



08/30/2020

Kit Components

Product code	Description
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10019485	EPIQ™ GDNA Purification CMP
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Components:

10019263	DNA Elution Solution
1,143	DNA Lysis Solution
1144	DNA High Stringency Wash Solution
9724329	DNA Low Stringency Wash Solution

Safety Data Sheet

according to HPR, Schedule 1

Printing date 08/30/2020

Reviewed on 08/28/2020

1 Identification

- **Product identifier**
- **Trade name:** *DNA Elution Solution*
- **Catalog or product number:** 10019263, 10019327
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories (Canada) Ltd.
1329 Meyerside Drive
Mississauga, Ontario
L5T 1C9
Canada
- **Information department:** sales_canada@bio-rad.com
- **Emergency telephone number:** 1-800-424-6723 option 2

phone: 1-800-268-0213 Fax: 1-888-913-9779

2 Hazard identification

- **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Not Applicable
- **Hazard pictograms** Not Applicable
- **Signal word** Not Applicable
- **Hazard statements** Not Applicable

3 Composition/Information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EC number:** 231-791-2
- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with non-hazardous additions.
- **Listing of dangerous and non-hazardous components:** Not applicable.
- **Additional information** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

- **Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.

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Trade name: DNA Elution Solution

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

5 Fire-fighting measures

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

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
No dangerous substances are released.
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

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

8 Exposure controls/ Personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.

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according to HPR, Schedule 1

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Trade name: DNA Elution Solution

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- **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:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.

· pH-value at 20 °C: 7

· Change in condition

Melting point/Melting range:	0 °C
Boiling point/Boiling range:	undetermined

· **Flash point:** Not applicable
Not determined.

· **Flammability (solid, gaseous)** Not applicable.

· **Decomposition temperature:** Not determined.

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

· **Danger of explosion:** Not determined.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure at 20 °C:** 23 hPa

· Density at 20 °C:	0.99984 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.

· Solubility in / Miscibility with

Water: Fully miscible

· **Partition coefficient (n-octanol/water):** Not determined.

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Safety Data Sheet

according to HPR, Schedule 1

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Trade name: DNA Elution Solution

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- | | |
|----------------------------|--|
| · Viscosity: | |
| dynamic: | Not determined. |
| kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 0.1 % |
| Water: | 99.9 % |
| · 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 irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

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

64-17-5 ethanol

1

- **NTP (National Toxicology Program)**

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.

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Trade name: DNA Elution Solution

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

13 Disposal considerations

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

14 Transport information

- | | |
|---|--|
| <ul style="list-style-type: none"> · UN-Number · DOT/TDG, ADR, ADN, IMDG, IATA | Not Regulated |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT/TDG, ADN, IMDG, IATA · ADR | Not Regulated
Not Regulated
Not Regulated |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT, ADR, ADN, IMDG, IATA · Class | Not Regulated |
| <ul style="list-style-type: none"> · Packing group · DOT/TDG, ADR, IMDG, IATA | Not Regulated |
| <ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: | No |
| <ul style="list-style-type: none"> · Special precautions for user | Not applicable. |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| <ul style="list-style-type: none"> · Transport/Additional information: | Not dangerous according to the above specifications. |
| <ul style="list-style-type: none"> · UN "Model Regulation": | Not Regulated |

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Trade name: DNA Elution Solution

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15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All components have the value ACTIVE.

- **MAK (German Maximum Workplace Concentration)**

64-17-5 ethanol

5

- **National regulations**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations

- **Water hazard class:** Generally not hazardous for water.
- **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:** Environmental Health and Safety.
- **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

