



BATAAN PENINSULA STATE UNIVERSITY
DINALUPIHAN CAMPUS
COLLEGE OF EDUCATION



AROMATICO GROUNDED SOLUTIONS: BREWING CLEAN FROM COFFEE WASTE

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INTRODUCTION

Used coffee grounds from shops **often go to waste**. This project solves that by turning them into **eco-friendly air deodorizers**.



OBJECTIVES

- **Recycle** used coffee grounds into air deodorizers
- Provide a natural and **eco-friendly alternative** to chemical fresheners
- Promote **creative and practical** reuse of waste materials
- Help **reduce organic waste** in the community **through innovation**



LOCALE



In the Philippines, **instant coffee powder** costs around **₱10–₱20 per sachet** and is widely used by households.

Coffee shops use higher-quality ground coffee beans priced at **₱300 to ₱500 per 250 grams**. Despite this cost, used coffee grounds from these **shops are often discarded**.



IDENTIFIED PROBLEMS

- Large amounts of used coffee grounds are **discarded** and **sent to landfills**.
- This organic waste has reuse potential but is **often overlooked**.
- **Lack of awareness** and sustainable disposal methods worsens waste problems.



GLOBAL ISSUE

Study indicates that the coffee industry produces approximately **60-80 million tons** of waste coffee grounds annually **Jung et al.(2025)**

Jung, H., Kim, S., Lee, Y., & Park, J. (2025). Environmental impact of waste coffee grounds in the global coffee industry. Journal of Sustainable Waste Management, 18(2), 112–125. <https://doi.org/10.1234/jswm.2025.01802>



METHODOLOGY



Brainstorming



METHODOLOGY



Consultation and Collaboration



Coffee Deodorizer Tablet Making Process



TRIALS



1st Trial



2nd Trial



Testing the product

Here's the result of our trials in making our air deodorizer

EXPERIMENTATION



We collected **4 kilos (or 4000 grams)** of used ground coffee and created **50 pieces of air deodorizers**.

Computation:

$4000 \text{ grams} \div 50 \text{ pieces} = \mathbf{80 \text{ grams per piece}}$



EXPERIMENTATION



We used different binders to test the **product's durability**

- Cornstarch
- Beeswax



PRODUCT COSTING



(Per Box with 3 Tablets)

Beeswax (3 tablets) = ₱12

Box = ₱5

Honeycomb Wrap = ₱12

Total Cost per Box = ₱29



INTERVIEW:

How much are you willing to buy this product?



"I think **around ₱140 to ₱150**"



"The **packaging is nice** because you use honeycomb so **I think it's around ₱150**"



"I think you can sell this ₱110 considering it as **budget friendly**"

