

**KIT COMPONENTS**Product name: **TeSeE sheep/goat Purification kit (192 tests)**Product code: **3551165**

<b>Article number</b>	<b>Description</b>	<b>Quantity</b>	<b>Symbols</b>
5144A	Grinding Tubes, 96 Tubes	2	GHS07
5165B	Réactif 1 - Solution de Dénaturation (55 mL)	1	GHS05
5165C	Réactif 2 - Solution Clarifiante (55 mL)	1	GHS02 GHS07 GHS05
5165D	Réactif 3 - Tampon de Solubilisation (7 mL)	1	
5144E	PK - Proteinase K (0.5 mL)	1	GHS08

**Safety Data Sheet**  
29 CFR Part 1910.1200

Printing date 08/06/2015

Reviewed on 07/17/2015

**1 Identification****· Product identifier**

- **Trade name: Grinding Tubes, 96 Tubes**

- **Article number:** 5144A

- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.

- **Application of the substance / the mixture** Laboratory reagent or component.

**· Details of the supplier of the safety data sheet****· Manufacturer/Supplier:**

Bio-Rad  
3, Boulevard Raymond Poincaré  
F-92430 Marnes-la-Coquette  
Tel.: +33 (0)1 47 95 60 00  
Fax : +33 (0)1 47 41 91 33  
e-mail: fds-msds.fr@bio-rad.com

- **Information department:** Customer support.

**· Emergency telephone number:**

See item 16

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-703-527-3887.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product.

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-510-741-1000.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION

or ACCIDENT with this product.

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-510-741-1000.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product.

**2 Hazard(s) identification****· Classification of the substance or mixture**

GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

**· Label elements****· GHS label elements**

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

- **Hazard pictograms** GHS07

- **Signal word** Warning

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

reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

**· Hazard statements**

May cause an allergic skin reaction.

**· Precautionary statements**

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

If skin irritation or rash occurs: Get medical advice/attention.

If on skin: Wash with plenty of water.

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

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

Health = 0

Fire = 0

Reactivity = 0

**· HMIS-ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**· Other hazards**
**· Results of PBT and vPvB assessment**

 · **PBT:** Not applicable.

 · **vPvB:** Not applicable.

### 3 Composition/information on ingredients

**· Chemical characterization: Mixtures**

 · **Description:** Mixture containing hazardous components.

**· Dangerous components:**

55965-84-9	reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	<0.01%
	⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 ⚠ Skin Corr. 1B, H314 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ⚠ Skin Sens. 1, H317	

### 4 First-aid measures

**· Description of first aid measures**

 · **After inhalation:** Supply fresh air and to be sure call for a doctor.

 · **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

 · **After eye contact:** Rinse opened eye for several minutes under running water.

 · **After swallowing:** Immediately call a doctor.

**· Information for doctor:**

 · **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

 · **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Fire-fighting measures

**· Extinguishing media**
**· Suitable extinguishing agents:**

Use fire fighting measures that suit the environment.

 CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray.

 · **Special hazards arising from the substance or mixture** No further relevant information available.

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- **Advice for firefighters**
- **Protective equipment:** No special measures required.

**6 Accidental release measures****· Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

Wear disposable gloves.

- **Environmental precautions:** Do not allow product to reach sewage system or any water course.

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

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

Ensure adequate ventilation.

**· Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**7 Handling and storage****· Handling:****· Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Follow good laboratory practices.

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

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

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

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

- **Further information about storage conditions:** None.

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

**8 Exposure controls/personal protection**

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

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

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

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

**· Exposure controls****· Personal protective equipment:****· General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

- **Breathing equipment:** Suitable respiratory protective device recommended.

- **Protection of hands:** Protective gloves

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· **Eye protection:** Safety glasses

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**9 Physical and chemical properties**

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

· **General Information**

· **Appearance:**

- **Form:** Suspension
- **Color:** Colorless
- **Odor:** Weak, characteristic

· **Change in condition**

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.

