

## 06/03/2015

## **Kit Components**

Product code	Description	
96CE	Autoimmune EIA Anti-Centromere Kit	
Components:		
200CE	Anti-Centromere Positive Control, Calibrator	
220NC	Negative Control	
220HSP	Conjugate	
220TM	Substrate	
220SM	Stop Solution	
230AD	Sample Diluent 230AD	
230AW	Wash Concentrate 230AW	



Printing date 06/03/2015 Reviewed on 06/02/2015

### 1 Identification

- · Product identifier
- · Trade name: Anti-Centromere Positive Control, Calibrator
- · Catalog or product number: 200CE, 210CE
- · 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: Mixtures
- · Description: Mixture of the substances listed below with non-hazardous additions.

· Listing of	dangerous and non-hazardous components:	
56-81-5	glycerol	35-50%
	Human Source Material	20-35%
7732-18-5	water	20-35%
	Goat Serum	2.5-5%

· Additional information

Contains human sourced and/or potentially infectious components.

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

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Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Anti-Centromere Positive Control, Calibrator

(Contd. of page 1)

### 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.
- · 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:

Disinfectant

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.

(Contd. on page 3)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Anti-Centromere Positive Control, Calibrator

(Contd. of page 2)

· Components with I	· Components with limit values that require monitoring at the workplace:	
56-81-5 glycerol		
PEL (United States)	15* 5** mg/m³ *total dust **respirable fraction	
TLV (United States)	10* ppm *Mist	
26628-22-8 sodium	azide	
REL (United States)	Short-term value: C 0.3** mg/m³, C 0.1* ppm *as HN3 vapor; **as NaN3; Skin	
TLV (United States)	Short-term value: C 0.29** mg/m³, 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

Follow the usual biosafety practices for handling potentially infectious materials.

- · 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

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9111	y Si Gai	aniu		car p	GI U	C3

· General Information · Appearance:		
Form: Color:	Liquid Whitish	
· Odor: · Odour threshold:	Odorless Not determined.	
· pH-value:	Not determined.	
· Change in condition Melting point/Melting range: Boiling point/Boiling range:	undetermined undetermined	
· Flash point:	Not applicable	
· Flammability (solid, gaseous)	Not applicable.	
· Ignition temperature:	400 °C	
· Decomposition temperature:	Not determined.	
· Auto igniting:	Product is not selfigniting.	
· Danger of explosion:	Product does not present an explosion hazard.	
		(Contd. on page 4)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Anti-Centromere Positive Control, Calibrator

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· Explosion limits:		
Lower:	0.9 Vol %	
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/w	rater): Not determined.	
· Viscosity:		
dynamic:	Not determined.	
kinematic:	Not determined.	
· Solvent content:		
Organic solvents:	38.8 %	
Water:	27.8 %	
· 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.

(Contd. on page 5)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Anti-Centromere Positive Control, Calibrator

(Contd. of page 4)

· 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.

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

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.

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	
<ul> <li>UN proper shipping name</li> <li>DOT, ADR, ADN, IMDG, IATA</li> </ul>	Void	
· Transport hazard class(es)		
· ADR, ADN, IMDG, IATA · Class	Void	
· Packing group · DOT, ADR, IMDG, IATA	Void	
· Environmental hazards: · Marine pollutant:	No	
		(Contd. on page 6)

(Contd. on page 6)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Anti-Centromere Positive Control, Calibrator

(Contd. of page 5)

· Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/	<b>78</b> Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	-

## 15 Regulatory information

· SARA (Superfund Amendents 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):

56-81-5 glycerol

7647-14-5 sodium chloride

26628-22-8 sodium azide

7558-79-4 disodium hydrogenorthophosphate

7558-80-7 Sodium dihydrogen phosphate

7732-18-5 water

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

Class	Share in %
NK	35-50

· 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

(Contd. on page 7)



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### Trade name: Anti-Centromere Positive Control, Calibrator

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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



Printing date 06/03/2015 Reviewed on 06/02/2015

### 1 Identification

- · Product identifier
- · Trade name: Negative Control
- · Catalog or product number: 220NC, 220ND, 220NS, 423-1004, 423-0108
- · 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: Mixtures
- · Description: Mixture of the substances listed below with non-hazardous additions.

