acute toxicity (oral): Not classified
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified  

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 oral rat</th>
<th>LD50 dermal rabbit</th>
<th>LC50 inhalation rat (mg/l)</th>
<th>ATE US (oral)</th>
<th>ATE US (dermal)</th>
<th>ATE US (vapors)</th>
<th>ATE US (dust, mist)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB-X</td>
<td>5800 mg/kg</td>
<td>20000 mg/kg</td>
<td>76 mg/l (Other, 4 h, Rat, Female, Experimental value, Inhalation (vapours))</td>
<td>5800 mg/kg</td>
<td>20000 mg/kg</td>
<td>76 mg/l/4h</td>
<td>76 mg/l/4h</td>
</tr>
<tr>
<td>acetone (67-64-1)</td>
<td>5800 mg/kg</td>
<td>20000 mg/kg</td>
<td>76 mg/l (Other, 4 h, Rat, Female, Experimental value, Inhalation (vapours))</td>
<td>5800 mg/kg</td>
<td>20000 mg/kg</td>
<td>76 mg/l/4h</td>
<td>76 mg/l/4h</td>
</tr>
<tr>
<td>chloroform (67-66-3)</td>
<td>908 mg/kg body weight</td>
<td>&gt; 3980 mg/kg body weight (24 h, Rabbit, No reliable data available, Dermal)</td>
<td>&gt; 10000 ppm (Equivalent or similar to OECD 403, 6 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))</td>
<td>5840 mg/kg body weight</td>
<td>16400000 mg/kg body weight</td>
<td>76 mg/l/4h</td>
<td>0.5 mg/l/4h</td>
</tr>
<tr>
<td>2-propanol (67-63-0)</td>
<td>5840 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Experimental value, Oral, 14 day(s))</td>
<td>16400 ml/kg (Equivalent or similar to OECD 402, 24 h, Rabbit, Experimental value, Dermal, 14 day(s))</td>
<td>&gt; 10000 ppm (Equivalent or similar to OECD 403, 6 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))</td>
<td>5840 mg/kg body weight</td>
<td>16400000 mg/kg body weight</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Not classified  
ph: 7 (10 g/l)  
Serious eye damage/irritation : Causes serious eye irritation.  
ph: 7 (10 g/l)  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  

chloroform (67-66-3)  
National Toxicology Program (NTP) Status : Reasonably anticipated to be Human Carcinogen  
Reproductive toxicity : Not classified  
Specific target organ toxicity – single exposure : May cause drowsiness or dizziness.  
aceton (67-64-1)  
Specific target organ toxicity – single exposure : May cause drowsiness or dizziness.  
hydrogen chloride, conc=36%, aqueous solution (7647-01-0)  
Specific target organ toxicity – single exposure : May cause respiratory irritation.
**2-propanol (67-63-0)**

Specific target organ toxicity – single exposure: May cause drowsiness or dizziness.

Specific target organ toxicity – repeated exposure: Not classified

**chloroform (67-66-3)**

Specific target organ toxicity – repeated exposure: Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard: Not classified

Viscosity, kinematic: 0.417 mm²/s

Potential Adverse human health effects and symptoms:

- Odour tolerance may develop. Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Repeated exposure may cause skin dryness or cracking. Non-toxic in contact with skin (LD50 skin> 5000 mg/kg). May cause drowsiness or dizziness. Non-toxic by inhalation (LC50 inh, rat > 50 mg/l/4h). Slightly irritant to respiratory organs. Causes serious eye irritation.

Symptoms/effects: May cause drowsiness or dizziness.


Symptoms/effects after skin contact: ON CONTINUOUS EXPOSURE/CONTACT: Dry skin. Cracking of the skin.

Symptoms/effects after eye contact: Irritation of the eye tissue.


**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecology - general: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air: Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).


**CB-X**

LC50 fish 1: 5540 mg/l (EU Method C.1, 96 h, Salmo gairdneri, Static system, Fresh water, Experimental value, Nominal concentration)

**acetone (67-64-1)**

LC50 fish 1: 5540 mg/l (EU Method C.1, 96 h, Salmo gairdneri, Static system, Fresh water, Experimental value, Nominal concentration)

**chloroform (67-66-3)**

LC50 fish 1: 0.0024 mg/l (LC50; ASTM; 96 h; Oncorhynchus mykiss; Flow-through system; Fresh water; Experimental value)

ErC50 (algae): 13.3 mg/l (Other, 72 h, Chlamydomonas reinhardtii, Static system, Fresh water, Experimental value)

