



06/03/2015

**Kit Components**

Product code	Description
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<b>2700800</b>	<b>Variant Hemoglobinopathy Pgm Reorder Pack</b>
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Components:

2700182	Variant Hemoglobin Analytical Cartridge
35497	Variant Hb Retention Time Marker Unlabeled
2700082	Variant Hb Testing System Wash Solution
2700802	Variant Hemoglobinopathy Pgm Elution Buffer 1
2700803	Variant Hemoglobinopathy Pgm Elution Buffer 2
2700804	Variant Hb Pgm Hemolysis Reagent, RTM Diluent

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 05/27/2015

## 1 Identification

- **Product identifier**
- **Trade name:** Variant Hemoglobin Analytical Cartridge
- **Catalog or product number:** 2700182, 2700503, 2700801
- **Application of the substance / the mixture** *In-vitro laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547 1(510)724-7000
- **Information department:**  
Technical services, customer support  
TechsupportUSSD@bio-rad.com
- **Emergency telephone number:**  
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 ingredients

- **Chemical characterization: Substances**
- **CAS No. Description:**  
*Methacrylate Resin*
- **Additional information:** *For the wording of the listed risk phrases refer to section 15.*

## 3 Hazard(s) identification

- **Classification of the substance or mixture**  
*The substance 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*

## 4 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** *Induce vomiting and call for medical help.*

## 5 Fire-fighting measures

- **Suitable extinguishing agents**  
*CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.*
- **Special hazards arising from the substance or mixture** *No further relevant information available.*

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**Trade name: Variant Hemoglobin Analytical Cartridge**

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

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**7 Handling and storage**

- **Handling**
- **Precautions for safe handling** No special measures required.
- **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.
- **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.
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **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

**9 Physical and chemical properties**

- **General Information**
- **Appearance:**

<b>Form:</b>	Solid
<b>Color:</b>	Whitish
<b>Odor:</b>	Light
<b>Odour threshold:</b>	Not determined.

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· <b>pH-value:</b>	Not applicable.
· <b>Change in condition</b> <b>Melting point/Melting range:</b>	undetermined
<b>Boiling point/Boiling range:</b>	undetermined
· <b>Flash point:</b>	Not applicable
· <b>Flammability (solid, gaseous)</b>	Product is not flammable.
· <b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Not determined.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density:</b>	Not determined
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with</b> <b>Water:</b>	Fully miscible
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>dynamic:</b>	Not applicable.
<b>kinematic:</b>	Not applicable.
<b>Organic solvents:</b>	0.0 %
<b>Solids content:</b>	100.0 %
· <b>Other information</b>	No further relevant information available.

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

**11 Toxicological information**

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.

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**Trade name: Variant Hemoglobin Analytical Cartridge**

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**· Additional toxicological information:**

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.

The substance is not subject to classification according to the latest version of the EU lists.

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

Substance is not listed.

**· NTP (National Toxicology Program)**

Substance is not listed.

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

Substance is not listed.

· **Target organs:** Not applicable.

**12 Ecological information**

- **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.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

- |  |      |
|--|------|
| · <b>UN-Number</b><br>· <b>DOT, ADR, ADN, IMDG, IATA</b>                               | Void |
| · <b>UN proper shipping name</b><br>· <b>DOT, ADR, ADN, IMDG, IATA</b>                 | Void |
| · <b>Transport hazard class(es)</b><br>· <b>ADR, ADN, IMDG, IATA</b><br>· <b>Class</b> | Void |
| · <b>Packing group</b><br>· <b>DOT, ADR, IMDG, IATA</b>                                | Void |

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**Trade name: Variant Hemoglobin Analytical Cartridge**

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- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **Transport/Additional information:** Not dangerous according to the above specifications.

**15 Regulatory information**

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

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

Substance not listed.

· **Section 313 (40CFR372.65):**

Substance is not listed.

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

Substance is not listed.

