

02/13/2017

**Kit Components**

Product code	Description
<b>1955880</b>	<b>p-Catecholamines by HPLC, Reagent Kit</b>

## Components:

1955881	p-Catecholamines by HPLC, REAG 1
1955882	p-Catecholamines by HPLC, REAG 2
1955883	p-Catecholamines by HPLC, REAG 3
1955884	p-Catecholamines by HPLC, DISP COL
1955367	Urinary Catecholamines by HPLC, INT STND
1955885	p-Catecholamines by HPLC, MP
1956059M	p-Catecholamines by HPLC, CAL

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

**1 Identification**

- **Product identifier**
- **Trade name:** p-Catecholamines by HPLC, REAG 1
- **Article number:** 1955881
- **Application of the substance / the mixture** *In-Vitro-laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier**  
Bio-Rad Laboratories (Canada) Ltd.  
2403 Guenette Street  
Montreal, Quebec H4R 2E9  
Phone: (514) 334-4372  
Freephone: 1 (800) 361-1808  
Fax: (514) 334-0872
- **Information department:**  
Technical Support:  
E-mail: [cdg\\_canada\\_salesmarketing@bio-rad.com](mailto:cdg_canada_salesmarketing@bio-rad.com)
- **Emergency telephone number:**  
GBK Gefährgut Büro GmbH  
Tel.: 0049(0)6123-84463

**2 Hazard(s) identification**

- **Classification of the substance or mixture**  
*Eye Irritation - Category 2A H319 Causes serious eye irritation.*
- **Label elements**
- **GHS label elements**  
*The product is classified and labeled according to the Globally Harmonized System (GHS).*
- **Hazard pictograms**



GHS07

- **Signal word** *Warning*
- **Hazard statements**  
*Causes serious eye irritation.*
- **Precautionary statements**  
*Wear protective gloves/protective clothing/eye protection/face protection.*  
*Wash thoroughly after handling.*  
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*  
*If eye irritation persists: Get medical advice/attention.*
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2  
Fire = 0  
Reactivity = 0

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· **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

77-86-1	trametamol	⚠ Eye Irritation - Category 2A, H319	10-13% w/w
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### 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Call a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon monoxide (CO)  
Nitrogen oxides (NO<sub>x</sub>)
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Send for recovery or disposal in suitable receptacles.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### 7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Use only in well ventilated areas.

Keep receptacles tightly sealed.

· **Information about protection against explosions and fires:** No special measures required.

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

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from oxidizing agents.

· **Further information about storage conditions:** Store receptacle in a well ventilated area.

· **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Be sure to clean skin thoroughly after work and before breaks.

Do not eat, drink, smoke or sniff while working.

Wash hands before breaks and at the end of work.

· **Breathing equipment:** Not required.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling.

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· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

Form:	Fluid
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.

· pH-value at 20 °C:	8,6
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#### · Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C

· Flash point:	Not applicable.
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· Flammability (solid, gaseous):	Not applicable.
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#### · Ignition temperature:

Decomposition temperature:	Not determined.
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· Auto igniting:	Product is not selfigniting.
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· Danger of explosion:	Product does not present an explosion hazard.
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#### · Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapor pressure at 20 °C:	23 hPa
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· Density at 20 °C:	1 g/cm <sup>3</sup>
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.

#### · Solubility in / Miscibility with

Water:	Fully miscible.
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· Partition coefficient (n-octanol/water):	Not determined.
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#### · Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Other information	No further relevant information available.
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## 10 Stability and reactivity

· Reactivity	No further relevant information available.
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#### · Chemical stability

#### · Thermal decomposition / conditions to be avoided:

To avoid thermal decomposition do not overheat.

No decomposition if used and stored according to specifications.

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- **Possibility of hazardous reactions**  
*Reacts with strong acids.*  
*Reacts with strong oxidizing agents.*
- **Conditions to avoid** *No further relevant information available.*
- **Incompatible materials:** *No further relevant information available.*
- **Hazardous decomposition products:**  
*Nitrogen oxides*  
*Carbon monoxide and carbon dioxide*

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** *No irritant effect.*
- **on the eye:** *No irritating effect.*
- **Sensitization:** *No sensitizing effects known.*
- **Additional toxicological information:**
- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>
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<i>None of the ingredients is listed.</i>
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· <b>NTP (National Toxicology Program)</b>
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<i>None of the ingredients is listed.</i>
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### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **Persistence and degradability** *No further relevant information available.*
- **Behavior in environmental systems:**
- **Bioaccumulative potential** *No further relevant information available.*
- **Mobility in soil** *No further relevant information available.*
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 2 (Self-assessment): hazardous for water*  
*Do not allow product to reach ground water, water course or sewage system.*  
*Danger to drinking water if even small quantities leak into the ground.*
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*
- **Other adverse effects** *No further relevant information available.*

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Must be specially treated adhering to official regulations.*  
*Smaller quantities can be disposed of with household waste.*  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*

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- **Uncleaned packagings:**
- **Recommendation:**  
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.  
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.  
Packaging can be reused or recycled after cleaning.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- |   |  |
|---|--|
| · <b>UN-Number</b>  | Void   |
| · <b>DOT, TDG, ADN, IMDG, IATA</b>  | Void   |
| · <b>UN proper shipping name</b>  | Void   |
| · <b>DOT, TDG, ADN, IMDG, IATA</b>  | Void   |
| · <b>Transport hazard class(es)</b>   | Void   |
| · <b>DOT, TDG, ADN, IMDG, IATA</b>  | Void   |
| · <b>Class</b>  | Void   |
| · <b>Packing group</b>  | Void   |
| · <b>DOT, TDG, IMDG, IATA</b>   | Void   |
| · <b>Environmental hazards:</b>   | No   |
| · <b>Marine pollutant:</b>  | No   |
| · <b>Special precautions for user</b>   | Not applicable.                                      |
| · <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b> | Not applicable.                                      |
| · <b>Transport/Additional information:</b>  | Not dangerous according to the above specifications. |
| · <b>UN "Model Regulation":</b>   | Void   |

### 15 Regulatory information

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

#### · **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

#### · **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

#### · **TSCA (Toxic Substances Control Act):**

77-86-1 | trometamol

7732-18-5 | water, distilled, conductivity or of similar purity

#### · **Canadian substance listings:**

##### · **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

##### · **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

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· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07

· **Signal word** Warning

· **Hazard statements**

Causes serious eye irritation.

· **Precautionary statements**

Wear protective gloves/protective clothing/eye protection/face protection.

Wash thoroughly after handling.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:**

Bio-Rad Laboratories GmbH  
Heidemannstrasse 164  
D-80939 Munich

· **Contact:**

Technical Support:

E-Mail: cts-ce@bio-rad.com

· **Abbreviations and acronyms:**

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

· **\* Data compared to the previous version altered.**



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acc. to OSHA HCS

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## 1 Identification

- **Product identifier**
- **Trade name:** p-Catecholamines by HPLC, REAG 2
- **Article number:** 1955882
- **Application of the substance / the mixture** *In-Vitro-laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier**  
 Bio-Rad Laboratories (Canada) Ltd.  
 2403 Guenette Street  
 Montreal, Quebec H4R 2E9  
 Phone: (514) 334-4372  
 Freephone: 1 (800) 361-1808  
 Fax: (514) 334-0872
- **Information department:**  
 Technical Support:  
 E-mail: [cdg\\_canada\\_salesmarketing@bio-rad.com](mailto:cdg_canada_salesmarketing@bio-rad.com)
- **Emergency telephone number:**  
 GBK Gefahrgut Büro GmbH  
 Tel.: 0049(0)6123-84463

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
 Skin Corrosion - Category 1A      H314 Causes severe skin burns and eye damage.  
 Serious Eye Damage - Category 1      H318 Causes serious eye damage.
- **Label elements**
- **GHS label elements**  
 The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** *Danger*
- **Hazard-determining components of labeling:**  
*acetic acid*
- **Hazard statements**  
*Causes severe skin burns and eye damage.*
- **Precautionary statements**  
*Do not breathe dust/fume/gas/mist/vapours/spray.*  
*IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].*  
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*  
*Immediately call a POISON CENTER/doctor.*  
*Store locked up.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Hazard description:**
- **WHMIS-symbols:**  
*D2B - Toxic material causing other toxic effects*

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E - Corrosive material



- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	4	Health = 4
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

64-19-7	acetic acid	10- <25% w/w
	Flammable Liquids - Category 3, H226;  Skin Corrosion - Category 1A, H314	

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**  
Take affected persons into fresh air and keep quiet.  
Seek medical treatment.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
If skin irritation continues, consult a doctor.  
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Seek medical treatment.  
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

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**Trade name:** p-Catecholamines by HPLC, REAG 2

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- **Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon monoxide (CO)  
CO<sub>2</sub>
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information** Cool endangered receptacles with water spray.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Send for recovery or disposal in suitable receptacles.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Keep receptacles tightly sealed.  
Use only in well ventilated areas.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Unsuitable material for receptacle: aluminium.  
Do not use light alloy receptacles.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** (VCI) 8 B
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**64-19-7 acetic acid**

EL	Short-term value: 15 ppm Long-term value: 10 ppm
EV	Short-term value: 37 mg/m <sup>3</sup> , 15 ppm Long-term value: 25 mg/m <sup>3</sup> , 10 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

· **Breathing equipment:**

Short term filter device:  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

E

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

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**9 Physical and chemical properties**

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

· **General Information**

· **Appearance:**

· <b>Form:</b>	Fluid
· <b>Color:</b>	Colorless
· <b>Odor:</b>	Pungent
· <b>Odor threshold:</b>	Not determined.

· **pH-value at 20 °C:** 2

· **Change in condition**

· <b>Melting point/Melting range:</b>	Undetermined.
· <b>Boiling point/Boiling range:</b>	100 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 485 °C

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

· <b>Lower:</b>	4,0 Vol %
· <b>Upper:</b>	19,9 Vol %

· **Vapor pressure at 20 °C:** 23 hPa

· <b>Density at 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.

· **Solubility in / Miscibility with**

· **Water:** Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.

· **Other information** No further relevant information available.

**10 Stability and reactivity**

· **Reactivity** No further relevant information available.

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

· **Possibility of hazardous reactions**

Reacts with alkali (lyes).

Reacts with metals forming hydrogen.

· **Conditions to avoid** No further relevant information available.

· **Incompatible materials:** No further relevant information available.