**hydrogen chloride, conc=36%, aqueous solution (7647-01-0)**

LC50 fish 1: 282 mg/l (96 h, Gambusia affinis, Pure substance)

EC50 Daphnia 1: < 56 mg/l (72 h, Daphnia magna, Pure substance)

**2-propanol (67-63-0)**

LC50 fish 1: 9640 - 10000 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
### 12.2 Persistence and degradability

#### CB-X

<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and degradability</th>
<th>Biochemical oxygen demand (BOD)</th>
<th>Chemical oxygen demand (COD)</th>
<th>ThOD</th>
<th>BOD (% of ThOD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>acetone (67-64-1)</td>
<td>Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.</td>
<td>1.43 g O₂/g substance</td>
<td>1.92 g O₂/g substance</td>
<td>2.2 g O₂/g substance</td>
<td>0.872 (20 day(s), Literature study)</td>
</tr>
<tr>
<td>hydrogen chloride, conc=36%, aqueous solution (7647-01-0)</td>
<td>Biodegradability: not applicable.</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>2-propanol (67-63-0)</td>
<td>Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.</td>
<td>1.19 g O₂/g substance</td>
<td>2.23 g O₂/g substance</td>
<td>2.4 g O₂/g substance</td>
<td></td>
</tr>
</tbody>
</table>

#### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substance</th>
<th>BCF fish 1</th>
<th>BCF other aquatic organisms 1</th>
<th>Log Pow</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB-X</td>
<td>0.69 (Pisces)</td>
<td>3 (BCFWIN, Calculated value)</td>
<td>-0.24 (Test data)</td>
<td>Not bioaccumulative.</td>
</tr>
<tr>
<td>acetone (67-64-1)</td>
<td>0.69 (Pisces)</td>
<td>3 (BCFWIN, Calculated value)</td>
<td>-0.24 (Test data)</td>
<td>Not bioaccumulative.</td>
</tr>
<tr>
<td>chloroform (67-66-3)</td>
<td>4.1 - 13 (OECD 305: Bioconcentration: Flow-Through Fish Test, 42 day(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value)</td>
<td>1.97 (Experimental value, 20 °C)</td>
<td></td>
<td>Low potential for bioaccumulation (BCF &lt; 500).</td>
</tr>
<tr>
<td>hydrogen chloride, conc=36%, aqueous solution (7647-01-0)</td>
<td>0.25 (QSAR)</td>
<td></td>
<td></td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4).</td>
</tr>
<tr>
<td>2-propanol (67-63-0)</td>
<td>0.05 (Weight of evidence approach, 25 °C)</td>
<td></td>
<td></td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4).</td>
</tr>
</tbody>
</table>
12.4. Mobility in soil

<table>
<thead>
<tr>
<th>CB-X</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>0.0237 N/m</td>
</tr>
<tr>
<td>Ecology - soil</td>
<td>No (test)data on mobility of the substance available.</td>
</tr>
</tbody>
</table>

**Acetone (67-64-1)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>0.0237 N/m</td>
</tr>
<tr>
<td>Ecology - soil</td>
<td>No (test)data on mobility of the substance available.</td>
</tr>
</tbody>
</table>

**Chloroform (67-66-3)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>0.0271 N/m (20 °C)</td>
</tr>
<tr>
<td>Log Koc</td>
<td>1.8 - 2.6 (log Koc, Other, Experimental value)</td>
</tr>
<tr>
<td>Ecology - soil</td>
<td>Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.</td>
</tr>
</tbody>
</table>

**Hydrogen chloride, conc=36%, aqueous solution (7647-01-0)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology - soil</td>
<td>No (test)data on mobility of the components available. May be harmful to plant growth, blooming and fruit formation.</td>
</tr>
</tbody>
</table>

**2-Propanol (67-63-0)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>0.021 N/m (25 °C)</td>
</tr>
<tr>
<td>Log Koc</td>
<td>0.185 - 0.541 (log Koc, SRC PCKOCWIN v2.0, Calculated value)</td>
</tr>
<tr>
<td>Ecology - soil</td>
<td>Highly mobile in soil.</td>
</tr>
</tbody>
</table>

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

- **Waste treatment methods**: Waste treatment methods.
- **Product/Packaging disposal recommendations**: Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Incinerate under surveillance with energy recovery.