· **National regulations**

· **Water hazard class:** Generally not 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 SDS:** 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

· **Date of preparation / last revision** 06/03/2015 / -

· **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

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

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

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 06/02/2015

## 1 Identification

- **Product identifier**
- **Trade name:** Variant Hb Retention Time Marker Unlabeled
- **Catalog or product number:** 35497
- **Application of the substance / the mixture** *In-vitro laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
*Bio-Rad Laboratories, Diagnostic Group  
 4000 Alfred Nobel Drive  
 Hercules, California 94547*
1(510)724-7000
- **Information department:**  
*Technical services, customer support  
 TechsupportUSSD@bio-rad.com*
- **Emergency telephone number:**  
*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 ingredients

- **Chemical characterization: Substances**
- **CAS No. Description:**  
*57-50-1 sucrose, pure*
- **Identification number(s):**
- **EC number:** 200-334-9
- **Additional information:** *Contains human sourced and/or potentially infectious components.*
- **Description:** *Mixture of the substances listed below with non-hazardous additions.*
- **Listing of dangerous and non-hazardous components:** *Void*
- **Additional information** *For the wording of the listed risk phrases refer to section 15.*

## 3 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*

## 4 First-aid measures

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

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**Trade name: Variant Hb Retention Time Marker Unlabeled**

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- **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** Induce vomiting and call for medical help.

**5 Fire-fighting measures**

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

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:** Disinfectant
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**7 Handling and storage**

- **Handling**
- **Precautions for safe handling** No special measures required.
- **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.
- **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.
- **Components with limit values that require monitoring at the workplace:**

**57-50-1 sucrose, pure**

PEL (United States)	15* 5** mg/m <sup>3</sup> *total dust **respirable fraction
REL (United States)	10* 5** mg/m <sup>3</sup> *total dust **respirable fraction
TLV (United States)	10 mg/m <sup>3</sup>

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

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**Trade name: Variant Hb Retention Time Marker Unlabeled**

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- **Personal protective equipment**
- **General protective and hygienic measures**  
Follow the usual biosafety practices for handling potentially infectious materials.
- **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

**9 Physical and chemical properties**

- **General Information**
- **Appearance:**
  - Form: Granulate
  - Color: White
- **Odor:** Odorless
- **Odour threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**
  - Melting point/Melting range: undetermined
  - Boiling point/Boiling range: undetermined
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Not determined.
- **Ignition temperature:**
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower: Not determined.
  - Upper: Not determined.
- **Vapor pressure:** Not applicable.
- **Density at 20 °C:** 0.94 g/cm<sup>3</sup>
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with Water:** Fully miscible
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - dynamic: Not applicable.
  - kinematic: Not applicable.

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**Trade name: Variant Hb Retention Time Marker Unlabeled**

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- **Solvent content:**
- Organic solvents:** 0.0 %
- **Solids content:** 100.0 %
- **Other information:** No further relevant information available.

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

**11 Toxicological information**

- **Acute toxicity:**
- **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.

· **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.

· **Target organs:** Not applicable.

**12 Ecological information**

- **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.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

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Reviewed on 06/02/2015

**Trade name: Variant Hb Retention Time Marker Unlabeled**

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**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation**  
Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations. Must not be disposed of together with household garbage. Do not allow product to reach sewage system. 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**

· <b>UN-Number</b>	Void
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
· <b>UN proper shipping name</b>	Void
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
· <b>Transport hazard class(es)</b>	Void
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>Class</b>	Void
· <b>Packing group</b>	Void
· <b>DOT, ADR, IMDG, IATA</b>	Void
· <b>Environmental hazards:</b>	No
· <b>Marine pollutant:</b>	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.

