

## SECTION 1 – IDENTIFICATION

**Product Identifier:** X-Gal  
Biotechnology Grade

**Catalogue Number:** 1020

**Other means of identification:** 5-Bromo-4-chloro-3-indolyl  $\beta$ -D-galactopyranoside  
BCIG

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

Chromogenic substrate for  $\beta$ -galactosidase that can be easily detected visually over background.  
For R&D use only. Not for pharmaceutical, household or other uses.

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

### Emergency phone number:

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

## SECTION 2 – HAZARDS IDENTIFICATION

### GHS Classification

Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

**Other hazards** - None

## SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS

**Chemical Identity:** X-Gal  
**Synonyms:** 5-bromo-4-chloro-3-indolyl-beta-D-galactopyranoside  
BCIG  
**Molecular Formula:**  $C_{14}H_{15}BrClNO_6$   
**Molecular Weight:** 408.63 g/mol  
**CAS No.:** 7240-90-6  
**EC No.:** 230-640-8

## SECTION 4 – FIRST-AID MEASURES

### Eye Contact

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

### Skin Contact

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

### Inhalation

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

**Ingestion**

If swallowed, wash mouth with water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**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.

**Indication of any immediate medical attention and special treatment needed**

Data not available.

**SECTION 5 – FIRE-FIGHTING MEASURES****Extinguishing Media**

Use water spray, dry chemical powder, carbon dioxide or alcohol-resistant foam.

**Specific hazards arising from the chemical**

Hazardous decomposition products formed under fire conditions - Carbon oxides, Nitrogen oxides, Hydrogen chloride gas, and Hydrogen bromide gas

**Special Fire-fighting Procedures**

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

**SECTION 6 – ACCIDENTAL RELEASE MEASURES****Personal Precautions**

Use personal protective equipment as needed. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

**Environmental Precautions**

Minimize entry of material into sewers and drainage systems.

**Methods and materials for containment and cleaning up**

Clean up spills immediately, observing precautions in the safety data sheet and label. Minimize dust generation. Dispose into a chemical waste container.

**SECTION 7 – HANDLING AND STORAGE****Precautions for safe handling**

Use with adequate ventilation as necessary or desired. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Follow all SDS/ label precautions. Avoid contact with skin and eyes. Avoid raising dust.

**Conditions for safe storage, including any incompatibilities**

Store in tightly closed container in a cool, well ventilated area, desiccated at -20°C.

**SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION****Occupational exposure limits**

We are not aware of any national exposure limit.

**Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice.

**Eye/ Face Protection**

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

#### **Skin/ 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 have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### **Body protection**

Type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory Protection**

Respiratory protection is not required. Where protection from nuisance levels of dusts are 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).

### **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

a)	<b>Appearance</b>	White powder
b)	<b>Odour</b>	Odourless
c)	<b>Odour Threshold</b>	Not available
d)	<b>pH</b>	Not available
e)	<b>Melting/freezing point</b>	230 °C
f)	<b>Initial boiling point and boiling range</b>	Not available
g)	<b>Flash point</b>	Not available
h)	<b>Evaporation rate</b>	Not available
i)	<b>Flammability (solid, gas)</b>	Not available
j)	<b>Upper/lower flammability or explosive limits</b>	Not available
k)	<b>Vapour pressure (mm Hg)</b>	Not available
l)	<b>Vapour density</b>	Not available
m)	<b>Relative density</b>	Not available
n)	<b>Solubility(ies)</b>	Slightly soluble in water
o)	<b>Partition coefficient: n-octanol/water</b>	Not available

p) **Autoignition temperature** Not available

q) **Decomposition temperature** Not available

r) **Viscosity** Not available

## SECTION 10 – STABILITY AND REACTIVITY

### Reactivity

Data no available.

### Chemical stability

Heat-, light-, moisture- sensitive. Stable under recommended storage conditions.

### Possibility of hazardous reactions

Data not available.

### Conditions to avoid

Data not available.

### Incompatible material

Strong oxidizing agents.

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions: toxic fumes of carbon oxides, nitrogen oxides, hydrogen chloride gas, and hydrogen bromide gas.

## SECTION 11 – TOXICOLOGICAL INFORMATION

### Acute toxicity

Data not available.

### Skin corrosion/irritation

Data not available.

### Serious eye damage/irritation

Data not available.

### Respiratory or skin sensitization

Data not available.

### Germ cell mutagenicity

Data not available.

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity

Data not available.

### Specific target organ toxicity – single exposure

Data not available.

### Specific target organ toxicity – repeated exposure

Data not available.

**Aspiration hazard**

Data not available.

**Other information**

RTECS: Data not available

**SECTION 12 – ECOLOGICAL INFORMATION**

**Toxicity**

Data not available.

**Persistence and degradability**

Data not available.

**Bioaccumulative potential**

Data not available.

**Mobility in soil**

Data not available.

**Other adverse effect**

Data not 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:** JULY 11, 2012

**Date of Revision:** FEBRUARY 23, 2022

*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. Axil Scientific Pte Ltd shall not be held liable for any damage resulting from*