

07/18/2024	Kit Components
Product code	Description
D4068, D4068T	Quick-DNA Miniprep Plus Kit (50 preps & 10 preps)
Components:	
Proteinase K	
Proteinase K Storage Buffer	
BioFluid & Cell Buffer	
Solid Tissue Buffer	
Genomic Binding Buffer	
DNA Pre-Wash Buffer	
g-DNA Wash Buffer	
DNA Elution Buffer	



Printing date 07/18/2024

Reviewed on 03/15/2021

tting date 07/18/2024	Reviewed on 03/15/2021
Identification	
Product identifier	
Trade name: Proteinase K	
Article number: D3001-2-A, D3001-2-B, D3001-2-F, D Application of the substance / the mixture Laboratory F	
Details of the supplier of the safety data sheet Manufacturer/Supplier: Zymo Research Corp. 17062 Murphy Ave., Irvine, CA 92614, U.S.A., Phone: - sds@zymoresearch.com	+1(949) 679-1190 or +1(888) 882-9682,
<i>Information department:</i> Product Safety Dept. <i>Emergency telephone number:</i> During normal business hours (8 am to 5 pm Pacific Star	ndard Time): +1 (949) 679 1190
Label elements GHS label elements Void Hazard pictograms Void Signal word Void Hazard statements Void Classification system: NFPA ratings (scale 0 - 4)	
$\begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 $	
HMIS-ratings (scale $0 - 4$)HEALTH \bigcirc Health = 0FIRE \bigcirc Fire = 0REACTIVITYReactivity = 0	
Other hazards	

3 Composition/information on ingredients

· Chemical characterization: Mixtures

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

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· 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:

Wash eyes immediately, for at least 15 minutes, with large amounts of water, holding upper and lower lids open. Remove contact lenses, if present and it is easy to do so. Get medical attention immediately.

- 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. Use fire fighting measures that suit the environment.

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

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Wear protective clothing.

- · Environmental precautions: No special measures required.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- 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

• PAC-1:

None of the ingredients is listed.

• PAC-2:

None of the ingredients is listed.

· PAC-3:

None of the ingredients is listed.

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.

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

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Trade name: Proteinase K

(Contd. of page 2)

- · 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 section 7.
- · Control parameters See Section 8 for information
- *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 \cdot *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.
- *Eye protection:* Not required.

Information on basic physical and General Information	chemical properties	
Appearance: Form:	Crystalline powder	
Color:	Whitish	
Odor:	Odorless	
Odor threshold:	Not determined.	
pH-value:	Not applicable.	
Change in condition		
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	Undetermined.	
Flash point:	Not applicable.	

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Trade name: Proteinase K

	(Contd. of page 2
Flammability (solid, gaseous):	Not determined.
Decomposition temperature:	Not determined.
Ignition temperature:	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 applicable.
Density:	Not determined.
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water:	Soluble.
Partition coefficient (n-octanol/wa	ter): Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
Solvent content:	
VOC content:	0.00 %
Solids content:	100.0 %
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:

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Trade name: Proteinase K

(Contd. of page 4)

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

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes: 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 accordance 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, ÂDN, IMDĞ, IATA	not regulated	
Transport hazard class(es)		
DOT, ADN, IMDG, IATA		
Class	not regulated	
Packing group		
DOT, IMDG, IATA	not regulated	

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Trade name: Proteinase K

 • 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 No further relevant information available.

· 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):

None of the ingredients is listed.

· Hazardous Air Pollutants

None of the ingredients is 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)

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.

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Trade name: Proteinase K

(Contd. of page 6)

product fea	ation is based on our present knowledge. However, this shall not constitute a guarantee for any spe tures and shall not establish a legally valid contractual relationship.	C1
- Devartmen	t issuing SDS:	
Zymo Rese		
Safety Dep		
17062 Mur		
Irvine, CA		
USA		
	19-679-1190 or 1-888-882-9682	
,	s@zymoresearch.com	
	paration / last revision 07/18/2024 / -	
	ons and acronyms: relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the Internation	1
	ingerous Goods by Road)	aı
U	tional Maritime Code for Dangerous Goods	
	artment of Transportation	
	tional Air Transport Association	
	pean Inventory of Existing Commercial Chemical Substances	
	pean List of Notified Chemical Substances	
	al Abstracts Service (division of the American Chemical Society) al Fire Protection Association (USA)	
	lous Materials Identification System (USA)	
	Organic Compounds (USA, EU)	
	t, Bioaccumulative and Toxic	
	rsistent and very Bioaccumulative	
	nal Institute for Occupational Safety	
	ational Safety & Health	
	ld Limit Value ble Exposure Limit	



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Product identifier	
Trade name: Proteinase K Storage Bu	ffer
Article number: D3001-2-C, D3001-2- Application of the substance / the mix	
Details of the supplier of the safety dat Manufacturer/Supplier: Zymo Research Corp. 17062 Murphy Ave., Irvine, CA 92614 sds@zymoresearch.com	<i>ta sheet</i> , U.S.A., Phone: +1(949) 679-1190 or +1(888) 882-9682,
<i>Information department:</i> Product Safe <i>Emergency telephone number:</i> During normal business hours (8 am to	ty Dept. 5 pm Pacific Standard Time): +1 (949) 679 1190
Hazard(s) identification	
<i>Classification of the substance or mixe</i> The product is not classified, according	<i>ture</i> 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)	
Signal word Void Hazard statements Void Classification system:	
Signal word Void Hazard statements Void Classification system: NFPA ratings (scale $0 - 4$) Health = 0 Fire = 1 Reactivity = 0 HMIS-ratings (scale $0 - 4$) HEALTH 0 Health = 0	
Signal word Void Hazard statements Void Classification system: NFPA ratings (scale $0 - 4$) Health = 0 Fire = 1 Reactivity = 0 HMIS-ratings (scale $0 - 4$) HEALTH 0 Health = 0	

• Chemical characterization: Mixtures

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

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Trade name: Proteinase K Storage Buffer

(Contd. of page 1)

≤50%

· Dangerous components:

CAS: 56-81-5 glycerol

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:

Wash eyes immediately, for at least 15 minutes, with large amounts of water, holding upper and lower lids open. Remove contact lenses, if present and it is easy to do so. Get medical attention immediately.

- 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. Use fire fighting measures that suit the environment.

- · 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).
- · 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

• PAC-1:

All components have the value 45 mg/m^3 .

· PAC-2:

All components have the value 180 mg/m³.

• PAC-3:

All components have the value $1,100 \text{ mg/m}^3$.

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Reviewed on 03/15/2021

Trade name: Proteinase K Storage Buffer

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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 section 7.
- · Control parameters See Section 8 for information
- *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.

CAS: 56-81-5 glycerol

PEL Long-term value: 15* 5** mg/m³

mist; *total dust **respirable fraction

- TLV TLV withdrawn-insufficient data human occup. exp.
- *Additional information:* The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:
- 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 \cdot *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.

• Eye protection: Goggles recommended during refilling.

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- General Information
- · Appearance: Form:

Liquid

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Trade name: Proteinase K Storage Buffer

	(Contd. of p	bage 3
Color:	Clear	
Odor:	Odorless	
Odor threshold:	Not determined.	
pH-value:	Not determined.	
Change in condition		
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	290 °C (554 °F)	
Flash point:	160 °C (320 °F)	
Flammability (solid, gaseous):	Not applicable.	
Auto igniting:	400 °C (752 °F)	
Decomposition temperature:	Not determined.	
Ignition temperature:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower:	0.9 Vol %	
Upper:	0.0 Vol %	
Vapor pressure at 20 °C (68 °F):	0.1 hPa	
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/wate	er): Not determined.	
Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Solvent content:		
Organic solvents:	50.0 %	
VOC content:	0.00 %	
	0.0 g/l / 0.00 lb/gal	
Solids content:	0.0 %	
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.

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Trade name: Proteinase K Storage Buffer

· Hazardous decomposition products: No dangerous decomposition products known.

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11 Toxicological information

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

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

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 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:* Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- · Recommendation:

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

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Trade name: Proteinase K Storage Buffer

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

Transport information		
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 MARPOL73/78 and the IBC Code	II of Not applicable.	
UN "Model Regulation":	not regulated	

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· 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 components have the value ACTIVE.

· Hazardous Air Pollutants

None of the ingredients is 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.

