

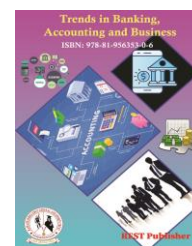


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## **A Study on Inventory Management at Indfrag Biosciences Pvt Ltd Bangalore**

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**Abstract:** *This project is aimed at developing a desktop-based application named Inventory Management System for managing the inventory system of any organization. This inventory is concern to all departments, the study was undertaken to get an exposure to the functioning of store department of the company, and it helped to interact with manager of store department of the company and to observe the workers at their workplace. The purpose of the study was to understand the working of their inventory at that company. The Inventory Management System (IMS) refers to the system and processes to manage the stock of organization with the involvement of Technology system. This system can be used to store the details of the inventory, stock maintenance, update the inventory based on the sales details, generate sales and inventory report daily or weekly based. This project is categorizing individual aspects for the sales and inventory management system. In this system we are solving different problem affecting to direct sales management and purchase management. Inventory Management System is important to ensure quality control in businesses that handle transactions resolving around consumer goods. The title of the project is "A Study on Inventory management in Indfrag bioscience pvt ltd". The entire study is based on secondary data and collected from websites, journal. The study covers a period of five years. Inventory Management System is also on important means of automatically tracking large shipment. An automated Inventory Management System helps to minimize the errors while recording the stock.*

**Keywords:** *Inventory Management, Manufacturing, Exporting Industry, Ratio Analysis, Investment, Financial records, Trend analysis, Balance sheet.*

### **1. INTRODUCTION**

Inventory management is a crucial aspect of business operations, linking production and distribution to ensure smooth activities. It involves planning, organizing, directing, coordinating, and controlling inventory levels to meet the organization's needs without excessive costs. Inventory, which includes raw materials, work-in-progress, and finished goods, is essential for maintaining production flow and meeting customer demand. Proper inventory management helps minimize costs related to storage, spoilage, and obsolescence while ensuring adequate stock to prevent production halts and lost sales opportunities. Effective inventory management is vital for manufacturing and retail businesses, impacting their ability to respond to market changes, customer expectations, and technological advancements. It requires balancing the conflicting interests of various departments, like finance and production, to maintain optimal inventory levels. Companies manage inventory to meet anticipated and unanticipated demand increases, take advantage of bulk purchasing discounts, avoid production stoppages, and ensure a steady supply of products to retailers. Inventory can be valued using methods like FIFO (first-in, first-out), LIFO (last-in, first-out), or the weighted average method. The goal is to maintain an optimal inventory level that minimizes investment while avoiding stockouts and excess inventory costs. This balance is critical as inventory is both a significant asset and a major expense. Best practices in inventory management include detailed tracking of goods from manufacturers to warehouses and points of sale, forecasting demand, and employing strategies like just-in-time (JIT) to reduce inventory costs and enhance operational efficiency

### **2. OBJECTIVES OF STUDY**

- To analyze the inventory position through various financial ratio.
- To understand the problems faced by company in handling inventory.
- To provide recommendations for efficient and effective inventory management.
- To analyze the inventory position through various financial ratio.

### 3. SCOPE OF THE STUDY

The scope of an inventory system can cover many needs, including valuing the inventory, measuring the change in inventory and planning for future inventory levels.

The scope of the study includes the Stock Review. Just in Time (JIT), ABC Analysis, Economic Order Quality, VED Analysis and SDE Analysis of raw material, work in progress and finished goods of one year.

The value of the inventory at the end of each period provides a basis for financial reporting on the balance sheet. This study provides insight to the management of high value items and also bring attention of management towards movement of A class items and the effect of inventory over last year.

### 4. RESEARCH METHODOLOGY

The proposed study is of ANALYTICAL IN NATURE. Research design is needed because it facilitates the smooth sailing of the various research operations, thereby making research as efficient as possible. A research design for a particular problem usually involves the consideration of the following factors.

Research Approach and Design: Research design is a framework or the blueprint for conducting the research report. Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

Data collection: Secondary Data has been collected from the company's annual report, journal, magazine, and website.

### 5. LITERATURE REVIEW

Schmelzer. P (1976) the banking sector maintain various inventories to satisfy their customer. The various cost involved in maintaining the inventories are: cost involved in maintaining, and the cost involved in allocation of such inventories to different departments. The bank usually will not inquire about the inventory turnover. The most accurate way to measure inventory in bank is to find the ratios of inventory to assets so that it is easy to identify the trends involved in supply costs. The inventory manager in bank has to analyse the profit same as they do in the industry.

Dubelaar & Chris (2001) the proper maintenance of the inventory helps the retail industry. The survey says that the sale is double the inventory. The author says that there is a relationship between the inventory and sales.

Biggart & Timothy. B (2002) just in time has changed the concept of the inventory management. This study focuses on the impact of Just in Time on inventory to sales ratio. It reveals that inventory to sales ratio reduce after implementing JIT; but there is no change in work in progress to finished goods and sales ratio. Capkun, Vedran &

Lawrence (2009) the study was to find the relationship between the total inventory and its separate components, and its impact on the financial performance. The interrelation between the components of the inventory and the financial performance slightly varies based on the type of inventory used in their manufacturing process.