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· *Hazardous decomposition products: Hydrogen*

### 11 Toxicological information

· **Information on toxicological effects**· **Acute toxicity:**· **Primary irritant effect:**· **on the skin:** Strong caustic effect on skin and mucous membranes.· **on the eye:** Strong caustic effect.· **Sensitization:** No sensitizing effects known.· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

### 12 Ecological information

· **Toxicity**· **Aquatic toxicity:** No further relevant information available.· **Persistence and degradability** No further relevant information available.· **Behavior in environmental systems:**· **Bioaccumulative potential** No further relevant information available.· **Mobility in soil** No further relevant information available.· **Ecotoxicological effects:**· **Remark:**

The product causes an alteration of the pH-value within the testing system. The result refers to the non-neutralised sample.

· **Additional ecological information:**· **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

· **Waste treatment methods**· **Recommendation:**

Must be specially treated adhering to official regulations.

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Trade name: *p*-Catecholamines by HPLC, REAG 2

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Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:**

Non contaminated packagings can be used for recycling.

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· **UN-Number**

· **DOT, TDG, IMDG, IATA** UN2790

· **UN proper shipping name**

· **DOT** Acetic acid solution

· **TDG** 2790 Acetic acid solution

· **IMDG, IATA** ACETIC ACID SOLUTION

· **Transport hazard class(es)**

· **DOT**



· **Class**

8 Corrosive substances

· **Label**

8

· **TDG, IMDG, IATA**



· **Class**

8 Corrosive substances

· **Label**

8

· **Packing group**

· **DOT, TDG, IMDG, IATA** III

· **Environmental hazards:**

· **Marine pollutant:** No

· **Special precautions for user**

Warning: Corrosive substances

· **Danger code (Kemler):**

80

· **EMS Number:**

F-A,S-B

· **Segregation groups**

Acids

· **Stowage Category**

A

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **TDG**

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: p-Catecholamines by HPLC, REAG 2

(Contd. of page 7)

· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 2790 ACETIC ACID SOLUTION, 8, III

## 15 Regulatory information

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

### · Section 355 (extremely hazardous substances):

None of the ingredient is listed.

### · Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

### · TSCA (Toxic Substances Control Act):

All ingredients are listed.

### · Canadian substance listings:

#### · Canadian Domestic Substances List (DSL)

All ingredients are listed.

#### · Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

#### · Canadian Ingredient Disclosure list (limit 1%)

64-19-7 | acetic acid

### · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

### · Hazard pictograms



GHS05

### · Signal word Danger

### · Hazard-determining components of labeling:

acetic acid

### · Hazard statements

Causes severe skin burns and eye damage.

### · Precautionary statements

Do not breathe dust/fume/gas/mist/vapours/spray.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 9)

CA



**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 02/13/2017

Reviewed on 02/10/2017

**Trade name: p-Catecholamines by HPLC, REAG 2**· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

(Contd. of page 8)

**16 Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing SDS:**

Bio-Rad Laboratories GmbH  
Heidemannstrasse 164  
D-80939 Munich

· **Contact:**

Technical Support:  
E-Mail: [cts-ce@bio-rad.com](mailto:cts-ce@bio-rad.com)

· **Abbreviations and acronyms:**

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative

· **\* Data compared to the previous version altered.**

CA

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

**1 Identification**

- **Product identifier**
- **Trade name:** p-Catecholamines by HPLC, REAG 3
- **Article number:** 1955883
- **Application of the substance / the mixture** *In-Vitro-laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier**  
Bio-Rad Laboratories (Canada) Ltd.  
2403 Guenette Street  
Montreal, Quebec H4R 2E9  
Phone: (514) 334-4372  
Freephone: 1 (800) 361-1808  
Fax: (514) 334-0872
- **Information department:**  
Technical Support:  
E-mail: [cdg\\_canada\\_salesmarketing@bio-rad.com](mailto:cdg_canada_salesmarketing@bio-rad.com)
- **Emergency telephone number:**  
GBK Gefahrgut Büro GmbH  
Tel.: 0049(0)6123-84463

**2 Hazard(s) identification**

- **Classification of the substance or mixture**  
*Acute Toxicity (Oral) - Category 4 H302 Harmful if swallowed.*  
*Serious Eye Damage - Category 1 H318 Causes serious eye damage.*
- **Label elements**
- **GHS label elements**  
*The product is classified and labeled according to the Globally Harmonized System (GHS).*
- **Hazard pictograms**



GHS05 GHS07

- **Signal word** *Danger*
- **Hazard-determining components of labeling:**  
*sodium metabisulphite*
- **Hazard statements**  
*Harmful if swallowed.*  
*Causes serious eye damage.*
- **Precautionary statements**  
*Wear protective gloves/protective clothing/eye protection/face protection.*  
*Wash thoroughly after handling.*  
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*  
*Immediately call a POISON CENTER/doctor.*  
*IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

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Trade name: p-Catecholamines by HPLC, REAG 3

(Contd. of page 1)

- **Hazard description:**
- **WHMIS-symbols:**  
D2B - Toxic material causing other toxic effects



- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

## 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

### · **Dangerous components:**

7681-57-4	sodium metabisulphite	60-100% w/w
	☠ Serious Eye Damage - Category 1, H318; ☠ Acute Toxicity (Oral) - Category 4, H302	

## 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Seek medical treatment.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Induce vomiting, only if affected person is fully conscious.  
Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

