

## ABSTRACT

At this time many have made and cultivated crayfish ponds. Lobsters that live in fresh water are the most common type of lobster found in Indonesia to be cultivated. This type of freshwater lobster is usually cultivated in tarpaulin or ponds that require temperatures between 24 °C-30 °C with water pH conditions of about 7-9. However, one of the main problems of lobster ponds is the quality of pond water that is suitable for the needs and survival of lobsters. Therefore, the purpose of designing and making this tool is to help monitor and interfere with water quality for lobsters so that lobster's development is good and becomes a superior lobster. Designed and built this tool uses a turbidity sensor for water turbidity, a pH sensor and a DS18B20 temperature sensor. Then for the control system when the pH is below 7, the pH up pump will turn on by adding a water pH-raising liquid so that the pH of the water is not low below pH 7, if the pH is above 9 then the pH down pump will light up by adding a pH-lowering liquid so that the pH of the water is not higher than pH 9, for water turbidity using a turbidity sensor using levels 1 to level 5 where the higher the level, the more turbid the water will be, the more turbid the water will be, if the turbidity sensor detects water turbidity is at level 3 and above, the raw water pump will turn on until the turbidity of the water decreases below level 3 and for the temperature when the water temperature is below 24°C then the heater will be activated, if the water temperature is above 30°C then the water peltier will be converted until the water temperature is at 24°C - 30°C.

**Keywords:** Water Quality, Lobster, IOT, pH sensor, DS18B20 Temperature Sensor, Turbidity Sensor.