

**SECTION 1 – IDENTIFICATION**

**1.1 Product Identifier:**

Product No: KIT-9022-10  
Product Name: PrimeWay Genomic II 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.

*1x 2.5 mL GL1 Buffer  
1x 2.5 mL GL2 Buffer  
1x 4.5 mL Wash Buffer G1  
1x 1.5 mL Wash Buffer G2  
1x 1.5 mL Elution Buffer  
1x 10 mg Proteinase K  
1x 10 mg RNase A*

**1.2 Recommended use of the chemical and restrictions on use:**

To extract genomic DNA from animal tissue, cultured cells, mouse/rat tail, bacteria, yeast, fungi from cut agar, whole blood, buffy coat, nucleated blood, dried blood spot, white blood cells, insects, buccal swab, saliva, alcohol-fixed tissue, sperm and feathers/ nails/ hair.

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](mailto:custcare@axilscientific.com)

**Apical Scientific Sdn Bhd**  
No 7-1 to 7-4, Jalan SP 2/7  
Taman Serdang Perdana, Seksyen 2  
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Tel: +603 8943 3252

Fax: +603 8943 3243

Email: [custcare@apicalscientific.com](mailto: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**

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.

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

### 2.5 mL GL1 Buffer



**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.

### 2.5 mL GL2 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.

### 4.5 mL Wash Buffer G1



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.

### 1.5 mL Wash Buffer G2

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

## 10 mg Proteinase K



Signal word

DANGER

### Hazard Identification

H315  
H319  
H334  
H335

### Hazard Classification; Hazard Statement

Skin Irrit. 2; Causes 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.

## 10 mg RNase A

Do not need labelling as hazardous

Signal word

-

No hazard class

## 2.2 Label Elements, including precautionary statements

### 2.5 mL GL1 Buffer



Signal word: WARNING

### 2.5 mL GL2 Buffer



Signal word: WARNING

### 4.5 mL Wash Buffer G1



Signal word: WARNING

### 1.5 mL Wash Buffer G2

Do not need labelling as hazardous.  
Signal word: -

### 1.5 mL Elution Buffer

Do not need labelling as hazardous.  
Signal word: -

**10 mg Proteinase K**



Signal word: DANGER

**10 mg RNase A**

Do not need labelling as hazardous.

Signal word: -

**Precautionary statement(s): -**

**Prevention**

- P261sh Avoid breathing dust/vapors.
- P264 Wash skin 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.
- P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- 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**

**2.5 mL GL1 Buffer**

Chemical:	sodium dodecyl sulfate	CAS No.: 151-21-3
GHS Classification:	H302, Acute Tox. 4 oral; H315, Skin Irrit. 2; H319, Eye Irrit. 2	
Formula:	C <sub>12</sub> H <sub>25</sub> OSO <sub>3</sub> Na	
Pseudonym:	Sodium lauryl sulfate Lauryl sulfate sodium salt SDS	
EC No.:	205-788-1	

Concentration: ≤2%

### 2.5 mL GL2 Buffer

Chemical: guanidine hydrochloride CAS No.: 50-01-1  
GHS Classification: H302, Acute Tox. 4 oral; H315, Skin Irrit. 2; H319, Eye Irrit. 2  
Formula: CH<sub>6</sub> CIN<sub>3</sub>  
Pseudonym: guanidinium chloride  
EC No.: 200-002-3  
Concentration: ≤10 %

### 4.5 mL Wash Buffer G1

Chemical: guanidine hydrochloride CAS No.: 50-01-1  
GHS Classification: H302, Acute Tox. 4 oral; H315, Skin Irrit. 2; H319, Eye Irrit. 2  
Formula: CH<sub>6</sub> CIN<sub>3</sub>  
Pseudonym: guanidinium chloride  
EC No.: 200-002-3  
Concentration: ≤10 %

### 1.5 mL Wash Buffer G2

No component or ingredient is contributing to hazard.

### 1.5 mL Elution Buffer

No component or ingredient is contributing to hazard.