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Reviewed on 03/15/2021

Trade name: Proteinase K Storage Buffer

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· Carcinogenic categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

• *TLV (Threshold Limit Value)* 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 07/18/2024 / -• Abbreviations and acronyms: ADR: Accord relatif au transport international 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) 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



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Reviewed on 03/15/2021

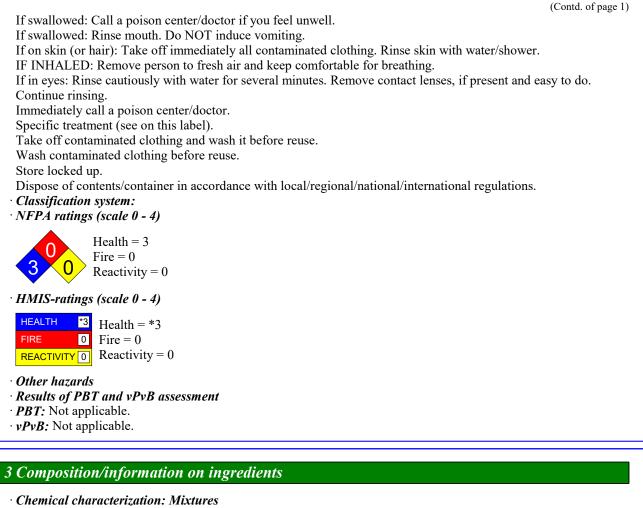
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1 Identification	
· Product identifier	
· Trade name: BioFluid & (Cell Buffer
· Article number: D4068-1-	12, D4068-1-25, D4068-1-45, D4068-1-2.5-S, D4068-1-6 ace / the mixture Laboratory Reagent
• Details of the supplier of the supplier of the supplier: • Manufacturer/Supplier: Zymo Research Corp. 17062 Murphy Ave., Irvine sds@zymoresearch.com	<i>he safety data sheet</i> e, CA 92614, U.S.A., Phone: +1(949) 679-1190 or +1(888) 882-9682,
• Information department: I	
• <i>Emergency telephone num</i>	<i>nber:</i> urs (8 am to 5 pm Pacific Standard Time): +1 (949) 679 1190
During normal business no	
2 Hazard(s) identification	on
• Classification of the substa	ance or mixture
GHS05 Corrosic	on
Skin Corrosion 1C	H314 Causes severe skin burns and eye damage.
Eye Damage 1	H318 Causes serious eye damage.
\wedge	
GHS07	
Acute Toxicity - Oral 4	H302 Harmful if swallowed.
Acute Toxicity - Dermal 4	H312 Harmful in contact with skin.
Acute Toxicity - Inhalation	4 H332 Harmful if inhaled.
Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.
 Hazard pictograms GHS03 Signal word Danger Hazard statements Harmful if swallowed, in constrained and the constraint of th	ontact with skin or if inhaled. nd eye damage. h long lasting effects. rs/spray. dling. when using this product. vell-ventilated area.
	(Contd. on page 2)

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Reviewed on 03/15/2021

Trade name: BioFluid & Cell Buffer



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

· Dangerous components:

CAS: 593-84-0 guanidinium thiocyanate

≤70%

4 First-aid measures

· Description of first aid measures

• General information:

Immediately remove any clothing soiled by the product.

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

• After inhalation:

Supply fresh air. If required, provide artificial respiration if trained to do so. Keep patient warm. Consult doctor if symptoms persist.

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

• After eye contact:

Wash eyes immediately, for at least 15 minutes, with large amounts of water, holding upper and lower lids open. Remove contact lenses, if present and it is easy to do so. Get medical attention immediately.

• After swallowing:

Rinse mouth

(Contd. on page 3)

US

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Reviewed on 03/15/2021

Trade name: BioFluid & Cell Buffer

DO NOT induce vomiting.

- 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. Use fire fighting measures that suit the environment.

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. *Special hazards arising from the substance or mixture*

Products of thermal decomposition of this material would include hydrogen cyanide, ammonia, and oxides of carbon, nitrogen and sulfur.

• Advice for firefighters

· Protective equipment: Wear self-contained breathing apparatus for fighting fires involving this material

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Wear self-contained breathing apparatus for responding to non-incidental release of this material in which there is the potential for inhalation of vapors, mists or sprays Wear protective equipment. Keep unprotected persons away. • 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). Use neutralizing agent. Dispose contaminated material as waste according to section 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 • PAC-1: All components have the value 0.98 mg/m^3 . · PAC-2: All components have the value 11 mg/m³. · PAC-3:

All components have the value 65 mg/m^3 .

7 Handling and storage

• Handling:

· Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

(Contd. on page 4)

⁻ US

(Contd. of page 3)

Safety Data Sheet acc. to OSHA HCS

Printing date 07/18/2024

Reviewed on 03/15/2021

Trade name: BioFluid & Cell Buffer

Prevent formation of aerosols.

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

- · Conditions for safe storage, including any incompatibilities
- Store in cool, dry place. Store in well-ventilated location.

· Storage:

- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Do not store together with acids or strong oxidizers
- 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 section 7.
- · Control parameters See Section 8 for information
- *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

The appropriate protective equipment under anticipated circumstances of use include lab-coat, safety glasses with side-shields and gloves.

- · 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 eves 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 \cdot *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)

(Contd. of page 4)

Safety Data Sheet acc. to OSHA HCS

Printing date 07/18/2024

Reviewed on 03/15/2021

Trade name: BioFluid & Cell Buffer

• Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

General Information Appearance:		
Appearance. Form:	Liquid	
Color:	Light red	
Odor:	Odorless	
Odor threshold:	Not determined.	
pH-value:	Not determined.	
Change in condition		
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	Undetermined.	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not applicable.	
Decomposition temperature:	Not determined.	
Ignition temperature:	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:		
VOC content:	0.00 %	
	0.0 g/l / 0.00 lb/gal	
Solids content:	70.0 %	

(Contd. of page 5)

Safety Data Sheet acc. to OSHA HCS

Printing date 07/18/2024

Reviewed on 03/15/2021

Trade name: BioFluid & Cell Buffer

• Other information

No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- Chemical stability This product is normally stable under anticipated circumstances of use and storage.
- Thermal decomposition / conditions to be avoided:

Products of thermal decomposition of this material would include hydrogen cyanide, ammonia, and oxides of carbon nitrogen and sulfur.

- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid Avoid exposing product to extreme temperatures or incompatible chemicals
- · Incompatible materials: Acids and strong oxidizers
- Hazardous decomposition products:

Product will not undergo self-decomposition, so no such products will be generated.

11 Toxicological information

· Information on toxicological effects

- Acute toxicity:
- · LD/LC50 values that are relevant for classification:

CAS: 593-84-0 guanidinium thiocyanate

- Oral LD50 593 mg/kg (rat)
- Primary irritant effect:

• on the skin: Caustic effect on skin and mucous membranes.

- · on the eye: Strong caustic effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

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

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· 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:

CAS: 593-84-0 guanidinium thiocyanate

EC50 42.4 mg/kg (daphnia)

(Contd. on page 7)

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Printing date 07/18/2024

Reviewed on 03/15/2021

Trade name: BioFluid & Cell Buffer

	(Contd. of page 6)
Persistence and degradability No further relevant information available.	
Behavior in environmental systems:	
Bioaccumulative potential No further relevant information available.	
Mobility in soil No further relevant information available.	
Additional ecological information:	
General notes:	
Water hazard class 2 (Self-assessment): hazardous for water	
Do not allow product to reach ground water, water course or sewage system.	
Must not reach bodies of water or drainage ditch undiluted or unneutralized.	
Danger to drinking water if even small quantities leak into the ground.	
Results of PBT and vPvB assessment	
PBT: Not applicable.	
v PvB: 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, IMDG, IATA	UN1760
UN proper shipping name	
DOT	Corrosive liquids, n.o.s. (guanidinium thiocyanate)
IMDG, IATA	CORROSIVE LIQUID, N.O.S. (guanidinium thiocyanate)
Transport hazard class(es)	
DOT	
CORROSINE 8	
Class	8 Corrosive substances
Label	8
IMDG, IATA	
APP CALL	
Class	8 Corrosive substances
Label	8

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Reviewed on 03/15/2021

Trade name: BioFluid & Cell Buffer

	(Contd. of page
Packing group DOT, IMDG, IATA	III
Environmental hazards:	Not applicable.
Special precautions for user	Warning: Corrosive substances
Hazard identification number (Kemler code	e): 80
EMS Number:	F-A,S-B
Stowage Category	A
Stowage Code	SW2 Clear of living quarters.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	r Not applicable.
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 5 L
	On cargo aircraft only: 60 L
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 1760 CORROSIVE LIQUID, N.O.S. (GUANIDINIUM THIOCYANATE), 8, III

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

• 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 components have the value ACTIVE.

· Hazardous Air Pollutants

None of the ingredients is 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.

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Printing date 07/18/2024

Reviewed on 03/15/2021

Trade name: BioFluid & Cell Buffer

	(Contd. of page
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)	
None of the ingredients is listed.	
NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	
<i>GHS label elements</i> The product is classified and labeled according to the Globally Harmon <i>Hazard pictograms</i> GHS05, GHS07 <i>Signal word</i> Danger	onized System (GHS).
Hazard statements	
Harmful if swallowed, in contact with skin or if inhaled.	
Causes severe skin burns and eye damage.	
Harmful to aquatic life with long lasting effects.	
Precautionary statements	
Do not breathe mist/vapours/spray.	
Wash thoroughly after handling.	
Do not eat, drink or smoke when using this product.	
Use only outdoors or in a well-ventilated area.	
Avoid release to the environment.	
Wear protective gloves/protective clothing/eye protection/face protection.	
If swallowed: Call a poison center/doctor if you feel unwell.	
If swallowed: Rinse mouth. Do NOT induce vomiting.	
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/	shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.	4 1 4 1
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if prese	nt and easy to do.
Continue rinsing.	
Immediately call a poison center/doctor. Specific treatment (see on this label).	
Take off contaminated clothing and wash it before reuse.	
Wash contaminated clothing before reuse.	
Store locked up.	
Dispose of contents/container in accordance with local/regional/national/international regu	lations.
<i>Chemical safety assessment:</i> A Chemical Safety Assessment has not been carried out.	
Chemical sujery assessment. It Chemical Safety Assessment has not been earned but.	

