in accordance with 29 CFR 1910.1200 and ANSI standard Z400.1-2010

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1. Product and company identification

Product identifier

BIO RAL

Trade name:

Test Erythrocytes This safety data sheet pertains to the following products: 816014100 Biotestcell® 1 & 2 816020100 Biotestcell®-I 8 816021100 Biotestcell®-I 11 816030100 Coombscell-E 816022100 Biotestcell®-I 11 Plus 816047100 Biotestcell®-A2 816057100 Biotestcell® A1 & B 816065100 Biotestcell® Pool 816085100 Biotestcell® 3

Relevant identified uses of the substance or mixture and uses advised against

General use: Use as laboratory reagent. Only for industrial users.

Details of the supplier of the safety data sheet

Company name:	Bio-Rad Medical Diagnostics GmbH	
Street/POB-No.:	Industriestr. 1	
Postal Code, city:	63303 Dreieich	
	Germany	
WWW:	www.medizinische-diagnostik-dreieich.de	
E-mail:	contact.bmd@bio-rad.com	
Telephone:	+49 (0)6103-3130-0	
Telefax:	+49 (0)6103-3130-646	
Dept. responsible for information:		
	Produktmanagement Transfusion	
	Telephone: 06103 3130-611	
	Telefax: 06103 3130-724	

Emergency phone number

GIZ-Nord, Göttingen, Germany, Telephone: +49 551-19240

2. Hazards identification

Emergency overview

Appearance:	Form: liquid
	Color: reddish
Odor:	odorless
Classification:	This material is classified as not hazardous.

Regulatory status

This material is not considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

Hazards not otherwise classified

see section 11: Toxicological information



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3. Composition / Information on ingredients

Chemical characterization: Aqueous solution of anorganic salts and organic compounds. Contains human source proteins.

Additional information: Contains CAS No. 56-75-7 Chloramphenicol < 0,1%.

4. First aid measures

In case of inhalation:	Provide fresh air. Seek medical treatment in case of troubles.
Following skin contact:	Remove residues with water. Change contaminated clothing. In case of skin reactions, consult a physician.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. In case of eye irritation consult an ophthalmologist.
After swallowing:	Rinse mouth and drink large quantities of water. Induce vomiting when the affected person is not unconscious. Observe risk of aspiration if vomiting occurs. Seek medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

No data available

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

No data available

Auto-ignition temperature: not applicable

Suitable extinguishing media:

Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.

Specific hazards arising from the chemical

cleaning.

Fires in the immediate vicinity may cause the development of dangerous vapors. In the event of a fire, the following may be produced when the water evaporates: Carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus. Wear appropriate protective equipment.

Additional information: Do not allow fire water to penetrate into surface or ground water.

6. Accidental release measures Personal precautions: Avoid contact with the substance. Provide adequate ventilation. Wear personal protection equipment. Do not breathe vapor or spray. Environmental precautions: Do not allow to penetrate into soil, waterbodies or drains. Methods for clean-up: Soak up with absorbent materials such as sand, siliceus earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance. Final



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7. Handling and storage

Handling

Advices on safe handling: Avoid contact with skin and eyes. Do not breathe vapors. Wear appropriate protective equipment.

Keep all containers, equipment and working place clean.

Storage

Requirements for storerooms and containers:

Hints on joint storage: Keep containers tightly closed and at a temperature between 35.6 °F and 46.4 °F. Do not store together with acids/alkalies and oxidation agents.

8. Exposure controls / personal protection

Exposure guidelines

Engineering controls

Provide good ventilation and/or an exhaust system in the work area. See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection	Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.
Skin protection	Wear suitable protective clothing.
	Protective gloves according to OSHA Standard - 29 CFR: 1910.138. Glove material: Nitrile rubber - Breakthrough time: > 480 min. Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Respiratory protection:	When vapors form, use respiratory protection. The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product.
General hygiene consider	Avoid contact with skin and eyes. Change contaminated clothing. After work, wash hands and face.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Form: liquid Color: reddish
Odor:	odorless
Odor threshold:	No data available
pH value:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	approx. 212 °F
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Flammability:	not applicable
Explosion limits:	LEL (Lower Explosion Limit): not applicable UEL (Upper Explosive Limit): not applicable
Vapor pressure:	No data available
Vapor density:	No data available



