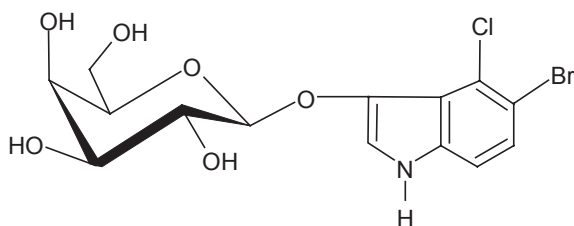




**INALCO PHARMACEUTICALS**  
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**DATA SHEET**  
enzyme substrate

**5-BROMO-4-CHLORO-3-INDOLYL-β-D-GALACTOPYRANOSIDE**  
(X-GAL)



Inalco code	1758-0300
C.A.S. R.N.	[7240-90-6]
Applications	Substrate for β-Galactosidase that is converted, by the enzyme, into an intense indigo-blue chromophore (615 nm). It has various applications. It is used in bacterial detection systems; in gene fusion studies where β-Galactosidase is the marker, or to identify natural lac gene carrying bacteria (e.g. general coliforms). It is also used in histochemistry.
Formula	C <sub>14</sub> H <sub>15</sub> BrClNO <sub>6</sub>
Molecular Weight	408.6
Appearance	White or almost white powder
Purity (HPLC)	≥ 99%
Specific Rotation	[α] <sub>D</sub> <sup>20</sup> -62° ± 2 (c=1 in DMF/H <sub>2</sub> O 1:1)
Water Content (K.F.)	≤ 1%
Solubility	Clear (2% in DMF)
<sup>1</sup> H-NMR	Conforming to the structure
Storage	Store at 4° C; protect from light and humidity. For long term storage: -20° C.
Toxicity	Toxicity unknown; avoid exposure.
References:	Davies, R.W., et al., Adv. Bacterial Genetics, Cold Spring Harbor, N.Y. (1980) Horwitz, J., et. al., J. Med. Chem., 7, 514 (1964) Lojda, Z., et al., Histochemie, 34, 361-369 (1973) Sambrook, J. et al., Molecular Cloning: A Laboratory Manual, Cold Spring Harbor Laboratory, 1.86, B.14 (1989)