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 07/18/2024 / -

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⁻ US

Printing date 07/18/2024

Reviewed on 03/15/2021

Trade name: BioFluid & Cell Buffer

	(Contd. of page 9)
· Abbreviations and acronyms:	
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning t	he 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)	
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 Toxicity - Oral 4: Acute toxicity – Category 4	
Skin Corrosion 1C: Skin corrosion/irritation – Category 1C	
Eye Damage 1: Serious eye damage/eye irritation – Category 1	
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3	
	US -



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Reviewed on 03/15/2021

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Identification	
Product identifier	
Trade name: Solid Tissue Buffer	
Article number: D4068-2-6, D4068-2-10, D4068-2-22, Application of the substance / the mixture Laboratory	
Details of the supplier of the safety data sheet Manufacturer/Supplier: Zymo Research Corp. 17062 Murphy Ave., Irvine, CA 92614, U.S.A., Phone: sds@zymoresearch.com	+1(949) 679-1190 or +1(888) 882-9682,
<i>Information department:</i> Product Safety Dept. <i>Emergency telephone number:</i> During normal business hours (8 am to 5 pm Pacific Sta	ndard Time): +1 (949) 679 1190
	Harmonized System (GHS).
Label elements GHS label elements Void Hazard pictograms Void Signal word Void Hazard statements Void Classification system:	Harmonized System (GHS).
Classification of the substance or mixture The product is not classified, according to the Globally Label elements GHS label elements Void Hazard pictograms Void Signal word Void Hazard statements Void	Harmonized System (GHS).
Classification of the substance or mixture The product is not classified, according to the Globally 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	Harmonized System (GHS).

3 Composition/information on ingredients

· Chemical characterization: Mixtures

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

(Contd. on page 2)

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Trade name: Solid Tissue Buffer

(Contd. of page 1)

· Dangerous comp	×	
CAS: 6381-92-6	Edetate Disodium, Dihydrate	≤20%
CAS: 151-21-3	sodium dodecyl sulphate	≤2.5%

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:

Wash eyes immediately, for at least 15 minutes, with large amounts of water, holding upper and lower lids open. Remove contact lenses, if present and it is easy to do so. Get medical attention immediately.

• After swallowing:

Do not induce vomiting; immediately call for medical help.

Immediately call a doctor. Drink copious amounts of water and provide fresh air. Immediately call a doctor.

- Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

5 Fire-fighting measures

• Extinguishing media

- Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire fighting measures that suit the environment.
- · 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).
- · 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

• PAC-1:		
CAS: 6381-92-6	Edetate Disodium, Dihydrate	30 mg/m ³
CAS: 151-21-3	sodium dodecyl sulphate	3.9 mg/m ³
• PAC-2:		
CAS: 6381-92-6	Edetate Disodium, Dihydrate	330 mg/m ³
		(Contd. on page 3)

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Trade name: Solid Tissue Buffer

CAS: 151-21-3	sodium dodecyl sulphate	(Contd. of page 2) 43 mg/m ³
· PAC-3:		
CAS: 6381-92-6	Edetate Disodium, Dihydrate	2,000 mg/m ³
CAS: 151-21-3	sodium dodecyl sulphate	260 mg/m ³

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 section 7.
- · Control parameters See Section 8 for information
- *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.
- Eye protection: Goggles recommended during refilling.

(Contd. on page 4)

Printing date 07/18/2024

Reviewed on 03/15/2021

Trade name: Solid Tissue Buffer

(Contd. of page 3)

Physical and chemical proper	rties
Information on basic physical and	chemical properties
General Information	
Appearance:	
Form:	Liquid
Color:	Clear
Odor:	Odorless
Odor threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Ignition temperature:	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	ter): Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gal
Solids content:	20.0 %
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.

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Trade name: Solid Tissue Buffer

- · 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.
- 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: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- Recommendation:

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

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(Contd. of page 5)

Trade name: Solid Tissue Buffer

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

4 Transport information		
· 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 MARPOL73/78 and the IBC Code	II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

• *Safety, health and environmental regulations/legislation specific for the substance or mixture* No further relevant information available.

· 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):

CAS: 151-21-3 sodium dodecyl sulphate

· Hazardous Air Pollutants

None of the ingredients is 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.

(Contd. on page 7)

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Printing date 07/18/2024

Reviewed on 03/15/2021

Trade name: Solid Tissue Buffer

(Contd. of page 6)

· Carcinogenic categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

• *TLV (Threshold Limit Value)* 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 07/18/2024 / -• Abbreviations and acronyms: ADR: Accord relatif au transport international 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) 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

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Product identifier	
-	
Trade name: Genomic Binding Buffer	
Article number: D4068-3-25, D4068-3-45, D4068-3-2068-3-2068-3-20068-3-20068-300068-30068-30068-30068-30068-30068-30068-30068-30068-3	
Details of the supplier of the safety data sheet Manufacturer/Supplier: Zymo Research Corp. 17062 Murphy Ave., Irvine, CA 92614, U.S.A., Pho sds@zymoresearch.com	one: +1(949) 679-1190 or +1(888) 882-9682,
Information department: Product Safety Dept.	
<i>Emergency telephone number:</i> During normal business hours (8 am to 5 pm Pacific	Standard Time): +1 (949) 679 1190
	Sundard Time). •1 (>+>) 0+> 11>0
Hazard(s) identification	
Classification of the substance or mixture	
GHS02 Flame	
\checkmark	
Flammable Liquids 2	H225 Highly flammable liquid and vapor.
GHS05 Corrosion	
Skin Corrosion 1C	H314 Causes severe skin burns and eye damage.
\checkmark	H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.
Skin Corrosion 1C	, ,
Skin Corrosion 1C Eye Damage 1 GHS07	, ,
Skin Corrosion 1C Eye Damage 1	H318 Causes serious eye damage.
Skin Corrosion 1C Eye Damage 1 GHS07 Acute Toxicity - Oral 4	H318 Causes serious eye damage. H302 Harmful if swallowed.
Skin Corrosion 1C Eye Damage 1 GHS07 Acute Toxicity - Oral 4 Acute Toxicity - Dermal 4	H318 Causes serious eye damage. H302 Harmful if swallowed. H312 Harmful in contact with skin. H332 Harmful if inhaled.
Skin Corrosion 1C Eye Damage 1 GHS07 Acute Toxicity - Oral 4 Acute Toxicity - Dermal 4 Acute Toxicity - Inhalation 4	H318 Causes serious eye damage. H302 Harmful if swallowed. H312 Harmful in contact with skin. H332 Harmful if inhaled.

Printing date 07/18/2024

Reviewed on 03/15/2021

Trade name: Genomic Binding Buffer

Manager durantization and displayer	(Contd. of page 1)
May cause drowsiness or dizziness.	
Harmful to aquatic life with long lasting effects.	
<i>Precautionary statements</i> Keep away from heat/sparks/open flames/hot surfaces No smoking.	
Ground/bond container and receiving equipment.	
Use explosion-proof electrical/ventilating/lighting/equipment.	
Use only non-sparking tools.	
Take precautionary measures against static discharge.	
Do not breathe dusts or mists.	
Wash thoroughly after handling.	
Do not eat, drink or smoke when using this product.	
Use only outdoors or in a well-ventilated area.	
Avoid release to the environment.	
Wear protective gloves/protective clothing/eye protection/face protection.	
If swallowed: Call a poison center/doctor if you feel unwell.	
If swallowed: Rinse mouth. Do NOT induce vomiting.	
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/show	wer.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present ar	nd easy to do.
Continue rinsing.	j
Immediately call a poison center/doctor.	
Specific treatment (see on this label).	
Take off contaminated clothing and wash it before reuse.	
Wash contaminated clothing before reuse.	
In case of fire: Use CO2, powder or water spray to extinguish.	
Store in a well-ventilated place. Keep container tightly closed.	
Store in a well-ventilated place. Keep cool.	
Store locked up.	
Dispose of contents/container in accordance with local/regional/national/international regulatio	ons.
Classification system:	
NFPA ratings (scale 0 - 4)	
Health $= 3$	
Fire $= 3$	
3 U Reactivity = 0	
HMIS-ratings (scale 0 - 4)	
HEALTH *3 Health = *3	
FIRE 3 Fire = 3	
REACTIVITY 0 Reactivity = 0	
Other hazards	
Results of PBT and vPvB assessment	
<i>PBT:</i> Not applicable.	
<i>vPvB:</i> Not applicable.	
······································	
Composition/information on ingredients	

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

· Dangerous components:

CAS: 593-84-0 guanidinium thiocyanate

(Contd. on page 3)

≤70%

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Trade name: Genomic Binding Buffer

CAS: 67-63-0 propan-2-ol

 $\frac{\text{(Contd. of page 2)}}{\leq 30\%}$

4 First-aid measures

- · Description of first aid measures
- General information:
- Immediately remove any clothing soiled by the product.

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

• After inhalation:

Supply fresh air. If required, provide artificial respiration if trained to do so. Keep patient warm. Consult doctor if symptoms persist.

- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact:

Wash eyes immediately, for at least 15 minutes, with large amounts of water, holding upper and lower lids open. Remove contact lenses, if present and it is easy to do so. Get medical attention immediately.

- After swallowing:
- Rinse mouth

DO NOT induce vomiting.

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

• Special hazards arising from the substance or mixture

Products of thermal decomposition of this material would include hydrogen cyanide, ammonia, and oxides of carbon, nitrogen and sulfur.

- Advice for firefighters
- Protective equipment: Wear self-contained breathing apparatus for fighting fires involving this material

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Wear self-contained breathing apparatus for responding to non-incidental release of this material in which there is
the potential for inhalation of vapors, mists or sprays

Wear protective equipment. Keep unprotected persons away.

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).
Use neutralizing agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.

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		(Contd. of page 3)
· 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		
• PAC-1:		
CAS: 593-84-0	guanidinium thiocyanate	0.98 mg/m ³
CAS: 67-63-0	propan-2-ol	400 ppm
· PAC-2:		
CAS: 593-84-0	guanidinium thiocyanate	11 mg/m ³
CAS: 67-63-0	propan-2-ol	2000* ppm
· PAC-3:		
CAS: 593-84-0	guanidinium thiocyanate	65 mg/m ³
CAS: 67-63-0	propan-2-ol	12000** ppm

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:* Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- *Conditions for safe storage, including any incompatibilities* Store in cool, dry place. Store in well-ventilated location.

• Storage:

• Requirements to be met by storerooms and receptacles: Store in a cool location.

- · Information about storage in one common storage facility: Do not store together with acids or strong oxidizers
- *Further information about storage conditions:* Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) Laboratory reagent

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

· Control parameters See Section 8 for information

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

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

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

CAS: 67-63-0 propan-2-ol

PEL Long-term value: 980 mg/m³, 400 ppm

(Contd. on page 5)

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KEL	(Contd. of page
	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TIV	
ILV	Short-term value: 400 ppm Long-term value: 200 ppm
	BEI, A4
T	
0	edients with biological limit values:
	: 67-63-0 propan-2-ol
	40 mg/L Medium: urine
	Time: end of shift at end of workweek
	Parameter: Acetone (background, nonspecific)
	tional information: The lists that were valid during the creation were used as basis.
	sure controls
	appropriate protective equipment under anticipated circumstances of use include lab-coat, safety glasses wit
	shields and gloves.
Perso	onal protective equipment:
	eral protective and hygienic measures:
	away from foodstuffs, beverages and feed.
	ediately remove all soiled and contaminated clothing.
	hands before breaks and at the end of work.
	d contact with the eyes and skin.
	thing equipment:
	se of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure us
	ratory protective device that is independent of circulating air.
Prote	ection of hands:
ſ	
1112	Protective gloves
The	glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
	to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the
	ical mixture.
	tion of the glove material on consideration of the penetration times, rates of diffusion and the degradation
	<i>rial of gloves</i>
	selection of the suitable gloves does not only depend on the material, but also on further marks of quality and
varie	s from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of
	love material can not be calculated in advance and has therefore to be checked prior to the application.
	tration time of glove material
	exact break through time has to be found out by the manufacturer of the protective gloves and has to be
obser	Vea
F .	
Eye p	protection:
Eye _k	
Eye J	protection:
Eye p	

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Trade name: Genomic Binding Buffer

(Contd. of page 5)

Information on basic physical and c	hemical properties
General Information	
Appearance:	T · · · 1
Form: Color:	Liquid Clear
Odor:	Alcohol-like
Odor threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	82 °C (179.6 °F)
Flash point:	13 °C (55.4 °F)
Flammability (solid, gaseous):	Highly flammable.
Auto igniting:	425 °C (797 °F)
Decomposition temperature:	Not determined.
Ignition temperature:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
Explosion limits:	
Lower:	2 Vol %
Upper:	12 Vol %
Vapor pressure at 20 °C (68 °F):	43 hPa (32.3 mm Hg)
Density at 20 °C (68 °F):	901.83551 g/cm ³ (7,525.81733 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with Water:	Fully miscible.
<i>water:</i> Partition coefficient (n-octanol/wate	
	<i>n</i> . Not determined.
Viscosity:	NT / 1 / 1
Dynamic: Kinematic:	Not determined. Not determined.
	Not determined.
Solvent content:	20.0.0/
Organic solvents:	30.0 %
VOC content:	30.00 %
Solids content:	70.0 %

10 Stability and reactivity

• *Reactivity* No further relevant information available.

• *Chemical stability* This product is normally stable under anticipated circumstances of use and storage.

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• Thermal decomposition / conditions to be avoided:

Products of thermal decomposition of this material would include hydrogen cyanide, ammonia, and oxides of carbon nitrogen and sulfur.

· Possibility of hazardous reactions No dangerous reactions known.

- · Conditions to avoid Avoid exposing product to extreme temperatures or incompatible chemicals
- · Incompatible materials: Acids and strong oxidizers
- · Hazardous decomposition products:

Product will not undergo self-decomposition, so no such products will be generated.

11 Toxicological information

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

CAS: 593-84-0 guanidinium thiocyanate

Oral LD50 593 mg/kg (rat)

- Primary irritant effect:
- · on the skin: Caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- · Sensitization: No sensitizing effects known.
- Additional toxicological information:

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

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

• Carcinogenic categories

· IARC (International Agency for Research on Cancer)	
CAS: 67-63-0 propan-2-ol	3
· 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:

CAS: 593-84-0 guanidinium thiocyanate

EC50 42.4 mg/kg (daphnia)

· Persistence and degradability No further relevant information available.

· Behavior in environmental systems:

- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Additional ecological information:

· General notes:

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

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

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(Contd. of page 7)

Must not reach bodies of water or drainage ditch undiluted or unneutralized. Danger to drinking water if even small quantities leak into the ground.

· Results of PBT and vPvB assessment

• *PBT*: Not applicable.

• *vPvB*: Not applicable.

· Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

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.

14 Transport information · UN-Number · DOT, IMDG, IATA UN2924 · UN proper shipping name · DOT Flammable liquids, corrosive, n.o.s. (Isopropanol, guanidinium thiocyanate) FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ISOPROPANOL · IMDG, IATA (ISOPROPYL ALCOHOL), guanidinium thiocyanate) · Transport hazard class(es) ·DOT · Class 3 Flammable liquids · Label 3,8 ·IMDG · Class 3 Flammable liquids 3/8 · Label · IATA 3 Flammable liquids · Class (Contd. on page 9)

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Trade name: Genomic Binding Buffer

	(Contd. of page
Label	3 (8)
Packing group	
DOT, IMDG, IATA	II
Environmental hazards:	Not applicable.
Special precautions for user	Warning: Flammable liquids
Hazard identification number (Kemler code)	: 338
EMS Number:	F-E,S-C
Stowage Category	В
Stowage Code	SW2 Clear of living quarters.
Transport in bulk according to Annex II of	
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 1 L
	On cargo aircraft only: 5 L
IMDG	
Limited quantities (LQ)	1L
Excepted quantities $(\widetilde{E}Q)$	Code: E2
• • • • •	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.
0	(ISOPROPANOL (ISOPROPYL ALCOHOL), GUANIDINIUM
	THIOCYANATE), 3 (8), II

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

C

· Sara
· Section 355 (extremely hazardous substances):
None of the ingredients is listed.
· Section 313 (Specific toxic chemical listings):
CAS: 67-63-0 propan-2-ol
· TSCA (Toxic Substances Control Act):
All components have the value ACTIVE.
· Hazardous Air Pollutants
None of the ingredients is 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.

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	(Contd. of page
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)	
CAS: 67-63-0 propan-2-ol	A
NIOSH-Ca (National Institute for Occupational Safety and Health)	I
None of the ingredients is listed.	
GHS label elements The product is classified and labeled according to the Globally Harmonized Hazard pictograms GHS02, GHS05, GHS07 Signal word Danger Hazard statements Highly flammable liquid and vapor.	System (GHS).
Harmful if swallowed, in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause drowsiness or dizziness.	
Harmful to aquatic life with long lasting effects. <i>Precautionary statements</i>	
Keep away from heat/sparks/open flames/hot surfaces No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.	
Take precautionary measures against static discharge. Do not breathe dusts or mists. Wash thoroughly after handling.	
Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment.	
Wear protective gloves/protective clothing/eye protection/face protection. If swallowed: Call a poison center/doctor if you feel unwell. If swallowed: Rinse mouth. Do NOT induce vomiting.	
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and	
Continue rinsing. Immediately call a poison center/doctor. Specific treatment (see on this label).	
Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse. In case of fire: Use CO2, powder or water spray to extinguish. Store in a well-ventilated place. Keep container tightly closed.	
Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations	
<i>Chemical safety assessment:</i> A Chemical Safety Assessment has not been carried out.	