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

· **Density:** Not determined.

· **Solubility in / Miscibility with**

· **Water:** Dispersible.

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

**10 Stability and reactivity**

· **Reactivity**

· **Chemical stability**

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

No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

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

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

· **Hazardous decomposition products:** No dangerous decomposition products known.

**11 Toxicological information**

· **Information on toxicological effects**

· **Acute toxicity:**

· **Sensitization:** Sensitization possible through skin contact.

· **Additional toxicological information:**

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

Irritant

· **Carcinogenic categories**

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

None of the ingredients is listed.

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<ul style="list-style-type: none"> <li>· <b>NTP (National Toxicology Program)</b></li> </ul>
None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b></li> </ul>
None of the ingredients is listed.

**12 Ecological information**

- **Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
  - **General notes:**
    - Avoid transfer into the environment.
    - Water hazard class 1 (Self-assessment): slightly hazardous for water
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

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

**14 Transport information**

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> </ul>	<ul style="list-style-type: none"> <li>· DOT, ADR, ADN, IMDG, IATA</li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> </ul>	<ul style="list-style-type: none"> <li>· DOT, ADR, ADN, IMDG, IATA</li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> </ul>	<ul style="list-style-type: none"> <li>· DOT, ADR, ADN, IMDG, IATA</li> <li>· Class</li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> </ul>	<ul style="list-style-type: none"> <li>· DOT, ADR, IMDG, IATA</li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> </ul>	<ul style="list-style-type: none"> <li>· <b>Marine pollutant:</b></li> </ul>	No

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- |  |                 |
|--|-----------------|
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | -               |

**15 Regulatory information**

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

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

26628-22-8	Sodium Azide
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· **Section 313 (Specific toxic chemical listings):**

26628-22-8	Sodium Azide
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· **TSCA (Toxic Substances Control Act):**

50-99-7	glucose
26628-22-8	Sodium Azide
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.

· **Carcinogen categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

26628-22-8	Sodium Azide	A4
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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **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.

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USA - Clinical Diagnostic Group  
Bio-Rad Laboratories  
4000 Alfred Nobel Drive  
Hercules, California 94547  
Phone: +1(510) 724-7000

**· Department issuing SDS:**

SDS / FDS Administr.  
Bio-Rad  
Marnes-la-Coquette, France

**· Contact:**

Customer Support  
Phone : +33 (0)1 47 95 61 85  
USA  
Bio-Rad Laboratories  
6565 185th Avenue NE  
Redmond, WA 98052-5039

Phone Number: 1-800-2BIORAD (1-800-224-6723) or (425) 881-8300 (daytime PST)

**· Date of preparation / last revision 08/06/2015 / 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  
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)  
Acute Tox. 3: Acute toxicity, Hazard Category 3  
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B  
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1  
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

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**1 Identification**· **Product identifier**

- **Trade name: Réactif 1 - Solution de Dénaturation (55 mL)**
  - **Article number:** 5165B
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
  - **Application of the substance / the mixture** Laboratory reagent or component.

· **Details of the supplier of the safety data sheet**· **Manufacturer/Supplier:**

Bio-Rad  
3, Boulevard Raymond Poincaré  
F-92430 Marnes-la-Coquette  
Tel.: +33 (0)1 47 95 60 00  
Fax : +33 (0)1 47 41 91 33  
e-mail: fds-msds.fr@bio-rad.com

· **Information department:** Customer support.· **Emergency telephone number:**

See item 16

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-703-527-3887.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product.

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-510-741-1000.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION

or ACCIDENT with this product.

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-510-741-1000.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product.

**2 Hazard(s) identification**· **Classification of the substance or mixture**

GHS05 Corrosion

Eye Dam. 1      H318 Causes serious eye damage.

Aquatic Chronic 3    H412 Harmful to aquatic life with long lasting effects.

