

Version: 202505

Material Safety Data Sheet

FavorPrep™ Tissue Genomic DNA Extraction Mini Kit

Cat. No.:	FATG1020 (4 preps)	FATG1023 (50 preps)	FATG1024 (100 preps)	FATG1026 (300 preps)
Contents	(- p. ope)	(or prope)	(100 propo)	(ccc prope)
FATG1 Buffer	1.5 ml	15 ml	30 ml	70 ml
FATG2 Buffer	1.5 ml	15 ml	30 ml	70 ml
W1 Buffer (Concentrate)	1.3 ml	22 ml	44 ml	124 ml
Wash Buffer (Concentrate)	1 ml	10 ml	20 ml	55 ml
Elution Buffer	1 ml	15 ml	30 ml	90 ml
Proteinase K (Liquid)	100 µl	1050 µl	1050 µl × 2	1600 µl × 4

Favorgen Biotech Corp.

Address: Ping-Tung Agricultural Biotechnology Park

No. 8-1, Yuanxi 2nd Road, Ping Tung 908126,

TAIWAN

Phone Number: +886-8-762-1829

technical@favorgen.com www.favorgen.com

According to Regulation (EC) No 1907/2006



Section 1. IDENTIFICATION

1.1 Product Identifier

Commercial Product Name: FATG1 Buffer

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

Product form: Laboratory chemical mixture/Lysis Buffer

Relevant identified uses: For research use only, not for diagnostic use.

Uses advised against:

1.3 Details of the supplier of the safety data sheet

Company: Favorgen Biotech Corp.

Address: Ping-Tung Agricultural Biotechnology Park No. 8-1, Yuanxi 2nd Road, Ping Tung 908126, TAIWAN

Phone Number: +886-8-762-1829

1.4 Emergency telephone number

+886-8-762-1829

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Hazard identification Hazard classes/categories

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

GHS hazard pictograms:



GHS07

Signal word: WARNING

Hazard statement(s)

H315 Causes skin irritation
H319 Causes serious eye irritation

Precautionary statement(s)

P264 Wash hands thoroughly after handling

P280 Wear protective gloves/protective clothing/eye protection/face protection

P302 + P352 IF ON SKIN: Wash with plenty of soap and water

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
P337 + P313 If eye irritation persists: Get medical advice/attention
P362 + P364 Take off contaminated clothing and wash it before reuse.

2.2 Label elements

According to section 1.5.2 of Annex I to CLP

GHS symbol



GHS07

WARNING

2.3 Other hazards

Not applicable

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances or 3.2 Mixtures

Chemical: Sodium dodecyl sulfate CAS No.: 151-21-3

Concentration: 1~5%

Always wear recommended Personal Protective Equipment.

According to Regulation (EC) No 1907/2006



Section 4. FIRST AID MEASURES

4.1 Description of first-aid measures

If inhaled

After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. Immediately call in physician.

In case of skin contact

After skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

If in eyes

Rinse cautiously with water for several minutes

4.2 Most important symptoms and effects, both acute and delayed

H315 - Causes skin irritation

H319 - Causes serious eye irritation

4.3 Indication of any immediate medical attention and special treatment needed

Wear Personal Protective Equipment. If skin irritation occurs: Get medical advice

Section 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

All extinguishers can be used.

5.2 Special hazards arising from the substance or mixture

None

5.3 Advice for firefighters

Wear self-contained breathing equipment and protective suit.

5.4 Additional Information

Section 6. ACCIDENTAL RELEASE MEASURE

6.1 Personal precautions, protective equipment, and emergency procedures

Do not breathe vapours/Ensure adequate ventilation/Avoid contact with skin, eyes or clothing/Use personal protection equipment/Regular staff training is necessary.

6.2 Environmental precautions

Do not allow mixture to enter ground water system.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material.

6.4 Reference to other sections

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Always wear recommended Personal Protective Equipment.

7.2 Conditions for safe storage, including any incompatibilities

Keep in a dry, cool, and well-ventilated place.

7.3 Specific end use(s)

For research use only.

