Conforms to US OSHA Hazard Communication 29CFR1910.1200

# SAFETY DATA SHEET

Agilent Technologies

Genomic DNA ULS Labeling Kit, Part Number 5190-0419

## Section 1. Identification

### 1.1 Product identifier

**Product name** : 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 |

**Validation date** : 3/20/2024

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

**Identified uses** : 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 |

### 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** :

| | |
|---|---|
| Agilent-CGHblock | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |
| ULS-Cyanine3 | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |
| ULS-Cyanine5 | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |
| 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. |

### Classification of the substance or mixture

**Agilent-CGHblock**

| | |
|---|---|
| H315 | SKIN IRRITATION - Category 2 |
| H319 | EYE IRRITATION - Category 2A |

**ULS-Cyanine3**

| | |
|---|---|
| H319 | EYE IRRITATION - Category 2A |
| H350 | CARCINOGENICITY - Category 1B |
| H360 | TOXIC TO REPRODUCTION - Category 1B |

# Section 2. Hazards identification

**ULS-Cyanine5**

H319 EYE IRRITATION - Category 2A
H350 CARCINOGENICITY - Category 1B
H360 TOXIC TO REPRODUCTION - Category 1B

| | |
|---|---|
| Agilent-CGHblock | Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 2.5% |
| 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% |

## 2.2 GHS label elements

**Hazard pictograms** :

Agilent-CGHblock

ULS-Cyanine3

ULS-Cyanine5

**Signal word** :

| | |
|---|---|
| Agilent-CGHblock | Warning |
| ULS-Cyanine3 | Danger |
| ULS-Cyanine5 | Danger |
| 10X Labeling Solution | No signal word. |

**Hazard statements** :

| | |
|---|---|
| Agilent-CGHblock | H315 - Causes skin irritation.<br>H319 - Causes serious eye irritation. |
| ULS-Cyanine3 | H319 - Causes serious eye irritation.<br>H350 - May cause cancer.<br>H360 - May damage fertility or the unborn child. |
| ULS-Cyanine5 | H319 - Causes serious eye irritation.<br>H350 - May cause cancer.<br>H360 - May damage fertility or the unborn child. |
| 10X Labeling Solution | No known significant effects or critical hazards. |

## Precautionary statements

**Prevention** :

| | |
|---|---|
| Agilent-CGHblock | P280 - Wear protective gloves. Wear eye or face protection.<br>P264 - Wash thoroughly after handling. |
| ULS-Cyanine3 | P201 - Obtain special instructions before use.<br>P280 - Wear protective gloves, protective clothing and eye or face protection. |
| ULS-Cyanine5 | P201 - Obtain special instructions before use.<br>P280 - Wear protective gloves, protective clothing and eye or face protection. |
| 10X Labeling Solution | Not applicable. |

## Section 2. Hazards identification

| | | | |
|---|---|---|---|
| **Response** | : | Agilent-CGHblock | P362 + P364 - Take off contaminated clothing and wash it before reuse.<br>P302 + P352 - IF ON SKIN: Wash with plenty of water.<br>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| | | ULS-Cyanine3 | P308 + P313 - IF exposed or concerned: Get medical advice or attention.<br>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| | | ULS-Cyanine5 | P308 + P313 - IF exposed or concerned: Get medical advice or attention.<br>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| | | 10X Labeling Solution | Not applicable. |
| **Storage** | : | Agilent-CGHblock | Not applicable. |
| | | ULS-Cyanine3 | Not applicable. |
| | | ULS-Cyanine5 | Not applicable. |
| | | 10X Labeling Solution | Not applicable. |
| **Disposal** | : | Agilent-CGHblock | Not applicable. |
| | | ULS-Cyanine3 | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | | ULS-Cyanine5 | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | | 10X Labeling Solution | Not applicable. |
| **Supplemental label elements** | : | Agilent-CGHblock | None known. |
| | | ULS-Cyanine3 | None known. |
| | | ULS-Cyanine5 | None known. |
| | | 10X Labeling Solution | None known. |

**2.3 Other hazards**

| | | | |
|---|---|---|---|
| **Hazards not otherwise classified** | : | Agilent-CGHblock | None known. |
| | | ULS-Cyanine3 | None known. |
| | | ULS-Cyanine5 | None known. |
| | | 10X Labeling Solution | None known. |

