

Laboratory Exercise 6: Properties of skeletal muscle

Introduction

In this laboratory you will conduct an experiment that examines the properties of skeletal muscle as an organ. Since we have not started discussing muscle in lecture, we don't expect you to be familiar with the mechanism of muscle contraction. We expect you to be prepared to conduct the experiment and collect data (see below). In a later lab period we will go over this data in light of material discussed in lecture. At that point you'll be given an assignment consisting of a number of questions probing the significance of your data – this assignment will be very useful in preparation for the respective lecture exam on skeletal muscle physiology.

Preparation

Required

1. Prior to lab go through Exercise 18B, Skeletal Muscle Physiology Computer Simulation. It will take about one hour to go through the exercise and collect your virtual data. As you work through Exercise 16B, you do not have to answer the questions that are posed throughout the text – we will address these later. In order to get credit for the pre-lab you do need to print your virtual data prior to quitting from the simulation (see page P-27). The printed copy should include your name and collected data – this shows us that you indeed completed the exercise. You'll turn in this data report at the beginning of your lab.
2. Carefully read through the Skeletal Muscle Properties lab protocol posted on the web. You need to familiarize yourself with the procedures and the equipment prior to coming into lab, otherwise your experiment will be disastrous.