

12. Colored Fire

Problem's task

It is easy to colorize a flame using various chemicals. Identify the chemicals needed to get a specific color and investigate what color is obtained if a mix of two chemicals is used.

Reporter Summary

Strong points

- Strong theory
- Good videos that showed the colours
- Good variation of parameters
- Good correlation between the colour and temperature
- Good answering of the questions

Weak points

- **Did not answer any of the questions**
- Did not talk about the correlation between an element's atomic nr and its colour.
- Useless colour theory, the colours temperature was not relevant
- Did not take into account the caloric power of the flame, which is a very important factor
- Not enough explanation of the setup
- Did not try to use anything but salts

Opponent Summary

Strong points

- Relevant questions to the problem
- Pointed out the lack of explanation on the chemical part of the problem.

Weak points

- Did not see the problem with the insufficiency if the parameter variation
- Not enough pros and cons

Clashes during the fight

- Opp: The setup was not explained well enough
Rep: I think that my pictures explained it well.
Rew: We agree with the opponent,
- Opp: Why did you choose a certain percentage of substances in the substance mix?
Rep: There was no particular reason.
Rew: We think the percentage should have been 50 percent for each substance, for a balance to exist

Thank you for your attention!

Clarifying questions for the reporter and opponent

Reporter:

- What is the coloration between the element's atomic number and the color obtained.
- Did u take into consideration the combustion power of the fuel
- Were there any impurities in the system
- How would the substance's age and humidity level affect the color?
- Would metals from the main groups generate any color?
Daca zice da spui The metals from the main groups do not produce colour, only white sparks si intrebi do u agree with me?
- Daca zice nu poți sa intrebi : why?

Opponent: