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A Study on Inventory Management at Hetero Drugs Ltd

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ABSTRACT
This study examines the concept of the INVENTORY MANAGEMENT in relation to the HETERO DRUGS LTD. Inventory is defined as a usable resource, which is physical and tangible such as material, and our stock is our inventory. Though inventory is a usable resource, it is also a idle resource, unless it is managed efficiently and effectively. Inventory management boils down to maintaining an adequate supply to meet the expected demand pattern subject to budgeting consideration. Effectiveness of materials and production functions depend to a large extent upon inventory management.
The investment on raw material should be made as per the requirement. Unnecessary investment may block up the funds. Neither too high nor too may inventory turnover ratios reduce profit and liquidity position of industry. S, proper balance should be made to increase profit and to ensure liquidity.
The raw material should be acquired from the right source at right quality and aright cost. The process that was being used by **Hetero Drugs Ltd** with purchasing department should undergo changes, so that, it seeks enhance the celerity of delivery of a product without compromising its quality by improving the utilization of material, labour and equipment. To reduce the work, purchasing department may enter the purchasing orders into a data base and did not send to a copy any one. When the merchandise arrived, the receiving clerk would enter the database and determine whether the order agreed with the electronic purchase order.

Key Words: - ABC analysis, inventory management, inventory control.

1. INTRODUCTION

make up the product while the trading firms buy finished products on wholesale and sell them for profit, the manufacturing firms buy raw materials, process them, convert them into finished goods and sell yourself them.The firm should maintain sufficient stock of finished goods to see that sales are made as and when demanded. Similarly stock of material should be maintained to have uninterrupted production activities. Inventories form a link between purchase and sales of a firm. As they represent assets, they require investment and thus involve commitment of firm's financial resources.

Definition of Inventory Management:
Inventory control may be defined as the "systematic control over the procurement, storage & usage of materials so as to maintain an even flow of materials and avoiding at the same time excessive investment in inventories".

Material control covers 3 stages namely

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1. Purchase of materials.
2. Storing of materials &
3. Issue of materials.

Inventory Management is the active control program which allows the management of sales, purchases and payments.

Inventory management is a very high complexed process that involves many variables such as purchase of raw materials, goods in process and storage of finished goods.

2. NEED OF THE STUDY

Inventory Management helpful to study various factors. It's helpful to hold safety stock. It's helpful to purchase raw materials in reasonable prices. It's helpful to reduce wastage of raw materials. It's helpful to effective resource utilization. Inventory Management helpful to measure standardization of stock. Inventory Management helpful to issue of products effectively.

Sample Size:

The sample for the study was chosen by means of simple random sampling technique. The sample covers all categories of employees from several departments of the company. As the study was intended to measure the effectiveness of Inventory Management. It was decided not to restrict the study to particular department (or) section. Hence the sample covers the stock from various departments. The size of sample was fixed to 5 years.

3. OBJECTIVES OF THE STUDY

The Present Study is based on Following Objectives:

1. To study the raw material being used.
2. To study the inventory management process.
3. To calculate Economic Order Quantity and Lead Time Consumption.
4. To calculate Reorder Level & Maximum Stock.
5. Activity Based Costing of Inventory.

4. SCOPE OF THE STUDY

The Scope and Period of Study is Restricted to the Followings:

1. The Scope is limited to the operations of "HETERO DRUGS LIMITED".
2. The Information obtained from the Primary & Secondary Data was limited to "HETERO DRUGS LIMITED".
3. The key Information Performance Indicates was taken from 2017-21.
4. The Profit & Loss, the Balance Sheet was as on last 5 years.
5. Comparison Analysis was done in Comparison of Sister Units.

5. RESEARCH METHODOLOGY

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1. The material management mechanism is studied in details.
2. The various factors of inventory management are studied in details.
3. The technical analysis is respect to Economic Order Quantity; Activity Based Costing techniques have been studied.

The data is collected from the "*HETERO DRUGS LIMITED*", Bonthay pally Unit with the help of Primary & Secondary Data.