**15 Regulatory information**

- **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):**  
57-50-1 sucrose, pure

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**Safety Data Sheet**  
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**Trade name: Variant Hb Retention Time Marker Unlabeled**

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· **California Proposition 65:**

· **Developmental Toxicity**

32986-56-4	tobramycin
1405-41-0	Gentamicin Sulfate

· **National regulations**

· **Water hazard class:** Generally not 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 SDS:** 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

· **Date of preparation / last revision** 06/03/2015 / -

· **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

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)

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

## Safety Data Sheet

acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 05/27/2015

### 1 Identification

- **Product identifier**
- **Trade name:** Variant Hb Testing System Wash Solution
- **Catalog or product number:** 2700082
- **Application of the substance / the mixture** *In-vitro laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547
- 1(510)724-7000
- **Information department:**  
Technical services, customer support  
TechsupportUSSD@bio-rad.com
- **Emergency telephone number:**  
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 ingredients

- **Chemical characterization:** Substances
- **CAS No. Description:**  
7732-18-5 water
- **Identification number(s):**
- **EC number:** 231-791-2
- **Description:** Mixture of the substances listed below with non-hazardous additions.
- **Listing of dangerous and non-hazardous components:** Void
- **Additional information** For the wording of the listed risk phrases refer to section 15.

### 3 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

### 4 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.

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**Trade name: Variant Hb Testing System Wash Solution**

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- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.

**5 Fire-fighting measures**

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

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:** Dilute with plenty of 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.  
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** No special measures required.
- **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.
- **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.
- **Components with limit values that require monitoring at the workplace:**

**26628-22-8 sodium azide**

REL (United States)	Short-term value: C 0.3** mg/m <sup>3</sup> , C 0.1* ppm *as HN3 vapor; **as NaN3; Skin
TLV (United States)	Short-term value: C 0.29** mg/m <sup>3</sup> , C 0.11* ppm *as HN3 vapor **as NaN3

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.

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**Trade name: Variant Hb Testing System Wash Solution**

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- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
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

**9 Physical and chemical properties**

- **General Information**
- **Appearance:**
  - **Form:** Liquid
  - **Color:** Colorless
  - **Odor:** Odorless
  - **Odour threshold:** Not determined.
- **pH-value at 20 °C:** 7
- **Change in condition**
  - **Melting point/Melting range:** 0 °C
  - **Boiling point/Boiling range:** 100 °C
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Not applicable.
- **Ignition temperature:**
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.
- **Vapor pressure at 20 °C:** 23 hPa
- **Density at 20 °C:** 1 g/cm<sup>3</sup>
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Fully miscible
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - **dynamic:** Not determined.
  - **kinematic:** Not determined.
- **Solvent content:**
  - **Organic solvents:** 0.0 %

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**Trade name: Variant Hb Testing System Wash Solution**

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**Water:** 100.0 %  
**Other information** No further relevant information available.

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:**  
 This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.
- **Hazardous decomposition products:** No dangerous decomposition products known

**11 Toxicological information**

- **Acute toxicity:**
- **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.

· **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.

· **Target organs:** Not applicable.

**12 Ecological information**

- **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.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

DUS

(Contd. on page 5)



**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 05/27/2015

**Trade name: Variant Hb Testing System Wash Solution**

(Contd. of page 4)

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation**  
Hand over to hazardous waste disposers.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Dispose of waste in accordance to applicable national, regional, or local regulations.  
Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.
- **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>   | Void   |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void   |
| · <b>UN proper shipping name</b>   | Void   |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | Void   |
| · <b>Transport hazard class(es)</b>  |  |
| · <b>ADR, ADN, IMDG, IATA</b>  |  |
| · <b>Class</b>   | Void   |
| · <b>Packing group</b>   |  |
| · <b>DOT, ADR, IMDG, IATA</b>  | Void   |
| · <b>Environmental hazards:</b>  |  |
| · <b>Marine pollutant:</b>   | 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**

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

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

26628-22-8 sodium azide

- **Section 313 (40CFR372.65):**

26628-22-8 sodium azide

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

All ingredients are listed.

