ABSTRACT

PT. Satya Sumba Cemerlang is a textile company that produces colored yarn and fabric production quantity and type depend on the customer orders, so the need for raw materials highly variable and changes in each period. PT. Satya Sumba Cemerlang doesn't use particular method, but only do planning based on estimates and the experience of a few people, and in determining the final inventory in the warehouse based on the high and low needs raw materials on that time period that cause the total cost of inventory to be less than optimal.

The purpose of this research was to determine optimal order number and time order by using the provisions of each type of order number from suppliers and the provision of a safety stock from the company to minimize the total cost of production.

Planning raw materials inventories of 25 kind coloring drugs performed by using Dynamic Lot Sizing method consisting of Fixed Order Quantity, Least Unit Cost, Silver Meal Algorithm, and Wagner Within Algorithm. Based on calculations performed, that the dynamic lot sizing method which can minimize the total cost of production is the method of Fixed Period Quantity with total cost of Rp 30.302.313,76/ year, so that the company can save costs Rp 8.848.739,11.

The research is expected to help company to make decisions about inventory planning and the addition of application method can simplify the calculation to of total cost from four dynamic lot sizing type.

Key words: Dynamic Lot Sizing, Order Number, Time Order, Safety Stock.