

## XTT

**Catalog Number:** XTT  
**Quantity:** 5.5 milliliters  
**Format:** PBS (0.14 M Sodium Chloride; 0.003 M Potassium Chloride; 0.002 M Potassium Phosphate; 0.01 M Sodium Phosphate; pH 7.4), no preservative.

### Background:

XTT is used to assess cell viability as a function of redox potential. Actively respiring cells convert the water-soluble XTT to a water-soluble, orange colored formazan product. Unlike MTT, XTT does NOT require solubilization prior to quantitation, thereby reducing the assay time in many viability assay protocols. Moreover, the sensitivity of the XTT reduction assay is reported to be similar to or better than that of the MTT reduction assay.

### Specificity and Preparation:

molecular formula:  $C_{22}H_{17}N_7NaO_{13}S_2$   
molecular weight: 674.5 daltons

### Usage and Storage:

The material should be stored at -20°C. Avoid repeated freezing and thawing. Solutions in water are stable frozen and protected from light for several months. Decomposition of solutions may take hours when they are exposed to diffuse light, but only 5-10 minutes when exposed to sunlight.

### References:

1. F. P. Altman (1976) Tetrazolium salts and formazans. *Prog Histochem Cytochem* 9:1-56.
2. M.V. Berridge, P.M. Herst, A.S. Tan (2005) Tetrazolium dyes as tools in cell biology: New insights into their cellular reduction. *Biotechnology Annual Review* 11:127-152.
3. D.A. Scudiero *et al.* (1988) Evaluation of a soluble tetrazolium/formazan assay for cell growth and drug sensitivity in culture using human and other tumor cell lines. *Cancer Res* 48:4827-4833.
4. N.J. Marshall, C.J. Goodwin, and S.J. Holt. (1999) A critical assessment of the use of microculture tetrazolium assays to measure cell growth and function. *Growth Regulation* 5:69-84.

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