· **Label elements**· **GHS label elements**

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

· **Hazard pictograms** GHS05· **Signal word** Danger· **Hazard-determining components of labeling:**

Triton™ X-100

· **Hazard statements**

Causes serious eye damage.

Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

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

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Avoid release to the environment.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

**Classification system:**

**· NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 0

Reactivity = 0

**· HMIS-ratings (scale 0 - 4)**

Health = 1

Fire = 0

Reactivity = 0

**· Other hazards**

**· Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

**3 Composition/information on ingredients**

**· Chemical characterization: Mixtures**

· **Description:** Mixture containing components at a non hazardous concentration.

**· Dangerous components:**

57-13-6	urea	10-25%
151-21-3	sodium dodecyl sulphate	2.5-10%
	Acute Tox. 3, H311 Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	
9002-93-1	Triton™ X-100	2.5-10%
	Acute Tox. 3, H301 Eye Dam. 1, H318 Aquatic Chronic 2, H411 Aquatic Acute 2, H401	

**4 First-aid measures**

**· Description of first aid measures**

· **General information:** No special measures required.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** Consult a doctor, if necessary.

**· 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.

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**Trade name: Réactif 1 - Solution de Dénaturation (55 mL)**

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**5 Fire-fighting measures**

- **Extinguishing media**
  - **Suitable extinguishing agents:**  
CO2, extinguishing powder or water spray. Fight larger fires with water spray.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
  - **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**  
Wear disposable gloves.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections** No dangerous substances are released.

**7 Handling and storage**

- **Handling:**
  - **Precautions for safe handling**  
Keep receptacles tightly sealed.  
Avoid all contact with reagents, even those considered to be non-hazardous.  
Follow good laboratory practices.
  - **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - **Requirements to be met by storerooms and receptacles:** No special requirements.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

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

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

**57-13-6 urea**

WEEL | 10 mg/m<sup>3</sup>

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

- **Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.

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- **Breathing equipment:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- **Eye protection:** Goggles recommended during refilling.

### 9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

- **Form:** Fluid
- **Color:** According to product specification
- **Odor:** Characteristic

- **Change in condition**

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.

- **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 (68 °F):** 23 hPa (17 mm Hg)

- **Density:** Not determined.

- **Solubility in / Miscibility with**

- **Water:** Fully miscible.

- **Solvent content:**

- **Organic solvents:** 0.0 %
- **Water:** 75.0 %

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

### 10 Stability and reactivity

- **Reactivity**

- **Chemical stability**

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

No decomposition if used according to specifications.

- **Possibility of hazardous reactions** No dangerous reactions known.

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

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

- **Hazardous decomposition products:** No dangerous decomposition products known.

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**11 Toxicological information**

· **Information on toxicological effects**

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

**12 Ecological information**

· **Toxicity**

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

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

· **Behavior in environmental systems:**

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

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

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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

**13 Disposal considerations**

· **Waste treatment methods**

· **Recommendation:**

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

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

**14 Transport information**

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

**15 Regulatory information**

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b> · Sara
· <b>Section 355 (extremely hazardous substances):</b> None of the ingredient is listed.
· <b>Section 313 (Specific toxic chemical listings):</b> None of the ingredients is listed.
· <b>TSCA (Toxic Substances Control Act):</b> All ingredients are listed.
· <b>Proposition 65</b>
· <b>Chemicals known to cause cancer:</b> None of the ingredients is listed.
· <b>Chemicals known to cause reproductive toxicity for females:</b> None of the ingredients is listed.
· <b>Chemicals known to cause reproductive toxicity for males:</b> None of the ingredients is listed.

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**· 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.

**· 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.

USA - Clinical Diagnostic Group

Bio-Rad Laboratories

4000 Alfred Nobel Drive

Hercules, California 94547

Phone: +1(510) 724-7000

**· Department issuing SDS:**

SDS / FDS Administr.

