

Brochure

# LTIMindtree's Automated Solution for Calculating Time Outside Controlled Systems (TOCS) Values

## Introduction

The pharmaceutical industry necessitates certain products to be stored under regulated temperatures, specifically refrigerated (2°C to 8°C) or frozen (-20°C and -40°C) conditions, as the quality of such products tends to decline when kept outside these controlled environments. Each product has a unique permissible duration for storage outside refrigeration that usually ranges from 14 to 40 hours. TOCS, also known as Time Outside Environment (TOE), denotes the number of hours a product has been outside regulated systems. The pharma industry needs an automated, efficient, and precise solution to calculate the TOCS value of its products.



## Business Problem

- Customers need to document and validate TOCS values for products during shipment. The TOCS value determines the product's suitability for storage, usage, and distribution.
- Manual calculations for each batch record in the TOCS calculation process are time-consuming and prone to errors. This leads to delayed dispatches and customer complaints regarding inaccurate TOCS calculations.



## Our Solution

LTIMindtree's solution offers an automated process for calculating the TOCS value of the end product, which reduces the calculation time from days to minutes.

- Utilizes the TOCS values of ingredients added at multiple stages of manufacturing.
- Considers the effects of packaging and quality testing on TOCS.
- Tracks items of lots or containers form the basis of our solution.
- Simulates TOCS value to aid the selection of ingredients for optimum TOCS adherence.
- Enables manual or automated recording of TOCS-related parameters.
- Provides scalability, audit trails, and integration assistance with Business Intelligence (BI) tools for dashboard displays.



## Why LTIMindtree

- LTIMindtree has the largest JD Edwards (JDE) team in the industry, including domain consultants with in-depth knowledge of the life sciences industry who provide specialized guidance and tailored solutions.
- Our skilled technical professionals handle the various complexities, ensuring seamless integration and implementation.
- We prioritize continuous improvement and innovation, evident through our dedicated research and development labs.
- By staying at the forefront of technology, we deliver cutting-edge solutions aligned with industry best practices.
- Our focus on research and development sets us apart from the competition, enabling us to develop innovative solutions that address your needs and challenges.

LTIMindtree embraces the limitless possibilities of technology with a range of comprehensive IT services and solutions, that help empower your business to thrive in this digital age.

For more information, write to us at [oraclemarketing@timindtree.com](mailto:oraclemarketing@timindtree.com).

### About LTIMindtree

**LTIMindtree** is a global technology consulting and digital solutions company that enables enterprises across industries to reimagine business models, accelerate innovation, and maximize growth by harnessing digital technologies. As a digital transformation partner to more than 700 clients, LTIMindtree brings extensive domain and technology expertise to help drive superior competitive differentiation, customer experiences, and business outcomes in a converging world. Powered by 84,000+ talented and entrepreneurial professionals across more than 30 countries, LTIMindtree — a Larsen & Toubro Group company — combines the industry-acclaimed strengths of erstwhile Larsen and Toubro Infotech and Mindtree in solving the most complex business challenges and delivering transformation at scale. For more information, please visit: [www.ltimindtree.com](http://www.ltimindtree.com)