(Contd. on page 11)

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Trade name: Genomic Binding Buffer

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Thi	s information is based on our present knowledge. However, this shall not constitute a guarantee for any specif
	duct features and shall not establish a legally valid contractual relationship.
	partment issuing SDS:
Zyn	no Research Corp.
Safe	ety Department
	62 Murphy Ave.
	ne, CA 92614
US	
0.01	ne: 1-949-679-1190 or 1-888-882-9682
	ntact: sds@zymoresearch.com
	e of preparation / last revision 07/18/2024 / -
	previations and acronyms:
ADR	R: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International
	iage of Dangerous Goods by Road)
	G: International Maritime Code for Dangerous Goods
	: US Department of Transportation
	A: International Air Transport Association
	ECS: European Inventory of Existing Commercial Chemical Substances NCS: European List of Notified Chemical Substances
	: Chemical Abstracts Service (division of the American Chemical Society)
	A: National Fire Protection Association (USA)
	IS: Hazardous Materials Identification System (USA)
	C: Volatile Organic Compounds (USA, ÉU)
LC5	0: Lethal concentration, 50 percent
	0: Lethal dose, 50 percent
	: Persistent, Bioaccumulative and Toxic
	3: very Persistent and very Bioaccumulative
	SH: National Institute for Occupational Safety
	IA: Occupational Safety & Health : Threshold Limit Value
	: Permissible Exposure Limit
	: Recommended Exposure Limit
	Biological Exposure Limit
	mable Liquids 2: Flammable liquids – Category 2
	te Toxicity - Oral 4: Acute toxicity – Category 4
	Corrosion 1C: Skin corrosion/irritation - Category 1C
	Damage 1: Serious eye damage/eye irritation – Category 1
	ific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3 atic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3



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Safety Data Sheet acc. to OSHA HCS

Printing date 07/18/2024

Reviewed on 03/15/2021

I Identification Product identifier • Trade name: DNA Pre-Wash Buffer • Article number: D3004-5-S, D3004-5-30, D3004-5-250, D3004-5-15 • Application of the substance / the mixture Laboratory Reagent Details of the supplier of the safety data sheet • Manufacturer/Supplier: Zymo Research Corp. 17002 Murphy Avc., Irvine, CA 92614, U.S.A., Phone: +1(949) 679-1190 or +1(888) 882-9682, sds@gymoresearch.com • Information department: Product Safety Dept. Emergency telephone number: During normal business hours (8 am to 5 pm Pacific Standard Time): +1 (949) 679 1190 2 Huzard(5) identification Classification of the substance or mixture ✓✓ ✓✓ GHS02 Flame Flammable Liquids 2 H225 Highly flammable liquid and vapor. ✓✓ H316 Causes skin irritation. Fye Irritation 2A H319 Causes skin irritation. Specific Target Organ Toxicity - Single Exposure 3 H336 May cause or dizziness. - Label elements GHS1061 - GHS1061 elements GHS107 - Maard pictograms GHS02, GHS07 H316 Causes skin irritation. - Maard pictograms GHS02, GHS07 H319 - Maard pictograms G	Thinks dute 07/10/2024	
 Product identifier Trade name: DNA Pre-Wash Buffer Article number: D3004-5-S, D3004-5-30, D3004-5-50, D3004-5-250, D3004-5-15 Application of the substance / the mixture Laboratory Reagent Details of the supplier of the safety data sheet Manufacturer/Supplier: Zymo Research Corp. TJ002 Murphy Ave., Irvine, CA 92614, U.S.A., Phone: +1(949) 679-1190 or +1(888) 882-9682, sa6@zymorsearch.com Information department: Product Safety Dept. Emergency telephone number: During normal business hours (8 am to 5 pm Pacific Standard Time): +1 (949) 679 1190 Classification of the substance or mixture Vor GHS02 Flame Flammable Liquids 2 H225 Highly flammable liquid and vapor. Visin Irritation 2 H315 Causes skin irritation. Eye Irritation 2A H319 Causes serious eye irritation. Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness. Label elements The product is classified and labeled according to the Globally Harmonized System (GHS). Harmaf Ji fswallowed. Causes skin irritation. Specific Target Onagen Harmonized GHS07 Acause skin irritation. Eye Irritation 2A H319 Causes serious eye irritation. Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness. Label elements Highly flammable liquid and vapor. Harmaf pictograms GHS02, GHS07 Signal word Danger Heard statements Kep away from heat/spark/sopen flames/hot surfaces No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take preceutionary measures against static discharge. 	1 Identification	
 Trade name: DNA Pre-Wash Buffer Article number: D3004-5-S, D3004-5-30, D3004-5-50, D3004-5-250, D3004-5-15 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, U.S.A., Phone: +1(949) 679-1190 or +1(888) 882-9682, sak@zymoresearch.com Information department: Product Safety Dept. Emergency telephone number: During normal business hours (8 am to 5 pm Pacific Standard Time): +1 (949) 679 1190 Classification of the substance or mixture Of GHS02 Flame Flammable Liquids 2 H225 Highly flammable liquid and vapor. Min triation 2 H315 Causes skin irritation. Eye Irritation 2A H319 Causes serious eye irritation. Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness. Label elements GHS02, GHS07 Acute Toxicity - Oral 4 H319 Causes serious eye irritation. Eye Irritation 2A H319 Causes serious eye irritation. Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness. Label elements GHS02, GHS07 Harmful if swallowed. Harmful if swallowed. Causes skin irritation. Eye Irritation 2A H319 Causes serious eye irritation. Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness. Label elements Harmful if swallowed. Causes skin irritation. Harmful if swallowed. Causes skin irritation. May cause drowsiness or dizziness. Harmful if swallowed. Causes skin irritation. Harmful if swallowed. Causes skin irritation. Harmful if swallowed. Causes skin irritation. Harmful if swallowed. H		
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 Application of the substance / the mixture Laboratory Reagent Details of the supplier of the safety data sheet Manufacture/Supplier; Zymo Research Corp. 17062 Murphy Ave., Irvine, CA 92614, U.S.A., Phone: +1(949) 679-1190 or +1(888) 882-9682, sa6@zymoresearch.com Information department: Product Safety Dept. Emergency telephone number: During normal business hours (8 am to 5 pm Pacific Standard Time): +1 (949) 679 1190 Classification of the substance or mixture Off Supplier of the substance or mixture GHS02 Flame Flammable Liquids 2 H225 Highly flammable liquid and vapor. GHS07 Acute Toxicity - Oral 4 H302 Harmful if swallowed. Skin Irritation 2 H315 Causes skin irritation. Eye Irritation 2A H319 Causes acrious cy ei rritation. Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness. Label elements The product is classified and labeled according to the Globally Harmonized System (GHS). Marad statements Highly flammable liquid and vapor. Acutes serious eye irritation. Causes serious eyee irritation. Causes serious eyee irritation. Causes serious ey		
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 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 	• <i>Manufacturer/Supplier:</i> Zymo Research Corp. 17062 Murphy Ave., Irvine, CA 92614, U.S	
 Classification of the substance or mixture Classification of the substance or mixture GHS02 Flame Flammable Liquids 2 H225 Highly flammable liquid and vapor. Contemporation of the substance or mixture GHS07 Acute Toxicity - Oral 4 H302 Harmful if swallowed. Skin Irritation 2 H315 Causes skin irritation. Eye Irritation 2A H319 Causes serious eye irritation. Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness. Label elements GHS02, GHS07 Signal word Danger Hazard pictograms GHS02, GHS07 Signal word Danger Hazard statements Highly flammable liquid and vapor. Harmful if swallowed. Causes serious eye irritation. Causes serious eye irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Precautionary statements Keep away from heat/sparks/open flames/hot surfaces No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. 	• Emergency telephone number:	
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Acute Toxicity - Oral 4 H302 Harmful if swallowed. Skin Irritation 2 H315 Causes skin irritation. Eye Irritation 2A H319 Causes serious eye irritation. Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness. • Label elements The product is classified and labeled according to the Globally Harmonized System (GHS). • Hazard pictograms GHS02, GHS07 Signal word Danger • Hazard statements Highly flammable liquid and vapor. Harmful if swallowed. Causes skin irritation. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Frecautionary statements • Frecautionary statements Keep away from heat/sparks/open flames/hot surfaces No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.	GHS02 Flame	
Skin Irritation 2H315 Causes skin irritation.Eye Irritation 2AH319 Causes serious eye irritation.Specific Target Organ Toxicity - Single Exposure 3H336 May cause drowsiness or dizziness.• Label elements• GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).• Hazard pictograms GHS02, GHS07• Signal word Danger• Hazard statements• Highly flammable liquid and vapor.• Harmful if swallowed	\mathbf{A}	H225 Highly flammable liquid and vapor.
Skin Irritation 2H315 Causes skin irritation.Eye Irritation 2AH319 Causes serious eye irritation.Specific Target Organ Toxicity - Single Exposure 3H336 May cause drowsiness or dizziness.• Label elements• GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).• Hazard pictograms GHS02, GHS07• Signal word Danger• Hazard statements• Highly flammable liquid and vapor.• Harmful if swallowed	Acute Toxicity - Oral 4	H302 Harmful if swallowed.
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		discharge. (Contd. on page 2)