Bio-Rad

Marnes-la-Coquette, France

**· Contact:**

Customer Support

Phone : +33 (0)1 47 95 61 85

USA

Bio-Rad Laboratories

6565 185th Avenue NE

Redmond, WA 98052-5039

Phone Number: 1-800-2BIORAD (1-800-224-6723) or (425) 881-8300 (daytime PST)

**· Date of preparation / last revision** 08/06/2015 / 1

**· 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

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)

HMS: Hazardous Materials Identification System (USA)

Acute Tox. 4: Acute toxicity, Hazard Category 4

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

(Contd. on page 8)

**Safety Data Sheet**  
29 CFR Part 1910.1200

Printing date 08/06/2015

Reviewed on 07/17/2015

**Trade name: Réactif 1 - Solution de Dénaturation (55 mL)**

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A  
Aquatic Acute 2: Hazardous to the aquatic environment - Acute Hazard, Category 2  
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2  
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

(Contd. of page 7)

USA



**Safety Data Sheet**  
29 CFR Part 1910.1200

Printing date 08/06/2015

Reviewed on 07/17/2015

**1 Identification**· **Product identifier**

- 
- Trade name: Réactif 2 - Solution Clarifiante (55 mL)**

· **Article number:** 5165C

- 
- Relevant identified uses of the substance or mixture and uses advised against**
- 
- No further relevant information available.

· **Application of the substance / the mixture** Laboratory reagent or component.· **Details of the supplier of the safety data sheet**· **Manufacturer/Supplier:**

Bio-Rad  
3, Boulevard Raymond Poincaré  
F-92430 Marnes-la-Coquette  
Tel.: +33 (0)1 47 95 60 00  
Fax : +33 (0)1 47 41 91 33  
e-mail: fds-msds.fr@bio-rad.com

- 
- Information department:**
- Customer support.

· **Emergency telephone number:**

See item 16

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-703-527-3887.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product.

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-510-741-1000.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION

or ACCIDENT with this product.

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-510-741-1000.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product.

**2 Hazard(s) identification**· **Classification of the substance or mixture**

GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

· **Label elements**· **GHS label elements**

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

- 
- Hazard pictograms**
- GHS02, GHS05, GHS07

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USA

**Safety Data Sheet**  
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Reviewed on 07/17/2015

**Trade name: Réactif 2 - Solution Clarifiante (55 mL)**

(Contd. of page 1)

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
butan-1-ol
- **Hazard statements**  
Flammable liquid and vapor.  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye damage.  
May cause respiratory irritation. May cause drowsiness or dizziness.
- **Precautionary statements**  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
Wash thoroughly after handling.  
Wear protective gloves / eye protection / face protection.  
Wear protective gloves.  
Wear eye protection / face protection.  
Ground/bond container and receiving equipment.  
Keep container tightly closed.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If on skin: Wash with plenty of water and soap.  
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
  - **NFPA ratings (scale 0 - 4)**  
Health = 2  
Fire = 3  
Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**  
Health = 2  
Fire = 3  
Reactivity = 0
- **Other hazards**
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.

**3 Composition/information on ingredients**

- **Chemical characterization: Mixtures**
  - **Description:** Mixture containing hazardous components.
- **Dangerous components:**

(Contd. on page 3)

USA




## Safety Data Sheet

29 CFR Part 1910.1200

Printing date 08/06/2015

Reviewed on 07/17/2015

**Trade name: Réactif 2 - Solution Clarifiante (55 mL)**

71-36-3	butan-1-ol	(Contd. of page 2) 50-100%
	<ul style="list-style-type: none"> <li> Flam. Liq. 3, H226</li> <li> Eye Dam. 1, H318</li> <li> Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335-H336</li> </ul>	

### 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. Then consult a doctor.

- **After swallowing:** Immediately call a doctor.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray.

- **Special hazards arising from the substance or mixture** No further relevant information available.