· Listing of	dangerous and non-hazardous components:	
	Human Source Material	35-50%
56-81-5	glycerol	20-35%
7732-18-5	water	20-35%
	Goat Serum	1.0-2.5%

· Additional information

Contains human sourced and/or potentially infectious components.

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

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Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Negative Control

(Contd. of page 1)

### 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.
- · 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:

Disinfectant

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.

(Contd. on page 3)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Negative Control

(Contd. of page 2)

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

56-81-5 glycerol

PEL (United States) 15\* 5\*\* mg/m<sup>3</sup>

\*total dust \*\*respirable fraction

TLV (United States) 10\* ppm

\*Mist

- · Additional information: The lists that were valid during the creation were used as basis.
- · Personal protective equipment
- · General protective and hygienic measures

Follow the usual biosafety practices for handling potentially infectious materials.

- · 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

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Liquid Whitish Odorless Not determined.
Not determined.
undetermined undetermined
Not applicable
Not applicable.
400 °C
Not determined.
Product is not selfigniting.
Product does not present an explosion hazard.
0.9 Vol % Not determined.
23 hPa
Not determined Not determined. Not determined.

(Contd. on page 4)



# Safety Data Sheet

Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Negative Control

(Contd. of page 3)

· 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: 29.5 % Water: 21.0 %

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 eve: 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.

(Contd. on page 5)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Negative Control

(Contd. of page 4)

- · 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

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.

INI Managara	
JN-Number DOT, ADR, ADN, IMDG, IATA	Void
JN 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.
Fransport in bulk according to Annex II of MA	ARPOL73/78 Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.
UN "Model Regulation":	-

## 15 Regulatory information

- · SARA (Superfund Amendents and Reauthorization Act of 1986 USA)
- Section 302/304 (40CFR355.30 / 40CFR355.40):

None of the ingredients is listed.

(Contd. on page 6)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Negative Control

(Contd. of page 5)

· Section 3	213 (40CFR372.65):
None of the	e ingredients is listed.
· TSCA (To)	ric Substances Control Act):
56-81-5	
7647-14-5	sodium chloride
	disodium hydrogenorthophosphate
	Sodium dihydrogen phosphate
7732-18-5	water

- National regulations
- · Technical instructions (air):

Class	Share in %
NK	20-35

· 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



Printing date 06/03/2015 Reviewed on 06/02/2015

### 1 Identification

- · Product identifier
- · Trade name: Conjugate
- · Catalog or product number: 220HSP, 423-1005, 423-2004, 423-3004, 220HAN, 220HDS, 220HCE
- · 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:

Stabilzyme Select HRP Conjugate Stabilizer (Proprietary aqueous, protein-containing mixture preserved with 0.02% methylisothiazolone, 0.02% bromonitrodioxane, and 20 ppm Proclin 300)

- · Additional information: Contains added constituents of animal origin.
- · Chemical characterization: Mixtures
- · 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 = 1

Fire = 0

Reactivity = 0

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Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Conjugate

(Contd. of page 1)

### 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.
- · 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:

### 56-81-5 glycerol

PEL (United States) 15\* 5\*\* mg/m³

\*total dust \*\*respirable fraction

(Contd. on page 3)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Conjugate

(Contd. of page 2)

TLV (United States) 10\* ppm \*Mist

- · 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

General Information	
Appearance:	
Form:	Liquid
Color:	Amber
Odor:	Odorless
Odour threshold:	Not determined.
pH-value at 20 °C:	7.2
Change in condition	
Melting point/Melting range:	undetermined
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:	Not determined.
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)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Conjugate

(Contd. of page 3)

· Viscosity:

dynamic: Not determined. kinematic: Not determined.

· Solvent content:

Organic solvents: 0.9 % Water: 0.7 %

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: 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.

(Contd. on page 5)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Conjugate

(Contd. of page 4)

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

## 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.

4 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.
<ul> <li>Transport in bulk according to Annex II of Manney and the IBC Code</li> </ul>	ARPOL73/78 Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	-

## 15 Regulatory information

- · SARA (Superfund Amendents 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.

