# KIT SAFETY DATA SHEET



Kit Product Name CytoTrack Kits

**Kit Catalogue Number(s)** 1351202, 1351203, 1351204, 1351205

Revision date 30-Aug-2023

# **Kit Contents**

Catalogue Number(s)	Product Name
10002430	Dimethylsulfoxide (DMSO)
10033056, 10033096, 10033098, 10033100, 10033102, 10033104,	Labeling Dye
10033106, 10033348, 10033349, 10041658, 10041659, 10041660,	
10041661, 10041662, 10041663, 10041664, 10041665	

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# SAFETY DATA SHEET

This safety data sheet complies with the requirements of: \$\$586: 2008 (2014)

Revision date 30-Aug-2023 Revision Number 1.1

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

**Product identifier** 

Product Name Dimethylsulfoxide (DMSO)

Other means of identification

Catalogue Number(s) 10002430

**CAS No** 67-68-5

Pure substance/mixture Substance

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Uses advised against No information available

Details of the supplier of the safety data sheet

<u>Corporate Headquarters</u> <u>Manufacturer</u> <u>Legal Entity / Contact Address</u>

Bio-Rad Laboratories Inc.

Bio-Rad Laboratories, Life Science Group

Bio-Rad Laboratories (Singapore) PTE LTD

1000 Alfred Nobel Drive

3A International Business Park #11-10/16

Hercules, CA 94547 Hercules, California 94547 ICON@IBP USA Singapore 609935

For further information, please contact

Technical Service 6424 0262

ctssingapore@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Singapore: 65-31581349

### **SECTION 2: Hazards identification**

### GHS Classification

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS): SS586: 2008 (2014)

#### Label elements

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS): SS586: 2008 (2014)

Other hazards which do not result in classification

# SECTION 3: Composition/information on ingredients

#### Substance

**CAS No** 67-68-5

Chemical name	EC No (EU Index No)	CAS No	Weight-%
Dimethyl sulfoxide	200-664-3	67-68-5	50 - 100

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

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

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

**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** In the case of skin irritation or allergic reactions see a doctor. 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.

For emergency responders

**Self-protection of the first aider** 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

Special protective actions for fire-fighters

Special protective equipment and precautions 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

**Personal precautions** Ensure adequate ventilation.

**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.

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

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## SECTION 7: Handling and storage

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

### SECTION 8: Exposure controls/personal protection

**Control parameters** 

Occupational 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.

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 stateLiquidAppearanceClearColourcolourlessOdourOdourless.

Odour threshold No information available

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

pH 7

Melting point / freezing point18.44 °CBoiling point / boiling range189 °CFlash point95 °C

Evaporation rateNo data availableNone knownFlammability (solid, gas)No data availableNone knownFlammability Limit in AirNone 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 availableNone knownPartition coefficientNo data availableNone knownAutoignition temperatureNo data availableNone knownDecomposition temperatureNo data availableNone knownKinematic viscosityNo data availableNone known

Kinematic viscosityNo data availableNone knownDynamic viscosityNo data availableNone known

Other information No information available

### 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 
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

Information on likely routes of exposure

#### **Product Information**

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**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 related to the physical, chemical and toxicological characteristics

**Symptoms** No information available.

**Acute toxicity** 

**Numerical measures of toxicity** 

**Component Information** 

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Dimethyl sulfoxide	= 28300 mg/kg (Rat)	= 40000 mg/kg (Rat)	> 5.33 mg/L (Rat) 4 h

### 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.

Carcinogenicity Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT - single exposure**Based on available data, the classification criteria are not met.

**STOT - repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Classification not possible.

# SECTION 12: Ecological information

### **Ecotoxicity**

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

Chemical name	Algae/aquatic plants	Fish	Crustacea
Dimethyl sulfoxide	-	LC50: =34000mg/L (96h,	-
		Pimephales promelas)	
		LC50: 33 - 37g/L (96h,	
		Oncorhynchus mykiss)	
		LC50: >40g/L (96h, Lepomis	
		macrochirus)	
		LC50: =41.7g/L (96h, Cyprinus	
		carpio)	

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

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

Chemical name	Partition coefficient
Dimethyl sulfoxide	-1.35

**Mobility** 

Mobility in soil No information available.

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Dimethyl sulfoxide	The substance is not PBT / vPvB

Other adverse effects

Other adverse effects No information available

# **SECTION 13: Disposal considerations**

Waste treatment methods

Waste from residues/unused

products

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

with local regulations.

Contaminated packaging Do not reuse empty containers.

# **SECTION 14: Transport information**

IMDG Not regulated

Transport in bulk according to No information available

Annex II of MARPOL and the IBC

Code

IATA Not regulated

# SECTION 15: Regulatory information

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

Singapore

#### **Environmental Public Health Act**

Dispose of waste product or used containers according to local regulations.

