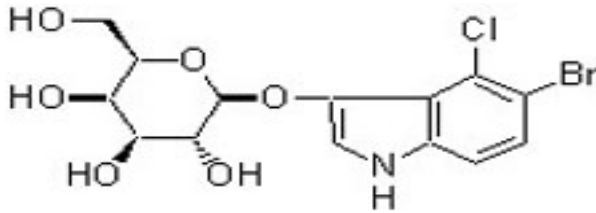


Product Information Sheet

X874
X-Gal



Synonym: 5-Bromo-4-chloro-3-indolyl- β -D-galactopyranoside
CAS: 7240-90-6
Formula: C₁₄H₁₅BrClNO₆
Molecular Wt: 408.63

Properties

Form: Powder
Appearance: White Powder
Application: Molecular Biology
Solubility: DMSO or KOH
Typical Working Concentration:
Storage Temp: -20 to 0° C
Storage Temp of Stock Solution: Stock solution is stable for 6-12 month when store at -20 to 0°C. Discard when solution turns pink.
Other Notes:

Application Notes

X-Gal is also known 5-Bromo-4-chloro-3-indolyl- β -D-galactopyranoside. It consists of a galactoside and an indole. When β -galactosidase is present, it cleaves the bond between the galactoside and indole forming a galactose and 5-bromo-4-chloro-3-hydroxyindole. The 5-bromo-4-chloro-3-hydroxyindole oxidizes to form an insoluble blue precipitate which is visualized on the culture plate. X-gal is often used for detection of bacterial or phage clones that contain recombinant plasmids or genomes. In molecular biology, X-Gal is used as a reporter gene in the detection of β -galactosidase activity, while in cloning it is used to detect foreign DNA that was inserted into the lac Z region of DNA plasmid.

Blue/White Colony Screening:

1. Dissolve X-gal in DMF (dimethylformamide) or DMSO (dimethyl sulfoxide) (Prod. No. D241) to make a 20 mg/ml solution. Wrap in aluminum foil to protect from light.
2. Prepare IPTG (Prod. No. I373) by dissolving 2 g in 8 ml of H₂O, then adjust level to 10 ml and filter sterilize using a 0.22-micron filter. Dispense into 1mL aliquots.
3. Store both solutions at -20°C. Avoid freeze/thaw cycles as this can cause false results.
4. For use, spread 40 μ L of stock X-gal and 4 μ L of IPTG onto surface of pre-made LB

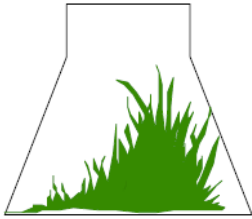
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Product Information Sheet

(prepared using LB Agar, Prod. No. L465) plate.

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