

ABSTRACT

Inventory Management is one of essential problem in Supply Chain system. It describes quantity and location of inventory, including raw materials, work-in-progress (WIP) and finished goods. Needs of finished goods for selling purpose become a crucial issue in macro issue on inventory management systems while order quantity decision becomes the crucial one in micro issues on inventory management systems.

This study aims to determine the order quantity planning of finished product on The Body Shop Indonesia's outlet of Semarang Paragon upon top product. Top product determining model engages a decision making tool, Analytical Hierarchy Process (AHP) considering several criteria; Price, demand and availability. This model finds She Body Butter as top product of pertinent outlet. The order quantity planning engages fuzzy logic interference system using Sugeno method. Research design used for this study is adopted and modified from previous study about supply allocation upon fresh vegetables commodity by Hadiguna and Marimin (2007). Research also presents several tests to know performance of the system.

Keywords: Analytical Hierarchy Process, Expert System, Fuzzy, Order Quantity Planning, The Body Shop Indonesia, Top Product