

ABSTRACT

Waterbath is an instrument that functioning appliance to take care of temperature of sample so that matching with the one which desired on water media. Waterbath placed at laboratory of hospital or medical home care. This time existing waterbath only equiped by temperature control circuit and heater also in admission of filling and cleanshing water still manually, therefore require to be enhanced by water sterilizer circuit that use to kill mikroorganisme that able to damage sample. This instrument also added by filling and cleanshing water circuit.

Therefore in this desertation, writer mean to built of waterbath that equiped by ultraviolet lamp to sterilizing water media and enhance circuit for the admission of filling and cleanshing of water automatically

Basically this instrument consist of circuit of control temperature by IC LM 35 as temperature censor and presented to segment seven by IC ADC 7107, with election of temperature of water media and also circuit to control solenoid valve for the admission filling and cleanshing of water

From result of measurement at appearance that displayed at temperature of 25 °C, getting result (% error) equal to 1.6%. at temperature of 30 °C, getting result (% error) equal to 1.6%. at temperature of 37 °C, getting result (% error) equal to 1.29%.

Keyword : Digital waterbath