

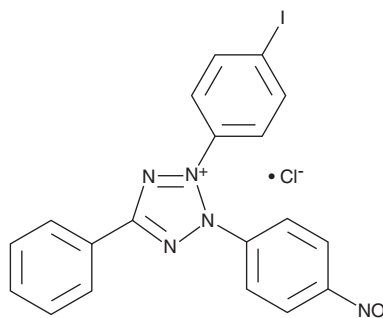
PRODUCT INFORMATION



Iodonitrotetrazolium (chloride)

Item No. 16073

CAS Registry No.: 146-68-9
Formal Name: 2-(4-iodophenyl)-3-(4-nitrophenyl)-5-phenyl-2H-tetrazolium, monochloride
Synonyms: INT, Iodonitrotetrazolium Violet, NSC 27620
MF: C₁₉H₁₃IN₅O₂ • Cl
FW: 505.7
Purity: ≥98%
UV/Vis.: λ_{max}: 249 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

Iodonitrotetrazolium (INT) (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the INT (chloride) in the solvent of choice, which should be purged with an inert gas. INT (chloride) is soluble in organic solvents such as ethanol and DMSO. The solubility of INT (chloride) in these solvents is approximately 30 and 0.5 mg/ml, respectively.

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 INT (chloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of INT (chloride) in PBS (pH 7.2) is approximately 10 mg/ml. For maximum solubility in aqueous buffers, INT (chloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. INT (chloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Iodonitrotetrazolium (INT) is a monotetrazolium salt used as an indicator dye.^{1,2} It is reduced to an insoluble formazan that is used as a vital dye or indicator of cellular redox activity.¹ Reduction commonly results from the activity of dehydrogenases, although non-enzymatic electron transfer reactions can occur in the presence of an intermediate electron acceptor.^{1,3} INT is commonly used to measure the respiratory activity of microorganisms in a variety of contexts.^{1,2}

References

1. Berridge, M.V., Tan, A.S., and Herst, P.M. Tetrazolium dyes as tools in cell biology: New insights into their cellular reduction. *Biotechnol. Ann. Rev.* 11, 127-152 (2005).
2. Sabnis, R.W. *Handbook of biological dyes and stains: Synthesis and industrial applications*. 1st edition, John Wiley & Sons, Inc., Madison, N.J. (2010).
3. Green, J.D. and Narahara, H.T. Assay of succinate dehydrogenase activity by the tetrazolium method: Evaluation of an improved technique in skeletal muscle fractions. *J. Histochem. Cytochem.* 28(5), 408-412 (1980).

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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