

ABSTRACT

PT Nose Herbalindo faces challenges in managing raw material inventory, which is still done manually. This process increases the risk of human error, especially in data entry and monitoring of raw material expiration dates. Such errors can disrupt production processes, cause delays, miscalculate stock, and reduce product quality. Therefore, a solution is needed in the form of a web-based inventory management information system that can improve accuracy and reduce errors in managing raw materials.

This research uses the Waterfall method, which includes requirements gathering, system design, implementation, testing, and maintenance. During the design phase, an analysis was carried out on the business processes and user needs. The analysis results were used to design use case, activity, and sequence diagrams that explain the system's workflow. The system is implemented with web-based technology, emphasizing features such as real-time inventory monitoring, notifications for expiring raw materials, and automatic stock reduction as needed.

System testing shows increased accuracy in managing raw material inventory. The system successfully reduces human error in data entry, provides real-time stock information, and monitors raw materials approaching expiration. This helps ensure that the raw materials used are in proper condition and do not exceed expiration limits.

The development of this system also opens opportunities for further development, such as predictive analysis that can help forecast future raw material needs. This supports the company's strategic planning in stock management.

Keywords — **human error, inventory management, information system, waterfall**