CA

(Contd. on page 3)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: p-Catecholamines by HPLC, REAG 3

(Contd. of page 2)

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Sulphur dioxide (SO<sub>2</sub>)  
NaOx
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Mouth respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Avoid formation of dust.  
Use respiratory protective device against the effects of fumes/dust/aerosol.  
Wear protective clothing.  
Mount respiratory protective device.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Send for recovery or disposal in suitable receptacles.  
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Keep receptacles tightly sealed.  
Use only in well ventilated areas.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**  
Store away from foodstuffs.  
Do not store together with acids.
- **Further information about storage conditions:** None.
- **Storage class:** (VCI) 11
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

(Contd. on page 4)

CA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: p-Catecholamines by HPLC, REAG 3

(Contd. of page 3)

## · Control parameters

### · Components with limit values that require monitoring at the workplace:

7681-57-4 sodium metabisulphite

EL Long-term value: 5 mg/m<sup>3</sup>EV Long-term value: 5 mg/m<sup>3</sup>

### · Additional information: The lists that were valid during the creation were used as basis.

## · Exposure controls

### · Personal protective equipment:

#### · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

### · Breathing equipment: Not required.

### · Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

### · Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

### · Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

### · Eye protection:



Tightly sealed goggles

### · Body protection: Protective work clothing

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

Form: Powder

Color: White

· Odor: Characteristic

· Odor threshold: Not determined.

· pH-value at 20 °C: 3,5

#### · Change in condition

Melting point/Melting range: ~150 °C

Boiling point/Boiling range: Undetermined.

(Contd. on page 5)

CA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: p-Catecholamines by HPLC, REAG 3

(Contd. of page 4)

· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not determined.
· <b>Ignition temperature:</b>	
· <b>Decomposition temperature:</b>	> 150 °C
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density at 20 °C:</b>	1,48 g/cm <sup>3</sup>
· <b>Bulk density at 20 °C:</b>	1,100-1.200 kg/m <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water at 20 °C:</b>	~650 g/l
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
To avoid thermal decomposition do not overheat.  
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** Reacts with strong acids and oxidizing agents.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**  
Sulfur dioxide  
NaOx

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.

(Contd. on page 6)

CA

## Safety Data Sheet

acc. to OSHA HCS

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**Trade name: p-Catecholamines by HPLC, REAG 3**

(Contd. of page 5)

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

· **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

### 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must be specially treated adhering to official regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:**

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

Non contaminated packagings can be used for recycling.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

· **UN-Number**

· **DOT, TDG, ADN, IMDG, IATA** Void

· **UN proper shipping name**

· **DOT, TDG, ADN, IMDG, IATA** Void

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**Safety Data Sheet**  
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Reviewed on 02/10/2017

**Trade name: p-Catecholamines by HPLC, REAG 3**

(Contd. of page 6)

- |   |                 |
|---|-----------------|
| · <b>Transport hazard class(es)</b>   |                 |
| · <b>DOT, TDG, ADN, IMDG, IATA</b>  |                 |
| · <b>Class</b>  | Void            |
| · <b>Packing group</b>  |                 |
| · <b>DOT, TDG, IMDG, IATA</b>   | Void            |
| · <b>Environmental hazards:</b>   |                 |
| · <b>Marine pollutant:</b>  | No              |
| · <b>Special precautions for user</b>   | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>   | Void            |

**15 Regulatory information**

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

- **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Canadian substance listings:**

- **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

- **Canadian Ingredient Disclosure list (limit 1%)**

All ingredients are listed.

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05 GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**

sodium metabisulphite

- **Hazard statements**

Harmful if swallowed.

Causes serious eye damage.

(Contd. on page 8)



## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

**Trade name: p-Catecholamines by HPLC, REAG 3**

(Contd. of page 7)

· **Precautionary statements**

*Wear protective gloves/protective clothing/eye protection/face protection.*

*Wash thoroughly after handling.*

*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

*Immediately call a POISON CENTER/doctor.*

*IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

### 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing SDS:**

*Bio-Rad Laboratories GmbH*

*Heidemannstrasse 164*

*D-80939 Munich*

· **Contact:**

*Technical Support:*

*E-Mail: cts-ce@bio-rad.com*

· **Abbreviations and acronyms:**

*IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)*

*ICAO: International Civil Aviation Organisation*

*ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*WHMIS: Workplace Hazardous Materials Information System (Canada)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

· **\* Data compared to the previous version altered.**

CA

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 01/19/2017

## 1 Identification

- **Product identifier**
- **Trade name:** p-Catecholamines by HPLC, DISP COL
- **Article number:** 1955884
- **Application of the substance / the mixture** *In-Vitro-laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier**  
Bio-Rad Laboratories (Canada) Ltd.  
2403 Guenette Street  
Montreal, Quebec H4R 2E9  
Phone: (514) 334-4372  
Freephone: 1 (800) 361-1808  
Fax: (514) 334-0872
- **Information department:**  
Technical Support:  
E-mail: [cdg\\_canada\\_salesmarketing@bio-rad.com](mailto:cdg_canada_salesmarketing@bio-rad.com)
- **Emergency telephone number:**  
GBK Gefahrgut Büro GmbH  
Tel.: 0049(0)6123-84463