## Section 3. Composition/information on ingredients

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

# Section 3. Composition/information on ingredients

| Ingredient name | % | CAS number |
|---|---|---|
| **Agilent-CGHblock** | | |
| sodium diethyldithiocarbamate | <3 | 148-18-5 |
| **ULS-Cyanine3** | | |
| N,N-Dimethylformamide | ≥50 - <55 | 68-12-2 |
| **ULS-Cyanine5** | | |
| N,N-Dimethylformamide | ≥50 - <55 | 68-12-2 |
| **10X Labeling Solution** | | |
| Trometamol | <10 | 77-86-1 |

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 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** :

Agilent-CGHblock: 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-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. 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 adverse health effects persist or are severe. 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

# Section 4. First aid measures

| | | | |
|---|---|---|---|
| | | | 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. 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. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| | | 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. |

# Section 4. First aid measures

| | | | |
|---|---|---|---|
| | | 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 dentures if any. 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 adverse health effects persist or are severe. 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. |
| | | ULS-Cyanine3 | Wash out mouth with water. Remove dentures if any. 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. |
| | | ULS-Cyanine5 | Wash out mouth with water. Remove dentures if any. 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. 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. |

## 4.2 Most important symptoms/effects, acute and delayed

### Potential acute health effects

| | | | |
|---|---|---|---|
| **Eye contact** | : | Agilent-CGHblock | Causes serious eye irritation. |
| | | ULS-Cyanine3 | Causes serious eye irritation. |
| | | ULS-Cyanine5 | Causes serious eye irritation. |
| | | 10X Labeling Solution | No known significant effects or critical hazards. |

# Section 4. First aid measures

| | | | |
|---|---|---|---|
| **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 | Causes skin irritation. |
| | | 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. |

**Over-exposure signs/symptoms**

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

# Section 4. First aid measures

## 4.3 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. |
| | | 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. |
| | | 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. Fire-fighting measures

## 5.1 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. |

# Section 5. Fire-fighting measures

| | | | |
|---|---|---|---|
| **Unsuitable extinguishing media** | : | Agilent-CGHblock | None known. |
| | | ULS-Cyanine3 | None known. |
| | | ULS-Cyanine5 | None known. |
| | | 10X Labeling Solution | None known. |

## 5.2 Special hazards arising from the substance or mixture

| | | | |
|---|---|---|---|
| **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:<br>carbon dioxide<br>carbon monoxide<br>nitrogen oxides<br>sulfur oxides<br>phosphorus oxides<br>halogenated compounds<br>metal oxide/oxides |
| | | ULS-Cyanine3 | Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide<br>nitrogen oxides<br>halogenated compounds<br>metal oxide/oxides |
| | | ULS-Cyanine5 | Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide<br>nitrogen oxides<br>halogenated compounds<br>metal oxide/oxides |
| | | 10X Labeling Solution | Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide<br>nitrogen oxides |

## 5.3 Advice for firefighters

| | | | |
|---|---|---|---|
| **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 |

# Section 5. Fire-fighting measures

| | | |
|---|---|---|
| | | 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

## 6.1 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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 spilled material. Avoid breathing vapor 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 spilled material. Avoid breathing vapor 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 through spilled material. Put on appropriate personal protective equipment. |

# Section 6. Accidental release measures

**For emergency responders** :

Agilent-CGHblock: 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".

ULS-Cyanine3: 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".

ULS-Cyanine5: 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".

10X Labeling Solution: 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".

**6.2 Environmental precautions** :

Agilent-CGHblock: 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).

ULS-Cyanine3: 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).

ULS-Cyanine5: 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).

10X Labeling Solution: 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).

**6.3 Methods and materials for containment and cleaning up**

**Methods for cleaning up** :

Agilent-CGHblock: 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.

ULS-Cyanine3: 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.

ULS-Cyanine5: 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.

10X Labeling Solution: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble.

# Section 6. Accidental release measures

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.

# Section 7. Handling and storage

## 7.1 Precautions for safe handling

**Protective measures** :

Agilent-CGHblock

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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-Cyanine3

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 vapor 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 vapor 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

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-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.

# Section 7. Handling and storage

| | | |
|---|---|---|
| | 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. |
| **7.2 Conditions for safe storage, including any incompatibilities** : | Agilent-CGHblock | 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. See Section 10 for incompatible materials before handling or use. |
| | ULS-Cyanine3 | 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |
| | ULS-Cyanine5 | 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |
| | 10X Labeling Solution | 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. See Section 10 for |

# Section 7. Handling and storage

incompatible materials before handling or use.

## 7.3 Specific end use(s)

| | | | |
|---|---|---|---|
| **Recommendations** | : | Agilent-CGHblock | Industrial applications, Professional applications. |
| | | ULS-Cyanine3 | Industrial applications, Professional applications. |
| | | ULS-Cyanine5 | Industrial applications, Professional applications. |
| | | 10X Labeling Solution | Industrial applications, Professional applications. |
| **Industrial sector specific solutions** | : | Agilent-CGHblock | Not available. |
| | | ULS-Cyanine3 | Not available. |
| | | ULS-Cyanine5 | Not available. |
| | | 10X Labeling Solution | Not available. |

# Section 8. Exposure controls/personal protection

## 8.1 Control parameters

### Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| **Agilent-CGHblock** | |
| sodium diethyldithiocarbamate | None. |
| **ULS-Cyanine3** | |
| N,N-Dimethylformamide | **ACGIH TLV (United States, 1/2023).**<br>**Absorbed through skin.**<br>TWA: 5 ppm 8 hours.<br>**OSHA PEL 1989 (United States, 3/1989).**<br>**Absorbed through skin.**<br>TWA: 10 ppm 8 hours.<br>TWA: 30 mg/m³ 8 hours.<br>**NIOSH REL (United States, 10/2020).**<br>**Absorbed through skin.**<br>TWA: 10 ppm 10 hours.<br>TWA: 30 mg/m³ 10 hours.<br>**OSHA PEL (United States, 5/2018).**<br>**Absorbed through skin.**<br>TWA: 10 ppm 8 hours.<br>TWA: 30 mg/m³ 8 hours.<br>**CAL OSHA PEL (United States, 5/2018).**<br>**Absorbed through skin.**<br>TWA: 30 mg/m³ 8 hours.<br>TWA: 10 ppm 8 hours. |
| **ULS-Cyanine5** | |
| N,N-Dimethylformamide | **ACGIH TLV (United States, 1/2023).**<br>**Absorbed through skin.**<br>TWA: 5 ppm 8 hours.<br>**OSHA PEL 1989 (United States, 3/1989).**<br>**Absorbed through skin.**<br>TWA: 10 ppm 8 hours.<br>TWA: 30 mg/m³ 8 hours.<br>**NIOSH REL (United States, 10/2020).**<br>**Absorbed through skin.**<br>TWA: 10 ppm 10 hours.<br>TWA: 30 mg/m³ 10 hours.<br>**OSHA PEL (United States, 5/2018).**<br>**Absorbed through skin.**<br>TWA: 10 ppm 8 hours. |

# Section 8. Exposure controls/personal protection

| | |
|---|---|
| | TWA: 30 mg/m³ 8 hours.<br>**CAL OSHA PEL (United States, 5/2018).**<br>**Absorbed through skin.**<br>TWA: 30 mg/m³ 8 hours.<br>TWA: 10 ppm 8 hours. |
| **10X Labeling Solution**<br>Trometamol | None. |

## Biological exposure indices

| Ingredient name | Exposure indices |
|---|---|
| **ULS-Cyanine3** | |
| N,N-Dimethylformamide | **ACGIH BEI (United States, 1/2023)**<br>BEI: 30 mg/l, total N-methylformamide [in urine]. Sampling time: end of shift.<br>BEI: 30 mg/l, N-acetyl-S-(N-methylcarbamoyl) cysteine [in urine]. Sampling time: end of shift at end of workweek. |
| **ULS-Cyanine5** | |
| N,N-Dimethylformamide | **ACGIH BEI (United States, 1/2023)**<br>BEI: 30 mg/l, total N-methylformamide [in urine]. Sampling time: end of shift.<br>BEI: 30 mg/l, N-acetyl-S-(N-methylcarbamoyl) cysteine [in urine]. Sampling time: end of shift at end of workweek. |

