

## SECTION 1 – IDENTIFICATION

### 1.1 Product Identifier:

Product No: KIT-1100-50  
Product Name: Bacterial DNA Barcoding Kit, 50 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 50 mL Bacterial Lysis Buffer*  
*1 x 11 mL Tris-EDTA (TE) Buffer*  
*1 x 180 µL Proteinase K Solution*  
*1 x 600 µL 16S Primer Mix*  
*1 x 30 µL 16S Enzyme Mix*  
*1 x 750 µL 16S PCR Buffer*  
*1 x 25 µL Bacterial Plasmid Positive Control*  
*1 x 150 µL Sequencing Forward Primer, 785F*  
*1 x 150 µL Sequencing Reverse Primer, 907R*

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

Nucleic acid extraction from bacterial pure isolates and amplification of 16s rRNA full-length gene for sequencing.

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  
Seri Kembangan 43300  
Selangor Darul Ehsan, Malaysia

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

H315

#### Hazard Classification; Hazard Statement

Skin Irrit. 2, Causes skin irritation

H319	Eye Irrit. 2, Causes serious eye irritation
H334	Resp. Sens. 1, May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	STOT SE 3, May cause respiratory irritation

## 2.1 GHS Classification of the Substance or Mixture

### 50 mL Bacterial Lysis Buffer

Do not need labelling as hazardous

Signal word -

No Hazard Class

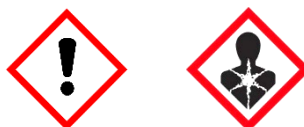
### 11 mL Tris-EDTA (TE) Buffer

Do not need labelling as hazardous

Signal word -

No Hazard Class

### 180 µL Proteinase K Solution



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 allergy or asthma symptoms or breathing difficulties if inhaled  
STOT SE 3, May cause respiratory irritation

### 600 µL 16S Primer Mix

Do not need labelling as hazardous

Signal word -

No Hazard Class

### 30 µL 16S Enzyme Mix

Do not need labelling as hazardous

Signal word -

No Hazard Class

## 750 $\mu$ L 16S PCR Buffer

Do not need labelling as hazardous

Signal word -

No Hazard Class

## 25 $\mu$ L Bacterial Plasmid Positive Control

Do not need labelling as hazardous

Signal word -

No Hazard Class

## 150 $\mu$ L Sequencing Forward Primer, 785F

Do not need labelling as hazardous

Signal word -

No Hazard Class

## 150 $\mu$ L Sequencing Reverse Primer, 907R

Do not need labelling as hazardous

Signal word -

No Hazard Class

## 2.2 Label Elements, including precautionary statements

### 50 mL Bacterial Lysis Buffer

Do not need labelling as hazardous.

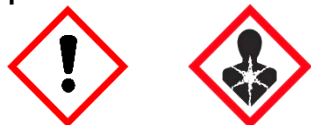
Signal word: -

### 11 mL Tris-EDTA (TE) Buffer

Do not need labelling as hazardous.

Signal word: -

### 180 $\mu$ L Proteinase K Solution



Signal word: DANGER

### 600 $\mu$ L 16S Primer Mix

Do not need labelling as hazardous.

Signal word: -

### 30 µL 16S Enzyme Mix

Do not need labelling as hazardous.

Signal word: -

### 750 µL 16S PCR Buffer

Do not need labelling as hazardous.

Signal word: -

### 25 µL Bacterial Plasmid Positive Control

Do not need labelling as hazardous.

Signal word: -

### 150 µL Sequencing Forward Primer, 785F

Do not need labelling as hazardous.

Signal word: -

### 150 µL Sequencing Reverse Primer, 907R

Do not need labelling as hazardous.

Signal word: -

## Precautionary statement(s):

### Prevention

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash exposed skin thoroughly after handling.  
P270 Do not eat, drink, or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P285 In case of inadequate ventilation wear respiratory protection.

### Response

- P302 + P352 If on skin: Wash with 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.  
P330 If swallowed: Rinse mouth.  
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.  
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/doctor.  
P362 Take off contaminated clothing and wash 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

This mixture has not been tested to determine the overall health hazard.

### 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

#### 50 mL Bacterial Lysis Buffer

Chemical: sodium dodecyl sulfate CAS No.: 151-21-3  
 GHS Classification: H302, Acute Tox. 4 oral, H312, Acute Tox. 4 dermal, H315, Skin Irrit. 2, H319, Eye Irrit. 2  
 Formula:  $\text{NaSO}_4 \text{C}_{12} \text{H}_{25}$   
 Pseudonym: sodium lauryl sulphate  
 EC No.: 205-788-1  
 Concentration: <1.0 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

#### 11 mL Tris-EDTA (TE) Buffer

No component or ingredient is contributing to hazard.

#### 180 µL Proteinase K Solution

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, STOT SE 3  
 Formula: Enzyme Comm. No. 3.4.21.64, origin: tritirachium album  
 EC No.: 254-457-8  
 Concentration: 1.0 to <3.0 %  
 acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2, H334, Resp. Sens. 1, H335, STOT SE 3

#### 600 µL 16S Primer Mix

No component or ingredient is contributing to hazard.

#### 30 µL 16S Enzyme Mix

Chemical: glycerol CAS No.: 56-81-5  
 GHS Classification: No criteria for classification or naming of chemical is not required.  
 Formula:  $\text{C}_3 \text{H}_8 \text{O}$   
 Pseudonym: glycerin, 1,2,3-propanetriol  
 EC No.: 200-289-5  
 Concentration: 1.0 to <3.0 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

#### 750 µL 16S PCR Buffer

No component or ingredient is contributing to hazard.

#### 25 µL Bacterial Plasmid Positive Control

No component or ingredient is contributing to hazard.

#### 150 µL Sequencing Forward Primer, 785F

No component or ingredient is contributing to hazard.

#### 150 µL Sequencing Reverse Primer, 907R

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

Not expected to present a significant ingestion hazard under anticipated conditions of normal use. 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

Do not breathe vapors. 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

No data available.

### 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

##### 50 mL Bacterial Lysis Buffer

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

##### 11 mL Tris-EDTA (TE) Buffer

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

##### 180 µL Proteinase K Solution

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

##### 600 µL 16S Primer Mix

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

##### 30 µL 16S Enzyme Mix

Chemical: glycerol  
Singapore OEL (PEL) = 10 mg/m<sup>3</sup>  
Singapore OEL (STEL) = No data  
Malaysia OEL (TWA) = 10 mg/m<sup>3</sup>  
Malaysia OEL (Ceilings) = No data

CAS No.: 56-81-5

##### 750 µL 16S PCR Buffer

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

### 25 µL Bacterial Plasmid Positive Control

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

### 150 µL Sequencing Forward Primer, 785F

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

### 150 µL Sequencing Reverse Primer, 907R

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

#### 50 mL Bacterial Lysis Buffer

Appearance: Liquid  
pH: 7.8-8.2 (Neat, 25 °C)

Colour: Colourless  
Specific gravity: No data available

Odour: Odourless

#### 11 mL Tris-EDTA (TE) Buffer

Appearance: Liquid  
pH: 7.8-8.2 (Neat, 25 °C)

Colour: Colourless  
Specific gravity: No data available

Odour: Odourless

#### 180 µL Proteinase K Solution

Appearance: Liquid  
pH: 7.8-8.2 (Neat, 25 °C)

Colour: Colourless  
Specific gravity: No data available

Odour: Odourless

#### 600 µL 16S Primer Mix

Appearance: Liquid  
pH: 7.0-9.0 (Neat, 25 °C)

Colour: Colourless  
Specific gravity: No data available

Odour: Odourless



**30 µL 16S Enzyme Mix**

Appearance: Liquid  
pH: 7.0-9.0 (Neat, 25 °C)

Colour: Colourless  
Specific gravity: No data available

Odour: Odourless

**750 µL 16S PCR Buffer**

Appearance: Liquid  
pH: 7.0-9.0 (Neat, 25 °C)

Colour: Colourless  
Specific gravity: No data available

Odour: Odourless

**25 µL Bacterial Plasmid Positive Control**

Appearance: Liquid  
pH: 7.0-9.0 (Neat, 25 °C)

Colour: Colourless  
Specific gravity: No data available

Odour: Odourless

**150 µL Sequencing Forward Primer, 785F**

Appearance: Liquid  
pH: 7.0-9.0 (Neat, 25 °C)

Colour: Colourless  
Specific gravity: No data available

Odour: Odourless

**150 µL Sequencing Reverse Primer, 907R**

Appearance: Liquid  
pH: 7.0-9.0 (Neat, 25 °C)

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**

Quantitative data on the toxicity of this product are not available.

Mixture:

**Proteinase K Solution**

**Acute toxicity**

No data available

**Skin corrosion/ irritation**

Mixture may cause slight skin irritation.

**Serious eye damage/ eye irritation**

Mixture may cause slight eye irritation.

**Respiratory or skin sensitization**

Mixture may cause allergy or asthma symptoms if inhaled.

**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.

**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.

## 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:** 18 October 2020

**Date of Revision:** 10 April 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.*