- **Advice for firefighters**

- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

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

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

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

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.

USA

(Contd. on page 4)

**Safety Data Sheet**  
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Printing date 08/06/2015

Reviewed on 07/17/2015

**Trade name: Réactif 2 - Solution Clarifiante (55 mL)**

(Contd. of page 3)

**7 Handling and storage**

- **Handling:**
  - **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
Follow good laboratory practices.
  - **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **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:**

**71-36-3 butan-1-ol**

PEL	300 mg/m <sup>3</sup> , 100 ppm
REL	Short-term value: C 150 mg/m <sup>3</sup> , C 50 ppm Skin
TLV	61 mg/m <sup>3</sup> , 20 ppm

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

- **Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the skin.  
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.
    - **Eye protection:** Tightly sealed goggles

USA

(Contd. on page 5)

## Safety Data Sheet

29 CFR Part 1910.1200

Printing date 08/06/2015

Reviewed on 07/17/2015

**Trade name: Réactif 2 - Solution Clarifiante (55 mL)**

(Contd. of page 4)

### 9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

- **Form:** Fluid
      - **Color:** According to product specification
      - **Odor:** Characteristic

- **pH-value at 20 °C (68 °F):** 6.1

- **Change in condition**

- **Melting point/Melting range:** Undetermined.
  - **Boiling point/Boiling range:** Undetermined.

- **Flash point:** 35 °C (95 °F)

- **Ignition temperature:** 340 °C (644 °F)

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

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- **Explosion limits:**

- **Lower:** 1.5 Vol %
  - **Upper:** 9.4 Vol %

- **Vapor pressure at 20 °C (68 °F):** 6.7 hPa (5 mm Hg)

- **Density:** Not determined.

- **Solubility in / Miscibility with**

- **Water:** Fully miscible.

- **Solvent content:**

- **Organic solvents:** 100.0 %
  - **VOC content:** 100.0 %

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

### 10 Stability and reactivity

- **Reactivity**

- **Chemical stability**

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

- No decomposition if used according to specifications.

- **Possibility of hazardous reactions** No dangerous reactions known.

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

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

- **Hazardous decomposition products:** No dangerous decomposition products known.

USA

(Contd. on page 6)

**Safety Data Sheet**  
29 CFR Part 1910.1200

Printing date 08/06/2015

Reviewed on 07/17/2015

**Trade name: Réactif 2 - Solution Clarifiante (55 mL)**

(Contd. of page 5)

**11 Toxicological information**

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**71-36-3 butan-1-ol**

Oral	LD50	790 mg/kg (rat)
Dermal	LD50	3400 mg/kg (rabbit)
Inhalative	LC50/4 h	8000 mg/l (rat)

· **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

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

Harmful  
Irritant

· **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

**12 Ecological information**

· **Toxicity**

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

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

· **Behavior in environmental systems:**

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

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

· **Additional ecological information:**

· **General notes:**

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

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

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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

USA

(Contd. on page 7)

**Safety Data Sheet**  
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Printing date 08/06/2015

Reviewed on 07/17/2015

**Trade name: Réactif 2 - Solution Clarifiante (55 mL)**

(Contd. of page 6)

**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.

**14 Transport information**

· **UN-Number**

· **DOT** UN1120  
· **ADR, IMDG, IATA** 1120

· **UN proper shipping name**

· **IMDG, IATA** BUTANOLS, mixture

· **Transport hazard class(es)**

· **DOT**



· **Class** 3 Flammable liquids  
· **Label** 3

· **ADR**



· **Class** 3 (F1) Flammable liquids  
· **Label** 3

· **IMDG, IATA**



· **Class** 3 Flammable liquids  
· **Label** 3

· **Packing group**

· **DOT, ADR, IMDG, IATA** III

· **Environmental hazards:**

· **Marine pollutant:** No

· **Special precautions for user**

Warning: Flammable liquids

· **Danger code (Kemler):** 30  
· **EMS Number:** F-E,S-D

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**Safety Data Sheet**  
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Printing date 08/06/2015

Reviewed on 07/17/2015

**Trade name: Réactif 2 - Solution Clarifiante (55 mL)**

(Contd. of page 7)

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** UN1120, BUTANOLS, mixture, 3, III

**15 Regulatory information**

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

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

None of the ingredient is listed.

