ABSTRACT

Water is used by humans for various daily needs. The use of water is very wide, one of which is for drinking, so efforts must be made in such a way as to remain available and meet certain physical, biological and chemical requirements. The title that the author will discuss this time is the author's curiosity about the process of electrolysis of water. Where the author wants to know how the water electrolysis process occurs, what are the indicators that affect the electrolysis process and the results, which method should be used.

The research conducted by the author is divided into 12 tests with 3 different distances, namely with differences in distances of 3cm, 5cm, and 7cm. Tests 1 to 3 use a current of 11.80mA where the author sets the current by turning the potentiometer on the buckbooster, and using 3 holes in the membrane. From the tests that the author did, the graph of the current and temperature will be seen and will be analyzed, where the temperature will rise slowly due to the water flowing by electric current.

The results of the tests that the author did were all successful because the results of the water electrolysis process were in accordance with the requirements for alkaline water and water suitable for drinking, namely getting a pH of 8-8.4 and Total Dissolved Solid (TDS) below 300. from the test it is also seen that the graph of the current and the temperature where the temperature always increases during the water electrolysis test, and for the best method according to the tests carried out by the author is the third test where the distance used is 7cm to get enough current to get alkaline water with a pH of 8.4 with a TDS of 105 within 3 hours.

Keywords: temperature, current control, water ionizer, electrolysis, drinking water