

Automatic Composter for Organic Fertilizer Generation

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I- Introduction

- A composter is a compost generation system that is generally used for the decomposition of matter, in other words, it transforms organic waste (garbage, animal waste, food scraps, etc.) into compost (organic fertilizer).
- This device is designed to save costs, time, labor and generate quality compost, which will be used especially in the agricultural and gardener fields.
- In this document, we explain how a composter is built from scratch, what is it, what is it used for, what are its benefits, and its final results.

II. The Composter and your System

- First, we agreed to build a box of approximately 60x1.50 meters with three levels.
- In the first level we will find fresh matter (just in preparation), in the second one we will find the matter at medium decomposition. Finally in the third level we will find the matter already prepared.

Levels	Results
SUPERIOR (1st LEVEL)	Compote in preparation (garbage, polite) moving
INTERMEDIATE (2 LEVEL)	Material in your fase intermediate
LOWER (3 NIVEL)	Compote ready to use.



Figure 1. Composter with it's adaptations

- In the lower level (3rd level) the sensors were placed (mq-2 and mq-135), which will measure the levels of: ammonia, methane, temperature and humidity. In addition, a two-phase 1.5 HP motor with a chain was adapted to move the internal mechanism of the box (worm screws).



Figure 2.

III. Results

The results obtained through the application are the following:

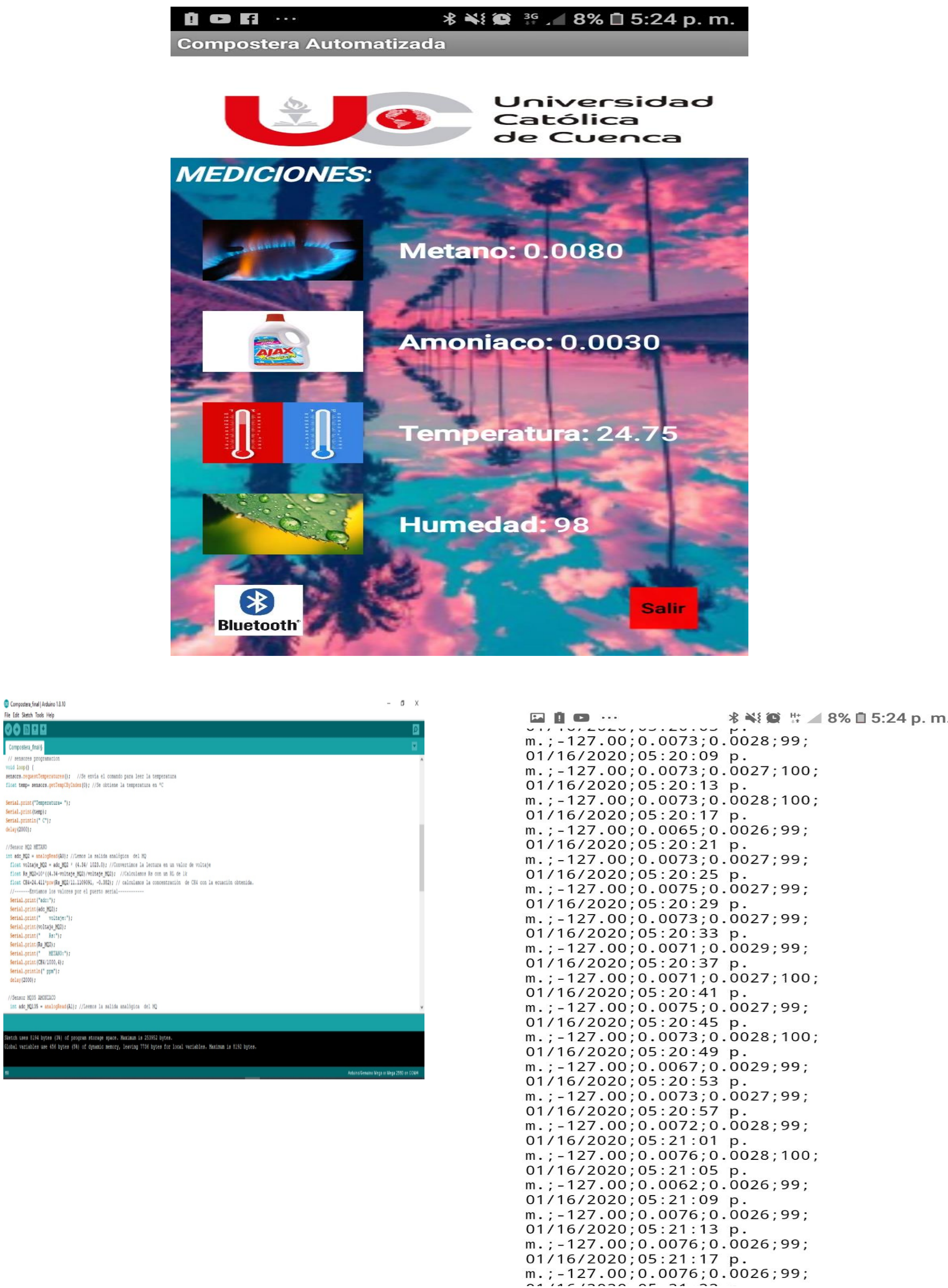


Figure 3. Results of programming.

IV. Conclusion

- This project seeks to obtain a measure of the different gases emitted in the compost process, through the implementation of an engine we seek to reduce the decomposition time from 4 months that takes manually to a month and a half time to 2 months .