(Contd. on page 6)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 05/27/2015

**Trade name: Variant Hb Testing System Wash Solution**

(Contd. of page 5)

- **National regulations**
- **Water hazard class:** Generally not 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 SDS:** 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
- **Date of preparation / last revision** 06/03/2015 / -
- **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  
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)
- \* **Data compared to the previous version altered.**

DUS

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 05/27/2015

## 1 Identification

- **Product identifier**
- **Trade name:** Variant Hemoglobinopathy Pgm Elution Buffer 1
- **Catalog or product number:** 2700802
- **Application of the substance / the mixture** *In-vitro laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547
- 1(510)724-7000
- **Information department:**  
Technical services, customer support  
TechsupportUSSD@bio-rad.com
- **Emergency telephone number:**  
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 ingredients

- **Chemical characterization: Substances**
- **CAS No. Description:**  
7732-18-5 water
- **Identification number(s):**
- **EC number:** 231-791-2
- **Description:** Mixture of the substances listed below with non-hazardous additions.
- **Listing of dangerous and non-hazardous components:** Void
- **Additional information** For the wording of the listed risk phrases refer to section 15.

## 3 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

## 4 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.

(Contd. on page 2)

DUS

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 05/27/2015

**Trade name: Variant Hemoglobinopathy Pgm Elution Buffer 1**

(Contd. of page 1)

- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.

**5 Fire-fighting measures**

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

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:** Dilute with plenty of 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.  
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** No special measures required.
- **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.
- **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.
- **Components with limit values that require monitoring at the workplace:**

**7647-01-0 hydrochloric acid**

PEL (United States)	Short-term value: C 7 mg/m <sup>3</sup> , C 5 ppm
REL (United States)	Short-term value: C 7 mg/m <sup>3</sup> , C 5 ppm
TLV (United States)	Short-term value: C 2.98 mg/m <sup>3</sup> , C 2 ppm

**26628-22-8 sodium azide**

REL (United States)	Short-term value: C 0.3** mg/m <sup>3</sup> , C 0.1* ppm *as HN <sub>3</sub> vapor; **as NaN <sub>3</sub> ; Skin
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(Contd. on page 3)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 05/27/2015

**Trade name: Variant Hemoglobinopathy Pgm Elution Buffer 1**

(Contd. of page 2)

TLV (United States) Short-term value: C 0.29\*\* mg/m<sup>3</sup>, C 0.11\* ppm  
\*as HN3 vapor \*\*as NaN3

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

**9 Physical and chemical properties**

- **General Information**
- **Appearance:**
  - Form: Liquid
  - Color: Colorless
- **Odor:** Odorless
- **Odour threshold:** Not determined.
- **pH-value at 20 °C:** 6.2
- **Change in condition**
  - Melting point/Melting range: 0 °C
  - Boiling point/Boiling range: 100 °C
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Not applicable.
- **Ignition temperature:**
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower: Not determined.
  - Upper: Not determined.
- **Vapor pressure at 20 °C:** 23 hPa
- **Density:** Not determined
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Fully miscible

(Contd. on page 4)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 05/27/2015

**Trade name: Variant Hemoglobinopathy Pgm Elution Buffer 1**

(Contd. of page 3)

- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - dynamic:** Not determined.
  - kinematic:** Not determined.
- **Solvent content:**
  - Organic solvents:** 0.0 %
  - Water:** 99.7 %
- **Other information** No further relevant information available.

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:**  
This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.
- **Hazardous decomposition products:** No dangerous decomposition products known

**11 Toxicological information**

- **Acute toxicity:**
- **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.
- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>	
7647-01-0 hydrochloric acid	3
- **NTP (National Toxicology Program)**  
None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**  
None of the ingredients is listed.
- **Target organs:** Not applicable.

**12 Ecological information**

- **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.

(Contd. on page 5)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 05/27/2015

**Trade name: Variant Hemoglobinopathy Pgm Elution Buffer 1**

(Contd. of page 4)

- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of waste in accordance to applicable national, regional, or local regulations. Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.
- **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><br>· <b>DOT, ADR, ADN, IMDG, IATA</b>                               | Void   |
| · <b>UN proper shipping name</b><br>· <b>DOT, ADR, ADN, IMDG, IATA</b>                 | Void   |
| · <b>Transport hazard class(es)</b><br>· <b>ADR, ADN, IMDG, IATA</b><br>· <b>Class</b> | Void   |
| · <b>Packing group</b><br>· <b>DOT, ADR, IMDG, IATA</b>                                | Void   |
| · <b>Environmental hazards:</b><br>· <b>Marine pollutant:</b>                          | 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. |

**15 Regulatory information**

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

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

7647-01-0	hydrochloric acid
26628-22-8	sodium azide

- **Section 313 (40CFR372.65):**

7647-01-0	hydrochloric acid
26628-22-8	sodium azide

(Contd. on page 6)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 05/27/2015

**Trade name: Variant Hemoglobinopathy Pgm Elution Buffer 1**

(Contd. of page 5)

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

All ingredients are listed.