According to Regulation (EC) No 1907/2006



Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: None

Chemical: Sodium dodecyl sulfate CAS No.: 151-21-3

Concentration: 1~5%

8.2 Exposure controls

Good ventilation and exhaust system in the workplace, and the floor has drainage and washing facilities, which can resist the erosion of chemicals. Must maintain the highest level of cleanliness in the workplace.

Personal protective equipment

Eye/face protection: Safety glasses. Used to prevent splash hazards. Government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Recommended to avoid contamination with these hazards.

Hand protection: Protective gloves, use for short times chemical resistant latex gloves with code EN 374-3 level 1.

Respiratory protection: Not necessary, if the workplace is well-ventilated.

Personal Hygiene: Wash hands before breaks and at the end of work. Handle in accordance with good industrial hygiene and safety practice.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: liquid/Color: clear/Odor: characteristic /pH: 8.0~8.6

9.2 Other information

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable under normal condition.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

No data available.

10.5 Incompatible materials

Not dangerous reaction known under normal use.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity Not Classified

Chemical Name	Oral LD50 (Rat)	Dermal LD50 (Rabbit)	Inhalation LC50 (Rat)
Sodium dodecyl sulfate CAS No.: 151-21-3	1,228 mg/kg	200 mg/kg	3,900 mg/m³

Skin corrosion/irritation	Not Classified
Serious eye damage/irritation	Not Classified
Respiratory or skin sensitization	Not Classified
Germ cell mutagenicity	Not Classified
Carcinogenicity	Not Classified
Reproductive toxicity	Not Classified

According to Regulation (EC) No 1907/2006



 Specific target organ toxicity (STOT) – single exposure
 Not Classified

 Specific target organ toxicity (STOT) – repeated exposure
 Not Classified

 Aspiration hazard
 Not Classified

11.2 Information on other hazards

No data available

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Following information is valid for pure substances.

Sodium dodecyl sulfate CAS No.: 151-21-3

EC50 Daphnia magna /48h: 1.8 mg/L

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

Section 13. DISPOSAL CONSIDERATIONS

Refer to local regulations.

13.1 Waste treatment methods

Dispose of contents/container in accordance with local regulation.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. TRANSPORT INFORMATION

ADR/RID: - IMDG: - IATA:
14.2 UN proper shipping name

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IMDG: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA-DGR: no

14.6 Special precautions for user

. None

14.7 Maritime transport in bulk according to IMO instruments

Not Applicable.

Further information

According to Regulation (EC) No 1907/2006



Not classified as dangerous in transport regulations.

Section 15. REGULATIONS INFORMATION

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

15.2 Chemical safety assessment

Not necessary

Section 16. OTHER INFORMATION

16.1 List of R, H and P phrases

Full text of H-Statements referred to under sections 2 and 3.

16.2 Training Advice

Regular safety training.

16.3 Recommended Restriction on Use

Only for professional/research user.

Section 1. IDENTIFICATION

1.1 Product Identifier

Commercial Product Name: FATG2 Buffer

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

Product form: Laboratory chemical mixture/Lysis Buffer

Relevant identified uses: For research use only, not for diagnostic use.

Uses advised against:

1.3 Details of the supplier of the safety data sheet

Company: Favorgen Biotech Corp.

Address: Ping-Tung Agricultural Biotechnology Park No. 8-1, Yuanxi 2nd Road, Ping Tung 908126, TAIWAN

Phone Number: +886-8-762-1829

1.4 Emergency telephone number

+886-8-762-1829

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Hazard identification Hazard classes/categories

Acute oral toxicity	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

GHS hazard pictograms:



GHS07

Signal word: **WARNING** Hazard statement(s)

H302 Harmful if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects

Precautionary statement(s)

According to Regulation (EC) No 1907/2006



P264 Wash hands thoroughly after handling

P280 Wear protective gloves/protective clothing/eye protection/face protection

P270 Do not eat, drink or smoke when using this product

P273 Avoid release to the environment

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P302 + P352 IF ON SKIN: Wash with plenty of soap and water