## 8.2 Exposure controls

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor 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**

# Section 8. Exposure controls/personal 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 and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance**

| | | |
|---|---|---|
| **Physical state** : | Agilent-CGHblock | Liquid. |
| | ULS-Cyanine3 | Liquid. [Clear.] |
| | ULS-Cyanine5 | Liquid. |
| | 10X Labeling Solution | Liquid. |
| **Color** : | Agilent-CGHblock | Not available. |
| | ULS-Cyanine3 | Pink [Light] |
| | ULS-Cyanine5 | Blue. [Light] |
| | 10X Labeling Solution | Colorless. |
| **Odor** : | Agilent-CGHblock | Not available. |
| | ULS-Cyanine3 | Amine-like. [Slight] |
| | ULS-Cyanine5 | Amine-like. [Slight] |
| | 10X Labeling Solution | Odorless. |
| **Odor threshold** : | Agilent-CGHblock | Not available. |
| | ULS-Cyanine3 | Not available. |
| | ULS-Cyanine5 | Not available. |
| | 10X Labeling Solution | Not available. |
| **pH** : | Agilent-CGHblock | Not available. |
| | ULS-Cyanine3 | Not available. |
| | ULS-Cyanine5 | Not available. |
| | 10X Labeling Solution | 7 to 8 |
| **Melting point/freezing point** : | Agilent-CGHblock | Not available. |
| | ULS-Cyanine3 | Not available. |
| | ULS-Cyanine5 | Not available. |
| | 10X Labeling Solution | Not available. |
| **Boiling point, initial boiling point, and boiling range** : | Agilent-CGHblock | Not available. |
| | ULS-Cyanine3 | Not available. |
| | ULS-Cyanine5 | Not available. |
| | 10X Labeling Solution | 95 to 100°C (203 to 212°F) |
| **Flash point** : | | |

# Section 9. Physical and chemical properties and safety characteristics

| Ingredient name | Closed cup °C | Closed cup °F | Closed cup Method | Open cup °C | Open cup °F | Open cup Method |
|---|---|---|---|---|---|---|
| **ULS-Cyanine3** | | | | | | |
| N,N-Dimethylformamide | 57.5 | 135.5 | DIN 51755 | - | - | - |
| **ULS-Cyanine5** | | | | | | |
| N,N-Dimethylformamide | 57.5 | 135.5 | DIN 51755 | - | - | - |

**Evaporation rate** :

| | |
|---|---|
| Agilent-CGHblock | Not available. |
| ULS-Cyanine3 | Not available. |
| ULS-Cyanine5 | Not available. |
| 10X Labeling Solution | Not available. |

**Flammability** :

| | |
|---|---|
| Agilent-CGHblock | Not applicable. |
| ULS-Cyanine3 | Not applicable. |
| ULS-Cyanine5 | Not applicable. |
| 10X Labeling Solution | Not applicable. |

**Lower and upper explosion limit/flammability limit** :

| | |
|---|---|
| Agilent-CGHblock | Not available. |
| ULS-Cyanine3 | Not available. |
| ULS-Cyanine5 | Not available. |
| 10X Labeling Solution | Not available. |

**Vapor pressure** :

| Ingredient name | Vapor Pressure at 20˚C mm Hg | Vapor Pressure at 20˚C kPa | Vapor Pressure at 20˚C Method | Vapor pressure at 50˚C mm Hg | Vapor pressure at 50˚C kPa | Vapor pressure at 50˚C Method |
|---|---|---|---|---|---|---|
| **Agilent-CGHblock** | | | | | | |
| water | 17.5 | 2.3 | - | 92.258 | 12.3 | - |
| **ULS-Cyanine3** | | | | | | |
| water | 17.5 | 2.3 | - | 92.258 | 12.3 | - |
| N,N-Dimethylformamide | 3.7 | 0.49 | - | - | - | - |
| **ULS-Cyanine5** | | | | | | |
| water | 17.5 | 2.3 | - | 92.258 | 12.3 | - |
| N,N-Dimethylformamide | 3.7 | 0.49 | - | - | - | - |
| **10X Labeling Solution** | | | | | | |
| water | 17.5 | 2.3 | - | 92.258 | 12.3 | - |
| Trometamol | <0.00075006 | <0.0001 | - | - | - | - |

