



8. Smells

OPPONENT

Greece – Phaedra Maria Tsolakidi

Hellenic Physical Society
I.Y.N.T. - Belarus 2019



Clarifying questions

- What were the conditions of the environment where the experiment took place?
- How many times did you conduct the experiment?
- What parameters did you take in your account?
- What quantities of samples did you use?



Pros & Cons

1. She tried to test in her experiment some of the parameters of diffusion rate.
2. Both theory and experiment included.
3. The odors that she included in her experiment covered a satisfying range of smells.
1. Theory and experiment not well balanced. Theory was too much.
2. She does not define the density of the tested substances in the experiments.
3. Her measurements were subjective. She depends on her own senses.
4. Her experiments were not tested many times.
5. Not examined fully what happens after the odour reaches our nose.
6. Not all diagrams had names in their axes.
7. Experimental procedure was in some points unclear and confusing.



You can improve at:

1. Defining density & measuring the density.
2. Make more accurate measurements.
3. Test all the parameters.
4. Not depending on her own senses.
5. Testing the experiments more times.
6. Focus more to the olfactory system.



Conclusions

- Well-based theory.
- Unclear and missed parts in the experiment.
- Based in his own senses.
- Not fully investigated the sensation of odors by humans.

8. Smells

THANK YOU FOR YOUR ATTENTION!



Discussion

- How many molecules are needed in order to recognise a smell for a healthy adult?
- Do molecules with the same shape or configuration of atoms smell the same ?
- How can we maximize the utilization of molecules of an object?
- What is the effect of molar mass on rates of diffusion / effusion ?
- If the experiment was conducted in an environment with no air, will we be able to smell the odors ?
- In an environment with no gravity , would we be able to smell the odors ?