PRIMARY DATA:

1. Interaction with the Planning and Development department.
2. Interaction with the Finance department.
3. By approaching the experts of the concerned field.

SECONDARY DATA:

1. Material Management Manual of "*HETERO DRUGS LIMITED*".
2. Accounting Manuals of "*HETERO DRUGS LIMITED*".
3. Browsing various websites through internet.
4. Referring various journals & books.

6. LIMITATIONS OF THE STUDY:

The following are the various limitations faced during the entire study.

1. The study is confined to a period of last 5 years. As most of the data is from secondary sources.
2. The Accuracy is limited. Any changes occurring in year are not annualized.
3. Non-Uniformity of data.
4. Data insufficiency.
5. Hypothetical Analysis.

7. REVIEW OF LITERATURE

Hong Shen, Qiang. Deng, Rebbaca Lao, Simon Wu (2016) focused on boosting the inventory management to improve the supply chain of the company. Drop in inventory is considered one of the most significant aspects of inventory management. In practice, small inventory level is not always a better solution, so manufacturers need to maintain the correct amount of inventory at the correct level.

As mentioned by Sunitha, K. V. (2012) in her thesis, inventory management is vital for keeping costs down, when meeting regulations. It is difficult to balance demand and supply and inventory management to make sure that the balance is untouched. The trained inventory management and good quality software will help make inventory management a victory. The ROI of Inventory management has seen better revenue and profits, positive employee ambiance and increase in customer satisfaction.

Plinere, D. & Borisov, A. (2015), concluded that, inventory management is necessary to every company, having inventories. Companies have stock, but so much as to keep away

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from overstock and out-of-stock situations. Inventory management can better company's inventory control existing condition and reduce costs of the company.

Jose, T., Jayakumar, A., & Sijo, M. T. (2013) found the difference between EOQ & number of pieces purchased. It is observed that the company is not using EOQ for buying the materials. Therefore, inventory management is not reasonable. From estimate of safety stock, company can decide how much inventory the company can keep in back stock per annum.

Mohamad, S. J. A. N. bin S., Suraidi, N. N., Rahman, N. A. A., & Suhaimi, R. D. S. R. (2016) concluded that efficiency of inventory management is a major concern area of business. Suggestions are given to improve the performance of inventory management, demand forecasting, scattered inventory & cycle counting.

8. DATA ANALYSIS ANDINTERPRETATION

STATEMENT SHOWING INVENTORY TURNOVER RATIO

$$\text{INVENTORY TURNOVER RATIO} = \frac{\text{COST OF GOODS SOLD}}{\text{AVERAGE INVENTORY}}$$

YEAR	COST OF GOODS SOLD	AVERAGE INVENTORY	INVENTORY TURNOVER RATIO
2016-17	4,30,31,502	2,25,29,582	1.91
2017-18	4,38,63,753	1,94,95,001	2.25
2018-19	6,72,32,180	2,25,61,134	2.98
2019-20	4,04,12,744	1,69,09,098	2.39
2020-21	6,01,39,019	2,16,32,740	2.78

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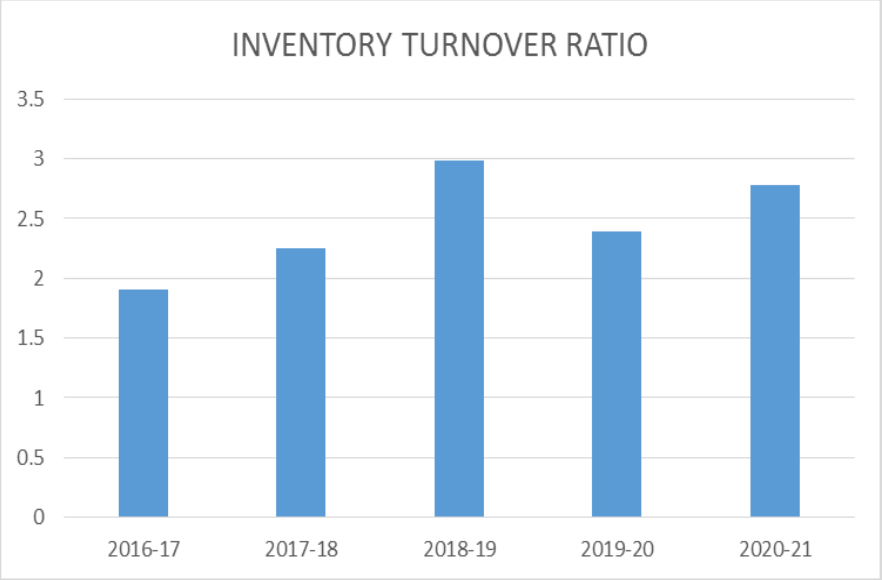

