SECTION 1 – IDENTIFICATION

1.1 Product Identifier:

Product Name : IPTG
Product Number : BIO-1010

REACH Registration number(s) : 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.

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Relevant identified uses

Commonly used in cloning procedures that requires induction of β-galactosidase activity.. For R&D use only.

Uses advised against

Not for pharmaceutical, household or other uses.

1.3 Details of the supplier of the safety data sheet

Manufactured/Supplied by:

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. 17, Jalan BS7/1C
Taman Perindustrian Bukit Serdang
43300 Seri Kembangan, Selangor, Malaysia
Tel: +603 8943 3252
Email: custcare@apicalscientific.com

1.4 Emergency phone number:

Monday – Friday, 8:00 a.m. to 6:00 p.m.
+65 6775 7318 (Singapore)
+603 8943 3252 (Malaysia)

SECTION 2 – HAZARD IDENTIFICATION

2.0 Classification of the complete product according to Regulation (EC) 1272/2008

Not a dangerous substance or mixture.

Hazard Identification Hazard classes/categories

Not a dangerous substance or mixture.

2.1 Classification of the substance or mixture according to Regulation (EC) 1272/2008

IPTG

Does not need labelling as hazardous
Signal word -

No hazard class

2.3 Other hazards

Possible hazards from physicochemical properties

No further relevant information is available.

Information pertaining to particular risks to human and possible symptoms

No further relevant information is available.

Information pertaining to particular risks to the environment

PBT: Not Applicable

vPvB: Not Applicable

SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS

Substance/Mixture: Substance

3.2 Substance

Component	Classification	Concentration
IPTG		
CAS-No. 367-93-1		100 %

3.3 Remarks

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4 – FIRST-AID MEASURES

4.1 Description of first-aid measures

Immediately relocate the individual from the danger zone to an area with fresh air. Ensure that the environment is quiet and warm and administer resuscitation if required. If needed, seek medical advice. If the individual experiences breathing difficulties, transport them to a physician while keeping them in an elevated position.

4.1.1 After Eye Contact

Immediately flush eyes with copious amounts of water for at least 15 minutes. Consult a physician.

4.1.2 After Skin Contact

Immediately wash skin thoroughly with soap and copious amounts of water. Consult a physician.

4.1.3 After Inhalation

Remove to fresh air. If not breathing, give artificial respiration or if breathing is difficult, give oxygen.

4.1.4 After Ingestion

Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 – FIRE-FIGHTING MEASURES

5.1 Extinguishing Media
Use water spray, CO_2, dry chemical powder or alcohol-resistant foam.

5.2 Special Exposure Hazards
Carbon dioxide, sulfur oxides.

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

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Prevent skin/eye contact. Use personal protective equipment. Ensure adequate ventilation.

6.2 Environmental Precautions
Do not allow material into sewers and drainage systems.

6.3 Methods and material for containment and cleaning up
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated materials as waste according to section 13. Ensure adequate ventilation. Dispose of the material collected according to regulations.

6.4 Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling
Prevent skin/eye contact. Use personal protective equipment. Ensure adequate ventilation. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities
Safe storage is guaranteed in the original packaging from Axil Scientific Pte Ltd.

Requirements to be met by storerooms and receptacles
No special requirements.

Information about storage in one common storage facility
No special requirements.

7.3 Specific end use(s)
The product is for Research Use Only.

SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control Parameters
Additional information about design of technical facilities
No further data; see Section 7.

Additional information.
The lists valid during the making were used as basis.

8.2 Exposure Controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Use process enclosures, local exhaust ventilation, or other engineering controls as needed.

8.2.1 Eye/face Protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

8.2.2 Skin 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.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

8.2.3 Body Protection
Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of dangerous substances at the specific workplace.

8.2.4 Respiratory Protection
Respiratory protection is not required. Where protection from nuisance levels of dust is desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

8.2.5 Control of environmental exposure
Keep away from drains, surface and ground waters. Avoid release into the environment.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Agarose

a)	Physical state	Crystalline solid
b)	Color	White
c)	Odour	Not available

d)	Melting/freezing point	Not available
e)	Initial boiling point and boiling range	Not available
f)	Flammability (solid, gas)	Not available
g)	Upper/lower flammability or explosive limits	Not available
h)	Flash point	Not available
i)	Autoignition temperature	Product is not self-igniting.
j)	Decomposition temperature	Not available
k)	pH (25 °C)	5.0 – 7.0 (5% aq solution)
l)	Viscosity	Not available
m)	Water solubility	0.05g/L
n)	Partition coefficient: n-octanol/water	Not available
o)	Evaporation rate	Not available
p)	Vapor pressure	Not available
q)	Density	Not available
r)	Relative density	Not available
s)	Relative vapor density	Not available
t)	Particle characteristics	Not available
u)	Explosive properties	Product does not present an explosion hazard
v)	Oxidizing properties	Not available

9.2 Other safety information

No further relevant information is available.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

No further relevant information is available.

