

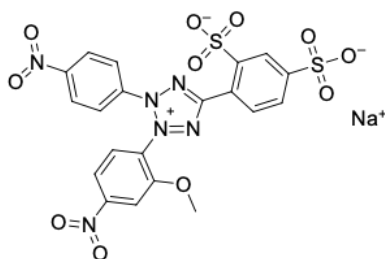
WST-8, reagent for cell proliferation assay

<http://www.lumiprobe.com/p/wst-8-reagent>

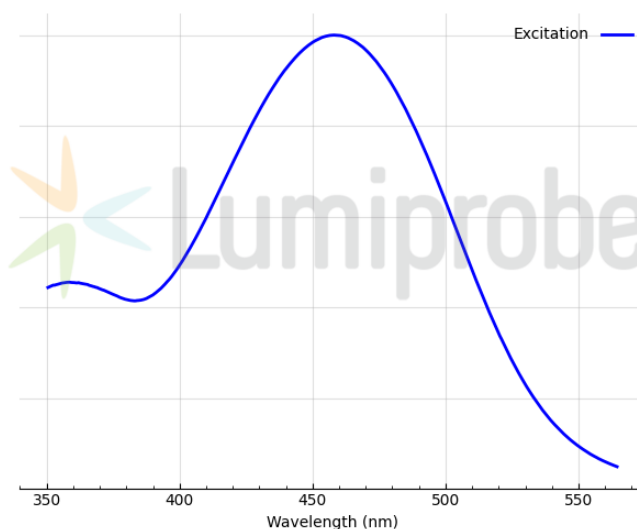
WST-8 (Water-Soluble Tetrazolium 8) is a water-soluble tetrazolium salt widely used to assess the metabolic activity of cells. The dye does not penetrate living cells but can be reduced outside the cells by NADPH-dependent cellular oxidoreductases to water-soluble formazan. The reaction occurs by electron transfer across the plasma membrane in a neutral pH and the presence of an intermediate electron acceptor, [1-methoxyphenazine methosulfate](#). The staining intensity is proportional to the number of viable cells. The maximum absorption of the reaction product is 450–500 nm.

The use of WST-8 has **several advantages**:

- Unlike MTT, working with WST-8 does not require dissolving formazan crystals, simplifying the protocol, and eliminating the use of toxic solvents (e.g., DMSO).
- Cell analysis using WST-8 is a one-step method. The reagent is added directly to the culture medium, and the results are read without additional processing.
- WST-8 is non-toxic to cells, which allows for long incubations (up to 24 hours) without the risk of artifacts.
- High sensitivity of the method. A wide dynamic range ensures accuracy even at low cell density.
- The method is compatible with adherent and suspension cultures and various types of spectrophotometric measurement plates.



Structure of WST-8



Excitation spectrum of WST-8

General properties

Appearance:	brick solid
Molecular weight:	600.47
CAS number:	193149-74-5
Molecular formula:	C ₂₀ H ₁₄ N ₆ NaO ₁₁ S ₂
IUPAC name:	2-(2-Methoxy-4-nitrophenyl)-3-(4-nitrophenyl)-5-(2,4-disulfophenyl)-2H-tetrazolium, sodium salt
Solubility:	water, DMSO
Quality control:	NMR ¹ H and HPLC-MS (95+%)
Storage conditions:	24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.

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Spectral properties

Excitation/absorption maximum, nm: 458