INTERPRETATION:

In 2020-21 stock are converted into liquid more faster when compared to the successive years 2017, 18, 19, 20. In this 2018-19 year Inventory Turnover ratio is very high 2.98 lakhs and 2017-18 year Inventory Turnover Ratio is very low 1.91 lakhs. But organization is satisfactory.

ABC ANALYSIS FOR THE YEAR 2020-21

S. NO	ITEMS	ANNUAL CONSUMP-TION	CUMULATIVE USAGE	CUMULATIVE % OF USAGE	INDIVIDUAL USAGE %
1	RAW MATERIALS	2493.33	2493.33	62.71	62.71
2	PACKING MATERIALS	609.88	3103.21	78.05	15.34
3	LAB ITEMS	61.40	3164.61	79.60	1.54
4	PRINTING & STATIONARY	27.92	3192.53	80.30	0.70
5	PRODUCTION CONSUMABLES	35.43	3227.95	81.19	0.89
6	ELECTRICAL ITEMS	162.39	3390.34	85.27	4.08
7	PIPES & FITTINGS	117.30	3507.65	88.22	2.95
8	FEED MATERIAL	256.03	3763.67	94.66	6.44
9	VETERNARY MEDICINES	161.27	3924.94	98.72	4.06
10	FARM CONSUMABLES	50.87	3975.81	100.00	1.28

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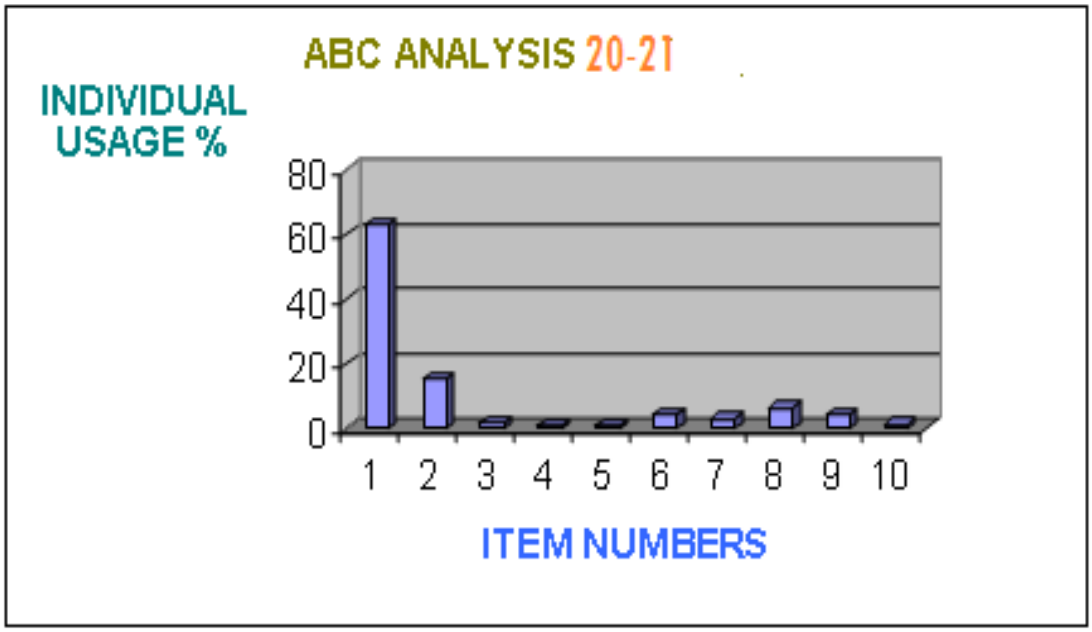
A – Occupies 80% Annual Consumption Value i.e., 80% of 3975.81 = 3810.65
B – Occupies 90% Annual Consumption Value i.e., 90% of 3975.81 = 3578.23

