

# KIT SAFETY DATA SHEET



**Kit Product Name** Bio-Plex Pro Mouse Diabetes Single-Plex Assay  
**Kit Catalogue Number(s)** 171G7002M, 171G7003M, 171G7004M, 171G7005M, 171G7006M, 171G7007M, 171G7008M, 171G7009M

**Revision date** 13-Feb-2024

## Kit Contents

| Catalogue Number(s)  | Product Name                                  |
|--|---|
| 9723892, 9703892, 9704415, 10014822, 10014823                                  | Bio-Plex Assay Buffer                         |
| 12002108, 12002109, 12005854   | Mouse HP DAD                                  |
| 171170001, 10014625  | Bio-Plex Pro Mouse Diabetes Standard          |
| 171304040, 10027955, 12006121, 12005850  | Bio-Plex Pro Assays 10X Wash Buffer           |
| 10018484, 10018485, 10018486, 10018487, 10018488, 10018489, 10018490, 10018515 | Bio-Plex Pro Mouse Diabetes Single-Plex Beads |
| 10018499, 10018500, 10018501, 10018502, 10018503, 10018504, 10018505, 10018506 | Bio-Plex Mouse Diabetes Single-Plex Detection |
| 10014641, 9704423, 9703895, 171305043, 10022628, 10041561, 12005851            | Bio-Plex Sample Diluent                       |
| 9703888, 9704424, 171305042, 171304080M, 10022368, 12005853                    | Bio-Plex Standard Diluent                     |
| 171304501, 9704418, 9703887, 9703897   | Streptavidin-PE                               |



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
GB/T 16483-2008, GB/T 17519-2013

**Product Name** Bio-Plex Assay Buffer

**Revision date** 18-Oct-2022

**Revision Number** 1.1

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

### Product identifier

**Product Name** Bio-Plex Assay Buffer

**Catalogue Number(s)** 9723892, 9703892, 9704415, 10014822, 10014823

### Other means of identification

**Pure substance/mixture** Mixture

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

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.  
1st and 2nd Floor, Lumpini 1 Building  
239/2, Rajdamri Road, Lumpini,  
Pathumwan, Bangkok 10330  
Thailand

**Technical Service** +66 2 652 8313  
ctsthailand@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Hong Kong: 800-968-793

### Recommended use of the chemical and restrictions on use

**Recommended use** Laboratory chemicals

## SECTION 2: Hazards identification

### **Emergency Overview**

No significant adverse health effects

**Appearance** aqueous solution

**Physical state** Liquid

**Odour** Odourless

### Classification of the substance or mixture

Not classified

### Label elements

#### **Hazard statements**

Not classified

#### **Physical and chemical hazards**

Not applicable.

**Health hazards**

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

**Environmental hazards**

Not applicable

**Other hazards which do not result in classification**

Not applicable

**SECTION 3: Composition/information on ingredients****Substance**

Not applicable.

**Mixture**

Not classified.

| Chemical name | Weight-%     | CAS No    |
|---------------|--------------|-----------|
| Water         | 50 - 100     | 7732-18-5 |
| Trade secret  | 1 - 2.5      | -         |
| Trade secret  | 0.3 - 0.99   | -         |
| Trade secret  | 0.1 - 0.299  | -         |
| Trade secret  | 0.01 - 0.099 | -         |

**SECTION 4: First aid measures****Description of necessary 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**

Wash skin with soap and water.

**Ingestion**

Rinse mouth thoroughly with water.

**Most important symptoms and effects, both acute and delayed**

No information available.

**For emergency responders**

No information available.

**Note to doctors**

Treat symptomatically.

**SECTION 5: Firefighting measures****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** No information available.

**Special protective actions 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** See section 8 for more information.

**For emergency responders** Use personal protection recommended in Section 8.

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

**Methods and material for containment and cleaning up** Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.

**Precautions to prevent secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## SECTION 7: Handling and storage

**Precautions for safe handling** Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.

**Conditions for safe storage, including any incompatibilities** Store according to product and label instructions.

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

## SECTION 8: Exposure controls/personal protection

### **Occupational exposure limits**

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

| Chemical name  | China                                  | ACGIH TLV  |
|----------------|--|--|
| Trade secret - | Ceiling: 0.3 mg/m <sup>3</sup> Ceiling | Ceiling: 0.29 mg/m <sup>3</sup> Sodium azide<br>Ceiling: 0.11 ppm Hydrazoic acid vapor |

**Note** See section 16 for terms and abbreviations

### **Biological occupational exposure limits**

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

### **Monitoring and observation processes**

No applicable information was found.

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

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

|                                       |  |
|---------------------------------------|--|
| <b>Eye/face protection</b>            | Wear safety glasses with side shields (or goggles).  |
| <b>Skin and body protection</b>       | Wear suitable protective clothing.   |
| <b>Hand protection</b>                | Wear suitable gloves.  |
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| <b>General hygiene considerations</b> | Handle in accordance with good industrial hygiene and safety practice.   |

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

|                        |                          |
|------------------------|--------------------------|
| <b>Appearance</b>      | aqueous solution         |
| <b>Colour</b>          | colourless               |
| <b>Physical state</b>  | Liquid                   |
| <b>Odour</b>           | Odourless                |
| <b>Odour threshold</b> | No information available |

| <u>Property</u>                                | <u>Values</u>     | <u>Remarks • Method</u> |
|--|-------------------|-------------------------|
| <b>pH</b>                                      | 7.4               |                         |
| <b>Melting point / freezing point</b>          | 0 °C              |                         |
| <b>Initial boiling point and boiling range</b> | 100 °C            |                         |
| <b>Flash point</b>                             | No data available | None known              |
| <b>Evaporation rate</b>                        | No data available | None known              |
| <b>Flammability</b>                            | No data available | None known              |
| <b>Flammability Limit in Air</b>               |                   | None known              |
| <b>Upper flammability or explosive limits</b>  | No data available |                         |
| <b>Lower flammability or explosive limits</b>  | No data available |                         |
| <b>Vapour pressure</b>                         | No data available | None known              |
| <b>Relative vapour density</b>                 | No data available | None known              |
| <b>Relative density</b>                        | No data available | None known              |
| <b>Water solubility</b>                        | Miscible in water |                         |
| <b>Solubility(ies)</b>                         | No data available | None known              |
| <b>Partition coefficient</b>                   | No data available | None known              |
| <b>Autoignition temperature</b>                | No data available | None known              |
| <b>Decomposition temperature</b>               | No data available | None known              |
| <b>Kinematic viscosity</b>                     | No data available | None known              |
| <b>Dynamic viscosity</b>                       | No data available | None known              |

### Additional information

|                             |                |
|-----------------------------|----------------|
| <b>Explosive properties</b> | Not applicable |
| <b>Oxidising properties</b> | Not applicable |

## SECTION 10: Stability and reactivity

|  |   |
|--|---|
| <b><u>Stability</u></b>                          | Stable under normal conditions.           |
| <b><u>Possibility of hazardous reactions</u></b> | None under normal processing.             |
| <b>Sensitivity to mechanical impact</b>          | None.                                     |
| <b>Sensitivity to static discharge</b>           | None.                                     |
| <b><u>Conditions to avoid</u></b>                | None known based on information supplied. |
| <b><u>Incompatible materials</u></b>             | None known based on information supplied. |
| <b><u>Hazardous decomposition products</u></b>   | None known based on information supplied. |

**SECTION 11: Toxicological information****Acute toxicity****Numerical measures of toxicity**

No information available

| Chemical name | Oral LD50            | Dermal LD50              | Inhalation LC50               |
|---------------|----------------------|--------------------------|-------------------------------|
| Water         | > 90 mL/kg ( Rat )   | -                        | -                             |
| Trade secret  | = 3 g/kg ( Rat )     | > 10000 mg/kg ( Rabbit ) | > 42 mg/L ( Rat ) 1 h         |
| Trade secret  | = 8290 mg/kg ( Rat ) | > 7940 mg/kg ( Rabbit )  | > 0.83 mg/L ( Rat ) 4 h       |
| Trade secret  | = 27 mg/kg ( Rat )   | = 20 mg/kg ( Rabbit )    | 0.054 - 0.52 mg/L ( Rat ) 4 h |

**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.

**Specific target organ toxicity — single exposure** Based on available data, the classification criteria are not met.

**Specific target organ toxicity — repeated exposure** Based on available data, the classification criteria are not met.

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

**SECTION 12: Ecological information****Ecotoxicity**

**Unknown aquatic toxicity** 0.095 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Algae/aquatic plants | Fish  | Crustacea  |
|---------------|----------------------|---|--|
| Trade secret  | -                    | LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus)<br>LC50: =12946mg/L (96h, Lepomis macrochirus)<br>LC50: 6020 - 7070mg/L (96h, Pimephales promelas)<br>LC50: =7050mg/L (96h, Pimephales promelas)<br>LC50: 6420 - 6700mg/L (96h, Pimephales promelas)<br>LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) | EC50: =1000mg/L (48h, Daphnia magna)<br>EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) |

|              |   |  |   |
|--------------|---|--|---|
| Trade secret | - | LC50: =0.8mg/L (96h, Oncorhynchus mykiss)<br>LC50: =0.7mg/L (96h, Lepomis macrochirus)<br>LC50: =5.46mg/L (96h, Pimephales promelas) | - |
|--------------|---|--|---|

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

**Mobility in soil** No information available.

### SECTION 13: Disposal considerations

**Waste chemicals** 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

**IMDG** Not regulated  
**Transport in bulk according to Annex II of MARPOL and the IBC Code** No information available

**IATA** Not regulated

**China** Not regulated

**Special precautions for user**  
Please refer to the applicable dangerous goods regulations for additional information

### SECTION 15: Regulatory information

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

**National regulations**

**Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

Catalogue of occupational hazard factors: Not applicable.  
Catalogue of occupational diseases: Not applicable.

**Regulations on the Control over Safety of Hazardous Chemicals**

Inventory of hazardous chemicals Not applicable.

| Chemical name | Inventory of hazardous chemicals |
|---------------|----------------------------------|
| Trade secret  | Listed, Highly toxic             |

GB 18218-2009 Identification of major hazard installations for dangerous chemicals Not applicable

**List of hazardous chemicals under priority management** Not applicable

**Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used**  
Inventory of highly toxic goods Not applicable

**Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

List of toxic chemicals severely restricted for import and export in China Not applicable

**Measures for the Environmental Management of New Chemical Substances****IECSC - China Inventory of Existing Chemical Substances** 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** 18-Oct-2022**Revision Note** Reformatted and updated existing information.**Abbreviations and acronyms****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

This safety data sheet was created pursuant to the requirements of:  
GB/T 16483-2008, GB/T 17519-2013

**Product Name** Mouse HP DAD

**Revision date** 02-Aug-2023

**Revision Number** 1.1

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

### Product identifier

**Product Name** Mouse HP DAD

**Catalogue Number(s)** 12002108, 12002109, 12005854

### Other means of identification

**Pure substance/mixture** Mixture

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

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.  
1st and 2nd Floor, Lumpini 1 Building  
239/2, Rajdamri Road, Lumpini,  
Pathumwan, Bangkok 10330  
Thailand

**Technical Service** +66 2 652 8313  
ctsthailand@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Hong Kong: 800-968-793

### Recommended use of the chemical and restrictions on use

**Recommended use** Laboratory chemicals

## SECTION 2: Hazards identification

### **Emergency Overview**

No significant adverse health effects

**Appearance** aqueous solution

**Physical state** Liquid

**Odour** Odourless

### Classification of the substance or mixture

Not classified

### Label elements

#### **Hazard statements**

Not classified

#### **Physical and chemical hazards**

Not applicable.

**Health hazards**

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

**Environmental hazards**

Not applicable

**Other hazards which do not result in classification**

Contains animal source material (Cattle)

**SECTION 3: Composition/information on ingredients****Substance**

Not applicable.