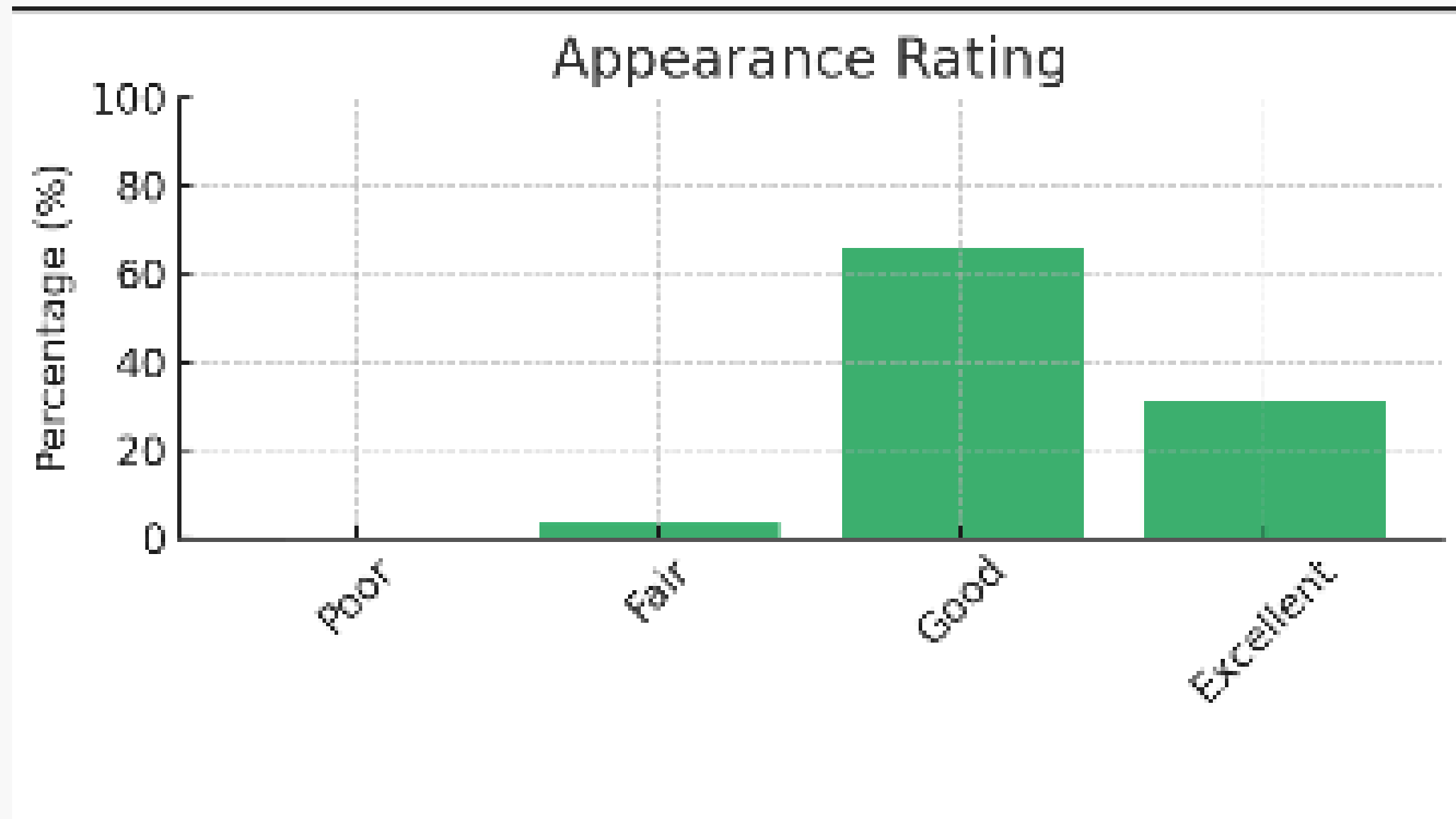
OUTCOMES AND IMPACT



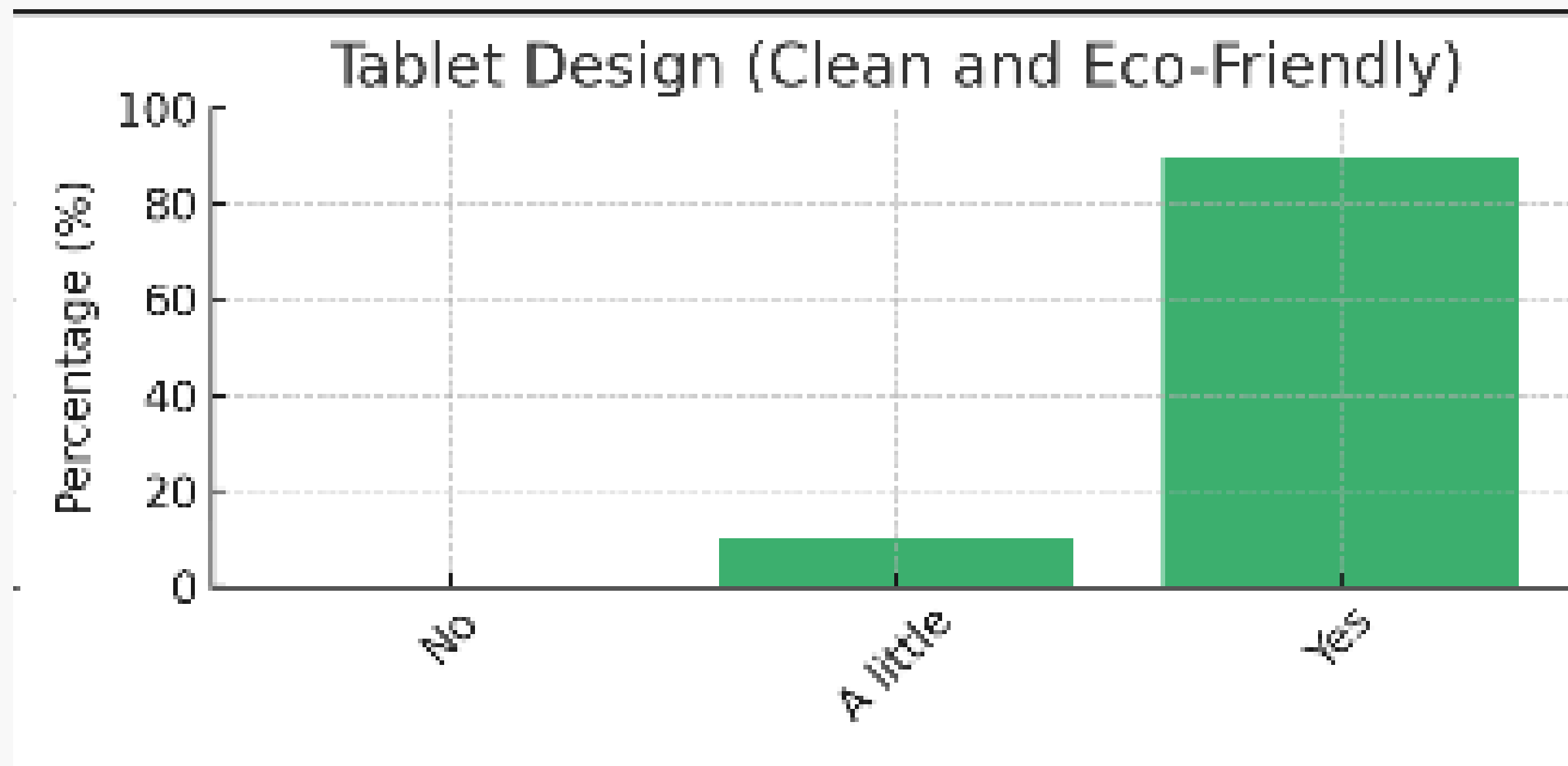
We used **qualitative**
interview and **survey form**.

We also distributed our
product to the locals to test it
and hear out some valuable
feedbacks.