SECTION 14: Transport information

**Department of Transportation (DOT)**

In accordance with DOT

- **Transport document description**: UN1090 Acetone, 3, II
- **UN-No.(DOT)**: UN1090
- **Proper Shipping Name (DOT)**: Acetone
- **Class (DOT)**: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
- **Packing group (DOT)**: II - Medium Danger
- **Hazard labels (DOT)**: 3 - Flammable liquid

**DOT Packaging Non Bulk (49 CFR 173.xxx)**: 202
**DOT Packaging Bulk (49 CFR 173.xxx)**: 242
DOT Special Provisions (49 CFR 172.102):
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 °C (1.1 bar at 122 °F), or 130 kPa at 55 °C (1.3 bar at 131 °F) are authorized.

T4 - 2.65 178.274(d)(2) Normal............. 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx): 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 60 L

DOT Vessel Stowage Location:
B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

Emergency Response Guide (ERG) Number: 127
Other information: No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Transport document description (IMDG): UN 1090 acetone, 3, II
UN-No. (IMDG): 1090
Proper Shipping Name (IMDG): acetone
Class (IMDG): 3 - Flammable liquids
Packing group (IMDG): II - substances presenting medium danger
EmS-No. (1): F-E
EmS-No. (2): S-D

Air transport

Transport document description (IATA): UN 1090 Acetone, 3, II
UN-No. (IATA): 1090
Proper Shipping Name (IATA): Acetone
Class (IATA): 3 - Flammable Liquids
Packing group (IATA): II - Medium Danger

SECTION 15: Regulatory information

15.1: US Federal regulations

acetone (67-64-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Not subject to reporting requirements of the United States SARA Section 313
CERCLA RO: 5000 lb

chloroform (67-66-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313
CERCLA RO: 10 lb
RQ (Reportable quantity, section 304 of EPA’s List of Lists): 10 lb
SARA Section 302 Threshold Planning Quantity (TPQ): 10000 lb
CB-X
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>hydrogen chloride, conc=36%, aqueous solution (7647-01-0)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory. Not subject to reporting requirements of the United States SARA Section 313. Subject to reporting requirements of United States SARA Section 313.</td>
</tr>
<tr>
<td>CERCLA RQ</td>
<td>5000 lb</td>
</tr>
<tr>
<td>RQ (Reportable quantity, section 304 of EPA's List of Lists)</td>
<td>5000 lb</td>
</tr>
<tr>
<td>SARA Section 302 Threshold Planning Quantity (TPQ)</td>
<td>500 lb</td>
</tr>
</tbody>
</table>

- 2-propanol (67-63-0)
  - Listed on the United States TSCA (Toxic Substances Control Act) inventory. Subject to reporting requirements of United States SARA Section 313.

15.2. International regulations

**CANADA**

- acetone (67-64-1)
  - Listed on the Canadian DSL (Domestic Substances List).

- chloroform (67-66-3)
  - Listed on the Canadian DSL (Domestic Substances List).

- hydrogen chloride, conc=36%, aqueous solution (7647-01-0)
  - Listed on the Canadian DSL (Domestic Substances List).

- 2-propanol (67-63-0)
  - Listed on the Canadian DSL (Domestic Substances List).

EU-Regulations

**National regulations**

- chloroform (67-66-3)
  - Listed on IARC (International Agency for Research on Cancer).
  - Listed as carcinogen on NTP (National Toxicology Program).

15.3. US State regulations

**chloroform (67-66-3)**

<table>
<thead>
<tr>
<th>State</th>
<th>Proposition 65 - Carcinogens List</th>
<th>Proposition 65 - Developmental Toxicity</th>
<th>Proposition 65 - Reproductive Toxicity - Female</th>
<th>Proposition 65 - Reproductive Toxicity - Male</th>
<th>No significant risk level (NSRL)</th>
<th>Maximum allowable dose level (MADL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 05/11/2017
### CB-X Safety Data Sheet

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H331</td>
<td>Toxic if inhaled</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
</tr>
</tbody>
</table>

**NFPA health hazard**: 1 - Materials that, under emergency conditions, can cause significant irritation.

**NFPA fire hazard**: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

**NFPA reactivity**: 0 - Material that in themselves are normally stable, even under fire conditions.

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
SECTION 1: Identification

1.1. Identification
- Product form: Mixture
- Product name: CB-X Assay Dye
- Product code: 119C

1.2. Recommended use and restrictions on use
No additional information available

1.3. Supplier
Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
Saint Louis, 63132 - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number
Emergency number: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS US classification
- Flammable liquids Category 4  H227 Combustible liquid
- Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements
GHS US labeling
- Signal word (GHS US): Warning
- Hazard statements (GHS US): H227 - Combustible liquid
- Precautionary statements (GHS US):
  - P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P280 - Wear protective gloves/protective clothing/eye protection/face protection.
  - P370+P378 - In case of fire: Use media other than water to extinguish.
  - P403+P235 - Store in a well-ventilated place. Keep cool.
  - P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>phosphoric acid, conc=85% (Note B)</td>
<td>orthophosphoric acid, conc=85% / phosphoric syrup, conc=85% / phosphoric-acid-</td>
<td>(CAS-No.) 7664-38-2</td>
<td>10 - 50</td>
<td>Skin Corr. 1B, H314</td>
</tr>
</tbody>
</table>
CB-X Assay Dye
Safety Data Sheet

