

SECTION 1 – IDENTIFICATION

1.1 Product Identifier:

Product No: KIT-9080-10
Product Name: PrimeWay Food DNA Extraction Kit, 10 preps

Other means of identification:

See section 3 or

A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.

*1 x 10 mL F1 Buffer
1 x 3.2 mL F2 Buffer
1 x 12 mL F3 Buffer
1 x 4 mL Wash Buffer FD
1 x 1.5 mL Elution Buffer
1 x 9 mg Proteinase K
1 x 500 µL Proteinase K Buffer*

1.2 Recommended use of the chemical and restrictions on use:

To extract DNA from food samples.

For R&D use only. Not for pharmaceutical, household, or other uses.

1.3 Supplier Information:

Axil Scientific Pte Ltd
2 Tukang Innovation Grove,
06-01 JTC MedTech Hub,
Singapore 618305

Tel: +65 6775 7318

Email: custcare@axilscientific.com

Apical Scientific Sdn Bhd
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Tel: +603 8943 3252

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1.4 Emergency phone number:

Monday – Friday, (UTC +8:00) 8:00 a.m. to 6:00 p.m.

+65 6775 7318 (Singapore)

+603 8943 3252 (Malaysia & Other Countries)

SECTION 2 – HAZARDS IDENTIFICATION

2.0 GHS Classification of Complete Product



Signal word

DANGER

Hazard Identification

H302
H302 + H332

H315
H319

Hazard Classification; Hazard Statement

Acute Tox. 4 oral; Harmful if swallowed.

Acute Tox. 4, oral & inhalation; Harmful if swallowed or inhaled.

Skin Irrit. 2; Causes skin irritation.

Eye Irrit. 2; Causes serious eye irritation.

H334 Resp. Sens. 1; May cause allergic or asthma symptoms or breathing difficulties if inhaled.
 H335 Acute Tox. 3; May cause respiratory irritation.

2.1 GHS Classification of the Substance or Mixture

10 mL F1 Buffer



Signal word WARNING

Hazard Identification

H302
H315
H319

Hazard Classification; Hazard Statement

Acute Tox. 4 oral; Harmful if swallowed.
Skin Irrit. 2; Causes skin irritation.
Eye Irrit. 2; Causes serious eye irritation.

3.2 mL F2 Buffer



Signal word WARNING

Hazard Identification

H302 + H332

H315
H319

Hazard Classification; Hazard Statement

Acute Tox. 4, oral & inhalation; Harmful if swallowed or inhaled.
Skin Irrit. 2; Causes skin irritation.
Eye Irrit. 2; Causes serious eye irritation.

12 mL F3 Buffer



Signal word WARNING

Hazard Identification

H302
H315
H319
H335

Hazard Classification; Hazard Statement

Acute Tox. 4 oral; Harmful if swallowed.
Skin Irrit. 2; Causes skin irritation.
Eye Irrit. 2; Causes serious eye irritation.
Acute Tox. 3; May cause respiratory irritation.

4 mL Wash Buffer FD

Do not need labelling as hazardous

Signal word -

No hazard class

1.5 mL Elution Buffer

Do not need labelling as hazardous

Signal word -

No hazard class

9 mg Proteinase K



Signal word DANGER

Hazard Identification

H315

H319

H334

H335

Hazard Classification; Hazard Statement

Skin. Irrit. 2; Cause skin irritation.

Eye Irrit. 2; Causes serious eye irritation

Resp. Sens. 1; May cause allergic or asthma symptoms or breathing difficulties if inhaled.

Acute Tox. 3; May cause respiratory irritation.

500 µL Proteinase K Buffer

Do not need labelling as hazardous

Signal word -

No hazard class

2.2 Label Elements, including precautionary statements

10 mL F1 Buffer



Signal word: WARNING

3.2 mL F2 Buffer



Signal word: WARNING

12 mL F3 Buffer



Signal word: WARNING

4 mL Wash Buffer FD

Do not need labelling as hazardous.

Signal word: -

1.5 mL Elution Buffer

Do not need labelling as hazardous.

Signal word: -

9 mg Proteinase K



Signal word: DANGER

500 µL Proteinase K Buffer

Do not need labelling as hazardous.