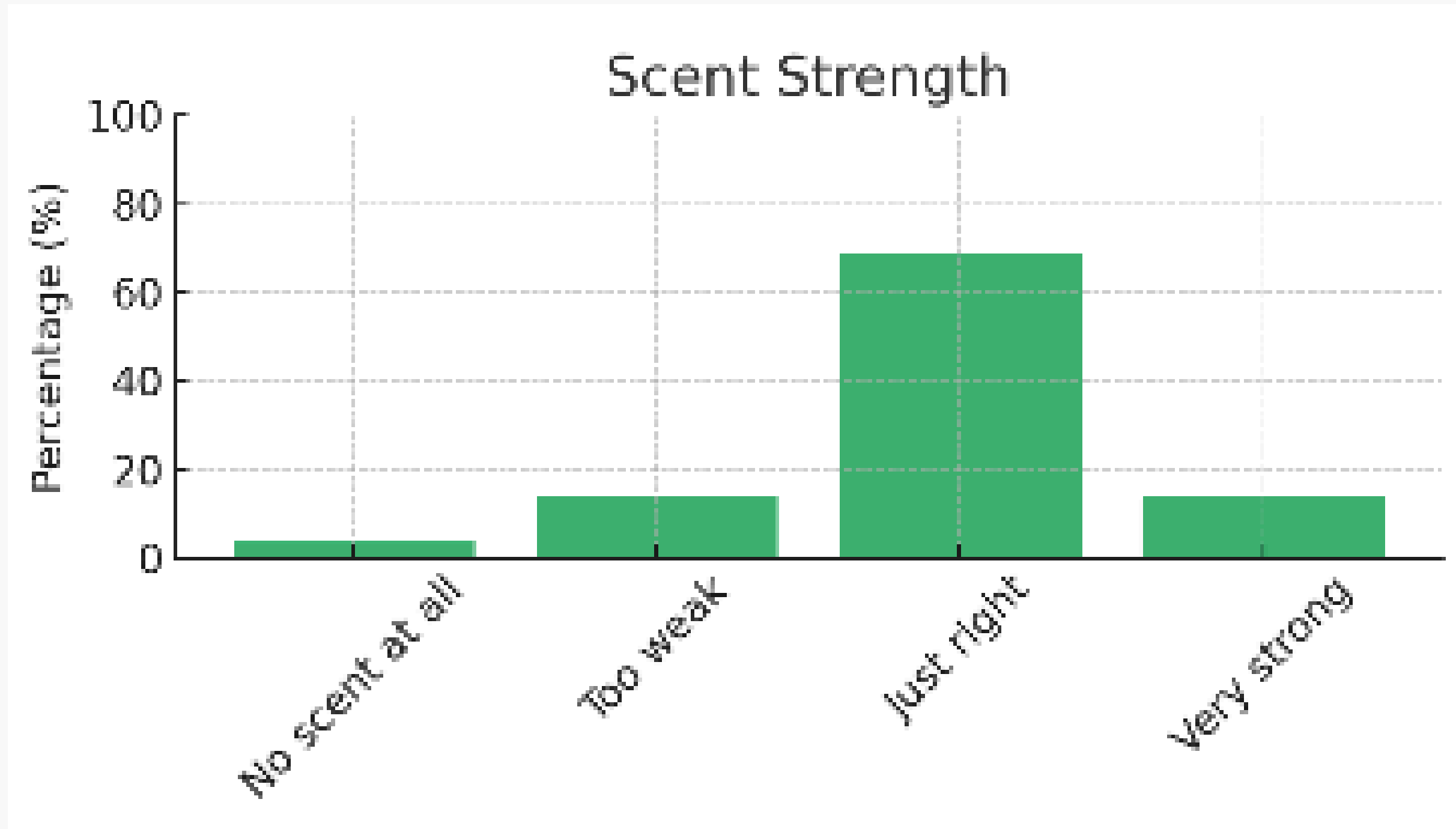
How would you rate the appearance of the coffee deodorizer tablet?



