

SAFETY DATA SHEET



Genomic DNA ULS Labeling Kit Module, Part Number 5190-0420

Section 1. Identification

1.1 Product identifier

Product name : Genomic DNA ULS Labeling Kit Module, Part Number 5190-0420
Part No. (Chemical Kit) : 5190-0420
Part No. : 10x Labeling Solution LK017G
 Cy3, Cy5 LK106A_LK107A
Validation date : 6/27/2017

1.2 Relevant identified uses of the substance or mixture and uses advised against

Material uses : Analytical chemistry.
 The following article is also contained in this kit: SP0005K. (No SDS is necessary.)
 10x Labeling Solution 0.1 ml
 Cy3, Cy5 0.0125 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : 10x Labeling Solution While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
 Cy3, Cy5 This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Cy3, Cy5
 H227 FLAMMABLE LIQUIDS - Category 4
 H319 EYE IRRITATION - Category 2A
 H350 CARCINOGENICITY - Category 1B
 H360 TOXIC TO REPRODUCTION (Unborn child) - Category 1B
 H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (liver) - Category 2

Ingredients of unknown toxicity : 10x Labeling Solution Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
 Cy3, Cy5 Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%

2.2 GHS label elements

Section 2. Hazards identification

Hazard pictograms : Cy3, Cy5



Signal word : 10x Labeling Solution
Cy3, Cy5

No signal word.
Danger

Hazard statements : 10x Labeling Solution
Cy3, Cy5

No known significant effects or critical hazards.
H227 - Combustible liquid.
H319 - Causes serious eye irritation.
H350 - May cause cancer.
H360 - May damage the unborn child.
H336 - May cause drowsiness or dizziness.
H373 - May cause damage to organs through prolonged or repeated exposure. (liver)

Precautionary statements

Prevention : 10x Labeling Solution
Cy3, Cy5

Not applicable.
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
P210 - Keep away from flames and hot surfaces. - No smoking.
P271 - Use only outdoors or in a well-ventilated area.
P260 - Do not breathe vapor.
P264 - Wash hands thoroughly after handling.

Response : 10x Labeling Solution
Cy3, Cy5

Not applicable.
P314 - Get medical attention if you feel unwell.
P308 + P313 - IF exposed or concerned: Get medical attention.
P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical attention.

Storage : 10x Labeling Solution
Cy3, Cy5

Not applicable.
P405 - Store locked up.
P403 - Store in a well-ventilated place.
P235 - Keep cool.

Disposal : 10x Labeling Solution
Cy3, Cy5

Not applicable.
P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : 10x Labeling Solution
Cy3, Cy5

None known.
None known.

2.3 Other hazards

Hazards not otherwise classified : 10x Labeling Solution
Cy3, Cy5

None known.
None known.

Section 3. Composition/information on ingredients

Substance/mixture : 10x Labeling Solution Mixture
Cy3, Cy5 Mixture

Ingredient name	%	CAS number
10x Labeling Solution Trometamol	<10	77-86-1
Cy3, Cy5 N,N-Dimethylformamide	≥25 - ≤50	68-12-2
Sodium chloride	≥10 - ≤20	7647-14-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact : 10x Labeling Solution

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Cy3, Cy5

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : 10x Labeling Solution

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Cy3, Cy5

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Section 4. First aid measures

Skin contact	: 10x Labeling Solution Cy3, Cy5	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: 10x Labeling Solution Cy3, Cy5	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards. Causes serious eye irritation.
Inhalation	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards. Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact	: 10x Labeling Solution Cy3, Cy5	No specific data. Adverse symptoms may include the following: pain or irritation watering redness
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Section 4. First aid measures

Inhalation	: 10x Labeling Solution Cy3, Cy5	No specific data. Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: 10x Labeling Solution Cy3, Cy5	No specific data. Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: 10x Labeling Solution Cy3, Cy5	No specific data. Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: 10x Labeling Solution Cy3, Cy5	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	: 10x Labeling Solution Cy3, Cy5	No specific treatment. No specific treatment.
Protection of first-aiders	: 10x Labeling Solution Cy3, Cy5	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: 10x Labeling Solution Cy3, Cy5	Use an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: 10x Labeling Solution Cy3, Cy5	None known. Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Section 5. Fire-fighting measures

Specific hazards arising from the chemical	: 10x Labeling Solution Cy3, Cy5	In a fire or if heated, a pressure increase will occur and the container may burst. Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
Hazardous thermal decomposition products	: 10x Labeling Solution Cy3, Cy5	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
 <u>5.3 Advice for firefighters</u>		
Special protective actions for fire-fighters	: 10x Labeling Solution Cy3, Cy5	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	: 10x Labeling Solution Cy3, Cy5	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: 10x Labeling Solution Cy3, Cy5	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on
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Section 6. Accidental release measures

