

SAFETY DATA SHEET



Agilent DNA 7500 Reagents, Part Number 5067-1507

Section 1. Identification

1.1 Product identifier

Product name : Agilent DNA 7500 Reagents, Part Number 5067-1507
Part no. (chemical kit) : 5067-1507
Part no. : Reagents DNA 7500 G2938-80021
 DNA 7500 Ladder Not available.
 DNA 7500 Marker Not available.
 DNA Dye Concentrate Not available.
 DNA 7500 Gel Matrix Not available.
Validation date : 2/8/2022

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

Material uses : Analytical reagent.
 Research and Development
 DNA 7500 Ladder 1 x 0.035 ml
 DNA 7500 Marker 2 x 1.2 ml
 DNA Dye Concentrate 1 x 0.09 ml
 DNA 7500 Gel Matrix 3 x 0.5 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 : DNA 7500 Ladder	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.
DNA 7500 Marker	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.
DNA Dye Concentrate	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
DNA 7500 Gel Matrix	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

Section 2. Hazards identification

DNA Dye Concentrate

H227	FLAMMABLE LIQUIDS - Category 4	
H320	EYE IRRITATION - Category 2B	
	DNA 7500 Marker	Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 4.6%
	DNA 7500 Gel Matrix	Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 4.6%

2.2 GHS label elements

Signal word	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	No signal word. No signal word. Warning No signal word.
Hazard statements	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	No known significant effects or critical hazards. No known significant effects or critical hazards. H227 - Combustible liquid. H320 - Causes eye irritation. No known significant effects or critical hazards.
Precautionary statements		
Prevention	: <input checked="" type="checkbox"/> DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	Not applicable. Not applicable. P210 - Keep away from flames and hot surfaces. No smoking. Not applicable.
Response	: <input checked="" type="checkbox"/> DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	Not applicable. Not applicable. 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 advice or attention. Not applicable.
Storage	: <input checked="" type="checkbox"/> DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	Not applicable. Not applicable. P403 + P235 - Store in a well-ventilated place. Keep cool. Not applicable.
Disposal	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	Not applicable. Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable.
Supplemental label elements	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	None known. None known. None known. None known.

2.3 Other hazards

Hazards not otherwise classified	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	None known. None known. None known. None known.
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Section 3. Composition/information on ingredients

Substance/mixture	:	DNA 7500 Ladder	Mixture
		DNA 7500 Marker	Mixture
		DNA Dye Concentrate	Mixture
		DNA 7500 Gel Matrix	Mixture

Ingredient name	%	CAS number
DNA Dye Concentrate Dimethyl sulfoxide	≥90	67-68-5

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

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified 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	:	DNA 7500 Ladder	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.
		DNA 7500 Marker	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.
		DNA Dye Concentrate	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. If irritation persists, get medical attention.
		DNA 7500 Gel Matrix	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	:	DNA 7500 Ladder	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		DNA 7500 Marker	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.
		DNA Dye Concentrate	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.
		DNA 7500 Gel Matrix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical

Section 4. First aid measures

Skin contact	: DNA 7500 Ladder	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.
	DNA 7500 Marker	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	DNA Dye Concentrate	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	DNA 7500 Gel Matrix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: DNA 7500 Ladder	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.
	DNA 7500 Marker	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.
	DNA Dye Concentrate	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.
	DNA 7500 Gel Matrix	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	: DNA 7500 Ladder	No known significant effects or critical hazards.
	DNA 7500 Marker	No known significant effects or critical hazards.
	DNA Dye Concentrate	Causes eye irritation.
	DNA 7500 Gel Matrix	No known significant effects or critical hazards.

Section 4. First aid measures

Inhalation	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	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.
Skin contact	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	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.
Ingestion	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	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	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate	No specific data. No specific data. Adverse symptoms may include the following: irritation watering redness
	DNA 7500 Gel Matrix	No specific data.
Inhalation	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	No specific data. No specific data. No specific data. No specific data.
Skin contact	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	No specific data. No specific data. No specific data. No specific data.
Ingestion	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	No specific data. No specific data. No specific data. No specific data.

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

Notes to physician	: DNA 7500 Ladder	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	DNA 7500 Marker	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.
	DNA Dye Concentrate	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	DNA 7500 Gel Matrix	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	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	No specific treatment. No specific treatment. No specific treatment. No specific treatment.

Section 4. First aid measures

Protection of first-aiders	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. 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. No action shall be taken involving any personal risk or without suitable training.
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See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO ₂ , water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	None known. None known. Do not use water jet. None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. Combustible liquid. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides Decomposition products may include the following materials: carbon dioxide

Section 5. Fire-fighting measures

carbon monoxide
nitrogen oxides
sulfur oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters

: DNA 7500 Ladder

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.