10.2 Chemical stability

Product is stable under normal conditions.

10.3 Possibility of hazardous reactions

Strong oxidizing agents.

10.4 Conditions to avoid

No further relevant information is available.

10.5 Incompatible material

No data available.

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

No data available.

LD/LC50 values relevant for classification.

No data available.

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.

STOT (Specific target organ toxicity) – single exposure

No data available.

STOT (Specific target organ toxicity)-repeated exposure

No data available.

Aspiration hazard

No data available.

Other information

As far as we are aware, the chemical, physical, and toxicological characteristics have not been comprehensively examined.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity

No further relevant information is available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No further relevant information is available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No further relevant information is available.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Product

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.

Uncleaned packaging

Disposal must be made according to official regulations.

Recommendation cleansing agents.

Water, if necessary, together with cleansing agents.

SECTION 14 – TRANSPORT INFORMATION

14.1 UN Number

ADR/RID: - IMDG: - IATA-DGR: -

14.2 UN Proper Shipping Name:

ADR/RID: -
IMDG: -
IATA-DGR: -

14.3 Transport Hazard Class(es)

ADR/RID: - IMDG: - IATA-DGR: -

14.4 Packing Group

ADR/RID: - IMDG: - IATA-DGR: -

14.5 Environmental Hazards

ADR/RID: no IMDG: marine pollutant: no IATA-DGR: no

14.6 Special Precaution for Users
Not applicable.

14.7 Incompatible Materials
No data available.

SECTION 15 – REGULATORY INFORMATION

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

Poisons Act - Schedule 1
None of the ingredients are listed.

Poisons Act - Schedule 2, Group II
None of the ingredients are listed.

Health Products Act - First Schedule- Psychotropic Substances
None of the ingredients are listed.

- **Directive 2012/18/EU** : Substance is not listed.
- **Named dangerous substances - ANNEX I**: None of the ingredients are listed.

LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)
None of the ingredients are listed.

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
None of the ingredients are listed.

- **REGULATION (EU) 2019/1148**

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
None of the ingredients are listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS
None of the ingredients are listed.

Regulation (EC) No 273/2004 on drug precursors
None of the ingredients are listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
None of the ingredients are listed.

National regulations:
The product is not subject to be labelled according with the prevailing version of the regulations on hazardous substances.

15.2 Chemical safety assessment
A chemical safety assessment has not been carried out.

SECTION 16 – OTHER INFORMATION

Date of Issue: JUNE 11, 2012 **Date of Revision:** DECEMBER 14, 2024

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

16.1 Relevant phrases

Not applicable.

16.2 Abbreviations and acronyms

ADR. Accord europeen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).

ADN. The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

IMDG. International Maritime Code for Dangerous Goods.

IATA. International Air Transport Association.

GHS. Globally Harmonised System of Classification and Labelling of Chemicals.

EINECS. European Inventory of Existing Commercial Chemical Substances.

ELINCS. European List of Notified Chemical Substances.

CAS. Chemical Abstracts Service (division of the American Chemical Society).

VOC. Volatile Organic Compounds (USA, EU).

LC50. Lethal concentration, 50 percent.

LD50. Lethal dose, 50 percent.

PBT. Persistent, Bioaccumulative and Toxic.

vPvB. very Persistent and very Bioaccumulative.

Skin Irrit 2. Skin corrosion/irritation – Category 2.

Eye Irrit 2. Serious eye damage/eye irritation – Category 2.

Resp. Sens. 1. Respiratory sensitizer – Category 1.

Acute Tox. 4. Acute toxicity – Category 4.

Flam. Sol. 2. Flammable solids – Category 2.

Met. Corr. 1. Corrosive to metals - Category 1.

STOT SE 3. Specific target organ toxicity (single exposure) – Category 3.