

SAFETY DATA SHEET

New Zealand

Section 1. Identification

Product name

triplePrep™ Kit, 50 reactions

Catalogue Number

28-9425-44



Other means of identification

Not available.

Product type

Liquid.

Identified uses

Use in laboratories

Supplier

Cytiva
Amersham Place
Little Chalfont
Buckinghamshire
HP7 9NA United Kingdom
+44 1494 508000

Cytiva New Zealand
Buddle Findlay, Level 18, Pricewaterhousecooper Tower,
188 Quay Street,
Auckland, Auckland, 1010
New Zealand

Person who prepared the SDS :

sds_author@cytiva.com

Emergency telephone number (with hours of operation)

0800 733 893
(10am - 7pm)

Section 2. Hazards identification

HSNO Classification

6.1 - ACUTE TOXICITY: ORAL - Category E
8.2 - CORROSIVE TO DERMAL TISSUE - Category A
8.3 - CORROSIVE TO OCULAR TISSUE - Category A
9.1 - AQUATIC ECOTOXICITY - Category B
9.2 - SOIL ECOTOXICITY - Category B
9.3 - TERRESTRIAL VERTEBRATE ECOTOXICITY - Category C

Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 92%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 73.5%

This material is classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS label elements

Signal word

Danger

Hazard statements

May be harmful if swallowed.
Causes severe skin burns and eye damage.
Toxic to aquatic life with long lasting effects.
Toxic to the soil environment.
Harmful to terrestrial vertebrates.

Precautionary statements

General

Do not apply directly into or onto water. Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

Prevention

Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid release to the environment. Wash thoroughly after handling.

Response

Collect spillage. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

Storage

Store locked up.

Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.



Symbol

Other hazards which do not result in classification

None known.

Section 3. Composition/information on ingredients

Substance/mixture Mixture

Other means of identification Not available.

Ingredient name	% (w/w)	Identifiers
Sodium chloride	18 - 19	CAS: 7647-14-5 EC: 231-598-3
Trichloroacetic acid	9	CAS: 76-03-9 EC: 200-927-2

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

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

Section 4. First aid measures

Description of necessary first aid measures

Inhalation	Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. 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.
Ingestion	Get medical attention immediately. 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. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	Get medical attention immediately. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Eye contact	Get medical attention immediately. 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. Chemical burns must be treated promptly by a physician.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation	May give off gas, vapour or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	May be harmful if swallowed. May cause burns to mouth, throat and stomach.
Skin contact	Causes severe burns.
Eye contact	Causes serious eye damage.

Over-exposure signs/symptoms

Inhalation	No specific data.
Ingestion	Adverse symptoms may include the following: stomach pains
Skin	Adverse symptoms may include the following: pain or irritation redness blistering may occur



Eyes	Adverse symptoms may include the following: pain watering redness
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Indication of immediate medical attention and special treatment needed, if necessary

Specific treatments	Not available.
Notes to physician	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.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	None known.
Specific hazards arising from the chemical	In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic 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.
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds carbonyl halides metal oxide/oxides
Hazchem code	Not available.
Special precautions for fire-fighters	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	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	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. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	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. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental precautions	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.

Methods and material for containment and cleaning up

Small spill	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.
Large spill	Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.



Section 7. Handling and storage

Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment (see Section 8). 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. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	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.
Conditions for safe storage, including any incompatibilities	Store between the following temperatures: 20 to 25°C (68 to 77°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. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name

Trichloroacetic acid

Exposure limits

HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 11/2023) carcinogen category 2.

WES-STEL 15 minutes: 1.4 mg/m³. Form: The Inhalable Fraction and Vapour (ifv) notation is used when a material exerts sufficient vapour pressure such that it may be present in both particle and vapour phases, with each contributing to a significant portion of exposure..

WES-STEL 15 minutes: 0.2 ppm. Form: The Inhalable Fraction and Vapour (ifv) notation is used when a material exerts sufficient vapour pressure such that it may be present in both particle and vapour phases, with each contributing to a significant portion of exposure..

Biological exposure indices

No exposure indices known.

Appropriate engineering controls

If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

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

Individual protection measures

Hygiene measures

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

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

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

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.

Respiratory protection

A respirator is not needed under normal and intended conditions of product 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	Liquid.
Colour	Colourless.
Odour	Not available.
Odour threshold	Not available.
pH	1
Melting point/freezing point	Not available.
Boiling point or initial boiling point and boiling range	Not available.
Flash point	Not applicable.
Burning time	Not applicable.
Burning rate	Not applicable.
Evaporation rate	Not available.
Flammability	Not available.
Lower and upper explosive (flammable) limits	Not available.
Vapour pressure	Not available.

Vapour Pressure at 20°C**Vapour pressure at 50°C**

	Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	water	17.5	2.3				
	TCA (ISO)	0.06	0.008				
Relative vapour density	Not available.						
Relative density	Not available.						

Solubility(ies)**Media****Result**

cold water
hot water

Easily soluble
Easily soluble

Solubility in water	Not available.
Partition coefficient: n-octanol/ water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
SADT	Not available.
Viscosity	Not available.
Flow time (ISO 2431)	Not available.

Particle characteristics

Median particle size	Not applicable.
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Section 10. Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	No specific data.
Incompatible materials	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.



Section 11. Toxicological information

Information on likely routes of exposure

Inhalation	May give off gas, vapour or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	May be harmful if swallowed. May cause burns to mouth, throat and stomach.
Skin contact	Causes severe burns.
Eye contact	Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	No specific data.
Ingestion	Adverse symptoms may include the following: stomach pains
Skin contact	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Eye contact	Adverse symptoms may include the following: pain watering redness

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

Acute toxicity

Not available.

