

02/13/2017

Kit Components

Product code	Description
1955880	p-Catecholamines by HPLC, Reagent Kit

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

- **1.1 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
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Inc
4000 Alfred Nobel Drive
Hercules, California 94547
USA
Phone: 510-724-7000
Toll-Free: 1-800-2-BIORAD (800-224-6723)
Fax: 510-741-6373
- **Information department:**
Technical Support:
Email: support@bio-rad.com
- **1.4 Emergency telephone number:**
GBK Gefahrgut Büro GmbH
Tel.: 0049(0)6123-84463

2 Hazard(s) identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Eye Irrit. 2A H319 Causes serious eye irritation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labeled according to the CLP regulation.
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard statements**
H319 Causes serious eye irritation.
- **Precautionary statements**
P280 Wear eye protection / face protection.
P264 Wash thoroughly after handling.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 0
Reactivity = 0

(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, REAG 1

(Contd. of page 1)

· **HMIS-ratings (scale 0 - 4)**

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

· **2.3 Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

3 Composition/information on ingredients

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

77-86-1	trometamol	10-25%
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4 First-aid measures

· **4.1 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.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

· **5.1 Extinguishing media**· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.· **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Carbon monoxide (CO)

Nitrogen oxides (NO_x)· **5.3 Advice for firefighters**· **Protective equipment:** Wear self-contained respiratory protective device.· **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Use respiratory protective device against the effects of fumes/dust/aerosol.

· **6.2 Environmental precautions:**

Dilute with plenty of water.

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

(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 1

(Contd. of page 2)

6.3 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).

6.4 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.

Protective Action Criteria for Chemicals

PAC-1:

77-86-1	trometamol	18 mg/m3
6381-92-6	Titriplex III (ethylendinitrilotetraacetic acid disodium salt dihydrat)	30 mg/m3

PAC-2:

77-86-1	trometamol	190 mg/m3
6381-92-6	Titriplex III (ethylendinitrilotetraacetic acid disodium salt dihydrat)	330 mg/m3

PAC-3:

77-86-1	trometamol	1,200 mg/m3
6381-92-6	Titriplex III (ethylendinitrilotetraacetic acid disodium salt dihydrat)	2,000 mg/m3

7 Handling and storage

7.1 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.

7.2 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.

7.3 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.

8.1 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.

8.2 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.

(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, REAG 1

(Contd. of page 3)

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.· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **9.1 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 (68 °F):** 8.6· **Change in condition****Melting point/Melting range:** Undetermined.**Boiling point/Boiling range:** 100 °C (212 °F)· **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 (68 °F):** 23 hPa (17 mm Hg)· **Density at 20 °C (68 °F):** 1 g/cm³ (8.345 lbs/gal)· **Relative density** Not determined.· **Vapor density** Not determined.· **Evaporation rate** Not determined.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: *p*-Catecholamines by HPLC, REAG 1

(Contd. of page 4)

- | | |
|---|--|
| · Solubility in / Miscibility with Water: | Fully miscible. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| VOC content: | 0.0 g/l / 0.00 lb/gl |
| · 9.2 Other information | No further relevant information available. |

10 Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
To avoid thermal decomposition do not overheat.
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with strong acids.
Reacts with strong oxidizing agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Nitrogen oxides
Carbon monoxide and carbon dioxide

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:**
Causes serious eye irritation.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)
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None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)
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None of the ingredients is listed.

12 Ecological information

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

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: p-Catecholamines by HPLC, REAG 1

(Contd. of page 5)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

- **13.1 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.
- **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

- | | |
|--|--|
| · 14.1 UN-Number
· DOT, ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name
· DOT, ADR, ADN, IMDG, IATA | Void |
| · 14.3 Transport hazard class(es)
· DOT, ADR, ADN, IMDG, IATA
· Class | Void |
| · 14.4 Packing group
· DOT, ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards:
· Marine pollutant: | No |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · UN "Model Regulation": | Void |

US

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: p-Catecholamines by HPLC, REAG 1

(Contd. of page 6)

15 Regulatory information

- 15.1 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

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- 15.2 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

· Date of preparation / last revision 02/13/2017 / 13

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

(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 1

(Contd. of page 7)

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
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)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

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

US

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

1 Identification

- **1.1 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
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Inc
4000 Alfred Nobel Drive
Hercules, California 94547
USA
Phone: 510-724-7000
Toll-Free: 1-800-2-BIORAD (800-224-6723)
Fax: 510-741-6373
- **Information department:**
Technical Support:
Email: support@bio-rad.com
- **1.4 Emergency telephone number:**
GBK Gefahrgut Büro GmbH
Tel.: 0049(0)6123-84463

2 Hazard(s) identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Acute Tox. 5 H313 May be harmful in contact with skin.
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labeled according to the CLP regulation.
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard-determining components of labeling:**
acetic acid
- **Hazard statements**
H313 May be harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**
P260 Do not breathe dusts or mists.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P405 Store locked up.