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing

P330 Rinse mouth

P332 + P313 If skin irritation occurs: Get medical advice/attention

2.2 Label elements

According to section 1.5.2 of Annex I to CLP

GHS symbol



GHS07

WARNING

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances or 3.2 Mixtures

Chemical: Guanidine hydrochloride CAS No.: 50-01-1

Concentration: 36 - <50%

Classification: H302, Acute oral Tox. 4 H315, Skin Irritation 2

H315, Skin Irritation 2 H319, Eye Irritation 2

Chemical: Polyoxyethylene sorbitan monolaurate (Tween® 20) CAS No.: 9005-64-5

Concentration: 10 - <33%

Classification: No criteria for classification or naming of chemical not required.

Section 4. FIRST AID MEASURES

4.1 Description of first-aid measures

f inhaled

After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. Immediately call in physician.

In case of skin contact

After skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

H302 - Harmful if swallowed

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H412 - Harmful to aquatic life

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

All extinguishers can be used.

5.2 Special hazards arising from the substance or mixture

None known.

According to Regulation (EC) No 1907/2006



5.3 Advice for firefighters

No specific fire or explosion hazard.

5.4 Additional Information

Section 6. ACCIDENTAL RELEASE MEASURE

6.1 Personal precautions, protective equipment, and emergency procedures

Do not breathe vapours/Ensure adequate ventilation/Avoid contact with skin, eyes or clothing/Use personal protection equipment/Regular staff training is necessary.

6.2 Environmental precautions

Do not allow mixture to enter ground water system.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material.

6.4 Reference to other sections

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Always wear recommended Personal Protective Equipment.

7.2 Conditions for safe storage, including any incompatibilities

Keep in a dry, cool, and well-ventilated place.

7.3 Specific end use(s)

For research use only.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: None

Chemical: guanidine hydrochloride CAS No.: 50-01-1

NIOSH: not listed OSHA: not listed

Chemical: polyoxyethylene sorbitan monolaurate CAS No.: 9005-64-5

8.2 Exposure controls

Good ventilation and exhaust system in the workplace, and the floor has drainage and washing facilities, which can resist the erosion of chemicals. Must maintain the highest level of cleanliness in the workplace.

Personal protective equipment

Eye/face protection: Safety glasses. Used to prevent splash hazards. Government standards such as NIOSH (US) or EN 166(EU).

 $\textbf{Skin protection:} \ \textbf{Recommended to avoid contamination with these hazards}.$

Hand protection: Protective gloves, use for short times chemical resistant latex gloves with code EN 374-3 level 1.

Respiratory protection: Not necessary, if the workplace is well-ventilated.

Personal Hygiene: Wash hands before breaks and at the end of work. Handle in accordance with good industrial hygiene and safety practice.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: liquid/Color: slightly yellow/Odor: odorless/pH: $3.4^{\circ}5.6$ /Specific gravity: 1.15 g/cm^3

9.2 Other information

Material Safety Data Sheet According to Regulation (EC) No 1907/2006



Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

Note: Can form very reactive substances with oxidizing agents.

10.4 Conditions to avoid

Not necessary.

10.5 Incompatible materials

Note: Avoid contact with strong acids or alkalines.

10.6 Hazardous decomposition products

Decompositions are not observed during the expiration period under recommended conditions.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Not Classified

Chemical Name	Oral LD50 (Rat)	Dermal LD50 (Rabbit)	Inhalation LC50 (Rat)
Guanidine hydrochloride CAS No.: 50-01-1	475-907 mg/kg	2000 mg/kg	[4h] 3181-7655 μg/m³
Polyoxyethylene sorbitan monolaurate CAS No.: 9005-64-5	No data available	No data available	No data available

Skin corrosion/irritation Skin irritation/ Irritating to eyes Serious eye damage/irritation Not Classified Not Classified Respiratory or skin sensitization Germ cell mutagenicity Not Classified Not Classified Carcinogenicity Reproductive toxicity Not Classified Specific target organ toxicity (STOT) - single exposure Not Classified Specific target organ toxicity (STOT) - repeated exposure Not Classified Aspiration hazard Not Classified

11.2 Information on other hazards

No data available.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Following information is valid for pure substances.

