SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION

1.1 Product Identifier:

Product No: KIT-9060-250
Product Name: PrimeWay Soil DNA Extraction Kit, 250 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.

1x 250 mL SL1 Buffer
1x 20 mL SL2 Buffer
1x 50 mL SL3 Buffer
2x 25 mL SIR Buffer
1x 220 mL SBD Buffer
1x 105 mL Wash Buffer S1
2x 50 mL Wash Buffer S2
1x 30 mL Elution Buffer
250x Soil Bead Tube

1.2 Recommended use of the chemical and restrictions on use:
To extract genomic DNA from soil, animal manure, worm compost and water.
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
No 7-1 to 7-4, Jalan SP 2/7
Taman Serdang Perdana, Seksyen 2
Seri Kembangan 43300
Selangor Darul Ehsan, Malaysia
Tel: +603 8943 3252
Fax: +603 8943 3243
Email: custcare@apicalscientific.com

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	Hazard Classification; Hazard Statement
H302	Acute Tox. 4; Harmful if swallowed.
H315	Skin Irrit. 2; Causes skin irritation.
H319	Eye Irrit. 2; Causes serious eye irritation.
H332	Acute Tox. 4; Harmful if inhaled.

2.1 GHS Classification of the Substance or Mixture

250 mL SL1 Buffer

Do not need labelling as hazardous

Signal word -

No hazard class

20 mL SL2 Buffer

Signal word WARNING

Hazard Identification	Hazard Classification; Hazard Statement
H315	Skin Irrit. 2; Causes skin irritation.
H319	Eye Irrit. 2; Causes serious eye irritation.

50 mL SL3 Buffer

Do not need labelling as hazardous

Signal word -

No hazard class

25 mL SIR Buffer

Signal word WARNING

Hazard Identification	Hazard Classification; Hazard Statement
H302	Acute Tox. 4; Harmful if swallowed.
H315	Skin Irrit. 2; Causes skin irritation.
H319	Eye Irrit. 2; Causes serious eye irritation.
H332	Acute Tox. 4; Harmful if inhaled.

220 mL SBD Buffer

Signal word WARNING

Hazard Identification	Hazard Classification; Hazard Statement
H302	Acute Tox. 4; Harmful if swallowed.
H315	Skin Irrit. 2; Causes skin irritation.
H319	Eye Irrit. 2; Causes serious eye irritation.

H332	Acute Tox. 4; Harmful if inhaled.

105 mL Wash Buffer S1

Signal word	WARNING

Hazard Identification	**Hazard Classification; Hazard Statement**
H302	Acute Tox. 4; Harmful if swallowed.
H315	Skin Irrit. 2; Causes skin irritation.
H319	Eye Irrit. 2; Causes serious eye irritation.
H332	Acute Tox. 4; Harmful if inhaled.

50 mL Wash Buffer S2

Do not need labelling as hazardous

Signal word -

No hazard class

30 mL Elution Buffer

Do not need labelling as hazardous

Signal word -

No hazard class

250x Soil Bead Tube

Do not need labelling as hazardous

Signal word -

No hazard class

2.2 Label Elements, including precautionary statements

250 mL SL1 Buffer
Do not need labelling as hazardous.
Signal word: -

20 mL SL2 Buffer

Signal word: WARNING

50 mL SL3 Buffer
Do not need labelling as hazardous.
Signal word: -

25 mL SIR Buffer

Signal word: WARNING

220 mL SBD Buffer

Signal word: WARNING

105 mL Wash Buffer S1

Signal word: WARNING

50 mL Wash Buffer S2
Do not need labelling as hazardous.
Signal word: -

30 mL Elution Buffer
Do not need labelling as hazardous.
Signal word: -

250x Soil Bead Tube
Do not need labelling as hazardous.
Signal word: -

Precautionary statement(s): -

Prevention

P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

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.
P362	Take off contaminated clothing and wash it before reuse.

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

250 mL SL1 Buffer
No component or ingredient is contributing to hazard.

20 mL SL2 Buffer
Chemical: Sodium dodecyl sulphate CAS No.: 151-21-3
GHS Classification: H315, Skin Irrit. 2; H319, Eye Irrit..
Formula: $C_{12}H_{25}O_4S.Na$
Pseudonym: Sodium lauryl sulphate
Lauryl sulphate sodium salt
SDS
EC No.: 205-788-1
Concentration: 1 - 10%

50 mL SL3 Buffer
Chemical: Potassium acetate CAS No.: 127-08-2
GHS Classification: No component or ingredient is contributing to hazard.
Formula: $C_2H_3O_2K$
Pseudonym: Potassium ethanoate
Acetic acid, potassium salt
EC No.: 204-822-2
Concentration: 30 - 50%

25 mL SIR Buffer
Chemical: Guanidine hydrochloride CAS No.: 50-01-1
GHS Classification: H302, Acute Tox. 4 oral; H315, Skin Irrit. 2; H319, Eye Irrit. 2; H332, Acute Tox. 4, inh.
Formula: $CH_6\ ClN_3$
Pseudonym: Guanidinium Chloride
EC No.: 200-002-3
Concentration: 15 - 35%

