



Safety Data Sheet

Cat. # 786-255

FOCUS™ PhosphoRich™

Size: 5 Preps





Phospho-Columns

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Revision date: 5/11/2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Phospho-Columns
Product code : 124P
Product group : Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

No additional information available

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
63132-1429 Saint Louis - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
agarose	(CAS-No.) 9012-36-6 (EC-No.) 232-731-8	50 - 80	Not classified
Deionized water	(CAS-No.) 7732-18-5	10 - 50	Not classified
ethanol	(CAS-No.) 64-17-5 (EC-No.) 200-578-6 (EC Index-No.) 603-002-00-5	10 - 50	Flam. Liq. 2, H225
sodium chloride	(CAS-No.) 7647-14-5 (EC-No.) 231-598-3	0.5 - 2	Not classified
acetic acid	(CAS-No.) 64-19-7 (EC-No.) 200-580-7 (EC Index-No.) 607-002-00-6	0.05 - 0.5	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Corr. 1A, H314

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Specific concentration limits:		
Name	Product identifier	Specific concentration limits
acetic acid	(CAS-No.) 64-19-7 (EC-No.) 200-580-7 (EC Index-No.) 607-002-00-6	(10 =<C < 25) Eye Irrit. 2, H319 (10 =<C < 25) Skin Irrit. 2, H315 (25 =<C < 90) Skin Corr. 1B, H314 (90 =<C < 100) Skin Corr. 1A, H314

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water.
- First-aid measures after eye contact : Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

acetic acid (64-19-7)

EU - Occupational Exposure Limits

IOELV TWA (mg/m ³)	25 mg/m ³
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IOELV TWA (ppm)	10 ppm
IOELV STEL (mg/m ³)	50 mg/m ³
IOELV STEL (ppm)	20 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m ³)	25 mg/m ³
WEL TWA (ppm)	10 ppm
WEL STEL (mg/m ³)	50 mg/m ³
WEL STEL (ppm)	20 ppm
ethanol (64-17-5)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m ³)	1920 mg/m ³
WEL TWA (ppm)	1000 ppm

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 95 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

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Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

sodium chloride (7647-14-5)

LD50 oral rat	> 3980 mg/kg bodyweight (Rat, Experimental value, 20% aqueous solution, Oral)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit, Experimental value, Dermal)
LC50 inhalation rat (mg/l)	> 42 mg/l air (1 h, Rat, Male, Experimental value, 20% aqueous solution, Inhalation (aerosol))

acetic acid (64-19-7)

LD50 oral rat	3310 mg/kg bodyweight (Rat, Male / female, Experimental value, Oral)
LC50 inhalation rat (mg/l)	11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value, Inhalation (vapours), 14 day(s))

ethanol (64-17-5)

LD50 oral rat	10740 mg/kg bodyweight (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	> 20 mg/l (4 h, Rat, Inhalation)

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

ethanol (64-17-5)

IARC group	1 - Carcinogenic to humans
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Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acute aquatic toxicity : Not classified

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Chronic aquatic toxicity : Not classified

sodium chloride (7647-14-5)	
LC50 fish 1	5840 mg/l (ASTM, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value)

acetic acid (64-19-7)	
LC50 fish 1	> 1000 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	> 1000 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 72h algae (1)	> 1000 mg/l (ISO 10253, Skeletonema costatum, Static system, Salt water, Experimental value, GLP)

ethanol (64-17-5)	
LC50 fish 1	14200 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 Daphnia 1	9300 mg/l (48 h, Daphnia magna, Pure substance)
EC50 72h algae (1)	275 mg/l (Equivalent or similar to OECD 201, Chlorella vulgaris, Static system, Fresh water, Experimental value, Growth rate)

12.2. Persistence and degradability

agarose (9012-36-6)	
Persistence and degradability	Biodegradability in water: no data available.

sodium chloride (7647-14-5)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

acetic acid (64-19-7)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.6 - 0.74 g O ₂ /g substance
Chemical oxygen demand (COD)	1.03 g O ₂ /g substance
ThOD	1.07 g O ₂ /g substance

ethanol (64-17-5)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0.8 - 0.967 g O ₂ /g substance
Chemical oxygen demand (COD)	1.7 g O ₂ /g substance
ThOD	2.1 g O ₂ /g substance
BOD (% of ThOD)	0.43

12.3. Bioaccumulative potential

agarose (9012-36-6)	
Bioaccumulative potential	No bioaccumulation data available.

sodium chloride (7647-14-5)	
Log Pow	-3 (Calculated)
Bioaccumulative potential	Not bioaccumulative.