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coomassie Brilliant Blue G 250 Dye</td>
<td>acid blue 90 / benzenemethanaminium, N[4-[(4-ethoxyphenyl)amino]phenyl][4-ethy(3-sulphonyl)amyl][amino]-2- methylbenzylen][methylene]-3-methyl-2,5-cyclohexadien-1-yliden][N-ethyl-3-sulfo-hydroxide, inner salt, monosodium salt / brilliant blue G / CL 42655 / CI. 42655 / C.I. 42655 / coomassie brilliant blue G / coomassie brilliant blue grand G 250</td>
<td>(CAS-Nos.) 6104-58-1</td>
<td>&lt; 0.05</td>
<td>Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335</td>
</tr>
</tbody>
</table>

Note B : Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: ‘nitric acid … %’. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

 Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid.
Reactivity in case of fire : Thermal decomposition generates : Corrosive vapors.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Emergency procedures
Ventilate spillage area. No open flames, no sparks, and no smoking.

6.1.2. For emergency responders
Protective equipment
Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up
Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information
Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling
Ensure good ventilation of the work station. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hygiene measures
Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions
Store in a well-ventilated place. Keep cool.

Storage temperature
20 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
CB-X Assay Dye
No additional information available

phosphoric acid, conc=85% (7664-38-2)
No additional information available

methanol (67-56-1)
USA - ACGIH - Occupational Exposure Limits
ACGIH TWA (ppm)
200 ppm
ACGIH STEL (ppm)
250 ppm
Coommassie Brilliant Blue G 250 Dye (6104-58-1)
No additional information available

8.2. Appropriate engineering controls
Appropriate engineering controls
Ensure good ventilation of the work station.

Environmental exposure controls
Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment
Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic 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>No data available</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>65 °C</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
**CB-X Assay Dye**

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 oral rat</th>
<th>LD50 dermal rabbit</th>
<th>LC50 inhalation rat (mg/l)</th>
<th>ATE US (oral)</th>
<th>ATE US (dermal)</th>
<th>ATE US (gases)</th>
<th>ATE US (vapors)</th>
<th>ATE US (dust, mist)</th>
</tr>
</thead>
<tbody>
<tr>
<td>methanol (67-56-1)</td>
<td>1187 - 2769 mg/kg body weight (BASF test, Rat, Male / female, Weight of evidence, Aqueous solution, Oral, 7 day(s))</td>
<td>17100 mg/kg (Rabbit, Inconclusive, insufficient data, Dermal)</td>
<td>128.2 mg/l air (BASF test, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))</td>
<td>100 mg/kg body weight</td>
<td>17100 mg/kg body weight</td>
<td>700 ppmV/4h</td>
<td>3 mg/l/4h</td>
<td>0.5 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Not classified
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified

### Specific target organ toxicity – single exposure

**methanol (67-56-1)**

Causes damage to organs.

Coomassie Brilliant Blue G 250 Dye (6104-58-1)

May cause respiratory irritation.

### Specific target organ toxicity – repeated exposure

**methanol (67-56-1)**

Not classified

**Coomassie Brilliant Blue G 250 Dye (6104-58-1)**

Not classified

Aspiration hazard: Not classified
Viscosity, kinematic: No data available

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

**phosphoric acid, conc=85% (7664-38-2)**

<table>
<thead>
<tr>
<th>Ecology - fish</th>
<th>138 mg/l (Pisces, Pure substance)</th>
</tr>
</thead>
</table>

**methanol (67-56-1)**

<table>
<thead>
<tr>
<th>Ecology - fish</th>
<th>15400 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Lethal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 Daphnia</td>
<td>18260 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 96 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Locomotor effect)</td>
</tr>
<tr>
<td>ErC50 (algae)</td>
<td>22000 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)</td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability

**phosphoric acid, conc=85% (7664-38-2)**

<table>
<thead>
<tr>
<th>Persistence and degradability</th>
<th>Biodegradability: not applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ThOD</td>
<td>Not applicable</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**methanol (67-56-1)**

<table>
<thead>
<tr>
<th>Persistence and degradability</th>
<th>Readily biodegradable in the soil. Readily biodegradable in water.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
<td>0.6 - 1.12 g O₂/g substance</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>1.42 g O₂/g substance</td>
</tr>
</tbody>
</table>
12.3. Bioaccumulative potential

**phosphoric acid, conc=85% (7664-38-2)**
- Bioaccumulative potential: Does not contain bioaccumulative component(s).

**methanol (67-56-1)**
- BCF fish 1: 1 - 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)
- Log Pow: -0.77 (Experimental value)
- Bioaccumulative potential: Low potential for bioaccumulation (BCF < 500).

