



Product Specifications

X-GAL

5' bromo-4-chloro-3-indolyl- β -D-galactopyranoside

<u>Catalog #</u>	<u>Size</u>
IB02260	1gm
IB02264	100mg
IB02265	25gm

Physical Specifications

CAS#	7240-90-6
Molecular Formula	$C_{14}H_{15}BrClNO_6$
Molecular Weight	408.64
Purity	Min. 99%
Solubility (2%, in N,N' DMF)	Clear and colorless

Molecular Biology Specifications

Optical rotation (C=1)	Pass
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Recommended Use

A histochemical substrate for β -galactosidase, allowing the detection of lac gene expression. To make a stock solution of X-GAL, dissolve the X-GAL in dimethylformamide to make a 20mg/ml solution. Use either a glass or polypropylene tube. Add 4ml of this solution per liter of culture media. The tube containing the solution should be wrapped in aluminum foil to prevent damage by light and should be stored at -20°C . (It is not necessary to sterilize X-GAL solutions by filtration.)

Storage

Store dessicated at -20°C . Warm to room temperature before opening. Keep tightly sealed.

Warning

Avoid contact with eyes, skin and clothing. Avoid breathing dust. Wash thoroughly with water after handling. See Material Safety Data Sheet for additional information.



IBI SCIENTIFIC

9861 Kapp Court ■ Peosta, IA 52068

Tele: (563) 690-0484 ■ 1-800-253-4942

Fax: (563) 690-0490 ■ **E-Mail:** info@ibisci.com

Web: www.ibisci.com

Issuing Date: 6-Jan-1998

Revision Date: 25-Oct-2011

Rev. 3

1. IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND THE COMPANY/UNDERTAKING

Product Name: X-Gal (5-Bromo-4-Chloro-3-indolyl)
Product Code: IB02260, IB02264, & IB02265
Recommend Use: For further manufacturing use only
Not for human or animal drug use
Company: IBI SCIENTIFIC
9861 Kapp Court
Peosta, IA 52068
Emergency Tele. Number: 3E Company (Acct# 9027) 1-800-451-8346 / (001) 760-602-8703
Company Tele. Number: 1-800-253-4942 / (001) 563-690-0484
E-Mail Address: info@ibisci.com

2. HAZARDOUS IDENTIFICATION

GHS – Classification

Classification: Not classified as a hazard

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: 5-Bromo-4-Chloro-3-indolyl
EC No.: EEC No. 230-640-8
REACH Reg. No.: Not available
CAS No.: 7240-90-6
Weight %: 95-100
Classification: Xn; R22; R43

4. FIRST AID MEASURES

Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact: Wash off immediately with soap and plenty of water, removing all contaminated clothes and shoes.
Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Ingestion: Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person.
Notes to Physician: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flammable Properties:	Not flammable
Flash Point:	Not determined
Suitable Extinguishing Media:	Dry chemical, CO ₂ , water spray, regular foam
Hazardous Combustion Products:	Carbon oxides, Nitrogen oxides (NO _x), Hydrogen Chloride gas, Hydrogen Bromide gas.
Explosion Data	
Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Not sensitive
Protective Equip. & Precautions for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equiv.) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with skin and eyes. Use personal protective equipment. Ensure adequate ventilation.
Methods for Containment:	Prevent further leakage or spillage, if safe to do so.
Methods for Cleaning Up:	Avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Handling:	Handle in accordance with good industrial hygiene and safety practice. Heat sensitive. Light sensitive. Moisture sensitive.
Storage:	Keep container tightly closed in a dry, cool, and well-ventilated place. Protect from light. Keep away from heat. Protect from moisture.
Incompatible Products:	Strong oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name:	5-Bromo-4-Chloro-3-indolyl - #7240-90-6
ACGIH TLV:	-
OSHA PEL:	-
NIOSH IDLH:	-
Engineering Measures:	Showers, Eyewash Stations, Ventilation Systems

Personal Protective Equipment

Eye/Face Protection:	Safety glasses with side shields.
Skin & Body Protection:	Wear protective gloves/clothing.
Respiratory Protection:	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene Measures:	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White
Odor:	No information available
Odor Threshold:	No information available
Decomposition Temp. °C:	No information available
Freezing Point:	No information available

MATERIAL SAFETY DATA SHEET

IB02260, IB02264, & IB02265 – X-GAL

Initial Boiling Point:	No information available
Physical State:	Powder
pH:	No data available
Flash Point:	Not determined
Autoignition Temp. °C:	No data available
Boiling Point/Range:	No data available
Melting Point/Range:	No data available
Flammability Limits (Air):	<u>Upper</u> -No data available * <u>Lower</u> -No data available
Explosion Limits	No information available
Explosive Properties:	No information available
Oxidizing Properties:	No information available
Evaporation Rate:	No information available
MMHG @ 37.8°C:	No data available
Vapor Density:	No data available
Specific Gravity:	No data available
Solubility:	Very soluble in water
Partition Coefficient (n-octanol/water):	No data available
Viscosity:	No information available

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions
Incompatible Products:	Strong oxidizing agents.
Conditions to Avoid:	Protect from light and moisture.
Hazardous Decomposition Products:	Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Hydrogen bromide gas.
Hazardous Polymerization:	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information:	Product does not present acute toxicity hazard based on known or supplied information.
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Chronic Toxicity

Chronic Toxicity:	No known effect based on information supplied.
Target Organ Effects:	None known.

12. ECOLOGICAL INFORMATION

<u>Ecotoxicity:</u>	The environmental impact of this product has not been fully investigated.
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13. DISPOSAL CONSIDERATIONS

Water Disposal Method:	Dispose of material in accordance with all federal, state, and local regulations.
Contaminated Packaging:	Dispose of in accordance with all federal, state, and local regulations.

14. TRANSPORT INFORMATION

IATA

Not regulated

US DOT

Not regulated

15. TOXICOLOGICAL INFORMATION

REACH Title VII Restrictions

Chemical Name:	No information available
Dangerous Substances:	5-Bromo-4-Chloro-3-indolyl - #7240-90-6
Organic Solvents:	Not applicable
Harmful Substances Whose Names are to be indicated on the Label:	Not applicable
Pollution Release and Transfer Registry (Class II):	Not applicable
Pollution Release and Transfer Registry (Class I):	Not applicable
Poison and Deleterious Substances Control Law:	Not applicable
ISHA – Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying:	Not applicable
ISHA – Harmful Substances Requiring Permission:	Not applicable
Toxic Chemical Classification Listing (TCCL):	Not applicable
Toxic Release Inventory (TRI) – Group I:	Not applicable
Toxic Release Inventory (TRI) – Group II:	Not applicable

International Inventories

TSCA:	Does not comply
EINECS/ELINCS:	Complies
ENCS:	Does not comply
IECSC:	Complies
KECL	Does not comply
PICCS	Does not comply
AICS	Does not comply

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical/chemicals which are subject to the reporting requirements of the Act & Title 40 of the Code of Federal Regulations, part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

CERCLA

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

International Regulations

Mexico

No information available

Canada

No information available

WHMIS Hazard Class
Not determined

16. OTHER INFORMATION

Issuing Date:	6-Jan-1998
Revision Date:	25-Oct-2011
Revision Note:	Update to GHS Standard
Recommended Restrictions:	No information available
Disclaimer:	The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release; and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the test.

End of MSDS