# **KIT SAFETY DATA SHEET**



Kit Product Name HRP Substrate Kit

Kit Catalogue Number(s) 1721064

Revision date 11-Jan-2023

# Kit Contents

| Catalogue Number(s) | Product Name                |
|---------------------|-----------------------------|
| 9702002             | ABTS Reagent Solution A     |
| 9702003             | Citrate/Peroxide Solution B |

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# SAFETY DATA SHEET

According to WHS Regulations

Revision date 11-Jan-2023 Revision Number 1

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

**Product identifier** 

ABTS Reagent Solution A **Product Name** 

Catalogue Number(s) 9702002

Other means of identification

Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Uses advised against No information available

Details of manufacturer or importer

**Corporate Headquarters** Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive Hercules, CA 94547

USA

Manufacturer Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories Pty Ltd 2000 Alfred Nobel Drive Hercules, California 94547

USA

**Legal Entity / Contact Address** u1A, 62 Ferndell Street, South Granville NSW 2142

Australia

For further information, please contact

+61 2 9914 2800 or 1800 224 354 **Technical Service** 

sales.australia@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Australia: 61-290372994

Emergency telephone number No information available

## **SECTION 2: Hazards identification**

GHS Classification

Not classified

Label elements

**Hazard statements** 

Not classified

Other hazards which do not result in classification

# SECTION 3: Composition/information on ingredients

Substance

Revision date 11-Jan-2023

Not applicable

#### Mixture

The product contains no substances which at their given concentration, are considered to be hazardous to health

| Chemical name             | CAS No      | Weight-% |
|---------------------------|-------------|----------|
| Non-hazardous ingredients | Proprietary | Balance  |

## **SECTION 4: First aid measures**

#### **Description of first aid measures**

**General advice** No hazards which require special first aid measures.

Poisons Information Centre, Australia: 13 11 26 **Emergency telephone number** 

Poisons Information Centre, New Zealand: 0800 764 766

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a doctor.

Skin contact Wash skin with soap and water.

Ingestion Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed

No information available. **Symptoms** 

Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Note to doctors

## SECTION 5: Firefighting measures

**Suitable Extinguishing Media** 

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the

surrounding environment.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

Specific hazards arising from the

None known.

chemical

Special protective actions for fire-fighters

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Use personal protection equipment.

## SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

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**Personal precautions** See section 8 for more information.

**Environmental precautions** 

**Environmental precautions**See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**Pick up and transfer to properly labelled containers.

Precautions to prevent secondary hazards

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

## SECTION 7: Handling and storage

## Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

#### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Store according to product and label instructions.

**Incompatible materials**None known based on information supplied.

## SECTION 8: Exposure controls/personal protection

#### Control parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational

exposure limits established by the region specific regulatory bodies.

#### Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

## Appropriate engineering controls

Engineering controls Showers

Eyewash stations Ventilation systems.

#### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear suitable protective clothing.

Hand protection Wear suitable gloves.

exceeded or irritation is experienced, ventilation and evacuation may be required.

None known

None known

**Environmental exposure controls** No information available.

# SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid

Appearance aqueous solution
Colour colourless
Odour Odourless.

Odour threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

pHNone knownMelting point / freezing pointNo data availableNone known

Boiling point / boiling range 100 °C

Flash point No data available None known Evaporation rate No data available None known Flammability (solid, gas) No data available None known Flammability Limit in Air None known

**Upper flammability or explosive** No data available

limits

Lower flammability or explosive No data available

limits

Vapour pressureNo data availableNone knownVapour densityNo data availableNone knownRelative densityNo data availableNone known

Water solubility

Solubility(ies)

No data available
Miscible in water
No data available

Partition coefficientNo data availableNone knownAutoignition temperatureNo data availableNone knownDecomposition temperatureNo data availableNone knownKinematic viscosityNo data availableNone known

Dynamic viscosity

Explosive properties

Oxidising properties

No data available
Not applicable
Not applicable

Other information

Molecular weightNot applicableVOC contentNot applicable

## SECTION 10: Stability and reactivity

Reactivity

**Reactivity** No information available.

**Chemical stability** 

**Stability** Stable under normal conditions.

**Explosion data** 

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

**Conditions to avoid**None known based on information supplied.

**Incompatible materials** 

**Incompatible materials**None known based on information supplied.

**Hazardous decomposition products** 

Hazardous decomposition products None known based on information supplied.

## SECTION 11: Toxicological information

#### **Acute toxicity**

Information on likely routes of exposure

Product Information

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye contact** Specific test data for the substance or mixture is not available.

**Skin contact** Specific test data for the substance or mixture is not available.

**Ingestion** Specific test data for the substance or mixture is not available

**Symptoms** No information available.

Numerical measures of toxicity - Product Information

See section 16 for terms and abbreviations

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

Skin corrosion/irritation Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. Serious eye damage/eye irritation Respiratory or skin sensitisation Based on available data, the classification criteria are not met. Germ cell mutagenicity Based on available data, the classification criteria are not met. Carcinogenicity Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. Reproductive toxicity STOT - single exposure Based on available data, the classification criteria are not met. Based on available data, the classification criteria are not met. STOT - repeated exposure **Aspiration hazard** Based on available data, the classification criteria are not met.