**Coomassie Brilliant Blue G 250 Dye (6104-58-1)**
- Bioaccumulative potential: No bioaccumulation data available.

12.4. Mobility in soil

**phosphoric acid, conc=85% (7664-38-2)**
- Ecology - soil: No (test)data on mobility of the components available.

**methanol (67-56-1)**
- Surface tension: 0.023 N/m (20 °C)
- Log Koc: 0.088 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
- Ecology - soil: Highly mobile in soil.

12.5. Other adverse effects

No additional information available

---

**SECTION 13: Disposal considerations**

13.1. Disposal methods


**SECTION 14: Transport information**

Department of Transportation (DOT)
In accordance with DOT

Other information: No supplementary information available.

Transportation of Dangerous Goods

Transport by sea
Not regulated

Air transport
Not regulated

**SECTION 15: Regulatory information**

15.1. US Federal regulations

**phosphoric acid, conc=85% (7664-38-2)**
- Not listed on the United States TSCA (Toxic Substances Control Act) inventory
- Not subject to reporting requirements of the United States SARA Section 313
  - CERCLA RQ: 5000 lb
# CB-X Assay Dye  
**Safety Data Sheet**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

---

<table>
<thead>
<tr>
<th><strong>methanol (67-56-1)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Subject to reporting requirements of United States SARA Section 313</td>
</tr>
<tr>
<td>Listed on EPA Hazardous Air Pollutant (HAPS)</td>
</tr>
<tr>
<td>CERCLA RQ</td>
</tr>
<tr>
<td><strong>Coomassie Brilliant Blue G 250 Dye (6104-58-1)</strong></td>
</tr>
<tr>
<td>Not listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

## 15.2. International regulations

### CANADA

<table>
<thead>
<tr>
<th><strong>methanol (67-56-1)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
</tbody>
</table>

### EU Regulations

No additional information available

## 15.3. US State regulations

<table>
<thead>
<tr>
<th><strong>methanol (67-56-1)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California - Proposition 65 - Carcinogens List</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 09/20/2017

**Full text of H-phrases:**

| H225 | Highly flammable liquid and vapour |  
| H227 | Combustible liquid |  
| H301 | Toxic if swallowed |  
| H314 | Causes severe skin burns and eye damage |  
| H315 | Causes skin irritation |  
| H319 | Causes serious eye irritation |  
| H331 | Toxic if inhaled |  
| H335 | May cause respiratory irritation |  
| H370 | Causes damage to organs |  

---

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
## SECTIO1: Identification

### 1.1. Identification

<table>
<thead>
<tr>
<th>Product form</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>CB-X Solubilization Buffer I</td>
</tr>
<tr>
<td>Product code</td>
<td>127C</td>
</tr>
</tbody>
</table>

### 1.2. Recommended use and restrictions on use

No additional information available

### 1.3. Supplier

Geno Technology, Inc./G-Biosciences  
9800 Page Avenue  
Saint Louis, 63132-1429 - United States  
T 800-628-7730 - F 314-991-1504  
technical@GBiosciences.com - www.GBiosciences.com

### 1.4. Emergency telephone number

Emergency number: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

<table>
<thead>
<tr>
<th>GHS US classification</th>
<th>H301</th>
<th>Toxic if swallowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral) Category 3</td>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>Skin corrosion/irritation Category 2</td>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation Category 1</td>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>Hazardous to the aquatic environment - Acute Hazard Category 1</td>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects</td>
</tr>
<tr>
<td>Hazardous to the aquatic environment - Chronic Hazard Category 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full text of H statements : see section 16

### 2.2. GHS Label elements, including precautionary statements

<table>
<thead>
<tr>
<th>GHS US labeling</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard pictograms (GHS US)</td>
<td><img src="image" alt="Hazard pictograms" /></td>
</tr>
<tr>
<td>Signal word (GHS US)</td>
<td>Danger</td>
</tr>
</tbody>
</table>
| Hazard statements (GHS US) | H301 - Toxic if swallowed  
H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H400 - Very toxic to aquatic life  
H412 - Harmful to aquatic life with long lasting effects |
| Precautionary statements (GHS US) | P264 - Wash hands, forearms and face thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 - If swallowed: Immediately call a poison center or doctor  
P302+P352 - If on skin: Wash with plenty of water  
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  
P311 - Specific treatment (see supplemental first aid instruction on this label)  
P330 - Rinse mouth.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P391 - Collect spillage.  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation |

### 2.3. Other hazards which do not result in classification

No additional information available

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Date of issue: 05/05/2016  
Revision date: 05/11/2017  
Version: 7.1
CB-X Solubilization Buffer I
Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.4. **Unknown acute toxicity (GHS US)**
Not applicable

**SECTION 3: Composition/Information on ingredients**

3.1. **Substances**
Not applicable

3.2. **Mixtures**

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>copper(II) sulfate, pentahydrate</td>
<td>blue copper / blue coppers / blue stone / blue viking / blue vitriol / chalcantite / chalcantie, natural / copper sulfate, pentahydrate / copper sulphate, pentahydrate / copper vitriol / copper(2+) sulfate, pentahydrate / copperrose bleue / CSP (=copper(II)sulfate, pentahydrate) / cupric sulfate, pentahydrate / Environmentally hazardous substance, solid, n.o.s. / phyto-bordeaux (=copper(II)sulfate, pentahydrate) / phytont-27 (=copper(II)sulfate, pentahydrate) / roman vitriol (=copper(II)sulfate, pentahydrate) / sulpacop / sulfuric acid, copper(2+) salt (1:1), pentahydrate / sulfuric acid, copper(II)salt, pentahydrate / triangle(=copper(II)sulfate, pentahydrate) / vencedor</td>
<td>(CAS-No.) 7758-99-8</td>
<td>2 - 5</td>
<td>Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

**SECTION 4: First-aid measures**

4.1. **Description of first aid measures**

- **First-aid measures general:** Call a physician immediately.
- **First-aid measures after inhalation:** Remove person to fresh air and keep comfortable for breathing.
- **First-aid measures after skin contact:** Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
- **First-aid measures after eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- **First-aid measures after ingestion:** Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Rinse mouth. Call a physician immediately. Do not induce vomiting.

4.2. **Most important symptoms and effects (acute and delayed)**

- **Symptoms/effects after inhalation:** AFTER INHALATION OF DUST/MIST: Dry/sore throat. Coughing. ON HEATING: Metal fume fever.
- **Symptoms/effects after skin contact:** Tingling/irritation of the skin. Burns. Irritation.
- **Symptoms/effects after eye contact:** Serious damage to eyes.
CB-X Solubilization Buffer I
Safety Data Sheet

Symptoms/effects after ingestion : Burns.

4.3. Immediate medical attention and special treatment, if necessary
Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

5.2. Specific hazards arising from the chemical
Fire hazard : DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard : DIRECT EXPLOSION HAZARD: No data available on direct explosion hazard. INDIRECT EXPLOSION HAZARD: No data available on indirect explosion hazard.
Reactivity in case of fire : Reacts on exposure to water (moisture) with (some) metals. On burning: release of toxic and corrosive gases/vapours (sulphur oxides) and formation of metallic fumes. Reacts violently with (strong) reducers. Thermal decomposition generates: Corrosive vapors.

5.3. Special protective equipment and precautions for fire-fighters
Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions : Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders
Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
For containment : Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling : Ensure good ventilation of the work station. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Avoid raising dust. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Avoid contact with skin and eyes. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray.
Hygiene measures: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store locked up. Store in a well-ventilated place. Keep cool.
Heat-ignition: KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage: KEEP SUBSTANCE AWAY FROM: reducing agents. (strong) bases. water/moisture.
Storage area: Store in a dry area. Keep container in a well-ventilated place. Meet the legal requirements. Keep out of direct sunlight.
Special rules on packaging: SPECIAL REQUIREMENTS: hermetical. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials: SUITABLE MATERIAL: No data available. MATERIAL TO AVOID: No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
- CB-X Solubilization Buffer I
  No additional information available
- sodium hydroxide (1310-73-2)
  USA - ACGIH - Occupational Exposure Limits
  ACGIH Ceiling (mg/m³) | 2 mg/m³
- copper(II) sulfate, pentahydrate (7758-99-8)
  No additional information available

8.2. Appropriate engineering controls
- Appropriate engineering controls: Ensure good ventilation of the work station.
- Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment
- Materials for protective clothing:
  GIVE GOOD RESISTANCE: butyl rubber. PVC. viton
- Hand protection:
  Gloves
- Eye protection:
  Safety glasses
- Skin and body protection:
  Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing
- Respiratory protection:
  Dust production: dust mask with filter type P2. Dust production: dust mask with filter type P3

