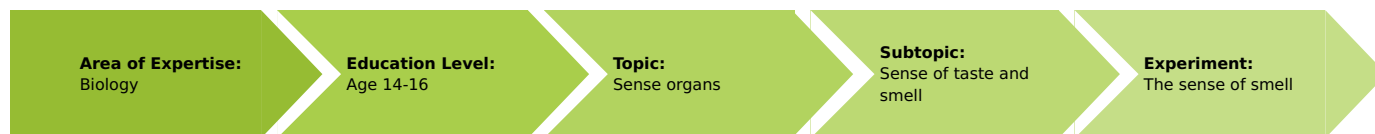


The sense of smell (Item No.: P8013400)

Curricular Relevance



Difficulty



Easy

Preparation Time



10 Minutes

Execution Time



10 Minutes

Recommended Group Size



2 Students

Additional Requirements:

Experiment Variations:

Keywords:

Olfactory receptors, Nasal tracts, Receptor cells

Task and equipment

Information for teachers

Additional Information

Our sense of smell is located very high up in the nose, where we have our "nasal tracts". In these lie the receptor cells for our sense of smell.

Hints on Set-up and Procedure

- This experiment can also be performed with other odorous substances.



Hazards!

- Ethanol is highly flammable!
- Keep the container tightly closed!
- Keep it away from sources of ignition!

Waste disposal

Pour ethanol into the container for organic halogen-free solvents.

The sense of smell (Item No.: P8013400)

Task and equipment

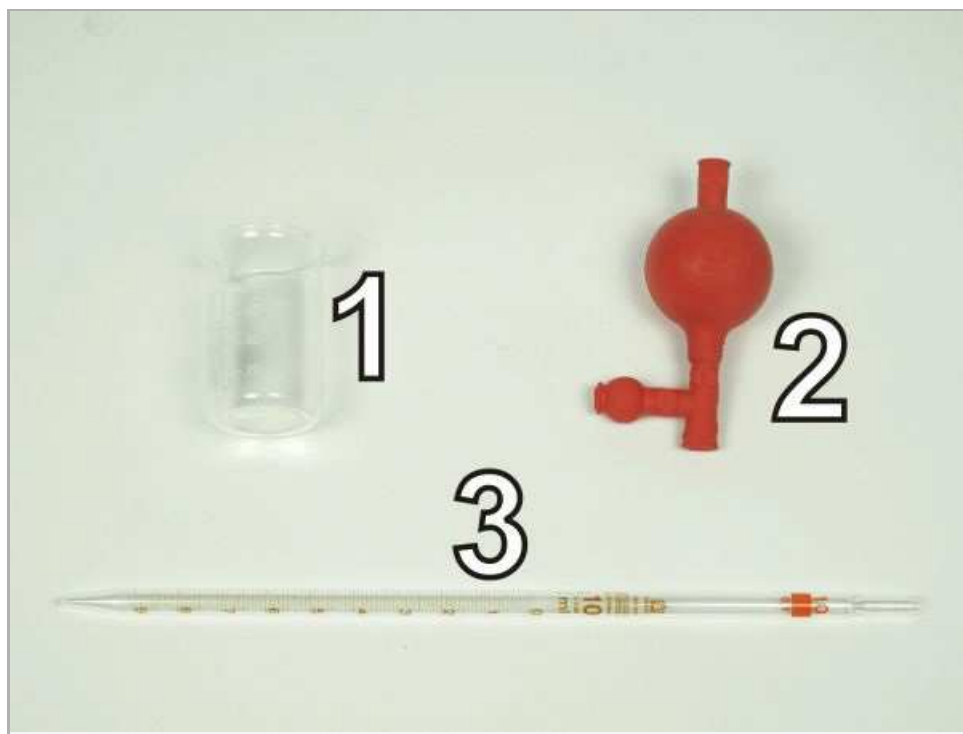
Task

How do we experience smells?

Find out under what conditions smells are experienced.



Equipment



Position No.	Material	Order No.	Quantity
1	Glass beaker DURAN®, tall, 100 ml	36002-00	1
2	Pipettor, bulb, 3 valves, 10ml max.	47127-01	1
3	Graduated pipette 10 ml	36600-00	1
	Protecting glasses, clear glass	39316-00	1
	Denaturated alcohol (spirit for burning), 1000 ml	31150-70	1

Set-up and procedure

Hazards!

- Ethanol is highly flammable!
- Keep the container tightly closed!
- Keep it away from sources of ignition!



Give 8-10 ml of 70 % ethyl alcohol (ethanol) into a 100 ml beaker.



Fig. 1

Hold the beaker under your nose and test the smell breathing normally, jerkily (sniffing) and without inhaling (Fig. 2). Write down your observations in the report.



Fig. 2

Waste disposal

Pour ethanol into the container for organic halogen-free solvents.

Report: The sense of smell

Result - Observations

Describe the sensation of smelling accurately in each case.

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Evaluation - Question 1

When is the sensation of smelling at its strongest? When can it not be experienced?

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Evaluation - Question 2

What is absolutely essential in order to experience a smell?

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