Project Title

Hygiene Meets Sustainability - Revolutionising Wet Wipes & Hygiene Products

Project Lead and Members

Project members: Moh Yan Ting, Michael Agabao, Charlene Tan

Organisation(s) Involved

Freshening Professional

Healthcare Family Group(s) Involved in this Project

Not Applicable (Industrial company)

Applicable Specialty or Discipline

Not Applicable (Industrial company)

Project Period

Start date: Not Available

Completed date: Year 2023

Aims

We aim to develop eco-friendly products using biodegradable formulation, non-woven paper and packaging so the public can enjoy the convenience of these products while being aware and responsible about our environment.

Project Attachment

See poster appended/ below

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Conclusion

See poster appended/ below

Project Category

Technology

Product Development, Product Evaluation

Keywords

Biodegradable, wet wipes, flushable

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Hygiene Meets Sustainability

Revolutionising Wet Wipes & Hygiene Products

Moh Yan Ting, Michael Agabao and Charlene Tan

Singapore Healthcare Management 2023

FRESHENING PROFESSIONAL™ SINCE 1994

Introduction

Majority of wipes in the market contain synthetic fibres like polyester and polypropylene, which never degrade in our environment over time. We aim to develop eco-friendly products using biodegradable formulation, non-woven paper and packaging so the public can enjoy the convenience of these products while being aware and responsible about our environment.

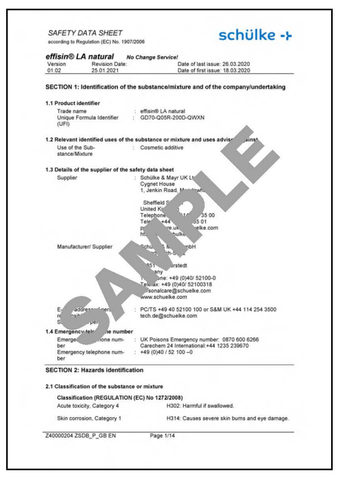
Methodology

1 Liquid Solution

There are 3 types of documents our Research and Development (R&D) Team uses to review and evaluate each ingredient to determine biodegradability before using the ingredient in the formulation.

Certificate of Origin, Natural certifications (e.g. COSMOS, Natrue, Ecocert)

Product Data Sheet



Material Safety Data Sheet

R&D Team will formulate using these biodegradable ingredients and conduct rounds of tests to ensure performance and efficacy are not compromised.

2 Paper Material

We work with carefully selected suppliers for 100% Viscose or Flushable papers made using fibres derived from natural sources.

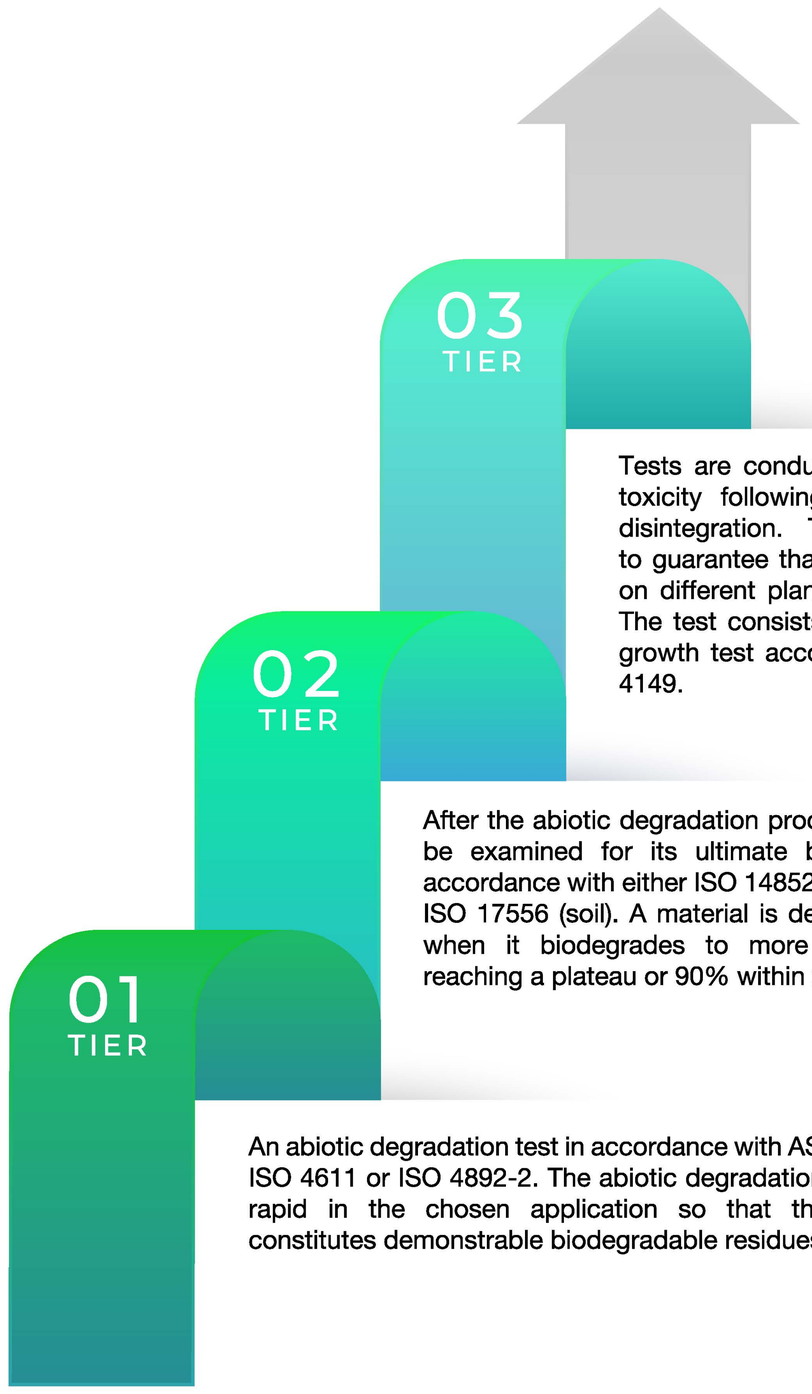
The production process transforms these pulps efficiently into cellulosic fibres with high resource efficiency and low ecological impact.

After use, wipes made from natural fibres can be either incinerated or composted. When composted, they are converted back into pure water and carbon dioxide which are reabsorbed during photosynthesis by the next generation of trees.

EN 13432 and ISO 14855 are conducted to ensure that these wipes degrade in soil to more than 90% within 6 months.

3 Packaging Material

Material must undergo and fulfil three tiers of tests.



Results

Since wipes dries out after using, the solution has no significant environmental impact. However, all ingredients used in formulating the liquid solution are certified biodegradable and/or natural.

The non-woven paper (wipes) used in our product is degraded by nature to more than 90% in less than 3 months, as opposed to wipes containing synthetic fibres like polyester and polypropylene, which never degrades or break down over time in our environment.

Our packaging can also degrade to 60% over time, as opposed to fossil-based plastic packaging which can last from 20-500 years in our environment.

Conclusion

Our range of biodegradable wet wipes successfully provides the benefits of an eco-friendly product without compromising on performance and quality, thus defining a new standard of environmental sustainability to everyday hygiene care.