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
- Physical state: Liquid
- Color: Blue
- Odor: Odourless
- Odor threshold: No data available
- pH: No data available
- Melting point: Not applicable
- Freezing point: No data available
- Boiling point: Not applicable
- Flash point: Not applicable
- Relative evaporation rate (butyl acetate=1): No data available
CB-X Solubilization Buffer I  
Safety Data Sheet  
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water. Soluble in methanol. Soluble in glycerol.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water. Soluble in methanol. Soluble in glycerol.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information
VOC content: Not applicable
Other properties: Hygroscopic. Acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reacts on exposure to water (moisture) with (some) metals. On burning: release of toxic and corrosive gases/vapours (sulphur oxides) and formation of metallic fumes. Reacts exothermically with (some) compounds: (increased) risk of fire. Reacts violently with (strong) reducers.

10.2. Chemical stability
Hygroscopic.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CB-X Solubilization Buffer I</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>300 mg/kg (Rat)</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 2000 mg/kg (Rabbit)</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>300 mg/kg body weight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>copper(II) sulfate, pentahydrate (7758-99-8)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>300 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 482 mg/kg bodyweight; Rat)</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 2000 mg/kg (Rabbit; Literature study; OECD 402: Acute Dermal Toxicity)</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>300 mg/kg body weight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
# CB-X Solubilization Buffer I

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Category</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Symptoms/effects after inhalation</td>
<td>AFTER INHALATION OF DUST/MIST: Dry/sore throat. Coughing. ON HEATING: Metal fume fever.</td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
<td>Tingling/irritation of the skin. Burns. Irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>Serious damage to eyes.</td>
</tr>
<tr>
<td>Symptoms/effects after ingestion</td>
<td>Burns.</td>
</tr>
</tbody>
</table>

## SECTION 12: Ecological information

### 12.1. Toxicity

**Ecology - general**: Harmful to aquatic life with long lasting effects. Very toxic to aquatic life.

**Ecology - air**: TA-Luft Klasse 5.2.2/I1l.


<table>
<thead>
<tr>
<th><strong>CB-X Solubilization Buffer I</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
</tr>
<tr>
<td>LC50 fish 2</td>
</tr>
<tr>
<td>TLM fish 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>sodium hydroxide (1310-73-2)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>copper(II) sulfate, pentahydrate (7758-99-8)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold limit algae 2</td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability

<table>
<thead>
<tr>
<th><strong>CB-X Solubilization Buffer I</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
</tr>
<tr>
<td>ThOD</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>sodium hydroxide (1310-73-2)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
</tr>
<tr>
<td>ThOD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>copper(II) sulfate, pentahydrate (7758-99-8)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
</tr>
<tr>
<td>ThOD</td>
</tr>
</tbody>
</table>

### 12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th><strong>CB-X Solubilization Buffer I</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>
CB-X Solubilization Buffer I
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium hydroxide (1310-73-2)</td>
<td>Not bioaccumulative.</td>
</tr>
<tr>
<td>copper(II) sulfate, pentahydrate (7758-99-8)</td>
<td>Bioaccumulative.</td>
</tr>
</tbody>
</table>

### 12.4. Mobility in soil

<table>
<thead>
<tr>
<th>Substance</th>
<th>Ecology - soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB-X Solubilization Buffer I</td>
<td>Toxic to flora.</td>
</tr>
<tr>
<td>sodium hydroxide (1310-73-2)</td>
<td>No (test) data on mobility of the substance available.</td>
</tr>
<tr>
<td>copper(II) sulfate, pentahydrate (7758-99-8)</td>
<td>Toxic to flora.</td>
</tr>
</tbody>
</table>

### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

- **Waste treatment methods**: Waste treatment methods.
- **Product/Packaging disposal recommendations**: Remove waste in accordance with local and/or national regulations. Recycle/reuse. Precipitate/make insoluble. Remove to an authorized dump (Class I). Do not discharge into the sewer.
- **Additional information**: LWCA (the Netherlands): KGA category 05. Hazardous waste according to Directive 2008/98/EC.