<p>For emergency responders : 10x Labeling Solution</p> <p style="margin-left: 100px;">Cy3, Cy5</p>	<p>appropriate personal protective equipment. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p>
<p>6.2 Environmental precautions : 10x Labeling Solution</p> <p style="margin-left: 100px;">Cy3, Cy5</p>	<p>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</p>
<p>6.3 Methods and materials for containment and cleaning up</p> <p>Methods for cleaning up : 10x Labeling Solution</p> <p style="margin-left: 100px;">Cy3, Cy5</p>	<p>Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.</p>

Section 7. Handling and storage

7.1 Precautions for safe handling

<p>Protective measures : 10x Labeling Solution</p> <p style="margin-left: 100px;">Cy3, Cy5</p>	<p>Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material</p>
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Section 7. Handling and storage

<p>Advice on general occupational hygiene</p>	<p>: 10x Labeling Solution</p> <p>Cy3, Cy5</p>	<p>handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.</p> <p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> <p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
<p>7.2 Conditions for safe storage, including any incompatibilities</p>	<p>: 10x Labeling Solution</p> <p>Cy3, Cy5</p>	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.</p> <p>Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.</p>
<p>7.3 Specific end use(s)</p> <p>Recommendations</p> <p>Industrial sector specific solutions</p>	<p>: 10x Labeling Solution</p> <p>Cy3, Cy5</p> <p>: 10x Labeling Solution</p> <p>Cy3, Cy5</p>	<p>Industrial applications, Professional applications.</p> <p>Industrial applications, Professional applications.</p> <p>Not applicable.</p> <p>Not applicable.</p>

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
<p>10x Labeling Solution Trometamol</p> <p>Cy3, Cy5 N,N-Dimethylformamide</p> <p>Sodium chloride</p>	<p>None.</p> <p>ACGIH TLV (United States, 3/2015). Absorbed through skin. TWA: 10 ppm 8 hours. TWA: 30 mg/m³ 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. TWA: 10 ppm 8 hours. TWA: 30 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2013). Absorbed through skin. TWA: 10 ppm 10 hours. TWA: 30 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). Absorbed through skin. TWA: 10 ppm 8 hours. TWA: 30 mg/m³ 8 hours.</p> <p>None.</p>

8.2 Exposure controls

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: 10x Labeling Solution Cy3, Cy5	Liquid. Liquid.
Color	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
Odor	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
Odor threshold	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
pH	: 10x Labeling Solution Cy3, Cy5	7 Not available.
Melting point	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
Boiling point	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
Flash point	: 10x Labeling Solution Cy3, Cy5	Not available. Closed cup: 61 to 93.3°C (141.8 to 199.9°F)
Evaporation rate	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
Flammability (solid, gas)	: 10x Labeling Solution Cy3, Cy5	Not applicable. Not applicable.
Lower and upper explosive (flammable) limits	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
Vapor pressure	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
Vapor density	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
Relative density	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
Solubility	: 10x Labeling Solution Cy3, Cy5	Easily soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
Auto-ignition temperature	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
Decomposition temperature	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
Viscosity	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.

Section 10. Stability and reactivity

10.1 Reactivity	: 10x Labeling Solution Cy3, Cy5	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: 10x Labeling Solution Cy3, Cy5	The product is stable. The product is stable.
10.3 Possibility of hazardous reactions	: 10x Labeling Solution Cy3, Cy5	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: 10x Labeling Solution Cy3, Cy5	No specific data. Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
10.5 Incompatible materials	: 10x Labeling Solution Cy3, Cy5	May react or be incompatible with oxidizing materials. Reactive or incompatible with the following materials: oxidizing materials
10.6 Hazardous decomposition products	: 10x Labeling Solution Cy3, Cy5	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
10x Labeling Solution Trometamol	LD50 Dermal LD50 Oral	Rat Rat	>5000 mg/kg 5000 mg/kg	- -
Cy3, Cy5 N,N-Dimethylformamide	LC50 Inhalation Vapor LC50 Inhalation Vapor LD50 Dermal LD50 Oral	Rat Rat Rabbit Rat	3421 ppm 1948 ppm 4720 mg/kg 2000 mg/kg	1 hours 4 hours - -
Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
10x Labeling Solution Trometamol	Skin - Moderate irritant Skin - Severe irritant	Rabbit Rabbit	- -	25 Percent 500 milligrams	- -
Cy3, Cy5 N,N-Dimethylformamide Sodium chloride	Eyes - Severe irritant Eyes - Moderate irritant	Rabbit Rabbit	- -	100 Percent 24 hours 100 milligrams	- -
	Eyes - Moderate irritant Skin - Mild irritant	Rabbit Rabbit	- -	10 milligrams 24 hours 500 milligrams	- -

