

# SAFETY DATA SHEET



Clarigo v2

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : Clarigo v2  
**Part no. (chemical kit)** : MR-2501.096  
**Part no.** :  AR 1 I-0801  
Clarigo PCR Mix I-2143  
Taq DNA Polymerase I-1707

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

**Material uses** : For In Vitro Diagnostic Use  
5.0184 ml  
AR 1 1 x 1 ml  
Clarigo PCR Mix 4 x 1 ml  
Taq DNA Polymerase 1 x 0.018 ml

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Belgium  
De Kleetlaan 5 bus 9  
1831 Diegem  
Belgium  
Tel.: +32(0)2 404 90 00

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(44)-870-8200418

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** :  AR 1 Mixture  
Clarigo PCR Mix Mixture  
Taq DNA Polymerase Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Clarigo PCR Mix  
H412 LONG-TERM (CHRONIC) AQUATIC HAZARD Category 3

Taq DNA Polymerase  
H412 LONG-TERM (CHRONIC) AQUATIC HAZARD Category 3

**Ingredients of unknown toxicity** :  Clarigo PCR Mix Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10%  
Taq DNA Polymerase Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%

**Ingredients of unknown ecotoxicity** :  Clarigo PCR Mix Contains 2.2% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

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## SECTION 2: Hazards identification


### 2.2 Label elements

<b>Signal word</b>	: <input checked="" type="checkbox"/> AR 1 Clarigo PCR Mix Taq DNA Polymerase	No signal word. No signal word. No signal word.
<b>Hazard statements</b>	: <input checked="" type="checkbox"/> AR 1 Clarigo PCR Mix Taq DNA Polymerase	No known significant effects or critical hazards. H412 - Harmful to aquatic life with long lasting effects. H412 - Harmful to aquatic life with long lasting effects.
<b><u>Precautionary statements</u></b>		
<b>Prevention</b>	: <input checked="" type="checkbox"/> AR 1 Clarigo PCR Mix Taq DNA Polymerase	Not applicable. P273 - Avoid release to the environment. P273 - Avoid release to the environment.
<b>Response</b>	: <input checked="" type="checkbox"/> AR 1 Clarigo PCR Mix Taq DNA Polymerase	Not applicable. Not applicable. Not applicable.
<b>Storage</b>	: <input checked="" type="checkbox"/> AR 1 Clarigo PCR Mix Taq DNA Polymerase	Not applicable. Not applicable. Not applicable.
<b>Disposal</b>	: <input checked="" type="checkbox"/> AR 1 Clarigo PCR Mix  Taq DNA Polymerase	Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	: <input checked="" type="checkbox"/> Clarigo PCR Mix Taq DNA Polymerase	Not applicable. Not applicable.
<b>Supplemental label elements</b>	: <input checked="" type="checkbox"/> AR 1 Clarigo PCR Mix Taq DNA Polymerase	Not applicable. Not applicable. Not applicable.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: <input checked="" type="checkbox"/> AR 1 Clarigo PCR Mix Taq DNA Polymerase	Not applicable. Not applicable. Not applicable.
<b><u>Special packaging requirements</u></b>		
<b>Tactile warning of danger</b>	: <input checked="" type="checkbox"/> AR 1 Clarigo PCR Mix Taq DNA Polymerase	Not applicable. Not applicable. Not applicable.
<b>2.3 Other hazards</b>		
<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	: <input checked="" type="checkbox"/> AR 1  Clarigo PCR Mix  Taq DNA Polymerase	This mixture does not contain any substances that are assessed to be a PBT or a vPvB. This mixture does not contain any substances that are assessed to be a PBT or a vPvB. This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
<b>Other hazards which do not result in classification</b>	: <input checked="" type="checkbox"/> AR 1 Clarigo PCR Mix Taq DNA Polymerase	None known. None known. None known.