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

71-36-3 butan-1-ol

- **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)**

71-36-3 butan-1-ol

D

- **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.

- **National regulations:**

Class	Share in %
NK	100.0

- **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.

USA - Clinical Diagnostic Group  
Bio-Rad Laboratories  
4000 Alfred Nobel Drive  
Hercules, California 94547

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**Safety Data Sheet**  
29 CFR Part 1910.1200

Printing date 08/06/2015

Reviewed on 07/17/2015

**Trade name: Réactif 2 - Solution Clarifiante (55 mL)**

(Contd. of page 8)

Phone: +1(510) 724-7000

**· Department issuing SDS:**

SDS / FDS Administr.

Bio-Rad

Marnes-la-Coquette, France

**· Contact:**

Customer Support

Phone : +33 (0)1 47 95 61 85

USA

Bio-Rad Laboratories

6565 185th Avenue NE

Redmond, WA 98052-5039

Phone Number: 1-800-2BIORAD (1-800-224-6723) or (425) 881-8300 (daytime PST)

**· Date of preparation / last revision** 08/06/2015 / 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

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

USA

**Safety Data Sheet**  
29 CFR Part 1910.1200

Printing date 08/06/2015

Reviewed on 07/17/2015

**1 Identification****· Product identifier**

- **Trade name: Réactif 3 - Tampon de Solubilisation (7 mL)**
  - **Article number:** 5165D
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
  - **Application of the substance / the mixture** Laboratory reagent or component.

**· Details of the supplier of the safety data sheet****· Manufacturer/Supplier:**

Bio-Rad  
3, Boulevard Raymond Poincaré  
F-92430 Marnes-la-Coquette  
Tel.: +33 (0)1 47 95 60 00  
Fax : +33 (0)1 47 41 91 33  
e-mail: fds-msds.fr@bio-rad.com

**· Information department:** Customer support.**· Emergency telephone number:**

See item 16

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-703-527-3887.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product.

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-510-741-1000.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION

or ACCIDENT with this product.

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-510-741-1000.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product.

**2 Hazard(s) identification****· Classification of the substance or mixture**

The product is not classified according to the Globally Harmonized System (GHS).

**· Label elements**

- **GHS label elements** Void
  - **Hazard pictograms** Void
  - **Signal word** Void
  - **Hazard statements** Void

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

Health = 0

Fire = 0

Reactivity = 0

**· HMIS-ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**· Other hazards****· Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

(Contd. on page 2)

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Reviewed on 07/17/2015

**Trade name: Réactif 3 - Tampon de Solubilisation (7 mL)**· **vPvB:** Not applicable.

(Contd. of page 1)

**3 Composition/information on ingredients**· **Chemical characterization: Mixtures**· **Description:** Mixture without a chemical hazard.· **Dangerous components:**

57-13-6 | urea

25-50%

**4 First-aid measures**· **Description of first aid measures**

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Consult a doctor, if necessary.
- **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:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray.· **Special hazards arising from the substance or mixture** No further relevant information available.· **Advice for firefighters**· **Protective equipment:** No special measures required.**6 Accidental release measures**· **Personal precautions, protective equipment and emergency procedures**

Wear disposable gloves.

· **Environmental precautions:**

Dilute with plenty of water.

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

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

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

· **Reference to other sections** No dangerous substances are released.