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Trade name: DNA Pre-Wash Buffer

(Contd	. of page 1)
Avoid breathing dust/fume/gas/mist/vapors/spray	
Wash thoroughly after handling.	
Do not eat, drink or smoke when using this product.	
Use only outdoors or in a well-ventilated area.	
Wear protective gloves/protective clothing/eye protection/face protection.	
If swallowed: Call a poison center/doctor if you feel unwell.	
Rinse mouth.	
Specific treatment (see on this label).	
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.	
IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to d	0.
Continue rinsing.	
If skin irritation occurs: Get medical advice/attention.	
Take off contaminated clothing and wash it before reuse.	
If eye irritation persists: Get medical advice/attention.	
In case of fire: Use CO2, powder or water spray to extinguish.	
Store in a well-ventilated place. Keep container tightly closed.	
Store in a well-ventilated place. Keep cool.	
Store locked up.	
Dispose of contents/container in accordance with local/regional/national/international regulations. • <i>Classification system:</i>	
· NFPA ratings (scale 0 - 4)	
Health = 2	
Fire = 3	
2 0 Reactivity = 0	
· HMIS-ratings (scale 0 - 4)	
HEALTH 2 Health = 2	
Titalui – 2	
FIRE 3 Fire = 3	
REACTIVITY Reactivity = 0	
· Other hazards	
· Results of PBT and vPvB assessment	
· <i>PBT</i> : Not applicable.	
v PvB: 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%
CAS: 67-63-0 propan-2-ol	≤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.

(Contd. on page 3)

(Contd. of page 2)

Safety Data Sheet acc. to OSHA HCS

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Trade name: DNA Pre-Wash Buffer

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

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

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. Wash eyes immediately, for at least 15 minutes, with large amounts of water, holding upper and lower lids open. Remove contact lenses, if present and it is easy to do so. Get medical attention immediately.

• After swallowing:

Do not induce vomiting; immediately call for medical help.

Immediately call a doctor.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

- Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray 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 equipment. Keep unprotected persons away.
 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 section 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

· PAC-1:	
CAS: 50-01-1 guanidinium chloride	1.4 mg/m ³
CAS: 67-63-0 propan-2-ol	400 ppm
• PAC-2:	
CAS: 50-01-1 guanidinium chloride	16 mg/m ³
CAS: 67-63-0 propan-2-ol	2000* ppm
· PAC-3:	
CAS: 50-01-1 guanidinium chloride	94 mg/m ³
	(Contd. on page 4)

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Trade name: DNA Pre-Wash Buffer

CAS: 67-63-0 propan-2-ol

(Contd. of page 3) 12000** ppm

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:* Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed. Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s) Laboratory reagent

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see section 7.
- · Control parameters See Section 8 for information
- Components with limit values that require monitoring at the workplace:
- The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
- At this time, the remaining constituent has no known exposure limits.

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

CAS: 67-63-0 propan-2-ol

- PEL Long-term value: 980 mg/m³, 400 ppm
- REL Short-term value: 1225 mg/m³, 500 ppm Long-term value: 980 mg/m³, 400 ppm
- TLV Short-term value: 400 ppm Long-term value: 200 ppm BEI, A4

· Ingredients with biological limit values:

CAS: 67-63-0 propan-2-ol

- BEI 40 mg/L
 - Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)

• 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.

(Contd. on page 5)

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Trade name: DNA Pre-Wash Buffer

Wash hands before breaks and at the Avoid contact with the eyes and skin. Breathing equipment: In case of brief exposure or low pollu respiratory protective device that is in Protection of hands:	Ition use respiratory filter device. In case of intensive or longer exposure use
Protective gloves	
Due to missing tests no recommendat chemical mixture. Selection of the glove material on con <i>Material of gloves</i> The selection of the suitable gloves d varies from manufacturer to manufact the glove material can not be calculat <i>Penetration time of glove material</i>	eable and resistant to the product/ the substance/ the preparation. tion to the glove material can be given for the product/ the preparation/ the nsideration of the penetration times, rates of diffusion and the degradation loes not only depend on the material, but also on further marks of quality and turer. As the product is a preparation of several substances, the resistance of ted in advance and has therefore to be checked prior to the application. be found out by the manufacturer of the protective gloves and has to be
9 Physical and chemical proper	ties
 Information on basic physical and c General Information 	chemical properties
 Appearance: Form: Color: Odor: Odor threshold: 	Liquid Clear Alcohol-like Not determined.
· pH-value:	Not determined.
Change in condition Melting point/Melting range: Boiling point/Boiling range:	Undetermined. >80 °C (>176 °F)
· Flash point:	13 °C (55.4 °F)
· Flammability (solid, gaseous):	Highly flammable.
· Auto igniting:	425 °C (797 °F)
· Decomposition temperature:	Not determined.
· Ignition temperature:	Product is not selfigniting.
• Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

(Contd. on page 6) US

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Trade name: DNA Pre-Wash Buffer

	(Contd. of page
· Explosion limits:	
Lower:	2 Vol %
Upper:	12 Vol %
· Vapor pressure at 20 °C (68 °F):	43 hPa (32.3 mm Hg)
· 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/wate	er): Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	≤50.0 %
VOC content:	≤50.00 %
	≤500.0 g/l / ≤4.17 lb/gal
Solids content:	0.0 %
• 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:

· LD/LC50 values that are relevant for classification:

CAS: 50-01-1	guanidinium	chloride
--------------	-------------	----------

Oral LD50 475 mg/kg (rat)

CAS: 67-63	-0 propan-2-ol
------------	----------------

- Oral LD50 5,045 mg/kg (rat)
- Dermal LD50 12,800 mg/kg (rabbit)

Inhalative LC50/4 h 30 mg/l (rat)

Primary irritant effect:

• on the skin: No irritant effect.

• on the eye: Irritating effect.

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Trade name: DNA Pre-Wash Buffer

(Contd. of page 6)

3

- 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)

CAS: 67-63-0 propan-2-ol

·NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

· Toxicity

- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

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

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

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, IMDG, IATA	UN1219
UN proper shipping name	
DOT	Isopropanol mixture
IMDG, IATA	ISOPROPANOL (ISOPROPYL ALCOHOL) mixture

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Trade name: DNA Pre-Wash Buffer

Transport hazard class(es)	
DOT	
RAMAN E COOP	
Class	3 Flammable liquids
Label	3
IMDG, IATA	
Class	3 Flammable liquids
Label	3
Packing group	
DOT, ĬMDĠ, IATA	II
Environmental hazards:	Not applicable.
Special precautions for user	Warning: Flammable liquids
Hazard identification number (Kemler code EMS Number:	9: 33 F-E,S-D
LMS Number: Stowage Category	г-е,s-D В
Transport in bulk according to Annex II of	
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 5 L
	On cargo aircraft only: 60 L
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1219 ISOPROPANOL (ISOPROPYL ALCOHOL) MIXTURE, 3, II

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

Section 355 (extremely hazardous substances):

None of the ingredients is listed.