Chemical: guanidine hydrochloride

CAS No.: 50-01-1

LC50leuciscus idus/96h: 1759 mg/L WGK (DE): 1 WGK No.: 0788 Storage class (VCI): 12

Chemical: polyoxyethylene sorbitan monolaurate (Tween® 20)

CAS No.: 9005-64-5 WGK (DE): 1

Storage class (VCI): 10-11

12.2 Persistence and degradability

No data available.

According to Regulation (EC) No 1907/2006



12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

Section 13. DISPOSAL CONSIDERATIONS

Refer to local regulations.

13.1 Waste treatment methods

Dispose of contents/container in accordance with local regulation.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IMDG: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA-DGR: no

14.6 Special precautions for user

None.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Further information

Not classified as dangerous in transport regulations.

Section 15. REGULATIONS INFORMATION

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

15.2 Chemical safety assessment

Not necessary.

Section 16. OTHER INFORMATION

16.1 List of R, H and P phrases

Full text of H-Statements referred to under sections 2 and 3.

16.2 Training Advice

According to Regulation (EC) No 1907/2006



Regular safety training.

16.3 Recommended Restriction on Use

Only for professional/research user.

Section 1. IDENTIFICATION

1.1 Product Identifier

Commercial Product Name: W1 Buffer

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

Product form: Laboratory chemical mixture

Relevant identified uses: For research use only, not for diagnostic use.

Uses advised against:

1.3 Details of the supplier of the safety data sheet

Company: Favorgen Biotech Corp.

Address: Ping-Tung Agricultural Biotechnology Park No. 8-1, Yuanxi 2nd Road, Ping Tung 908126, TAIWAN

Phone Number: +886-8-762-1829

1.4 Emergency telephone number

+886-8-762-1829

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Hazard identification Hazard classes/categories

Acute oral toxicity	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

GHS hazard pictograms:



GHS07

Signal word: WARNING

Hazard statement(s)

H302 Harmful if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation

H412 Harmful to aquatic life with long lasting effects

Precautionary statement(s)

P264 Wash hands thoroughly after handling

P270 Do not eat, drink or smoke when using this product

P273 Avoid release to the environment

P280 Wear protective gloves/protective clothing/ eye protection/ face protectio
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P302 + P352 IF ON SKIN: Wash with plenty of soap and water

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing

P330 Rinse mouth

P332 + P313 If skin irritation occurs: Get medical advice/attention

2.2 Label elements

According to section 1.5.2 of Annex I to CLP

GHS symbol



According to Regulation (EC) No 1907/2006



CAS No.: 50-01-1

WARNING

Hazard contents

Guanidine hydrochloride, 20~50%, CAS-No. 50-01-1

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances or 3.2 Mixtures

Chemical: Guanidine hydrochloride

Concentration: 20 - <50 %

Classification: H302, Acute oral Tox. 4,

H315, Skin Irrit. 2, H319, Eye Irrit. 2

Section 4. FIRST AID MEASURES

4.1 Description of first-aid measures

If inhaled

After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. Immediately call in physician.

In case of skin contact

After skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

H302 - Harmful if swallowed

H315 - Causes skin irritation

H319 - Causes serious eye irritation

 $\ensuremath{\mathsf{H412}}$ - $\ensuremath{\mathsf{Harmful}}$ to a quatic life

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

All extinguishers can be used.

5.2 Special hazards arising from the substance or mixture

None known.

5.3 Advice for firefighters

No specific fire or explosion hazard.

5.4 Additional Information

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Section 6. ACCIDENTAL RELEASE MEASURE

6.1 Personal precautions, protective equipment, and emergency procedures

Do not breathe vapours/Ensure adequate ventilation/Avoid contact with skin, eyes or clothing/Use personal protection equipment/Regular staff training is necessary.

6.2 Environmental precautions

Do not allow mixture to enter ground water system.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material.

According to Regulation (EC) No 1907/2006



6.4 Reference to other sections

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Always wear recommended Personal Protective Equipment.

