

AUTOMATION FOR PROCESS IMPROVISATION

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ABSTRACT

In pharmaceutical companies the bacteria remove process is done manually and by a lengthy process by which production is affected so much. Manual process is also harmful for the labor who always present in the contact with high radiation areas and take part in the process. Here we tried to make the process automated by using microcontroller so that the labor efforts can be neglected and also risk factor is minimized. And process will be more safe and fast. Here we are making a smart conveyor on which the box of medicine or food will be placed and as the box is placed the conveyor will move automatically when the box will reach to the high radiation area the conveyor will be stopped and the doors of that particular area will be closed and the process will be executed for particular time period as per the nature of process.

After the process is completed the doors will be opened and the conveyor will be run automatically. The whole process will be automated and controlled by microprocessor and no labour efforts will be needed for this process.

1.Introduction

Clinical microbiology has been an especially dynamic discipline during the past 10 to 15 years. The exciting developments include the recognition of several new etiologic agents, the reemergence of some classic pathogens, development of molecular diagnostic tools, and automation of antimicrobial susceptibility testing and microbial identification. This article explores the development of automated identification systems and reviews their performance. To limit confusion, we will avoid terms often used in the literature such as semi-automated or partially automated. Webster's Dictionary defines automation as the "automatically controlled operation of an apparatus, process, or system by mechanical or electronic devices that take the place of human organs of observation, effort, and decision" (77a). None of the systems described is totally automated. We use the term "automated" to describe the instruments discussed here and trust the reader to understand that some instruments are more automated than others.

The criteria used for inclusion of an instrument in this review are as follows:

(i) The minimum requirement is automated result entry and identification of microorganisms. Systems requiring manual result entry are not discussed.

(ii) The instrument must have a data base for the identification of a large variety of different microorganisms. Instruments such as automated enzyme immunoassay systems that identify a relatively small number of microorganisms are not described.

(iii) The instrument must be available in the United States. For studies that have compared the identification accuracy of two or more automated identification systems, the percentile (P value) of the chi-square distribution as determined by the chi-square test has been calculated.

The development of the first generation of automated equipment for clinical microbiology involved essentially two approaches. One can be described as the mechanization of existing techniques. The second combined mechanization with other changes, such as miniaturization and/or incorporation of innovative substrates, inhibitors, or indicators. The primary goal was to enhance data acquisition and processing, particularly with regard to decreasing turnaround time. Although the instruments available today are improvements over the original formulations, they still represent the first generation of instruments used to identify microorganisms. These instruments are widely accepted and very helpful; however, like the instruments used in clinical chemistry and hematology laboratories, they will continue to evolve to better meet the needs of the clinical microbiology laboratory. If we compare the modern clinical chemistry analyzer, with its discrete multianalytes requiring no sample preparation, with instruments available in clinical chemistry during the 1960s, we believe we get a glimpse of what the future can be in microbiology. At the very least, we should target that level of automation for clinical microbiology and expect future generations of equipment to be highly automated, cost-effective, accurate, reliable, and flexible and to provide rapid turnaround time.

2.LITRATURE SURVEY

2.1 CELLULOSE FIBERS FOR REINFORCEMENT

The idea of using cellulose fibers as reinforcement in composite materials is not a new or recent one. Man had used this idea for a long time, since the beginning of our civilization when grass and straw were used to reinforce mud bricks [14]. In the past, composites, such as coconut fiber/natural rubber latex, was extensively used by the automotive industry [15]. However, during the seventies and eighties, cellulose fibers were gradually substituted by newly developed synthetic fibers because of better performance [15]. Since then, the use of cellulose fibers has been limited to the production of rope, string, clothing, carpets and other decorative products [14]. Over the past few years, there has been a renewed interest in using these fibers as reinforcement materials to some extent in the plastics industry. This resurgence of interest is due to the increasing cost of plastics [17], and also because of the environmental aspects of using renewable and biodegradable materials.

2.2 Utilization of cellulose fibers:

Opportunities and limitations There is a wide variety of cellulose fibers that can be used to reinforce thermoplastics. These include wood fibers, such as steam-exploded fibers, and a variety of agro-based fibers such as stems, stalks, bast, leaves and seed hairs. These fibers are abundantly available throughout the world, particularly in developing countries like India, 12 and they come from renewable resources [14, 17]. Other large sources are recycling agro fiber-based products such as paper, waste wood, and point source agricultural residues such as rice hulls from a rice processing plant [17]. Cellulose fibers, depending on the part of the plant from which they are taken, can be classified as: 1. Grasses and reeds These fibers come from the stems of monocotyledonous plants such as bamboo and sugar cane [13, 18]. Both types of fibers can be used to reinforce plastics [14]. 2. Leaf fibers Leaf fibers are fibers that run lengthwise through the leaves of most monocotyledonous plants such as sisal, henequem, abaca and esparto [13, 18].

