Developing a Method to Calculate the Muscle Resistivity of Pitchers in Baseball

HMUKK Herath# and PP Weerakkody

Department of Sports Sciences and Physical Education, Faculty of Applied Sciences,
Sabaragamuwa University of Sri Lanka
#uherath83@gmail.com

Baseball is a bat and ball game between two teams has nine players. Pitcher is the most important position in the baseball. In baseball pitcher is the player who throws the baseball from the pitcher's mound toward the catcher to being each play. There are so many physical qualities such as strength, endurance, speed, co- ordination, muscle resistivity. Pitchers have to do many exercises to improve those qualities. But exercise can't measure value of those qualities. In order to solve this problem muscle resistivity calculating machine was introduced through this experiment. The machine has mainly three parts. Fabric sensor, Circuit and Software. Fabric sensor should hold pitcher's throwing hand and circuit also hold closer the sensor. There is a display in the circuit. When player start the machine, note with a Beep sound. After the beep sound player must do the movement and also can adjust the movement duration by using circuit button and display. After that the resistivity values will count by the fabric sensor. Counted data transfer to the software through the Bluetooth modular which located in the circuit. This software can install any phone or computer (using blue stack). Researcher can get a drafted report of resistivity capacity of movement duration by arbitrary unit. Accuracy of the measurement output of the machine was verified by testing the significant difference(95%confidenceinterval) of the two attempt of Pitcher muscle resistivity calculating test. According to the results only resistivity values had no significant differences (p=0.124) and is greater than 0.05. Machine could be concluded that muscle resistivity calculating programme should take another look and tested.

Keywords: Arbitrary Unit, Baseball, Pitcher, Resistivity, Fabric Sensor