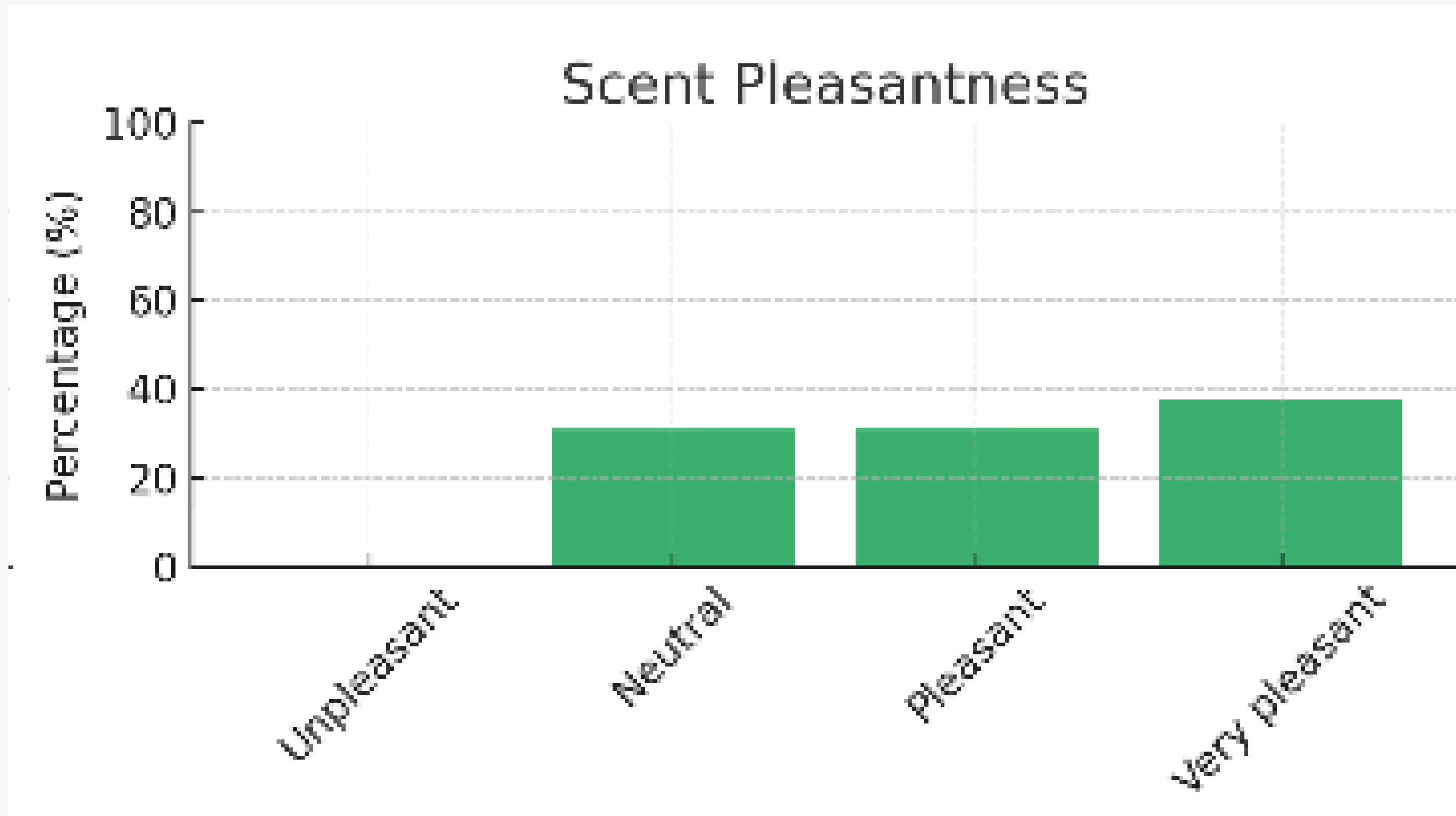
Does the design of the tablet look clean and eco-friendly?