# Section 9. Physical and chemical properties and safety characteristics

**Relative vapor density** :

| | |
|---|---|
| Agilent-CGHblock | Not available. |
| ULS-Cyanine3 | Not available. |
| ULS-Cyanine5 | Not available. |
| 10X Labeling Solution | Not available. |

**Relative density** :

| | |
|---|---|
| Agilent-CGHblock | Not available. |
| ULS-Cyanine3 | Not available. |
| ULS-Cyanine5 | Not available. |
| 10X Labeling Solution | Not available. |

**Solubility(ies)** :

| Media | Result |
|---|---|
| **Agilent-CGHblock** | |
| water | Soluble |
| **ULS-Cyanine3** | |
| water | Not soluble |
| **ULS-Cyanine5** | |
| water | Not soluble |
| **10X Labeling Solution** | |
| water | Soluble |

**Partition coefficient: n-octanol/water** :

| | |
|---|---|
| Agilent-CGHblock | Not applicable. |
| ULS-Cyanine3 | Not applicable. |
| ULS-Cyanine5 | Not applicable. |
| 10X Labeling Solution | Not applicable. |

**Auto-ignition temperature** :

| Ingredient name | °C | °F | Method |
|---|---|---|---|
| **ULS-Cyanine3** | | | |
| N,N-Dimethylformamide | 445 | 833 | - |
| **ULS-Cyanine5** | | | |
| N,N-Dimethylformamide | 445 | 833 | - |

**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. |

**Particle characteristics**

**Median particle size** :

| | |
|---|---|
| Agilent-CGHblock | Not applicable. |
| ULS-Cyanine3 | Not applicable. |
| ULS-Cyanine5 | Not applicable. |
| 10X Labeling Solution | Not applicable. |

# Section 10. Stability and reactivity

**10.1 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. |

# Section 10. Stability and reactivity

| | | | |
|---|---|---|---|
| **10.2 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. |
| **10.3 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. |
| **10.4 Conditions to avoid** | : | Agilent-CGHblock | No specific data. |
| | | ULS-Cyanine3 | No specific data. |
| | | ULS-Cyanine5 | No specific data. |
| | | 10X Labeling Solution | No specific data. |
| **10.5 Incompatible materials** | : | Agilent-CGHblock | May react or be incompatible with oxidizing materials. |
| | | ULS-Cyanine3 | May react or be incompatible with oxidizing materials. |
| | | ULS-Cyanine5 | May react or be incompatible with oxidizing materials. |
| | | 10X Labeling Solution | May react or be incompatible with oxidizing materials. |
| **10.6 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

## 11.1 Information on toxicological effects

### Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| **Agilent-CGHblock** | | | | |
| sodium diethyldithiocarbamate | LD50 Oral | Rat | 1500 mg/kg | - |
| **ULS-Cyanine3** | | | | |
| N,N-Dimethylformamide | LC50 Inhalation Vapor | Rat | 3421 ppm | 1 hours |
| | LC50 Inhalation Vapor | Rat | 1948 ppm | 4 hours |
| | LD50 Oral | Rat | 4000 mg/kg | - |
| **ULS-Cyanine5** | | | | |
| N,N-Dimethylformamide | LC50 Inhalation Vapor | Rat | 3421 ppm | 1 hours |

# Section 11. Toxicological information

| | | | | |
|---|---|---|---|---|
| | LC50 Inhalation Vapor | Rat | 1948 ppm | 4 hours |
| | LD50 Oral | Rat | 4000 mg/kg | - |
| **10X Labeling Solution** | | | | |
| Trometamol | LD50 Dermal | Rat | >5000 mg/kg | - |

## Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| **ULS-Cyanine3** | | | | | |
| N,N-Dimethylformamide | Eyes - Severe irritant | Rabbit | - | 100 % | - |
| **ULS-Cyanine5** | | | | | |
| N,N-Dimethylformamide | Eyes - Severe irritant | Rabbit | - | 100 % | - |
| **10X Labeling Solution** | | | | | |
| Trometamol | Skin - Moderate irritant | Rabbit | - | 25 % | - |
| | Skin - Severe irritant | Rabbit | - | 500 mg | - |

## Sensitization

Not available.