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## SECTION 3: Composition/information on ingredients

**3.1 Substances** :  AR 1 Mixture  
 Clarigo PCR Mix Mixture  
 Taq DNA Polymerase Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
 Clarigo PCR Mix Magnesium chloride	EC: 232-094-6 CAS: 7786-30-3	≤0.3	Aquatic Chronic 1, H410 (M=1)	[1]
<b>Taq DNA Polymerase</b> Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥25 - ≤50	Not classified.	[2]
Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl)phenyl]- omega.-hydroxy-	CAS: 9036-19-5	<1	Eye Irrit. 2, H319 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) <b>See Section 16 for the full text of the H statements declared above.</b>	[1]



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

### Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy




## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	:  AR 1	
	Clarigo PCR Mix	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.
	Taq DNA Polymerase	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 if irritation occurs.
<b>Inhalation</b>	:  AR 1	
	Clarigo PCR Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. 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 of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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## SECTION 4: First aid measures

	Taq DNA Polymerase	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.
<b>Skin contact</b>	:  AR 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Clarigo PCR Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Taq DNA Polymerase	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	:  AR 1	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Clarigo PCR Mix	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if 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.
	Taq DNA Polymerase	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if 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.
<b>Protection of first-aiders</b>	:  AR 1	No action shall be taken involving any personal risk or without suitable training.
	Clarigo PCR Mix	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.
	Taq DNA Polymerase	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person

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## SECTION 4: First aid measures

providing aid to give mouth-to-mouth resuscitation.

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

#### Potential acute health effects

<b>Eye contact</b>	: <b>AR 1</b>	No known significant effects or critical hazards.
	Clarigo PCR Mix	No known significant effects or critical hazards.
	Taq DNA Polymerase	No known significant effects or critical hazards.
<b>Inhalation</b>	: <b>AR 1</b>	No known significant effects or critical hazards.
	Clarigo PCR Mix	No known significant effects or critical hazards.
	Taq DNA Polymerase	No known significant effects or critical hazards.
<b>Skin contact</b>	: <b>AR 1</b>	No known significant effects or critical hazards.
	Clarigo PCR Mix	No known significant effects or critical hazards.
	Taq DNA Polymerase	No known significant effects or critical hazards.
<b>Ingestion</b>	: <b>AR 1</b>	No known significant effects or critical hazards.
	Clarigo PCR Mix	No known significant effects or critical hazards.
	Taq DNA Polymerase	No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: <b>AR 1</b>	No specific data.
	Clarigo PCR Mix	No specific data.
	Taq DNA Polymerase	No specific data.
<b>Inhalation</b>	: <b>AR 1</b>	No specific data.
	Clarigo PCR Mix	No specific data.
	Taq DNA Polymerase	No specific data.
<b>Skin contact</b>	: <b>AR 1</b>	No specific data.
	Clarigo PCR Mix	No specific data.
	Taq DNA Polymerase	No specific data.
<b>Ingestion</b>	: <b>AR 1</b>	No specific data.
	Clarigo PCR Mix	No specific data.
	Taq DNA Polymerase	No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	: <b>AR 1</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Clarigo PCR Mix	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.
	Taq DNA Polymerase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: <b>AR 1</b>	No specific treatment.
	Clarigo PCR Mix	No specific treatment.
	Taq DNA Polymerase	No specific treatment.

## SECTION 5: Firefighting measures





### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: <b>AR 1</b>	Use an extinguishing agent suitable for the surrounding fire.
	Clarigo PCR Mix	Use an extinguishing agent suitable for the surrounding fire.
	Taq DNA Polymerase	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: <b>AR 1</b>	None known.
	Clarigo PCR Mix	None known.
	Taq DNA Polymerase	None known.

### 5.2 Special hazards arising from the substance or mixture


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## SECTION 5: Firefighting measures

<b>Hazards from the substance or mixture</b>	:  AR 1	In a fire or if heated, a pressure increase will occur and the container may burst.
	Clarigo PCR Mix	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	Taq DNA Polymerase	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
<b>Hazardous combustion products</b>	:  AR 1	No specific data.
	Clarigo PCR Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	Taq DNA Polymerase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
<b>5.3 Advice for firefighters</b>		
<b>Special precautions for fire-fighters</b>	:  AR 1	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.
	Clarigo PCR Mix	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.
	Taq DNA Polymerase	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.
<b>Special protective equipment for fire-fighters</b>	:  AR 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	Clarigo PCR Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	Taq DNA Polymerase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	:  AR 1	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Clarigo PCR Mix	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.