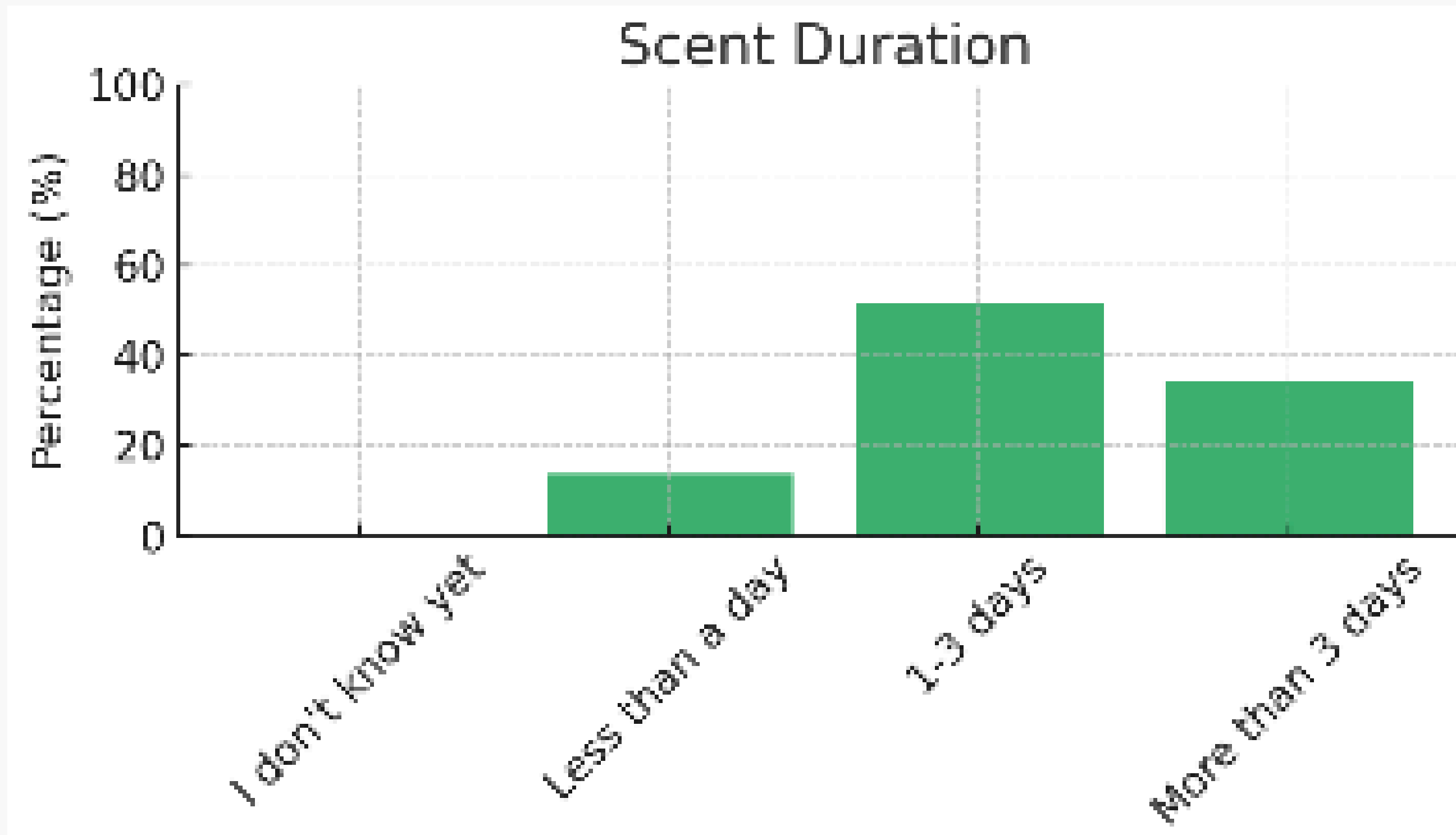
How strong is the scent?