### SECTION 14: Transport information

**Department of Transportation (DOT)**

In accordance with DOT

Not regulated

**Transportation of Dangerous Goods**

- **Transport by sea**: Not regulated
- **Air transport**: Not regulated

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not listed on the United States TSCA (Toxic Substances Control Act) inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium hydroxide (1310-73-2)</td>
<td>Not subject to reporting requirements of the United States SARA Section 313</td>
</tr>
<tr>
<td>CERCLA RQ</td>
<td>1000 lb</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Not listed on the United States TSCA (Toxic Substances Control Act) inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>copper(II) sulfate, pentahydrate (7758-99-8)</td>
<td></td>
</tr>
</tbody>
</table>

#### 15.2. International regulations

**CANADA**

**EU-Regulations**

06/28/2019 EN (English US)
SECTION 16: Other information

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H290</td>
<td>May be corrosive to metals</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 2 - Materials that readily undergo violent chemical change at elevated temperatures and pressures.

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
### SECTION 1: Identification

1. **Identification**

- **Product form**: Mixture
- **Product name**: CB-X Solubilization Buffer II
- **Product code**: 133C

1.2. **Recommended use and restrictions on use**

No additional information available

1.3. **Supplier**

Geno Technology, Inc./G-Biosciences
9800 Page Avenue
Saint Louis, 63132-1429 - United States
T 800-628-7730 - F 314-991-1504
[technical@GBiosciences.com](mailto:technical@GBiosciences.com) - [www.GBiosciences.com](http://www.GBiosciences.com)

1.4. **Emergency telephone number**

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

### SECTION 2: Hazard(s) identification

2.1. **Classification of the substance or mixture**

GHS US classification
Not classified

2.2. **GHS Label elements, including precautionary statements**

GHS US labeling
No labeling applicable

2.3. **Other hazards which do not result in classification**

No additional information available

2.4. **Unknown acute toxicity (GHS US)**

Not applicable

### SECTION 3: Composition/Information on ingredients

3.1. **Substances**

Not applicable

3.2. **Mixtures**

CB-X Solubilization Buffer II
<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
</table>

CB-X Solubilization Buffer II
Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
# CB-X Solubilization Buffer II

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
</table>
Full text of hazard classes and H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact: Wash skin with plenty of water.
First-aid measures after eye contact: Rinse eyes with water as a precaution.
First-aid measures after ingestion: Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


5.2. Specific hazards arising from the chemical

No additional information available

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures: Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Take up liquid spill into absorbent material.
Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the workstation. Wear personal protective equipment.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

CB-X Solubilization Buffer II
No additional information available
sodium dodecyl sulphate (151-21-3)
No additional information available
8.2. Appropriate engineering controls

- Appropriate engineering controls: Ensure good ventilation of the work station.
- Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
- Protective gloves

Eye protection:
- Safety glasses

Skin and body protection:
- Wear suitable protective clothing

Respiratory protection:
- In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state: Liquid
- Color: No data available
- Odor: No data available
- Odor threshold: No data available
- pH: No data available
- Melting point: Not applicable
- Freezing point: No data available
- Boiling point: No data available
- Flash point: No data available
- Relative evaporation rate (butyl acetate=1): No data available
- Flammability (solid, gas): Not applicable
- Vapor pressure: No data available
- Relative vapor density at 20 °C: No data available
- Relative density: No data available
- Solubility: No data available
- Log Pow: No data available
- Auto-ignition temperature: No data available
- Decomposition temperature: No data available
- Viscosity, kinematic: No data available
- Viscosity, dynamic: No data available
- Explosion limits: No data available
- Explosive properties: No data available
- Oxidizing properties: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.
10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

<table>
<thead>
<tr>
<th>sodium dodecyl sulphate (151-21-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
</tr>
<tr>
<td>ATE US (oral)</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : Not classified
Specific target organ toxicity – repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>sodium dodecyl sulphate (151-21-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>sodium dodecyl sulphate (151-21-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
</tr>
<tr>
<td>BCF fish 2</td>
</tr>
<tr>
<td>Log Pow</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

<table>
<thead>
<tr>
<th>sodium dodecyl sulphate (151-21-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
</tr>
</tbody>
</table>
CB-X Solubilization Buffer II
Safety Data Sheet
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<table>
<thead>
<tr>
<th>sodium dodecyl sulphate (151-21-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Koc</td>
</tr>
<tr>
<td>Ecology - soil</td>
</tr>
</tbody>
</table>

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
Not regulated

Transportation of Dangerous Goods

Transport by sea
Not regulated

Air transport
Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations
sodium dodecyl sulphate (151-21-3)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
EU-Regulations

National regulations
No additional information available

15.3. US State regulations

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date: 05/11/2017

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H302</th>
<th>Harmful if swallowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>H312</td>
<td>Harmful in contact with skin</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
</tbody>
</table>

06/28/2019 EN (English US)
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