

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

1 Identification

- **Product identifier**
- **Trade name:** KETOCHROME/17-OHCS by Column Test, REAG C
- **Article number:** 1843014
- **CAS Number:**
7790-28-5
- **EC number:**
232-197-6
- **Application of the substance / the mixture** In-Vitro-laboratory reagent or component
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier**
Bio-Rad Laboratories (Canada) Ltd.
2403 Guenette Street
Montreal, Quebec H4R 2E9
Phone: (514) 334-4372
Freephone: 1 (800) 361-1808
Fax: (514) 334-0872
- **Information department:**
Technical Support:
E-mail: cdg_canada_salesmarketing@bio-rad.com
- **Emergency telephone number:**
GBK Gefahrgut Büro GmbH
Tel.: 0049(0)6123-84463

2 Hazard(s) identification

- **Classification of the substance or mixture**

Oxidizing Solids - Category 1	H271 May cause fire or explosion; strong oxidizer.
Acute Toxicity (Oral) - Category 3	H301 Toxic if swallowed.
Skin Irritation - Category 2	H315 Causes skin irritation.
Eye Irritation - Category 2A	H319 Causes serious eye irritation.
Specific Target Organ Toxicity - Single Exposure - Category 3	H335 May cause respiratory irritation.

· Label elements

· GHS label elements

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

· Hazard pictograms



GHS03 GHS06 GHS07

· Signal word Danger

· Hazard-determining components of labeling:

sodium periodate

· Hazard statements

May cause fire or explosion; strong oxidizer.

Toxic if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

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Precautionary statements

Wear fire resistant or flame retardant clothing.

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

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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

Store locked up.

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

Hazard description:

WHMIS-symbols:

C - Oxidizing materials

D1B - Toxic material causing immediate and serious toxic effects

D2B - Toxic material causing other toxic effects



Classification system:

NFPA ratings (scale 0 - 4)



Health = 2

Fire = 3

Reactivity = 0

The substance possesses oxidizing properties.

HMIS-ratings (scale 0 - 4)



Health = 2

Fire = 3

Reactivity = 0

3 Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description

7790-28-5 sodium periodate

Identification number(s)

EC number: 232-197-6

4 First-aid measures

Description of first aid measures

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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. If symptoms persist, consult a doctor.

After swallowing: Immediately call a doctor.

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- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

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

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Keep receptacles tightly sealed.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.

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· **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:**

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

· **Protection of hands:**

Protective gloves

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

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

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

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

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

· **Eye protection:**

Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:****Form:** Solid**Color:** Whitish· **Odor:** Odorless· **Odor threshold:** Not determined.· **pH-value:** ~5,2· **Change in condition****Melting point/Melting range:** 175 °C**Boiling point/Boiling range:** 300 °C· **Flash point:** Not applicable.· **Flammability (solid, gaseous):** Contact with combustible material may cause fire.

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· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· 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:	3,87 g/cm ³
· Bulk density at 20 °C:	2,000-2.400 kg/m ³
· Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water at 20 °C:	91 g/l
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Possibility of hazardous reactions** Danger of explosion.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**
- Substance is not listed.

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· **NTP (National Toxicology Program)**

Substance is not listed.


12 Ecological information

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

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must 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

- | | |
|---|---|
| · UN-Number | UN1479 |
| · DOT, TDG, IMDG, IATA | |
| · UN proper shipping name | Oxidizing solid, n.o.s. (sodium periodate) |
| · DOT | 1479 Oxidizing solid, n.o.s. (sodium periodate) |
| · TDG | OXIDIZING SOLID, N.O.S. (sodium periodate) |
| · IMDG, IATA | |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 5.1 Oxidizing substances |

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· Label	5.1
· TDG, IMDG, IATA	
	
· Class	5.1 Oxidizing substances
· Label	5.1
· Packing group	
· DOT, TDG, IMDG, IATA	I
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Oxidizing substances
· Danger code (Kemler):	-
· EMS Number:	F-A,S-Q
· Stowage Category	D
· Segregation Code	SG38 Stow "separated from" ammonium compounds. SG49 Stow "separated from" cyanides SG60 Stow "separated from" peroxides SG61 Stow "separated from" powdered metals
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· TDG	
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 1479 OXIDIZING SOLID, N.O.S. (SODIUM PERIODATE), 5.1, I

15 Regulatory information

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

· Section 355 (extremely hazardous substances):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

Substance is not listed.

· TSCA (Toxic Substances Control Act):

Substance is listed.

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- **Canadian substance listings:**

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

- Substance is listed.

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

- Substance is not listed.

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

- Substance is not listed.

- **GHS label elements**

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

- **Hazard pictograms**



GHS03 GHS06 GHS07

- **Signal word** Danger

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

- sodium periodate

- **Hazard statements**

- May cause fire or explosion; strong oxidizer.

- Toxic if swallowed.

- Causes skin irritation.

- Causes serious eye irritation.

- May cause respiratory irritation.

- **Precautionary statements**

- Wear fire resistant or flame retardant clothing.

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

- IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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

- Store locked up.

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

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

16 Other information

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

- **Department issuing SDS:**

- Bio-Rad Laboratories GmbH

- Heidemannstrasse 164

- D-80939 Munich

- **Contact:**

- Technical Support:

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

- **Abbreviations and acronyms:**

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

- ICAO: International Civil Aviation Organisation

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

- IMDG: International Maritime Code for Dangerous Goods

- DOT: US Department of Transportation

- IATA: International Air Transport Association

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EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

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

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