

PROBLEM

It is often said that heavy smokers can't taste and smell things as well as non-smokers. Can you conduct experiments to show if this is so? Can you relate your findings to the length of time the people have been smoking and/or the number of cigarettes they have each day?

INFORMATION

1. Easiest substances to use are ones that you can measure and dilute accurately so you can find out what is the lowest concentration of a substance your tester can smell or taste (a few suggestions – vinegar, honey, sesame seed oil, chilli sauce etc – don't use anything poisonous or substances that will evaporate very fast).
2. Some people are "odour" blind or "taste" blind to certain substances.
3. Many of the things we think we taste, we really smell, and there are only four basic taste sensations, sweet, acid, salty and bitter.

DESIGN OF EXPERIMENTS

1. You will need to label your diluted substances carefully. How can you be sure your test subject doesn't just read the labels?
2. Will you present substances in a graded sequence from water up, or at random? How many times should each concentration be tested?
3. Will you tell the person what they are supposed to smell first or wait till they find out for themselves?
4. Will it matter if the person has a cold?

REFERENCES

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