Conclusion/Summary[Product] Not available.

Ingredient name
Trichloroacetic acid

Conclusion/Summary

ACGIH : Proven animal carcinogenic substance of potential relevance to humans.

Skin corrosion/irritation

Product/ingredient name
Trichloroacetic acid

Result

Human - Skin - Severe irritant
Duration of treatment/exposure: 24 hours
Amount/concentration applied: 35 pph

Conclusion/Summary[Product] Corrosive to the skin.

Serious eye damage/eye irritation

Not available.

Conclusion/Summary[Product] Corrosive to eyes.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary[Product] May cause respiratory irritation.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary[Product] Not available.

Respiratory

Conclusion/Summary[Product] Not available.



Potential chronic health effects

General	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Eye contact	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Chronic toxicity

Not available.

Conclusion/Summary[Product] Not available.**Carcinogenicity**

Not available.

Conclusion/Summary[Product] Not available.**Germ cell mutagenicity**

Not available.

Conclusion/Summary[Product] Not available.**Reproductive toxicity**

Not available.

Conclusion/Summary[Product] Not available.**Specific target organ toxicity (single exposure)**

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Numerical measures of toxicity**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)
triplePrep Kit, 50 reactions	500	N/A	N/A	N/A	N/A
Trichloroacetic acid	500	N/A	N/A	N/A	N/A

Section 12. Ecological information**Ecotoxicity**

This material is toxic to aquatic life with long lasting effects.

Aquatic and terrestrial toxicity**Product/ingredient name**

Sodium chloride

Result**Acute - LC50 - Fresh water**Fish - Striped bass - *Morone saxatilis* - Larvae
1000 mg/l [96 hours]Effect: Mortality**Chronic - NOEC - Fresh water**Daphnia - Water flea - *Daphnia pulex*
0.314 g/l [21 days]Effect: Reproduction

Trichloroacetic acid

Chronic - NOEC - Fresh waterFish - Eastern mosquitofish - *Gambusia holbrooki* - Adult

100 mg/l [8 weeks]

Effect: Reproduction**Chronic - NOEC - Fresh water**

OECD

Aquatic plants - Duckweed - *Lemna minor*

6 g/l [96 hours]

Effect: Growth**Acute - EC50 - Fresh water**Daphnia - Water flea - *Daphnia magna*

402.6 mg/l [48 hours]

Effect: Intoxication**Acute - EC50 - Fresh water**Algae - Green algae - *Selenastrum capricornutum*28.85 mg/dm³ [72 hours]Effect: Population**Acute - EC50 - Fresh water**Daphnia - Water flea - *Daphnia magna* - NeonateAge: <24 hours

146 mg/l [48 hours]

Effect: Intoxication**Acute - LC50 - Fresh water**Fish - Trout Family - *Salmonidae* - Fry

1050 mg/l [96 hours]

Effect: Mortality**Acute - EC50 - Fresh water**

OECD

Algae - Green algae - *Desmodesmus subspicatus* - Exponential growth phase

4.7 mg/l [72 hours]

Effect: Population**Chronic - NOEC - Fresh water**

OECD

Algae - Green algae - *Desmodesmus subspicatus* - Exponential growth phase

3 mg/l [72 hours]

Effect: Population**Chronic - NOEC - Fresh water**

OECD

Daphnia - Water flea - *Daphnia magna*Age: <24 hours

285 mg/l [21 days]

Effect: Mortality**Chronic - NOEC - Marine water**

OECD

Fish - Sheepshead minnow - *Cyprinodon variegatus* - Embryo

235 mg/l [32 days]

Effect: Mortality**Conclusion/Summary[Product]** Toxic to aquatic life with long lasting effects.**Persistence/degradability**

Not available.

Conclusion/Summary[Product] Not available.**Product/ingredient name**

Trichloroacetic acid

Aquatic half-life

-

Photolysis

-

Biodegradability

Not readily

Bioaccumulative potential**Product/ingredient name**

TCA (ISO)

LogP_{ow}

1.33

BCF

1.7

Potential

Low

Mobility in soil**Soil/water partition coefficient**

Not available.

Other adverse effects

No known significant effects or critical hazards.








Section 13. Disposal considerations

Disposal methods

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

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*
New Zealand Class	UN2564	Trichloroacetic acid solution (TCA (ISO), solution). Marine pollutant (TCA (ISO))	8	II
	 	- Yes.		
IATA Class	UN2564	Trichloroacetic acid solution (TCA (ISO), solution)	8	II
		- No.		
IMDG Class	UN2564	Trichloroacetic acid solution (TCA (ISO), solution). Marine pollutant (TCA (ISO))	8	II
	 	- Yes.		

PG* : Packing group

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

HSNO Approval Number

HSR002596

HSNO Group Standard

Laboratory Chemicals and Reagent Kits

HSNO Classification

6.1 - ACUTE TOXICITY: ORAL - Category E
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 9.2 - SOIL ECOTOXICITY - Category B
 9.3 - TERRESTRIAL VERTEBRATE ECOTOXICITY - Category C

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



New Zealand	All components are listed or exempted.
Australia	All components are listed or exempted.
United States	All components are listed or exempted.
Canada inventory	All components are listed or exempted.
China	All components are listed or exempted.
Japan	All components are listed or exempted.

Section 16. Other information

History

Date of printing	19 February 2026
Date of issue/ Date of revision	19 February 2026
Date of previous issue	12/19/2023
Version	5.01

Key to abbreviations

ADG = Australian Dangerous Goods
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
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)
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
UN = United Nations

References

Not available.

▀ Indicates information that has changed from previously issued version.

Notice to reader

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