## Mutagenicity

**Conclusion/Summary** : Not available.

## Carcinogenicity

**Conclusion/Summary** : Not available.

## Classification

| Product/ingredient name | OSHA | IARC | NTP |
|---|---|---|---|
| **Agilent-CGHblock** | | | |
| sodium diethyldithiocarbamate | - | 3 | - |
| **ULS-Cyanine3** | | | |
| N,N-Dimethylformamide | - | 2A | - |
| **ULS-Cyanine5** | | | |
| N,N-Dimethylformamide | - | 2A | - |

## Reproductive toxicity

**Conclusion/Summary** : Not available.

## Teratogenicity

**Conclusion/Summary** : Not available.

## Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|---|---|---|---|
| **10X Labeling Solution** | | | |
| Trometamol | Category 3 | - | Respiratory tract irritation |

## Specific target organ toxicity (repeated exposure)

Not available.

## Aspiration hazard

Not available.

# Section 11. Toxicological information

| | | | |
|---|---|---|---|
| **Information on the likely routes of exposure** | : | Agilent-CGHblock | Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. |
| | | ULS-Cyanine3 | Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. |
| | | ULS-Cyanine5 | Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. |
| | | 10X Labeling Solution | Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. |

**Potential acute health effects**

| | | | |
|---|---|---|---|
| **Eye contact** | : | Agilent-CGHblock | Causes serious eye irritation. |
| | | ULS-Cyanine3 | Causes serious eye irritation. |
| | | ULS-Cyanine5 | Causes serious eye irritation. |
| | | 10X Labeling Solution | No known significant effects or critical hazards. |
| **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 | Causes skin irritation. |
| | | 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 | Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness |
| | | ULS-Cyanine3 | Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness |
| | | ULS-Cyanine5 | Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness |
| | | 10X Labeling Solution | No specific data. |
| **Inhalation** | : | Agilent-CGHblock | No specific data. |
| | | ULS-Cyanine3 | Adverse symptoms may include the following:<br>reduced fetal weight<br>increase in fetal deaths<br>skeletal malformations |
| | | ULS-Cyanine5 | Adverse symptoms may include the following:<br>reduced fetal weight<br>increase in fetal deaths<br>skeletal malformations |
| | | 10X Labeling Solution | No specific data. |
| **Skin contact** | : | Agilent-CGHblock | Adverse symptoms may include the following:<br>irritation<br>redness |
| | | ULS-Cyanine3 | Adverse symptoms may include the following:<br>reduced fetal weight<br>increase in fetal deaths<br>skeletal malformations |
| | | ULS-Cyanine5 | Adverse symptoms may include the following: |

# Section 11. Toxicological information

| | | | |
|---|---|---|---|
| | | | reduced fetal weight<br>increase in fetal deaths<br>skeletal malformations |
| | | 10X Labeling Solution | No specific data. |
| **Ingestion** | : | Agilent-CGHblock | No specific data. |
| | | ULS-Cyanine3 | Adverse symptoms may include the following:<br>reduced fetal weight<br>increase in fetal deaths<br>skeletal malformations |
| | | ULS-Cyanine5 | Adverse symptoms may include the following:<br>reduced fetal weight<br>increase in fetal deaths<br>skeletal malformations |
| | | 10X Labeling Solution | No specific data. |

## 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.

### Potential chronic health effects

| | | | |
|---|---|---|---|
| **General** | : | 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. |
| **Carcinogenicity** | : | Agilent-CGHblock | No known significant effects or critical hazards. |
| | | ULS-Cyanine3 | May cause cancer. Risk of cancer depends on duration and level of exposure. |
| | | ULS-Cyanine5 | May cause cancer. Risk of cancer depends on duration and level of exposure. |
| | | 10X Labeling Solution | No known significant effects or critical hazards. |
| **Mutagenicity** | : | 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. |
| **Reproductive toxicity** | : | Agilent-CGHblock | No known significant effects or critical hazards. |
| | | ULS-Cyanine3 | May damage fertility or the unborn child. |
| | | ULS-Cyanine5 | May damage fertility or the unborn child. |
| | | 10X Labeling Solution | No known significant effects or critical hazards. |