(Contd. on page 6)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Conjugate

(Contd. of page 5)

· TSCA (To	xic Substances Control Act):
	glycerol
7647-14-5	sodium chloride
7558-79-4	disodium hydrogenorthophosphate
7732-18-5	water

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

Class	Share in %
NK	0.1-1.0

· 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 acronvms:

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



Printing date 06/03/2015 Reviewed on 06/02/2015

### 1 Identification

- · Product identifier
- · Trade name: Substrate
- · Catalog or product number: 220TM, 423-0003, 220HT
- · 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: Mixtures
- · Description: Mixture of the substances listed below with non-hazardous additions.

· Listing of dangerous and non-hazardous components:		
7732-18-5	water	50-100%
67-56-1	methanol	10-20%
67-64-1	acetone	5-10%
67-68-5	dimethyl sulfoxide	2.5-5%
54827-17-7	3,3',5,5'-tetramethylbenzidine	0.01-0.1%

<sup>·</sup> Additional information For the wording of the listed risk phrases refer to section 15.

### 3 Hazard(s) identification

· Classification of the substance or mixture

Acute Tox. 4 H332 Harmful if inhaled.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 1 H370 Causes damage to organs.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms





GHS07 GHS08

· Signal word Danger

(Contd. on page 2)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Substrate

(Contd. of page 1)

· Hazard-determining components of labeling:

methanol acetone

3,3',5,5'-tetramethylbenzidine

· Hazard statements

H332 Harmful if inhaled.

H319 Causes serious eye irritation. H370 Causes damage to organs.

· Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear eye protection / face protection.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing.

P321 Specific treatment (see on this label).

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

Health = 1 Fire = 2 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.
- · After eye contact Rinse opened eye for several minutes under running water.
- · After swallowing Rinse mouth with water. Seek medical attention and appropriate follow-up.

### 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.

(Contd. on page 3)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Substrate

See Section 13 for disposal information.

(Contd. of page 2)

### 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 lim	nit values that require monitoring at the workplace:
67-56-1 methanol	
PEL (United States)	260 mg/m³, 200 ppm
REL (United States)	Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm Skin
TLV (United States)	Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm Skin; BEI
67-64-1 acetone	
PEL (United States)	2400 mg/m³, 1000 ppm
REL (United States)	590 mg/m³, 250 ppm
TLV (United States)	Short-term value: 1782 mg/m³, 750 ppm Long-term value: 1188 mg/m³, 500 ppm BEI
67-68-5 dimethyl sulf	oxide
WEEL (United States)	250 ppm
7722-84-1 hydrogen <sub>I</sub>	peroxide solution
PEL (United States)	1.4 mg/m³, 1 ppm
REL (United States)	1.4 mg/m³, 1 ppm
TLV (United States)	1.4 mg/m³, 1 ppm
· Additional informatio	on: 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

(Contd. on page 4)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Substrate

(Contd. of page 3)

• 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

Physical and chemical prope		
General Information		
Appearance:		
Form:	Liquid	
Color:	Whitish	
Odor:	Like alcohol	
Odour threshold:	Not determined.	
pH-value:	Not determined.	
Change in condition		
Melting point/Melting range:	undetermined	
Boiling point/Boiling range:	undetermined	
Flash point:	> 55 °C	
Flammability (solid, gaseous)	Not applicable.	
Ignition temperature:	455 °C	
Decomposition temperature:	Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower:	2.6 Vol %	
Upper:	44.0 Vol %	
Vapor pressure at 20 °C:	233 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/wa	ter): Not determined.	
Viscosity:		
dynamic:	Not determined.	
kinematic:	Not determined.	
Solvent content:		
Organic solvents:	28.0 %	
Water:	71.9 %	



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Substrate

(Contd. of page 4)

· 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:
- · LD/LC50 values for hazardous components per OSHA criteria:

### 67-56-1 methanol

Oral LD50 5628 mg/kg (rat) Dermal LD50 20000 mg/kg (rat)

### 67-64-1 acetone

Oral LD50 5800 mg/kg (rat) Dermal LD50 20000 mg/kg (rbt) 67-68-5 dimethyl sulfoxide

Oral LD50 14500 mg/kg (rat)

- Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eve:

No irritant effect.