Signal word: -

Precautionary statement(s):

Prevention

- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284 Wear respiratory protection.

Response

- P264 Wash skin thoroughly after handling.
P301 + P312 If swallowed: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352 If on skin: Wash with plenty of soap and water.
P304 + P340 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
P501 Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3 Other hazards

Possible hazards from physicochemical properties

In the case of pH values are less than 5 or higher than 9 then it is irritant.

Information pertaining to particular risks to human and possible symptoms

Cause after oral intake, impairments of health when ingested in small quantities. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Information pertaining to particular risks to the environment

No data available.

Other hazards:

No additional data available.

SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS THAT CONTRIBUTING TO HAZARD

3.1 Substances or 3.2 Mixtures

10 mL F1 Buffer

Chemical: sodium dodecyl sulphate

CAS No.: 151-21-3

GHS Classification: H315, Skin Irrit. 2; H319, Eye Irrit. 2

Formula: C₁₂H₂₅O₄S·Na
Pseudonym: Sodium lauryl sulphate
Lauryl sulphate sodium salt
SDS
EC No.: 205-788-1
Concentration: ≤ 10%

3.2 mL F2 Buffer

Chemical: potassium acetate CAS No.: 127-08-2
GHS Classification: H302, Acute Tox. 4 oral; H315, Skin Irrit. 2; H319, Eye Irrit. 2; H332, Acute Tox. 4 inhalation
Formula: CH₃CO₂K
Pseudonym: Potassium ethanoate
KOAc
EC No.: 204-822-2
Concentration: ≤ 50%

12 mL F3 Buffer

Chemical: guanidine thiocyanate CAS No.: 593-84-0
GHS Classification: H302, Acute Tox. 4 oral; H315, Skin Irrit. 2
Formula: C₂H₆N₄S
Pseudonym: guanidinium isothiocyanate
guanidinium rhodanide
EC No.: 209-812-1
Concentration: ≤ 40%

4 mL Wash Buffer FD

No component or ingredient is contributing to hazard.

1.5 mL Elution Buffer

No component or ingredient is contributing to hazard.

9 mg Proteinase K

Chemical: proteinase K CAS No.: 39450-01-6
GHS Classification: H315, Skin Irrit. 2; H319, Eye Irrit. 2; H334, Resp. Sens. 1; H335, Acute Tox. 3
Formula: Enzyme Comm. No. 3.4.21.64, origin: tritirachium album
Pseudonym: Endopeptidase K
Protease K
EC No.: 254-457-8
Concentration: 100%

500 µL Proteinase K Buffer

No component or ingredient is contributing to hazard.

3.3 Remarks

Components of mixture that are not listed are not hazardous to health or the environment within the meaning of GHS, and/or are present below their cut-off levels.

SECTION 4 – FIRST-AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

Eye Contact

Rinse cautiously with plenty of water. Remove contact lenses. Continue rinsing for at least 15 minutes and consult a physician.

Skin Contact

Rinse skin with soap and plenty of water. Remove contaminated clothing/ shoes and consult a physician.

Inhalation

If product is inhaled, move exposed individual to fresh air. If individual is not breathing, begin artificial respiration immediately and obtain medical attention.

Ingestion

After oral intake, lots of water should be drunk after it has been ingested. If you feel unwell, seek medical advice.

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 2.3) 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

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2 Special Exposure Hazards

Carbon oxides, Nitrogen oxides (NO_x)

5.3 Special Fire-fighting Procedures

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5.4 Further Information

The product itself does not burn.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Regular staff training is necessary, indicating hazards and precautions about the basis of operating instructions. Restrictions on activity must be observed. Wear protective gloves, protective clothing, and eye/face protection. Observe general safety guidelines for protection; avoid eye and skin contact.

6.2 Environmental precautions

Contain spill to prevent migration. Do not allow the undiluted product to enter sewers/surface or ground water. Dispose of contents/container in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

Bind any escaping liquid with inert absorbent or liquid-binding material. Dispose chemicals or excess reagents in accordance with local regulations for hazardous chemicals. Clean any contaminated equipment and floors with plenty of water. Collect small amounts of leaked liquid and flush with water into drains.