# **SECTION 12: Ecological information**

## **Ecotoxicity**

**Ecotoxicity**The environmental impact of this product has not been fully investigated.

Revision date 11-Jan-2023

Unknown aquatic toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aquatic

environment.

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

**Bioaccumulation** No information available.

Mobility

No information available. Mobility in soil

Mobility No information available.

Other adverse effects

Other adverse effects No information available.

## **SECTION 13: Disposal considerations**

#### Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.

# **SECTION 14: Transport information**

ADG Not regulated

<u>IATA</u> Not regulated

**IMDG** Not regulated

Transport in bulk according to Annex II of MARPOL and the IBC Code

No information available

# **SECTION 15: Regulatory information**

Safety, health and environmental regulations/legislation specific for the substance or mixture

#### **National regulations**

### Australia

See section 8 for national exposure control parameters

## Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

No poisons schedule number allocated

#### International Inventories

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Contact supplier for inventory compliance status

#### **International Regulations**

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

## **SECTION 16: Other information**

Prepared By Bio-Rad Laboratories, Environmental Health and Safety

Revision date 11-Jan-2023

**Revision Note** Significant changes throughout SDS. Review all sections.

#### Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value \* Skin designation

C Carcinogen

#### Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set RTECS (Registry of Toxic Effects of Chemical Substances)

World Health Organization

#### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet** 



# SAFETY DATA SHEET

According to WHS Regulations

Revision date 11-Jan-2023 Revision Number 1

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

**Product identifier** 

Citrate/Peroxide Solution B **Product Name** 

Catalogue Number(s) 9702003

Other means of identification

Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Uses advised against No information available

Details of manufacturer or importer

**Corporate Headquarters** Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive

Hercules, CA 94547 USA

Manufacturer Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories Pty Ltd

2000 Alfred Nobel Drive Hercules, California 94547

USA

**Legal Entity / Contact Address** 

u1A, 62 Ferndell Street, South Granville NSW 2142

Australia

For further information, please contact

+61 2 9914 2800 or 1800 224 354 **Technical Service** 

sales.australia@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Australia: 61-290372994

Emergency telephone number No information available

## **SECTION 2: Hazards identification**

## GHS Classification

Not classified

## Label elements

#### **Hazard statements**

Not classified

## **Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

## Other hazards which do not result in classification

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Harmful to aquatic life

# SECTION 3: Composition/information on ingredients

Substance

Not applicable

Mixture

| Chemical name             | CAS No      | Weight-% |
|---------------------------|-------------|----------|
| Hydrogen peroxide         | 7722-84-1   | 2.5 - 5  |
| Citric acid               | 77-92-9     | 1 - 2.5  |
| Non-hazardous ingredients | Proprietary | Balance  |

## **SECTION 4: First aid measures**

**Description of first aid measures** 

**General advice** No hazards which require special first aid measures.

**Emergency telephone number** Poisons Information Centre, Australia: 13 11 26

Poisons Information Centre, New Zealand: 0800 764 766

**Inhalation** Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a doctor.

**Skin contact** Wash skin with soap and water.

**Ingestion** Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed

**Symptoms** No information available.

Indication of any immediate medical attention and special treatment needed

**Note to doctors**Treat symptomatically.

# **SECTION 5: Firefighting measures**

**Suitable Extinguishing Media** 

surrounding environment.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

Specific hazards arising from the None known.

chemical

140110 KITOWI

Special protective actions for fire-fighters

Special protective equipment for Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

**fire-fighters** Use personal protection equipment.

## SECTION 6: Accidental release measures

## Personal precautions, protective equipment and emergency procedures

**Personal precautions** See section 8 for more information.

**Environmental precautions** 

**Environmental precautions** See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labelled containers.

Precautions to prevent secondary hazards

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

## SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

**Storage Conditions** Store according to product and label instructions.

**Incompatible materials**None known based on information supplied.

## SECTION 8: Exposure controls/personal protection

#### **Control parameters**

#### **Exposure Limits**

| Chemical name     | Australia                  | ACGIH TLV  |
|-------------------|----------------------------|------------|
| Hydrogen peroxide | TWA: 1 ppm                 | TWA: 1 ppm |
| 7722-84-1         | TWA: 1.4 mg/m <sup>3</sup> |            |

## **Biological occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

## **Appropriate engineering controls**

Engineering controls Showers

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection**Wear suitable protective clothing.

**Hand protection** Wear suitable gloves.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required.

**Environmental exposure controls** No information available.

# SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid

Appearance aqueous solution
Colour colourless
Odour Odourless.

