



03/20/2017 Kit Components

Product code	Description
D4062 & D4063	ZR-96 Oligo Clean & Concentrator (2 x 96 preps & 4 x 96 preps)
Components:	
D4060-1-10	Oligo Binding Buffer
D4003-2-6	DNA Wash Buffer

Page 1/10

Safety Data Sheet acc. to OSHA HCS

Printing date 03/20/2017 Reviewed on 12/28/2015

1 Identification

- · Product identifier
- · Trade name: Oligo Binding Buffer
- · Article number: D4060-1-10, D4060-1-40
- · Application of the substance / the mixture Laboratory Reagent
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Zymo Research Corp.

17062 Murphy Ave.

Irvine, CA 92614

USA

Phone: 1-949-679-1190 or 1-888-882-9682

sds@zymoresearch.com

- · Information department: Product safety department
- · Emergency telephone number:

During normal business hours (8 am to 5 pm Pacific Standard Time): +1 (949) 679 1190

2 Hazard(s) identification

· Classification of the substance or mixture



Acute Tox. 4 H302 Harmful if swallowed.

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 GHS07
- · Signal word Warning
- · Hazard-determining components of labeling:

guanidinium chloride

· Hazard statements

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

· Precautionary statements

Wear protective gloves / eye protection / face protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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

Continue rinsing.

Specific treatment (see on this label).

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

If skin irritation occurs: Get medical advice/attention.

(Contd. on page 2)



Page 2/10

Safety Data Sheet acc. to OSHA HCS

Printing date 03/20/2017 Reviewed on 12/28/2015

Trade name: Oligo Binding Buffer

(Contd. of page 1)

If eye irritation persists: Get medical advice/attention.

Rinse mouth.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

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

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



Health = 1Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 1Fire = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components:

CAS: 50-01-1 guanidinium chloride

≤50%

4 First-aid measures

- · Description of first aid measures
- · General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- · After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eve contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- · After swallowing: Do not induce vomiting; immediately call for medical help.
- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.

(Contd. on page 3)



Page 3/10

Safety Data Sheet acc. to OSHA HCS

Printing date 03/20/2017 Reviewed on 12/28/2015

Trade name: Oligo Binding Buffer

(Contd. of page 2)

· Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · Advice for firefighters
- · Protective equipment: Wear protective clothing.

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).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

1.4 mg/m3
16 mg/m3
94 mg/m3

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.

(Contd. on page 4)

Page 4/10

Safety Data Sheet acc. to OSHA HCS

Printing date 03/20/2017 Reviewed on 12/28/2015

Trade name: Oligo Binding Buffer

(Contd. of page 3)

- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) Laboratory reagent

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

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

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

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· 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.

(Contd. on page 5)



Page 5/10

Safety Data Sheet acc. to OSHA HCS

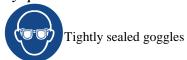
Printing date 03/20/2017 Reviewed on 12/28/2015

Trade name: Oligo Binding Buffer

(Contd. of page 4)

· Eye protection:

· Viscosity: Dynamic:



9 Physical and che	emical pro	perties
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Liquid
Clear
No information available
Not determined.
Not determined.
Undetermined.
Undetermined.
Not applicable.
Not applicable.
Not determined.
Product is not selfigniting.
Product does not present an explosion hazard.
Not Applicable
Not Applicable
Not determined.
Fully miscible.
r): Not determined.

Not determined.

(Contd. on page 6)



Printing date 03/20/2017 Reviewed on 12/28/2015

Trade name: Oligo Binding Buffer

	(Contd. of page 5)
Not determined.	
0.0 %	
0.0 g/l / 0.00 lb/gl	
50.0 %	
No further relevant information available.	
	0.0 % 0.0 g/l / 0.00 lb/gl 50.0 %

10 Stability and reactivity

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

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:

CAS: 50-01-1 guanidinium chloride

Oral LD50 475 mg/kg (rat)

- Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- · on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

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

Harmful Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

Page 7/10

Safety Data Sheet acc. to OSHA HCS

Printing date 03/20/2017 Reviewed on 12/28/2015

Trade name: Oligo Binding Buffer

(Contd. of page 6)

12 Ecological information

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

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

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

- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Dispose of contents in accordance with local/regional/national, and international recommendations.