## Numerical measures of toxicity

### Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|---|---|---|---|---|

# Section 11. Toxicological information

| | | | | | |
|---|---|---|---|---|---|
| **Agilent-CGHblock** | | | | | |
| Agilent-CGHblock | 150000.0 | N/A | N/A | N/A | N/A |
| sodium diethyldithiocarbamate | 1500 | N/A | N/A | N/A | N/A |
| **ULS-Cyanine3** | | | | | |
| ULS-Cyanine3 | 6552.0 | 2754.8 | N/A | 20.2 | N/A |
| N,N-Dimethylformamide | 4000 | 1500 | N/A | 11 | N/A |
| **ULS-Cyanine5** | | | | | |
| ULS-Cyanine5 | 6552.0 | 2754.8 | N/A | 20.2 | N/A |
| N,N-Dimethylformamide | 4000 | 1500 | N/A | 11 | N/A |

# Section 12. Ecological information

## 12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| **Agilent-CGHblock** | | | |
| sodium diethyldithiocarbamate | Acute EC50 1400 µg/l Fresh water | Algae - *Chlorella pyrenoidosa* | 96 hours |
| | Acute LC50 910 µg/l Fresh water | Daphnia - *Daphnia magna* | 48 hours |
| | Acute LC50 6900 µg/l Fresh water | Fish - *Poecilia reticulata* | 96 hours |
| **ULS-Cyanine3** | | | |
| N,N-Dimethylformamide | Acute EC50 4500 mg/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 |
| | Chronic NOEC 0.1 ml/L Fresh water | Fish - *Oncorhynchus mykiss* - Embryo | 30 days |
| **ULS-Cyanine5** | | | |
| N,N-Dimethylformamide | Acute EC50 4500 mg/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 |
| | Chronic NOEC 0.1 ml/L Fresh water | Fish - *Oncorhynchus mykiss* - Embryo | 30 days |
| **10X Labeling Solution** | | | |
| Trometamol | Acute EC50 >980 mg/l Fresh water | Daphnia | 48 hours |
| | Acute NOEC 520 mg/l Fresh water | Daphnia | 48 hours |

## 12.2 Persistence and degradability

# Section 12. Ecological information

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|---|---|---|---|
| **ULS-Cyanine3** | | | | |
| N,N-Dimethylformamide | - | 100 % - Readily - 21 days | - | - |
| **ULS-Cyanine5** | | | | |
| N,N-Dimethylformamide | - | 100 % - Readily - 21 days | - | - |
| **10X Labeling Solution** | | | | |
| Trometamol | OECD 301F Ready Biodegradability - Manometric Respirometry Test | 97.1 % - Readily - 28 days | 30 mg/l | - |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|---|---|---|
| **Agilent-CGHblock** | | | |
| sodium diethyldithiocarbamate | - | - | Readily |
| **ULS-Cyanine3** | | | |
| N,N-Dimethylformamide | - | - | Readily |
| **ULS-Cyanine5** | | | |
| N,N-Dimethylformamide | - | - | Readily |
| **10X Labeling Solution** | | | |
| 10X Labeling Solution | - | - | Readily |
| Trometamol | - | - | Readily |

## 12.3 Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| **Agilent-CGHblock** | | | |
| sodium diethyldithiocarbamate | -1.1 | - | Low |
| **ULS-Cyanine3** | | | |
| N,N-Dimethylformamide | -1.01 | 0.79 | Low |
| **ULS-Cyanine5** | | | |
| N,N-Dimethylformamide | -1.01 | 0.79 | Low |
| **10X Labeling Solution** | | | |
| Trometamol | -2.31 | - | 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** 367.31 lbs / 166.76 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 IMO instruments** : 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

# Section 15. Regulatory information

**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** :

| | |
|---|---|
| Agilent-CGHblock | SKIN IRRITATION - Category 2<br>EYE IRRITATION - Category 2A |
| ULS-Cyanine3 | EYE IRRITATION - Category 2A<br>CARCINOGENICITY - Category 1B<br>TOXIC TO REPRODUCTION - Category 1B |
| ULS-Cyanine5 | EYE IRRITATION - Category 2A<br>CARCINOGENICITY - Category 1B<br>TOXIC TO REPRODUCTION - Category 1B |
| 10X Labeling Solution | Not applicable. |