**Mixture**

Not classified.

**SECTION 4: First aid measures****Description of necessary first aid measures**

|   |  |
|---|--|
| <b>General advice</b>   | No hazards which require special first aid measures.   |
| <b>Inhalation</b>   | Remove to fresh air.   |
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.<br>Consult a doctor. |
| <b>Skin contact</b>   | Wash skin with soap and water.   |
| <b>Ingestion</b>  | Rinse mouth thoroughly with water.   |
| <b><u>Most important symptoms and effects, both acute and delayed</u></b> | No information available.  |
| <b><u>For emergency responders</u></b>                                    | No information available.  |
| <b><u>Note to doctors</u></b>   | Treat symptomatically.   |

**SECTION 5: Firefighting measures****Extinguishing media**

|  |   |
|--|---|
| <b>Suitable Extinguishing Media</b>                        | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                               |
| <b>Unsuitable extinguishing media</b>                      | No information available.   |
| <b><u>Specific hazards arising from the chemical</u></b>   | No information available.   |
| <b><u>Special protective actions for fire-fighters</u></b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.<br>Use personal protection equipment. |

**SECTION 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures**

|  |   |
|--|---|
| <b>Personal precautions</b>  | See section 8 for more information.   |
| <b>For emergency responders</b>                                    | Use personal protection recommended in Section 8.   |
| <b><u>Environmental precautions</u></b>                            | See Section 12 for additional Ecological Information.   |
| <b><u>Methods and material for containment and cleaning up</u></b> | Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers. |
| <b><u>Precautions to prevent secondary hazards</u></b>             | Clean contaminated objects and areas thoroughly observing environmental regulations.                        |

**SECTION 7: Handling and storage**

|  |  |
|--|--|
| <b><u>Precautions for safe handling</u></b>                                | Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment. |
| <b><u>Conditions for safe storage, including any incompatibilities</u></b> | Store according to product and label instructions.   |
| <b>Incompatible materials</b>  | Metals.  |

**SECTION 8: Exposure controls/personal protection****Occupational exposure limits**

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

**Note** See section 16 for terms and abbreviations

**Biological occupational exposure limits**

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

**Monitoring and observation processes**

No applicable information was found.

|                                    |   |
|------------------------------------|---|
| <b><u>Engineering controls</u></b> | Showers<br>Eyewash stations<br>Ventilation systems. |
|------------------------------------|---|

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

|                                       |  |
|---------------------------------------|--|
| <b>Eye/face protection</b>            | Wear safety glasses with side shields (or goggles).  |
| <b>Skin and body protection</b>       | Wear suitable protective clothing.   |
| <b>Hand protection</b>                | Wear suitable gloves.  |
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| <b>General hygiene considerations</b> | Handle in accordance with good industrial hygiene and safety practice.   |

**SECTION 9: Physical and chemical properties****Information on basic physical and chemical properties**

|                 |                          |
|-----------------|--------------------------|
| Appearance      | aqueous solution         |
| Colour          | amber                    |
| Physical state  | Liquid                   |
| Odour           | Odourless                |
| Odour threshold | No information available |

| <b><u>Property</u></b>                  | <b><u>Values</u></b> | <b><u>Remarks • Method</u></b> |
|---|----------------------|--------------------------------|
| pH                                      | 7.2                  |                                |
| Melting point / freezing point          | No data available    | None known                     |
| Initial boiling point and boiling range | > 100 °C             |                                |
| Flash point                             | No data available    | None known                     |
| Evaporation rate                        | No data available    | None known                     |
| Flammability                            | No data available    | None known                     |
| Flammability Limit in Air               |                      | None known                     |
| Upper flammability or explosive limits  | No data available    |                                |
| Lower flammability or explosive limits  | No data available    |                                |
| Vapour pressure                         | No data available    | None known                     |
| Relative vapour density                 | No data available    | None known                     |
| Relative density                        | No data available    | None 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               | No data available    | None known                     |
| Kinematic viscosity                     | No data available    | None known                     |
| Dynamic viscosity                       | No data available    | None known                     |

**Additional information**

|                      |                |
|----------------------|----------------|
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |

**SECTION 10: Stability and reactivity**

**Stability** Stable under normal conditions.

**Possibility of hazardous reactions** Avoid contact with metals. This product contains Sodium azide. Sodium azide can react with Copper, Brass, Lead, and solder in piping systems to form explosive compounds and toxic gases.

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

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

**Incompatible materials** Metals.

**Hazardous decomposition products** None known based on information supplied.

**SECTION 11: Toxicological information**

**Acute toxicity**

**Numerical measures of toxicity**

|   |   |
|---|---|
| <b>Skin corrosion/irritation</b>                          | Based on available data, the classification criteria are not met. |
| <b>Serious eye damage/eye irritation</b>                  | Based on available data, the classification criteria are not met. |
| <b>Respiratory or skin sensitisation</b>                  | Based on available data, the classification criteria are not met. |
| <b>Germ cell mutagenicity</b>                             | Based on available data, the classification criteria are not met. |
| <b>Carcinogenicity</b>                                    | Based on available data, the classification criteria are not met. |
| <b>Reproductive toxicity</b>                              | Based on available data, the classification criteria are not met. |
| <b>Specific target organ toxicity — single exposure</b>   | Based on available data, the classification criteria are not met. |
| <b>Specific target organ toxicity — repeated exposure</b> | Based on available data, the classification criteria are not met. |
| <b>Aspiration hazard</b>                                  | Based on available data, the classification criteria are not met. |

## SECTION 12: Ecological information

### Ecotoxicity

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

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

**Mobility in soil** No information available.

## SECTION 13: Disposal considerations

**Waste chemicals** Flush pipes with water frequently if discarding solutions containing Sodium azide into metal piping systems. 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

**IMDG** Not regulated  
**Transport in bulk according to Annex II of MARPOL and the IBC Code** No information available

**IATA** Not regulated

**China** Not regulated

**Special precautions for user**  
Please refer to the applicable dangerous goods regulations for additional information

## SECTION 15: Regulatory information

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

#### National regulations

##### **Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

|   |                 |
|---|-----------------|
| Catalogue of occupational hazard factors: | Not applicable. |
| Catalogue of occupational diseases:       | Not applicable. |

##### **Regulations on the Control over Safety of Hazardous Chemicals**

|   |                 |
|---|-----------------|
| <u>Inventory of hazardous chemicals</u> | Not applicable. |
|---|-----------------|

|   |                |
|---|----------------|
| <u>GB 18218-2009 Identification of major hazard installations for dangerous chemicals</u> | Not applicable |
|---|----------------|

|  |                |
|--|----------------|
| <b>List of hazardous chemicals under priority management</b> | Not applicable |
|--|----------------|

##### **Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used**

|                                 |                |
|---------------------------------|----------------|
| Inventory of highly toxic goods | Not applicable |
|---------------------------------|----------------|

##### **Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

|  |                |
|--|----------------|
| List of toxic chemicals severely restricted for import and export in China | Not applicable |
|--|----------------|

##### **Measures for the Environmental Management of New Chemical Substances**

|  |   |
|--|---|
| <b>IECSC - China Inventory of Existing Chemical Substances</b> | Contact supplier for inventory compliance status. |
|--|---|

#### International Regulations

|   |                |
|---|----------------|
| <b>The Montreal Protocol on Substances that Deplete the Ozone Layer</b> | Not applicable |
|---|----------------|

|  |                |
|--|----------------|
| <b>The Stockholm Convention on Persistent Organic Pollutants</b> | Not applicable |
|--|----------------|

|                                 |                |
|---------------------------------|----------------|
| <b>The Rotterdam Convention</b> | Not applicable |
|---------------------------------|----------------|

## SECTION 16: Other information

|                    |   |
|--------------------|---|
| <b>Prepared By</b> | Bio-Rad Laboratories, Environmental Health and Safety |
|--------------------|---|

|                      |             |
|----------------------|-------------|
| <b>Revision date</b> | 02-Aug-2023 |
|----------------------|-------------|

|                      |   |
|----------------------|---|
| <b>Revision Note</b> | Reformatted and updated existing information. |
|----------------------|---|

#### **Abbreviations and acronyms**

##### 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) (AELG(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

This safety data sheet was created pursuant to the requirements of:  
GB/T 16483-2008, GB/T 17519-2013

**Product Name** Bio-Plex Pro Mouse Diabetes Standard

**Revision date** 23-Aug-2023

**Revision Number** 1.1

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

### Product identifier

**Product Name** Bio-Plex Pro Mouse Diabetes Standard

**Catalogue Number(s)** 171170001, 10014625

### Other means of identification

**Pure substance/mixture** Mixture

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

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.  
1st and 2nd Floor, Lumpini 1 Building  
239/2, Rajdamri Road, Lumpini,  
Pathumwan, Bangkok 10330  
Thailand

**Technical Service** +66 2 652 8313  
ctsthailand@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Hong Kong: 800-968-793

### Recommended use of the chemical and restrictions on use

**Recommended use** Laboratory chemicals

## SECTION 2: Hazards identification

### **Emergency Overview**

No significant adverse health effects

**Appearance** solid

**Physical state** Solid

**Odour** Odourless

### Classification of the substance or mixture

Not classified

### Label elements

#### **Hazard statements**

Not classified

#### **Physical and chemical hazards**

Not applicable.



**Health hazards**

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

**Environmental hazards**

Not applicable

**Other hazards which do not result in classification**

Contains animal source material (Cattle)

**SECTION 3: Composition/information on ingredients****Substance**

Not applicable.

**Mixture**

Not classified.

| Chemical name     | Weight-%    | CAS No    |
|-------------------|-------------|-----------|
| Trade secret      | 5 - 10      | -         |
| Sodium hydroxide  | 0.1 - 0.299 | 1310-73-2 |
| Hydrochloric acid | 0.1 - 0.299 | 7647-01-0 |

**SECTION 4: First aid measures****Description of necessary first aid measures**

|   |  |
|---|--|
| <b>General advice</b>   | No hazards which require special first aid measures.   |
| <b>Inhalation</b>   | Remove to fresh air.   |
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.<br>Consult a doctor. |
| <b>Skin contact</b>   | Wash skin with soap and water.   |
| <b>Ingestion</b>  | Rinse mouth thoroughly with water.   |
| <b><u>Most important symptoms and effects, both acute and delayed</u></b> | No information available.  |
| <b><u>For emergency responders</u></b>                                    | No information available.  |
| <b><u>Note to doctors</u></b>   | Treat symptomatically.   |

**SECTION 5: Firefighting measures****Extinguishing media**

|  |   |
|--|---|
| <b>Suitable Extinguishing Media</b>                      | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <b>Unsuitable extinguishing media</b>                    | No information available.   |
| <b><u>Specific hazards arising from the chemical</u></b> | No information available.   |

**Special protective actions 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**

See section 8 for more information.

**For emergency responders**

Use personal protection recommended in Section 8.

**Environmental precautions**

See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.

**Precautions to prevent secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations.

**SECTION 7: Handling and storage****Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.

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

Store according to product and label instructions.

**Incompatible materials**

None known based on information supplied.

**SECTION 8: Exposure controls/personal protection****Occupational exposure limits**

| Chemical name                 | China                                  | ACGIH TLV                    |
|-------------------------------|--|------------------------------|
| Sodium hydroxide - 1310-73-2  | Ceiling: 2 mg/m <sup>3</sup> Ceiling   | Ceiling: 2 mg/m <sup>3</sup> |
| Hydrochloric acid - 7647-01-0 | Ceiling: 7.5 mg/m <sup>3</sup> Ceiling | Ceiling: 2 ppm               |

**Note**

See section 16 for terms and abbreviations

**Biological occupational exposure limits**

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

**Monitoring and observation processes**

No applicable information was found.