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## SECTION 6: Accidental release measures

			Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Taq DNA Polymerase		No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b>		: AR 1	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Clarigo PCR Mix		If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Taq DNA Polymerase		If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
<b>6.2 Environmental precautions</b>		: AR 1	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Clarigo PCR Mix		Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
	Taq DNA Polymerase		Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
<b>6.3 Methods and material for containment and cleaning up</b>			
<b>Methods for cleaning up</b>		: AR 1	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.
	Clarigo PCR Mix		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.
	Taq DNA Polymerase		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. May be harmful to the environment if released. Dispose of spillages under controlled conditions.



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## SECTION 6: Accidental release measures


**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	:  R 1	Put on appropriate personal protective equipment (see Section 8).
	Clarigo PCR Mix	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. 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.
	Taq DNA Polymerase	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. 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.
<b>Advice on general occupational hygiene</b>	:  R 1	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.
	Clarigo PCR Mix	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.
	Taq DNA Polymerase	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

<b>Storage</b>	:  R 1	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Clarigo PCR Mix	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use

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## SECTION 7: Handling and storage

Taq DNA Polymerase

appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.  
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

<b>Recommendations</b>	: <input checked="" type="checkbox"/> R 1	Industrial applications, Professional applications.
	Clarigo PCR Mix	Industrial applications, Professional applications.
	Taq DNA Polymerase	Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: <input checked="" type="checkbox"/> R 1	Not available.
	Clarigo PCR Mix	Not available.
	Taq DNA Polymerase	Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
<input checked="" type="checkbox"/> Taq DNA Polymerase Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
<input checked="" type="checkbox"/> Clarigo PCR Mix Magnesium chloride	DNEL	Long term Oral	7 mg/kg bw/day	General population	Systemic

#### PNECs

No PNECs available

### 8.2 Exposure controls

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

#### Individual protection measures

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## SECTION 8: Exposure controls/personal protection

- 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: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- 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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: <input checked="" type="checkbox"/> R 1	Liquid.
	Clarigo PCR Mix	Liquid.
	Taq DNA Polymerase	Liquid. [Clear. / solution]
<b>Colour</b>	: <input checked="" type="checkbox"/> R 1	Not available.
	Clarigo PCR Mix	Not available.
	Taq DNA Polymerase	Colourless.
<b>Odour</b>	: <input checked="" type="checkbox"/> R 1	Not available.
	Clarigo PCR Mix	Not available.
	Taq DNA Polymerase	Not available.
<b>Odour threshold</b>	: <input checked="" type="checkbox"/> R 1	Not available.
	Clarigo PCR Mix	Not available.
	Taq DNA Polymerase	Not available.
<b>pH</b>	: <input checked="" type="checkbox"/> R 1	Not available.
	Clarigo PCR Mix	Not available.
	Taq DNA Polymerase	Not available.
<b>Melting point/freezing point</b>	: <input checked="" type="checkbox"/> R 1	0°C
	Clarigo PCR Mix	Not available.
	Taq DNA Polymerase	Not available.
<b>Initial boiling point and boiling range</b>	: <input checked="" type="checkbox"/> R 1	100°C
	Clarigo PCR Mix	Not available.
	Taq DNA Polymerase	Not available.

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## SECTION 9: Physical and chemical properties

<b>Flash point</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Not available. Not available.
<b>Evaporation rate</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Not available. Not available.
<b>Flammability (solid, gas)</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not applicable. Not applicable. Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Not available. Not available.
<b>Vapour pressure</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Not available. Not available.
<b>Vapour density</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Not available. Not available.
<b>Relative density</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Not available. Not available.
<b>Solubility(ies)</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Easily soluble in the following materials: cold water and hot water. Partially soluble in the following materials: cold water and hot water. Not available.
<b>Partition coefficient: n-octanol/water</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Not available. Not available.
<b>Auto-ignition temperature</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Not available. Not available.
<b>Decomposition temperature</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Not available. Not available.
<b>Viscosity</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Not available. Not available.
<b>Explosive properties</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Not available. Not available.
<b>Oxidising properties</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Not available. Not available.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: <b>R 1</b> Clarigo PCR Mix Taq DNA Polymerase	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
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## SECTION 10: Stability and reactivity