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
*The product is not classified according to the Globally Harmonized System (GHS).*
- **Label elements**
- **GHS label elements** *Void*
- **Hazard pictograms** *Void*
- **Signal word** *Void*
- **Hazard statements** *Void*
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

## 3 Composition/information on ingredients

- **Chemical characterization:** *Mixtures*
- **Description:** *Mixture of the substances listed below with nonhazardous additions.*

· **Dangerous components:**

1344-28-1	aluminium oxide	60-100% w/w
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## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 01/19/2017

Trade name: *p-Catecholamines by HPLC, DISP COL*

(Contd. of page 1)

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

(Contd. on page 3)

CA

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 01/19/2017

**Trade name: p-Catecholamines by HPLC, DISP COL**

(Contd. of page 2)

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**1344-28-1 aluminium oxide**

EL Long-term value: 1,0 mg/m<sup>3</sup>  
respirable, as Al

EV Long-term value: 10 mg/m<sup>3</sup>  
total dust

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

· **Breathing equipment:** Not required.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Not required.

**9 Physical and chemical properties**

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

· **General Information**

· **Appearance:**

Form: Solid

Color: White

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value (100 g/l) at 20 °C:** 4

· **Change in condition**

Melting point/Melting range: 2,050 °C

Boiling point/Boiling range: >999 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Auto igniting:** Product is not selfigniting.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 01/19/2017

Trade name: *p*-Catecholamines by HPLC, DISP COL

(Contd. of page 3)

· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density at 20 °C:</b>	3,94 g/cm <sup>3</sup>
· <b>Bulk density at 20 °C:</b>	920 kg/m <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water at 20 °C:</b>	0,001 g/l
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>
---

None of the ingredients is listed.
------------------------------------

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 01/19/2017

Trade name: *p-Catecholamines by HPLC, DISP COL*

(Contd. of page 4)

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Disposal must be made according to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>UN-Number</b>   |                 |
| · <b>DOT, TDG, ADN, IMDG, IATA</b>   | Void            |
| · <b>UN proper shipping name</b>   |                 |
| · <b>DOT, TDG, ADN, IMDG, IATA</b>   | Void            |
| · <b>Transport hazard class(es)</b>  |                 |
| · <b>DOT, TDG, ADN, IMDG, IATA</b>   |                 |
| · <b>Class</b>   | Void            |
| · <b>Packing group</b>   |                 |
| · <b>DOT, TDG, IMDG, IATA</b>  | Void            |
| · <b>Environmental hazards:</b>  |                 |
| · <b>Marine pollutant:</b>   | No              |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | Void            |

(Contd. on page 6)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 01/19/2017

**Trade name: p-Catecholamines by HPLC, DISP COL**

(Contd. of page 5)

**15 Regulatory information**

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

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

All ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

All ingredients are listed.

· **GHS label elements** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:**

Bio-Rad Laboratories GmbH  
Heidemannstrasse 164  
D-80939 Munich

· **Contact:**

Technical Support:  
E-Mail: cts-ce@bio-rad.com

· **Abbreviations and acronyms:**

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative

· **\* Data compared to the previous version altered.**

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

**1 Identification**

- **Product identifier**
- **Trade name:** Urinary Catecholamines by HPLC, INT STND
- **Article number:** 1955367
- **Application of the substance / the mixture** In-Vitro-laboratory reagent or component
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier**  
Bio-Rad Laboratories (Canada) Ltd.  
2403 Guenette Street  
Montreal, Quebec H4R 2E9  
Phone: (514) 334-4372  
Freephone: 1 (800) 361-1808  
Fax: (514) 334-0872
- **Information department:**  
Technical Support:  
E-mail: [cdg\\_canada\\_salesmarketing@bio-rad.com](mailto:cdg_canada_salesmarketing@bio-rad.com)
- **Emergency telephone number:**  
GBK Gefahrgut Büro GmbH  
Tel.: 0049(0)6123-84463

**2 Hazard(s) identification**

- **Classification of the substance or mixture**  
Skin Corrosion - Category 1A H314 Causes severe skin burns and eye damage.  
Serious Eye Damage - Category 1 H318 Causes serious eye damage.
- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard statements**  
Causes severe skin burns and eye damage.
- **Precautionary statements**  
Do not breathe dust/fume/gas/mist/vapours/spray.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER/doctor.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Hazard description:**
- **WHMIS-symbols:**  
D2B - Toxic material causing other toxic effects  
E - Corrosive material

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CA



# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

Trade name: Urinary Catecholamines by HPLC, INT STND

(Contd. of page 1)



- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



## 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- **Dangerous components:** Void

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Dilute with plenty of water.

