

# PRODUCT INFORMATION

## 5-bromo-4-chloro-3-indolyl-β-D-Glucuronide (cyclohexylammonium salt hydrate)

Item No. 33591

**Formal Name:** 5-bromo-4-chloro-1H-indol-3-yl, β-D-glucopyranosiduronic acid, compd. with cyclohexylamine, hydrate

**Synonyms:** BCIG, X-GLUC

**MF:**  $C_{14}H_{13}BrClNO_7 \cdot C_6H_{13}N [H_2O]$

**FW:** 539.8

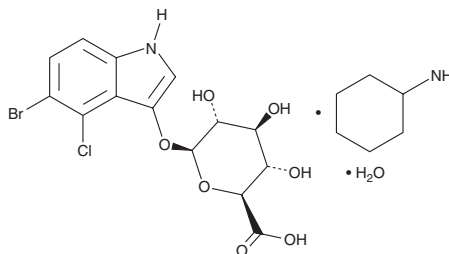
**Purity:** ≥98%

**UV/Vis.:**  $\lambda_{max}$ : 234 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

5-bromo-4-chloro-3-indolyl-β-D-Glucuronide (X-GLUC) (cyclohexylammonium salt hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the X-GLUC (cyclohexylammonium salt hydrate) in the solvent of choice, which should be purged with an inert gas. X-GLUC (cyclohexylammonium salt hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of X-GLUC (cyclohexylammonium salt hydrate) in these solvents is approximately 0.5 mg/ml in ethanol and 10 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of X-GLUC (cyclohexylammonium salt hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of X-GLUC (cyclohexylammonium salt hydrate) in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

X-GLUC is a chromogenic substrate for β-glucuronidase.<sup>1,2</sup> Upon cleavage by β-glucuronidase, an indigo pigment is released that can be used as a marker of β-glucuronidase activity. X-GLUC has been used for the detection of *E. coli* contamination in foodstuffs.

### References

1. Frampton, E.W., Restaino, L., and Blaszkowski, N. Evaluation of the β-glucuronidase substrate 5-bromo-4-chloro-3-indolyl-β-D-glucuronide (X-GLUC) in a 24-hour direct plating method for *Escherichia coli*. *J. Food Prot.* **51**(5), 402-404 (1988).
2. Restaino, L., Frampton, E.W., and Lyon, R.H. Use of the chromogenic substrate 5-bromo-4-chloro-3-indolyl-β-D-glucuronide (X-GLUC) for enumerating *Escherichia coli* in 24 H from ground beef. *J. Food Prot.* **53**(6), 508-510 (1990).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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