(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, REAG 2

(Contd. of page 1)

P501

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

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



Health = 3
Fire = 0
Reactivity = 0

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



Health = 4
Fire = 0
Reactivity = 0

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

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

- **Dangerous components:**

64-19-7 | acetic acid

10-<25%

4 First-aid measures

- **4.1 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.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:

(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 2

(Contd. of page 2)

Carbon monoxide (CO)

CO₂
· 5.3 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

· 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

Dilute with plenty of water.

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

· 6.3 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.

· 6.4 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.

· Protective Action Criteria for Chemicals
· PAC-1:

64-19-7 acetic acid

5 ppm

· PAC-2:

64-19-7 acetic acid

35 ppm

· PAC-3:

64-19-7 acetic acid

250 ppm

7 Handling and storage

· 7.1 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.

· 7.2 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

(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, REAG 2

(Contd. of page 3)

- **7.3 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.

- **8.1 Control parameters**

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

64-19-7 acetic acid

PEL Long-term value: 25 mg/m³, 10 ppm

REL Short-term value: 37 mg/m³, 15 ppm

Long-term value: 25 mg/m³, 10 ppm

TLV Short-term value: 37 mg/m³, 15 ppm

Long-term value: 25 mg/m³, 10 ppm

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

- **8.2 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

(Contd. on page 5)

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 4)

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

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

· pH-value at 20 °C (68 °F): 2

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 485 °C (905 °F)

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

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

· Explosion limits:

Lower:	4.0 Vol %
Upper:	19.9 Vol %

· Vapor pressure at 20 °C (68 °F): 23 hPa (17 mm Hg)

· Density at 20 °C (68 °F): 1 g/cm³ (8.345 lbs/gal)

· Relative density: Not determined.

· Vapor density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

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

· Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

VOC content: 23.8 %
1000.0 g/l / 8.35 lb/gl

· 9.2 Other information: No further relevant information available.

10 Stability and reactivity

· 10.1 Reactivity: No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

(Contd. on page 6)

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 5)

- **10.3 Possibility of hazardous reactions**
Reacts with alkali (lyes).
Reacts with metals forming hydrogen.
- **10.4 Conditions to avoid** *No further relevant information available.*
- **10.5 Incompatible materials:** *No further relevant information available.*
- **10.6 Hazardous decomposition products:** *Hydrogen*

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
May be harmful in contact with skin.
- **Primary irritant effect:**
- **on the skin:**
Causes severe skin burns and eye damage.
- **on the eye:**
Causes serious eye damage.
- **Sensitization:** *Based on available data, the classification criteria are not met.*
- **Additional toxicological information:**
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)

<i>None of the ingredients is listed.</i>

· NTP (National Toxicology Program)
--

<i>None of the ingredients is listed.</i>

· OSHA-Ca (Occupational Safety & Health Administration)
--

<i>None of the ingredients is listed.</i>

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **12.2 Persistence and degradability** *No further relevant information available.*
- **12.3 Bioaccumulative potential** *No further relevant information available.*
- **12.4 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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*
- **12.6 Other adverse effects** *No further relevant information available.*

US

(Contd. on page 7)

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 6)

13 Disposal considerations

· 13.1 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:

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

· 14.1 UN-Number

· DOT, ADR, IMDG, IATA UN2790

· 14.2 UN proper shipping name

· DOT Acetic acid solution

· ADR 2790 Acetic acid solution

· IMDG, IATA ACETIC ACID SOLUTION

· 14.3 Transport hazard class(es)

· DOT



· Class 8 Corrosive substances

· Label 8

· ADR, IMDG, IATA



· Class 8 Corrosive substances

· Label 8

· 14.4 Packing group

· DOT, ADR, IMDG, IATA III

· 14.5 Environmental hazards:

· Marine pollutant: No

· 14.6 Special precautions for user

Warning: Corrosive substances

· Danger code (Kemler): 80

· EMS Number: F-A,S-B

· Segregation groups Acids

· Stowage Category A

· 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

(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)

· Transport/Additional information:

· ADR

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· IMDG

· Limited quantities (LQ)

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":

UN 2790 ACETIC ACID SOLUTION, 8, III

15 Regulatory information

· 15.1 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.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· 15.2 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.

