

SAFETY DATA SHEET



Genomic DNA ULS Labeling Kit, Part Number 5190-0419

Section 1. Identification

Product identifier : Genomic DNA ULS Labeling Kit, Part Number 5190-0419
Part No. (Chemical Kit) : 5190-0419
Part No. : Agilent-CGHblock 5190-0421
 ULS-Cyanine3 LK019G
 ULS-Cyanine5 LK020G
 10X Labeling Solution LK017D

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

Analytical reagent.

The following article is also contained in this kit: SP0005K. (No SDS is necessary.)

Agilent-CGHblock	0.75 ml
ULS-Cyanine3	0.0125 ml
ULS-Cyanine5	0.0125 ml
10X Labeling Solution	0.1 ml

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
 679 Springvale Road
 Mulgrave
 Victoria 3170, Australia
 1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: (61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

ULS-Cyanine3

H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
 H360 TOXIC TO REPRODUCTION (Unborn child) - Category 1B


ULS-Cyanine5

H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
 H360 TOXIC TO REPRODUCTION (Unborn child) - Category 1B

Agilent-CGHblock	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 5%
ULS-Cyanine3	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 5%
ULS-Cyanine5	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 5%
10X Labeling Solution	Not applicable.
Agilent-CGHblock	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5%
ULS-Cyanine3	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5%
ULS-Cyanine5	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5%
10X Labeling Solution	Not applicable.

GHS label elements

Section 2. Hazard(s) identification

Hazard pictograms	:		
Signal word	:	Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	No signal word. DANGER DANGER No signal word.
Hazard statements	:	Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	No known significant effects or critical hazards. H319 - Causes serious eye irritation. H360 - May damage the unborn child. H319 - Causes serious eye irritation. H360 - May damage the unborn child. No known significant effects or critical hazards.
<u>Precautionary statements</u>			
Prevention	:	Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not applicable. P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required. P280 - Wear eye or face protection. P264 - Wash hands thoroughly after handling. P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required. P280 - Wear eye or face protection. P264 - Wash hands thoroughly after handling.
Response	:	Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not applicable. P308 + P313 - IF exposed or concerned: Get medical attention. 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. P308 + P313 - IF exposed or concerned: Get medical attention. 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	:	Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not applicable. P405 - Store locked up. P405 - Store locked up.
Disposal	:	Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable.

Section 2. Hazard(s) identification

Supplemental label elements : Agilent-CGHblock Not applicable.
 ULS-Cyanine3 Not applicable.
 ULS-Cyanine5 Not applicable.
 10X Labeling Solution Not applicable.

Other hazards which do not result in classification : Agilent-CGHblock None known.
 ULS-Cyanine3 None known.
 ULS-Cyanine5 None known.
 10X Labeling Solution None known.

Section 3. Composition and ingredient information

Substance/mixture : Agilent-CGHblock Mixture
 ULS-Cyanine3 Mixture
 ULS-Cyanine5 Mixture
 10X Labeling Solution Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
ULS-Cyanine3 N,N-Dimethylformamide	≥30 - <55	68-12-2
ULS-Cyanine5 N,N-Dimethylformamide	≥30 - <55	68-12-2

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

Description of necessary first aid measures

Eye contact : Agilent-CGHblock 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.
 ULS-Cyanine3 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.
 ULS-Cyanine5 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.
 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.

Inhalation : Agilent-CGHblock 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.
 ULS-Cyanine3 Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

Section 4. First aid measures

Get medical attention. 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.

ULS-Cyanine5

Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 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.

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.

Skin contact

: Agilent-CGHblock

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

ULS-Cyanine3

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.

ULS-Cyanine5

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.

10X Labeling Solution

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion

: Agilent-CGHblock

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.

ULS-Cyanine3

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

Section 4. First aid measures

ULS-Cyanine5

occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. 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.

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. 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.

10X Labeling Solution

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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution
Inhalation	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution
Skin contact	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution
Ingestion	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution

No known significant effects or critical hazards. Causes serious eye irritation. Causes serious eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: Agilent-CGHblock ULS-Cyanine3
	ULS-Cyanine5
	10X Labeling Solution

No specific data. Adverse symptoms may include the following: pain or irritation
watering
redness
Adverse symptoms may include the following: pain or irritation
watering
redness
No specific data.

