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BIO 125

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LABORATORY 1: PHYSIOLOGICAL INSTRUMENTATION

PURPOSE: The purpose of the lab was to demystify the black block, use different units of measure, and covert the units in order to familiarize ourselves with the new lab equipment.

PROCEDURE:

- Observe the black box and understand how it preforms
- Recognize and identify the different elements and understand the application of the black box to experiments and measurements of human physiological events
- Familiarize with the basic units of measure
- Learn the basic units
- Understand the significance of the units and know how to convert them into other unit measurements
- Measure the pH of different liquids using pH testing strips and understand the meanings of each pH level

RESULTS:

Linear measurements:

	mm	cm
Length of lecture text:	156 mm	15.6 cm
Width of lecture text:	3 mm	0.03 cm
Depth of lecture text:	1 mm	0.01 cm

Volume measurements:

	mL	L
Water in beaker volume:	75 mL	0.075 L
Water in beaker into graduated cylinder volume:	70 mL	0.070 L

Mass measurements:

	mg	g
Mass of the weight:	0.11355 mg	113.55 g

Water in beaker; mass of liquid in beaker:	0.06774 mg	67.74 g

pH measurements:

pH in container A:	4
pH in container B:	7
pH in container C:	9

Time measurements:

Pulse rate after 15 seconds:	19 beats/second	76 beats/minute	
Pulse rate after 60 seconds:	18 beats/second	72 beats/minute	7200 beats/millisecond

DISCUSSION:

This lab for me was a bit of a review from my other classes I've taken, specifically chemistry. In chemistry we were required to measure using different units and we had to know how to convert the units if it needed to be different. I also had to measure the pH before so knowing what the different colors on the strips represented was easy for me. I had never used a "black box" before so I thought it was a cool new experience and understanding how it worked and what it does was very interesting to me and I would like to use it again.

CONCLUSION:

In lab 1, physiological instrumentation, I was able to learn how to use a "black box" effectively and understand its use in order to retrieve results, how to calculate the volume from mL to L , how to convert mg to g, understand what the different pH levels were and how the acidic range is 0-7 and past that is basic, as well as measure pulse rate and convert from seconds to minutes and even milliseconds. Overall this lab was able to help me review what I had learned in past classes and also teach me new skills.