



**Insulin-Transferrin-Selenium (100X)
(ITS)**
Catalog #0803

Product Description

ITS is a mixture of insulin, transferrin, and selenium. It is a general cell supplement designed for use in classical media such as DMEM, RPMI-1640 and nutrient media such as Ham's F-12, DMEM/F-12. ITS enhances cell proliferation and decreases the serum requirement of many cell types [1, 2, 3]. When ITS is used with a low percent serum, proliferation is reported to be similar to medium supplemented with 10 percent serum.

ITS is prepared in Hank's Balanced Salt Solution (HBSS) without phenol red.

Formula

Insulin	1.0 mg/ml
Apo-Transferrin	1.0 mg/ml
Sodium Selenite	3.4 μ M

Product Use

ITS is for research use only. It is not approved for human or animal use, or for application in *in vitro* diagnostic procedures.

Storage

Store at -20°C.

Shipping

Dry ice.

References

- [1] Guilbert, L. and Iscove, N.(1976) "Partial replacement of serum by selenite, transferrin, albumin, and lecithin in haemopoietic cell culture." *Nature* 263: 594-595.
- [2] Kelley, D., Becker, J., and Porter, V. (1978) "Effects of insulin, dexamethasone, and glucagon on the amino acid transport ability of four rat hepatoma cell lines and rat hepatocytes in culture." *Cancer Res.* 38: 4591-4601.
- [3] McKeehan, W., Hamilton, W., and Ham, R. (1976) "Selenium is an essential trace nutrient for the growth of WI-38 diploid human fibroblasts." *Proc. Natl. Acad. Sci.* 73: 2023-2027.

Caution: If handled improperly, some components of this product may present a health hazard. Take appropriate precautions when handling this product, including the wearing of protective clothing and eyewear. Dispose of properly.