**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.

|                                       |  |
|---------------------------------------|--|
| <b>Hand protection</b>                | Wear suitable gloves.  |
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| <b>General hygiene considerations</b> | Handle in accordance with good industrial hygiene and safety practice.   |

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

|                        |                          |
|------------------------|--------------------------|
| <b>Appearance</b>      | solid                    |
| <b>Colour</b>          | white                    |
| <b>Physical state</b>  | Solid                    |
| <b>Odour</b>           | Odourless                |
| <b>Odour threshold</b> | No information available |

| <u>Property</u>                                | <u>Values</u>     | <u>Remarks • Method</u> |
|--|-------------------|-------------------------|
| <b>pH</b>                                      |                   | None known              |
| <b>Melting point / freezing point</b>          | No data available | None known              |
| <b>Initial boiling point and boiling range</b> | 1461 °C           |                         |
| <b>Flash point</b>                             | No data available | None known              |
| <b>Evaporation rate</b>                        | No data available | None known              |
| <b>Flammability</b>                            | No data available | None known              |
| <b>Flammability Limit in Air</b>               |                   | None known              |
| <b>Upper flammability or explosive limits</b>  | No data available |                         |
| <b>Lower flammability or explosive limits</b>  | No data available |                         |
| <b>Vapour pressure</b>                         | No data available | None known              |
| <b>Relative vapour density</b>                 | No data available | None known              |
| <b>Relative density</b>                        | No data available | None known              |
| <b>Water solubility</b>                        | Soluble in water  |                         |
| <b>Solubility(ies)</b>                         | No data available | None known              |
| <b>Partition coefficient</b>                   | No data available | None known              |
| <b>Autoignition temperature</b>                | No data available | None known              |
| <b>Decomposition temperature</b>               | No data available | None known              |
| <b>Kinematic viscosity</b>                     | No data available | None known              |
| <b>Dynamic viscosity</b>                       | No data available | None known              |

### Additional information

|                             |                |
|-----------------------------|----------------|
| <b>Explosive properties</b> | Not applicable |
| <b>Oxidising properties</b> | Not applicable |

## SECTION 10: Stability and reactivity

|   |   |
|---|---|
| <b>Stability</b>                          | Stable under normal conditions.           |
| <b>Possibility of hazardous reactions</b> | None under normal processing.             |
| <b>Sensitivity to mechanical impact</b>   | None.                                     |
| <b>Sensitivity to static discharge</b>    | None.                                     |
| <b>Conditions to avoid</b>                | None known based on information supplied. |
| <b>Incompatible materials</b>             | None known based on information supplied. |
| <b>Hazardous decomposition products</b>   | None known based on information supplied. |

## SECTION 11: Toxicological information

### Acute toxicity

**Numerical measures of toxicity**

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

ATEmix (oral) 33,333.30 mg/kg

**Component Information**

| Chemical name     | Oral LD50               | Dermal LD50              | Inhalation LC50         |
|-------------------|-------------------------|--------------------------|-------------------------|
| Trade secret      | = 3 g/kg ( Rat )        | > 10000 mg/kg ( Rabbit ) | > 42 mg/L ( Rat ) 1 h   |
| Sodium hydroxide  | = 325 mg/kg ( Rat )     | = 1350 mg/kg ( Rabbit )  | -                       |
| Hydrochloric acid | 238 - 277 mg/kg ( Rat ) | > 5010 mg/kg ( Rabbit )  | = 1.68 mg/L ( Rat ) 1 h |

**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**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name     | China | IARC    |
|-------------------|-------|---------|
| Hydrochloric acid | -     | Group 3 |

**Legend**

**IARC (International Agency for Research on Cancer)**

Group 3 - Not Classifiable as to Carcinogenicity in Humans

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

**Specific target organ toxicity — single exposure** Based on available data, the classification criteria are not met.

**Specific target organ toxicity — repeated exposure** Based on available data, the classification criteria are not met.

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

**SECTION 12: Ecological information****Ecotoxicity**

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

| Chemical name | Algae/aquatic plants | Fish   | Crustacea  |
|---------------|----------------------|--|--|
| Trade secret  | -                    | LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus)<br>LC50: =12946mg/L (96h, Lepomis macrochirus)<br>LC50: 6020 - 7070mg/L (96h, Pimephales promelas)<br>LC50: =7050mg/L (96h, Pimephales promelas)<br>LC50: 6420 - 6700mg/L (96h, | EC50: =1000mg/L (48h, Daphnia magna)<br>EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) |

|                  |   |  |   |
|------------------|---|--|---|
|                  |   | Pimephales promelas<br>LC50: 4747 - 7824mg/L (96h,<br>Oncorhynchus mykiss) |   |
| Sodium hydroxide | - | LC50: =45.4mg/L (96h,<br>Oncorhynchus mykiss)                              | - |

**Persistence and degradability** No information available.

**Bioaccumulative potential** There is no data for this product.

**Mobility in soil** No information available.

### SECTION 13: Disposal considerations

**Waste chemicals** 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

**IMDG** Not regulated  
**Transport in bulk according to** No information available  
**Annex II of MARPOL and the IBC**  
**Code**

**IATA** Not regulated

**China** Not regulated

#### Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

### SECTION 15: Regulatory information

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

##### National regulations

##### Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors:

Listed. Chemical hazards.

Catalogue of occupational diseases:

Listed. Occupational poisoning.

| Chemical name     | Category         |
|-------------------|------------------|
| Sodium hydroxide  | Chemical hazards |
| Hydrochloric acid | Chemical hazards |

##### Regulations on the Control over Safety of Hazardous Chemicals

Inventory of hazardous chemicals

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed. Weight-%  
0

| Chemical name     | Inventory of hazardous chemicals |
|-------------------|----------------------------------|
| Sodium hydroxide  | Listed                           |
| Hydrochloric acid | Listed                           |

##### GB 18218-2009 Identification of major hazard installations for dangerous chemicals

| Chemical name     | Threshold quantity (T) |
|-------------------|------------------------|
| Hydrochloric acid | 20                     |

List of hazardous chemicals under priority management Not applicable

**Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used**

Inventory of highly toxic goods Not applicable

**Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

List of toxic chemicals severely restricted for import and export in China Not applicable

**Measures for the Environmental Management of New Chemical Substances**

IECSC - China Inventory of Existing Chemical Substances 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 23-Aug-2023

Revision Note Reformatted and updated existing information.

**Abbreviations and acronyms**

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

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**Product Name** Bio-Plex Pro Mouse Diabetes Standard

**Revision date** 23-Aug-2023

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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 was created pursuant to the requirements of:  
GB/T 16483-2008, GB/T 17519-2013

**Product Name** Bio-Plex Pro Assays 10X Wash Buffer

**Revision date** 07-Feb-2024

**Revision Number** 2

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

### Product identifier

**Product Name** Bio-Plex Pro Assays 10X Wash Buffer

**Catalogue Number(s)** 171304040, 10027955, 12006121, 12005850

### Other means of identification

**Pure substance/mixture** Mixture

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

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.  
1st and 2nd Floor, Lumpini 1 Building  
239/2, Rajdamri Road, Lumpini,  
Pathumwan, Bangkok 10330  
Thailand

**Technical Service** +66 2 652 8313  
ctsthailand@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Hong Kong: 800-968-793

### Recommended use of the chemical and restrictions on use

**Recommended use** Laboratory chemicals

## SECTION 2: Hazards identification

### **Emergency Overview**

No significant adverse health effects

**Appearance** aqueous solution

**Physical state** Liquid

**Odour** Odourless

### Classification of the substance or mixture

Not classified

### Label elements

#### **Hazard statements**

Not classified

#### **Precautionary statements**

#### **Physical and chemical hazards**



Not applicable.

**Health hazards**

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

**Environmental hazards**

Not applicable

**Other hazards which do not result in classification**

Not applicable

**SECTION 3: Composition/information on ingredients****Substance**

Not applicable.

**Mixture**

Not classified.

| Chemical name | Weight-% | CAS No |
|---------------|----------|--------|
| Trade secret  | 5 - 10   | -      |

**SECTION 4: First aid measures****Description of necessary first aid measures**

|   |  |
|---|--|
| <b>General advice</b>   | No hazards which require special first aid measures.   |
| <b>Inhalation</b>   | Remove to fresh air.   |
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.<br>Consult a doctor. |
| <b>Skin contact</b>   | Wash skin with soap and water.   |
| <b>Ingestion</b>  | Rinse mouth thoroughly with water.   |
| <b><u>Most important symptoms and effects, both acute and delayed</u></b> | No information available.  |
| <b><u>For emergency responders</u></b>                                    | No information available.  |
| <b><u>Note to doctors</u></b>   | Treat symptomatically.   |

**SECTION 5: Firefighting measures****Extinguishing media**

|  |   |
|--|---|
| <b>Suitable Extinguishing Media</b>                      | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <b>Unsuitable extinguishing media</b>                    | No information available.   |
| <b><u>Specific hazards arising from the chemical</u></b> | No information available.   |

**Special protective actions 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**

See section 8 for more information.

**For emergency responders**

Use personal protection recommended in Section 8.

**Environmental precautions**

See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.

**Precautions to prevent secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations.

**SECTION 7: Handling and storage****Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.

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

Store according to product and label instructions.

**Incompatible materials**

Metals.

**SECTION 8: Exposure controls/personal protection****Occupational exposure limits**

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

**Note**

See section 16 for terms and abbreviations

**Biological occupational exposure limits**

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

**Monitoring and observation processes**

No applicable information was found.

**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.

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

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

|                        |                          |
|------------------------|--------------------------|
| <b>Appearance</b>      | aqueous solution         |
| <b>Colour</b>          | colourless               |
| <b>Physical state</b>  | Liquid                   |
| <b>Odour</b>           | Odourless                |
| <b>Odour threshold</b> | No information available |

| <u>Property</u>                         | <u>Values</u>     | <u>Remarks • Method</u> |
|---|-------------------|-------------------------|
| pH                                      | 7.4               |                         |
| Melting point / freezing point          | No data available | None known              |
| Initial boiling point and boiling range | 100 °C            |                         |
| Flash point                             | No data available | None known              |
| Evaporation rate                        | No data available | None known              |
| Flammability                            | No data available | None known              |
| Flammability Limit in Air               |                   | None known              |
| Upper flammability or explosive limits  | No data available |                         |
| Lower flammability or explosive limits  | No data available |                         |
| Vapour pressure                         | No data available | None known              |
| Relative vapour density                 | No data available | None known              |
| Relative density                        | No data available | None 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               | No data available | None known              |
| Kinematic viscosity                     | No data available | None known              |
| Dynamic viscosity                       | No data available | None known              |

### Additional information

|                             |                |
|-----------------------------|----------------|
| <b>Explosive properties</b> | Not applicable |
| <b>Oxidising properties</b> | Not applicable |

## SECTION 10: Stability and reactivity

**Stability** Stable under normal conditions.

**Possibility of hazardous reactions** Avoid contact with metals. This product contains Sodium azide. Sodium azide can react with Copper, Brass, Lead, and solder in piping systems to form explosive compounds and toxic gases.

