ABSTRACT

A Rotary Agitator is a device that is used for leaching, or a process to separate chemical compounds from a solid matrics to a liquid by mixing waste and extracting Acetid Acid (Ph 5), with proportion 1 : 20. Spinning rotarily with speed of rotation 30±2 rpm for 18±2 hours, and for EP toxicity test takes 24 hours.

This device provide three speeds option that can be choosed. Its 20 rpm, 30rpm, and 40rpm. And timer options that can be choosed. It is 18 and 24 hours by using up and down button for each 6 hours. This device uses seven segment as display and microcontroller AVR A tmega 8535 as system control.

After a calibration process by using stopwatch for measuring time, the % error that we get when the time is set to 18 hours is 0,0021%, when is set to 24 hours is 0,0006%. And the error % that we get for measuring the speed of rotation by using tachometer when is set to 20 rpm is 4,6%, when is set to 30 rpm is 2,27% and when is set to 40rpm is 0,7%.

Keyword : Rotary Agitator, Timer, RPM