ELECTRONIC CONTROLLED WASTEWATER TREATMENT SYSTEM MODEL FOR HOUSEHOLD APPLICATIONS

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ABSTRACT

Title: Electronic Controlled Wastewater Treatment System Model for Household Applications

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In order to help resolve the increasing problem on water shortage, the authors had came up with the idea of recycling kitchen wastewater through their project study which is the Electronic Controlled Wastewater Treatment System Model for Household Applications (EWTS). It includes the automation of several wastewater treatment processes such as filtration and sedimentation through the use of chemical coagulant and flocculant. EWTS was designed to treat 18, 927.06 mL of kitchen wastewater per treatment process.

The project study used PIC16F84A as their main project component. It controlled all the operations necessary to complete the treatment process such as the switching on and off of certain components as determined by the time of completion per process. Experiments were performed to get the correct amount of time as well as to see if the quality of water produced after the treatment is in a good state. The circuit created and its other components had undergone a series of testing wherein a particular type of data was collected and analyzed to evaluate the capabilities of the design.

From the data obtained by the researchers and by several computation, the authors have found that by using EWTS, 832 790.592 mL of water is saved per month. The findings could ably resolve the increasing threat of worldwide water shortage.

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