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

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

**Incompatible materials** Metals.

**Hazardous decomposition products** None known based on information supplied.

## SECTION 11: Toxicological information

### Acute toxicity

### Numerical measures of toxicity

No information available

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

ATEmix (oral) 34,207.50 mg/kg

#### Component Information

| Chemical name | Oral LD50        | Dermal LD50              | Inhalation LC50       |
|---------------|------------------|--------------------------|-----------------------|
| Trade secret  | = 3 g/kg ( Rat ) | > 10000 mg/kg ( Rabbit ) | > 42 mg/L ( Rat ) 1 h |

**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.

**Specific target organ toxicity — single exposure** Based on available data, the classification criteria are not met.

**Specific target organ toxicity — repeated exposure** Based on available data, the classification criteria are not met.

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

## SECTION 12: Ecological information

### Ecotoxicity

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

| Chemical name | Algae/aquatic plants | Fish  | Crustacea  |
|---------------|----------------------|---|--|
| Trade secret  | -                    | LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus)<br>LC50: =12946mg/L (96h, Lepomis macrochirus)<br>LC50: 6020 - 7070mg/L (96h, Pimephales promelas)<br>LC50: =7050mg/L (96h, Pimephales promelas)<br>LC50: 6420 - 6700mg/L (96h, Pimephales promelas)<br>LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) | EC50: =1000mg/L (48h, Daphnia magna)<br>EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) |

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

**Mobility in soil** No information available.

## SECTION 13: Disposal considerations

|                                      |  |
|--------------------------------------|--|
| <b><u>Waste chemicals</u></b>        | Flush pipes with water frequently if discarding solutions containing Sodium azide into metal piping systems. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
| <b><u>Contaminated packaging</u></b> | Do not reuse empty containers.   |

## SECTION 14: Transport information

|   |                          |
|---|--------------------------|
| <b><u>IMDG</u></b>  | Not regulated            |
| <b>Transport in bulk according to Annex II of MARPOL and the IBC Code</b> | No information available |

|                    |               |
|--------------------|---------------|
| <b><u>IATA</u></b> | Not regulated |
|--------------------|---------------|

|                     |               |
|---------------------|---------------|
| <b><u>China</u></b> | Not regulated |
|---------------------|---------------|

### Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

## SECTION 15: Regulatory information

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

#### National regulations

#### **Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

|   |                 |
|---|-----------------|
| Catalogue of occupational hazard factors: | Not applicable. |
| Catalogue of occupational diseases:       | Not applicable. |

#### **Regulations on the Control over Safety of Hazardous Chemicals**

|   |                 |
|---|-----------------|
| <u>Inventory of hazardous chemicals</u> | Not applicable. |
|---|-----------------|

|   |                |
|---|----------------|
| <u>GB 18218-2009 Identification of major hazard installations for dangerous chemicals</u> | Not applicable |
|---|----------------|

|  |                |
|--|----------------|
| <b>List of hazardous chemicals under priority management</b> | Not applicable |
|--|----------------|

#### **Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used**

|                                 |                |
|---------------------------------|----------------|
| Inventory of highly toxic goods | Not applicable |
|---------------------------------|----------------|

#### **Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

|  |                |
|--|----------------|
| List of toxic chemicals severely restricted for import and export in China | Not applicable |
|--|----------------|

#### **Measures for the Environmental Management of New Chemical Substances**

|  |   |
|--|---|
| <b>IECSC - China Inventory of Existing Chemical Substances</b> | Contact supplier for inventory compliance status. |
|--|---|

#### International Regulations

|   |                |
|---|----------------|
| <b>The Montreal Protocol on Substances that Deplete the Ozone Layer</b> | Not applicable |
|---|----------------|

|  |                |
|--|----------------|
| <b>The Stockholm Convention on Persistent Organic Pollutants</b> | Not applicable |
|--|----------------|

|                                 |                |
|---------------------------------|----------------|
| <b>The Rotterdam Convention</b> | Not applicable |
|---------------------------------|----------------|

## SECTION 16: Other information

|                    |   |
|--------------------|---|
| <b>Prepared By</b> | Bio-Rad Laboratories, Environmental Health and Safety |
|--------------------|---|

Revision date 07-Feb-2024

Revision Note SDS sections updated. 2. 12.

**Abbreviations and acronyms****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**



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
GB/T 16483-2008, GB/T 17519-2013

**Product Name** Bio-Plex Pro Mouse Diabetes Single-Plex Beads

**Revision date** 23-Aug-2023

**Revision Number** 1

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

### Product identifier

**Product Name** Bio-Plex Pro Mouse Diabetes Single-Plex Beads

**Catalogue Number(s)** 10018484, 10018485, 10018486, 10018487, 10018488, 10018489, 10018490, 10018515

### Other means of identification

**Pure substance/mixture** Mixture

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

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.  
1st and 2nd Floor, Lumpini 1 Building  
239/2, Rajdamri Road, Lumpini,  
Pathumwan, Bangkok 10330  
Thailand

**Technical Service** +66 2 652 8313  
ctsthailand@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Hong Kong: 800-968-793

### Recommended use of the chemical and restrictions on use

**Recommended use** Laboratory chemicals

## SECTION 2: Hazards identification

### **Emergency Overview**

May cause allergic skin reaction

**Appearance** Dilute bead suspension in aqueous solution

**Physical state** Liquid

**Odour** Odourless

### Classification of the substance or mixture

|  |             |
|--|-------------|
| <b>Skin sensitisation</b>                                    | Category 1A |
| <b>Hazardous to the Aquatic Environment - Acute Hazard</b>   | Category 3  |
| <b>Hazardous to the Aquatic Environment - Chronic Hazard</b> | Category 3  |

### Label elements



**Signal word**

Warning

**Hazard statements**

May cause an allergic skin reaction  
Harmful to aquatic life with long lasting effects

**Precautionary statements**

**Prevention**

Avoid breathing dust/fume/gas/mist/vapours/spray  
Contaminated work clothing should not be allowed out of the workplace  
Wear protective gloves/protective clothing/eye protection/face protection  
Avoid release to the environment  
IF ON SKIN: Wash with plenty of water and soap  
If skin irritation or rash occurs: Get medical advice/attention  
Take off all contaminated clothing and wash it before reuse

**Disposal**

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

**Physical and chemical hazards**

Not applicable.

**Health hazards**

Immediate Health Effects: Allergic reactions (sensitiser). Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.  
Chronic effects: Not applicable.

**Environmental hazards**

This material is a water pollutant. Keep out of drains, sewers, ditches and waterways. Minimise use of water to prevent environmental contamination

**Other hazards which do not result in classification**

Contains animal source material (Cattle)

## SECTION 3: Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name  | Weight-%    | CAS No    |
|----------------|-------------|-----------|
| Water          | 50 - 100    | 7732-18-5 |
| Magnetic Beads | 20 - 35     | NO-CAS-23 |
| Trade secret   | 10 - 20     | -         |
| Trade secret   | 5 - 10      | -         |
| Trade secret   | 5 - 10      | -         |
| Trade secret   | 1 - 2.5     | -         |
| Trade secret   | 0.1 - 0.299 | -         |
| Trade secret   | 0.1 - 0.299 | -         |
| Trade secret   | 0.1 - 0.299 | -         |
| Antibodies     | 0.1 - 0.299 | NO-CAS-81 |



|              |              |   |
|--------------|--------------|---|
| Trade secret | 0.01 - 0.099 | - |
| Trade secret | 0.001 - 0.01 | - |
| Trade secret | 0.001 - 0.01 | - |

## SECTION 4: First aid measures

### Description of necessary first aid measures

|   |   |
|---|---|
| <b>General advice</b>   | Show this safety data sheet to the doctor in attendance.  |
| <b>Inhalation</b>   | Remove to fresh air.  |
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.                 |
| <b>Skin contact</b>   | Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. |
| <b>Ingestion</b>  | Rinse mouth thoroughly with water.  |
| <b><u>Most important symptoms and effects, both acute and delayed</u></b> | Itching. Rashes. Hives.   |
| <b><u>For emergency responders</u></b>                                    | No information available.   |
| <b><u>Note to doctors</u></b>   | May cause sensitisation in susceptible persons. Treat symptomatically.  |

## SECTION 5: Firefighting measures

### Extinguishing media

|  |  |
|--|--|
| <b>Suitable Extinguishing Media</b>                        | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                            |
| <b>Unsuitable extinguishing media</b>                      | No information available.  |
| <b><u>Specific hazards arising from the chemical</u></b>   | Product is or contains a sensitiser. May cause sensitisation by skin contact.  |
| <b><u>Special protective actions for fire-fighters</u></b> | 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

|  |  |
|--|--|
| <b>Personal precautions</b>  | Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. |
| <b>For emergency responders</b>                                    | Use personal protection recommended in Section 8.  |
| <b><u>Environmental precautions</u></b>                            | See Section 12 for additional Ecological Information.  |
| <b><u>Methods and material for containment and cleaning up</u></b> | Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.  |
| <b><u>Precautions to prevent secondary</u></b>                     | Clean contaminated objects and areas thoroughly observing environmental regulations.   |

**hazards**

## **SECTION 7: Handling and storage**

**Precautions for safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. See Section 8 for information on appropriate personal protective equipment.

**Conditions for safe storage, including any incompatibilities** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store according to product and label instructions.

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

## **SECTION 8: Exposure controls/personal protection**

### **Occupational exposure limits**

| Chemical name  | China                                  | ACGIH TLV  |
|----------------|--|--|
| Trade secret - | -                                      | TWA: 10 mg/m <sup>3</sup>  |
| Trade secret - | Ceiling: 2 mg/m <sup>3</sup> Ceiling   | Ceiling: 2 mg/m <sup>3</sup>   |
| Trade secret - | Ceiling: 0.3 mg/m <sup>3</sup> Ceiling | Ceiling: 0.29 mg/m <sup>3</sup> Sodium azide<br>Ceiling: 0.11 ppm Hydrazoic acid vapor |

**Note** See section 16 for terms and abbreviations

### **Biological occupational exposure limits**

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

### **Monitoring and observation processes**

No applicable information was found.

**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.

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

## **SECTION 9: Physical and chemical properties**

### **Information on basic physical and chemical properties**

**Appearance** Dilute bead suspension in aqueous solution  
**Colour** Opaque  
**Physical state** Liquid

**Product Name** Bio-Plex Pro Mouse Diabetes Single-Plex Beads

**Revision date** 23-Aug-2023

**Odour** Odourless  
**Odour threshold** No information available

| <u>Property</u>                         | <u>Values</u>      | <u>Remarks • Method</u> |
|---|--------------------|-------------------------|
| pH                                      | 7.4                |                         |
| Melting point / freezing point          | No data available  | None known              |
| Initial boiling point and boiling range | 100 °C             |                         |
| Flash point                             | No data available  | None known              |
| Evaporation rate                        | No data available  | None known              |
| Flammability                            | No data available  | None known              |
| Flammability Limit in Air               |                    | None known              |
| Upper flammability or explosive limits  | No data available  |                         |
| Lower flammability or explosive limits  | No data available  |                         |
| Vapour pressure                         | No data available  | None known              |
| Relative vapour density                 | No data available  | None known              |
| Relative density                        | No data available  | None known              |
| Water solubility                        | Partially miscible |                         |
| Solubility(ies)                         | No data available  | None known              |
| Partition coefficient                   | No data available  | None known              |
| Autoignition temperature                | No data available  | None known              |
| Decomposition temperature               | No data available  | None known              |
| Kinematic viscosity                     | No data available  | None known              |
| Dynamic viscosity                       | No data available  | None known              |
| <u><b>Additional information</b></u>    |                    |                         |
| Explosive properties                    | Not applicable     |                         |
| Oxidising properties                    | Not applicable     |                         |