DNA 7500 Marker

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.

DNA Dye Concentrate

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

DNA 7500 Gel Matrix

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

: DNA 7500 Ladder

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

DNA 7500 Marker

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

DNA Dye Concentrate

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

DNA 7500 Gel Matrix

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

: DNA 7500 Ladder

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.

DNA 7500 Marker

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.

DNA Dye Concentrate

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

Section 6. Accidental release measures

	DNA 7500 Gel Matrix	touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders :	DNA 7500 Ladder	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".
	DNA 7500 Marker	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".
	DNA Dye Concentrate	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".
	DNA 7500 Gel Matrix	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	DNA 7500 Ladder	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).
	DNA 7500 Marker	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).
	DNA Dye Concentrate	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).
	DNA 7500 Gel Matrix	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 :	DNA 7500 Ladder	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.
	DNA 7500 Marker	Stop leak if without risk. Move containers from spill

Section 6. Accidental release measures


DNA Dye Concentrate	area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
DNA 7500 Gel Matrix	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.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures	: DNA 7500 Ladder	Put on appropriate personal protective equipment (see Section 8).
	DNA 7500 Marker	Put on appropriate personal protective equipment (see Section 8).
	DNA Dye Concentrate	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.
	DNA 7500 Gel Matrix	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: DNA 7500 Ladder	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.
	DNA 7500 Marker	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.
	DNA Dye Concentrate	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and


Section 7. Handling and storage

	DNA 7500 Gel Matrix	<p>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 before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
<p>7.2 Conditions for safe storage, including any incompatibilities</p>	:  DNA 7500 Ladder	<p>Storage temperature: 4°C (39.2°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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	DNA 7500 Marker	<p>Storage temperature: 4°C (39.2°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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	DNA Dye Concentrate	<p>Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	DNA 7500 Gel Matrix	<p>Storage temperature: 4°C (39.2°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 unlabeled</p>

Section 7. Handling and storage

containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.


7.3 Specific end use(s)

Recommendations	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	:  DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	Not available. Not available. Not available. Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
 DNA Dye Concentrate Dimethyl sulfoxide	OARS WEEL (United States, 1/2021). TWA: 250 ppm 8 hours.

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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

Individual protection measures

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

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

Skin protection

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

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

Section 8. Exposure controls/personal protection

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

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

Physical state	:	DNA 7500 Ladder	Liquid.
		DNA 7500 Marker	Liquid.
		DNA Dye Concentrate	Liquid.
		DNA 7500 Gel Matrix	Liquid.
Color	:	DNA 7500 Ladder	Not available.
		DNA 7500 Marker	Not available.
		DNA Dye Concentrate	Blue.
		DNA 7500 Gel Matrix	Not available.
Odor	:	DNA 7500 Ladder	Not available.
		DNA 7500 Marker	Not available.
		DNA Dye Concentrate	Not available.
		DNA 7500 Gel Matrix	Not available.
Odor threshold	:	DNA 7500 Ladder	Not available.
		DNA 7500 Marker	Not available.
		DNA Dye Concentrate	Not available.
		DNA 7500 Gel Matrix	Not available.
pH	:	DNA 7500 Ladder	Not available.
		DNA 7500 Marker	Not available.
		DNA Dye Concentrate	Not available.
		DNA 7500 Gel Matrix	Not available.
Melting point/freezing point	:	DNA 7500 Ladder	0°C (32°F)
		DNA 7500 Marker	0°C (32°F)
		DNA Dye Concentrate	18.5°C (65.3°F)
		DNA 7500 Gel Matrix	Not available.
Boiling point, initial boiling point, and boiling range	:	DNA 7500 Ladder	100°C (212°F)
		DNA 7500 Marker	100°C (212°F)
		DNA Dye Concentrate	189°C (372.2°F)
		DNA 7500 Gel Matrix	Not available.
Flash point	:	DNA 7500 Ladder	Not available.
		DNA 7500 Marker	Not available.
		DNA Dye Concentrate	Closed cup: 87°C (188.6°F)
		DNA 7500 Gel Matrix	Not available.