7.2 Conditions for safe storage, including any incompatibilities

Keep in a dry, cool, and well-ventilated place.

7.3 Specific end use(s)

For research use only.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: None

Chemical: Guanidine hydrochloride CAS No.: 50-01-1

NIOSH: not listed OSHA: not listed

8.2 Exposure controls

Good ventilation and exhaust system in the workplace, and the floor has drainage and washing facilities, which can resist the erosion of chemicals. Must maintain the highest level of cleanliness in the workplace.

Personal protective equipment

Eye/face protection: Safety glasses. Used to prevent splash hazards. Government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Recommended to avoid contamination with these hazards.

Hand protection: Protective gloves, use for short times chemical resistant latex gloves with code EN 374-3 level 1

Respiratory protection: Not necessary, if the workplace is well-ventilated.

Personal Hygiene: Wash hands before breaks and at the end of work. Handle in accordance with good industrial hygiene and safety practice.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: liquid/Color: clear/Odor: odorless/pH: 6.0~7.0

9.2 Other information

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

Note: Can form very reactive substances with oxidizing agents.

10.4 Conditions to avoid

Not necessary.

10.5 Incompatible materials

Note: Avoid contact with strong acids or alkalines.

10.6 Hazardous decomposition products

Material Safety Data Sheet According to Regulation (EC) No 1907/2006



Decompositions are not observed during the expiration period under recommended conditions.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity Not Classified

Chemical Name	Oral LD50 (Rat)	Dermal LD50 (Rabbit)	Inhalation LC50 (Rat)
Guanidine hydrochloride CAS No.: 50-01-1	475-907 mg/kg	2000 mg/kg	[4h] 3181-7655 μg/m³

Skin corrosion/irritation Skin irritation/Irritating to eyes Serious eye damage/irritation Not Classified Respiratory or skin sensitization Not Classified Germ cell mutagenicity Not Classified Carcinogenicity Not Classified Reproductive toxicity Not Classified Specific target organ toxicity (STOT) - single exposure Not Classified Specific target organ toxicity (STOT) – repeated exposure Not Classified Aspiration hazard Not Classified

11.2 Information on other hazards

No data available.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Following information is valid for pure substances.

Guanidine hydrochloride

CAS No.: 50-01-1

LC50leuciscus idus/96h: 1759 mg/L WGK (DE): 1 WGK No.: 0788 Storage class (VCI): 12

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

Section 13. DISPOSAL CONSIDERATIONS

Refer to local regulations.

13.1 Waste treatment methods

Dispose of contents/container in accordance with local regulation.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. TRANSPORT INFORMATION

14.1 UN number

According to Regulation (EC) No 1907/2006



ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IMDG: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA-DGR: no

14.6 Special precautions for user

None

14.7 Maritime transport in bulk according to IMO instruments

Not Applicable.

Further information

Not classified as dangerous in transport regulations.

Section 15. REGULATIONS INFORMATION

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

15.2 Chemical safety assessment

Not necessary.

Section 16. OTHER INFORMATION

16.1 List of R, H and P phrases

Full text of H-Statements referred to under sections 2 and 3.

16.2 Training Advice

Regular safety training.

16.3 Recommended Restriction on Use

Only for professional/research user.

Section 1. IDENTIFICATION

1.1 Product Identifier

Commercial Product Name: Wash Buffer

 $\textbf{1.2} \ \textbf{Relevant identified uses of the substance or mixture and uses advised against}$

Product form: Laboratory chemical mixture

Relevant identified uses: For research use only, not for diagnostic use.

Uses advised against:

1.3 Details of the supplier of the safety data sheet

Company: Favorgen Biotech Corp.

Address: Ping-Tung Agricultural Biotechnology Park No. 8-1, Yuanxi 2^{nd} Road, Ping Tung 908126, TAIWAN Phone Number: +886-8-762-1829

1.4 Emergency telephone number

+886-8-762-1829

According to Regulation (EC) No 1907/2006



Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

No hazardous substance as specified in Regulation (EC) No 1272/2008.

