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A Study on Inventory Management with Reference to Dr. Reddy's Lab

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Abstract: *Every industry on average spends 70 percent on raw materials (inventory). Therefore, there is a need to know the raw material cost and also there is great importance to understand the inventory management system of this industry. The study helps a log to various departments to take steps to control the inventory process. In this competitive business world, each and every business organization need inventory management system for determining what to order, when to order, where and how much to order so that purchasing and storing costs are the lowest possible without affecting production and sales. Thus, inventory management control incorporates the determination of the optimum size of the inventory-how much to be ordered and when after taking into consideration the minimum inventory cost. The overall inventory management includes design and inventory control organization with proper accountability establishing procedure for inventory handling disposal of scrap, simplification, standardization and codification of inventories, determining the size of inventory holdings, maintaining record points and safety stocks, economic order quantity, Economic Order Quantity analysis and VALUE analysis and finally framing an inventory manual.*
Keywords: *Inventory Management, EOQ, Inventory holdings.*

1. INTRODUCTION

The management and control of inventory is a problem common to all organizations in any sector of the economy. The problems of inventory do not confine themselves to profit-making business firms. The same type of problems are encountered by social and non-profit organizations too. Inventories are common to industries – agriculture, wholesalers, retailers, hospitals, temples churches, prisons, zoos, universities and national, state and local governments. Inventory problems have been encountered by every society, but it was not until the 20th century that analytical techniques were developed to study them. The initial impetus for analysis expectedly came from the manufacturing sector. It was not until after World War II that a concerted effort on risk and uncertainty aspects of inventory was made. In theory, inventory is an area of organizational operation that is well developed. In practice, it is very backward. This gap will narrow as educational institutions integrate materials management into their course structures.

2. REVIEW OF LITERATURE

Farzaneh (1997) Presented a mathematical model, to assist the companies in their decision to switch from EOQ to JIT purchasing policy. He defines JIT as "to produce and deliver finished goods just in time to be sold, sub-assemblies just in time to be assembled in goods and purchased material just in time to be transformed into fabricated parts". He highlights that the EOQ model focuses on minimizing the inventory costs rather than minimizing the inventory. Under the ideal condition where all the conditions meet, it is economically better off to choose the JIT over the EOQ because it results in purchase price, ordering cost.

Objectives of the study:

1. To study the inventory management of the Dr.Reddys, for the past five years.
2. To analyze this Inventory management with the help of Inventory Analysis as a principal tool.
3. To evaluate the performance of the company on the basis of Analysis.
4. To find the trends for the past years.

3. METHODOLOGY OF THE STUDY

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The research was carried out by collecting data from web site of company which is a secondary source of data. The data were collected from leading web sites which are meant exclusively for tracking market data. The theoretical part explained in this project was collected from textbooks written by famous authors who are well known for their writing skills and who have an ocean of experience in the teaching field.

Types of data:

1. Primary data
2. Secondary data

Primary Data:
The source of data which is not readily available but collected through questionnaire and personal interviews.

Secondary Data:
The source of data which is readily available and collected through reports, journals books and periodicals and websites.

Source of data:
The primary source for the project is secondary data, which is collected from reports of the company, magazines, & websites.

Tools Applied:
For analysis purpose following techniques are applied

- Inventory levels.
- Ratio Analysis
- Economic Order Quantity Methods

Limitations of the study:

- Dr. Reddys is a manufacturing company and producers.
- Dr. Reddys has also international markets and hence huge tons should be stored in advance.
- Because of this they purchase raw materials monthly depending upon Demand
- It charges high costs when we make orders monthly, in terms of transport cost. Storage cost, ordering cost, inventory charges, and other expenditures.

4. DATA ANALYSIS & INTERPRETATION

TABLE 1. For the year 2022 -2023

Items	total qty	avg qty per month	purchasing ct	od ct	invent cost
A1NKOS-7025	225	19	12.83	27.1	2.59
A1NKOS-7026	50,300	325	13.71	28.8	2.69
A1NKOS-7073	56,350	211	14.89	30.93	2.75
A1NKOS-7122	65,500	339	16.08	32.82	2.72
A1NKOS-7123	2,375	264	23.33	45.77	3.23
A1NKOS-7152	1,254	2718	10.48	23.52	2.67
A1NKOS-7177	15,475	5589	7.95	18.09	2.2
A1NKOS-7178	56,350	6261	17.72	35.32	1.82
A1NKOS-7179	65,500	7278	18.11	36.04	1.85
A1NKOS-7181	2,850	317	19.96	39.13	1.89
A1NKOS-7249	3,900	433	26.47	50	2.07
A1NKOS-7254	900	100	31.85	59.85	2.16