Section 4. First aid measures

Inhalation	: Agilent-CGHblock ULS-Cyanine3	No specific data. Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	ULS-Cyanine5	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	10X Labeling Solution	No specific data.
Skin contact	: Agilent-CGHblock ULS-Cyanine3	No specific data. Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	ULS-Cyanine5	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	10X Labeling Solution	No specific data.
Ingestion	: Agilent-CGHblock ULS-Cyanine3	No specific data. Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	ULS-Cyanine5	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	10X Labeling Solution	No specific data.

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

Notes to physician	: Agilent-CGHblock	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.
	ULS-Cyanine3	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.
	ULS-Cyanine5	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.
	10X Labeling Solution	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	: Agilent-CGHblock	No specific treatment.
	ULS-Cyanine3	No specific treatment.
	ULS-Cyanine5	No specific treatment.
	10X Labeling Solution	No specific treatment.
Protection of first-aiders	: Agilent-CGHblock	No action shall be taken involving any personal risk or without suitable training.
	ULS-Cyanine3	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.

Section 4. First aid measures

ULS-Cyanine5	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.
10X Labeling Solution	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	: Agilent-CGHblock	Use an extinguishing agent suitable for the surrounding fire.
	ULS-Cyanine3	Use an extinguishing agent suitable for the surrounding fire.
	ULS-Cyanine5	Use an extinguishing agent suitable for the surrounding fire.
	10X Labeling Solution	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Agilent-CGHblock	None known.
	ULS-Cyanine3	None known.
	ULS-Cyanine5	None known.
	10X Labeling Solution	None known.
Specific hazards arising from the chemical	: Agilent-CGHblock	In a fire or if heated, a pressure increase will occur and the container may burst.
	ULS-Cyanine3	In a fire or if heated, a pressure increase will occur and the container may burst.
	ULS-Cyanine5	In a fire or if heated, a pressure increase will occur and the container may burst.
	10X Labeling Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: Agilent-CGHblock	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
	ULS-Cyanine3	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	ULS-Cyanine5	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	10X Labeling Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides

Section 5. Firefighting measures

Special protective actions for fire-fighters	: Agilent-CGHblock	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.
	ULS-Cyanine3	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.
	ULS-Cyanine5	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.
	10X Labeling Solution	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.
Special protective equipment for fire-fighters	: Agilent-CGHblock	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	ULS-Cyanine3	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	ULS-Cyanine5	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	10X Labeling Solution	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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Agilent-CGHblock	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 spilt material. Put on appropriate personal protective equipment.
	ULS-Cyanine3	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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	ULS-Cyanine5	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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	10X Labeling Solution	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

Section 6. Accidental release measures

For emergency responders : Agilent-CGHblock

ULS-Cyanine3

ULS-Cyanine5

10X Labeling Solution

through spilt material. Put on appropriate personal protective equipment.

If specialised 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".

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Environmental precautions : Agilent-CGHblock

ULS-Cyanine3

ULS-Cyanine5

10X Labeling Solution

Avoid dispersal of spilt 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).

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Methods and material for containment and cleaning up

Methods for cleaning up : Agilent-CGHblock

ULS-Cyanine3

ULS-Cyanine5

10X Labeling Solution

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.

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Section 6. Accidental release measures

inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

:  Agilent-CGHblock

ULS-Cyanine3

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 ingest. Avoid breathing vapour or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

ULS-Cyanine5

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 ingest. Avoid breathing vapour or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

10X Labeling Solution

Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene

:  Agilent-CGHblock

ULS-Cyanine3

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.

ULS-Cyanine5

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.

10X Labeling Solution

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.

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

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Agilent-CGHblock

before entering eating areas. See also Section 8 for additional information on hygiene measures.

ULS-Cyanine3

Do not store above the following temperature: -20°C (-4°F). 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

ULS-Cyanine5

Store between the following temperatures: 2 to 6°C (35.6 to 42.8°F). 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. Store locked up. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

10X Labeling Solution

Store between the following temperatures: 2 to 6°C (35.6 to 42.8°F). 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

Store between the following temperatures: 2 to 6°C (35.6 to 42.8°F). 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
<p>ULS-Cyanine3 N,N-Dimethylformamide</p>	<p>Safe Work Australia (Australia, 1/2014). Absorbed through skin. TWA: 30 mg/m³ 8 hours. TWA: 10 ppm 8 hours.</p>
<p>ULS-Cyanine5 N,N-Dimethylformamide</p>	<p>Safe Work Australia (Australia, 1/2014).</p>

Section 8. Exposure controls and personal protection

Absorbed through skin.

TWA: 30 mg/m³ 8 hours.

TWA: 10 ppm 8 hours.

