



"Eco Flora Paper"

Conversion of recycled paper to a sustainable waterproof plantable paper using papaya latex and flower seeds

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Abstract

Paper manufacturing causes deforestation, uses vast amounts of energy and water and adds to pollution and waste issues. Eco-Flora Paper is made from recycled paper that is embedded with flower seeds and coated with papaya latex. Papaya latex is a proteolytic enzyme known for its hydrophobic amino acid with an outer hydrophilic core and an inner hydrophobic core. Therefore, it could either repel or let water adhere to the surface of the paper. The embedded flower seeds allow the paper to grow into flowers, which aid in soil regeneration and encourage secondary vegetation such as shrubs to grow.

Methodology

The materials involved are flower seeds, recycled papers, papaya latex, paper mould and deckle, a container, blender, sponge, and cloth sheet. The procedure began by blending the shredded paper. Then, let the paper be soaked in water before aligning the deckle to the mould and dipping it in the mixture. Sprinkle the flower seeds and use a sponge to soak up the excess water. Let it dry before spreading some papaya latex on the paper.

Conclusion and discussion

Finally, as compared to paper we usually use, Eco-Flora Paper helps to reduce the amount of paper waste disposed of in landfills, which has a negative impact on the environment. The special coatings provide a waterproof capability that makes our daily tasks easier and the seeds inside the paper will grow into flowers which are beneficial to the ecosystem and pollinators, apart from helping our community to live a zero-waste lifestyle. These features help to stop the drivers of climate change by reducing the cutting down of forests and minimizing the carbon footprint which results from the production of papers.

Novelty element

Developing an environmentally sustainable, high-quality innovation that can withstand any task due to the water resiliency and ability to grow when planted in soil.

Marketability element

Product: Eco-Flora Paper
Price: 100pcs cost RM 12.45
Place: Sell in Art Shop or Bookstore
Promotion: Promote on social media & hire influencers as ambassadors
People: Pulp and paper industry, paper art company, students, school and paper artist

Future improvement

The thing that we want to developed from the research that has been done are to make the paper smoother and to use natural ingredients to create various colours of the paper.

References

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