

## ABSTRACT

*Wolffia spp.* had garnered attention as a potential "superfood" due to its reported nutritional value, offering a promising solution to the escalating global obesity crisis. Nonetheless, *Wolffia spp.* exhibits a moisture content of approximately 95% post-harvest, necessitating a drying procedure to reduce the microbial growth and facilitate storage, packaging, and transportation. This study focused on evaluating the effects of different temperatures in both hot-air oven and vacuum drying methods on the physicochemical characteristics of *Wolffia globosa*. Raw *Wolffia globosa* samples underwent hot-air oven drying at 60°C and 70°C, as well as vacuum drying at 60°C and 70°C. Subsequently, the dried watermeal was grind into a powder, and various physical properties, such as moisture content, water activity, and color, were examined. Additionally, chemical analyses, including pH, fat content, protein, crude fiber, ash, and carbohydrates, were conducted. The results indicated that the vacuum drying at 70°C treatment resulted in the lowest moisture content ( $5.393 \pm 0.176$ ) and water activity ( $0.408 \pm 0.030$ ), coupled with the highest fat ( $3.585 \pm 0.195$ ), lowest carbohydrate ( $39.113 \pm 0.209$ ), highest protein ( $26.440 \pm 0.045$ ), and highest ash contents ( $17.879 \pm 0.106$ ). Conversely, oven drying at 60°C produced the lightest color, while vacuum drying at 60°C led to higher crude fiber content ( $13.678 \pm 0.404$ ). Thus, the optimal drying process was achieved through vacuum drying at 70°C.

**Keyword:** Oven drying, Physicochemical, Vacuum Drying, *Wolffia globosa*, *Wolffia spp.*