- **Date of the latest revision of the safety data sheet** 08/30/2020 / -

- **Abbreviations and acronyms:**

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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Safety Data Sheet

according to HPR, Schedule 1

Printing date 08/30/2020

Reviewed on 08/28/2020

1 Identification

- **Product identifier**
- **Trade name:** **DNA Lysis Solution**
- **Catalog or product number:** 10040657, 9724325, 10019260
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories (Canada) Ltd.
1329 Meyerside Drive
Mississauga, Ontario
L5T 1C9
Canada
- **Information department:** sales_canada@bio-rad.com
- **Emergency telephone number:** 1-800-424-6723 option 2

phone: 1-800-268-0213 Fax: 1-888-913-9779

2 Hazard identification

- **Classification of the substance or mixture**
Acute Toxicity (Oral) - Category 4 H302 Harmful if swallowed.
Skin Corrosion - Category 1A H314 Causes severe skin burns and eye damage.
Serious Eye Damage - Category 1 H318 Causes serious eye damage.
- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05 GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Guanidine thiocyanate
- **Hazard statements**
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a poison center/doctor.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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Safety Data Sheet

according to HPR, Schedule 1

Printing date 08/30/2020

Reviewed on 08/28/2020

Trade name: DNA Lysis Solution

(Contd. of page 1)

3 Composition/Information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

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

593-84-0	Guanidine thiocyanate	30-60% w/w *
	Skin Corrosion - Category 1A, H314; Serious Eye Damage - Category 1, H318 Acute Toxicity (Oral) - Category 4, H302; Acute Toxicity (Dermal) - Category 4, H312; Acute Toxicity (Inhalation) - Category 4, H332	

* Actual concentration ranges are withheld as a trade secret.

- **Additional information** For the wording of the listed hazard phrases refer to section 16.

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** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact**
Generally the product does not irritate the skin.
Immediately wash with water and soap and rinse thoroughly.
Immediately rinse with water.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing**
Immediately call a doctor.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.

(Contd. on page 3)

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according to HPR, Schedule 1

Printing date 08/30/2020

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Trade name: DNA Lysis Solution

(Contd. of page 2)

Wear protective equipment (See section 8). Keep unprotected persons away.

Wear protective clothing.

· **Environmental precautions:**

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

Inform respective authorities in case of seepage into water course or sewage system.

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 item 13.

Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· **Handling**

· **Precautions for safe handling**

Ensure good ventilation/exhaust at the workplace.

Prevent formation of aerosols.

· **Information about protection against explosions and fires:** Keep respiratory protective device available.

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

· **Storage**

· **Requirements to be met by storerooms and receptacles:** According to product specification

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

· **Further information about storage conditions:** Keep receptacle tightly sealed.

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

8 Exposure controls/ Personal protection

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

· **Control parameters**

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

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**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

(Contd. on page 4)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 08/30/2020

Reviewed on 08/28/2020

Trade name: DNA Lysis Solution

(Contd. of page 3)

- **Breathing equipment:** Not necessary if room is well-ventilated. Adequate ventilation required.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**
Safety glasses
Tightly sealed goggles.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.

· pH-value at 20 °C: 7

· Change in condition

Melting point/Melting range:	undetermined
Boiling point/Boiling range:	undetermined

· **Flash point:** Not applicable
Not determined.

· **Flammability (solid, gaseous)** Not applicable.

· **Decomposition temperature:** Not determined.

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

· **Danger of explosion:** Not determined.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure at 20 °C:** 23 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/water):** Not determined.

· Viscosity:

dynamic: Not determined.

(Contd. on page 5)

Safety Data Sheet

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Trade name: DNA Lysis Solution

(Contd. of page 4)

kinematic:	Not determined.
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· Solvent content:	
Water:	51.7 %

· Solids content:	68.4 %
· 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 for hazardous components per OSHA criteria:

593-84-0 Guanidine thiocyanate

Oral	LD50	593 mg/kg (Rat) OECD Test Guideline 401
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- **Primary irritant effect:**
 - **on the skin:**
Strong caustic effect on skin and mucous membranes.
Caustic effect on skin and mucous membranes.
 - **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
 - **Sensitization:** No sensitizing effects known.
 - **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Corrosive
Irritant
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. |
|------------------------------------|

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Safety Data Sheet

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Trade name: DNA Lysis Solution

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· **NTP (National Toxicology Program)**

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 (German Regulation) (Self-assessment): slightly hazardous for water.

