

SECTION 1 – IDENTIFICATION

1.1 Product Identifier:

Product No: KIT-7839-10
Product Name: Classroom PCR Teaching Kit

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.

*10 µL Taq DNA Polymerase
100 µL 10X Taq Buffer
100 µL 25 mM MgCl₂
30 µL dNTP Mix
30 µL 16S rRNA Forward Primer
30 µL 16S rRNA Reverse Primer
1 mL Water
60 µL DNA Template
30 µL Control PCR Product
60 µL Floro+Red Nucleic Acid Stain
30 µL 6X DNA Loading Dye
30 µL 1 kb DNA Ladder
60 mL 50X TAE Buffer
7 g Agarose*

1.2 Recommended use of the chemical and restrictions on use:

To conduct teaching in corresponding of laboratory techniques in polymerase chain reaction (PCR) and electrophoresis.

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

1.3 Supplier Information:

Axil Scientific Pte Ltd
41 Science Park Road
#01-22/23, The Gemini
Singapore Science Park II
Singapore 117610
Tel: +65 6775 7318
Fax: +65 6775 7211
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

Do not need labelling as hazardous

Signal word -

No hazard class

2.1 GHS Classification of the Substance or Mixture

10 µL Taq DNA Polymerase

Do not need labelling as hazardous

Signal word -

No hazard class

100 µL 10X Taq Buffer

Do not need labelling as hazardous

Signal word -

No hazard class

100 µL 25 mM MgCl₂

Do not need labelling as hazardous

Signal word -

No hazard class

30 µL dNTP Mix

Do not need labelling as hazardous

Signal word -

No hazard class

30 µL 16S rRNA Forward Primer

Do not need labelling as hazardous

Signal word -

No hazard class

30 µL 16S rRNA Reverse Primer

Do not need labelling as hazardous

Signal word -

No hazard class

1 mL Water

Do not need labelling as hazardous

Signal word -

No hazard class

60 µL DNA Template

Do not need labelling as hazardous

Signal word -

No hazard class

30 µL Control PCR Product

Do not need labelling as hazardous

Signal word -

No hazard class

60 µL Floro+Red Nucleic Acid Stain

Do not need labelling as hazardous

Signal word -

No hazard class

30 µL 6X DNA Loading Dye

Do not need labelling as hazardous

Signal word -

No hazard class

30 µL 1 kb DNA Ladder

Do not need labelling as hazardous

Signal word -

No hazard class

60 mL 50X TAE Buffer

Do not need labelling as hazardous

Signal word -

No hazard class

7 g Agarose

Do not need labelling as hazardous

Signal word -

No hazard class

2.2 Label Elements, including precautionary statements

10 µL Taq DNA Polymerase

Do not need labelling as hazardous

Signal word: -

100 µL 10X Taq Buffer

Do not need labelling as hazardous

Signal word: -

100 µL 25 mM MgCl₂

Do not need labelling as hazardous

Signal word: -

30 µL dNTP Mix

Do not need labelling as hazardous

Signal word: -

30 µL 16S rRNA Forward Primer

Do not need labelling as hazardous

Signal word: -

30 µL 16S rRNA Reverse Primer

Do not need labelling as hazardous

Signal word: -

1 mL Water

Do not need labelling as hazardous

Signal word: -

60 µL DNA Template

Do not need labelling as hazardous

Signal word: -

30 µL Control PCR Product

Do not need labelling as hazardous

Signal word: -

60 µL Floro⁺Red Nucleic Acid Stain

Do not need labelling as hazardous

Signal word: -

30 µL 6X DNA Loading Dye

Do not need labelling as hazardous

Signal word: -

30 µL 1 kb DNA Ladder

Do not need labelling as hazardous

Signal word: -

60 mL 50X TAE Buffer

Do not need labelling as hazardous
Signal word: -

7 g Agarose

Do not need labelling as hazardous
Signal word: -

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

7 g Agarose

No component or ingredient is contributing to hazard.

3.2 Mixtures

10 µL Taq DNA Polymerase

No component or ingredient is contributing to hazard.

100 µL 10XTaq buffer

No component or ingredient is contributing to hazard.

100 µL 25 mM MgCl₂

No component or ingredient is contributing to hazard.

30 µL dNTP Mix

No component or ingredient is contributing to hazard.

30 µL 16S rRNA Forwards Primer

No component or ingredient is contributing to hazard.

30 µL 16S rRNA Reverse Primer

No component or ingredient is contributing to hazard.

1 mL Water

No component or ingredient is contributing to hazard.

