Name: _____

Quick Lab

How does exercise affect disposal of wastes from cellular respiration?

Materials 2 small test tubes, glass-marking pencil, 10-mL graduated cylinder, bromthymol blue solution, 2 straws, clock or watch with second hand

Procedure

1. **Predicting** Record your prediction of how exercise will affect your body's production of carbon dioxide.
2. If you are using a carbon dioxide probe, see your teacher for instructions.
3. Label two test tubes A and B. Put 10 mL of water and a few drops of bromthymol blue solution in each test tube. Carbon dioxide causes bromthymol blue to turn yellow or green.
4. Your partner will time you during this step. When your partner says "go," slowly blow air through a straw into the bottom of test tube A.
   CAUTION: *Do not inhale through the straw.*
5. When the solution changes color, your partner should say "stop," and then record how long the color change took.
6. Jog in place for 1 minute.
   CAUTION: *Do not do this if you have a medical condition that interferes with exercise. If you feel faint or dizzy, stop immediately and sit down.*
7. Repeat steps 4 and 5 using test tube B.
8. Trade roles with your partner. Repeat steps 3 through 7.

Analyze and Conclude

1. **Analyzing Data** How did exercise affect the time for the solution to change color? Did these results support your prediction?
2. **Inferring** What process in your body produces carbon dioxide? How does exercise affect this process?
3. **SAFETY** What safety procedures did you follow? Why were these procedures important?

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