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, 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.
- 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

Appearance

- Physical state** : Agilent-CGHblock Liquid.
 ULS-Cyanine3 Liquid. [Clear.]
 ULS-Cyanine5 Liquid.
 10X Labeling Solution Liquid.
- Colour** : Agilent-CGHblock Yellowish. [Light]
 ULS-Cyanine3 Pink [Light]
 ULS-Cyanine5 Blue. [Light]
 10X Labeling Solution Colourless.
- Odour** : Agilent-CGHblock Sulphurous. [Slight]
 ULS-Cyanine3 Amine-like. [Slight]
 ULS-Cyanine5 Amine-like. [Slight]
 10X Labeling Solution Odourless.

Section 9. Physical and chemical properties

Odour threshold	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not available. Not available. Not available. Not available.
pH	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not available. Not available. Not available. 7 to 8
Melting point	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not available. Not available. Not available. Not available.
Boiling point	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not available. Not available. Not available. 95 to 100°C (203 to 212°F)
Flash point	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not available. Not available. Not available. Not available.
Evaporation rate	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not available. Not available. Not available. Not available.
Flammability (solid, gas)	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not applicable. Not applicable. Not applicable. Not applicable.
Lower and upper explosive (flammable) limits	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not available. Not available. Not available. Not available.
Vapour pressure	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not available. Not available. Not available. Not available.
Vapour density	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not available. Not available. Not available. Not available.
Relative density	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not available. Not available. Not available. Not available.
Solubility	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Partially soluble in the following materials: cold water and hot water. Partially soluble in the following materials: cold water and hot water. Partially 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	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not available. Not available. Not available. Not available.
Auto-ignition temperature	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	Not available. Not available. Not available. Not available.

Section 9. Physical and chemical properties

Decomposition temperature	: Agilent-CGHblock	Not available.
	ULS-Cyanine3	Not available.
	ULS-Cyanine5	Not available.
	10X Labeling Solution	Not available.
Viscosity	: Agilent-CGHblock	Not available.
	ULS-Cyanine3	Not available.
	ULS-Cyanine5	Not available.
	10X Labeling Solution	Not available.

Section 10. Stability and reactivity

Reactivity	: Agilent-CGHblock	No specific test data related to reactivity available for this product or its ingredients.
	ULS-Cyanine3	No specific test data related to reactivity available for this product or its ingredients.
	ULS-Cyanine5	No specific test data related to reactivity available for this product or its ingredients.
	10X Labeling Solution	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: Agilent-CGHblock	The product is stable.
	ULS-Cyanine3	The product is stable.
	ULS-Cyanine5	The product is stable.
	10X Labeling Solution	The product is stable.
Possibility of hazardous reactions	: Agilent-CGHblock	Under normal conditions of storage and use, hazardous reactions will not occur.
	ULS-Cyanine3	Under normal conditions of storage and use, hazardous reactions will not occur.
	ULS-Cyanine5	Under normal conditions of storage and use, hazardous reactions will not occur.
	10X Labeling Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Agilent-CGHblock	No specific data.
	ULS-Cyanine3	No specific data.
	ULS-Cyanine5	No specific data.
	10X Labeling Solution	No specific data.
Incompatible materials	: Agilent-CGHblock	May react or be incompatible with oxidising materials.
	ULS-Cyanine3	May react or be incompatible with oxidising materials.
	ULS-Cyanine5	May react or be incompatible with oxidising materials.
	10X Labeling Solution	May react or be incompatible with oxidising materials.
Hazardous decomposition products	: Agilent-CGHblock	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	ULS-Cyanine3	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	ULS-Cyanine5	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10X Labeling Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ULS-Cyanine3 N,N-Dimethylformamide	LC50 Inhalation Vapour LC50 Inhalation Vapour LD50 Dermal LD50 Oral	Rat Rat Rabbit Rat	3421 ppm 1948 ppm 4720 mg/kg 2000 mg/kg	1 hours 4 hours - -
ULS-Cyanine5 N,N-Dimethylformamide	LC50 Inhalation Vapour LC50 Inhalation Vapour LD50 Dermal LD50 Oral	Rat Rat Rabbit Rat	3421 ppm 1948 ppm 4720 mg/kg 2000 mg/kg	1 hours 4 hours - -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ULS-Cyanine3 N,N-Dimethylformamide	Eyes - Severe irritant	Rabbit	-	100 Percent	-
ULS-Cyanine5 N,N-Dimethylformamide	Eyes - Severe irritant	Rabbit	-	100 Percent	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : Agilent-CGHblock
ULS-Cyanine3
ULS-Cyanine5
10X Labeling Solution

Routes of entry anticipated: Oral, Dermal, Inhalation.
Routes of entry anticipated: Oral, Dermal, Inhalation.
Routes of entry anticipated: Oral, Dermal, Inhalation.
Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Agilent-CGHblock
ULS-Cyanine3
ULS-Cyanine5
10X Labeling Solution

No known significant effects or critical hazards.
Causes serious eye irritation.
Causes serious eye irritation.
No known significant effects or critical hazards.