2.2 Label elements

Does not need labelling as hazardous.

2.3 Other hazards

Not applicable.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances or 3.2 Mixtures

Chemical: chemicals/mixture < 1%, no declaration necessary CAS No.: ------

Concentration: 0.1 - <1%

Section 4. FIRST AID MEASURES

4.1 Description of first-aid measures

If inhaled

Supply fresh air.

In case of skin contact

Remove contaminated clothing. Rinse skin with water/shower.

In case of eye contact

Rinse out with plenty of water.

If swallowed

Consult a doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

Section 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

All extinguishers can be used.

5.2 Special hazards arising from the substance or mixture

None

5.3 Advice for firefighters

No explosion hazard.

5.4 Additional Information

Section 6. ACCIDENTAL RELEASE MEASURE

6.1 Personal precautions, protective equipment, and emergency procedures

Ensure adequate ventilation.

6.2 Environmental precautions

Do not allow mixture to enter ground water system.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material.

6.4 Reference to other sections

According to Regulation (EC) No 1907/2006



Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Always wear recommended Personal Protective Equipment.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

For research use only.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Contains no substances with occupational exposure limit.

8.2 Exposure controls

Personal protective equipment

Personal Hygiene: Wash hands before breaks and at the end of work. Handle in accordance with good

industrial hygiene and safety practice.

Eye/face protection: Tight sealing safety glasses.

Hand protection: Protective gloves.

Respiratory protection: Not necessary, if the workplace is well-ventilated.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: liquid/Color: Clear/Odor: odorless/pH: 7.5~8.5

9.2 Other information

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

None.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

Not necessary.

10.5 Incompatible materials

None.

10.6 Hazardous decomposition products

Decompositions are not observed during the expiration period under recommended conditions.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicityNot ClassifiedSkin corrosion/irritationNot ClassifiedSerious eye damage/irritationNot ClassifiedRespiratory or skin sensitizationNot ClassifiedGerm cell mutagenicityNot ClassifiedCarcinogenicityNot Classified

According to Regulation (EC) No 1907/2006



Reproductive toxicity

Specific target organ toxicity (STOT) – single exposure

Specific target organ toxicity (STOT) – repeated exposure

Aspiration hazard

Not Classified

Not Classified

Not Classified

11.2 Information on other hazards

No data available.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Contains no substances known to be hazardous to the ecosystem.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

Section 13. DISPOSAL CONSIDERATIONS

Refer to local regulations.

13.1 Waste treatment methods

Dispose of contents/container in accordance with local regulation.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IMDG: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA-DGR: no

14.6 Special precautions for user

. None.

14.7 Maritime transport in bulk according to IMO instruments

Not Applicable.

Further information

Not classified as dangerous in transport regulations.

According to Regulation (EC) No 1907/2006



Section 15. REGULATIONS INFORMATION

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

15.2 Chemical safety assessment

Not necessary.

Section 16. REGULATIONS INFORMATION

16.1 List of R, H and P phrases

Full text of H-Statements referred to under sections 2 and 3.

16.2 Training Advice

Regular safety training.

16.3 Recommended Restriction on Use

Only for professional/research user.

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Section 1. IDENTIFICATION

1.1 Product Identifier

Commercial Product Name: Elution Buffer

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

Product form: Laboratory chemical mixture

Relevant identified uses: For research use only, not for diagnostic use.

Uses advised against:

1.3 Details of the supplier of the safety data sheet

Company: Favorgen Biotech Corp.

Address: Ping-Tung Agricultural Biotechnology Park No. 8-1, Yuanxi 2nd Road, Ping Tung 908126, TAIWAN

Phone Number: +886-8-762-1829

1.4 Emergency telephone number

+886-8-762-1829

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

No hazardous substance as specified in Regulation (EC) No 1272/2008.

2.2 Label elements

Does not need labelling as hazardous.

2.3 Other hazards

Not applicable.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances or 3.2 Mixtures

Chemical: chemicals/mixture < 1%, no declaration necessary CAS No.: ------

Concentration: 0.1 - <1%

Section 4. FIRST AID MEASURES

According to Regulation (EC) No 1907/2006



4.1 Description of first-aid measures

If inhaled

Supply fresh air.