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

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

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

Dispose of waste in accordance to applicable national, regional, or local regulations.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT/TDG, ADR, ADN, IMDG, IATA**

Not Regulated

· **UN proper shipping name**

· **DOT/TDG, ADN, IMDG, IATA**

Not Regulated

· **ADR**

Not Regulated

Not Regulated

· **Transport hazard class(es)**

· **DOT, ADR, ADN, IMDG, IATA**

· **Class**

Not Regulated

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Trade name: DNA Lysis Solution

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· Packing group	
· DOT/TDG, ADR, IMDG, IATA	Not Regulated
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	Not Regulated

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All components have the value ACTIVE.

- **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

- **National regulations**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **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:** Environmental Health and Safety.

- **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

- **Date of the latest revision of the safety data sheet** 08/30/2020 / -

- **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

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Safety Data Sheet
according to HPR, Schedule 1

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Trade name: DNA Lysis Solution

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*IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative*

CA

Safety Data Sheet according to HPR, Schedule 1

Printing date 08/30/2020

Reviewed on 08/28/2020

1 Identification

- **Product identifier**
- **Trade name:** DNA High Stringency Wash Solution
- **Catalog or product number:** 1144
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories (Canada) Ltd.
1329 Meyerside Drive
Mississauga, Ontario
L5T 1C9
Canada
- **Information department:** sales_canada@bio-rad.com
- **Emergency telephone number:** 1-800-424-6723 option 2

phone: 1-800-268-0213 Fax: 1-888-913-9779

2 Hazard identification

- **Classification of the substance or mixture**
Skin Irritation - Category 2 H315 Causes skin irritation.
Eye Irritation - Category 2A H319 Causes serious eye irritation.
- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
- **Precautionary statements**
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P337+P313 If eye irritation persists: Get medical advice/attention.

3 Composition/Information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with non-hazardous additions.

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Trade name: DNA High Stringency Wash Solution

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Listing of dangerous and non-hazardous components:

50-01-1 guanidinium chloride

10-30% w/w *

Acute Toxicity (Oral) - Category 4, H302; Skin Irritation - Category 2, H315; Eye Irritation - Category 2A, H319

* Actual concentration ranges are withheld as a trade secret.

 • **Additional information** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

Description of first aid measures

 • **General information** Immediately remove any clothing soiled by the product.

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

After skin contact

Generally the product does not irritate the skin.

Immediately wash with water and soap and rinse thoroughly.

Immediately rinse with water.

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

 • **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.

Information for doctor

 • **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

5 Fire-fighting measures

Extinguishing media

 • **Suitable extinguishing agents** Use fire fighting measures that suit the environment.

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

Advice for firefighters

 • **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

 • **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.

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

Methods and material for containment and cleaning up:

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

Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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Trade name: DNA High Stringency Wash Solution

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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:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/ Personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
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**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not necessary if room is well-ventilated. Adequate ventilation required.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**
Safety glasses
Tightly sealed goggles.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Liquid
Color:	Colorless

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· Odor:	Odorless
· Odor threshold:	Not determined.
· pH-value at 20 °C:	7
· Change in condition	
Melting point/Melting range:	undetermined
Boiling point/Boiling range:	undetermined
· Flash point:	Not applicable Not determined.
· Flammability (solid, gaseous)	Not applicable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Not determined.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C:	23 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/water):	Not determined.
· Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
· Solvent content:	
Water:	75.6 %
Solids content:	67.5 %
· 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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· **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** Irritant to skin and mucous membranes.

· **on the eye:** Irritant effect.

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

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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 (German Regulation) (Self-assessment): slightly hazardous for water.

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

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

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

Dispose of waste in accordance to applicable national, regional, or local regulations.

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Trade name: DNA High Stringency Wash Solution

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|--|
| <ul style="list-style-type: none"> · UN-Number · DOT/TDG, ADR, ADN, IMDG, IATA | <p>Not Regulated</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT/TDG, ADN, IMDG, IATA · ADR | <p>Not Regulated</p> <p>Not Regulated</p> <p>Not Regulated</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT, ADR, ADN, IMDG, IATA · Class | <p>Not Regulated</p> |
| <ul style="list-style-type: none"> · Packing group · DOT/TDG, ADR, IMDG, IATA | <p>Not Regulated</p> |
| <ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: | <p>No</p> |
| <ul style="list-style-type: none"> · Special precautions for user | <p>Not applicable.</p> |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | <p>Not applicable.</p> |
| <ul style="list-style-type: none"> · Transport/Additional information: | <p>Not dangerous according to the above specifications.</p> |
| <ul style="list-style-type: none"> · UN "Model Regulation": | <p>Not Regulated</p> |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All components have the value ACTIVE.