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CA

## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

**Trade name: Urinary Catecholamines by HPLC, INT STND**

(Contd. of page 2)

*Do not allow to enter sewers/ surface or ground water.*

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

*Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).*

*Use neutralizing agent.*

*Dispose contaminated material as waste according to item 13.*

*Ensure adequate ventilation.*

· **Reference to other sections**

*See Section 7 for information on safe handling.*

*See Section 8 for information on personal protection equipment.*

*See Section 13 for disposal information.*

### 7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

*Ensure good ventilation/exhaustion at the workplace.*

*Prevent formation of aerosols.*

· **Information about protection against explosions and fires:** *No special measures required.*

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

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** *No special requirements.*

· **Information about storage in one common storage facility:** *Not required.*

· **Further information about storage conditions:** *Keep receptacle tightly sealed.*

· **Specific end use(s)** *No further relevant information available.*

### 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** *No further data; see item 7.*

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

*The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.*

· **Additional information:** *The lists that were valid during the creation were used as basis.*

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

*Keep away from foodstuffs, beverages and feed.*

*Immediately remove all soiled and contaminated clothing.*

*Wash hands before breaks and at the end of work.*

*Avoid contact with the eyes.*

*Avoid contact with the eyes and skin.*

· **Breathing equipment:**

*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.*

· **Protection of hands:**



Protective gloves

*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.*

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## Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 02/13/2017

**Trade name: Urinary Catecholamines by HPLC, INT STND**

(Contd. of page 3)

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

### 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:	Fluid
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.

pH-value at 20 °C:	<1
--------------------	----

· **Change in condition**

Melting point/Melting range:	0 °C
Boiling point/Boiling range:	100 °C

Flash point:	Not applicable.
--------------	-----------------

Flammability (solid, gaseous):	Not applicable.
--------------------------------	-----------------

· **Ignition temperature:**

Decomposition temperature:	Not determined.
----------------------------	-----------------

Auto igniting:	Product is not selfigniting.
----------------	------------------------------

Danger of explosion:	Product does not present an explosion hazard.
----------------------	---

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

Vapor pressure at 20 °C:	23 hPa
--------------------------	--------

Density at 20 °C:	1 g/cm <sup>3</sup>
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.

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## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

**Trade name: Urinary Catecholamines by HPLC, INT STND**

(Contd. of page 4)

- |   |  |
|---|--|
| <b>· Solubility in / Miscibility with Water:</b>  | Fully miscible.                            |
| <b>· Partition coefficient (n-octanol/water):</b> | Not determined.                            |
| <b>· Viscosity:</b>                               |  |
| <b>Dynamic:</b>                                   | Not determined.                            |
| <b>Kinematic:</b>                                 | Not determined.                            |
| <b>· Other information</b>                        | No further relevant information available. |

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**
  - **Primary irritant effect:**
  - **on the skin:** Strong caustic effect on skin and mucous membranes.
  - **on the eye:**  
Strong caustic effect.  
Strong irritant with the danger of severe eye injury.
  - **Sensitization:** No sensitizing effects known.
  - **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Corrosive  
Irritant  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
  - **Carcinogenic categories**
- |   |
|---|
| <b>· IARC (International Agency for Research on Cancer)</b> |
| None of the ingredients is listed.                          |
- |  |
|--|
| <b>· NTP (National Toxicology Program)</b> |
| None of the ingredients is listed.         |

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.

(Contd. on page 6)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

**Trade name: Urinary Catecholamines by HPLC, INT STND**

(Contd. of page 5)

- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 1 (Self-assessment): slightly hazardous for water*  
*Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*  
*Must not reach bodies of water or drainage ditch undiluted or unneutralized.*  
*Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- |   |                 |
|---|-----------------|
| · <b>UN-Number</b><br>· <b>DOT, TDG, ADN, IMDG, IATA</b>                                    | Void            |
| · <b>UN proper shipping name</b><br>· <b>DOT, TDG, ADN, IMDG, IATA</b>                      | Void            |
| · <b>Transport hazard class(es)</b><br>· <b>DOT, TDG, ADN, IMDG, IATA</b><br>· <b>Class</b> | Void            |
| · <b>Packing group</b><br>· <b>DOT, TDG, IMDG, IATA</b>                                     | Void            |
| · <b>Environmental hazards:</b><br>· <b>Marine pollutant:</b>                               | No              |
| · <b>Special precautions for user</b>   | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>           | Not applicable. |
| · <b>UN "Model Regulation":</b>   | Void            |

CA

(Contd. on page 7)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

**Trade name: Urinary Catecholamines by HPLC, INT STND**

(Contd. of page 6)

**15 Regulatory information**

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

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

7732-18-5 | water, distilled, conductivity or of similar purity

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

7732-18-5 | water, distilled, conductivity or of similar purity

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05

· **Signal word** *Danger*

· **Hazard statements**

Causes severe skin burns and eye damage.

· **Precautionary statements**

Do not breathe dust/fume/gas/mist/vapours/spray.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:**

Bio-Rad Laboratories GmbH

Heidemannstrasse 164

D-80939 Munich

· **Contact:**

Technical Support:

E-Mail: cts-ce@bio-rad.com

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**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 02/13/2017

Reviewed on 02/13/2017

**Trade name: Urinary Catecholamines by HPLC, INT STND**

(Contd. of page 7)

**· Abbreviations and acronyms:**

ICAO: International Civil Aviation Organisation  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative

**· \* Data compared to the previous version altered.**

CA

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

**1 Identification**

- **Product identifier**
- **Trade name:** p-Catecholamines by HPLC, MP
- **Article number:** 1955885
- **Application of the substance / the mixture** *In-Vitro-laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier**  
Bio-Rad Laboratories (Canada) Ltd.  
2403 Guenette Street  
Montreal, Quebec H4R 2E9  
Phone: (514) 334-4372  
Freephone: 1 (800) 361-1808  
Fax: (514) 334-0872
- **Information department:**  
Technical Support:  
E-mail: [cdg\\_canada\\_salesmarketing@bio-rad.com](mailto:cdg_canada_salesmarketing@bio-rad.com)
- **Emergency telephone number:**  
GBK Gefahrgut Büro GmbH  
Tel.: 0049(0)6123-84463