- · Uncleaned packagings:
- · Recommendation:

Dispose of container in acoordance with local/regional/national and international recommendations.

· Recommended cleansing agent: Water, if necessary with cleansing agents.

UN-Number		
DOT, ADN, IMDG, IATA	not regulated	
UN proper shipping name DOT, ADN, IMDG, IATA	not regulated	
Transport hazard class(es)		
DOT, ADN, IMDG, IATA		
Class	not regulated	
Packing group		
DOT, IMDG, IATA	not regulated	
Environmental hazards:	Not applicable.	
Special precautions for user	Not applicable.	

(Contd. on page 8)



Page 8/10

Safety Data Sheet acc. to OSHA HCS

Printing date 03/20/2017 Reviewed on 12/28/2015

Trade name: Oligo Binding Buffer

(Contd. of page 7)

· Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

· UN ''Model Regulation'': not regulated

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- · Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

- · Proposition 65
- · Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

- · Carcinogenic categories
- · EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

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

None of the ingredients is listed.

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms GHS07
- · Signal word Warning
- · Hazard-determining components of labeling:

guanidinium chloride

· Hazard statements

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

(Contd. on page 9)

Safety Data Sheet

Page 9/10

Reviewed on 12/28/2015

Trade name: Oligo Binding Buffer

(Contd. of page 8)

· Precautionary statements

Wear protective gloves / eye protection / face protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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

acc. to OSHA HCS

Continue rinsing.

Printing date 03/20/2017

Specific treatment (see on this label).

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.

Rinse mouth.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

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

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS:

Zymo Research Corp.

Safety Department

17062 Murphy Ave.

Irvine, CA 92614

USA

Phone: 1-949-679-1190 or 1-888-882-9682

- · Contact: sds@zymoresearch.com
- · Date of preparation / last revision 03/20/2017 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity - Category 4

(Contd. on page 10)



Page 10/10

Safety Data Sheet acc. to OSHA HCS

Printing date 03/20/2017 Reviewed on 12/28/2015

Trade name: Oligo Binding Buffer

(Contd. of page 9)

Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

IIC.



Printing date 03/20/2017 Reviewed on 12/03/2015

1 Identification

- · Product identifier
- · Trade name: DNA Wash Buffer
- · Article number: D4003-2-6, D4003-2-24, D4003-2-48
- · Application of the substance / the mixture Laboratory Reagent
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Zymo Research Corp.

17062 Murphy Ave.

Irvine, CA 92614

USA

Phone: 1-949-679-1190 or 1-888-882-9682

sds@zymoresearch.com

- · Information department: Product safety department
- · Emergency telephone number:

During normal business hours (8 am to 5 pm Pacific Standard Time): +1 (949) 679 1190

2 Hazard(s) identification

- · Classification of the substance or mixture
- The product is not classified according to the Globally Harmonized System (GHS).
- · Label elements
- · GHS label elements Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 0

Fire = 0

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 0

Fire = 0

REACTIVITY $\boxed{0}$ Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · vPvB: Not applicable.

US





Printing date 03/20/2017 Reviewed on 12/03/2015

Trade name: DNA Wash Buffer

(Contd. of page 1)

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components: Void

4 First-aid measures

- · Description of first aid measures
- · General information: No special measures required.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Generally the product does not irritate the skin.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Do not induce vomiting; immediately call for medical help.
- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · Advice for firefighters
- · Protective equipment: Wear protective clothing.

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

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

1 Totalite Metto	a Criteria for Chemicais	
· PAC-1:		
CAS: 1185-53-1	2-amino-2-(hydroxymethyl)propane-1,3-diolhydrochloride	12 mg/m3
CAS: 6381-92-6	Edetate Disodium, Dihydrate	30 mg/m3
· PAC-2:		
CAS: 1185-53-1	2-amino-2-(hydroxymethyl)propane-1,3-diolhydrochloride	130 mg/m3
		(Contd. on page 3)





Printing date 03/20/2017 Reviewed on 12/03/2015

Trade name: DNA Wash Buffer

CAS: 6381-92-6 Edetate Disodium,	Dihydrate	(Contd. of page 2) 330 mg/m3
· PAC-3:		
CAS: 1185-53-1 2-amino-2-(hydrox	ymethyl)propane-1,3-diolhydrochloride	790 mg/m3
CAS: 6381-92-6 Edetate Disodium,	Dihydrate	2,000 mg/m3

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · Specific end use(s) Laboratory reagent

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

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

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

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.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· 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.

(Contd. on page 4)



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Page 4/8

Safety Data Sheet acc. to OSHA HCS

Printing date 03/20/2017 Reviewed on 12/03/2015

Trade name: DNA Wash Buffer

(Contd. of page 3)

· Eye protection: Goggles recommended during refilling.

Information on basic physical and	chemical properties	
General Information		
Appearance:	T::1	
Form: Color:	Liquid Clear	
Odor:	Odorless	
Odor threshold:	Not determined.	
pH-value:	Not determined.	
	1,00 0000	
Change in condition	Undetermined.	
Melting point/Melting range: Boiling point/Boiling range:	Undetermined.	
01 0		
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 Applicable	
Upper:	Not Applicable	
Vapor pressure:	Not determined.	
Density:	Not determined.	
Relative density	Not determined.	
Vapor density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
Water:	Fully miscible.	
Partition coefficient (n-octanol/wat	er): Not determined.	
Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Solvent content:		
Organic solvents:	0.0 %	
VOC content:	0.0 g/l / 0.00 lb/gl	

(Contd. on page 5)



Page 5/8

Safety Data Sheet acc. to OSHA HCS

Reviewed on 12/03/2015 *Printing date 03/20/2017*

Trade name: DNA Wash Buffer

(Contd. of page 4)

Solids content: 1.0 %

· Other information No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

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

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.

(Contd. on page 6)





Printing date 03/20/2017 Reviewed on 12/03/2015

Trade name: DNA Wash Buffer

(Contd. of page 5)

- · Additional ecological information:
- · General notes: Generally not hazardous for water
- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- · Recommendation:
- Dispose of container in acoordance with local/regional/national and international recommendations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

UN-Number	
DOT, ADN, IMDG, IATA	not regulated
UN proper shipping name DOT, ADN, IMDG, IATA	not regulated
Transport hazard class(es)	
DOT, ADN, IMDG, IATA Class	not regulated
Packing group DOT, IMDG, IATA	not regulated
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex	II of
MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	not regulated

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- · Section 355 (extremely hazardous substances):

None of the ingredients is listed.

(Contd. on page 7)



Page 7/8

Safety Data Sheet acc. to OSHA HCS

Printing date 03/20/2017 Reviewed on 12/03/2015

Trade name: DNA Wash Buffer

(Contd. of page 6)

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

CAS: 1185-53-1 2-amino-2-(hydroxymethyl)propane-1,3-diolhydrochloride

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

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

None of the ingredients is listed.

- · GHS label elements Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS:

Zymo Research Corp.

Safety Department

17062 Murphy Ave.

Irvine, CA 92614

USA

Phone: 1-949-679-1190 or 1-888-882-9682

- · Contact: sds@zymoresearch.com
- · Date of preparation / last revision 03/20/2017 / -
- · 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)

(Contd. on page 8)

Page 8/8

Safety Data Sheet acc. to OSHA HCS

Printing date 03/20/2017 Reviewed on 12/03/2015

Trade name: DNA Wash Buffer

(Contd. of page 7)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit

US ·