Section 11. Toxicological information

Inhalation	:	Agilent-CGHblock	No known significant effects or critical hazards.
		ULS-Cyanine3	No known significant effects or critical hazards.
		ULS-Cyanine5	No known significant effects or critical hazards.
		10X Labeling Solution	No known significant effects or critical hazards.
Skin contact	:	Agilent-CGHblock	No known significant effects or critical hazards.
		ULS-Cyanine3	No known significant effects or critical hazards.
		ULS-Cyanine5	No known significant effects or critical hazards.
		10X Labeling Solution	No known significant effects or critical hazards.
Ingestion	:	Agilent-CGHblock	No known significant effects or critical hazards.
		ULS-Cyanine3	No known significant effects or critical hazards.
		ULS-Cyanine5	No known significant effects or critical hazards.
		10X Labeling Solution	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	Agilent-CGHblock	No specific data.
		ULS-Cyanine3	Adverse symptoms may include the following: pain or irritation watering redness
		ULS-Cyanine5	Adverse symptoms may include the following: pain or irritation watering redness
		10X Labeling Solution	No specific data.
Inhalation	:	Agilent-CGHblock	No specific data.
		ULS-Cyanine3	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		ULS-Cyanine5	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		10X Labeling Solution	No specific data.
Skin contact	:	Agilent-CGHblock	No specific data.
		ULS-Cyanine3	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		ULS-Cyanine5	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		10X Labeling Solution	No specific data.
Ingestion	:	Agilent-CGHblock	No specific data.
		ULS-Cyanine3	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		ULS-Cyanine5	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		10X Labeling Solution	No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.

Section 11. Toxicological information

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	No known significant effects or critical hazards. May damage the unborn child. May damage the unborn child. No known significant effects or critical hazards.
Developmental effects	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: Agilent-CGHblock ULS-Cyanine3 ULS-Cyanine5 10X Labeling Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
ULS-Cyanine3 Dermal Inhalation (vapours)	2020.2 mg/kg 20.2 mg/l
ULS-Cyanine5 Dermal Inhalation (vapours)	2020.2 mg/kg 20.2 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ULS-Cyanine3 N,N-Dimethylformamide	Acute EC50 4500000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 >100000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 7100000 µg/l Fresh water	Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 1500 mg/l Fresh water	Daphnia - Daphnia magna	21 days

Section 12. Ecological information

ULS-Cyanine5 N,N-Dimethylformamide	Acute EC50 4500000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 >100000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 7100000 µg/l Fresh water	Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 1500 mg/l Fresh water	Daphnia - Daphnia magna	21 days

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
10X Labeling Solution 10X Labeling Solution	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
ULS-Cyanine3 N,N-Dimethylformamide	-1.01	0.3 to 1.2	low
ULS-Cyanine5 N,N-Dimethylformamide	-1.01	0.3 to 1.2	low

Mobility in soil

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

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised 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.

Section 14. Transport information

Regulatory information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code .

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

Standard Uniform Schedule of Medicine and Poisons



Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

Australia inventory (AICS) : Not determined.

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 Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Canada	: Not determined.
China	: Not determined.
Europe	: Not determined.
Japan	: Japan inventory (ENCS) : Not determined. Japan inventory (ISHL) : Not determined.
Malaysia	: Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Turkey	: Not determined.
United States	: Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 03/02/2016

Date of previous issue : 15/01/2014.

Version : 2

Key to abbreviations

: ADG = Australian Dangerous Goods
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 NOHSC = National Occupational Health and Safety Commission
 SUSMP = Standard Uniform Schedule of Medicine and Poisons
 UN = United Nations

Section 16. Any other relevant information

Procedure used to derive the classification

Classification	Justification
<p>ULS-Cyanine3 Eye Irrit. 2A, H319 Repr. 1B, H360 (Unborn child)</p>	<p>Calculation method Calculation method</p>
<p>ULS-Cyanine5 Eye Irrit. 2A, H319 Repr. 1B, H360 (Unborn child)</p>	<p>Calculation method Calculation method</p>

References : Not available.

 Indicates information that has changed from previously issued version.

Notice to reader

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