(Contd. on page 9)

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 8)

· **Department issuing SDS:**

Bio-Rad Laboratories GmbH
Heidemannstrasse 164
D-80939 Munich

· **Contact:**

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

· **Date of preparation / last revision 02/13/2017 / 13**

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

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)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 5: Acute toxicity – Category 5

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

1 Identification

- **1.1 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
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Inc
4000 Alfred Nobel Drive
Hercules, California 94547
USA
Phone: 510-724-7000
Toll-Free: 1-800-2-BIORAD (800-224-6723)
Fax: 510-741-6373
- **Information department:**
Technical Support:
Email: support@bio-rad.com
- **1.4 Emergency telephone number:**
GBK Gefahrgut Büro GmbH
Tel.: 0049(0)6123-84463

2 Hazard(s) identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Acute Tox. 4 H302 Harmful if swallowed.
Eye Dam. 1 H318 Causes serious eye damage.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labeled according to the CLP regulation.
- **Hazard pictograms**



GHS05 GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**
sodium metabisulphite
- **Hazard statements**
H302 Harmful if swallowed.
H318 Causes serious eye damage.
- **Precautionary statements**
P280 Wear eye protection / face protection.
P264 Wash thoroughly after handling.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(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, REAG 3

(Contd. of page 1)

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



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

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

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

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

- **Dangerous components:**

7681-57-4	sodium metabisulphite	50-100%
-----------	-----------------------	---------

4 First-aid measures

- **4.1 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.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Sulphur dioxide (SO₂)
NaOx

(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)

- **5.3 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

- **6.1 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.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 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.
- **6.4 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.
- **Protective Action Criteria for Chemicals**

· PAC-1:		
7681-57-4	sodium metabisulphite	15 mg/m3
· PAC-2:		
7681-57-4	sodium metabisulphite	64 mg/m3
· PAC-3:		
7681-57-4	sodium metabisulphite	390 mg/m3

7 Handling and storage

- **7.1 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.
- **7.2 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
- **7.3 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)

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)

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

7681-57-4 sodium metabisulphite

REL Long-term value: 5 mg/m³TLV Long-term value: 5 mg/m³

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

8.2 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

9.1 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 (68 °F): 3.5

Change in condition

Melting point/Melting range: ~150 °C (~302 °F)

Boiling point/Boiling range: Undetermined.

(Contd. on page 5)

US

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)

· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not determined.
· Ignition temperature:	
· Decomposition temperature:	> 150 °C
· 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:	Not applicable.
· Density at 20 °C (68 °F):	1.48 g/cm ³ (12.3506 lbs/gal)
· Bulk density at 20 °C (68 °F):	1.100-1,200 kg/m ³
· Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water at 20 °C (68 °F):	~650 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· VOC content:	0.0 g/l / 0.00 lb/gl
· 9.2 Other information	No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
Harmful if swallowed.
- **Primary irritant effect:**
- **on the skin:** Based on available data, the classification criteria are not met.

(Contd. on page 6)

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 5)

- **on the eye:**
Causes serious eye damage.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **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.

· OSHA-Ca (Occupational Safety & Health Administration)
--

None of the ingredients is listed.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

- **13.1 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

- | | |
|------------------------------------|------|
| · 14.1 UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
- | | |
|---------------------------------------|------|
| · 14.2 UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | Void |

(Contd. on page 7)

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 6)

- | | |
|--|-----------------|
| · 14.3 Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · 14.4 Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards: | |
| · Marine pollutant: | No |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Void |

15 Regulatory information

- 15.1 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.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

7681-57-4 | sodium metabisulphite

A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

-US

(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)

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

· **Date of preparation / last revision 02/13/2017 / 16**

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

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)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 01/19/2017

1 Identification

- **1.1 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
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Inc
4000 Alfred Nobel Drive
Hercules, California 94547
USA
Phone: 510-724-7000
Toll-Free: 1-800-2-BIORAD (800-224-6723)
Fax: 510-741-6373
- **Information department:**
Technical Support:
Email: support@bio-rad.com
- **1.4 Emergency telephone number:**
GBK Gefahrgut Büro GmbH
Tel.: 0049(0)6123-84463

2 Hazard(s) identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The product is not classified according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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



- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

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

(Contd. on page 2)

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)

· **Dangerous components:**

1344-28-1 aluminium oxide

50-100%

4 First-aid measures

· **4.1 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.· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

· **5.1 Extinguishing media**· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.· **5.3 Advice for firefighters**· **Protective equipment:** No special measures required.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures** Not required.· **6.2 Environmental precautions:** No special measures required.· **6.3 Methods and material for containment and cleaning up:** Pick up mechanically.· **6.4 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.

