

# Will Mountain Dew Dissolve a Mouse?



# HYPOTHESIS

Will Mountain Dew (or other kitchen liquids) dissolve a mouse?

# BACKGROUND INFORMATION

A recent news story - someone claiming they found a dead mouse in a can of Mountain Dew and they wanted a lot of money from the company.

Mountain Dew said it's not possible because of the amount of acid in the soda would dissolve the mouse into a jelly like goo in a can that was 20 months old.

Is this true or were the people who claimed that the mouse was dead in the soda lying?

# **Problem** - Will Mountain Dew (or other kitchen liquids) dissolve a mouse?

## Independent variable

*Type of liquid: Mountain Dew and other liquids in our kitchen to see how they would affect would the “mouse” dissolving.*

## Dependent variable

*Whether the “mouse” dissolves or not*

## Constants

*Size and type of “mouse” as represented by a piece of pork steak and bone.*

*The size and amount of liquid in jar*

# PROCEDURE - Step 1

Finding something to represent a mouse. I used raw meat and bone since I didn't want to kill a mouse and did not have any dead available for the experiment. I went to the grocery store and got a pork steak. My Dad did all the cutting of the meat and bone for safety in even pieces (about 20 grams) so I would not get hurt.



# PROCEDURE - Step 2

In addition to Mountain Dew, I chose 4 different kitchen liquids, Water, Lemon Juice, Vinegar, and Coca Cola. se My Dad with the selections based on varying acid contents. helped



# PROCEDURE - Step 3

I put raw meat and bone in 5 different jars that could hold 40 ounces or ~120 ml and added the 5 different liquids in the jars and sealed and closed them.



# PROCEDURE - Step 4

I took regular observations and wrote things down and I took pictures of the meat and the liquids (see Observations, center).

# PROCEDURE - Step 5

After 27 days, February 11, 2012, I opened the jars to see the results. This was not my favorite part of this experiment as the first jar opened the water smelled horrible. I took the meat and bones out of the jars, took pictures and recorded my observations.

# BIBLIOGRPAHY

I Googled “mouse mountain dew” and came up with websites reporting the details about the story.

I also used the internet to find out “What is the weight of an average lab mouse? Answer: About 20 grams

And find the acidity of the liquids.

<b>Drink</b>	<b>Acid (pH)</b>
<b>Lemon juice</b>	2.00-2.60
<b>Vinegar</b>	2.40-3.40
<b>Coke Classic</b>	2.53
<b>Mountain Dew</b>	3.22
<b>Water</b>	7.0

# TRIALS AND SAMPLES

- Trial 1 – Mountain Dew
- Trial 2 - Vinegar
- Trial 3 – Lemon Juice
- Trial 4 – Water
- Trial 5 – Coca-Cola

# Observation 1

Sunday January 15, 2012, 5:30 pm - Four hours after start

Trial 1 - Mountain Dew - cloudy

Trial 2 - Vinegar - fluffy bone and meat

Trial 3 - Lemon Juice cloudy

Trial 4 - Water - turning pink

Trial 5 - Coca-Cola - dark particles at the bottom; liquid nearly clear



# Observation 2

Monday January 16, 2012, 3:47 pm - 1 day after experiment started

Trial 1 – Mountain Dew –meat not floating any more

Trial 2 - Vinegar – meat in vinegar is expanded.

Trial 3 –Lemon Juice -white powdery substance is floating around

Trial 4 – Water – still a little pink

Trial 5 – Coca-Cola – meat is floating

# Observation 3

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Trial 1 – Mountain Dew – meat not floating any more

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Trial 5 – Coca-Cola – meat is floating

# Observation 4

Sunday January 22, 2012 - 1 week after experiment started



# Observation 6

Saturday February 11, 2012 - 27 days after experiment started.



# Conclusion

- Meat did not dissolve, though color changed.
- Two meats had a gelatin “jelly like” substance: vinegar and lemon juice.
- Meat in the water was the stinkiest; most spoiled?
- Vinegar used to preserve foods, so maybe helped preserve meat.
- Bones remained hard,
  - lemon juice and vinegar turned black
  - two soda trials took color of the soda
  - water stayed red like in the beginning.

Unclear that a mouse would completely dissolve in a Mountain Dew but it appears that a “jelly like” substance could have formed