**Composition/information on ingredients**

| Name | % | Classification |
|---|---|---|
| **Agilent-CGHblock**<br>sodium diethyldithiocarbamate | <3 | ACUTE TOXICITY (oral) - Category 4<br>SKIN CORROSION - Category 1B<br>SERIOUS EYE DAMAGE - Category 1 |
| **ULS-Cyanine3**<br>N,N-Dimethylformamide | ≥50 - <55 | FLAMMABLE LIQUIDS - Category 3<br>ACUTE TOXICITY (dermal) - Category 4<br>ACUTE TOXICITY (inhalation) - Category 4<br>EYE IRRITATION - Category 2A<br>CARCINOGENICITY - Category 1B<br>TOXIC TO REPRODUCTION - Category 1B |
| **ULS-Cyanine5**<br>N,N-Dimethylformamide | ≥50 - <55 | FLAMMABLE LIQUIDS - Category 3<br>ACUTE TOXICITY (dermal) - Category 4<br>ACUTE TOXICITY (inhalation) - Category 4<br>EYE IRRITATION - Category 2A<br>CARCINOGENICITY - Category 1B<br>TOXIC TO REPRODUCTION - Category 1B |
| **10X Labeling Solution**<br>Trometamol | <10 | COMBUSTIBLE DUSTS<br>SKIN IRRITATION - Category 2<br>EYE IRRITATION - Category 2A<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |

**SARA 313**

| | Product name | CAS number | % |
|---|---|---|---|
| **Form R - Reporting requirements** | **ULS-Cyanine3**<br>N,N-Dimethylformamide | 68-12-2 | ≥50 - <55 |
| | **ULS-Cyanine5**<br>N,N-Dimethylformamide | 68-12-2 | ≥50 - <55 |
| **Supplier notification** | **ULS-Cyanine3**<br>N,N-Dimethylformamide | 68-12-2 | ≥50 - <55 |
| | **ULS-Cyanine5**<br>N,N-Dimethylformamide | 68-12-2 | ≥50 - <55 |

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.

# Section 15. Regulatory information

## 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

**Pennsylvania** : The following components are listed: FORMAMIDE, N,N-DIMETHYL-

## California Prop. 65

⚠ **WARNING**: This product can expose you to N,N-Dimethylformamide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

| Ingredient name | No significant risk level | Maximum acceptable dosage level |
|---|---|---|
| **ULS-Cyanine3**<br>N,N-Dimethylformamide | - | - |
| **ULS-Cyanine5**<br>N,N-Dimethylformamide | - | - |

## International regulations

### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

### Montreal Protocol

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** : Not determined.

**Canada** : Not determined.

**China** : Not determined.

**Japan** : **Japan inventory (CSCL)**: Not determined.
**Japan inventory (ISHL)**: Not determined.

**New Zealand** : Not determined.

**Philippines** : Not determined.

**Republic of Korea** : Not determined.

**Taiwan** : Not determined.

**Thailand** : Not determined.

**Turkey** : Not determined.

**United States** : Not determined.

**Viet Nam** : Not determined.

# Section 16. Other information

## Procedure used to derive the classification

| Classification | Justification |
|---|---|
| **Agilent-CGHblock** | |
| SKIN IRRITATION - Category 2 | Calculation method |
| EYE IRRITATION - Category 2A | Calculation method |
| **ULS-Cyanine3** | |
| EYE IRRITATION - Category 2A | Calculation method |
| CARCINOGENICITY - Category 1B | Calculation method |
| TOXIC TO REPRODUCTION - Category 1B | Calculation method |
| **ULS-Cyanine5** | |
| EYE IRRITATION - Category 2A | Calculation method |
| CARCINOGENICITY - Category 1B | Calculation method |
| TOXIC TO REPRODUCTION - Category 1B | Calculation method |

## History

**Date of issue/Date of revision** : 03/20/2024

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**Key to abbreviations** : 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)
N/A = Not available
UN = United Nations

**Indicates information that has changed from previously issued version.**

## Notice to reader

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