- **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

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Trade name: DNA High Stringency Wash Solution

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· National regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **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:** Environmental Health and Safety.

- **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

- **Date of the latest revision of the safety data sheet** 08/30/2020 / -

- **Abbreviations and acronyms:**

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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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1 Identification

- **Product identifier**
- **Trade name:** DNA Low Stringency Wash Solution
- **Catalog or product number:** 9724329, 10019262
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories (Canada) Ltd.
1329 Meyerside Drive
Mississauga, Ontario
L5T 1C9
Canada
- **Information department:** sales_canada@bio-rad.com
- **Emergency telephone number:** 1-800-424-6723 option 2

phone: 1-800-268-0213 Fax: 1-888-913-9779

2 Hazard identification

- **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Not Applicable
- **Hazard pictograms** Not Applicable
- **Signal word** Not Applicable
- **Hazard statements** Not Applicable

3 Composition/Information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EC number:** 231-791-2
- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with non-hazardous additions.
- **Listing of dangerous and non-hazardous components:** Not applicable.
- **Additional information** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

- **Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.

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Trade name: DNA Low Stringency Wash Solution

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

5 Fire-fighting measures

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

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
No dangerous substances are released.
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

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

8 Exposure controls/ Personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.

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- **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:** Protective gloves.
- **Material of gloves** Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.

· pH-value at 20 °C:	7.5
----------------------	-----

· Change in condition

Melting point/Melting range:	0 °C
Boiling point/Boiling range:	undetermined

· Flash point:	Not applicable Not determined.
----------------	-----------------------------------

· Flammability (solid, gaseous)	Not applicable.
---------------------------------	-----------------

· Decomposition temperature:	Not determined.
------------------------------	-----------------

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

· Danger of explosion:	Not determined.
------------------------	-----------------

· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.

· Vapor pressure at 20 °C:	23 hPa
----------------------------	--------

· Density at 20 °C:	0.99868 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.

· Solubility in / Miscibility with Water:	Fully miscible
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· Partition coefficient (n-octanol/water):	Not determined.
--	-----------------

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Trade name: DNA Low Stringency Wash Solution

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- | | |
|----------------------------|--|
| · Viscosity: | |
| dynamic: | Not determined. |
| kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 0.1 % |
| Water: | 99.3 % |
| · Solids content: | 0.6 % |
| · 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 irritant effect.
 - **Sensitization:** No sensitizing effects known.
 - **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
 - **Carcinogenic categories**
 - **IARC (International Agency for Research on Cancer)**
- | | |
|-----------------|---|
| 64-17-5 ethanol | 1 |
|-----------------|---|
- **NTP (National Toxicology Program)**
 - 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.

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Trade name: DNA Low Stringency Wash Solution

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- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

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

14 Transport information

- | | |
|---|---|
| <ul style="list-style-type: none"> · UN-Number · DOT/TDG, ADR, ADN, IMDG, IATA | <p>Not Regulated</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT/TDG, ADN, IMDG, IATA · ADR | <p>Not Regulated
Not Regulated
Not Regulated</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT, ADR, ADN, IMDG, IATA · Class | <p>Not Regulated</p> |
| <ul style="list-style-type: none"> · Packing group · DOT/TDG, ADR, IMDG, IATA | <p>Not Regulated</p> |
| <ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: | <p>No</p> |
| <ul style="list-style-type: none"> · Special precautions for user | <p>Not applicable.</p> |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | <p>Not applicable.</p> |
| <ul style="list-style-type: none"> · Transport/Additional information: | <p>Not dangerous according to the above specifications.</p> |

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Trade name: DNA Low Stringency Wash Solution

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UN "Model Regulation":

Not Regulated

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All components have the value ACTIVE.

- **MAK (German Maximum Workplace Concentration)**

64-17-5 ethanol

5

- **National regulations**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations

- **Water hazard class:** Generally not hazardous for water.
- **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:** Environmental Health and Safety.

- **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative