ABSTRACT

Bacteriology shaking Incubator is a tool used corpulent health laboratory that serves to megicubasi bacterial samples, by selecting the setting temperature between 30oC-80oC, in accordance with the samples to be incubasi to keep growing well. Which translates to growth is the addition of a regular basis of all body cells. For micleolus growth, mitrokhondria, walls, cells, and others. Motor speed settings High Low and who serves to shake the sample to sample did not settle.

Incubator tool is difficult to stabilize the temperature in the incubator, the temperature of an incubator is very important to the appliance, to keep the temperature of bacterial samples, the motor speed to shake the sample ager does not settle, the motor speed is 250 rpm.

So the writer makes prototype Bacteriology shaking Incubator, which has two settings for motor speed control and temperature settings in which group should the temperature range of 30oC-80oC, with the increase in two steps. Dry and use the heating element. Bacteriology tool shaking Incubator uses Digital systems are expected to produce a more stable temperature so that the conditions in incubasi bacteria that can be maintained adequately. And setting the motor kecepatana Low and High.

Based on data measurement and analysis of temperature, 30oC until 80oC, the average value deviation: -0.21, and Error: -0.35%, and SD values: 0098. BPFK Display Calibration 30.6 oC.Deviation: -0.30. Error: -1.0%. UA: ± 0.21. And Display 40.4 oC. Deviation: 0.48. Error: 1.2%.UA: ± 0.19. and Display 50.3 oC. Deviation: 0.32. Error: 0.65%. UA: ± 0.31. PWM outputs by setting Duty Cycle Ton Toff 4.1% and 95.9%, and Ton Toff 7.5% and 92.5%.

From the conclusion of measurement and data analysis can be concluded, shaking incubator Bacteriology tool has a setting temperature of 30oC-80oC, with the increase in two steps. and motor speed settings Low and High. Setting the speed by adjusting the PWM duty cycle Output Ton and Toff. And the average time of 7.85 minutes kstabilan temperature. so that the lower the SD value proves that the more accurate data taken. Sehigga from analysis of existing data that the tool is Eligible Use.