USA

(Contd. on page 3)

**Safety Data Sheet**  
29 CFR Part 1910.1200

Printing date 08/06/2015

Reviewed on 07/17/2015

**Trade name: Réactif 3 - Tampon de Solubilisation (7 mL)**

(Contd. of page 2)

**7 Handling and storage**

- **Handling:**
  - **Precautions for safe handling**  
Keep receptacles tightly sealed.  
Avoid all contact with reagents, even those considered to be non-hazardous.  
Follow good laboratory practices.
  - **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - **Requirements to be met by storerooms and receptacles:** No special requirements.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

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

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

**57-13-6 urea**

WEEL	10 mg/m <sup>3</sup>
------	----------------------

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

- **Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:**  
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.
    - **Eye protection:** Goggles recommended during refilling.

**9 Physical and chemical properties**

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

· **General Information**

· **Appearance:**

- **Form:** Fluid
- **Color:** According to product specification
- **Odor:** Characteristic

· **Change in condition**

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.

(Contd. on page 4)

**Safety Data Sheet**  
29 CFR Part 1910.1200

Printing date 08/06/2015

Reviewed on 07/17/2015

**Trade name: Réactif 3 - Tampon de Solubilisation (7 mL)**

(Contd. of page 3)

· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Vapor pressure at 20 °C (68 °F):</b>	23 hPa (17 mm Hg)
· <b>Density:</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
· <b>Water:</b>	Fully miscible.
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	0.0 %
· <b>Water:</b>	60.6 %
· <b>Other information</b>	No further relevant information available.

**10 Stability and reactivity**

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

**11 Toxicological information**

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

· **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>
None of the ingredients is listed.
· <b>NTP (National Toxicology Program)</b>
None of the ingredients is listed.
· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>
None of the ingredients is listed.

USA

(Contd. on page 5)

**Safety Data Sheet**  
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Printing date 08/06/2015

Reviewed on 07/17/2015

**Trade name: Réactif 3 - Tampon de Solubilisation (7 mL)**

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**12 Ecological information**

- **Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
  - **General notes:**  
Water hazard class 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**

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

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- |  |  |
|--|--|
| · <b>Transport/Additional information:</b> | Not dangerous according to the above specifications. |
| · <b>UN "Model Regulation":</b>            | -  |

**15 Regulatory information**

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

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

None of the ingredient is listed.

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

None of the ingredients is listed.

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

All ingredients are listed.

· **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.

- **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.

USA - Clinical Diagnostic Group

Bio-Rad Laboratories

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Hercules, California 94547

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USA

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29 CFR Part 1910.1200

Printing date 08/06/2015

Reviewed on 07/17/2015

**Trade name: Réactif 3 - Tampon de Solubilisation (7 mL)**

(Contd. of page 6)

**· Department issuing SDS:**SDS / FDS Administr.  
Bio-Rad  
Marnes-la-Coquette, France**· Contact:**Customer Support  
Phone : +33 (0)1 47 95 61 85  
USA  
Bio-Rad Laboratories  
6565 185th Avenue NE  
Redmond, WA 98052-5039

Phone Number: 1-800-2BIORAD (1-800-224-6723) or (425) 881-8300 (daytime PST)

**· Date of preparation / last revision** 08/06/2015 / 1**· 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  
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)

USA



**Safety Data Sheet**  
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Printing date 08/06/2015

Reviewed on 07/17/2015

**1 Identification**

· **Product identifier**

· **Trade name: PK - Proteinase K (0.5 mL)**

· **Article number:**

5144E

5169M

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

No further relevant information available.

· **Application of the substance / the mixture** Laboratory reagent or component.

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Bio-Rad

3, Boulevard Raymond Poincaré

F-92430 Marnes-la-Coquette

Tel.: +33 (0)1 47 95 60 00

Fax : +33 (0)1 47 41 91 33

e-mail: fds-msds.fr@bio-rad.com

· **Information department:** Customer support.

· **Emergency telephone number:**

See item 16

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-703-527-3887.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product.