220 mL SBD Buffer
Chemical: Guanidine hydrochloride CAS No.: 50-01-1
GHS Classification: H302, Acute Tox. 4 oral; H315, Skin Irrit. 2; H319, Eye Irrit. 2; H332, Acute Tox. 4, inh.
Formula: $CH_6\ ClN_3$
Pseudonym: Guanidinium Chloride
EC No.: 200-002-3
Concentration: 30 - 50%

105 mL Wash Buffer S1
Chemical: Guanidine hydrochloride CAS No.: 50-01-1
GHS Classification: H302, Acute Tox. 4 oral; H315, Skin Irrit. 2; H319, Eye Irrit. 2; H332, Acute Tox. 4, inh.
Formula: $CH_6\ ClN_3$
Pseudonym: Guanidinium Chloride

EC No.: 200-002-3
Concentration: 30 - 50%

50 mL Wash Buffer S2
No component or ingredient is contributing to hazard.

30 mL Elution Buffer
No component or ingredient is contributing to hazard.

250x Soil Bead Tube
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
Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.

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 (NOx)

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 a 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

250 mL SL1 Buffer
This component is not known to contain any substances with occupational exposure limit values.

20 mL SL2 Buffer
This component is not known to contain any substances with occupational exposure limit values.

50 mL SL3 Buffer
This component is not known to contain any substances with occupational exposure limit values.

25 mL SIR Buffer

Chemical: Guanidine hydrochloride CAS No.: 50-01-1
DNEL : 10.5 mg/m^3 [inh]
PNEC$_{(fresh\ water)}$: Not listed
NIOSH : Not listed
OSHA : Not listed

220 mL SBD Buffer

Chemical: Guanidine hydrochloride CAS No.: 50-01-1
DNEL : 10.5 mg/m^3 [inh]
PNEC$_{(fresh\ water)}$: Not listed
NIOSH : Not listed
OSHA : Not listed

105 mL Wash Buffer S1

Chemical: Guanidine hydrochloride CAS No.: 50-01-1
DNEL : 10.5 mg/m^3 [inh]
PNEC$_{(fresh\ water)}$: Not listed
NIOSH : Not listed
OSHA : Not listed

50 mL Wash Buffer S2

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

30 mL Elution Buffer

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

250x Soil Bead Tube

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 typeN95 (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

250 mL SL1 Buffer

Appearance: Liquid	Colour: Colourless	Odour: Characteristic
pH: 7.8 – 8.2 (Neat, 25 °C)	Specific gravity: No data available	

20 mL SL2 Buffer

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

50 mL SL3 Buffer

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

25 mL SIR Buffer

Appearance: Liquid, viscous	Colour: White to pale yellow	Odour: Odourless
pH: No data available	Specific gravity: No data available	

220 mL SBD Buffer

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: No data available	Specific gravity: No data available	

105 mL Wash Buffer S1

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: No data available	Specific gravity: No data available	

50 mL Wash Buffer S2

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

30 mL Elution Buffer

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

250x Soil Bead Tube

Appearance: Glass bead	Colour: White	Odour: Odourless
pH: Not applicable	Specific gravity: Not applicable	

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

50 mL SL3 Buffer
Harmful if swallowed or inhaled.
Acute oral toxicity estimate - 1,922 mg/kg
Acute Inhalation toxicity estimate - 4 h - 18.88 mg/l – vapor

Skin corrosion/irritation

250 mL SL1 Buffer
Mixture may cause skin irritation and/or dermatitis.

20 mL SL2 Buffer
Mixture may cause skin irritation and/or dermatitis.

50 mL SL3 Buffer
Mixture may cause skin irritation and/or dermatitis.

25 mL SIR Buffer
Mixture causes skin irritation and/or dermatitis.

220 mL SBD Buffer
Mixture may cause skin irritation and/or dermatitis.

105 mL Wash Buffer S1
Mixture may cause skin irritation and/or dermatitis.

50 mL Wash Buffer S2
Mixture may cause skin irritation and/or dermatitis in susceptible persons.

30 mL Elution Buffer
Mixture may cause skin irritation and/or dermatitis in susceptible persons.

Serious eye damage/eye irritation

250 mL SL1 Buffer
Mixture may cause eye irritation.

20 mL SL2 Buffer
Mixture may cause eye irritation.

50 mL SL3 Buffer
Mixture may cause eye irritation and irreversible eye damage.

25 mL SIR Buffer

Mixture may cause eye irritation and irreversible eye damage.

220 mL SBD Buffer
Mixture may cause eye irritation and irreversible eye damage.

105 mL Wash Buffer S1
Mixture may cause eye irritation and irreversible eye damage.

50 mL Wash Buffer S2
Mixture may cause eye irritation.

30 mL Elution Buffer
Mixture may cause 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 - No data available

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:
Guanidine hydrochloride

Acute toxicity:
Converted acute toxicity point estimate - 500 mg/kg
LD50 Oral - Rat - 1120 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
Data for the substances and mixtures are not 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 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
Data not available.

SECTION 15 – REGULATORY INFORMATION

Safety, health, and environmental regulations/legislation specific for the substance or mixture
Data not available.

SECTION 16 – OTHER INFORMATION

Date of Issue: 14 February 2023 **Date of Revision:** 14 February 2023

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.