**2 Hazard(s) identification**

- **Classification of the substance or mixture**  
Flammable Liquids - Category 4 H227 Combustible liquid.  
Specific Target Organ Toxicity - Single Exposure - H371 May cause damage to organs.  
Category 2

- **Label elements**
- **GHS label elements**  
*The product is classified and labeled according to the Globally Harmonized System (GHS).*
- **Hazard pictograms**



GHS08

- **Signal word** *Warning*
- **Hazard-determining components of labeling:**  
*methanol*
- **Hazard statements**  
*Combustible liquid.*  
*May cause damage to organs.*
- **Precautionary statements**  
*Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*  
*Do not breathe dust/fume/gas/mist/vapours/spray.*  
*Wear protective gloves/protective clothing/eye protection/face protection.*  
*Store locked up.*  
*Store in a well-ventilated place.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Hazard description:**
- **WHMIS-symbols:**  
*B3 - Combustible liquid*

(Contd. on page 2)



**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

**Trade name: p-Catecholamines by HPLC, MP**

(Contd. of page 1)

D2B - Toxic material causing other toxic effects



- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

67-56-1	methanol	3-5% w/w
	Flammable Liquids - Category 2, H225;  Acute Toxicity (Oral) - Category 3, H301; Acute Toxicity (Dermal) - Category 3, H311; Acute Toxicity (Inhalation) - Category 3, H331;  Specific Target Organ Toxicity - Single Exposure - Category 1, H370	

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Seek medical treatment.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Take affected persons into fresh air and keep quiet.  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

**Trade name: p-Catecholamines by HPLC, MP**

(Contd. of page 2)

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
Alcohol resistant foam  
Fire-extinguishing powder  
Carbon dioxide  
Water spray
- **Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon monoxide (CO)  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur dioxide (SO<sub>2</sub>)
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Mouth respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Use respiratory protective device against the effects of fumes/dust/aerosol.  
Ensure adequate ventilation  
Wear protective clothing.  
Keep away from ignition sources
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Send for recovery or disposal in suitable receptacles.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Keep receptacles tightly sealed.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 4)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: *p*-Catecholamines by HPLC, MP

(Contd. of page 3)

- **Information about storage in one common storage facility:**  
Store away from oxidizing agents.  
Store away from foodstuffs.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** (VCI) 10
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

#### 67-56-1 methanol

EL	Short-term value: 250 ppm Long-term value: 200 ppm Skin
EV	Short-term value: 325 mg/m <sup>3</sup> , 250 ppm Long-term value: 260 mg/m <sup>3</sup> , 200 ppm Skin

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Do not eat, drink, smoke or sniff while working.  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
Short term filter device:  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling.

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# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: *p*-Catecholamines by HPLC, MP

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· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

Form:	Fluid
Color:	Colorless
Odor:	Characteristic
Odor threshold:	Not determined.

· pH-value at 20 °C: 4,5

#### · Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C

· Flash point: 65 °C

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: &gt; 400 °C

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Not determined.

#### · Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapor pressure at 20 °C: 23 hPa

Density at 20 °C:	1 g/cm <sup>3</sup>
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.

#### · Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

· Partition coefficient (n-octanol/water): Not determined.

#### · Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Other information: No further relevant information available.

## 10 Stability and reactivity

· **Reactivity** No further relevant information available.

#### · Chemical stability

#### · Thermal decomposition / conditions to be avoided:

To avoid thermal decomposition do not overheat.

No decomposition if used and stored according to specifications.

· **Possibility of hazardous reactions** Reacts with oxidizing agents.

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## Safety Data Sheet

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Reviewed on 02/10/2017

**Trade name:** *p*-Catecholamines by HPLC, MP

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- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**  
Carbon monoxide and carbon dioxide  
Sulfur dioxide  
Nitrogen oxides  
Phosphorus oxides (e.g. P<sub>2</sub>O<sub>5</sub>)

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful

- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must be specially treated adhering to official regulations.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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**Trade name: p-Catecholamines by HPLC, MP**

(Contd. of page 6)

- **Uncleaned packagings:**
- **Recommendation:**  
Non contaminated packagings can be used for recycling.  
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

**14 Transport information**

- **UN-Number**  
· **DOT, TDG, ADN, IMDG, IATA**      *Void*
- **UN proper shipping name**  
· **DOT, TDG, ADN, IMDG, IATA**      *Void*
- **Transport hazard class(es)**  
· **DOT, TDG, ADN, IMDG, IATA**  
· **Class**      *Void*
- **Packing group**  
· **DOT, TDG, IMDG, IATA**      *Void*
- **Environmental hazards:**  
· **Marine pollutant:**      *No*
- **Special precautions for user**      *Not applicable.*
- **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**      *Not applicable.*
- **UN "Model Regulation":**      *Void*

**15 Regulatory information**

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

· **Section 355 (extremely hazardous substances):**

*None of the ingredient is listed.*

· **Section 313 (Specific toxic chemical listings):**

67-56-1 | *methanol*

· **TSCA (Toxic Substances Control Act):**

67-56-1 | *methanol*  
5324-84-5 | *sodium octane-1-sulphonate monohydrate*  
7732-18-5 | *water, distilled, conductivity or of similar purity*