<b>10.2 Chemical stability</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	The product is stable. The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No specific data. No specific data. No specific data.
<b>10.5 Incompatible materials</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
<b>10.6 Hazardous decomposition products</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. 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
<b>Clarigo PCR Mix</b> Magnesium chloride	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat	2800 mg/kg	-
<b>Taq DNA Polymerase</b> Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	LD50 Oral	Rat	2800 mg/kg	-

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
<b>Clarigo PCR Mix</b> Magnesium chloride	2800	N/A	N/A	N/A	N/A
<b>Taq DNA Polymerase</b> Poly(oxy-1,2-ethanediyl), .alpha.-[ (1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	2800	N/A	N/A	N/A	N/A

#### Irritation/Corrosion

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## SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>Taq DNA Polymerase</b> Poly(oxy-1,2-ethanediyl), . alpha.-[ (1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	Eyes - Severe irritant	Rabbit	-	1 %	-

### Sensitiser

**Conclusion/Summary** : Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Information on likely routes of exposure

<b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	Not available. Routes of entry anticipated: Oral, Dermal, Inhalation. Routes of entry anticipated: Oral, Dermal, Inhalation.
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### Potential acute health effects

<b>Inhalation</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Eye contact</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Inhalation</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No specific data. No specific data. No specific data.
<b>Ingestion</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No specific data. No specific data. No specific data.
<b>Skin contact</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No specific data. No specific data. No specific data.
<b>Eye contact</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No specific data. No specific data. No specific data.

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

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## SECTION 11: Toxicological information

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

<b>General</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: <b>AR 1</b> Clarigo PCR Mix Taq DNA Polymerase	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>Clarigo PCR Mix</b> Magnesium chloride	Acute EC50 >100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 180000 µg/l Fresh water	Crustaceans - Eudiaptomus padanus ssp. padanus - Adult	48 hours
	Acute IC50 6.8 mg/l Fresh water	Aquatic plants - Lemna aequinoctialis	96 hours
	Acute LC50 32000 µg/l Fresh water	Daphnia - Daphnia hyalina - Adult	48 hours
	Acute LC50 2120 mg/l Fresh water Acute NOEC 100 mg/l Fresh water	Fish - Pimephales promelas Algae - Desmodesmus subspicatus	96 hours 72 hours
	Chronic NOEC 0.1 mg/l Fresh water	Fish - Cyprinus carpio	35 days
<b>Taq DNA Polymerase</b> Poly(oxy-1,2-ethanediyl), . alpha.-[ (1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	Acute EC50 210 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 10800 µg/l Marine water	Crustaceans - Pandalus montagui - Adult	48 hours
	Acute LC50 8600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

### 12.2 Persistence and degradability

Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>Taq DNA Polymerase</b> Poly(oxy-1,2-ethanediyl), . alpha.-[ (1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	3.77	78.67	low

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## SECTION 12: Ecological information

### 12.4 Mobility in soil

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

Mobility : Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** :  Dispose of material(s) and residues under controlled conditions. 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

### Additional information

14.6 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.

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## SECTION 14: Transport information

14.7 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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Label	: <b>R</b> 1	Not applicable.
	Clarigo PCR Mix	Not applicable.
	Taq DNA Polymerase	Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

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.
Europe	: Not determined.
Japan	: <b>Japan inventory (ENCS):</b> Not determined. <b>Japan inventory (ISHL):</b> Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.

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## SECTION 15: Regulatory information

**Turkey** : Not determined.  
**United States** : Not determined.  
**Viet Nam** : Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 vPvB = Very Persistent and Very Bioaccumulative

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
✔ <b>Clarigo PCR Mix</b> Aquatic Chronic 3, H412	Calculation method
<b>Taq DNA Polymerase</b> Aquatic Chronic 3, H412	Calculation method

### Full text of abbreviated H statements

✔ <b>Clarigo PCR Mix</b> H410 H412	Very toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.
<b>Taq DNA Polymerase</b> H319 H400 H410 H412	Causes serious eye irritation. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.

### Full text of classifications [CLP/GHS]

✔ <b>Clarigo PCR Mix</b> Aquatic Chronic 1 Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
<b>Taq DNA Polymerase</b> Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 3 Eye Irrit. 2	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

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#### Notice to reader

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