

PRODUCT INFORMATION



XTT (sodium salt hydrate)

Item No. 14919

CAS Registry No.: 413585-64-5

Formal Name: 2,3-bis(2-methoxy-4-nitro-5-sulfophenyl)-5-[(phenylamino) carbonyl]-2H-tetrazolium, inner salt, monosodium salt, hydrate

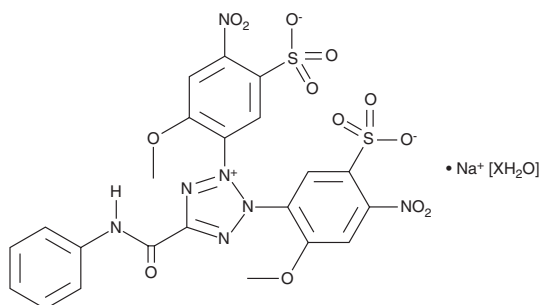
MF: $C_{22}H_{16}N_7O_{13}S_2 \cdot Na [XH_2O]$
FW: 650.5

UV/Vis.: λ_{max} : 284 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

XTT (sodium salt hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the XTT (sodium salt hydrate) in the solvent of choice, which should be purged with an inert gas. XTT (sodium salt hydrate) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of XTT (sodium salt hydrate) in these solvents is approximately 3.3 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 XTT (sodium salt hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of XTT (sodium salt hydrate) in PBS, pH 7.2, is approximately 3.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

XTT is a cell-impermeable, negatively charged tetrazolium dye that produces a water-soluble formazan when reduced at the cell surface by cellular-derived NADH and an electron mediator.^{1,2} It is frequently used in colorimetric assays to measure cell proliferation, cytotoxicity, and apoptosis.³

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. Annu. Rev.* **11**, 127-152 (2005).
2. Berridge, M.V. and Tan, A.S. Trans-plasma membrane electron transport: A cellular assay for NADH and NADPH-oxidase based on extracellular, superoxide-mediated reduction of the sulfonated tetrazolium salt WST-1. *Protoplasma* **205**, 74-82 (1998).
3. Sutherland, M.W. and Learmonth, B.A. The tetrazolium dyes MTS and XTT provide new quantitative assays for superoxide and superoxide dismutase. *Free Radic. Res.* **27(3)**, 283-289 (1997).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 09/29/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM