

## **ABSTRACT**

Water is a natural resource that is necessary for all living things, humans, animals and plants. Water has become a primary need that is needed for daily life such as drinking, bathing, cooking, and industrial needs. Therefore, water must remain so that life can continue. Indonesia is a country with fairly high rainfall. The average rainfall in Indonesia ranges from 2,000-3,000 mm per year. The huge potential of rainwater has not been utilized properly. This needs to be considered regarding the difficulty of water during the dry season in Indonesia. When the dry season arrives, there will be drought, while in the rainy season there is often flooding. Rainwater can be a refreshing and safe source of water for use in daily purposes.

Rainwater cannot be used directly, the pH level of ideal rainwater according to BMKG that enters the water storage tank tends to reach 5,6 - 6. With a water pH of 5,6 - 6, the water is not suitable for daily human activities. Water in the water storage with a pH of 5,6-6 is then processed with an electrolysis system. The electrolysis system is a decomposition reaction in an electrolyte solution by an electric current. The water that has been processed will change its pH to pH 7 which is suitable for use for daily activities.

The results of this Rain Water Harvesting research are Rainwater can be useful for daily life after the electrolysis process and can reduce the potential for flooding, the power used is using solar panels as an alternative to electrical energy and is also useful for saving the use of electrical energy because it uses energy from the sun, water conditions can be easily monitored by users because there is a pH and water turbidity monitoring system that can be used by users to check water pH levels and water turbidity periodically.

**Keywords:** Rainwater, pH Level, Electrolysis, Solar Panel.