### 10 mg Proteinase K

Chemical: proteinase K (origin: tritirachium album) 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: 95 - <100 %  
acc. CLP (GHS): H315, Skin Irrit. 2; H319, Eye Irrit. 2; H334, Resp. Sens. 1; H335, Acute Tox. 3

### 10 mg RNase A

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 (NO<sub>x</sub>)

### **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

#### 2.5 mL GL1 Buffer

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

#### 2.5 mL GL2 Buffer

Chemical: Guanidine hydrochloride  
DNEL : 3.5 mg/m<sup>3</sup> [inh]  
PNEC<sub>(fresh water)</sub> : Not listed  
NIOSH : Not listed  
OSHA : Not listed

CAS No.: 50-01-1

#### 4.5 mL Wash Buffer G1

Chemical: Guanidine hydrochloride  
DNEL : 3.5 mg/m<sup>3</sup> [inh]  
PNEC<sub>(fresh water)</sub> : Not listed  
NIOSH : Not listed  
OSHA : Not listed

CAS No.: 50-01-1

#### 1.5 mL Wash Buffer G2

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.

#### 10 mg Proteinase K

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

#### 10 mg RNase A

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

#### 2.5 mL GL1 Buffer

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: 7.5 – 8.5 (Neat, 25 °C)	Specific gravity: No data available	

#### 2.5 mL GL2 Buffer

Appearance: Liquid	Colour: Pale yellow	Odour: Odourless
pH: 7.5 – 8.5 (Neat, 25 °C)	Specific gravity: No data available	

#### 4.5 mL Wash Buffer G1

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: 7.5 – 8.5 (Neat, 25 °C)	Specific gravity: No data available	

#### 1.5 mL Wash Buffer G2

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: 7.5 – 8.5 (Neat, 25 °C)	Specific gravity: No data available	

#### 1.5 mL Elution Buffer

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: 7.5 – 8.5 (Neat, 25 °C)	Specific gravity: No data available	

#### 10 mg Proteinase K

Appearance: Fine powder	Colour: White	Odour: No data available
pH: No data available	Specific gravity: No data available	

#### 10 mg RNase A

Appearance: Powder	Colour: Pale Yellow	Odour: No data available
pH: No data available	Specific gravity: No data available	

### 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

**2.5 mL GL1 Buffer**  
Harmful if swallowed.

**2.5 mL GL2 Buffer**  
Harmful if swallowed.

**4.5 mL Wash Buffer G1**  
Harmful if swallowed.

**1.5 mL Wash Buffer G2**  
Harmful if swallowed.

**1.5 mL Elution Buffer**  
Harmful if swallowed.

#### Skin corrosion/irritation

**2.5 mL GL1 Buffer**  
Mixture may cause skin irritation and/or dermatitis.

**2.5 mL GL2 Buffer**  
Mixture may cause skin irritation and/or dermatitis.

**4.5 mL Wash Buffer G1**  
Mixture may cause skin irritation and/or dermatitis.

**1.5 mL Wash Buffer G2**  
Mixture may cause skin irritation and/or dermatitis.

**1.5 mL Elution Buffer**  
Mixture may cause skin irritation and/or dermatitis.

**Serious eye damage/eye irritation****2.5 mL GL1 Buffer**

Mixture may cause serious eye irritation.

**2.5 mL GL2 Buffer**

Mixture may cause serious eye irritation.

**4.5 mL Wash Buffer G1**

Mixture may cause serious eye irritation.

**1.5 mL Wash Buffer G2**

Mixture may cause serious eye irritation.

**1.5 mL Elution Buffer**

Mixture may cause serious eye irritation.

**Respiratory or skin sensitization****10 mg Proteinase K**

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

**10 mg RNase A**

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

**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 - 1288 mg/kg

LD50 Dermal - Rabbit - 200 mg/kg

LC50 Inhalation - Rat - >3900 mg/m<sup>3</sup>

**Skin corrosion/irritation**

Causes skin irritation.

**Serious eye damage/eye irritation**

Irritating to eyes.

**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:**

LD50 Oral - Rat - 475 mg/kg

LD50 Dermal - Rabbit - 2000 mg/kg

LC50 Inhalation - Rat - 3.181 – 7.655 mg/L - 4 h

**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**

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:** 4 July 2023

**Date of Revision:** 4 July 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*

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*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.*