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Density:	No data available
Solubility: No data avail	
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature: Thermal decomposition:	not applicable No data available
Explosive properties:	not applicable

10. Stability and reactivity

Reactivity:	No data available	
Chemical stability:	Stable under recommended storage conditions.	
Possibility of hazardous reactions No hazardous reactions known.		
Conditions to avoid:	Protect against heat /sun rays.	
Incompatible materials:	Strong oxidizing agents, strong acids and alkalis.	
Hazardous decomposition products: In the event of a fire, the following may be produced when the water evapo Carbon monoxide and carbon dioxide. Thermal decomposition: No data available		

11. Toxicological information

Toxicological tests

Toxicological effects:	Acute toxicity (oral): Lack of data. Acute toxicity (dermal): Lack of data. Acute toxicity (inhalative): Lack of data. Skin corrosion/irritation: Lack of data. Eye damage/irritation: Lack of data. Sensitisation to the respiratory tract: Lack of data. Skin sensitisation: Lack of data. Germ cell mutagenicity/Genotoxicity: Lack of data. Carcinogenicity: Lack of data. For carcinogenic effects: Information about Chloramphenicol CAS No. 56-75-7 IARC: Group 2A OSHA: not listed NTP: not listed Reproductive toxicity: Lack of data. Effects on or via lactation: Lack of data. Specific target organ toxicity (single exposure): Lack of data.
	Specific target organ toxicity (repeated exposure): Lack of data. Aspiration hazard: Lack of data.

12. Ecological information

Ecotoxicity

Further details: No data available



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Mobility in soil

No data available

Persistence and degradability

Further details: No data available

Additional ecological information

General information: Do not allow to penetrate into soil, waterbodies or drains.

13. Disposal considerations

Product

Recommendation:

Small quantities can be disposed of with the domestic waste or burnt, with due observance of regulations of local authorities. Large quantities are hazardous waste and must be disposed of accordingly.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself. Non-contaminated packages may be recycled.

14. Transport information

USA: Department of Transportation (DOT)

Proper shipping name:

Canada: Transportation of Dangerous Goods (TDG)

Shipping name:

Not restricted

Not restricted

Not restricted

Sea transport (IMDG)

Proper shipping name: Not restricted Marine pollutant: no

Air transport (IATA)

Proper shipping name:

Further information

No dangerous good in sense of these transport regulations.



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15. Regulatory information

National regulations - U.S. Federal Regulations

	-	
	Human red blood cells:	TSCA: not listed
	Sodium chloride:	TSCA Inventory: listed TSCA HPVC: not listed
	Citric acid monohydrate:	TSCA Inventory: not listed TSCA listed: Citric acid anhydrous CAS 77-92-9
	Trisodium citrate - 2-hydrate:	TSCA Inventory: not listed TSCA listed: Trisodium citrate, anhydrous CAS No. 68-04-2
	Glucose:	TSCA Inventory: listed TSCA HPVC: not listed
	myo-Inositol:	TSCA Inventory: listed TSCA HPVC: not listed
	Chloramphenicol:	TSCA Inventory: listed TSCA HPVC: not listed Carcinogen Status: IARC Rating: Group 2A OSHA Carcinogen: not listed NTP Rating: not listed
	Neomycin sulfate:	TSCA Inventory: listed; EPA flags XU TSCA HPVC: not listed
	Adenin:	TSCA Inventory: listed TSCA HPVC: not listed
	Amphotericin B:	TSCA Inventory: not listed
-		

National regulations - U.S. State Regulations

Neomycin sulfate:

California Proposition 65: developmental Rhode Island HSL: listed

	16. Other information	
Hazard rating systems:	NFPA Hazard Rating: Health: 1 (Slight) Fire: 0 (Minimal) Reactivity: 0 (Minimal)	
	HMIS Version III Rating: Health: 1 (Slight) Flammability: 0 (Minimal) Physical Hazard: 0 (Minimal) Personal Protection: X = Consult your supervisor	HEALTH1FLAMMABILITY0PHYSICAL HAZARD0X
Reason of change: Date of first version:	Changes in section 9: Physical and chemical properties 9/4/2014	

see section 1: Dept. responsible for information Contact person:

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.