Case Study

High Temperature Composting System

Accelerating home composting and breaking down compostable plastics

Home composting is the most environmentally friendly way of dealing with kitchen and garden waste, also producing compost which can be used as an excellent soil improver. Although councils offer green waste collections, home composting should be encouraged as it avoids the heavy transport associated and its environmental costs.

Furthermore, we are currently seeing a fast development rate of more easily degradable plastics, a few of them are already available in the market in products such as food packaging, cutlery, toothbrushes and 3d printed objects. While some of these plastics are labelled as compostable, they require higher temperatures to degrade than typically achieved in a home composting system.

Sabe Applied Science is researching and developing a composting system intended to consistently operate at a higher temperature than achieved by the traditional system. Such system will make use of renewable energy sources and create an environment to degrade kitchen and garden waste several times quicker than seen with a traditional system, as well as successfully breaking down compostable plastics.

We are passionate for the environment and creating sustainable solutions for our daily living, contact us to discuss your idea!

Project summary

Background Application:
Research and development of a high temperature home composting system to accelerate kitchen and garden waste decomposition, as well as successfully breaking down compostable plastics.

Engineering Challenge:
Ensuring a consistently high and uniformly distributed operating temperature within the system, all generated through renewable sources.

Methodology Employed:
Design and testing of various technologies for thermal load generation and ventilation.

Our Experience:
We are combining our engineering background in thermal and fluid dynamics to our passion for creating sustainable solutions for our daily living.