$$\text{Actual Value of A} = \frac{3103.21}{3975.81} * 100 = 78.05\%$$

$$\text{Actual Value of B} = \frac{404.44}{3975.81} * 100 = 10.17\%$$

$$\text{Actual Value of C} = \frac{468.16}{3975.81} * 100 = 11.76\%$$

Here I am Considering;
A = Items 1+2,
B = Items 3+4+5+6+7,
C = Items 8+9+10



A = 78.05%
B = 10.17%
C = 11.76%

Here I am Considering;
A = R.M + P.M
B = L.I + P&S + P.C + E.I + P&F and
C = F.M + V.M + F.C.

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INTERPRETATION:

In this analysis I representing raw materials and packing materials are "A" category, lab items, printing & stationary, production consumables, electrical items, Pipes & fitting are "B" category and In "C" category I have taken feed materials, veterinary medicines and farm consumables.
Coming to category wise analysis actual value of "A" items percentage very high. "C" items usage percentage in 2nd place and "B" items usage percentage in 3rd place.

ABC ANALYSIS FOR THE YEAR 2020-21

S.NO	ITEMS	ANNUAL CONSUMPTION	CUMULATIVE USAGE	CUMULATIVE % OF USAGE	INDIVIDUAL USAGE %
1	RAW MATERIALS	2797.04	2797.04	55.13	55.13
2	PACKING MATERIALS	716.67	3513.71	69.25	14.12
3	LAB ITEMS	74.84	3588.56	70.73	1.48
4	PRINTING & STATIONARY	29.81	3618.36	71.31	0.59
5	PRODUCTION CONSUMABLES	57.74	3676.11	72.45	1.14
6	ELECTRICAL ITEMS	189.46	3865.56	76.18	3.73
7	PIPES & FITTINGS	127.08	3992.65	78.69	2.50
8	FEED MATERIAL	659.03	4651.68	91.68	12.99
9	VETERNARY MEDICINES	312.76	4964.43	97.84	6.16
10	FARM CONSUMABLES	109.49	5073.92	100.00	2.16

A – Occupies 80% Annual Consumption Value i.e., 80% of 5073.92 = 4059.14
B – Occupies 90% Annual Consumption Value i.e., 90% of 5073.92 = 4566.53

$$\text{Actual Value of A} = \frac{351371}{5073.92} * 100 = 69.25\%$$

$$\text{Actual Value of B} = \frac{478.93}{5073.92} * 100 = 9.44\%$$

$$\text{Actual Value of C} = \frac{1081.28}{5073.92} * 100 = 21.31\%$$

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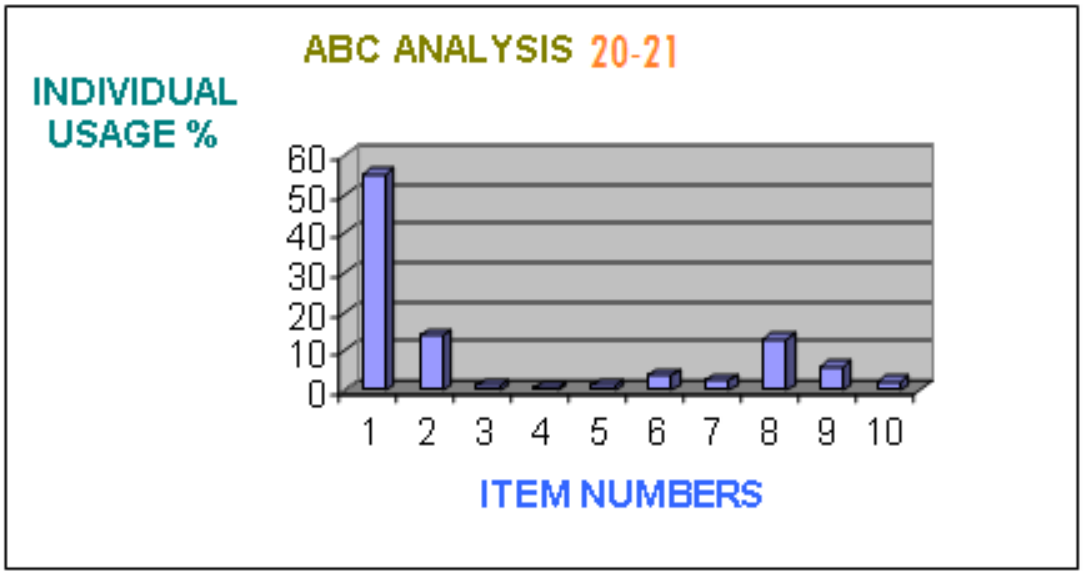
Here I am Considering;
A = Items 1+2,
B = Items 3+4+5+6+7,
C = Items 8+9+10.



