Lab Report – Bokashi Fermentation

Group Members:
Date(s):
Class/Period:
Location:

Objective

What are you trying to find out in this investigation?
(Write a short statement explaining the goal of this activity — e.g., to observe microbial fermentation of cafeteria food scraps, track changes in pH and leachate, and understand how microbes help reduce food waste.)

Safety Precautions

List at least three safety or hygiene rules you followed during this activity.

1.
2.
3.

Materials Used

List all equipment and supplies used for the bokashi fermentation experiment.

Procedure Summary

Briefly describe the main steps your group followed to set up the bokashi fermentation system and monitor it over time.

Data Collection
Bokashi Setup Log
(Record bucket weights, net food added, and notes about food types.)

Date	Bucket Weight (Empty)	Bucket Weight (With Food)	Net Food Added (g or kg)	Notes (food types, chopped/whole)
Setup Day				

Fermentation Monitoring Log
(Record leachate volume, pH, smell, visible changes, and notes for each monitoring day.)

Date	Leachate Volume (mL)	pH Reading	Smell Description	Visible Changes (mold, condensation, liquid)	Notes
Day 0 (Setup)	—	—	Neutral / bran-like	Fresh scraps, layered with bran	
Day 7					
Day 10					
Day 14					
Day 18					
Day 21 (Final)					

Guiding Questions
Answer the questions based on your observations.

1. How did the pH change over the monitoring period?

2. How did the smell evolve? (e.g., neutral → sour → vinegar-like)

3. How did the leachate volume change over time? What might this suggest about microbial activity?

4. What microbial processes might explain these changes?

5. What does this experiment suggest about the role of microbes in reducing food waste?

Reflection and Analysis
1. Summary of Findings
Describe what you discovered from the bokashi fermentation experiment.

2. Environmental & Community Impacts
Explain how bokashi fermentation of food waste affects:
The environment:

The school/community:

3. Recommendations
If you could advise your school or community on using bokashi or other food waste management strategies, what two realistic actions would you recommend?

1.

Why would this help?

2.

Why would this help?

Conclusion
Summarize what you learned about microbial fermentation, food waste reduction, and how your school can move toward a more sustainable, circular food system.

Appendix
Attach:

- Photos or sketches of your setup
- Completed data logs
- Graphs or charts of pH or leachate trends
- Any supporting calculations or notes