ABSTRACT

Indonesia is a maritime country, which is surrounded by a vast expanse of sea. Tropical climate conditions make Indonesia's coastal areas suitable for salt business development. Salt as a product of non-biological fishery resources has quite good business prospects and is much needed by the people of Indonesia. However, this need cannot be met by the country itself, this is due to the small amount of salt production in Indonesia. Conventional methods and technological limitations are the main reasons for the lack of quality locally produced salt. The existing technology to overcome this problem does not yet have a system to monitor salt quality in real-time, so in this study, a prototype internet of the things-based monitoring system was created to help determine in real-time the quality of the salt produced. This system will read the quality of the salt, which will then be displayed on a website and MIT app inventor application using LoRa connectivity so that salt farmers can view detailed data and have reported on the progress of the salt quality. From the data acquisition and reading of the salt quality tool, it can be seen that the accuracy of this system is 94.97% for the salinity sensor and 96.75% for the temperature sensor, the linear error in this system is 5.01% for the salinity sensor and 3.2% for the temperature sensor, and the average delivery latency is 0.22 seconds.

***Keywords**: Salt, Monitoring, Traditional, LoRa, Internet of Things, Website, MIT App Inventor*