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Trade name: DNA Pre-Wash Buffer

	(Contd. of page
Section 313 (Specific toxic chemical listings):	
CAS: 67-63-0 propan-2-ol	
TSCA (Toxic Substances Control Act):	
All components have the value ACTIVE.	
Hazardous Air Pollutants	
None of the ingredients is 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)	
CAS: 67-63-0 propan-2-ol	А
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 Harmoniz • Hazard pictograms GHS02, GHS07 • Signal word Danger	ed System (GHS).
<i>Hazard statements</i> Highly flammable liquid and vapor.	
Harmful if swallowed.	
Causes skin irritation.	
Causes serious eye irritation.	
May cause drowsiness or dizziness. Precautionary statements	
Keep away from heat/sparks/open flames/hot surfaces No smoking.	
Ground/bond container and receiving equipment.	
Use explosion-proof electrical/ventilating/lighting/equipment.	
Use only non-sparking tools. Take precautionary measures against static discharge.	
Avoid breathing dust/fume/gas/mist/vapors/spray	
Wash thoroughly after handling.	
Do not eat, drink or smoke when using this product.	
Use only outdoors or in a well-ventilated area.	
Wear protective gloves/protective clothing/eye protection/face protection. If swallowed: Call a poison center/doctor if you feel unwell.	
Rinse mouth.	
Specific treatment (see on this label).	
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/show	wer.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.	(Contd. on page
	(Conta, on page

(Contd. on page 10)

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

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use CO2, powder or water spray to extinguish.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

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 07/18/2024 / -· Abbreviations and acronyms: ADR: Accord relatif au transport international 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) 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 BEI: Biological Exposure Limit Flammable Liquids 2: Flammable liquids - Category 2 Acute Toxicity - Oral 4: Acute toxicity - Category 4 Skin Irritation 2: Skin corrosion/irritation - Category 2 Eye Irritation 2A: Serious eye damage/eye irritation - Category 2A Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) - Category 3



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Identification	
Product identifier	
Trade name: g-DNA Wash	Buffer
Article number: D3004-2-S	, D3004-2-50, D3004-2-100, D3004-2-200, D3004-2-250, D3004-2-400 e / the mixture Laboratory Reagent
Details of the supplier of the Manufacturer/Supplier: Zymo Research Corp. 17062 Murphy Ave., Irvine, sds@zymoresearch.com	<i>e safety data sheet</i> CA 92614, U.S.A., Phone: +1(949) 679-1190 or +1(888) 882-9682,
Information department: Pr	
<i>Emergency telephone numl</i>	b er: rs (8 am to 5 pm Pacific Standard Time): +1 (949) 679 1190
TT 1/ \ • 1 /•/• /•	
Hazard(s) identification	n
Classification of the substan	nce or mixture
GHS02 Flame	
Flammable Liquids 3	H226 Flammable liquid and vapor.
GHS07	· · · · · · · · · · · · · · · · · · ·
	H319 Causes serious eye irritation.
GHS07 Eye Irritation 2A	
GHS07 Eye Irritation 2A Specific Target Organ Toxic Label elements GHS label elements The pro Hazard pictograms GHS02, Signal word Warning Hazard statements Flammable liquid and vapor Causes serious eye irritation	H319 Causes serious eye irritation. Eity - Single Exposure 3 H336 May cause drowsiness or dizziness. Oduct is classified and labeled according to the Globally Harmonized System (GHS). GHS07
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GHS07 Eye Irritation 2A Specific Target Organ Toxic Label elements GHS label elements The pro- Hazard pictograms GHS02, Signal word Warning Hazard statements Flammable liquid and vapor Causes serious eye irritation May cause drowsiness or diz Precautionary statements Keep away from heat/sparks Ground/bond container and Use explosion-proof electric Use only non-sparking tools Take precautionary measure Avoid breathing dust/fume/g	H319 Causes serious eye irritation. Sity - Single Exposure 3 H336 May cause drowsiness or dizziness. Doduct is classified and labeled according to the Globally Harmonized System (GHS). GHS07
GHS07 Eye Irritation 2A Specific Target Organ Toxic <i>Label elements</i> GHS label elements The pro <i>Hazard pictograms</i> GHS02, <i>Signal word</i> Warning <i>Hazard statements</i> Flammable liquid and vapor Causes serious eye irritation May cause drowsiness or diz <i>Precautionary statements</i> Keep away from heat/sparks Ground/bond container and Use explosion-proof electric Use only non-sparking tools Take precautionary measure Avoid breathing dust/fume/g Wash thoroughly after handl Use only outdoors or in a we	H319 Causes serious eye irritation. eity - Single Exposure 3 H336 May cause drowsiness or dizziness. boduct is classified and labeled according to the Globally Harmonized System (GHS). GHS07
GHS07 Eye Irritation 2A Specific Target Organ Toxic <i>Label elements</i> <i>GHS label elements</i> The pro <i>Hazard pictograms</i> GHS02, <i>Signal word</i> Warning <i>Hazard statements</i> Flammable liquid and vapor Causes serious eye irritation May cause drowsiness or diz <i>Precautionary statements</i> Keep away from heat/sparks Ground/bond container and i Use explosion-proof electric Use only non-sparking tools Take precautionary measure Avoid breathing dust/fume/g Wash thoroughly after handl Use only outdoors or in a we Wear protective gloves/prote	H319 Causes serious eye irritation. eity - Single Exposure 3 H336 May cause drowsiness or dizziness. oduct is classified and labeled according to the Globally Harmonized System (GHS). GHS07

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Trade name: g-DNA Wash Buffer

	(Contd. of page 1)
IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and	easy to do.
Continue rinsing.	
Call a poison center/doctor if you feel unwell.	
If eye irritation persists: Get medical advice/attention.	
In case of fire: Use CO2, powder or water spray to extinguish.	
Store in a well-ventilated place. Keep container tightly closed.	
Store in a well-ventilated place. Keep cool.	
Store locked up.	
Dispose of contents/container in accordance with local/regional/national/international regulations.	
· Classification system:	
NFPA ratings (scale 0 - 4)	
Health $= 2$	
Fire = 3	
2 Reactivity = 0	
· HMIS-ratings (scale 0 - 4)	
mms-ruungs (seure v - 4)	
$\frac{\text{HEALTH}}{2} \text{Health} = 2$	
FIRE 3 Fire = 3	
REACTIVITY Reactivity = 0	
· Other hazards	
• Results of PBT and vPvB assessment • PBT: Not applicable.	
<i>vPvB</i> : Not applicable.	
3 Composition/information on ingredients	
· Chemical characterization: Mixtures	
• Description: Mixture of the substances listed below with nonhazardous additions.	

 · Dangerous components:

 CAS: 64-17-5
 ethanol
 0-≤25%

 CAS: 67-63-0
 propan-2-ol
 0-≤25%

4 First-aid measures

- · Description of first aid measures
- · 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. If symptoms persist, consult a doctor. Wash eyes immediately, for at least 15 minutes, with large amounts of water, holding upper and lower lids open. Remove contact lenses, if present and it is easy to do so. Get medical attention immediately.

• After swallowing: Do not induce vomiting; immediately call for medical help.

• Information for doctor:

• *Most important symptoms and effects, both acute and delayed* Inhalation of vapors, mists or sprays can cause drowsiness, dizziness, and other central nervous system effects. Accidental eye contact can cause serious irritation.

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Trade name: g-DNA Wash Buffer

• *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 equipment. Keep unprotected persons away.
- 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). 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

· PAC-1:	
CAS: 64-17-5 ethanol	1,800 ppm
CAS: 67-63-0 propan-2-ol	400 ppm
• PAC-2:	
CAS: 64-17-5 ethanol	3300* ppm
CAS: 67-63-0 propan-2-ol	2000* ppm
· PAC-3:	
CAS: 64-17-5 ethanol	15000* ppm
CAS: 67-63-0 propan-2-ol	12000** ppm

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:* Keep ignition sources away - Do not smoke. Protect against electrostatic charges.

· Conditions for safe storage, including any incompatibilities

• Storage:

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

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Safety Data Sheet acc. to OSHA HCS

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- · 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 section 7.
- · Control parameters See Section 8 for information
- 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.

CAS: 6	4-17-5 ethanol
012.0110	
PEL LO	ong-term value: 1900 mg/m ³ , 1000 ppm
REL LO	ong-term value: 1900 mg/m ³ , 1000 ppm
TLV Sł	hort-term value: 1000 ppm
A.	3
CAS: 67	7-63-0 propan-2-ol
PEL Lo	ong-term value: 980 mg/m ³ , 400 ppm
REL Sł	hort-term value: 1225 mg/m ³ , 500 ppm
Lo	ong-term value: 980 mg/m ³ , 400 ppm
TLV Sł	hort-term value: 400 ppm
Lo	ong-term value: 200 ppm
B	BEI, A4
· Ingredie	ients with biological limit values:
CAS: 67	7-63-0 propan-2-ol
BEI 40) mg/L
Me	edium: urine
Tir	me: end of shift at end of workweek
Par	arameter: Acetone (background, nonspecific)
Addition	nal information: The lists that were valid during the creation were used as basis.
· Exposu	are controls
	al protective equipment:
	l protective and hygienic measures:
Keep aw	way from foodstuffs, beverages and feed.
Immedia	ately remove all soiled and contaminated clothing.
Wash ha	ands before breaks and at the end of work.
Avoid c	contact with the eyes.

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.

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(Contd. of page 4)

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.

• Eye protection:

Tightly sealed goggles

9 Physical and chemical properties

Appearance:	
Form:	Liquid
Color:	Clear
Odor:	Alcohol-like Not determined.
Odor threshold:	
oH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	>30 °C (>86 °F)
Flammability (solid, gaseous):	Flammable.
Auto igniting:	425 °C (797 °F)
Decomposition temperature:	Not determined.
gnition temperature:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
Explosion limits:	
Lower:	2 Vol %
Upper:	15 Vol %
Vapor pressure at 20 °C (68 °F):	59 hPa (44.3 mm Hg)
Density:	Not determined.
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.

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Trade name: g-DNA Wash Buffer

		(Contd. of page 5
· Viscosity:	Not determined.	
Dynamic: Kinematic:	Not determined.	
· Solvent content:		
Organic solvents:	20-50 %	
VOC content:	20-50 %	
	500.0 g/l / 4.17 lb/gal	
Solids content:	0.0 %	
• Other information	No further relevant information available.	

