

# RESEARCH OF INFLUENCE OF GALVANIC CELLS ON THE ENVIRONMENT

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## 1. Introduction

Cell phones, notebooks, electric devices, children's toys, watches – all this stuff works on batteries. We do not think of how they influence a human body, what harm they do to the environment. The used batteries contain a lot of harmful substances and may cause diseases of nervous system and much more troubles. The aim of that research is to find out how dangerous the used batteries are and to call on people to protect our planet from those substances.

## 2. Research technique

Before the experiment, we conducted a sociological survey. The survey involved 86 persons - these are students from 8 to 18 years old. We found how many batteries are thrown out in each family. Also we've figured out where do they use to throw those batteries and asked what do they think about recycling. We were going to check the impact of batteries on the growth of plants and how the cell's contained substances will change the aqueous solutions. To check it the disassembled batteries were lowered into the water and after few days we checked all the samples with a universal indicator. After matching results we've grown the samples of plants and watered them .

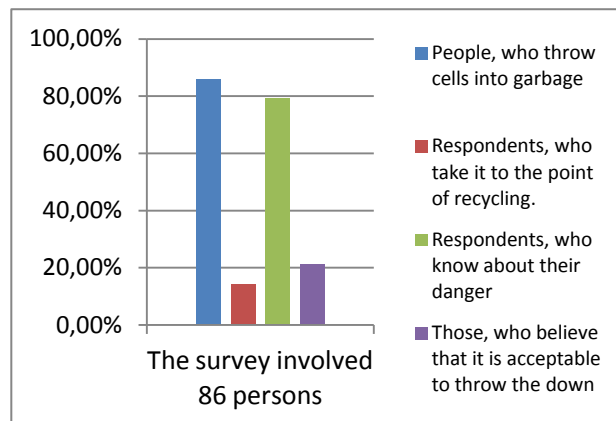


Table 1. Survey results

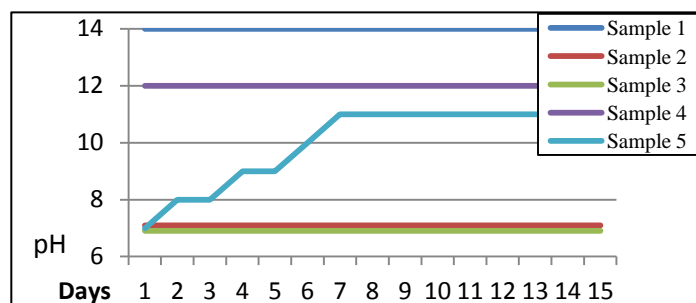


Table 2. The change of pH level of the water

Our flowers, which were also watered by the dangerous solutions, dropped down their petals after the first day.



## 3. Results

Short results of the survey you can see in the Table 1. Table 2 contain results of the water pH changes after sealing down the samples – disassembled batteries.

All the plants used for another experiment perished during next 2 weeks, but samples with the alkaline-based cells killed its' plants for 4 days! It is much faster than we've expected before and it is very mind-blowing



## 4. Conclusions

Our research shows how dangerous can be non-recycled galvanic cells. Every day that trash cares death for the thousands of plants and spoils life of thousands animals. Our planet is in our hands and everybody of us creates the world for the future generations. We tend to get sad with the today's situation, but we believe that people will become more responsible in the future.

## 5. References

[1] Theodore E. Brown "Student's Guide to Chemistry the Central Science", 1977