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acetic acid (64-19-7)	
BCF fish 1	3.16 (Pisces, Fresh water, QSAR)
Log Pow	-0.17 (Experimental value, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

ethanol (64-17-5)	
BCF fish 1	1 (Other, 72 h, Cyprinus carpio, Static system, Fresh water, Read-across)
Log Pow	-0.35 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 24 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

agarose (9012-36-6)	
Ecology - soil	No (test)data on mobility of the substance available.

sodium chloride (7647-14-5)	
Surface tension	73.03 mN/m (23 °C, 14.5 g/l)
Ecology - soil	No (test)data on mobility of the substance available.

acetic acid (64-19-7)	
Surface tension	26.3 mN/m (30 °C)
Ecology - soil	Highly mobile in soil. May be harmful to plant growth, blooming and fruit formation.

ethanol (64-17-5)	
Surface tension	0.0245 N/m (20 °C)
Ecology - soil	Highly mobile in soil.

12.5. Results of PBT and vPvB assessment

Component	
sodium chloride (7647-14-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
acetic acid (64-19-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
ethanol (64-17-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Waste treatment methods.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable

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Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

Packing group (ADN) : Not applicable

Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2

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Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Safety Data Sheet applicable for regions : GB - United Kingdom

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



Phospho-Elution Buffer [5X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Revision date: 5/11/2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Phospho-Elution Buffer [5X]
Product code : 131P
Product group : Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

No additional information available

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
63132-1429 Saint Louis - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH210 - Safety data sheet available on request.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Deionized water	(CAS-No.) 7732-18-5	>= 80	Not classified
ammonium bicarbonate	(CAS-No.) 1066-33-7 (EC-No.) 213-911-5	0.5 - 2	Acute Tox. 4 (Oral), H302
tris(hydroxymethyl)aminomethane	(CAS-No.) 77-86-1 (EC-No.) 201-064-4	0.5 - 2	Not classified

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:

Avoid release to the environment.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

tris(hydroxymethyl)aminomethane (77-86-1)

LD50 oral rat	> 5000 mg/kg bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 5000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)

ammonium bicarbonate (1066-33-7)

LD50 oral rat	1576 mg/kg (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified

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Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

tris(hydroxymethyl)aminomethane (77-86-1)

EC50 Daphnia 1	> 980 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
EC50 72h algae (1)	397 mg/l (Equivalent or similar to OECD 201, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)

ammonium bicarbonate (1066-33-7)

LC50 fish 1	63.4 mg/l (US EPA, 96 h, Oncorhynchus mykiss, Fresh water, Expert judgement)
EC50 Daphnia 1	202 mg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Expert judgement, Locomotor effect)
ErC50 (algae)	1921 mg/l (Other, 5 day(s), Chlorella vulgaris, Static system, Fresh water, Read-across, Nominal concentration)

12.2. Persistence and degradability

tris(hydroxymethyl)aminomethane (77-86-1)

Persistence and degradability	Readily biodegradable in water.
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ammonium bicarbonate (1066-33-7)

Persistence and degradability	Not readily biodegradable in water.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

tris(hydroxymethyl)aminomethane (77-86-1)

Log Pow	-2.31 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Not bioaccumulative.

ammonium bicarbonate (1066-33-7)

Log Pow	-3.08 (Estimated value, KOWWIN)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

tris(hydroxymethyl)aminomethane (77-86-1)

Log Koc	1.87 (log Koc, QSAR)
Ecology - soil	Highly mobile in soil.

ammonium bicarbonate (1066-33-7)

Ecology - soil	Low potential for mobility in soil.
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12.5. Results of PBT and vPvB assessment

Component	
tris(hydroxymethyl)aminomethane (77-86-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
ammonium bicarbonate (1066-33-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Waste treatment methods.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Phospho-Elution Buffer [5X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
H302	Harmful if swallowed.
EUH210	Safety data sheet available on request.