60 µL DNA Template

No component or ingredient is contributing to hazard.

30 µL Control PCR Product

No component or ingredient is contributing to hazard.

60 µL Floro*Red Nucleic Acid Stain

No component or ingredient is contributing to hazard.

30 µL 6X DNA Loading Dye

No component or ingredient is contributing to hazard.

30 µL 1 kb DNA Ladder

No component or ingredient is contributing to hazard.

60 mL 50X TAE 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

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_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. And dispose chemicals or excess reagents in accordance to 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

10 µL Taq DNA Polymerase

Chemical: Glycerol

CAS No.: 56-81-5

Singapore OEL (PEL) = 10 mg/m³

Singapore OEL (STEL) = No data

Malaysia OEL (TWA) = 10 mg/m³

Malaysia OEL (Ceilings) = No data

100 µL 10X Taq Buffer

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

100 µL 25 mM MgCl₂

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

30 µL dNTP Mix

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

30 µL 16S rRNA Forward Primer

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

30 µL 16S rRNA Reverse Primer

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

1 mL Water

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

60 µL DNA Template

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

30 µL Control PCR Product

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

60 µL Floro⁺Red Nucleic Acid Stain

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

30 µL 6X DNA Loading Dye

Chemical: Glycerol

CAS No.: 56-81-5

Singapore OEL (PEL) = 10 mg/m³

Singapore OEL (STEL) = No data

Malaysia OEL (TWA) = 10 mg/m³

Malaysia OEL (Ceilings) = No data

30 µL 1 kb DNA Ladder

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

60 mL 50X TAE Buffer

Chemical: Acetic Acid

CAS No.: 64-19-7

Singapore OEL (PEL) = 25 mg/m³

Singapore OEL (STEL) = 37 mm/m³

Malaysia OEL (TWA) = 25 mg/m³

Malaysia OEL (Ceilings) = No data

7 g Agarose

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

9.1.1 Substances

7 g Agarose

Appearance: Fine powder

pH: Not available

Solubility: 10 g/L at 80°C (Water)

Colour: White

Relative density: 1.1 g/cm³ (20°C)

Odour: Odourless

9.1.2 Mixtures

10 µL Taq DNA Polymerase

Appearance: Liquid

pH: 7.8 – 8.2 (Neat, 25 °C)

Colour: Colourless

Relative density: Not available

Odour: Odourless

100 µL 10X Taq Buffer

Appearance: Liquid

pH: 8.6 – 9.0 (Neat, 25 °C)

Colour: Colourless

Relative density: Not available

Odour: Odourless

100 µL 25 mM MgCl₂

Appearance: Liquid

pH: Not available

Colour: Colourless

Relative density: Not available

Odour: Odourless

30 µL dNTP Mix

Appearance: Liquid

pH: 6.8 – 7.2 (Neat, 25 °C)

Colour: Colourless

Relative density: Not available

Odour: Odourless

30 µL 16S rRNA Forward Primer

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: Not available	Relative density: Not available	

30 µL 16S rRNA Reverse Primer

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: Not available	Relative density: Not available	

1 mL Water

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: 5.0 – 7.0 (Neat, 25 °C)	Relative density: 1 g/cm ³	

60 µL DNA Template

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: Not available	Relative density: Not available	

30 µL Control PCR Product

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: Not available	Relative density: Not available	

60 µL Floro*Red Nucleic Acid Stain

Appearance: Liquid	Colour: Red	Odour: Odourless
pH: Not available	Relative density: Not available	

30 µL 6X DNA Loading Dye

Appearance: Liquid	Colour: Dark green	Odour: Odourless
pH: 7.5 – 8.0 (Neat, 25 °C)	Relative density: Not available	

30 µL 1 kb DNA Ladder

Appearance: Liquid	Colour: Blue	Odour: Odourless
pH: 7.8 – 8.2 (Neat, 25 °C)	Relative density: 1 g/cm ³ (20°C)	

60 mL 50X TAE Buffer

Appearance: Liquid	Colour: Colourless	Odour: Odourless
pH: 7.8 – 8.2 (Neat, 25 °C)	Relative density: Not 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

Data not available.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

Data not available.

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.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity
Data for the substances and mixtures are not available.

12.2 Persistence and degradability
Not necessary.

12.3 Bioaccumulative potential
Not necessary.

12.4 Mobility in soil
Not necessary.

12.5 Other adverse effects
No additional 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

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: June 13, 2021

Date of Revision: June 30, 2021

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.