

Material Safety Data Sheet

Australia

English

1. Identification of the material and supplier

Product name **Protein precipitation buffer type 1; part of 'illustra triplePrep Kit, 50 purifications'**

Catalogue Number **28-9364-81**



9 0 2 8 9 3 6 4 8 1

Component Number **28936879**

Company details**Manufacturer**

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Supplier

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ADG **ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.**

Uses

Area of application Industrial applications.
Material uses Analytical reagent. Research.
Product type Liquid.

2. Hazards identification

Classification C; R35
N; R51/53

Risk phrases R35- Causes severe burns.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S61- Avoid release to the environment. Refer to special instructions/safety data sheet.

Statement of hazardous/dangerous nature

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

3. Composition/information on ingredients

Mixture Yes.

Ingredient name

trichloroacetic acid

CAS number

76-03-9

Concentration

10

Additional information

Other ingredients, determined not to be hazardous according to NOHSC criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.



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Validation date 19 March 2008

Version 1

4. First-aid measures

First-aid measures

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.
Skin contact	Get medical attention immediately. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing 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.
Inhalation	Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. 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.
Ingestion	Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. 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.
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 or wear gloves.

5. Fire-fighting measures

Extinguishing media

Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	None known.
Special exposure hazards	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. This material is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. In a fire or if heated, a pressure increase will occur and the container may burst.
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.
Hazardous combustion products	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds carbonyl halides metal oxide/oxides

6. Accidental release measures

Personal precautions	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 (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 for cleaning up	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). 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.
Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.



7. Handling and storage

Handling	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. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Refer to special instructions/safety data sheet. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Storage	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.

8. Exposure controls/personal protection

Occupational exposure limits

<u>Inгредиент name</u>	<u>Occupational exposure limits</u>
trichloroacetic acid	NOHSC (Australia, 8/2005). TWA: 6.7 mg/m ³ 8 hour(s). TWA: 1 ppm 8 hour(s).
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.
Engineering measures	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.
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.
Personal protection	
Eyes	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.
Hands	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.
Respiratory	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Skin	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.
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.

9. Physical and chemical properties

Physical state	Liquid.
Colour	Colourless.
pH	4.8 [Conc. (% w/w): 100%]

10. Stability and reactivity

11. Toxicological information

Potential acute health effects

Inhalation	May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
Ingestion	May cause burns to mouth, throat and stomach.
Skin contact	Severely corrosive to the skin. Causes severe burns.
Eye contact	Severely corrosive to the eyes. Causes severe burns.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Zinc sulphate, heptahydrate	LD50 Oral	Rat	1710 mg/kg	-
	LD50 Oral	Mouse	245 mg/kg	-
Conclusion/Summary	Not available.			

Potential chronic health effects

Chronic toxicity



Conclusion/Summary	Not available.
<u>Carcinogenicity</u>	
Conclusion/Summary	Not available.
<u>Mutagenicity</u>	
Conclusion/Summary	Not available.
<u>Teratogenicity</u>	
Conclusion/Summary	Not available.
<u>Reproductive toxicity</u>	
Conclusion/Summary	Not available.
Chronic effects	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	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.
<u>Over-exposure signs/symptoms</u>	
Inhalation	No specific data.
Ingestion	Adverse symptoms may include the following: stomach pains
Skin	Adverse symptoms may include the following: pain or irritation
Eyes	redness blistering may occur Adverse symptoms may include the following: pain watering redness
Target organs	Contains material which causes damage to the following organs: mucous membranes, gastrointestinal tract, upper respiratory tract, skin, eyes, stomach.

12. Ecological information

Environmental effects Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Trichloroacetic acid	Intoxication	Acute EC50 2000 mg/L	Daphnia	48 hours
	Intoxication	Acute EC50 146 mg/L	Daphnia	48 hours
	Mortality	Acute LC50 3100 mg/L	Daphnia	96 hours
	Mortality	Acute LC50 2000 mg/L	Fish	96 hours
	Mortality	Acute LC50 2500 mg/L	Fish	96 hours
Conclusion/Summary	Not available.			

Biodegradability

Conclusion/Summary	Not available.		
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
trichloroacetic acid	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
trichloroacetic acid	1.33	0.4 to 1.7	low

Other adverse effects No known significant effects or critical hazards.




13. Disposal considerations

Methods of disposal The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.



14. Transport information

International transport regulations

Regulation	UN number	Proper shipping name	Class	PG	Label	Additional information
ADG	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	9	III		-
IMDG	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	9	III		-
IATA	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	9	III		-

15. Regulatory information

Standard for the Uniform Scheduling of Drugs and Poisons

Not regulated.

Control of Scheduled Carcinogenic Substances

Ingredient name

Not available.

Schedule

Australia inventory (AICS)

Australia inventory (AICS): All components are listed or exempted.

EU Classification

C; R35

HCS Classification

N; R51/53

Corrosive material

Target organ effects

16. Other information

History

Date of printing	25 March 2008	Date of previous issue	No previous validation
Date of issue	19 March 2008	Version	1



Indicates information that has changed from previously issued version.

Enquiries regarding MSDS content should be directed to: our local sales office.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

