

Project Title :

Homemade Air Freshener
Using Natural Ingredients

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3. Abstract

This project aims to make a simple, safe, and effective homemade air freshener using natural ingredients. A combination of baking soda and essential oils was used to trap unwanted odors and add a refreshing aroma. The experiment evaluated how well the natural air freshener neutralized smells in small indoor areas. Results showed that unpleasant odors were significantly reduced within days, and the air remained fresh for up to three weeks.

4. Introduction

Air fresheners are popular for creating pleasant indoor environments, but most commercial products release volatile organic compounds (VOCs) and chemicals that harm human health and the environment. This project demonstrates how natural ingredients—like baking soda, essential oils, and citrus peels—can be used to create an eco-friendly air freshener free from such toxins.

5. Methodology and Procedure

Materials:

- Baking soda – ½ cup
- Essential oils (lavender, lemon, peppermint, eucalyptus) – 10–15 drops
- Small glass jar or container
- Coffee filter or breathable cloth
- Rubber band or perforated lid
- Optional: Dried herbs or citrus peels

Procedure:

1. Take a clean glass jar and add ½ cup of baking soda.
 2. Add 10–15 drops of essential oil(s).
 3. Mix gently with a spoon.
 4. Cover the jar using a coffee filter or thin cloth and secure with a rubber band.
 5. Place the jar in a room, car, or washroom.
 6. Shake occasionally to renew the scent.
 7. Replace ingredients every 2–4 weeks.
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6. Result

Observation Day	Odor Intensity (1–5)	Freshness Noted	Duration of Effectiveness
Day 1	5 (strong odor)	No scent yet	—
Day 2	3	Light scent present	—
Day 4	2	Noticeable freshness	Effective
Week 2	2	Pleasant scent	Effective
Week 3	3	Slightly faded scent	Needs refresh
Week 4	5 (odor returns)	No active scent	Replace mixture

The natural air freshener began reducing odor within one to two days. The effect remained steady for two to three weeks, depending on oil type and environment. Lemon and peppermint oils performed best for removing strong odors.

7. Discussion

The experiment demonstrates that natural ingredients are effective for neutralizing indoor odors. Unlike commercial air fresheners, the homemade version does not emit VOCs or chemical residues and poses no risk to individuals with sensitivities or allergies. Results indicate that the scent and deodorizing effects are long-lasting, safe, and eco-friendly, offering a reliable alternative for household air purification.

8. Conclusion

The project successfully demonstrated that baking soda and essential oils can produce a simple, effective, and eco-friendly air freshener. It is non-toxic, biodegradable, and safe for family use. This natural solution proves beneficial for those seeking health-conscious and environmentally sustainable alternatives.

9. Reference

- Articles on homemade air fresheners with natural ingredients.
 - Studies regarding the effects of VOCs from commercial fresheners.
 - Islamic teachings and hadith on cleanliness and use of natural fragrances.
 - Environmental science textbooks for middle school.
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10. Acknowledgement

The student expresses gratitude to Guide Teacher Syeda Ayesha Siddiqua for her constant support and guidance, school authorities at M.S Creative School for encouragement, and the family for assistance in conducting the experiment and documenting the results.