

## Insulin, Transferrin, Ethanolamine and Selenium (ITES and ITS)

ITES (500X) and ITS (500X) are medium supplements widely used in reduced-serum and serum-free cell culture systems.

500X Stock Concentration	ITES	ITS
Insulin, human, recombinant	5 mg/mL	5 mg/mL
Transferrin, bovine	5 mg/mL	5 mg/mL
Ethanolamine	5 mM	-----
Selenium	5 µg/mL	5 µg/mL

### Usage

Recommended usage: 1 mL per 500 mL of medium.

**NOTE:** ITES and ITS should not be thawed repeatedly and refrozen. They may be thawed once, aliquoted, and refrozen within the same day, and then thawed again just prior to use. Refreezing more than once is not recommended.

### Ordering information

Catalog number	Description	Size
17-839Z	Insulin, Transferrin, Ethanolamine and Selenium (ITES)	5 mL
17-838Z	Insulin, Transferrin and Selenium (ITS)	5 mL

### References

1. Aisen, P., and I. Listowsky. A serum protein that binds and stabilizes iron, a component often present at sub-optimal concentrations in medium formulations. Iron Transport and Storage Proteins. Ann. Rev. Biochem. 49: 357-393. 1980.
2. Barnes, D and G. Sato. A peptide hormone required by the vast majority of cell types, acts as a mitogen and has a wide influence on cell metabolism. Methods for Growth of Cultured Cells in Serum-Free Medium. Analytical Biochemistry 102, 255-270. 1980.
3. Kano-Sueoka, T., and J.E. Errick. A precursor of plasma membrane phospholipids particularly in epithelial systems. Role of Phospho-ethanolamine, Ethanolamine and Prolactin in Mammary Cell Growth. Cold Spring Harbor Conference on Cell Proliferation 9: 729-740. 1982.
4. Lehninger, A.L. A trace element that is part of the molecular configuration of several cellular enzymes with detoxification functions. Vitamins and Trace Elements in the Function of Enzymes. In: Principles of Biochemistry (S. Anderson and J. Fox, eds.). Worth Publishers, Inc., New York pp. 207-247. 1982.

### Product use statement

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