3.PROPOSED SYSTEM

The primary goal was to enhance data acquisition and processing, particularly with regard to decreasing turnaround time. Although the instruments available today are improvements over the original formulations, they still represent the first generation of instruments used to identify microorganisms. These instruments are widely accepted and very helpful; however, like the instruments used in clinical chemistry and hematology laboratories, they will continue to evolve to better meet the needs of the clinical microbiology laboratory. If we compare the modern clinical chemistry analyzer, with its discrete multianalytes requiring no sample preparation, with instruments available in clinical chemistry during the 1960s, we believe we get a glimpse of what the future can be in microbiology. At the very least, we should target that level of automation for clinical microbiology and expect future

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4.BLOCK DIAGRAM

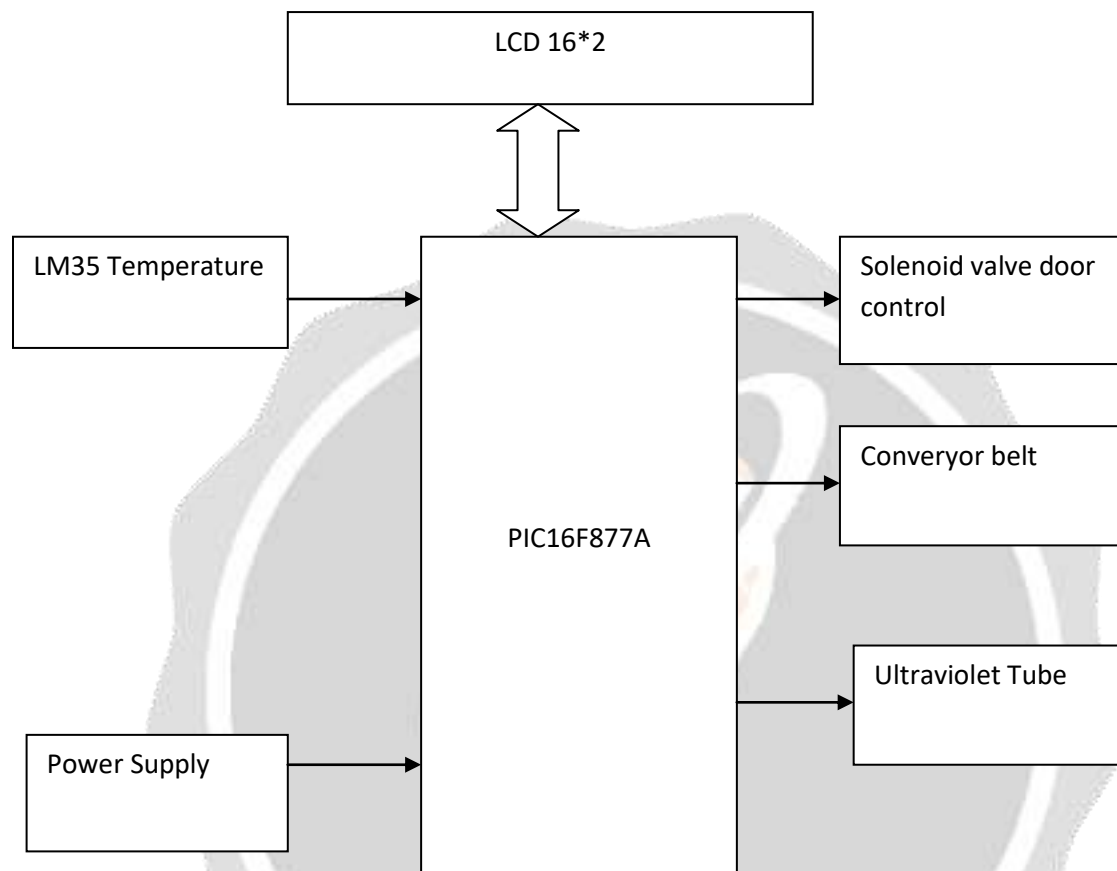


Fig: Block diagram of system

4. CONCLUSIONS

By using this system we will get the deep knowledge of the system which will let to study parameters like temperature UV rays etc. and also we have studied about the system such as PIC controller, LM35 temperature Sensor.

FUTURE SCOPE:

- We will send message to users, by implementing GSM modem
- With the help of GPS we will send the Real time location
- Using voice module we will store regional automatic audio alert clips.

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