## SECTION 10: Stability and reactivity

**Stability** Stable under normal conditions.

**Possibility of hazardous reactions** None under normal processing.

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

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

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

**Hazardous decomposition products** None known based on information supplied.

## SECTION 11: Toxicological information

**Acute toxicity**

**Numerical measures of toxicity**

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

ATEmix (oral) 50,476.20 mg/kg

### Component Information

| Chemical name | Oral LD50          | Dermal LD50 | Inhalation LC50 |
|---------------|--------------------|-------------|-----------------|
| Water         | > 90 mL/kg ( Rat ) | -           | -               |

|              |                       |                          |                               |
|--------------|-----------------------|--------------------------|-------------------------------|
| Trade secret | = 29700 mg/kg ( Rat ) | -                        | -                             |
| Trade secret | = 3 g/kg ( Rat )      | > 10000 mg/kg ( Rabbit ) | > 42 mg/L ( Rat ) 1 h         |
| Trade secret | = 15900 mg/kg ( Rat ) | -                        | -                             |
| Trade secret | = 325 mg/kg ( Rat )   | = 1350 mg/kg ( Rabbit )  | -                             |
| Trade secret | = 27 mg/kg ( Rat )    | = 20 mg/kg ( Rabbit )    | 0.054 - 0.52 mg/L ( Rat ) 4 h |
| Trade secret | = 53 mg/kg ( Rat )    | = 87.12 mg/kg ( Rabbit ) | -                             |

|   |   |
|---|---|
| <b>Skin corrosion/irritation</b>                          | Based on available data, the classification criteria are not met. |
| <b>Serious eye damage/eye irritation</b>                  | Based on available data, the classification criteria are not met. |
| <b>Respiratory or skin sensitisation</b>                  | May cause sensitisation by skin contact.                          |
| <b>Germ cell mutagenicity</b>                             | Based on available data, the classification criteria are not met. |
| <b>Carcinogenicity</b>                                    | Based on available data, the classification criteria are not met. |
| <b>Reproductive toxicity</b>                              | Based on available data, the classification criteria are not met. |
| <b>Specific target organ toxicity — single exposure</b>   | Based on available data, the classification criteria are not met. |
| <b>Specific target organ toxicity — repeated exposure</b> | Based on available data, the classification criteria are not met. |
| <b>Target organ effects</b>                               | Respiratory system. Eyes.   |
| <b>Aspiration hazard</b>                                  | Based on available data, the classification criteria are not met. |

## SECTION 12: Ecological information

|                                 |   |
|---------------------------------|---|
| <b>Ecotoxicity</b>              | Harmful to aquatic life with long lasting effects.  |
| <b>Unknown aquatic toxicity</b> | 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment |

| Chemical name | Algae/aquatic plants | Fish  | Crustacea  |
|---------------|----------------------|---|--|
| Trade secret  | -                    | LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus)<br>LC50: =12946mg/L (96h, Lepomis macrochirus)<br>LC50: 6020 - 7070mg/L (96h, Pimephales promelas)<br>LC50: =7050mg/L (96h, Pimephales promelas)<br>LC50: 6420 - 6700mg/L (96h, Pimephales promelas)<br>LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) | EC50: =1000mg/L (48h, Daphnia magna)<br>EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) |
| Trade secret  | -                    | LC50: =45.4mg/L (96h, Oncorhynchus mykiss)  | -  |
| Trade secret  | -                    | LC50: =0.8mg/L (96h, Oncorhynchus mykiss)<br>LC50: =0.7mg/L (96h, Lepomis   | -  |

**Product Name** Bio-Plex Pro Mouse Diabetes Single-Plex Beads

**Revision date** 23-Aug-2023

|  |  |   |  |
|--|--|---|--|
|  |  | macrochirus)<br>LC50: =5.46mg/L (96h,<br>Pimephales promelas) |  |
|--|--|---|--|

**Persistence and degradability** No information available.

**Bioaccumulative potential** There is no data for this product.

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| Trade secret  | 0.7                   |

**Mobility in soil** No information available.

### SECTION 13: Disposal considerations

**Waste chemicals** 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

**IMDG** Not regulated  
**Transport in bulk according to Annex II of MARPOL and the IBC Code** No information available

**IATA** Not regulated

**China** Not regulated

**Special precautions for user**  
Please refer to the applicable dangerous goods regulations for additional information

### SECTION 15: Regulatory information

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

#### **National regulations**

**Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

Catalogue of occupational hazard factors: Listed. Chemical hazards.  
Catalogue of occupational diseases: Listed. Occupational poisoning.

| Chemical name | Category         |
|---------------|------------------|
| Trade secret  | Chemical hazards |

#### **Regulations on the Control over Safety of Hazardous Chemicals**

**Inventory of hazardous chemicals**  
The table below indicates ingredients above the cut-off threshold considered as relevant which are listed. Weight-%  
0

| Chemical name | Inventory of hazardous chemicals |
|---------------|----------------------------------|
| Trade secret  | Listed                           |
| Trade secret  | Listed, Highly toxic             |

**GB 18218-2009 Identification of major hazard installations for dangerous chemicals** Not applicable

**List of hazardous chemicals under priority management** Not applicable

**Product Name** Bio-Plex Pro Mouse Diabetes Single-Plex Beads

**Revision date** 23-Aug-2023

**Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used**

Inventory of highly toxic goods Not applicable

**Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

List of toxic chemicals severely restricted for import and export in China Not applicable

**Measures for the Environmental Management of New Chemical Substances**

**IECSC - China Inventory of Existing Chemical Substances** 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** 23-Aug-2023

**Revision Note** Reformatted and updated existing information.

**Abbreviations and acronyms**

**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

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**Product Name** Bio-Plex Pro Mouse Diabetes Single-Plex  
Beads

**Revision date** 23-Aug-2023

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materials or in any process, unless specified in the text

**End of Safety Data Sheet**



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
GB/T 16483-2008, GB/T 17519-2013

**Product Name** Bio-Plex Mouse Diabetes Single-Plex Detection  
**Revision date** 23-Aug-2023  
**Revision Number** 1

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

### Product identifier

**Product Name** Bio-Plex Mouse Diabetes Single-Plex Detection  
**Catalogue Number(s)** 10018499, 10018500, 10018501, 10018502, 10018503, 10018504, 10018505, 10018506

### Other means of identification

**Pure substance/mixture** Mixture

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

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.  
1st and 2nd Floor, Lumpini 1 Building  
239/2, Rajdamri Road, Lumpini,  
Pathumwan, Bangkok 10330  
Thailand

**Technical Service** +66 2 652 8313  
ctsthailand@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Hong Kong: 800-968-793

### Recommended use of the chemical and restrictions on use

**Recommended use** Laboratory chemicals

## SECTION 2: Hazards identification

### **Emergency Overview**

May cause allergic skin reaction

**Appearance** aqueous solution      **Physical state** Liquid      **Odour** Odourless

### Classification of the substance or mixture

|  |             |
|--|-------------|
| <b>Skin sensitisation</b>                                    | Category 1A |
| <b>Hazardous to the Aquatic Environment - Acute Hazard</b>   | Category 3  |
| <b>Hazardous to the Aquatic Environment - Chronic Hazard</b> | Category 3  |

### Label elements





**Signal word**

Warning

**Hazard statements**

May cause an allergic skin reaction  
Harmful to aquatic life with long lasting effects

**Precautionary statements**

**Prevention**

Avoid breathing dust/fume/gas/mist/vapours/spray  
Contaminated work clothing should not be allowed out of the workplace  
Wear protective gloves/protective clothing/eye protection/face protection  
Avoid release to the environment  
IF ON SKIN: Wash with plenty of water and soap  
If skin irritation or rash occurs: Get medical advice/attention  
Take off all contaminated clothing and wash it before reuse

**Disposal**

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

**Physical and chemical hazards**

Not applicable.

**Health hazards**

Immediate Health Effects: Allergic reactions (sensitiser). Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.  
Chronic effects: Not applicable.

**Environmental hazards**

This material is a water pollutant. Keep out of drains, sewers, ditches and waterways. Minimise use of water to prevent environmental contamination

**Other hazards which do not result in classification**

Contains animal source material (Cattle)

## SECTION 3: Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name            | Weight-%     | CAS No    |
|--------------------------|--------------|-----------|
| Water                    | 50 - 100     | 7732-18-5 |
| Antibodies               | 10 - 20      | NO-CAS-81 |
| Trade secret             | 0.3 - 0.99   | -         |
| Sodium phosphate dibasic | 0.1 - 0.299  | 7558-79-4 |
| Trade secret             | 0.1 - 0.299  | -         |
| Trade secret             | 0.1 - 0.299  | -         |
| Trade secret             | 0.01 - 0.099 | -         |
| Trade secret             | 0.01 - 0.099 | -         |
| Trade secret             | 0.001 - 0.01 | -         |
| Trade secret             | 0.001 - 0.01 | -         |

|              |              |   |
|--------------|--------------|---|
| Trade secret | 0.001 - 0.01 | - |
| Trade secret | 0.001 - 0.01 | - |

## SECTION 4: First aid measures

### Description of necessary first aid measures

|   |   |
|---|---|
| <b>General advice</b>   | Show this safety data sheet to the doctor in attendance.  |
| <b>Inhalation</b>   | Remove to fresh air.  |
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.                 |
| <b>Skin contact</b>   | Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. |
| <b>Ingestion</b>  | Rinse mouth thoroughly with water.  |
| <b><u>Most important symptoms and effects, both acute and delayed</u></b> | Itching. Rashes. Hives.   |
| <b><u>For emergency responders</u></b>                                    | No information available.   |
| <b><u>Note to doctors</u></b>   | May cause sensitisation in susceptible persons. Treat symptomatically.  |

## SECTION 5: Firefighting measures

### Extinguishing media

|  |  |
|--|--|
| <b>Suitable Extinguishing Media</b>                        | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                            |
| <b>Unsuitable extinguishing media</b>                      | No information available.  |
| <b><u>Specific hazards arising from the chemical</u></b>   | Product is or contains a sensitiser. May cause sensitisation by skin contact.  |
| <b><u>Special protective actions for fire-fighters</u></b> | 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

|  |  |
|--|--|
| <b>Personal precautions</b>  | Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. |
| <b>For emergency responders</b>                                    | Use personal protection recommended in Section 8.  |
| <b><u>Environmental precautions</u></b>                            | See Section 12 for additional Ecological Information.  |
| <b><u>Methods and material for containment and cleaning up</u></b> | Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.  |
| <b><u>Precautions to prevent secondary hazards</u></b>             | Clean contaminated objects and areas thoroughly observing environmental regulations.   |

## SECTION 7: Handling and storage

### Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. See Section 8 for information on appropriate personal protective equipment.

### Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store according to product and label instructions.

### **Incompatible materials**

None known based on information supplied.

## SECTION 8: Exposure controls/personal protection

### Occupational exposure limits

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

| Chemical name  | China                                  | ACGIH TLV  |
|----------------|--|--|
| Trade secret - | Ceiling: 0.3 mg/m <sup>3</sup> Ceiling | Ceiling: 0.29 mg/m <sup>3</sup> Sodium azide<br>Ceiling: 0.11 ppm Hydrazoic acid vapor |

### **Note**

See section 16 for terms and abbreviations

### Biological occupational exposure limits

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

### Monitoring and observation processes

No applicable information was found.

