

Simulated Stomach Lab

Lesson Title: Acid Stomach

Page 1 of 1

Name: _____

OBJECTIVE

You can see the difference between regular, buffered, and enteric (coated) aspirin by testing the tablets in neutral, acidic, and basic solutions. Your stomach is acidic, but your small intestine is basic. These chemical opposites are separated by the pyloric valve, which opens only briefly to transfer partially digested food from the stomach to the intestine.

MATERIALS

- Safety goggles
- 9 plastic cups
- 600 mL water
- 300 mL vinegar
- Regular aspirin tablets
- Buffered aspirin tablets
- Enteric aspirin tablets
- 45 g baking soda
- Stop watch

PROCEDURE

1. Add 100 mL of water to each of three labeled plastic cups.
2. Record the time on your Simulated Stomach Lab Data Sheet. Simultaneously add a regular aspirin tablet to one cup, a buffered aspirin tablet to the second, and an enteric aspirin tablet to the third.
3. Record any changes in the tablets at 30-second intervals until no further change is evident.
4. Repeat steps 1-3 using vinegar in each cup instead of water.
5. Repeat steps 1-3 again, using 15 g of baking soda in 300 mL of water in each cup.