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

67-56-1 | *methanol*  
5949-29-1 | *1,2,3-Propanetricarboxylic acid, 2-hydroxy-, monohydrate*  
5324-84-5 | *sodium octane-1-sulphonate monohydrate*  
6381-92-6 | *Titriplex III*  
*(ethylendinitrilotetraacetic acid disodium salt dihydrat)*  
7732-18-5 | *water, distilled, conductivity or of similar purity*

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**Trade name: p-Catecholamines by HPLC, MP**

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**· Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

**· Canadian Ingredient Disclosure list (limit 1%)**

67-56-1 | methanol

**· GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

**· Hazard pictograms**


GHS08

**· Signal word** Warning

**· Hazard-determining components of labeling:**

methanol

**· Hazard statements**

Combustible liquid.

May cause damage to organs.

**· Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

Store locked up.

Store in a well-ventilated place.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**· Department issuing SDS:**

Bio-Rad Laboratories GmbH

Heidemannstrasse 164

D-80939 Munich

**· Contact:**

Technical Support:

E-Mail: [cts-ce@bio-rad.com](mailto:cts-ce@bio-rad.com)
**· Abbreviations and acronyms:**

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

**· \* Data compared to the previous version altered.**

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

## 1 Identification

- **Product identifier**
- **Trade name:** p-Catecholamines by HPLC, CAL
- **Article number:** 1956059M
- **Application of the substance / the mixture** In-Vitro-laboratory reagent or component
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier**  
Bio-Rad Laboratories (Canada) Ltd.  
2403 Guenette Street  
Montreal, Quebec H4R 2E9  
Phone: (514) 334-4372  
Freephone: 1 (800) 361-1808  
Fax: (514) 334-0872
- **Information department:**  
Technical Support:  
E-mail: [cdg\\_canada\\_salesmarketing@bio-rad.com](mailto:cdg_canada_salesmarketing@bio-rad.com)
- **Emergency telephone number:**  
GBK Gefahrgut Büro GmbH  
Tel.: 0049(0)6123-84463

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



## 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Human source material. Treat as potentially infectious.
- **Dangerous components:** Void



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Trade name: *p-Catecholamines by HPLC, CAL*

(Contd. of page 1)

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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Trade name: *p*-Catecholamines by HPLC, CAL

(Contd. of page 2)

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Not required.

### 9 Physical and chemical properties

- |   |                 |
|---|-----------------|
| · <b>Information on basic physical and chemical properties</b>              |                 |
| · <b>General Information</b>  |                 |
| · <b>Appearance:</b>  |                 |
| Form:   | Solid           |
| Color:  | Yellowish       |
| Odor:   | Characteristic  |
| Odor threshold:   | Not determined. |
| · <b>pH-value:</b> Not applicable.  |                 |
| · <b>Change in condition</b>  |                 |
| Melting point/Melting range:  | Undetermined.   |
| Boiling point/Boiling range:  | Undetermined.   |
| · <b>Flash point:</b> Not applicable.                                       |                 |
| · <b>Flammability (solid, gaseous):</b> Not determined.                     |                 |
| · <b>Ignition temperature:</b>  |                 |
| Decomposition temperature:  | Not determined. |
| · <b>Auto igniting:</b> Product is not selfigniting.                        |                 |
| · <b>Danger of explosion:</b> Product does not present an explosion hazard. |                 |
| · <b>Explosion limits:</b>  |                 |
| Lower:  | Not determined. |

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Trade name: *p*-Catecholamines by HPLC, CAL

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<b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Soluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product is not subject to classification according to internally approved calculation methods for preparations:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.

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## Safety Data Sheet

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Reviewed on 02/13/2017

Trade name: p-Catecholamines by HPLC, CAL

(Contd. of page 4)

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 1 (Self-assessment): slightly hazardous for water*  
*Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Disposal must be made according to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- |   |                 |
|---|-----------------|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, TDG, ADN, IMDG, IATA</b></li> </ul>  | Void            |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT, TDG, ADN, IMDG, IATA</b></li> </ul>                            | Void            |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, TDG, ADN, IMDG, IATA</b></li> <li>· <b>Class</b></li> </ul> | Void            |
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, TDG, IMDG, IATA</b></li> </ul>   | Void            |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>                                     | No              |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> </ul>   | Not applicable. |
| <ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>                        | Not applicable. |
| <ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>   | Void            |

### 15 Regulatory information

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

<ul style="list-style-type: none"> <li>· <b>Section 355 (extremely hazardous substances):</b></li> </ul>
--

<ul style="list-style-type: none"> <li>· <i>None of the ingredient is listed.</i></li> </ul>
--

(Contd. on page 6)

## Safety Data Sheet

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Reviewed on 02/13/2017

**Trade name: p-Catecholamines by HPLC, CAL**

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· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

None of the ingredients is listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

· **GHS label elements** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:**

Bio-Rad Laboratories GmbH  
Heidemannstrasse 164  
D-80939 Munich

· **Contact:**

Technical Support:  
E-Mail: [cts-ce@bio-rad.com](mailto:cts-ce@bio-rad.com)

· **Abbreviations and acronyms:**

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative

· **\* Data compared to the previous version altered.**

CA