ELEPHANT'S STRESS DETECTION FROM URINE

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Abstract: **The main aim of this project is to provide the help of peoples from elephant's attack. This is a portable electronic device which is used for measuring the stress of elephant's from urine. In this study urine is collected from 15 elephants and tested by Stresensor which is equipment for the analyses of biological reaction. It is a reader device and user friendly associated with electronics and signal processing units. One common example of a Stresensor is a glucometer.**

***Keywords*- working electrode, reference electrode, counter electrode, power supply unit, LCD.**

1. INTRODUCTION

The sensitive biological elements are (tissue, microorganisms, organelles, cell receptors, antibody, nucleic acid etc...) In this system two parts are used one is detection unit and other is strip .in this strip contains three electrode models are used they are:

- working electrode (WE),
- reference electrode (RE) and
- Counter electrode (CE).

After this current is produced, it must be changed to voltage for processing by the micro controller .This action is performed by a Tran's impedance amplifier. Finally the microcontroller detects and processes the signal with the ADC module. And read the value then displayed.

II.MATERIALS AND METHODS

Microcontroller is the core part of the project. It is a40 pin IC loaded with the program to reading and comparing pre entered values. The program is stored in the internal memory of the PIC (256 kb EEPROM data memory).Every second the PIC compares the data's. When the values become equal, the interrupt is enabled and the PIC executes *interfaced* the Interrupt Service Routine.

Being the heart of the product the PIC is connected to all other functional blocks. The 5V dc voltage required is given by the power supply circuit shown in the figure1.

Fig 1: The LCD is interfaced with PIC

The LCD is interfaced with PIC to show the time, date, day, etc. MAX 232 IC is used for the serial communication with the computer.

SYSTEMS INTER FACE:

In my system and the serial communication between the microcontroller and the computer is necessary to read, it store the values from sensor and displays graphical representation. Several standards have been developed for serial communication. When data is transmitted as voltage, the commonly used standard is known as RS-232C developed by the Electronics Industries Association (EIA), USA and adopted by IEEE. The RS-232c signal levels are not compatible with TTl logic levels. Hence for interfacing TTL devices standard is known as RS-232Cdeveloped by the Electronics Industries Association (EIA), USA and adopted by IEEE. The RS-232c signal levels are not compatible with TTl logic levels. Hence for interfacing TTL devices.

DISPLAY UNIT:

LCD is stands for liquid crystal display. It is a 16 pin IC only displayed characters and symbols with the matrix format. In this system the LCD connected to the system is a 20*4 LCD. The working voltage is a 5v.Here the function of LCD is to display

the status of the device and display the amount of detected urine. And how much amount contains of cortisol in urine.

POWER SUPPLY CIRCUIT

It is used to convert the 230v, 50Hz a.c power supply to 5v d.c, that required for the Stresensor .This block contains step down transformer or an a.c adaptor, bridge rectifier, filter circuit and a voltage regulator. A red LED is connected to indicate the proper functioning of the circuit. This block supplies power to the PIC, sensor, strip, LCD module, etc

RESULTS

Elephantsurins and get the good result of corresponding data's.

III.CONCLUSIONS

The current study describes a way of directly the experiments presented in this paper have demonstrated the amount of cortisol in urine we will generate a small amount of voltage that voltage varying.

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