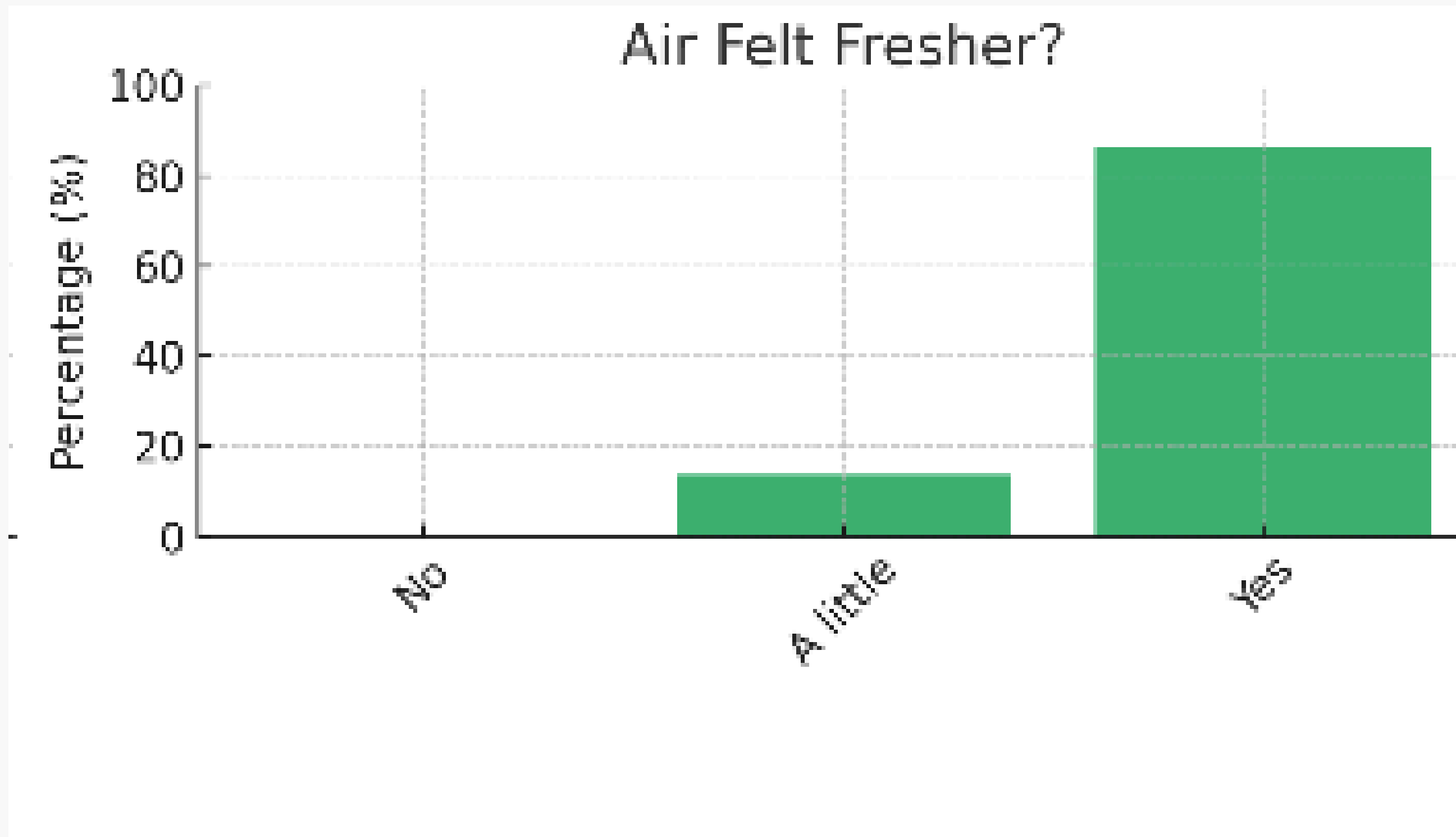
Does our product smell pleasant?



For how long did the scent last?



Did the tablet make the air feel fresher or better?



OUTCOMES AND IMPACT



OUTCOMES AND IMPACT



A **natural, eco-friendly** deodorizer that promotes **sustainable living** by reusing coffee waste.



Improves indoor air quality while **promoting hygiene and cleanliness** in common **living spaces**.

OUTCOMES AND IMPACT



Made from biodegradable coffee, it **promotes sustainability** and reduces environmental impact.



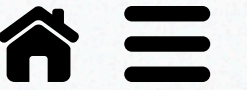
Collaboration with suppliers will greatly **enhance** the sustainability **efforts**.



RECOMMENDATIONS

- **Encourage more** local coffee shops to donate used grounds
- **Educate students** about composting and **repurposing waste**
- Develop a **digital campaign to raise awareness** and promote eco-products

LESSONS LEARNED:



**Scientific Application
In Daily Life**

Entrepreneurial Thinking

**Inspiring Community
Involvement**

**Teamwork and
Cooperation**

Leading by Example

**Adaptability and
Creativity**





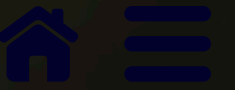
FUTURE DIRECTION

- Improve our product by **experimenting with other natural scents**
- Collaboration with the **Earth Savers Club**
- **Encourage more** coffee shops to donate their used coffee grounds instead of throwing them away.



ACKNOWLEDGEMENT

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Dinalupihan



**THANK YOU
FOR BREWING
CLEAN WITH US!**