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-510-741-1000.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION

or ACCIDENT with this product.

This SDS is listed with CHEMTREC 1-800-424-9300 / 1-510-741-1000.

Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product.

**2 Hazard(s) identification**

· **Classification of the substance or mixture**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

· **Label elements**

· **GHS label elements**

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

· **Hazard pictograms** GHS08

· **Signal word** Danger

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

Proteinase, Tritirachium album serine

· **Hazard statements**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray

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

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**Trade name: PK - Proteinase K (0.5 mL)**



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- **Classification system:**
  - **NFPA ratings (scale 0 - 4)**  
Health = 0  
Fire = 0  
Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**  
Health = \*0  
Fire = 0  
Reactivity = 0
- **Other hazards**
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.

**3 Composition/information on ingredients**

- **Chemical characterization: Mixtures**
  - **Description:** Mixture containing components at a non hazardous concentration.

· **Dangerous components:**

56-81-5	glycerol	0.1-2.5%
39450-01-6	Proteinase, Tritirachium album serine	0.1-2.5%
	 Resp. Sens. 1, H334  Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	

**4 First-aid measures**

- **Description of first aid measures**
  - **After inhalation:** Supply fresh air; consult doctor in case of complaints.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:** Rinse opened eye for several minutes under running water.
  - **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
  - **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**5 Fire-fighting measures**

- **Extinguishing media**
  - **Suitable extinguishing agents:**  
CO2, extinguishing powder or water spray. Fight larger fires with water spray.  
Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
  - **Protective equipment:** No special measures required.

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**Trade name: PK - Proteinase K (0.5 mL)**

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**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.
- **Environmental precautions:** Do not allow product to reach sewage system or any water course.
- **Methods and material for containment and cleaning up:**  
Absorb liquid components with liquid-binding material.
- **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.  
Follow good laboratory practices.
  - **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - **Requirements to be met by storerooms and receptacles:** No special requirements.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

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

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

**56-81-5 glycerol**

PEL	Long-term value: 15* 5** mg/m <sup>3</sup> mist; *total dust **respirable fraction
TLV	TLV withdrawn-insufficient data human occup. exp.

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

- **Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:**  
Wash hands before breaks and at the end of work.
    - **Breathing equipment:** Suitable respiratory protective device recommended.
    - **Protection of hands:** Protective gloves
    - **Eye protection:** Safety glasses

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**Trade name: PK - Proteinase K (0.5 mL)**

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**9 Physical and chemical properties**

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

· **General Information**

· **Appearance:**

- **Form:** Fluid
- **Color:** Red
- **Odor:** Weak, characteristic

· **pH-value:** Not determined.

· **Change in condition**

· **Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.

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

· **Density:** Not determined.

· **Solubility in / Miscibility with**

· **Water:** Fully miscible.

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

**10 Stability and reactivity**

· **Reactivity**

· **Chemical stability**

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

No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

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

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

· **Hazardous decomposition products:** No dangerous decomposition products known.

**11 Toxicological information**

· **Information on toxicological effects**

· **Additional toxicological information:**

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

Harmful

· **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

**12 Ecological information**

- **Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
  - **General notes:** Avoid transfer into the environment.
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

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

**14 Transport information**

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

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Reviewed on 07/17/2015

**Trade name: PK - Proteinase K (0.5 mL)**

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· **UN "Model Regulation":** -

**15 Regulatory information**

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

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

None of the ingredient is listed.

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

None of the ingredients is listed.

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

56-81-5 glycerol

34487-61-1 sodium hydrogen 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bisphenolate S,S-dioxide

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.

· **Carcinogeny 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.

· **National regulations:**

Class	Share in %
I	1.7
NK	2.4

· **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.

USA - Clinical Diagnostic Group  
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**· Date of preparation / last revision** 08/06/2015 / 2**· Abbreviations and acronyms:**

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

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)

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

USA