· **Protective Action Criteria for Chemicals**· **PAC-1:**

1344-28-1 aluminium oxide

15 mg/m3

· **PAC-2:**

1344-28-1 aluminium oxide

170 mg/m3

· **PAC-3:**

1344-28-1 aluminium oxide

990 mg/m3

7 Handling and storage

· **7.1 Precautions for safe handling** No special measures required.· **Information about protection against explosions and fires:** No special measures required.· **7.2 Conditions for safe storage, including any incompatibilities**· **Storage:**· **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 3)

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)

- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **7.3 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.

8.1 Control parameters

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

1344-28-1 aluminium oxide

PEL	Long-term value: 15*; 5** mg/m ³ *Total dust; ** Respirable fraction
REL	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV	Long-term value: 1* mg/m ³ as Al; *as respirable fraction

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

8.2 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

- **9.1 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 (68 °F):** 4

(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)

· Change in condition	
Melting point/Melting range:	2.050 °C (36 °F)
Boiling point/Boiling range:	>999 °C (>1830 °F)
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not determined.
· 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:	Not applicable.
· Density at 20 °C (68 °F):	3.94 g/cm ³ (32.8793 lbs/gal)
· Bulk density at 20 °C (68 °F):	920 kg/m ³
· Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water at 20 °C (68 °F):	0.001 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
VOC content:	0.0 g/l / 0.00 lb/gl
· 9.2 Other information	No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.

(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)

· **Additional toxicological information:**· **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.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **12.1 Toxicity**· **Aquatic toxicity:** No further relevant information available.· **12.2 Persistence and degradability** No further relevant information available.· **12.3 Bioaccumulative potential** No further relevant information available.· **12.4 Mobility in soil** No further relevant information available.· **Additional ecological information:**· **General notes:** Generally not hazardous for water· **12.5 Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

· **13.1 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

· **14.1 UN-Number**· **DOT, ADR, ADN, IMDG, IATA**

Void

· **14.2 UN proper shipping name**· **DOT, ADR, ADN, IMDG, IATA**

Void

· **14.3 Transport hazard class(es)**· **DOT, ADR, ADN, IMDG, IATA**· **Class**

Void

· **14.4 Packing group**· **DOT, ADR, IMDG, IATA**

Void

· **14.5 Environmental hazards:**· **Marine pollutant:**

No

· **14.6 Special precautions for user**

Not applicable.

(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)

- | | |
|--|-----------------|
| · 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Void |

15 Regulatory information

- **15.1 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.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenicity categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**

1344-28-1 | aluminium oxide

A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **15.2 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

- **Date of preparation / last revision** 02/13/2017 / 11

(Contd. on page 7)

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 6)

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 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)
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 ACGIH: American Conference of Governmental Industrial Hygienists
 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)
 VOC: Volatile Organic Compounds (USA, EU)
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit

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

US

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

1 Identification

- **1.1 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
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Inc
4000 Alfred Nobel Drive
Hercules, California 94547
USA
Phone: 510-724-7000
Toll-Free: 1-800-2-BIORAD (800-224-6723)
Fax: 510-741-6373
- **Information department:**
Technical Support:
Email: support@bio-rad.com
- **1.4 Emergency telephone number:**
GBK Gefahrgut Büro GmbH
Tel.: 0049(0)6123-84463

2 Hazard(s) identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labeled according to the CLP regulation.
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard statements**
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**
P260 Do not breathe dusts or mists.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)

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)**



- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

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

4 First-aid measures

- **4.1 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.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

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

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

(Contd. on page 3)

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)

· **6.3 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.

· **6.4 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.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**

None of the ingredients is listed.

· **PAC-2:**

None of the ingredients is listed.

· **PAC-3:**

None of the ingredients is listed.

7 Handling and storage

· **7.1 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.

· **7.2 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.

· **7.3 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.