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Cy3, Cy5 N,N-Dimethylformamide	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
10x Labeling Solution Trometamol	Category 3	Not applicable.	Respiratory tract irritation
Cy3, Cy5 N,N-Dimethylformamide	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Cy3, Cy5 N,N-Dimethylformamide	Category 2	Not determined	liver

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure	: 10x Labeling Solution Cy3, Cy5	Routes of entry anticipated: Oral, Dermal, Inhalation. Routes of entry anticipated: Oral, Dermal, Inhalation.
<u>Potential acute health effects</u>		
Eye contact	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards. Causes serious eye irritation.
Inhalation	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards. Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards. Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: 10x Labeling Solution Cy3, Cy5	No specific data. Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: 10x Labeling Solution Cy3, Cy5	No specific data. Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: 10x Labeling Solution Cy3, Cy5	No specific data. Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: 10x Labeling Solution Cy3, Cy5	No specific data. Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Section 11. Toxicological information

Potential chronic health effects

General	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards. May cause damage to organs through prolonged or repeated exposure.
Carcinogenicity	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards.
Mutagenicity	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards.
Teratogenicity	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards. May damage the unborn child.
Developmental effects	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards.
Fertility effects	: 10x Labeling Solution Cy3, Cy5	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
10x Labeling Solution Oral	50505.1 mg/kg
Cy3, Cy5 Oral	4285.7 mg/kg
Dermal	11800 mg/kg
Inhalation (vapors)	27.5 mg/l

Other information	: 10x Labeling Solution Cy3, Cy5	Not available. Not available.
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Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
10x Labeling Solution Trometamol	Acute EC50 >980 mg/l Fresh water Acute NOEC 520 mg/l Fresh water	Daphnia Daphnia	48 hours 48 hours
Cy3, Cy5 N,N-Dimethylformamide	Acute EC50 4500000 µg/l Fresh water Acute LC50 >100000 µg/l Marine water Acute LC50 7100000 µg/l Fresh water	Daphnia - Daphnia magna Crustaceans - Crangon crangon - Adult Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	48 hours 48 hours 96 hours
Sodium chloride	Chronic NOEC 1500 mg/l Fresh water Acute EC50 2430000 µg/l Fresh water Acute EC50 28.85 mg/dm ³ Fresh water Acute EC50 519.6 mg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1661 mg/l Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water	Daphnia - Daphnia magna Algae - Navicula seminulum Algae - Pseudokirchneriella subcapitata Crustaceans - Cypris subglobosa Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca -	21 days 96 hours 72 hours 48 hours 96 hours 48 hours 96 hours 3 weeks

Section 12. Ecological information

	Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Juvenile (Fledgling, Hatchling, Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 21 days 8 weeks
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12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
10x Labeling Solution Trometamol	-1.56	-	low
Cy3, Cy5 N,N-Dimethylformamide	-1.01	0.3 to 1.2	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

Additional information

DOT Classification : **Reportable quantity**
 500 lbs / 227 kg
 Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification :

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
10x Labeling Solution Trometamol	<10	Yes.	No.	No.	Yes.	No.
Cy3, Cy5 N,N-Dimethylformamide	≥25 - ≤50	Yes.	No.	No.	Yes.	Yes.
Sodium chloride	≥10 - ≤20	No.	No.	No.	Yes.	No.

SARA 313

Section 15. Regulatory information

	Product name	CAS number	%
Form R - Reporting requirements	Cy3, Cy5 N,N-Dimethylformamide	68-12-2	≥25 - ≤50
Supplier notification	Cy3, Cy5 N,N-Dimethylformamide	68-12-2	≥25 - ≤50

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: DIMETHYLFORMAMIDE
- New York** : The following components are listed: Dimethyl formamide
- New Jersey** : The following components are listed: DIMETHYLFORMAMIDE; FORMAMIDE, N,N-DIMETHYL-
- Pennsylvania** : The following components are listed: FORMAMIDE, N,N-DIMETHYL-
- California Prop. 65**

No products were found.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- Japan** : **Japan inventory (ENCS)**: All components are listed or exempted.
Japan inventory (ISHL): All components are listed or exempted.
- Malaysia** : Not determined.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : Not determined.
- Thailand** : Not determined.
- Turkey** : Not determined.
- United States** : All components are listed or exempted.
- Viet Nam** : Not determined.

Section 16. Other information

History

Date of issue : 06/27/2017

Date of previous issue : 06/27/2017.

Version : 5

✔ Indicates information that has changed from previously issued version.

Notice to reader

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