



GROWING MICROGREENS AND HARVESTING THEM FOR NUTRITION TESTING

Microgreens are tiny, young vegetable greens packed with vitamins and minerals. In this experiment, you will grow your own microgreens, harvest them, and test their nutrition content.




**GOOD FOOD
SMALL SIZE
BIG BENEFITS**

QUESTION

How nutritious are the microgreens you grow?

HYPOTHESIS

If I grow microgreens and harvest them, then they will contain measurable amounts of nutrients that are good for my body.

MATERIALS

- Microgreen seeds (such as broccoli, radish, or sunflower)
- Shallow tray or container with drainage holes
- Potting soil or coco coir
- Water spray bottle
- Light source (sunny window or grow light)
- Scissors
- Kitchen scale (to weigh microgreens)
- Blender or mortar and pestle
- Water
- Cheesecloth or coffee filter
- Test kits or methods for nutrition testing (see below)
- Notebook and pen

PROCEDURE

1. **Plant Seeds:** Fill the tray with moist soil or coco coir. Sprinkle seeds evenly over the surface. Do not cover the seeds; just press them gently into the soil.
2. **Water:** Mist the seeds gently with water. Keep the soil moist (but not soggy) throughout the growing period.
3. **Provide Light:** Place the tray in a sunny spot or under a grow light for 12–16 hours per day.
4. **Grow:** Watch your microgreens grow! Most will be ready to harvest in 7–14 days, when the first true leaves appear.
5. **Harvest:** Use scissors to cut the microgreens just above the soil line. Weigh your harvest and record the mass.
6. **Prepare Sample:** Blend or crush 10 g of microgreens with 20 mL of distilled water. Strain the mixture through cheesecloth or a coffee filter into a clean cup. This is your test solution.
7. **Test for Nutrients:** Use the test kits or methods below to measure nutrients in your sample.
8. **Record Results:** Record your observations and results in the data table.
9. **Clean Up:** Dispose of plant material in compost or trash. Clean all materials and your workspace.

NUTRITION TESTS

	Chlorophyll (Plant Pigment) What it shows: More chlorophyll may mean more antioxidants and vitamins. How to test: Use a chlorophyll test kit following the instructions.
	Vitamin C What it shows: Vitamin C supports your immune system. How to test: Use a Vitamin C test kit. Add the solution to your sample and compare the color to the chart.
	Nitrate What it shows: Plants naturally take in nitrates. High levels may not be safe. How to test: Use a nitrate test kit. Compare the color of your sample to the chart.
	Total Antioxidant Capacity (Optional) What it shows: Antioxidants help protect your cells. How to test: Use an antioxidant test kit and follow the instructions.

Note: Follow all test kit instructions carefully. Results may vary.

DATA TABLE

Test	What It Measures	Result	What It Means
Chlorophyll	Plant pigment (antioxidants)		Higher is generally better
Vitamin C	Vitamin C (mg/L or kit units)		Higher is generally better
Nitrate	Nitrate (mg/L or ppm)		Lower is generally better
Total Antioxidant Capacity (Optional)	Antioxidant level (kit units)		Higher is generally better

OBSERVATIONS

What did you notice about growing and harvesting your microgreens?

CONCLUSION

What did your results show about the nutrition in your microgreens?

Would you grow microgreens again? Why or why not?

How could you improve your experiment next time?

EXTENSION IDEAS

- Compare different types of microgreens.
- Test how light, water, or soil affects nutrition levels.
- Research how microgreens can help your health.