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)

7722-84-1 hydrogen peroxide solution

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.

(Contd. on page 6)



Reviewed on 06/02/2015 Printing date 06/03/2015

Trade name: Substrate

(Contd. of page 5)

- · 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 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.

### 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.

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 a and the IBC Code	MARPOL73/78 Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
UN "Model Regulation":	-



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Substrate

(Contd. of page 6)

### 15 Regulatory information

- · SARA (Superfund Amendents and Reauthorization Act of 1986 USA)
- Section 302/304 (40CFR355.30 / 40CFR355.40):

7722-84-1 hydrogen peroxide solution

Section 313 (40CFR372.65):

67-56-1 methanol

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

- · California Proposition 65:
- · Developmental Toxicity

67-56-1 methanol

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

Class	Share in %
I	10-20
NK	10-20

· Water hazard class: Water hazard class 2 (Self-assessment): 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

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

STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1

· \* Data compared to the previous version altered.



Printing date 06/03/2015 Reviewed on 06/02/2015

### 1 Identification

- · Product identifier
- · Trade name: Stop Solution
- · Catalog or product number: 220SM, 423-0004, 220HS
- · 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
- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with non-hazardous additions.
- · Listing of dangerous and non-hazardous components:

7664-93-9 sulphuric acid

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

Health = 0

Fire = 0

Reactivity = 0

- DU



# Safety Data Sheet

Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Stop Solution

(Contd. of page 1)

### 4 First-aid measures

- · General information No special measures required.
- · After inhalation Seek immediate medical advice.
- · 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 Rinse mouth with water. Seek medical attention and appropriate follow-up.

### 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:

7647-01-0 hydrochloric acid

PEL (United States) | Short-term value: C 7 mg/m³, C 5 ppm

(Contd. on page 3)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Stop Solution

(Contd. of page 2)

REL (United States) | Short-term value: C 7 mg/m³, C 5 ppm TLV (United States) | Short-term value: C 2.98 mg/m³, C 2 ppm

- · 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

General Information	
Appearance:	
Form:	Liquid
Color:	Colorless
Odor:	Odorless
Odour threshold:	Not determined.
pH-value at 20 °C:	< 3
Change in condition	
Melting point/Melting range:	0 ℃
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:	1.009 g/cm³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible

(Contd. on page 4)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Stop Solution

(Contd. of page 3)

· Viscosity:

dynamic: Not determined. kinematic: Not determined.

· Solvent content:

Organic solvents: 0.0 % Water: 97.0 %

· 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)	
7647-01-0 hydrochloric acid	3
7664-93-9 sulphuric acid	1
· NTP (National Toxicology Program)	
7664-93-9 sulphuric acid	K
· OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingradients is listed	

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)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Stop Solution

(Contd. of page 4)

- · Additional ecological information:
- · General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

### 13 Disposal considerations

- · 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.

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

IN-Number OOT, ADR, ADN, IMDG, IATA	Void
	VOIG
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 MA and the IBC Code	RPOL73/78 Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.
UN "Model Regulation":	_

## 15 Regulatory information

- · SARA (Superfund Amendents and Reauthorization Act of 1986 USA)
- Section 302/304 (40CFR355.30 / 40CFR355.40):

7647-01-0 hydrochloric acid

7664-93-9 sulphuric acid

(Contd. on page 6)



Printing date 06/03/2015 Reviewed on 06/02/2015

Trade name: Stop Solution

(Contd. of page 5)

· Section 313 (40CFR372.65):

7647-01-0 hydrochloric acid

7664-93-9 sulphuric acid

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

- · 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)

· \* Data compared to the previous version altered.

DUS



Printing date 06/03/2015 Reviewed on 05/26/2015

### 1 Identification

- · Product identifier
- · Trade name: Sample Diluent
- · Catalog or product number: 230AD, 423-0002
- · 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
- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with non-hazardous additions.