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
DNA 7500 Ladder Acetic acid, (ethylenedinitrilo)tetra-, disodium salt, dihydrate	>100	>212				
DNA 7500 Marker Acetic acid, (ethylenedinitrilo)tetra-, disodium salt, dihydrate	>100	>212				

Section 9. Physical and chemical properties and safety characteristics

	DNA 7500 Gel Matrix Acetic acid, (ethylenedinitrilo)tetra-, disodium salt, dihydrate	>100	>212																																																																																
Evaporation rate	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix						Not available. Not available. Not available. Not available.																																																																												
Flammability	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix						Not applicable. Not applicable. Not applicable. Not applicable.																																																																												
Lower and upper explosion limit/flammability limit	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix						Not available. Not available. Lower: 2.6% Upper: 42% Not available.																																																																												
Vapor pressure	:	<table border="1"> <thead> <tr> <th rowspan="2">Ingredient name</th> <th colspan="3">Vapor Pressure at 20°C</th> <th colspan="3">Vapor pressure at 50°C</th> </tr> <tr> <th>mm Hg</th> <th>kPa</th> <th>Method</th> <th>mm Hg</th> <th>kPa</th> <th>Method</th> </tr> </thead> <tbody> <tr> <td>DNA 7500 Ladder</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Water</td> <td>23.8</td> <td>3.2</td> <td></td> <td>92.258</td> <td>12.3</td> <td></td> </tr> <tr> <td>2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride</td> <td>0.000027</td> <td>0.0000036</td> <td></td> <td>0.000007501</td> <td>0.000001</td> <td></td> </tr> <tr> <td>DNA 7500 Marker</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Water</td> <td>23.8</td> <td>3.2</td> <td></td> <td>92.258</td> <td>12.3</td> <td></td> </tr> <tr> <td>DNA Dye Concentrate</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Dimethyl sulfoxide</td> <td>0.42</td> <td>0.056</td> <td>EU A.4</td> <td></td> <td></td> <td></td> </tr> <tr> <td>DNA 7500 Gel Matrix</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Water</td> <td>23.8</td> <td>3.2</td> <td></td> <td>92.258</td> <td>12.3</td> <td></td> </tr> </tbody> </table>						Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C			mm Hg	kPa	Method	mm Hg	kPa	Method	DNA 7500 Ladder							Water	23.8	3.2		92.258	12.3		2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001		DNA 7500 Marker							Water	23.8	3.2		92.258	12.3		DNA Dye Concentrate							Dimethyl sulfoxide	0.42	0.056	EU A.4				DNA 7500 Gel Matrix							Water	23.8	3.2		92.258	12.3	
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Relative vapor density	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix						Not available. Not available. 2.7 [Air = 1] Not available.																																																																												
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Solubility	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix						Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.																																																																												

Section 9. Physical and chemical properties and safety characteristics

Partition coefficient: n-octanol/water : DNA 7500 Ladder Not applicable.
 DNA 7500 Marker Not applicable.
 DNA Dye Concentrate Not applicable.
 DNA 7500 Gel Matrix Not applicable.

Auto-ignition temperature	Ingredient name	°C	°F	Method
	DNA Dye Concentrate			
	Dimethyl sulfoxide	300 to 302	572 to 575.6	

Decomposition temperature : DNA 7500 Ladder Not available.
 DNA 7500 Marker Not available.
 DNA Dye Concentrate Not available.
 DNA 7500 Gel Matrix Not available.

Viscosity : DNA 7500 Ladder Not available.
 DNA 7500 Marker Not available.
 DNA Dye Concentrate Not available.
 DNA 7500 Gel Matrix Not available.

Particle characteristics

Median particle size : DNA 7500 Ladder Not applicable.
 DNA 7500 Marker Not applicable.
 DNA Dye Concentrate Not applicable.
 DNA 7500 Gel Matrix Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity : DNA 7500 Ladder No specific test data related to reactivity available for this product or its ingredients.
 DNA 7500 Marker No specific test data related to reactivity available for this product or its ingredients.
 DNA Dye Concentrate No specific test data related to reactivity available for this product or its ingredients.
 DNA 7500 Gel Matrix No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : DNA 7500 Ladder The product is stable.
 DNA 7500 Marker The product is stable.
 DNA Dye Concentrate The product is stable.
 DNA 7500 Gel Matrix The product is stable.

10.3 Possibility of hazardous reactions : DNA 7500 Ladder Under normal conditions of storage and use, hazardous reactions will not occur.
 DNA 7500 Marker Under normal conditions of storage and use, hazardous reactions will not occur.
 DNA Dye Concentrate Under normal conditions of storage and use, hazardous reactions will not occur.
 DNA 7500 Gel Matrix Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : DNA 7500 Ladder No specific data.
 DNA 7500 Marker No specific data.
 DNA Dye Concentrate Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
 DNA 7500 Gel Matrix No specific data.

