

Collecting Air Pollutants

There are many kinds of pollutants in the air. Some are invisible gases, but many kinds of air pollutants are actually tiny particles that you can easily see — if you get a close look at them. Some common particles in the air include dust from soil, pollen from plants and soot from smoke.

Objective

Make particulate collectors to observe the different kinds of particles that can be found in the air that you breathe everyday.

Materials

- four petri dishes
- one petri dish cover
- petroleum jelly
- a marker
- a magnifying glass

Safety Notice: All applicable laboratory safety rules must be followed. Students should not perform any experimental activity without the teacher's supervision and express permission. Students must follow safety guidelines and wear appropriate protective gear.

Procedure

1. Use your marker to label the petri dishes one through four.
2. Coat the bottom of each dish with petroleum jelly.
3. Quickly cover dish number one with the petri dish cover. This will act as your control.
4. Place the uncovered dishes 2, 3 and 4 in different locations, both indoors and out, where no one will disturb them. Describe each area in the data table.

5. Leave the particulate collectors in their locations for three days.

- What do you think you will see? Which do you think will contain the most particles, and why?

6. After three days, collect all four of your particulate collectors.

7. Remove the cover of number one, which is your control, and record any observations in the data table.

8. Observe each collector. Record the amount and type of particles you see in each one.

Conclusions

- What was the purpose of the control? Did your control have any particulates on it? Why or why not?

- Try to identify five particulates that landed in your collectors. Which of these would you classify as a pollutant? Explain why.

- Describe the locations you chose to place your collectors. Which location showed the greatest number of air particulates? Which location showed the least? Was it what you expected?

Data Table

	Dish 1 – control	Dish 2 – Area: _____	Dish 3 – Area: _____	Dish 4 – Area: _____
Particulate observations				