In case of skin contact

Remove contaminated clothing. Rinse skin with water/shower.

In case of eye contact

Rinse out with plenty of water.

If swallowed

Consult a doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

Section 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

All extinguishers can be used.

5.2 Special hazards arising from the substance or mixture

None

5.3 Advice for firefighters

No explosion hazard.

5.4 Additional Information

Section 6. ACCIDENTAL RELEASE MEASURE

6.1 Personal precautions, protective equipment, and emergency procedures

Ensure adequate ventilation.

6.2 Environmental precautions

Do not allow mixture to enter ground water system.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material.

6.4 Reference to other sections

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Always wear recommended Personal Protective Equipment.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

For research use only.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Contains no substances with occupational exposure limit.

8.2 Exposure controls

Personal protective equipment

Personal Hygiene: Wash hands before breaks and at the end of work. Handle in accordance with good industrial hygiene and safety practice.

According to Regulation (EC) No 1907/2006



Eye/face protection: Tight sealing safety glasses.

Hand protection: Protective gloves.

Respiratory protection: Not necessary, if the workplace is well-ventilated.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: liquid/Color: Clear/Odor: odorless/pH: 8.0~9.0

9.2 Other information

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Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

None.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

Not necessary.

10.5 Incompatible materials

None.

10.6 Hazardous decomposition products

Decompositions are not observed during the expiration period under recommended conditions.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Not Classified Acute toxicity Not Classified Skin corrosion/irritation Serious eye damage/irritation Not Classified Respiratory or skin sensitization Not Classified Germ cell mutagenicity Not Classified Carcinogenicity Not Classified Reproductive toxicity Not Classified Specific target organ toxicity (STOT) – single exposure Not Classified Specific target organ toxicity (STOT) - repeated exposure Not Classified Aspiration hazard Not Classified

11.2 Information on other hazards

No data available.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Contains no substances known to be hazardous to the ecosystem.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

According to Regulation (EC) No 1907/2006



12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

Section 13. DISPOSAL CONSIDERATIONS

Refer to local regulations.

13.1 Waste treatment methods

Dispose of contents/container in accordance with local regulation.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IMDG: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA-DGR: no

14.6 Special precautions for user

None

14.7 Maritime transport in bulk according to IMO instruments

Not Applicable.

Further information

Not classified as dangerous in transport regulations.

Section 15. REGULATIONS INFORMATION

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

Look for your country-specific regulations.

15.2 Chemical safety assessment

Not necessary.

Section 16. REGULATIONS INFORMATION

16.1 List of R, H and P phrases

Full text of H-Statements referred to under sections 2 and 3.

16.2 Training Advice

Regular safety training.

16.3 Recommended Restriction on Use

Only for professional/research user.

According to Regulation (EC) No 1907/2006



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Section 1. IDENTIFICATION

1.1 Product Identifier

Commercial Product Name: Proteinase K (Liquid)

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

Product form: Laboratory chemical mixture

Relevant identified uses: For research use only, not for diagnostic use.

Uses advised against:

1.3 Details of the supplier of the safety data sheet

Company: Favorgen Biotech Corp.

Address: Ping-Tung Agricultural Biotechnology Park No. 8-1, Yuanxi 2nd Road, Ping Tung 908126, TAIWAN

Phone Number: +886-8-762-1829

1.4 Emergency telephone number

+886-8-762-1829

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Hazard identification Hazard classes/categories

Resp. Sens.	Category 1
Sensitization/skin	Category 1

GHS hazard pictograms:



GHS08

Signal word: DANGER

Hazard statement(s)

H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statement(s)

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection/

hearing protection/...

P284 [In case of inadequate ventilation] wear respiratory protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P501 Dispose of contents/container in accordance with local/regional/national/

international regulations.