· Listing of dangerous and non-hazardous components:		
7732-18-5	water	50-100%
	Goat Serum	2.5-5%
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

(Contd. on page 2)



Printing date 06/03/2015 Reviewed on 05/26/2015

Trade name: Sample Diluent

(Contd. of page 1)

- · 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.
- · 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.

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Trade name: Sample Diluent

(Contd. of page 2)

### 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/m³, C 0.1\* ppm

\*as HN3 vapor; \*\*as NaN3; Skin

TLV (United States) Short-term value: C 0.29\*\* mg/m³, 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.

• Eve protection: Safety glasses

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<ul> <li>General Information</li> <li>Appearance:     Form:     Color:     Odor:     Odour threshold:</li> </ul>	Liquid Whitish Odorless Not determined.
· pH-value at 20 °C:	7.3
· Change in condition Melting point/Melting range: Boiling point/Boiling range:	undetermined 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: Upper:	Not determined. Not determined.

(Contd. on page 4)



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Trade name: Sample Diluent

(Contd. of page 3)

	(Conta. or page 3	
· Vapor pressure at 20 °C:	23 hPa	
· Density at 20 °C:	1.00181 g/cm³	
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 %	
Water:	94.2 %	
· 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.

(Contd. on page 5)



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Trade name: Sample Diluent

· Target organs: Not applicable.

(Contd. of page 4)

## 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. 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.

JN-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 MA and the IBC Code	RPOL73/78 Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.
UN "Model Regulation":	-



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Trade name: Sample Diluent

(Contd. of page 5)

### 15 Regulatory information

- · SARA (Superfund Amendents and Reauthorization Act of 1986 USA)
- Section 302/304 (40CFR355.30 / 40CFR355.40): 26628-22-8 sodium azide

20020-22-0 30didili azide

Section 313 (40CFR372.65):

26628-22-8 sodium azide

- · TSCA (Toxic Substances Control Act):
  - 7647-14-5 sodium chloride 26628-22-8 sodium azide
  - 7558-79-4 disodium hydrogenorthophosphate
  - 9000-70-8 Gelatins
  - 7558-80-7 Sodium dihydrogen phosphate
  - 7732-18-5 water
- · 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.

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### 1 Identification

- · Product identifier
- · Trade name: Wash Concentrate
- · Catalog or product number: 230AW, 423-0005
- · 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
- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with non-hazardous additions.

· Listing of dangerous and non-hazardous components:		
7732-18-5	water	50-100%
7647-14-5	sodium chloride	10-20%
7558-79-4	disodium hydrogenorthophosphate	1.0-2.5%
9005-64-5	Tween 20	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

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms





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Trade name: Wash Concentrate

(Contd. of page 1)

· Signal word Warning

· Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

· Precautionary statements

P280 Wear protective gloves.

P280 Wear eye protection / face protection.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing.

P321 Specific treatment (see on this label).

P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.

Classification system

NFPA ratings (scale 0-4)

Health = 1 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.
- · 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.

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Trade name: Wash Concentrate

(Contd. of page 2)

## 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:

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.
- · 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

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· General Information		
· Appearance:		
Form:	Liquid	
Color:	Whitish	
· Odor:	Odorless	
· Odour threshold:	Not determined.	
· pH-value at 20 °C:	7.3	
· Change in condition		
Melting point/Melting range:	undetermined	
Boiling point/Boiling range:	undetermined	
· Flash point:	Not applicable	
· Flammability (solid, gaseous)	Not applicable.	
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Contd. on page 4



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Trade name: Wash Concentrate

(Contd of page 3)

	(Contd. of page
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/wa	ter): Not determined.
· Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
Solvent content:	
Organic solvents:	0.0 %
Water:	85.0 %
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.

Irritant to skin and mucous membranes.

· on the eye:

No irritant effect.

Irritant effect.

· Sensitization: No sensitizing effects known.

(Contd. on page 5)



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Trade name: Wash Concentrate

(Contd. of page 4)

· 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.

### 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

(Contd. on page 6)



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Trade name: Wash Concentrate

	(Contd. of page 5)
· 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 and the IBC Code	3/78 Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	-

### 15 Regulatory information

- · SARA (Superfund Amendents 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):

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.

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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)

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

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

· \* Data compared to the previous version altered.