· **National regulations**

· **Water hazard class:** Generally not 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 SDS:** 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

· **Date of preparation / last revision** 06/03/2015 / -

· **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

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)

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



**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 06/02/2015

**1 Identification**

- **Product identifier**
- **Trade name:** Variant Hemoglobinopathy Pgm Elution Buffer 2
- **Catalog or product number:** 2700803
- **Application of the substance / the mixture** *In-vitro laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
*Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547* 1(510)724-7000
- **Information department:**  
*Technical services, customer support  
TechsupportUSSD@bio-rad.com*
- **Emergency telephone number:**  
*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 ingredients**

- **Chemical characterization:** **Substances**
- **CAS No. Description:**  
*7732-18-5 water*
- **Identification number(s):**
- **EC number:** 231-791-2
- **Description:** *Mixture of the substances listed below with non-hazardous additions.*

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

7647-14-5	sodium chloride	1.0-2.5%
-----------	-----------------	----------

- **Additional information** *For the wording of the listed risk phrases refer to section 15.*

**3 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*

**4 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.*

(Contd. on page 2)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 06/02/2015

**Trade name: Variant Hemoglobinopathy Pgm Elution Buffer 2**

(Contd. of page 1)

· **After swallowing** Induce vomiting and call for medical help.

**5 Fire-fighting measures**

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

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:** Dilute with plenty of 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.  
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** No special measures required.
- **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.
- **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.

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

**7647-01-0 hydrochloric acid**

PEL (United States)	Short-term value: C 7 mg/m <sup>3</sup> , C 5 ppm
REL (United States)	Short-term value: C 7 mg/m <sup>3</sup> , C 5 ppm
TLV (United States)	Short-term value: C 2.98 mg/m <sup>3</sup> , C 2 ppm

**26628-22-8 sodium azide**

REL (United States)	Short-term value: C 0.3** mg/m <sup>3</sup> , C 0.1* ppm *as HN3 vapor; **as NaN3; Skin
TLV (United States)	Short-term value: C 0.29** mg/m <sup>3</sup> , C 0.11* ppm *as HN3 vapor **as NaN3

(Contd. on page 3)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 06/02/2015

**Trade name: Variant Hemoglobinopathy Pgm Elution Buffer 2**

(Contd. of page 2)

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

**9 Physical and chemical properties**

- **General Information**
- **Appearance:**
  - Form: Liquid
  - Color: Colorless
- **Odor:** Odorless
- **Odour threshold:** Not determined.
- **pH-value at 20 °C:** 6.2
- **Change in condition**
  - Melting point/Melting range: 0 °C
  - Boiling point/Boiling range: 100 °C
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Not applicable.
- **Ignition temperature:**
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower: Not determined.
  - Upper: Not determined.
- **Vapor pressure at 20 °C:** 23 hPa
- **Density:** Not determined
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Fully miscible
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - dynamic: Not determined.
  - kinematic: Not determined.

(Contd. on page 4)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 06/02/2015

**Trade name: Variant Hemoglobinopathy Pgm Elution Buffer 2**

(Contd. of page 3)

- **Solvent content:**
- Organic solvents:** 0.0 %
- Water:** 98.5 %
- **Other information** No further relevant information available.

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:**  
This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.
- **Hazardous decomposition products:** No dangerous decomposition products known

**11 Toxicological information**

- **Acute toxicity:**
- **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.

· **Carcinogenic categories**

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

7647-01-0 hydrochloric acid

3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

- **Target organs:** Not applicable.