### Hazardous Waste (Control of Export, Import and Transit) Act

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

#### **Poison**

Verify that licence requirements are met Verify that requirements related to using, handling, and storing substances subject to prohibition, authorisation or restriction are met

Chemical name	Poison	Poison Schedule Number
Dimethyl sulfoxide	X	First schedule
-		Third schedule

#### **Workplace Safety and Health Act**

Comply with the health and safety at work laws.

### **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

#### International Inventories

Contact supplier for inventory compliance status

### **SECTION 16: Other information**

### 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

#### 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

Label elements

Issuing Date Bio-Rad Laboratories, Environmental Health and Safety

Revision date 30-Aug-2023

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

This safety data sheet complies with the requirements of: SS586: 2008 (2014)

#### **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

This safety data sheet complies with the requirements of: \$\$586: 2008 (2014)

Revision date 30-Aug-2023 Revision Number 1

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

**Product identifier** 

Product Name Labeling Dye

Other means of identification

**Catalogue Number(s)** 10033056, 10033096, 10033098, 10033100, 10033102, 10033104, 10033106, 10033348,

10033349, 10041658, 10041659, 10041660, 10041661, 10041662, 10041663, 10041664,

10041665

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 the supplier of the safety data sheet

<u>Corporate Headquarters</u> <u>Manufacturer</u> <u>Legal Entity / Contact Address</u>

Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories (Singapore) PTE LTD 1000 Alfred Nobel Drive Bio-Rad Laboratories (Singapore) PTE LTD 3A International Business Park #11-10/16

Hercules, CA 94547 Hercules, California 94547 ICON@IBP USA USA Singapore 609935

For further information, please contact

Technical Service 6424 0262

ctssingapore@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Singapore: 65-31581349

# **SECTION 2: Hazards identification**

#### **GHS Classification**

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS): SS586: 2008 (2014)

#### Label elements

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS): SS586: 2008 (2014)

Other hazards which do not result in classification

# SECTION 3: Composition/information on ingredients

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#### Substance

Not applicable

#### **Mixture**

Chemical name	EC No (EU Index No)	CAS No	Weight-%
Dye	-	NO-CAS-83	50 - 100

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

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

General advice No hazards which require special first aid measures.

**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** In the case of skin irritation or allergic reactions see a doctor. 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.

For emergency responders

**Self-protection of the first aider** No information available.

Indication of any immediate medical attention and special treatment needed

# **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

Special protective actions for fire-fighters

Special protective equipment and precautions 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

**Personal precautions** Ensure adequate ventilation.

For emergency responders

Use personal protection recommended in Section 8.

**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.

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

**Reference to other sections**See section 8 for more information. See section 13 for more information.

### SECTION 7: Handling and storage

#### Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

# SECTION 8: Exposure controls/personal protection

#### **Control parameters**

Occupational 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.

**Environmental exposure controls** No information available.

# SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state Solid
Appearance solid
Colour Varies
Odour Odourless.

Odour threshold No information available

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

рΗ No data available Melting point / freezing point None known Boiling point / boiling range No data available None known 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 Insoluble in water Solubility(ies) No data available

Solubility(ies)No data availableNone knownPartition coefficientNo data availableNone knownAutoignition temperatureNo data availableNone knownDecomposition temperatureNone known

Kinematic viscosityNo data availableNone knownDynamic viscosityNo data availableNone known

Other information No information available

# **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 
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**

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

**Symptoms** No information available.

Acute toxicity

**Numerical measures of toxicity** 

No information available

### 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.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity**Based on available data, the classification criteria are not met.

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

**Aspiration hazard** Classification not possible.

# **SECTION 12: Ecological information**

**Ecotoxicity** 

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

**Unknown aquatic toxicity**Contains 0 % of components with unknown hazards to the aquatic environment

Persistence and degradability

Persistence and degradability No information available.

**Bioaccumulative potential** 

**Bioaccumulation** No information available.

**Mobility** 

**Mobility in soil** No information available.

PBT and vPvB assessment 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 waste in accordance with environmental legislation. Dispose of in accordance

with local regulations.

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

# **SECTION 14: Transport information**

<u>IMDG</u> Not regulated

Transport in bulk according to No information available

Annex II of MARPOL and the IBC

Code

IATA Not regulated

# SECTION 15: Regulatory information

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

**Singapore** 

### **Environmental Public Health Act**

Dispose of waste product or used containers according to local regulations.

### Hazardous Waste (Control of Export, Import and Transit) Act

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

Poison

None Listed

# Workplace Safety and Health Act

Comply with the health and safety at work laws.

### 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

#### **International Inventories**

Contact supplier for inventory compliance status

### **SECTION 16: Other information**

### 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

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

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Food Research Journal

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RTECS (Registry of Toxic Effects of Chemical Substances)

World Health Organization

Label elements

Issuing Date Bio-Rad Laboratories, Environmental Health and Safety

Revision date 30-Aug-2023

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#### **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**