### 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.

#### **General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

|                        |                          |
|------------------------|--------------------------|
| <b>Appearance</b>      | aqueous solution         |
| <b>Colour</b>          | colourless               |
| <b>Physical state</b>  | Liquid                   |
| <b>Odour</b>           | Odourless                |
| <b>Odour threshold</b> | No information available |

| <u>Property</u>                         | <u>Values</u>     | <u>Remarks • Method</u> |
|---|-------------------|-------------------------|
| pH                                      | 7.4               |                         |
| Melting point / freezing point          | 0 °C              |                         |
| Initial boiling point and boiling range | 100 °C            |                         |
| Flash point                             | No data available | None known              |
| Evaporation rate                        | No data available | None known              |
| Flammability                            | No data available | None known              |
| Flammability Limit in Air               |                   | None known              |
| Upper flammability or explosive limits  | No data available |                         |
| Lower flammability or explosive limits  | No data available |                         |
| Vapour pressure                         | No data available | None known              |
| Relative vapour density                 | No data available | None known              |
| Relative density                        | No data available | None 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               | No data available | None known              |
| Kinematic viscosity                     | No data available | None known              |
| Dynamic viscosity                       | No data available | None known              |
| <u>Additional information</u>           |                   |                         |
| Explosive properties                    | Not applicable    |                         |
| Oxidising properties                    | Not applicable    |                         |

## SECTION 10: Stability and reactivity

|   |   |
|---|---|
| <u>Stability</u>                          | Stable under normal conditions.           |
| <u>Possibility of hazardous reactions</u> | None under normal processing.             |
| Sensitivity to mechanical impact          | None.                                     |
| Sensitivity to static discharge           | None.                                     |
| <u>Conditions to avoid</u>                | None known based on information supplied. |
| <u>Incompatible materials</u>             | None known based on information supplied. |
| <u>Hazardous decomposition products</u>   | None known based on information supplied. |

## SECTION 11: Toxicological information

### Acute toxicity

### Numerical measures of toxicity

#### Component Information

| Chemical name            | Oral LD50          | Dermal LD50              | Inhalation LC50       |
|--------------------------|--------------------|--------------------------|-----------------------|
| Water                    | > 90 mL/kg ( Rat ) | -                        | -                     |
| Trade secret             | = 3 g/kg ( Rat )   | > 10000 mg/kg ( Rabbit ) | > 42 mg/L ( Rat ) 1 h |
| Sodium phosphate dibasic | = 17 g/kg ( Rat )  | -                        | -                     |

|              |                      |                          |                               |
|--------------|----------------------|--------------------------|-------------------------------|
| Trade secret | = 8290 mg/kg ( Rat ) | > 7940 mg/kg ( Rabbit )  | > 0.83 mg/L ( Rat ) 4 h       |
| Trade secret | = 27 mg/kg ( Rat )   | = 20 mg/kg ( Rabbit )    | 0.054 - 0.52 mg/L ( Rat ) 4 h |
| Trade secret | = 2600 mg/kg ( Rat ) | -                        | -                             |
| Trade secret | = 3200 mg/kg ( Rat ) | -                        | > 0.83 mg/L ( Rat ) 4 h       |
| Trade secret | = 53 mg/kg ( Rat )   | = 87.12 mg/kg ( Rabbit ) | -                             |

**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** May cause sensitisation by skin contact.

**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.

**Specific target organ toxicity — single exposure** Based on available data, the classification criteria are not met.

**Specific target organ toxicity — repeated exposure** Based on available data, the classification criteria are not met.

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

## SECTION 12: Ecological information

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

**Unknown aquatic toxicity** 3.12069 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Algae/aquatic plants                          | Fish  | Crustacea  |
|---------------|---|---|--|
| Trade secret  | -   | LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus)<br>LC50: =12946mg/L (96h, Lepomis macrochirus)<br>LC50: 6020 - 7070mg/L (96h, Pimephales promelas)<br>LC50: =7050mg/L (96h, Pimephales promelas)<br>LC50: 6420 - 6700mg/L (96h, Pimephales promelas)<br>LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) | EC50: =1000mg/L (48h, Daphnia magna)<br>EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) |
| Trade secret  | -   | LC50: =0.8mg/L (96h, Oncorhynchus mykiss)<br>LC50: =0.7mg/L (96h, Lepomis macrochirus)<br>LC50: =5.46mg/L (96h, Pimephales promelas)  | -  |
| Trade secret  | EC50: =2500mg/L (72h, Desmodemus subspicatus) | LC50: =1060mg/L (96h, Lepomis macrochirus)<br>LC50: 750 - 1020mg/L (96h,  | EC50: =825mg/L (48h, Daphnia magna)<br>EC50: =83mg/L (48h, Daphnia                   |

**Product Name** Bio-Plex Mouse Diabetes Single-Plex  
Detection

**Revision date** 23-Aug-2023

|  |  |                      |        |
|--|--|----------------------|--------|
|  |  | Pimephales promelas) | magna) |
|--|--|----------------------|--------|

**Persistence and degradability** No information available.

**Bioaccumulative potential** There is no data for this product.

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| Trade secret  | 0.7                   |

**Mobility in soil** No information available.

### SECTION 13: Disposal considerations

**Waste chemicals** 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

**IMDG** Not regulated  
**Transport in bulk according to Annex II of MARPOL and the IBC Code** No information available

**IATA** Not regulated

**China** Not regulated

**Special precautions for user**  
Please refer to the applicable dangerous goods regulations for additional information

### SECTION 15: Regulatory information

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

#### **National regulations**

**Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

Catalogue of occupational hazard factors: Not applicable.  
Catalogue of occupational diseases: Not applicable.

#### **Regulations on the Control over Safety of Hazardous Chemicals**

Inventory of hazardous chemicals Not applicable.

| Chemical name | Inventory of hazardous chemicals |
|---------------|----------------------------------|
| Trade secret  | Listed, Highly toxic             |

GB 18218-2009 Identification of major hazard installations for dangerous chemicals Not applicable

**List of hazardous chemicals under priority management** Not applicable

**Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used**  
Inventory of highly toxic goods Not applicable

**Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**  
List of toxic chemicals severely restricted for import and export in China Not applicable

**Measures for the Environmental Management of New Chemical Substances**

**Product Name** Bio-Plex Mouse Diabetes Single-Plex  
Detection

**Revision date** 23-Aug-2023

**IECSC - China Inventory of Existing Chemical Substances** 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** 23-Aug-2023

**Revision Note** Reformatted and updated existing information.

#### **Abbreviations and acronyms**

**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

This safety data sheet was created pursuant to the requirements of:  
GB/T 16483-2008, GB/T 17519-2013

**Product Name** Bio-Plex Sample Diluent

**Revision date** 17-May-2023

**Revision Number** 1.1

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

### Product identifier

**Product Name** Bio-Plex Sample Diluent

**Catalogue Number(s)** 10014641, 9704423, 9703895, 171305043, 10022628, 10041561, 12005851

### Other means of identification

**Pure substance/mixture** Mixture

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

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.  
1st and 2nd Floor, Lumpini 1 Building  
239/2, Rajdamri Road, Lumpini,  
Pathumwan, Bangkok 10330  
Thailand

**Technical Service** +66 2 652 8313  
ctsthailand@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Hong Kong: 800-968-793

### Recommended use of the chemical and restrictions on use

**Recommended use** Laboratory chemicals

## SECTION 2: Hazards identification

### **Emergency Overview**

No significant adverse health effects

**Appearance** aqueous solution

**Physical state** Liquid

**Odour** Odourless

### Classification of the substance or mixture

Not classified

### Label elements

#### **Hazard statements**

Not classified

#### **Physical and chemical hazards**

Not applicable.



**Health hazards**

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

**Environmental hazards**

Not applicable

**Other hazards which do not result in classification**

Contains animal source material (Cattle)

**SECTION 3: Composition/information on ingredients****Substance**

Not applicable.

**Mixture**

Not classified.

| Chemical name | Weight-%     | CAS No    |
|---------------|--------------|-----------|
| Water         | 50 - 100     | 7732-18-5 |
| Trade secret  | 0.3 - 0.99   | -         |
| HBR 1 Blocker | 0.1 - 0.299  | NO-CAS-18 |
| Trade secret  | 0.1 - 0.299  | -         |
| Trade secret  | 0.1 - 0.299  | -         |
| Trade secret  | 0.1 - 0.299  | -         |
| Trade secret  | 0.1 - 0.299  | -         |
| Trade secret  | 0.01 - 0.099 | -         |
| Trade secret  | 0.01 - 0.099 | -         |

**SECTION 4: First aid measures****Description of necessary 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**

Wash skin with soap and water.

**Ingestion**

Rinse mouth thoroughly with water.

**Most important symptoms and effects, both acute and delayed**

No information available.

**For emergency responders**

No information available.

**Note to doctors**

Treat symptomatically.

**SECTION 5: Firefighting measures****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** No information available.

**Special protective actions 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** See section 8 for more information.

**For emergency responders** Use personal protection recommended in Section 8.

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

**Methods and material for containment and cleaning up** Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.

**Precautions to prevent secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## SECTION 7: Handling and storage

**Precautions for safe handling** Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.

**Conditions for safe storage, including any incompatibilities** Store according to product and label instructions.

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

## SECTION 8: Exposure controls/personal protection

### **Occupational exposure limits**

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

| Chemical name  | China                                  | ACGIH TLV  |
|----------------|--|--|
| Trade secret - | Ceiling: 0.3 mg/m <sup>3</sup> Ceiling | Ceiling: 0.29 mg/m <sup>3</sup> Sodium azide<br>Ceiling: 0.11 ppm Hydrazoic acid vapor |

**Note** See section 16 for terms and abbreviations

### **Biological occupational exposure limits**

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

### **Monitoring and observation processes**

No applicable information was found.

**Engineering controls** Showers  
Eyewash stations

Ventilation systems.

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

|                                       |  |
|---------------------------------------|--|
| <b>Eye/face protection</b>            | Wear safety glasses with side shields (or goggles).  |
| <b>Skin and body protection</b>       | Wear suitable protective clothing.   |
| <b>Hand protection</b>                | Wear suitable gloves.  |
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| <b>General hygiene considerations</b> | Handle in accordance with good industrial hygiene and safety practice.   |

### **SECTION 9: Physical and chemical properties**

#### **Information on basic physical and chemical properties**

|                        |                          |
|------------------------|--------------------------|
| <b>Appearance</b>      | aqueous solution         |
| <b>Colour</b>          | colourless               |
| <b>Physical state</b>  | Liquid                   |
| <b>Odour</b>           | Odourless                |
| <b>Odour threshold</b> | No information available |

| <b><u>Property</u></b>                         | <b><u>Values</u></b> | <b><u>Remarks • Method</u></b> |
|--|----------------------|--------------------------------|
| <b>pH</b>                                      | 7.4                  |                                |
| <b>Melting point / freezing point</b>          | 0 °C                 |                                |
| <b>Initial boiling point and boiling range</b> | 100 °C               |                                |
| <b>Flash point</b>                             | No data available    | None known                     |
| <b>Evaporation rate</b>                        | No data available    | None known                     |
| <b>Flammability</b>                            | No data available    | None known                     |
| <b>Flammability Limit in Air</b>               |                      | None known                     |
| <b>Upper flammability or explosive limits</b>  | No data available    |                                |
| <b>Lower flammability or explosive limits</b>  | No data available    |                                |
| <b>Vapour pressure</b>                         | No data available    | None known                     |
| <b>Relative vapour density</b>                 | No data available    | None known                     |
| <b>Relative density</b>                        | No data available    | None known                     |
| <b>Water solubility</b>                        | Miscible in water    |                                |
| <b>Solubility(ies)</b>                         | No data available    | None known                     |
| <b>Partition coefficient</b>                   | No data available    | None known                     |
| <b>Autoignition temperature</b>                | No data available    | None known                     |
| <b>Decomposition temperature</b>               | No data available    | None known                     |
| <b>Kinematic viscosity</b>                     | No data available    | None known                     |
| <b>Dynamic viscosity</b>                       | No data available    | None known                     |

#### **Additional information**

|                             |                |
|-----------------------------|----------------|
| <b>Explosive properties</b> | Not applicable |
| <b>Oxidising properties</b> | Not applicable |

### **SECTION 10: Stability and reactivity**

|                         |                                 |
|-------------------------|---------------------------------|
| <b><u>Stability</u></b> | Stable under normal conditions. |
|-------------------------|---------------------------------|

|  |                               |
|--|-------------------------------|
| <b><u>Possibility of hazardous reactions</u></b> | None under normal processing. |
|--|-------------------------------|

|   |       |
|---|-------|
| <b>Sensitivity to mechanical impact</b> | None. |
| <b>Sensitivity to static discharge</b>  | None. |

|                                   |   |
|-----------------------------------|---|
| <b><u>Conditions to avoid</u></b> | None known based on information supplied. |
|-----------------------------------|---|

|                                      |   |
|--------------------------------------|---|
| <b><u>Incompatible materials</u></b> | None known based on information supplied. |
|--------------------------------------|---|