Odour threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

pH None known
Melting point / freezing point No data available None known

Boiling point / boiling range 100 °C

Flash point No data available None known Evaporation rate No data available None known Flammability (solid, gas) No data available None known

Flammability Limit in Air None known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Vapour pressureNo data availableNone knownVapour densityNo data availableNone knownRelative densityNo data availableNone known

Water solubility Miscible in water

Solubility(ies) No data available None known
Partition coefficient No data available None known
Autoignition temperature No data available None known
Decomposition temperature
None known
None known
None known

Kinematic viscosity

No data available

None known

No data available

None known

Explosive properties Not applicable Oxidising properties Not applicable

Other information

Molecular weightNot applicableVOC contentNot applicable

# **SECTION 10: Stability and reactivity**

Reactivity

**Reactivity** No information available.

**Chemical stability** 

**Stability** Stable under normal conditions.

**Explosion data** 

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions 
None under normal processing.

**Conditions to avoid** 

**Conditions to avoid**None known based on information supplied.

**Incompatible materials** 

**Incompatible materials**None known based on information supplied.

**Hazardous decomposition products** 

Hazardous decomposition products None known based on information supplied.

## SECTION 11: Toxicological information

#### **Acute toxicity**

#### Information on likely routes of exposure

Product Information

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye contact** Specific test data for the substance or mixture is not available.

**Skin contact** Specific test data for the substance or mixture is not available.

**Ingestion** Specific test data for the substance or mixture is not available

**Symptoms** No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 20,900.20 mg/kg
ATEmix (dermal) 48,750.80 mg/kg
ATEmix (inhalation-dust/mist) 66.70 mg/l

#### **Component Information**

| Chemical name     | Oral LD50          | Dermal LD50             | Inhalation LC50                      |
|-------------------|--------------------|-------------------------|--------------------------------------|
| Hydrogen peroxide | = 1518 mg/kg (Rat) | = 9200 mg/kg ( Rabbit ) | = 2000 mg/m <sup>3</sup> ( Rat ) 4 h |
| , , ,             | 3 3 ( )            | 3 3 ( )                 | <b>3</b> ( )                         |
| Citric acid       | = 3 g/kg (Rat)     | > 2000 mg/kg (Rat)      | -                                    |
|                   | ,                  | - • ,                   |                                      |
|                   |                    |                         |                                      |

See section 16 for terms and abbreviations

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

**Skin corrosion/irritation**Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

CarcinogenicityBased on available data, the classification criteria are not met.Reproductive toxicityBased on available data, the classification criteria are not met.STOT - single exposureBased on available data, the classification criteria are not met.STOT - repeated exposureBased on available data, the classification criteria are not met.Aspiration hazardBased on available data, the classification criteria are not met.

# **SECTION 12: Ecological information**

**Ecotoxicity** 

**Ecotoxicity** Harmful to aquatic life.

**Unknown aquatic toxicity** 0 % of the mixture consists of component(s) of unknown hazards to the aquatic

environment.

| Chemical name     | Algae/aquatic plants | Fish                    | Toxicity to    | Crustacea               |
|-------------------|----------------------|-------------------------|----------------|-------------------------|
|                   |                      |                         | microorganisms |                         |
| Hydrogen peroxide | -                    | LC50: =16.4mg/L (96h,   | -              | EC50: 18 - 32mg/L (48h, |
|                   |                      | Pimephales promelas)    |                | Daphnia magna)          |
|                   |                      | LC50: 18 - 56mg/L (96h, |                |                         |
|                   |                      | Lepomis macrochirus)    |                |                         |
|                   |                      | LC50: 10.0 - 32.0mg/L   |                |                         |
|                   |                      | (96h, Oncorhynchus      |                |                         |
|                   |                      | mykiss)                 |                |                         |
| Citric acid       | -                    | LC50: =1516mg/L (96h,   | -              | -                       |
|                   |                      | Lepomis macrochirus)    |                |                         |

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

**Bioaccumulation** There is no data for this product.

**Component Information** 

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| Citric acid   | -1.72                 |

**Mobility** 

**Mobility in soil** No information available.

**Mobility** No information available.

Other adverse effects

Other adverse effects No information available.

# SECTION 13: Disposal considerations

#### Waste treatment methods

Waste from residues/unused products

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

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**Contaminated packaging** Do not reuse empty containers.

# **SECTION 14: Transport information**

ADG Not regulated

IATA Not regulated

IMDG Not regulated

#### Transport in bulk according to Annex II of MARPOL and the IBC Code

No information available

# **SECTION 15: Regulatory information**

Safety, health and environmental regulations/legislation specific for the substance or mixture

## **National regulations**

#### Australia

See section 8 for national exposure control parameters

#### Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Poison Schedule Number

#### **International Inventories**

Contact supplier for inventory compliance status

## **International Regulations**

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

# **SECTION 16: Other information**

Prepared By Bio-Rad Laboratories, Environmental Health and Safety

Revision date 11-Jan-2023

**Revision Note** Significant changes throughout SDS. Review all sections.

## Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value \* Skin designation

C Carcinogen

### Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

RTECS (Registry of Toxic Effects of Chemical Substances)

World Health Organization

#### Disclaimer

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**End of Safety Data Sheet**