

## **ABSTRACT**

*Technological developments encourage the growth of industry in Indonesia, especially industrial manufacture. More and more companies are implementing automation based systems in their production activities due to market demand. Without exception ready to drink water (RTD water) company, requires a system which is able to work automatically to maintain the cleanliness and accuracy of product uniformity. The problem is, most companies do direct monitoring of the plant so it takes so much time to done, other problems arise from the product data collection is done manually so it takes too long.*

*The research method begins with data collection phase, at this stage the necessary data is collected by studying and observing previous research. Then an user requirement specification and tagname PLC obtained from previous research. Furthermore, system design used URS as a reference workmanship and tagname PLC for communication devices. System design begins with designing the program scenario, HMI structure, designing the interface, scripting, database creation, and communication. Third, Test the system.*

*From the result of research conducted, it is concluded that the design of monitoring, controlling, and data logging system events in real time at the work station filling, sorting, and stacking based SCADA done so that all the production processes can be monitored and is easy to control. The process begins with filling the bottle then cap it, followed by separating the 330ml bottles with 600ml bottles which would then be given a label on each bottle, then the bottle will be arranged based on a predetermined number that can be entered into program. The results of the monitoring work station can be displayed in real time and automatically be recorded on a database that has been created. Reporting data is displayed in the form of the number of bottles that go every hour, the number of bottles of 330ml, 600ml bottle number and the total number of bottles. and also performed on the recording of the alarm system so that it can be repaired.*

**Keywords:** *automation, Human Machine Interface, SCADA, database, ODBC*