**12 Ecological information**

- **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.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

DUS

(Contd. on page 5)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 06/02/2015

**Trade name: Variant Hemoglobinopathy Pgm Elution Buffer 2**

(Contd. of page 4)

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation**  
Hand over to hazardous waste disposers.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Dispose of waste in accordance to applicable national, regional, or local regulations.  
Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**14 Transport information**

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

**15 Regulatory information**

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

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

7647-01-0 hydrochloric acid

26628-22-8 sodium azide

· **Section 313 (40CFR372.65):**

7647-01-0 hydrochloric acid

26628-22-8 sodium azide

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

All ingredients are listed.

(Contd. on page 6)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 06/02/2015

**Trade name: Variant Hemoglobinopathy Pgm Elution Buffer 2**

(Contd. of page 5)

- **National regulations**
- **Water hazard class:** Generally not 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 SDS:** 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
- **Date of preparation / last revision** 06/03/2015 / -
- **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  
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)
- **\* Data compared to the previous version altered.**

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**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 05/27/2015

**1 Identification**

- **Product identifier**
- **Trade name:** Variant Hb Pgm Hemolysis Reagent, RTM Diluent
- **Catalog or product number:** 2700804, 2700806
- **Application of the substance / the mixture** *In-vitro laboratory reagent or component*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
*Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547* 1(510)724-7000
- **Information department:**  
*Technical services, customer support  
TechsupportUSSD@bio-rad.com*
- **Emergency telephone number:**  
*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 ingredients**

- **Chemical characterization:** **Substances**
- **CAS No. Description:**  
*7732-18-5 water*
- **Identification number(s):**
- **EC number:** 231-791-2
- **Description:** *Mixture of the substances listed below with non-hazardous additions.*

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

10043-35-3	boric acid	0.01-0.1%
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· **Additional information** *For the wording of the listed risk phrases refer to section 15.*

**3 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*

**4 First-aid measures**

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

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**Trade name: Variant Hb Pgm Hemolysis Reagent, RTM Diluent**

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- **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** Induce vomiting and call for medical help.

**5 Fire-fighting measures**

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

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **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.  
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** No special measures required.
- **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.
- **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.
- **Components with limit values that require monitoring at the workplace:**

**10043-35-3 boric acid**

TLV (United States)	Short-term value: 6* mg/m <sup>3</sup> Long-term value: 2* mg/m <sup>3</sup> *as inhalable fraction
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- **Additional information:** The lists that were valid during the creation were used as basis.

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- **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.  
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

**9 Physical and chemical properties**

- **General Information**
- **Appearance:**
  - Form: Liquid
  - Color: Colorless
- **Odor:** Odorless
- **Odour threshold:** Not determined.
- **pH-value at 20 °C:** 7.8
- **Change in condition**
  - Melting point/Melting range: 0 °C
  - Boiling point/Boiling range: 100 °C
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Not applicable.
- **Ignition temperature:**
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower: Not determined.
  - Upper: Not determined.
- **Vapor pressure at 20 °C:** 23 hPa
- **Density:** Not determined
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Fully miscible
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
- **dynamic:** Not determined.

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**kinematic:** Not determined.

**· Solvent content:**

**Organic solvents:** 0.0 %

**Water:** 99.9 %

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

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

**11 Toxicological information**

- **Acute toxicity:**
- **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.
- **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.
- **Target organs:** Not applicable.

**12 Ecological information**

- **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.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

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

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. 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**

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

**15 Regulatory information**

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

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

151-50-8 | potassium cyanide

· **Section 313 (40CFR372.65):**

151-50-8 | potassium cyanide

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

10043-35-3 | boric acid

151-50-8 | potassium cyanide

7732-18-5 | water

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**Trade name: Variant Hb Pgm Hemolysis Reagent, RTM Diluent**

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· **California Proposition 65:**

· **Developmental Toxicity**

32986-56-4	tobramycin
1405-41-0	Gentamicin Sulfate

· **National regulations**

· **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 SDS:** 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

· **Date of preparation / last revision** 06/03/2015 / -

· **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

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)

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