6.4 Reference to other sections

Nil.

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product. Use only in well-ventilated working areas.

7.2 Conditions for safe storage, including any incompatibilities.

The original product package allows safe storage. To maintain product quality, store according to the instructions in the product labelling.

7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)

Product for research use.

SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

10 mL F1 Buffer

Chemical: Sodium dodecyl sulphate	CAS No.: 151-21-3
DNEL	: 285 mg/m ³ [inh] 4060 mg/kg [dermal] 24 mg/kg [oral]
PNEC _(fresh water)	: Not listed
NIOSH	: Not listed
OSHA	: Not listed

3.2 mL F2 Buffer

Chemical: Potassium acetate	CAS No.: 127-08-2
DNEL	: 1.266 mg/m ³ [inh][acute]
PNEC _(fresh water)	: 0.46 mg/L
NIOSH	: Not listed
OSHA	: Not listed

12 mL F3 Buffer

Chemical: Guanidine thiocyanate	CAS No.: 593-84-0
DNEL	: 1092 mg/m ³ [inh][chronic] 3.28 mg/m ³ [inh][acute]
PNEC _(fresh water)	: 42.4 µg/L
NIOSH	: Not listed
OSHA	: Not listed

4 mL Wash Buffer FD

This component is not known to contain any substances with occupational exposure limit values.

1.5 mL Elution Buffer

This component is not known to contain any substances with occupational exposure limit values.

9 mg Proteinase K

This component is not known to contain any substances with occupational exposure limit values.

500 µL Proteinase K Buffer

This component is not known to contain any substances with occupational exposure limit values.

8.2 Exposure controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. High level of cleanliness shall be maintained at the workplace.

8.2.1 Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts is desired, use type N95 (US) or type P1 (EN 143) dust masks.

8.2.2 Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

8.2.3 Eye/ face protection

Use safety glasses. Where contact with the eyes is likely, use chemical safety goggles.

8.2.4 Skin protection

Recommended to avoid contamination with these hazards.

8.2.5 Personal hygiene

Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes, and clothing. Rinse any clothing on which the substance has been spilled and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

10 mL F1 Buffer

Appearance: Liquid	Colour: Colourless	Odour: Characteristic
pH: 8.1 – 8.5 (Neat, 25 °C)	Specific gravity: No data available	

3.2 mL F2 Buffer

Appearance: Liquid	Colour: Colourless	Odour: Characteristic
pH: 4.3 – 4.7 (Neat, 25 °C)	Specific gravity: No data available	

12 mL F3 Buffer

Appearance: Liquid	Colour: Yellow	Odour: Characteristic
pH: 6.8 – 7.2 (Neat, 25 °C)	Specific gravity: No data available	

4 mL Wash Buffer FD

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: 7.5 – 7.9 (Neat, 25 °C)	Specific gravity: No data available	

1.5 mL Elution Buffer

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: 8.3 – 8.7 (Neat, 25 °C)	Specific gravity: No data available	

9 mg Proteinase K

Appearance: Fine Powder	Colour: White	Odour: Odourless
pH: Not applicable	Specific gravity: No data available	

500 µL Proteinase K Buffer

Appearance: Liquid
pH: No data available

Colour: Colourless
Specific gravity: No data available

Odour: Odourless

9.2 Other information

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

9.3 Relevant Properties of Substance Group

No data available.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Store according to the recommended temperature on the container label.

10.3 Possibility of hazardous reactions

Hazardous reaction has not been reported.

10.4 Conditions to avoid

Strong heat, direct sunlight, strong oxidizers, and strong reducers.

10.5 Incompatible materials

Avoid contact with strong acids or alkaline.

10.6 Hazardous decomposition products

In the original package, all parts/ all reagents are safely and separately stored. Decompositions are not observed during the expiration period under recommended conditions.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Mixture:

Acute toxicity

3.2 mL F2 Buffer

Harmful if swallowed.

Acute oral toxicity estimate - 1,922 mg/kg

Acute inhalation toxicity estimate - 4h - 18.88 mg/l - vapour

12 mL F3 Buffer

Harmful if swallowed or if inhaled.