· **8.1 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.

· **8.2 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.

(Contd. on page 4)

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 3)

· 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

9 Physical and chemical properties

· 9.1 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 (68 °F): <1

· Change in condition

Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	100 °C (212 °F)

· 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.

(Contd. on page 5)

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)

· Vapor pressure at 20 °C (68 °F):	23 hPa (17 mm Hg)
· Density at 20 °C (68 °F):	1 g/cm ³ (8.345 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· 9.2 Other information	No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **on the skin:**
Causes severe skin burns and eye damage.
- **on the eye:**
Causes serious eye damage.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **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.

· OSHA-Ca (Occupational Safety & Health Administration)
--

None of the ingredients is listed.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** 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)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

- **13.1 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

- | | |
|--|-----------------|
| · 14.1 UN-Number
· DOT, ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name
· DOT, ADR, ADN, IMDG, IATA | Void |
| · 14.3 Transport hazard class(es)
· DOT, ADR, ADN, IMDG, IATA
· Class | Void |
| · 14.4 Packing group
· DOT, ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards:
· Marine pollutant: | No |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Void |

-US-

(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

- 15.1 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

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenicity categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- 15.2 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

- **Date of preparation / last revision** 02/13/2017 / 2

- **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association

(Contd. on page 8)

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)

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

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

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

1 Identification

- **1.1 Product identifier**
- **Trade name:** p-Catecholamines by HPLC, MP
- **Article number:** 1955885
- **Application of the substance / the mixture** In-Vitro-laboratory reagent or component
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Inc
4000 Alfred Nobel Drive
Hercules, California 94547
USA
Phone: 510-724-7000
Toll-Free: 1-800-2-BIORAD (800-224-6723)
Fax: 510-741-6373
- **Information department:**
Technical Support:
Email: support@bio-rad.com
- **1.4 Emergency telephone number:**
GBK Gefahrgut Büro GmbH
Tel.: 0049(0)6123-84463

2 Hazard(s) identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Flam. Liq. 4 H227 Combustible liquid.
Acute Tox. 5 H333 May be harmful if inhaled.
STOT SE 2 H371 May cause damage to organs.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labeled according to the CLP regulation.
- **Hazard pictograms**



GHS08

- **Signal word** Warning
- **Hazard-determining components of labeling:**
methanol
- **Hazard statements**
H227 Combustible liquid.
H333 May be harmful if inhaled.
H371 May cause damage to organs.
- **Precautionary statements**
P210 Keep away from flames and hot surfaces. – No smoking.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)

US

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)

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



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

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

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

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

- **Dangerous components:**

67-56-1	methanol	3-<10%
---------	----------	--------

4 First-aid measures

- **4.1 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.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Alcohol resistant foam
Fire-extinguishing powder

(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)

Carbon dioxide

Water spray

· **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Carbon monoxide (CO)

Nitrogen oxides (NO_x)Sulphur dioxide (SO₂)

· **5.3 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

· **6.1 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

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **6.3 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.

· **6.4 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.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**

67-56-1	methanol	530 ppm
6381-92-6	Titriplex III (ethylendinitrilotetraacetic acid disodium salt dihydrat)	30 mg/m ³

· **PAC-2:**

67-56-1	methanol	2,100 ppm
6381-92-6	Titriplex III (ethylendinitrilotetraacetic acid disodium salt dihydrat)	330 mg/m ³

· **PAC-3:**

67-56-1	methanol	7200* ppm
6381-92-6	Titriplex III (ethylendinitrilotetraacetic acid disodium salt dihydrat)	2,000 mg/m ³

7 Handling and storage

· **7.1 Precautions for safe handling**

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

(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 protection against explosions and fires:** No special measures required.
- **7.2 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 oxidizing agents.
Store away from foodstuffs.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** (VCI) 10
- **7.3 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.

8.1 Control parameters

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

67-56-1 methanol

PEL	Long-term value: 260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m ³ , 250 ppm
	Long-term value: 260 mg/m ³ , 200 ppm
	Skin
TLV	Short-term value: 328 mg/m ³ , 250 ppm
	Long-term value: 262 mg/m ³ , 200 ppm
	Skin; BEI

- **Ingredients with biological limit values:**

67-56-1 methanol

BEI	15 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Methanol (background, nonspecific)

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

8.2 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.

(Contd. on page 5)

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 4)

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.