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A1NKOS-7270	5,850	650	32.81	61.55	2.38
A1NKOS-7285	7,675	853	51.66	92.44	2.79
A1NKOS-7286	15,325	1703	25.73	48.64	2.06
A1NKOS-7288	8,200	911	16.52	34.07	1.87
A1NKOS-7296	200	22	17.64	35.09	1.88
A1NKOS-7417	225	25	19.62	33.93	0.83
A1NKOS-7418	1587	25	17.45	33.22	1.78
A1NKOS-7421	625	69	34.14	63.01	2.3
A1NKOS-7456	16,125	1792	28.35	55.79	2.59
A1NKOS-7457	9,990	1110	61.72	114.97	2.68
A1NKOS-7458	16,975	1886	67.21	121.74	2.85
A1NKOS-7459	31,300	3478	24.68	44.76	1.73
A1NKOS-7460	5,350	594	25.14	48.7	2.07
A1NKOS-7487	23,800	2644	29.78	55.26	1.97
A1NKOS-7488	85,590	9510	27.94	56.39	2.6
A1NKOS-7490	55,450	6161	50.39	89.11	1.9
A1NKOS-7493	28,950	3217	52.97	93.48	1.92
A1NKOS-7494	1,150	128	34.45	64.18	2.37
A1NKOS-7495	1,87,800	20867	33.24	62.1	2.38
A1NKOS-7496	14,700	1633	32.6	59.87	2.13
A1NKOS-7497	23,600	2622	39.84	72.12	2.32
A1NKOS-7498	25,050	2783	41.91	75.65	2.31
A1NKOS-7625	13,575	1508	42.8	77.72	2.62
A1NKOS-7627	39,525	4392	49.36	88.54	2.7
A1NKOS-7757	21,050	2339	0.91	7.58	1.88
A1NKOS-7842	3,875	431	2.61	5.27	0.65
A1NKOS-7847	5,000	556	4.02	7.68	0.76
A1NKOS-7851	56,200	6244	9.32	17.47	1.73
A1NKOS-7872	5,050	561	4.81	9.17	0.81
A1NKOS-7877	33,900	3767	13.55	23.76	0.94
A1NKOS-79002	5,855	651	1.38	3.34	0.56
A1NKOS-7915	400	44	1.04	2.79	0.66

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A1NKOS-7917	4,400	489	4.68	9.43	1.23
A1NKOS-7918	18,000	2000	2.24	4.79	0.73
A1NKOS-7919	11,200	1244	0.88	2.53	0.66
A1NKOS-7920	8,600	956	1.8	3.87	0.6
A1NKOS-7921	10,300	1144	2.26	4.65	0.62
A1NKOS-7922	175	19	0.73	2.16	0.6
A1NKOS-7923	2,600	289	10.04	19.81	2.52
A1NKOS-7925	10,350	1150	1.41	3.39	0.65
Total	1136551	5214	1200	150	200

$$EOQ = \frac{\sqrt{2 \times \text{Annual Demand} \times \text{Oredring Cost}}}{\text{Purchasing cost} \times \text{Inventory Carring Charges}}$$
$$= \frac{\sqrt{2 \times 1136551 \times 150}}{1200 \times 200}$$
$$= 15.38\ (tons)$$

$$TOTAL\ COST = 965878\ (CRORES)$$

Interpretation: The Above Table Reveals The data from 2022-2023 from the above information we did EOQ is 15.38(tons) And Total Cost is 965878 (crores)

Findings

- Inventory process of Dr. Reddy's Lab following some important process they are ordering process, Material variance, Purchase order but these are not an increase positions of the company growth.
- This process takes an input, adds value to it and provides an output to internal or external customers.
- The company follows two important models like EOQ and EPQ Models. EOQ is greater than EPQ. So purchases are decreasing.
- Estimating the cost of Raw materials increases every year.
- For the year of 2018-23 total cost and inventory values are very high

Suggestions

1. The company should make orders at one stretch and also 2017-22 total cost and inventory values are very high.
2. A company may try to order annually rather than monthly depending upon demand for the products.
3. Because of this they purchase raw materials monthly depending upon Demand
4. It charges high costs when we make orders monthly, in terms of transport cost. Storage cost, ordering cost, inventory charges, and other expenditures.
5. Total cost incurred when purchases are made annually is less than the total cost incurred when orders placed monthly.
6. When orders are made at one time in bulk, then suppliers may provide special discounts.
7. A reduction in the use of transport facilities is noticed when orders in a bulk.
8. Ordering cost, inventory carriage cost may not be euchred.

5. CONCLUSION

Orders are placed monthly or quarterly. It may cost heavy expenditure for placing order so many times. Costs will be bearding each time an order is placed. So, it is suggestible that orders should be placed annually depending on demand. Storage facilities should be modified. A stores manager should be appointed separately to look after the product at hand. A separate department of research should be placed. Especially for inventory of goods

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