Safety Data Sheet applicable for regions : GB - United Kingdom

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



Phospho-Lysis Buffer [1X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Revision date: 5/11/2017 Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Phospho-Lysis Buffer [1X]
Product code : 159P
Product group : Blend

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Research purposes

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
63132-1429 Saint Louis - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	
United Kingdom	National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital	Penarth CF64 2XX Cardiff	0344 892 0111	
United Kingdom	National Poisons Information Service Edinburgh Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA Edinburgh	0344 892 0111	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazardous ingredients : sodium molybdate, dihydrate

2.3. Other hazards

No additional information available

Phospho-Lysis Buffer [1X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Deionized water	(CAS-No.) 7732-18-5	>= 80	Not classified
sodium molybdate, dihydrate	(CAS-No.) 10102-40-6	0.05 - 0.5	Not classified
sodium fluoride	(CAS-No.) 7681-49-4 (EC-No.) 231-667-8 (EC Index-No.) 009-004-00-7	0.05 - 0.5	Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319
Magnesium chloride	(CAS-No.) 7791-18-6	< 0.05	Not classified
Sodium Orthovanadate	(CAS-No.) 13721-39-6 (EC-No.) 237-287-9	< 0.05	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Phospho-Lysis Buffer [1X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

sodium molybdate, dihydrate (10102-40-6)

United Kingdom - Occupational Exposure Limits

WEL TWA (mg/m³) 5 mg/m³

WEL STEL (mg/m³) 10 mg/m³

sodium fluoride (7681-49-4)

EU - Occupational Exposure Limits

IOELV TWA (mg/m³) 2.5 mg/m³

United Kingdom - Occupational Exposure Limits

WEL TWA (mg/m³) 2.5 mg/m³

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear.
Odour	: None.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

Phospho-Lysis Buffer [1X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

sodium molybdate, dihydrate (10102-40-6)

LD50 oral rat	4233 mg/kg (Rat, Oral)
LD50 dermal rat	> 2000 mg/kg (Rat, Dermal)

Magnesium chloride (7791-18-6)

LD50 oral rat	8100 mg/kg (Rat, Oral)
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sodium fluoride (7681-49-4)

LD50 oral rat	52 mg/kg (Rat, Oral)
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Sodium Orthovanadate (13721-39-6)

LD50 oral rat	330 mg/kg (Rat, Oral)
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Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

sodium molybdate, dihydrate (10102-40-6)

LC50 fish 1	644.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Semi-static system, Fresh water, Experimental value)
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Phospho-Lysis Buffer [1X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

EC50 Daphnia 1	130.9 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 (algae)	289.2 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Weight of evidence)

Magnesium chloride (7791-18-6)	
LC50 fish 1	16500 mg/l (96 h, Gambusia affinis, Anhydrous form)
EC50 Daphnia 1	3190 mg/l (24 h, Daphnia magna, Anhydrous form)
EC50 72h algae (1)	2200 mg/l (Scenedesmus subspicatus, Anhydrous form)

sodium fluoride (7681-49-4)	
LC50 fish 1	> 530 mg/l (96 h, Lepomis macrochirus)
EC50 Daphnia 1	98 mg/l (48 h, Daphnia magna)
EC50 72h algae (1)	1000 mg/l (Scenedesmus subspicatus, Growth)

12.2. Persistence and degradability

sodium molybdate, dihydrate (10102-40-6)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Magnesium chloride (7791-18-6)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

sodium fluoride (7681-49-4)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Sodium Orthovanadate (13721-39-6)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

sodium molybdate, dihydrate (10102-40-6)	
BCF fish 1	4.9 (28 day(s), Oncorhynchus tshawytscha, Fresh water, Weight of evidence, Anhydrous form)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Magnesium chloride (7791-18-6)	
Bioaccumulative potential	No bioaccumulation data available.

sodium fluoride (7681-49-4)	
BCF fish 1	2.3 (Salmo gairdneri)

Phospho-Lysis Buffer [1X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Bioaccumulative potential	Not bioaccumulative.
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Sodium Orthovanadate (13721-39-6)

Bioaccumulative potential	No bioaccumulation data available.
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12.4. Mobility in soil

sodium molybdate, dihydrate (10102-40-6)

Ecology - soil	No (test)data on mobility of the substance available.
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sodium fluoride (7681-49-4)

Ecology - soil	Toxic to flora.
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Sodium Orthovanadate (13721-39-6)

Ecology - soil	No (test)data on mobility of the substance available.
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12.5. Results of PBT and vPvB assessment

Component

sodium molybdate, dihydrate (10102-40-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Waste treatment methods.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not regulated
UN-No. (IATA)	: Not regulated
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not regulated
Proper Shipping Name (IATA)	: Not regulated
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 6.1

IMDG

Transport hazard class(es) (IMDG) : Not regulated

IATA

Transport hazard class(es) (IATA) : Not regulated

ADN

Transport hazard class(es) (ADN) : 6.1

RID

Transport hazard class(es) (RID) : 6.1

14.4. Packing group

Packing group (ADR)	: II
Packing group (IMDG)	: Not regulated
Packing group (IATA)	: Not regulated
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