Skin corrosion/irritation

10 mL F1 Buffer

Mixture may cause skin irritation and/or dermatitis.

3.2 mL F2 Buffer

Mixture causes skin irritation and/or dermatitis.

12 mL F3 Buffer

Mixture causes serious skin irritation and/or dermatitis.

4 mL Wash Buffer FD

Mixture may cause skin irritation and/or dermatitis in susceptible persons.

1.5 mL Elution Buffer

Mixture may cause skin irritation and/or dermatitis in susceptible persons.

Serious eye damage/eye irritation

10 mL F1 Buffer

Mixture causes eye irritation.

3.2 mL F2 Buffer

Mixture causes serious eye irritation and may cause irreversible eye damage.

12 mL F3 Buffer

Mixture causes serious eye damage and may cause irreversible eye damage.

4 mL Wash Buffer FD

Mixture may cause eye irritation.

1.5 mL Elution Buffer

Mixture may cause eye irritation.

9 mg Proteinase K

Mixture may cause eye irritation.

Germ cell mutagenicity: No data available

Carcinogenicity: No data available

Reproductive toxicity: No data available

Specific target organ toxicity: May cause respiratory irritation.

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

11.2 Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties cannot be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Component:

Sodium dodecyl sulphate

Acute toxicity:

LD50 Oral - Rat - 977 mg/kg

LD50 Dermal - Rabbit - 580 mg/kg

Skin corrosion/irritation

Skin - Rabbit

Result: Skin irritation - 24 h

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Risk of serious eye damage.

(OECD Test Guideline 405)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity – single exposure

Inhalation - may cause respiratory irritation.

Specific target organ toxicity – repeated exposure

No data available

Aspiration hazard

No data available

Component:

Potassium acetate

Acute toxicity:

LD50 Oral - Rat - 3,250 mg/kg

LD50 Dermal - Rabbit - >20,000 mg/kg

LC50 Inhalation - Rat - >5.6 mg/l - 4h

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity – single exposure

No data available

Specific target organ toxicity – repeated exposure

No data available

Aspiration hazard

No data available

Component:

Guanidine thiocyanate

Acute toxicity:

LD50 Oral - Rat (female) - 593 mg/kg

Skin corrosion/irritation

Causes serious skin burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity – single exposure

No data available

Specific target organ toxicity – repeated exposure

No data available

Aspiration hazard

No data available

Component:

Guanidine hydrochloride

Acute toxicity:

Converted acute toxicity point estimate - 500 mg/kg

LD50 Oral - Rat - 1,120 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity – single exposure

No data available

Specific target organ toxicity – repeated exposure

No data available

Aspiration hazard
No data available

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

Components:

sodium dodecyl sulphate

NOEC - Oncorhynchus mykiss (rainbow trout) - 19.5 mg/l - 96h

LC50 - Oncorhynchus mykiss (rainbow trout) - 3.6 mg/l - 96 h

Growth Inhibition - Pseudokirchneriella subcapitata (green algae) - 2.68 mg/l - 150h

Guanidine thiocyanate

LC50 - Poecilia reticulata (guppy) - 89.1 mg/l - 96h

EC50 - Daphnia - 42.4 mg/l - 48h

NOEC - Poecilia reticulata (guppy) - 25 mg/l - 96d

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 Other adverse effects

No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose-off as unused product.

SECTION 14 – TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

UN Number

ADR/RID: -

IMDG: -

IATA-DGR: -

UN Proper Shipping Name:

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA-DGR: Not dangerous goods

Transport Hazard Class(es)

ADR/RID: -

IMDG: -

IATA-DGR: -

Packing Group

ADR/RID: -

IMDG: -

IATA-DGR: -

Environmental Hazards

ADR/RID: no

IMDG: marine pollutant: no

IATA-DGR: no

Special Precaution for Users

No data available.

SECTION 15 – REGULATORY INFORMATION

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

No data available.

SECTION 16 – OTHER INFORMATION

Date of Issue: 1 April 2024

Date of Revision: 1 April 2024

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. We shall not be held liable for any damage resulting from handling or from contact with the above product and shall not establish a legally valid contractual relationship.