Section 10. Stability and reactivity

10.5 Incompatible materials	: DNA 7500 Ladder	May react or be incompatible with oxidizing materials.
	DNA 7500 Marker	May react or be incompatible with oxidizing materials.
	DNA Dye Concentrate	Reactive or incompatible with the following materials: oxidizing materials
	DNA 7500 Gel Matrix	May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products	: DNA 7500 Ladder	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	DNA 7500 Marker	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	DNA Dye Concentrate	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	DNA 7500 Gel Matrix	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
DNA Dye Concentrate Dimethyl sulfoxide	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
DNA Dye Concentrate Dimethyl sulfoxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	100 mg	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure	: DNA 7500 Ladder	Not available.
	: DNA 7500 Marker	Not available.
	: DNA Dye Concentrate	Routes of entry anticipated: Oral, Dermal, Inhalation.
	: DNA 7500 Gel Matrix	Not available.

Potential acute health effects

Eye contact	: DNA 7500 Ladder	No known significant effects or critical hazards.
	: DNA 7500 Marker	No known significant effects or critical hazards.
	: DNA Dye Concentrate	Causes eye irritation.
	: DNA 7500 Gel Matrix	No known significant effects or critical hazards.
Inhalation	: DNA 7500 Ladder	No known significant effects or critical hazards.
	: DNA 7500 Marker	No known significant effects or critical hazards.
	: DNA Dye Concentrate	No known significant effects or critical hazards.
	: DNA 7500 Gel Matrix	No known significant effects or critical hazards.
Skin contact	: DNA 7500 Ladder	No known significant effects or critical hazards.
	: DNA 7500 Marker	No known significant effects or critical hazards.
	: DNA Dye Concentrate	No known significant effects or critical hazards.
	: DNA 7500 Gel Matrix	No known significant effects or critical hazards.
Ingestion	: DNA 7500 Ladder	No known significant effects or critical hazards.
	: DNA 7500 Marker	No known significant effects or critical hazards.
	: DNA Dye Concentrate	No known significant effects or critical hazards.
	: DNA 7500 Gel Matrix	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: DNA 7500 Ladder	No specific data.
	: DNA 7500 Marker	No specific data.
	: DNA Dye Concentrate	Adverse symptoms may include the following: irritation watering redness
	: DNA 7500 Gel Matrix	No specific data.
Inhalation	: DNA 7500 Ladder	No specific data.
	: DNA 7500 Marker	No specific data.
	: DNA Dye Concentrate	No specific data.
	: DNA 7500 Gel Matrix	No specific data.
Skin contact	: DNA 7500 Ladder	No specific data.
	: DNA 7500 Marker	No specific data.
	: DNA Dye Concentrate	No specific data.
	: DNA 7500 Gel Matrix	No specific data.
Ingestion	: DNA 7500 Ladder	No specific data.
	: DNA 7500 Marker	No specific data.
	: DNA Dye Concentrate	No specific data.
	: DNA 7500 Gel Matrix	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.

Section 11. Toxicological information

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	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	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	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	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	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.
Reproductive toxicity	: <input checked="" type="checkbox"/> DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	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

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
DNA Dye Concentrate Dimethyl sulfoxide	14500	40000	N/A	N/A	N/A

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> DNA Dye Concentrate Dimethyl sulfoxide	Acute LC50 25000 ppm Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 34000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 100 ul/L Marine water	Algae - Ulva lactuca	72 hours
	Chronic NOEC 100 ul/L Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	21 days

12.2 Persistence and degradability

Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
DNA Dye Concentrate Dimethyl sulfoxide	OECD 301D Ready Biodegradability - Closed Bottle Test	31 % - Not readily - 28 days	-	-
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
DNA Dye Concentrate Dimethyl sulfoxide	-	-	Not readily	

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
DNA Dye Concentrate Dimethyl sulfoxide	-1.35	3.16	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.

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) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification	: DNA 7500 Ladder DNA 7500 Marker DNA Dye Concentrate DNA 7500 Gel Matrix	Not applicable. Not applicable. FLAMMABLE LIQUIDS - Category 4 EYE IRRITATION - Category 2B Not applicable.
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Composition/information on ingredients

Name	%	Classification
DNA Dye Concentrate Dimethyl sulfoxide	≥90	FLAMMABLE LIQUIDS - Category 4 EYE IRRITATION - Category 2B

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : The following components are listed: DIMETHYL SULFOXIDE; METHANE, SULFINYLBI-

Pennsylvania : None of the components are listed.

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Date of issue : 02/08/2022

19/21

Section 15. Regulatory information

[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.
Europe	: 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
DNA Dye Concentrate FLAMMABLE LIQUIDS - Category 4 EYE IRRITATION - Category 2B	On basis of test data Calculation method

[History](#)

Date of issue	: 02/08/2022
Date of previous issue	: 05/03/2019
Version	: 7
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

Section 16. Other information

✔ Indicates information that has changed from previously issued version.

[Notice to reader](#)

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