"Which "Antacid is the Best Buy?"

Purpose: to compare four different brands of antacid tablets with respect to their abilities to "neutralize" excess stomach acid that drops below a pH of 3 (the normal pH of the stomach). This comparison will also be based upon price.

Materials:

safety glasses

mortar and pestle

4 antacids

electronic balance

■ Erlenmever flask

@ Congo red indicator

回 hydrochloric acid

eyedropper

Method:

- Record the price, number of tablets and the name of the active ingreditent of your first antacid.
- Record the recommended dose. 2.
- Find the mass of one recommended dose. 3.
- Grind these tablets up using a mortar and pestle. 4.
- Transfer all of the powder to the Erlenmeyer flask. 5.
- Add 5 drops of Congo red indicator. 6.
- Add acid, one drop at a time until you have achieved the required colour change. KEEP TRACK OF YOUR 7. NUMBER OF DROPS and record them.
- 8. Clean out your flask and repeat for the next antacid until they are all done.

Results:

Name of Antacid	Name of Antacid
Active ingredient	Active ingredient
Cost of battle	Cost of bottle
# of tablets per . bottle	# of tablets per bottle
Recommended dose	Recommended dose
Mass of recommended dose	Mass of recommended dose
# of drops of acid	# of drops of acid

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Active ingredient .	Active ingredient
Cost of bottle	Cost of bottle
# of tablets per bottle	# of tablets per bottle
Recommended dose	Recommended cose
Mass of recommended dose	Mass of recommended dose
# of drops of acid	# of drops of acid

Calculations:

Show your calculations for each tablet as shown below;

Name of antacid			
Cost per tablet = cost of bottle + # of tablets			
Cost per dose = cost per tablet x # of tablets in a dose		·	
# of drops required to bring one dose to a safe pH for the stomach		·	
# of drops per gram of tablet = # of drops ÷ mass of one dose			
# of drops per penny = # of drops ÷ cost of one dose	^		

Questions:

1	What is an	antacid	and how	2anh	It work?

2. Which of the 4 antacids you tested is the "best buy". Support your answer with evidence from this lab.

3. Why was Congo red used as the indicator?

4. Has this lab made an impact on your choice of antacids? Explain.