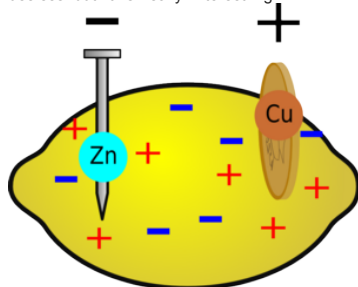


Lemon battery

Lemon battery is made from lemon, nail Zink (-) and coin Copper (+). If you will connect bulb to the lemon, it will glow for some time. If you don't have lemon, you can use many other fruits instead. This battery will not charge your phone or computer. Its actually useless but it is really interesting.



Odkaz na video: <https://youtu.be/AY9qcDCFvI>

COKE & MENTOS

VULCANO

Supplies:

- Diet coke (Light/Zero)
- Mentos
- If you're trying at home you will need some box/bath/basin

1) What will happen?

Do you know what will happen if you drop Mentos in a bottle of coke?
Draw and describe the reaction.

2) Why all of this happens?

- Coke contains big amount of CO_2 both in form of bubbles and carbonic acid. Carbonic acid spontaneously decays into CO_2 and water. When you drop mentos into a bottle of coke, the rough surface of the candy will cause rapid decay of the carbonic acid, which creates the explosion. Another thing to note is the surface tension of the soda. The bigger the tension is, the faster is the release of CO_2 . Diet sodas are usually sweetened with Aspartam. This artificial sweetener decreases the surface tension of the drink, thus strengthens the reaction. Arabic-gum which is contained in mentos works similar way.

3) Interesting videos about this experiment:

- <https://www.youtube.com/watch?v=iS2vG1o7Op4>
- <https://www.youtube.com/watch?v=GnmN9L5eP5s>
- <https://www.youtube.com/watch?v=LjblELjgZg>

4) Answer the questions

- Is there any difference between Cola Light and regular cola?
- Is Aspartam natural sweetener?
- What effect does it have on the experiment?
- Is it true, that CO_2 decays into carbonic acid?

* Carbon Dioxide

Julie Jeřková VIII.B.



Experiment With Sugar and an Additive

What we need:

Sugar cube,
some source of fire,
cinnamon or ash (or some additive)

In this experiment we can see that you can not set the sugar on fire but when we add some additive for example cigaret ash then the sugar burns.



Here is link to the video where you can see the experiment:
<https://www.youtube.com/watch?v=UOsQXupKcFM>

PROJECT BALLOON

- **Aids:** balloon, salt, pepper, plate and something like shirt
- **What happened:** A teacher took a balloon and rubbed the balloon on his shirt, then put the balloon over the pepper and salt. And the pepper sucked on the balloon. The salt stayed on the plate.
- **Why does it happened:** After friction with shirt (or some kind of wave) balloon is electrically charged. On the balloon is now Static electricity. Electric charge is attracted pepper like a magnet attracts iron, salt electrostatically not charging. Salt is still on the plate.
- **Link with the video:**
<https://www.vimproc.cz/?page=record&id=684>

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