Phospho-Lysis Buffer [1X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

No data available

Rail transport

No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues] (CAS 9002-93-1)

Contains REACH Annex XIV substances:

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Safety Data Sheet applicable for regions : GB - United Kingdom

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Phospho-Lysis Buffer [1X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830



Phospho-Wash Buffer [10X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Revision date: 5/11/2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Phospho-Wash Buffer [10X]
Product code : 190P
Product group : Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

No additional information available

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
63132-1429 Saint Louis - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice. Causes skin irritation. Causes serious eye irritation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH210 - Safety data sheet available on request.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Deionized water	(CAS-No.) 7732-18-5	>= 80	Not classified
sodium chloride	(CAS-No.) 7647-14-5 (EC-No.) 231-598-3	2 - 5	Not classified
acetic acid	(CAS-No.) 64-19-7 (EC-No.) 200-580-7 (EC Index-No.) 607-002-00-6	0.5 - 2	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Corr. 1A, H314

Specific concentration limits:

Name	Product identifier	Specific concentration limits
acetic acid	(CAS-No.) 64-19-7 (EC-No.) 200-580-7 (EC Index-No.) 607-002-00-6	(10 =<C < 25) Eye Irrit. 2, H319 (10 =<C < 25) Skin Irrit. 2, H315 (25 =<C < 90) Skin Corr. 1B, H314 (90 =<C < 100) Skin Corr. 1A, H314

Full text of H-statements: see section 16

Phospho-Wash Buffer [10X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

acetic acid (64-19-7)

EU - Occupational Exposure Limits

IOELV TWA (mg/m ³)	25 mg/m ³
IOELV TWA (ppm)	10 ppm
IOELV STEL (mg/m ³)	50 mg/m ³
IOELV STEL (ppm)	20 ppm

United Kingdom - Occupational Exposure Limits

WEL TWA (mg/m ³)	25 mg/m ³
------------------------------	----------------------

Phospho-Wash Buffer [10X]

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

WEL TWA (ppm)	10 ppm
WEL STEL (mg/m ³)	50 mg/m ³
WEL STEL (ppm)	20 ppm

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 95 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

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10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

sodium chloride (7647-14-5)

LD50 oral rat	> 3980 mg/kg bodyweight (Rat, Experimental value, 20% aqueous solution, Oral)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit, Experimental value, Dermal)
LC50 inhalation rat (mg/l)	> 42 mg/l air (1 h, Rat, Male, Experimental value, 20% aqueous solution, Inhalation (aerosol))

acetic acid (64-19-7)

LD50 oral rat	3310 mg/kg bodyweight (Rat, Male / female, Experimental value, Oral)
LC50 inhalation rat (mg/l)	11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value, Inhalation (vapours), 14 day(s))

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

sodium chloride (7647-14-5)

LC50 fish 1	5840 mg/l (ASTM, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value)
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acetic acid (64-19-7)

LC50 fish 1	> 1000 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	> 1000 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 72h algae (1)	> 1000 mg/l (ISO 10253, Skeletonema costatum, Static system, Salt water, Experimental value, GLP)

12.2. Persistence and degradability

sodium chloride (7647-14-5)

Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

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acetic acid (64-19-7)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.6 - 0.74 g O ₂ /g substance
Chemical oxygen demand (COD)	1.03 g O ₂ /g substance
ThOD	1.07 g O ₂ /g substance

12.3. Bioaccumulative potential

sodium chloride (7647-14-5)	
Log Pow	-3 (Calculated)
Bioaccumulative potential	Not bioaccumulative.

acetic acid (64-19-7)	
BCF fish 1	3.16 (Pisces, Fresh water, QSAR)
Log Pow	-0.17 (Experimental value, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

sodium chloride (7647-14-5)	
Surface tension	73.03 mN/m (23 °C, 14.5 g/l)
Ecology - soil	No (test)data on mobility of the substance available.

acetic acid (64-19-7)	
Surface tension	26.3 mN/m (30 °C)
Ecology - soil	Highly mobile in soil. May be harmful to plant growth, blooming and fruit formation.

12.5. Results of PBT and vPvB assessment

Component	
sodium chloride (7647-14-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
acetic acid (64-19-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Waste treatment methods.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
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IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

Packing group (ADN) : Not applicable

Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B

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Skin Irrit. 2	Skin corrosion/irritation, Category 2
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
EUH210	Safety data sheet available on request.

Safety Data Sheet applicable for regions : GB - United Kingdom

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.