10 Stability and reactivity

- · Reactivity No further relevant information available.
- *Chemical stability* This product is normally stable under anticipated circumstances of use and storage.
- 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: Acids and strong oxidizers
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

May be harmful by inhalation. Material is irritating to mucous membranes and upper respiratory tract. • Acute toxicity:

· LD/LC50	values	that are	relevant	for	classification:

CAS: 67-63-0 propan-2-ol

Oral	LD50	5,045 mg/kg (rat)
Dermal	LD50	12,800 mg/kg (rabbit)
T I I I	TOTOLAI	

Inhalative LC50/4 h 30 mg/l (rat)

• Primary irritant effect:

- on the skin: No irritant effect.
- 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: Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

CAS: 67-63-0 propan-2-ol

·NTP (National Toxicology Program)

None of the ingredients is listed.

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- · OSHA-Ca (Occupational Safety & Health Administration)
- None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- 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, IMDG, IATA	UN1993
	011775
UN proper shipping name	
DOT	Flammable liquids, n.o.s. (Isopropanol, Ethanol)
·IMDG	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL (ISOPROPY
	ALCOHOL), ETHANOL (ETHYL ALCOHOL))
IATA	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL (ISOPROPY
	ALCOHOL), ETHANOL)
Class	3 Flammable liquids

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Trade name: g-DNA Wash Buffer

	(Contd. of page
Label	3
IMDG, IATA	
Class	3 Flammable liquids
Label	3
Packing group DOT, IMDG, IATA	III
Environmental hazards:	Not applicable.
Special precautions for user	Warning: Flammable liquids
Hazard identification number (Kemler code).	: 30
EMS Number:	F-E, <u>S-E</u>
Stowage Category	A
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 60 L
	On cargo aircraft only: 220 L
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL), ETHANOL (ETHYL ALCOHOL)), 3, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- Section 355 (extremely hazardous substances):
- None of the ingredients is listed.
- · Section 313 (Specific toxic chemical listings):
- CAS: 67-63-0 propan-2-ol
- TSCA (Toxic Substances Control Act):
- All components have the value ACTIVE.
- · Hazardous Air Pollutants
- None of the ingredients is listed.

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(Contd. of	(nogo 8)
· Proposition 65	page 8)
· 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)	
CAS: 64-17-5 ethanol	A3
CAS: 67-63-0 propan-2-ol	A4
· NIOSH-Ca (National Institute for Occupational Safety and Health)	<u> </u>
None of the ingredients is listed.	
• GHS label elements The product is classified and labeled according to the Globally Harmonized System (GF	IS).
· Hazard pictograms GHS02, GHS07	
· Signal word Warning	
· Hazard statements	
Flammable liquid and vapor.	
Causes serious eye irritation.	
May cause drowsiness or dizziness.	
 Precautionary statements Keep away from heat/sparks/open flames/hot surfaces No smoking. 	
Ground/bond container and receiving equipment.	
Use explosion-proof electrical/ventilating/lighting/equipment.	
Use only non-sparking tools.	
Take precautionary measures against static discharge.	
Avoid breathing dust/fume/gas/mist/vapors/spray	
Wash thoroughly after handling.	
Use only outdoors or in a well-ventilated area.	
Wear protective gloves/protective clothing/eye protection/face protection.	
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.	
IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.	
Continue rinsing.	
Call a poison center/doctor if you feel unwell.	
If eye irritation persists: Get medical advice/attention.	
In case of fire: Use CO2, powder or water spray to extinguish.	
Store in a well-ventilated place. Keep container tightly closed.	
Store in a well-ventilated place. Keep cool.	
Store locked up.	
Dispose of contents/container in accordance with local/regional/national/international regulations. • <i>Chemical safety assessment:</i> A Chemical Safety Assessment has not been carried out.	
Chemical sujety assessment. A Chemical Safety Assessment has not been carried out.	US

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	<i>• information</i> formation is based on our present knowledge. However, this shall not constitute a guarantee for any speci
	t features and shall not establish a legally valid contractual relationship.
Depart	tment issuing SDS:
Zymo I	Research Corp.
	Department
	Murphy Ave.
	CA 92614
	CA 72014
USA	
	1-949-679-1190 or 1-888-882-9682
	et: sds@zymoresearch.com
Date o	f preparation / last revision 07/18/2024 / -
Abbrev	viations and acronyms:
ADR: A	ccord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International
Carriage	of Dangerous Goods by Road)
	nternational Maritime Code for Dangerous Goods
	S Department of Transportation
	iternational Air Transport Association
	: European Inventory of Existing Commercial Chemical Substances
	: European List of Notified Chemical Substances nemical Abstracts Service (division of the American Chemical Society)
	Vational Fire Protection Association (USA)
	Hazardous Materials Identification System (USA)
	olatile Organic Compounds (USA, EU)
LC50: L	ethal concentration, 50 percent
	ethal dose, 50 percent
	rsistent, Bioaccumulative and Toxic
	ery Persistent and very Bioaccumulative
	National Institute for Occupational Safety
	Occupational Safety & Health reshold Limit Value
	rmissible Exposure Limit
	commended Exposure Limit
	logical Exposure Limit
	ble Liquids 3: Flammable liquids – Category 3
	ation 2A: Serious eye damage/eye irritation – Category 2A



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	n
Product iden	fier
Trade name:	DNA Elution Buffer
	r: D3004-4-1, D3004-4-4, D3004-4-10, D3004-4-16, D3004-4-50 <i>the substance / the mixture</i> Laboratory Reagent
<i>Manufacture</i> Zymo Resear	n Corp. Ave., Irvine, CA 92614, U.S.A., Phone: +1(949) 679-1190 or +1(888) 882-9682,
Emergency t	<i>epartment:</i> Product Safety Dept. <i>ephone number:</i> business hours (8 am to 5 pm Pacific Standard Time): +1 (949) 679 1190
Classification	<i>lentification</i> of the substance or mixture not classified, according to the Globally Harmonized System (GHS).
Label elemer GHS label el Hazard picto	nents Void
Signal word Hazard state Classification	oid <i>ents</i> Void <i>system:</i>
Signal word Hazard state. Classification NFPA rating	oid <i>ents</i> Void <i>system:</i>
Signal word Hazard state Classification	oid ents Void system: (scale $0 - 4$) Health = 0 Fire = 0 Reactivity = 0
Signal word Hazard state Classification NFPA rating UDD HMIS-rating HEALTH FIRE CO REACTIVITY Other hazard	oid ents Void system: (scale $0 - 4$) Health = 0 Fire = 0 Reactivity = 0 (scale $0 - 4$) Health = 0 Fire = 0 Reactivity = 0 Y and vPvB assessment icable.

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

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Trade name: DNA Elution Buffer

(Contd. of page 1)

· 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:

Wash eyes immediately, for at least 15 minutes, with large amounts of water, holding upper and lower lids open. Remove contact lenses, if present and it is easy to do so. Get medical attention immediately.

- 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. Use fire fighting measures that suit the environment.

- · 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).
- · 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

12 mg/m ³
30 mg/m ²
130 mg/m
330 mg/m
790 mg/m ³
(Contd. on page

(Contd. of page 2)

 $2,000 \text{ mg/m}^3$

Safety Data Sheet acc. to OSHA HCS

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Trade name: DNA Elution Buffer

CAS: 6381-92-6 Edetate Disodium, Dihydrate

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 section 7.
- · Control parameters See Section 8 for information
- 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 \cdot *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.

• *Eye protection:* Goggles recommended during refilling.

9 Physical and chemical properties • Information on basic physical and chemical properties • General Information • Appearance: Form: Liquid Color: Clear • Odor: Odorless

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Trade name: DNA Elution Buffer

		(Contd. of page
Odor threshold:	Not determined.	
pH-value:	Not determined.	
Change in condition		
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	Undetermined.	
· Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not applicable.	
Decomposition temperature:	Not determined.	
Ignition temperature:	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/wa	ter): Not determined.	
· Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Solvent content:		
VOC content:	0.00 %	
	0.0 g/l / 0.00 lb/gal	
Solids content:	2.0 %	
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.

(Contd. on page 5)

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Trade name: DNA Elution Buffer

(Contd. of page 4)

11 Toxicological information

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

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

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

·NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

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

• General notes:

Water hazard class 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: 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.

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Reviewed on 03/15/2021

Trade name: DNA Elution Buffer

(Contd. of page 5)

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 MARPOL73/78 and the IBC Code	II of Not applicable.	
UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· 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):

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

ACTIVE

· Hazardous Air Pollutants

None of the ingredients is 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.

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US

Printing date 07/18/2024

Reviewed on 03/15/2021

Trade name: DNA Elution Buffer

(Contd. of page 6)

• *TLV (Threshold Limit Value)* 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 07/18/2024 / -· Abbreviations and acronyms: ADR: Accord relatif au transport international 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) 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