OPTIMIZATION PRODUCTION OF GOLD JEWELRY INDUSTRY in P.T. "X"
BY LINEAR PROGRAMMING METHOD

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ABSTRACT

P.T. "X" is a manufacturing company engaged in the field of gold jewelry. Results include the production jewelry necklace, bracelet, ring, pendant, earrings / ear stud, such as the type of plain and variations. Contribute benefit most in the can by PT "X" came from all forms of jewelry that kind of plain. Type of variation is a product which is very attractive but short-cycle and high production costs. The amount of gold jewelry that will be produced is determined from the number of orders received, which depends on customer demand. Customer demand is very sensitive to the price of raw materials pure gold (gold). If certain conditions on the pure gold price rose sharply, the ability of companies in the procurement of raw materials to be limited. Because of the many factors that constraint, the company is often difficult to obtain the products and detained the quantity of gold jewelry that must be produced in order to obtain the maximum benefit.

To solve the problem that has been described, the planning required product mixture so that the right to obtain the maximum benefit. The first step is to make forecasting the demand for jewelry products based on past data. The second step is to do with the method maksimasi profit by Linear Programming. As a decision variable is the number of jewelry products that must be produced. The limitations are the availability of key raw materials, work hours, the amount of labor, the amount of inventory and production capacity.

Maksimasi benefit from the results that have been made, the company must prioritize products in jewelry necklace middle carat of plain white, necklace middle carat of plain yellow, necklace variation low carat yellow and variations earings low carat yellow obtained profits of 339.02 kg / year.

Keywords: Demand for customers, raw materials, forecasting methods, the form of jewelry, the type of perhiasan, labor, working hours, inventory, Linear Programming.