

## **ABSTRACT**

*Water is the most important substance for all living things from humans, animals to plants. Most of the reaction processes that occur in the human body will use water as an ingredient. Alkaline water is a type of drinking water that has a pH of more than 8 or also known as alkaline water. Alkaline water is usually produced from an electrolysis process using regular drinking water that is electrified.*

*Good alkaline water has more or less the same properties as regular drinking water, only it has a higher pH, which is in the range of 8 to 9. Alkaline water will be tested using the parameters pH, temperature, total dissolved solid (TDS), and turbidity (turbidity). Other parameters are the power and energy used during the electrolysis process.*

*The pH sensor works by measuring the potential difference between the glass electrode and the reference electrode. As the electrolysis process takes place, this potential difference will change and make measurements of the pH sensor inaccurate.*

*The alkaline water produced in this test proves that the alkaline water produced by the water ionizer system is suitable for drinking because it is odorless, not cloudy, has a pH value of 9, and a TDS of less than 500ppm. The power used in the electrolysis process is also not too high, it was less than 30W.*

**Keywords:** *sensors, pH, TDS, electrolysis, alkaline*