**Hazardous decomposition products** None known based on information supplied.

## SECTION 11: Toxicological information

### Acute toxicity

#### Numerical measures of toxicity

| Chemical name | Oral LD50                                 | Dermal LD50             | Inhalation LC50                     |
|---------------|---|-------------------------|-------------------------------------|
| Water         | > 90 mL/kg ( Rat )                        | -                       | -                                   |
| Trade secret  | = 8290 mg/kg ( Rat )                      | > 7940 mg/kg ( Rabbit ) | > 0.83 mg/L ( Rat ) 4 h             |
| Trade secret  | = 22 g/kg ( Rat )                         | > 20 g/kg ( Rabbit )    | -                                   |
| Trade secret  | = 5700 mg/kg ( Rat )<br>= 16 g/kg ( Rat ) | -                       | = 320 mg/m <sup>3</sup> ( Rat ) 4 h |
| Trade secret  | = 27 mg/kg ( Rat )                        | = 20 mg/kg ( Rabbit )   | 0.054 - 0.52 mg/L ( Rat ) 4 h       |

**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.

**Specific target organ toxicity — single exposure** Based on available data, the classification criteria are not met.

**Specific target organ toxicity — repeated exposure** Based on available data, the classification criteria are not met.

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

## SECTION 12: Ecological information

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

**Unknown aquatic toxicity** 0.095 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Algae/aquatic plants | Fish  | Crustacea |
|---------------|----------------------|---|-----------|
| Trade secret  | -                    | LC50: =0.8mg/L (96h, Oncorhynchus mykiss)<br>LC50: =0.7mg/L (96h, Lepomis macrochirus)<br>LC50: =5.46mg/L (96h, | -         |

|  |  |                      |  |
|--|--|----------------------|--|
|  |  | Pimephales promelas) |  |
|--|--|----------------------|--|

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| Trade secret  | -0.698                |

**Mobility in soil** No information available.

## SECTION 13: Disposal considerations

**Waste chemicals** 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

**IMDG** Not regulated  
**Transport in bulk according to Annex II of MARPOL and the IBC Code** No information available

**IATA** Not regulated

**China** Not regulated

**Special precautions for user**  
Please refer to the applicable dangerous goods regulations for additional information

## SECTION 15: Regulatory information

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

### National regulations

**Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

Catalogue of occupational hazard factors: Not applicable.  
Catalogue of occupational diseases: Not applicable.

### Regulations on the Control over Safety of Hazardous Chemicals

Inventory of hazardous chemicals: Not applicable.

| Chemical name | Inventory of hazardous chemicals |
|---------------|----------------------------------|
| Trade secret  | Listed, Highly toxic             |

GB 18218-2009 Identification of major hazard installations for dangerous chemicals: Not applicable

**List of hazardous chemicals under priority management** Not applicable

**Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used**  
Inventory of highly toxic goods: Not applicable

### Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

List of toxic chemicals severely restricted for import and export in China: Not applicable

### Measures for the Environmental Management of New Chemical Substances

**IECSC - China Inventory of Existing Chemical Substances** 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** 17-May-2023**Revision Note** Reformatted and updated existing information.**Abbreviations and acronyms****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

This safety data sheet was created pursuant to the requirements of:  
GB/T 16483-2008, GB/T 17519-2013

**Product Name** Bio-Plex Standard Diluent

**Revision date** 17-May-2023

**Revision Number** 1.1

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

### Product identifier

**Product Name** Bio-Plex Standard Diluent

**Catalogue Number(s)** 9703888, 9704424, 171305042, 171304080M, 10022368, 12005853

### Other means of identification

**Pure substance/mixture** Mixture

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

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.  
1st and 2nd Floor, Lumpini 1 Building  
239/2, Rajdamri Road, Lumpini,  
Pathumwan, Bangkok 10330  
Thailand

**Technical Service** +66 2 652 8313  
ctsthailand@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Hong Kong: 800-968-793

### Recommended use of the chemical and restrictions on use

**Recommended use** Laboratory chemicals

## SECTION 2: Hazards identification

### **Emergency Overview**

No significant adverse health effects

**Appearance** aqueous solution

**Physical state** Liquid

**Odour** Odourless

### Classification of the substance or mixture

Not classified

### Label elements

#### **Hazard statements**

Not classified

#### **Physical and chemical hazards**

Not applicable.

**Health hazards**

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

**Environmental hazards**

Not applicable

**Other hazards which do not result in classification**

Contains animal source material (Cattle)

**SECTION 3: Composition/information on ingredients****Substance**

Not applicable.

**Mixture**

Not classified.

| Chemical name | Weight-%     | CAS No    |
|---------------|--------------|-----------|
| Water         | 50 - 100     | 7732-18-5 |
| Trade secret  | 20 - 35      | -         |
| Trade secret  | 0.3 - 0.99   | -         |
| HBR 1 Blocker | 0.1 - 0.299  | NO-CAS-18 |
| Trade secret  | 0.01 - 0.099 | -         |
| Trade secret  | 0.01 - 0.099 | -         |
| Trade secret  | 0.01 - 0.099 | -         |
| Trade secret  | 0.01 - 0.099 | -         |

**SECTION 4: First aid measures****Description of necessary first aid measures**

|   |  |
|---|--|
| <b>General advice</b>   | No hazards which require special first aid measures.   |
| <b>Inhalation</b>   | Remove to fresh air.   |
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.<br>Consult a doctor. |
| <b>Skin contact</b>   | Wash skin with soap and water.   |
| <b>Ingestion</b>  | Rinse mouth thoroughly with water.   |
| <b><u>Most important symptoms and effects, both acute and delayed</u></b> | No information available.  |
| <b><u>For emergency responders</u></b>                                    | No information available.  |
| <b><u>Note to doctors</u></b>   | Treat symptomatically.   |

**SECTION 5: Firefighting measures****Extinguishing media**

|                                     |   |
|-------------------------------------|---|
| <b>Suitable Extinguishing Media</b> | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|-------------------------------------|---|



|  |   |
|--|---|
| <b>Unsuitable extinguishing media</b>                      | No information available.   |
| <b><u>Specific hazards arising from the chemical</u></b>   | No information available.   |
| <b><u>Special protective actions for fire-fighters</u></b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.<br>Use personal protection equipment. |

## SECTION 6: Accidental release measures

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

|  |   |
|--|---|
| <b>Personal precautions</b>  | See section 8 for more information.   |
| <b>For emergency responders</b>                                    | Use personal protection recommended in Section 8.   |
| <b><u>Environmental precautions</u></b>                            | See Section 12 for additional Ecological Information.   |
| <b><u>Methods and material for containment and cleaning up</u></b> | Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers. |
| <b><u>Precautions to prevent secondary hazards</u></b>             | Clean contaminated objects and areas thoroughly observing environmental regulations.                        |

## SECTION 7: Handling and storage

|  |  |
|--|--|
| <b><u>Precautions for safe handling</u></b>                                | Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment. |
| <b><u>Conditions for safe storage, including any incompatibilities</u></b> | Store according to product and label instructions.   |
| <b>Incompatible materials</b>  | None known based on information supplied.  |

## SECTION 8: Exposure controls/personal protection

### **Occupational exposure limits**

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

| Chemical name  | China                                  | ACGIH TLV  |
|----------------|--|--|
| Trade secret - | Ceiling: 0.3 mg/m <sup>3</sup> Ceiling | Ceiling: 0.29 mg/m <sup>3</sup> Sodium azide<br>Ceiling: 0.11 ppm Hydrazoic acid vapor |

**Note** See section 16 for terms and abbreviations

### **Biological occupational exposure limits**

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

### **Monitoring and observation processes**

No applicable information was found.

|                                    |   |
|------------------------------------|---|
| <b><u>Engineering controls</u></b> | Showers<br>Eyewash stations<br>Ventilation systems. |
|------------------------------------|---|

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

|                                       |  |
|---------------------------------------|--|
| <b>Eye/face protection</b>            | Wear safety glasses with side shields (or goggles).  |
| <b>Skin and body protection</b>       | Wear suitable protective clothing.   |
| <b>Hand protection</b>                | Wear suitable gloves.  |
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| <b>General hygiene considerations</b> | Handle in accordance with good industrial hygiene and safety practice.   |

**SECTION 9: Physical and chemical properties****Information on basic physical and chemical properties**

|                        |                          |
|------------------------|--------------------------|
| <b>Appearance</b>      | aqueous solution         |
| <b>Colour</b>          | colourless               |
| <b>Physical state</b>  | Liquid                   |
| <b>Odour</b>           | Odourless                |
| <b>Odour threshold</b> | No information available |

| <b>Property</b>                                | <b>Values</b>     | <b>Remarks • Method</b> |
|--|-------------------|-------------------------|
| <b>pH</b>                                      | 7.4               |                         |
| <b>Melting point / freezing point</b>          | No data available | None known              |
| <b>Initial boiling point and boiling range</b> | 100 °C            |                         |
| <b>Flash point</b>                             | No data available | None known              |
| <b>Evaporation rate</b>                        | No data available | None known              |
| <b>Flammability</b>                            | No data available | None known              |
| <b>Flammability Limit in Air</b>               |                   | None known              |
| <b>Upper flammability or explosive limits</b>  | No data available |                         |
| <b>Lower flammability or explosive limits</b>  | No data available |                         |
| <b>Vapour pressure</b>                         | No data available | None known              |
| <b>Relative vapour density</b>                 | No data available | None known              |
| <b>Relative density</b>                        | No data available | None known              |
| <b>Water solubility</b>                        | Miscible in water |                         |
| <b>Solubility(ies)</b>                         | No data available | None known              |
| <b>Partition coefficient</b>                   | No data available | None known              |
| <b>Autoignition temperature</b>                | No data available | None known              |
| <b>Decomposition temperature</b>               | No data available | None known              |
| <b>Kinematic viscosity</b>                     | No data available | None known              |
| <b>Dynamic viscosity</b>                       | No data available | None known              |

**Additional information**

|                             |                |
|-----------------------------|----------------|
| <b>Explosive properties</b> | Not applicable |
| <b>Oxidising properties</b> | Not applicable |

**SECTION 10: Stability and reactivity**

|                  |                                 |
|------------------|---------------------------------|
| <b>Stability</b> | Stable under normal conditions. |
|------------------|---------------------------------|

|   |                               |
|---|-------------------------------|
| <b>Possibility of hazardous reactions</b> | None under normal processing. |
|---|-------------------------------|

|   |       |
|---|-------|
| <b>Sensitivity to mechanical impact</b> | None. |
| <b>Sensitivity to static discharge</b>  | None. |

|                            |   |
|----------------------------|---|
| <b>Conditions to avoid</b> | None known based on information supplied. |
|----------------------------|---|

|                               |   |
|-------------------------------|---|
| <b>Incompatible materials</b> | None known based on information supplied. |
|-------------------------------|---|

**Hazardous decomposition products** None known based on information supplied.

## SECTION 11: Toxicological information

### Acute toxicity

#### Numerical measures of toxicity

| Chemical name | Oral LD50                                 | Dermal LD50             | Inhalation LC50                     |
|---------------|---|-------------------------|-------------------------------------|
| Water         | > 90 mL/kg ( Rat )                        | -                       | -                                   |
| Trade secret  | = 8290 mg/kg ( Rat )                      | > 7940 mg/kg ( Rabbit ) | > 0.83 mg/L ( Rat ) 4 h             |
| Trade secret  | = 22 g/kg ( Rat )                         | > 20 g/kg ( Rabbit )    | -                                   |
| Trade secret  | = 5700 mg/kg ( Rat )<br>= 16 g/kg ( Rat ) | -                       | = 320 mg/m <sup>3</sup> ( Rat ) 4 h |
| Trade secret  | = 27 mg/kg ( Rat )                        | = 20 mg/kg ( Rabbit )   | 0.054 - 0.52 mg/L ( Rat ) 4 h       |

**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.

**Specific target organ toxicity — single exposure** Based on available data, the classification criteria are not met.

**Specific target organ toxicity — repeated exposure** Based on available data, the classification criteria are not met.

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

## SECTION 12: Ecological information

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

**Unknown aquatic toxicity** 0.018 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Algae/aquatic plants | Fish   | Crustacea |
|---------------|----------------------|--|-----------|
| Trade secret  | -                    | LC50: =0.8mg/L (96h, Oncorhynchus mykiss)<br>LC50: =0.7mg/L (96h, Lepomis macrochirus)<br>LC50: =5.46mg/L (96h, Pimephales promelas) | -         |

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| Trade secret  | -0.698                |

**Mobility in soil** No information available.

## SECTION 13: Disposal considerations

**Waste chemicals** 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

**IMDG** Not regulated  
**Transport in bulk according to Annex II of MARPOL and the IBC Code** No information available

**IATA** Not regulated

**China** Not regulated

**Special precautions for user**  
 Please refer to the applicable dangerous goods regulations for additional information

## SECTION 15: Regulatory information

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

#### **National regulations**

##### **Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

Catalogue of occupational hazard factors: Not applicable.  
 Catalogue of occupational diseases: Not applicable.