A = 69.25%
B = 9.44%
C = 21.31%

Here I am Considering;
A = R.M + P.M
B = L.I + P&S + P.C + E.I + P&F and
C = F.M + V.M + F.C.

INTERPRETATION:

In this analysis I representing raw materials and packing materials are "A" category, lab items, printing & stationary, production consumables, electrical items, Pipes & fitting are "B" category and In "C" category I have taken feed materials, veterinary medicines and farm consumables.
Coming to category wise analysis actual value of "A" items percentage very high. "C" items usage percentage in 2nd place and "B" items usage percentage in 3rd place.

9. FINDINGS

Inventory Turnover Ratio in 2020-21 stock is converted into liquid more fast when compared to successive years 2017,18,19,20.

Inventory Holding Period 131 days in 2020-21. The Inventory Conversion Period is less when compared to previous years.

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Economic Order Quantity refers to the size of order that gives maximum economy in purchasing any materials. It also referred as optimum or standard ordering quantity.

HETERO DRUGS LIMITED item's Avg. Annual Consumption is very high when compared to other items.

ABC Analysis:

A – Characteristic elements of previous years decreased, but 2020-21, was increasing.
B – Characteristic elements regularly decreased but 2018-19, only one was increased.
C – Characteristic elements decreased accepted 2018-19.

10. SUGGESTIONS

Inventory Turnover Ratio existing the organizational stock how efficiently used. Inventory Turnover Ratio is not either more or less. It should be maintain appropriate.

In 2019-20, Inventory Turnover Ratio is impressive compare than to previous years, and they needs should be decreasing as much as possible.

Inventory Holding Period is too impressive comparable previous years. Its reduction days are 60 from 2016-20. If might be possible they reduce.

EOQ purchase the materials at a reasonable price without sacrificing the quality of such materials.

ABC Analysis:

A – Characteristic elements are important, because its investment regularly increased on necessary inventories.
B – Characteristic elements are less important compare than A elements. So, its good for the company.
C – Characteristic elements are less important than B.

11. CONCLUSION

Inventory Turnover Ratio in 2020-21 stock is converted into liquid more fast when compared to successive years 2017,18,19,20. Inventory Turnover Ratio existing the organizational stock how efficiently used. Inventory Turnover Ratio is not either more or less. It should be maintain appropriate. Inventory Holding Period 131 days in 2020-21. The Inventory Conversion Period is less when compared to previous years. In 2020-21, Inventory Turnover Ratio is impressive compare than to previous years, and they needs should be decreasing as much as possible. Inventory Holding Period is too impressive comparable previous years. Its reduction days are 60 from 2017-21. If might be possible they reduce. Economic Order Quantity refers to the size of order that gives maximum economy in purchasing any materials. It also referred as optimum or standard ordering quantity. EOQ purchase the materials at a reasonable price without sacrificing the quality of such materials. HETERO

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DRUGS LIMITED item's Avg. Annual Consumption is very high when compared to other items. Overall company performance of 'HETERO DRUGS LIMITED' is well.

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