

ABSTRACT

The drum hoop mixer is one tool to help the mixing process in the manufacture of drugs, especially in the Inventory was solid. Mixing which is placed in a container in the form of a cylinder that is placed in such a way that can be played on an axis. The resulting turbulence is rolled powder-covered roll in a large container, mechanically rotated by the engine rotation speed 30 rpm.

During this mixing process is still manual and manufacture of drugs in a very large capacity, so the user must look at the time manually and the capacity of small scale industries are too big.

To facilitate medical staff, especially the pharmaceutical field in the mixing process, was made a tool "Drum Hoop Mixer Mini" based microcontroller AT89S51 with little capacity for small scale industries which are the timing of which is 5 minutes, 10 minutes and 15 minutes. The mixing process is completed are marked with a beep sound indicator.

According to data presented timer, the error value obtained from the comparison of measurements between the stopwatch timer displayed on a 5-minute measurement error 0.4%, 0.4% error 10 minutes, 15 minutes 0.4% error. While the motor rotation speed 30 rpm, the error value obtained for 1.2% within 5 minutes, 10 minutes 2.86%, 1.6% within 15 minutes.

Based on the results of measurements of the timer and the motor rotation speed obtained error value is less than 5% can be concluded tool worth taking.

Keywords: *Drum Hoop Mixer, Mixing, Drug, Timer, Rpm*