##### **Regulations on the Control over Safety of Hazardous Chemicals**

Inventory of hazardous chemicals Not applicable.

| Chemical name | Inventory of hazardous chemicals |
|---------------|----------------------------------|
| Trade secret  | Listed, Highly toxic             |

GB 18218-2009 Identification of major hazard installations for dangerous chemicals Not applicable

**List of hazardous chemicals under priority management** Not applicable

##### **Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used**

Inventory of highly toxic goods Not applicable

##### **Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

List of toxic chemicals severely restricted for import and export in China Not applicable

##### **Measures for the Environmental Management of New Chemical Substances**

**IECSC - China Inventory of Existing Chemical Substances** 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** 17-May-2023

**Revision Note** Reformatted and updated existing information.

**Abbreviations and acronyms**

**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) (AELG(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

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**End of Safety Data Sheet**



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
GB/T 16483-2008, GB/T 17519-2013

**Product Name** Streptavidin-PE  
**Revision date** 17-May-2023  
**Revision Number** 1.1

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

### Product identifier

**Product Name** Streptavidin-PE  
**Catalogue Number(s)** 171304501, 9704418, 9703887, 9703897

### Other means of identification

**Pure substance/mixture** Mixture

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

#### Corporate Headquarters

Bio-Rad Laboratories Inc.  
1000 Alfred Nobel Drive  
Hercules, CA 94547  
USA

#### Manufacturer

Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.  
1st and 2nd Floor, Lumpini 1 Building  
239/2, Rajdamri Road, Lumpini,  
Pathumwan, Bangkok 10330  
Thailand

**Technical Service** +66 2 652 8313  
ctsthailand@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Hong Kong: 800-968-793

### Recommended use of the chemical and restrictions on use

**Recommended use** Laboratory chemicals

## SECTION 2: Hazards identification

### **Emergency Overview**

No significant adverse health effects

**Appearance** aqueous solution      **Physical state** Liquid      **Odour** Odourless

### Classification of the substance or mixture

Not classified

### Label elements

#### **Hazard statements**

Not classified

**Physical and chemical hazards**

Not applicable.

**Health hazards**

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

**Environmental hazards**

Not applicable

**Other hazards which do not result in classification**

Not applicable

**SECTION 3: Composition/information on ingredients****Substance**

Not applicable.

**Mixture**

Not classified.

| Chemical name | Weight-%     | CAS No    |
|---------------|--------------|-----------|
| Water         | 50 - 100     | 7732-18-5 |
| Trade secret  | 0.3 - 0.99   | -         |
| Trade secret  | 0.1 - 0.299  | -         |
| Trade secret  | 0.1 - 0.299  | -         |
| Trade secret  | 0.01 - 0.099 | -         |
| Avidin        | 0.01 - 0.099 | 9013-20-1 |

**SECTION 4: First aid measures****Description of necessary 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**

Wash skin with soap and water.

**Ingestion**

Rinse mouth thoroughly with water.

**Most important symptoms and effects, both acute and delayed**

No information available.

**For emergency responders**

No information available.

**Note to doctors**

Treat symptomatically.

**SECTION 5: Firefighting measures****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** No information available.

**Special protective actions 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** See section 8 for more information.

**For emergency responders** Use personal protection recommended in Section 8.

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

**Methods and material for containment and cleaning up** Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.

**Precautions to prevent secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## SECTION 7: Handling and storage

**Precautions for safe handling** Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.

**Conditions for safe storage, including any incompatibilities** Store according to product and label instructions.

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

## SECTION 8: Exposure controls/personal protection

### **Occupational exposure limits**

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

| Chemical name  | China                                  | ACGIH TLV  |
|----------------|--|--|
| Trade secret - | Ceiling: 0.3 mg/m <sup>3</sup> Ceiling | Ceiling: 0.29 mg/m <sup>3</sup> Sodium azide<br>Ceiling: 0.11 ppm Hydrazoic acid vapor |

**Note** See section 16 for terms and abbreviations

### **Biological occupational exposure limits**

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

### **Monitoring and observation processes**

No applicable information was found.

**Engineering controls** Showers  
Eyewash stations



Ventilation systems.

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

|                                       |  |
|---------------------------------------|--|
| <b>Eye/face protection</b>            | Wear safety glasses with side shields (or goggles).  |
| <b>Skin and body protection</b>       | Wear suitable protective clothing.   |
| <b>Hand protection</b>                | Wear suitable gloves.  |
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| <b>General hygiene considerations</b> | Handle in accordance with good industrial hygiene and safety practice.   |

### **SECTION 9: Physical and chemical properties**

#### **Information on basic physical and chemical properties**

|                        |                          |
|------------------------|--------------------------|
| <b>Appearance</b>      | aqueous solution         |
| <b>Colour</b>          | colourless               |
| <b>Physical state</b>  | Liquid                   |
| <b>Odour</b>           | Odourless                |
| <b>Odour threshold</b> | No information available |

| <b>Property</b>                                | <b>Values</b>     | <b>Remarks • Method</b> |
|--|-------------------|-------------------------|
| <b>pH</b>                                      | 7.4               |                         |
| <b>Melting point / freezing point</b>          | 0 °C              |                         |
| <b>Initial boiling point and boiling range</b> | 100 °C            |                         |
| <b>Flash point</b>                             | No data available | None known              |
| <b>Evaporation rate</b>                        | No data available | None known              |
| <b>Flammability</b>                            | No data available | None known              |
| <b>Flammability Limit in Air</b>               |                   | None known              |
| <b>Upper flammability or explosive limits</b>  | No data available |                         |
| <b>Lower flammability or explosive limits</b>  | No data available |                         |
| <b>Vapour pressure</b>                         | No data available | None known              |
| <b>Relative vapour density</b>                 | No data available | None known              |
| <b>Relative density</b>                        | No data available | None known              |
| <b>Water solubility</b>                        | Miscible in water |                         |
| <b>Solubility(ies)</b>                         | No data available | None known              |
| <b>Partition coefficient</b>                   | No data available | None known              |
| <b>Autoignition temperature</b>                | No data available | None known              |
| <b>Decomposition temperature</b>               | No data available | None known              |
| <b>Kinematic viscosity</b>                     | No data available | None known              |
| <b>Dynamic viscosity</b>                       | No data available | None known              |

#### **Additional information**

|                             |                |
|-----------------------------|----------------|
| <b>Explosive properties</b> | Not applicable |
| <b>Oxidising properties</b> | Not applicable |

### **SECTION 10: Stability and reactivity**

|                  |                                 |
|------------------|---------------------------------|
| <b>Stability</b> | Stable under normal conditions. |
|------------------|---------------------------------|

|   |                               |
|---|-------------------------------|
| <b>Possibility of hazardous reactions</b> | None under normal processing. |
|---|-------------------------------|

|   |       |
|---|-------|
| <b>Sensitivity to mechanical impact</b> | None. |
| <b>Sensitivity to static discharge</b>  | None. |

|                            |   |
|----------------------------|---|
| <b>Conditions to avoid</b> | None known based on information supplied. |
|----------------------------|---|

|                               |   |
|-------------------------------|---|
| <b>Incompatible materials</b> | None known based on information supplied. |
|-------------------------------|---|

**Hazardous decomposition products** None known based on information supplied.

## SECTION 11: Toxicological information

### Acute toxicity

#### Numerical measures of toxicity

| Chemical name | Oral LD50            | Dermal LD50              | Inhalation LC50               |
|---------------|----------------------|--------------------------|-------------------------------|
| Water         | > 90 mL/kg ( Rat )   | -                        | -                             |
| Trade secret  | = 3 g/kg ( Rat )     | > 10000 mg/kg ( Rabbit ) | > 42 mg/L ( Rat ) 1 h         |
| Trade secret  | = 8290 mg/kg ( Rat ) | > 7940 mg/kg ( Rabbit )  | > 0.83 mg/L ( Rat ) 4 h       |
| Trade secret  | = 27 mg/kg ( Rat )   | = 20 mg/kg ( Rabbit )    | 0.054 - 0.52 mg/L ( Rat ) 4 h |

**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.

**Specific target organ toxicity — single exposure** Based on available data, the classification criteria are not met.

**Specific target organ toxicity — repeated exposure** Based on available data, the classification criteria are not met.

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

## SECTION 12: Ecological information

### Ecotoxicity

**Unknown aquatic toxicity** 0.02 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Algae/aquatic plants | Fish   | Crustacea  |
|---------------|----------------------|--|--|
| Trade secret  | -                    | LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus)<br>LC50: =12946mg/L (96h, Lepomis macrochirus)<br>LC50: 6020 - 7070mg/L (96h, Pimephales promelas)<br>LC50: =7050mg/L (96h, Pimephales promelas)<br>LC50: 6420 - 6700mg/L (96h, | EC50: =1000mg/L (48h, Daphnia magna)<br>EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) |

|              |   |   |   |
|--------------|---|---|---|
|              |   | Pimephales promelas)<br>LC50: 4747 - 7824mg/L (96h,<br>Oncorhynchus mykiss)   |   |
| Trade secret | - | LC50: =0.8mg/L (96h,<br>Oncorhynchus mykiss)<br>LC50: =0.7mg/L (96h, Lepomis<br>macrochirus)<br>LC50: =5.46mg/L (96h,<br>Pimephales promelas) | - |

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

**Mobility in soil** No information available.

### SECTION 13: Disposal considerations

**Waste chemicals** 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

**IMDG** Not regulated  
**Transport in bulk according to** No information available  
**Annex II of MARPOL and the IBC**  
**Code**

**IATA** Not regulated

**China** Not regulated

**Special precautions for user**  
Please refer to the applicable dangerous goods regulations for additional information

### SECTION 15: Regulatory information

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

**National regulations**

**Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

Catalogue of occupational hazard factors: Not applicable.  
Catalogue of occupational diseases: Not applicable.

**Regulations on the Control over Safety of Hazardous Chemicals**

Inventory of hazardous chemicals Not applicable.

| Chemical name | Inventory of hazardous chemicals |
|---------------|----------------------------------|
| Trade secret  | Listed, Highly toxic             |

**GB 18218-2009 Identification of major hazard installations for dangerous chemicals** Not applicable

**List of hazardous chemicals under priority management** Not applicable

**Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used**

Inventory of highly toxic goods Not applicable

**Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

List of toxic chemicals severely restricted for import and export in China

Not applicable

**Measures for the Environmental Management of New Chemical Substances****IECSC - China Inventory of Existing Chemical Substances** 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** 17-May-2023**Revision Note** Reformatted and updated existing information.**Abbreviations and acronyms****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) (AELG(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

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**End of Safety Data Sheet**