Supplemental Hazard Statements

None

2.2 Label elements

According to section 1.5.2 of Annex I to CLP





DANGER

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

According to Regulation (EC) No 1907/2006



Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances or 3.2 Mixtures

Chemical: Proteinase K CAS No.: 39450-01-6

Concentration: 1- ≤2.5%

Classification: H334, Resp. Sens. 1,

H315, Skin Irrit. 2, H317, Skin Sens.1 H319, Eye Irrit. 2 H335, STOT SE 3

Section 4. FIRST AID MEASURES

4.1 Description of first-aid measures

If inhaled

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

In case of skin contact

After skin contact: Immediately wash with water and soap and rinse thoroughly. Seek medical treatment.

In case of eye contact

After eye contact: Rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses. Call a doctor immediately.

If swallowed

After swallowing: Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

All extinguishers can be used.

5.2 Special hazards arising from the substance or mixture

None known.

5.3 Advice for firefighters

No specific fire or explosion hazard.

5.4 Additional Information

Section 6. ACCIDENTAL RELEASE MEASURE

6.1 Personal precautions, protective equipment, and emergency procedures

Do not breathe vapours/Ensure adequate ventilation/Avoid contact with skin, eyes or clothing/Use personal protection equipment/Regular staff training is necessary.

6.2 Environmental precautions

Do not allow mixture to enter ground water system.

6.3 Methods and material for containment and cleaning up

Ensure adequate ventilation.

Soak up the dissolved solution with inert absorbent material.

6.4 Reference to other sections

According to Regulation (EC) No 1907/2006



Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Always wear recommended Personal Protective Equipment.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions: Tightly closed. Dry. Keep locked up or in an area accessible only to qualified or authorized persons.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: None

Ingredients with workplace control parameters.

8.2 Exposure controls

Good ventilation and exhaust system in the workplace, and the floor has drainage and washing facilities, which can resist the erosion of chemicals. Must maintain the highest level of cleanliness in the workplace.

Personal protective equipment

Eye/face protection: Safety glasses. Used to prevent splash hazards. Government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Recommended to avoid contamination with these hazards.

Hand protection: Protective gloves, use for short times chemical resistant latex gloves with code EN 374-3 level 1.

Respiratory protection: Not necessary, if the workplace is well-ventilated.

Personal Hygiene: Wash hands before breaks and at the end of work. Handle in accordance with good industrial hygiene and safety practice.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: liquid/Color: Colorless/Odor: Odorless/pH: 7.5

9.2 Other information

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature). Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

In the event of fire: see section 5.

Section 11. TOXICOLOGICAL INFORMATION

According to Regulation (EC) No 1907/2006



11.1 Information on toxicological effects

Acute toxicityNot ClassifiedSkin corrosion/irritationCauses skin irritation.Serious eye damage/irritationCauses serious eye irritation.

Respiratory or skin sensitization May cause allergy or asthma symptoms or

breathing difficulties if inhaled.

Germ cell mutagenicity Not Classified

Carcinogenicity Based on available data, the classification

criteria are not met.

Reproductive toxicity

Specific target organ toxicity (STOT) – single exposure

Specific target organ toxicity (STOT) – repeated exposure

Aspiration hazard

Not Classified

Not Classified

11.2 Information on other hazards

No data available.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No additional data available.

Section 13. DISPOSAL CONSIDERATIONS

Refer to local regulations.

13.1 Waste treatment methods

Dispose of contents/container in accordance with local regulation.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IMDG: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA-DGR: no

Material Safety Data Sheet According to Regulation (EC) No 1907/2006



14.6 Special precautions for user

14.7 Maritime transport in bulk according to IMO instruments

Not Applicable.

Further information

Not classified as dangerous in transport regulations.

Section 15. REGULATIONS INFORMATION

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

This material safety data sheet complies with the requirements of Regulation (EC) No.1907/2006.

15.2 Chemical safety assessment

For this product, a chemical safety assessment was not carried out $% \left(1\right) =\left(1\right) \left(1\right)$

Section 16. OTHER INFORMATION

16.1 List of R, H and P phrases

Full text of H-Statements referred to under sections 2 and 3.

16.2 Training Advice

Regular safety training.

16.3 Recommended Restriction on Use

Only for professional/research user.