

Material Safety Data Sheet

Printing date 03/17/2010

Reviewed on 03/11/2010

1 Identification of substance:

- **Product details:**
- **Trade name:** System Calibrator
- **Catalog or product number:** 153
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
 Bio-Rad Laboratories, Diagnostic Group
 9500 Jeronimo Road
 Irvine, California 92618-2017 1(949) 598-1200
- **Information department:** Technical services, customer support.
- **Emergency information:**
 1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/Information on components:

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**

7732-18-5	water		50-100%
	Human Whole Blood		20-35%
25322-68-3	Polyethylene glycol (includes 3000, 4500)		5-10%
64-17-5	ethanol	F; R 11	2.5-5%

- **Additional information** Contains human sourced and/or potentially infectious components.

3 Hazards identification

- **Emergency overview:** not applicable
- **Routes of exposure:**
 Ingestion
 Inhalation
 Skin
- **Information pertaining to particular dangers for man and environment**
 The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system**
 The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0-4)**
 Health = 0
 Fire = 0
 Reactivity = 0
- **Special Hazards** Contains human sourced and/or potentially infectious components.

4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.

(Contd. on page 2)

— QUS —

Material Safety Data Sheet

Printing date 03/17/2010

Reviewed on 03/11/2010

Trade name: System Calibrator

(Contd. of page 1)

- **After skin contact**
Immediately wash with water and soap and rinse thoroughly.
Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **Information for doctor**
- **The following symptoms may occur:**
Skin irritation
Eye irritation
- **Medical conditions aggravated by exposure:** None expected.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Handle as potentially infectious.
- **Measures for environmental protection:**
Keep contaminated washing water and dispose of appropriately.
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb liquid components with liquid-binding material.
Pick up mechanically.
Clean the affected area carefully; suitable cleaners are:
Disinfectant
Dispose contaminated material as waste according to item 13.
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling**
- **Information for safe handling:** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

8 Exposure controls and personal protection

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

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

25322-68-3 Polyethylene glycol (includes 3000, 4500)

TLV () (average molecular weight 200-600)

(Contd. on page 3)

Material Safety Data Sheet

Printing date 03/17/2010

Reviewed on 03/11/2010

Trade name: System Calibrator

(Contd. of page 2)

64-17-5 ethanol

PEL () 1900 mg/m³, 1000 ppm
 REL () 1900 mg/m³, 1000 ppm
 TLV () 1880 mg/m³, 1000 ppm

1310-58-3 potassium hydroxide

REL () 2 mg/m³
 TLV () Short-term value: C 2 mg/m³

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
 Follow the usual biosafety practices for handling potentially infectious materials.
 The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves:** Synthetic gloves
- **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:** Safety glasses
- **Body protection:** Protective work clothing.

9 Physical and chemical properties:

· **General Information**

Form: liquid
Color: Dark red
Odor: Odorless

· **Change in condition**

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

- **Flash point:** Not applicable
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Vapor pressure at 20°C:** 23 hPa
- **Density:** Not determined
- **Solubility in / Miscibility with**
Water: Fully miscible
- **pH-value at 20°C:** 7.1 - 7.3
- **Solvent content:**
Organic solvents: 3.5 %
Water: 65.0 %
- **Solids content:** 31.5 %

Material Safety Data Sheet

Printing date 03/17/2010

Reviewed on 03/11/2010

Trade name: System Calibrator

(Contd. of page 3)

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values for hazardous components per OSHA criteria:**

64-17-5 ethanol

Oral	LD50	7060 mg/kg (rat)
Inhalative	LC50/4 h	20000 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information:

- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (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.

13 Disposal considerations

- **Product:**
- **Recommendation** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **Maritime transport IMDG:**
- **Marine pollutant:** No

(Contd. on page 5)

QUS

Material Safety Data Sheet

Printing date 03/17/2010

Reviewed on 03/11/2010

Trade name: System Calibrator

(Contd. of page 4)

· **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulations

· **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

None of the ingredients is listed.

· **Section 313 (40CFR372.65):**

None of the ingredients is listed.

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

7732-18-5	water
25322-68-3	Polyethylene glycol (includes 3000, 4500)
64-17-5	ethanol
60-00-4	ethylenediaminetetraacetic acid
90-15-3	1-naphthol
7631-99-4	sodium nitrate, containing in the dry state more than 16,3 per cent by weight of nitrogen
1132-61-2	4-morpholinopropanesulphonic acid
1310-58-3	potassium hydroxide
1310-73-2	sodium hydroxide
7681-49-4	sodium fluoride
13746-66-2	tripotassium hexacyanoferrate
151-50-8	potassium cyanide
70-49-5	mercaptosuccinic acid

· **California Proposition 65:**

· **Developmental Toxicity**

64-17-5 ethanol

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

64-17-5 ethanol

A4

· **MAK (German Maximum Workplace Concentration)**

64-17-5 ethanol

5

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

None of the ingredients is listed.

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

None of the ingredients is listed.

(Contd. on page 6)

Material Safety Data Sheet

Printing date 03/17/2010

Reviewed on 03/11/2010

Trade name: System Calibrator

(Contd. of page 5)

· **Markings according to EU guidelines:**

Observe the general safety regulations when handling chemicals

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

· **Safety phrases:**

35 This material and its container must be disposed of in a safe way.

· **National regulations**· **Technical instructions (air):**

Class	Share in %
NK	2.5-5

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**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 MSDS:** Environmental Health and Safety.· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

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