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **9.1 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 (68 °F):** 4.5

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)

- **Flash point:** 65 °C (149 °F)

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

- **Ignition temperature:** > 400 °C (> 752 °F)

- **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 (68 °F):** 23 hPa (17 mm Hg)

- **Density at 20 °C (68 °F):** 1 g/cm³ (8.345 lbs/gal)

- **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.

(Contd. on page 6)

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 5)

- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
 - VOC content:** 3.8 %
- **9.2 Other information** No further relevant information available.

10 Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
To avoid thermal decomposition do not overheat.
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with oxidizing agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Sulfur dioxide
Nitrogen oxides
Phosphorus oxides (e.g. P₂O₅)

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
May be harmful if inhaled.
- **Primary irritant effect:**
- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**

- **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.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

(Contd. on page 7)

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 6)

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

13 Disposal considerations

- **13.1 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:**
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

- | | |
|--|-----------------|
| · 14.1 UN-Number
· DOT, ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name
· DOT, ADR, ADN, IMDG, IATA | Void |
| · 14.3 Transport hazard class(es)
· DOT, ADR, ADN, IMDG, IATA
· Class | Void |
| · 14.4 Packing group
· DOT, ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards:
· Marine pollutant: | No |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Void |

15 Regulatory information

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

Section 355 (extremely hazardous substances):
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<i>None of the ingredient is listed.</i>
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(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, MP

(Contd. of page 7)

· **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

· **Proposition 65**· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

67-56-1 | methanol

· **Carcinogenicity categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **15.2 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

· **Date of preparation / last revision** 02/13/2017 / 16· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances

(Contd. on page 9)

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 8)

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 4: Flammable liquids – Category 4

Acute Tox. 5: Acute toxicity – Category 5

STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

· *** 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

- **1.1 Product identifier**
- **Trade name:** p-Catecholamines by HPLC, CAL
- **Article number:** 1956059M
- **Application of the substance / the mixture** *In-Vitro-laboratory reagent or component*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Inc
4000 Alfred Nobel Drive
Hercules, California 94547
USA
Phone: 510-724-7000
Toll-Free: 1-800-2-BIORAD (800-224-6723)
Fax: 510-741-6373
- **Information department:**
Technical Support:
Email: support@bio-rad.com
- **1.4 Emergency telephone number:**
GBK Gefahrgut Büro GmbH
Tel.: 0049(0)6123-84463

2 Hazard(s) identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The product is not classified according to the CLP regulation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** *Void*
- **Hazard pictograms** *Void*
- **Signal word** *Void*
- **Hazard statements** *Void*
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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



- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**
- **Description:** Human source material. Treat as potentially infectious.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

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

(Contd. of page 1)

· *Dangerous components: Void*

4 First-aid measures

- **4.1 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.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

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

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:** Pick up mechanically.
- **6.4 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.
- **Protective Action Criteria for Chemicals**

· PAC-1:
None of the ingredients is listed.
· PAC-2:
None of the ingredients is listed.
· PAC-3:
None of the ingredients is listed.

7 Handling and storage

- **7.1 Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 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.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

Trade name: p-Catecholamines by HPLC, CAL

(Contd. of page 2)

- **Further information about storage conditions:** None.
- **7.3 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.
- **8.1 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.
- **8.2 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

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Solid
Color:	Yellowish
Odor:	Characteristic
Odor threshold:	Not determined.
- **pH-value:** Not applicable.
- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not determined.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

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

(Contd. of page 3)

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

10 Stability and reactivity

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

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **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.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

Trade name: p-Catecholamines by HPLC, CAL

(Contd. of page 4)

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

- **13.1 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

- | | |
|--|-----------------|
| · 14.1 UN-Number
· DOT, ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name
· DOT, ADR, ADN, IMDG, IATA | Void |
| · 14.3 Transport hazard class(es)
· DOT, ADR, ADN, IMDG, IATA
· Class | Void |
| · 14.4 Packing group
· DOT, ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards:
· Marine pollutant: | No |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

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

(Contd. of page 5)

· UN "Model Regulation":

Void

15 Regulatory information

- 15.1 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):**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenicity categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- 15.2 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

- **Date of preparation / last revision** 02/13/2017 / 6

- **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/13/2017

Trade name: p-Catecholamines by HPLC, CAL

(Contd. of page 6)

*ICAO: International Civil Aviation Organisation**ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)**ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**ACGIH: American Conference of Governmental Industrial Hygienists**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**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**** Data compared to the previous version altered.**

US