Sha & Ping BA (2014) the study reveals that demand forecasting acts as a basis for inventory management. A proper maintenance of inventory helps the firm to withstand the competitiveness of the firm. The firm has to first understand the demand for the product and analyse the inventory required for the meeting the demand and it is easy for the firm to reduce the cost involved in the inventory.

Balakrishna V Selvaraj (2014) in his book "Supply chain logistics management." explains about how to manage inventory with the objective of evaluating and examining the inventory with 5 samples. The samples indicate through accounting and statistical tools. They have compared the inventory ratio of 5 different companies for 10 years which have proven that relation between the costs of goods sold and inventory which is highly positive and concluded as satisfactory.

Eleonora Kontus (2014) this article explains about dependency between company level of inventory and profitability. The article has been calculated as per the statistical formula. The aim of the paper is to contribute the analysis with inventory and profitability where higher inventory costs result in increased costs and contributes for their net earnings.

Ahmad Kamilah &Shafie Mohamed Zabri (2016) the inventory management acts as a factor in identifying how company controls its inventory flow. In micro enterprises they maintain inventory both systematically and unsystematically. The main activity of micro enterprise is to buy and store the inventory, the knowledge and skill of the manager plays a major role in proper control of the inventory.

## 6. DATA ANALYSIS AND INTREPRETATION:

### Current ratio:

This ratio measures the company's ability to pay short-term obligations or those due within one year.

$$\text{Current ratio} = \frac{\text{Current Asset}}{\text{Current liabilities}}$$

TABLE 1. Current ratio Rs in Lakhs

Year	Current assets	Current liabilities	Current Ratio
2018-2019	5992.866	3629.496	2.89
2019-2020	2641.753	1561.52	1.81
2020-2021	4089.59	1918.44	2.13
2021-2022	7604.55	4194.85	1.69
2022-2023	11509.73	3982.03	1.65

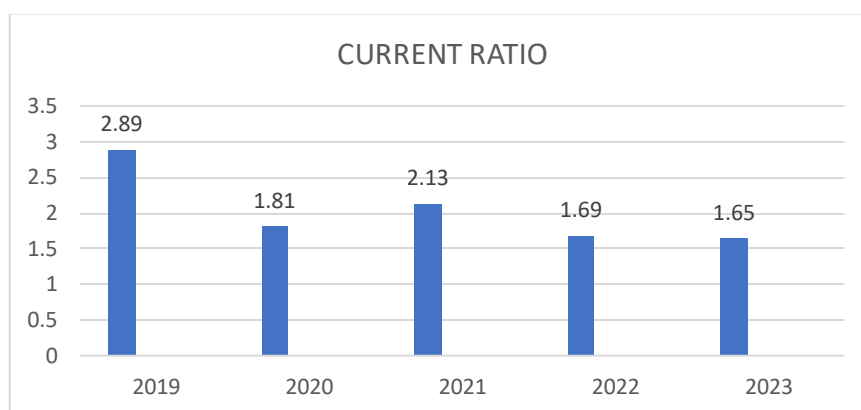


FIGURE 1. Source of Data: Company annual report from 2018-2019 to 2022-2023

**Interpretation:** From the above table shows that current ratio of the company under study is decreasing year by year from 2018-2019 to 2022-2023 except 2018-2019 and 2020-2021.

## 7. FINDINGS

1. During the financial year of 2019, the value of finished goods was decreased and it was increased in 2020 and then it was increased in 2022 and then again it decreased in 2023.
2. The raw material turnover ratio in 2020 was 14.113 which was increased by 23.52 in 2021 which was decreased up to 10.35 in 2023
3. The inventory Turnover ratio in the value 5.81 in 2020 and increased in next two years of 2021, 2022 and decreased up to 4.04 in 2023.

## 8. SUGGESTION

Purchasing of less quantity of materials at a time will reduce the carrying cost but it leads to increases in the ordering cost and reverse therefore optimum ordering quantity is important which minimizes the overall cost. Maintaining safety level is important for every company and also recording point, it helps to know at what time they should order for the required material and this will help them not to face any shortage of raw materials at time of production.

## 9. CONCLUSION

INDFRAG BIOSCIENCES PVT LTD has to deal with effectiveness of inventory management and the company should be improved in all the aspects; hence the industry can still support its position by looking into following

points Fast moving inventory has to be used after completing the manufacturing process the finished goods should reach customers within a feasible time. Cost can be minimised by maintain the optimum order quantity. Organization has to follow proper inventory management techniques. The inventory holding for the year was increasing and holding period was decreasing year by year where the cost of maintaining the inventory was reduced. The turnover ratio of the company was compared where it was increased which indicates reputation, good sales policy etc. This study can be extended to include by installing an application called as “Warehouse executor” which keeps track of all the flaws like incoming goods, outgoing goods, wastages, production etc.

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