2.3 Moisture Content Analysis

Using this process, the moisture content of banana samples that were both organic and non-organic was found. With this technique, water is extracted from the sample by applying heat, which makes it possible to accurately determine the moisture content.

2.3.1 Materials

- Fresh organic and non-organic banana samples
- Analytical balance
- Oven capable of maintaining 105°C
- Desiccator
- Aluminium moisture pans
- Tongs

2.3.2 Procedure

Preparation of Samples: Using an analytical scale, fresh banana samples both organic and non-organic were precisely weighed. Every sample's starting weight was noted.

Drying Procedure: The banana samples were put in aluminium moisture pans that had been previously weighed. Then, these pans were placed in an oven that was preheated to 105°C. To make sure all of the moisture was gone, the samples were placed in the oven for a whole day.

Cooling: The moisture pans with the dried samples were taken out of the oven and left in a desiccator for about half an hour after the 24-hour period. By taking this step, you can make sure that the weight measurement is not affected by atmospheric moisture.

Final Weighing: Using an analytical scale, the dried materials' final weight was determined after they had cooled. The dried sample's weight was noted.

Calculation of Moisture Content: The moisture content was calculated using the following formula:

Moisture Content (%) = ((Initial Sample Weight - Weight of Dry Sample) / Initial Sample Weight) × 100

Since it fully evaporates moisture, this approach is extensively used to determine the moisture level of food goods. It correctly reflects the water content (AOAC, 2005).