

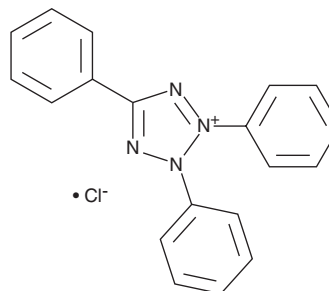
PRODUCT INFORMATION



Tetrazolium (chloride)

Item No. 17342

CAS Registry No.: 298-96-4
Formal Name: 2,3,5-triphenyl-2H-tetrazolium, monochloride
Synonyms: Tetrazolium Red, 2,3,5-Triphenyl Tetrazolium Chloride, TTC
MF: $C_{19}H_{15}N_4 \cdot Cl$
FW: 334.8
Purity: $\geq 95\%$
UV/Vis.: λ_{max} : 247 nm
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

Tetrazolium (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the tetrazolium (chloride) in the solvent of choice, which should be purged with an inert gas. Tetrazolium (chloride) is soluble in organic solvents such as ethanol and DMSO. The solubility of tetrazolium (chloride) in these solvents is approximately 1 and 0.25 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 tetrazolium (chloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of tetrazolium (chloride) in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

TTC is a redox indicator used to detect cellular respiration.¹ It is primarily reduced by Complex I in mitochondria and, under anaerobic conditions, is completely reduced to an insoluble red 1,3,5-triphenylformazan.² TTC assays are typically used as a mitochondrial redox potential indicator for cell death.¹

References

1. Sabnis, R.W. Handbook of biological dyes and stains: Synthesis and industrial applications. John Wiley & Sons, Inc. Madison, NJ, USA (2010).
2. 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).

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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