

Drying models and quality analysis of sun-dried ciku

ABSTRACT

Sun drying of ciku (*Manilkara zapota*) was carried out on different sample sizes to investigate the effects on drying kinetics. It was found that the maximum drying rates of sun-dried ciku decreased with larger product size. Three sunny days are needed to dry the ciku slabs to an average final moisture content of 0.2 g H₂O/g dry mass. The results showed that hardness and chewiness of the dried samples were significantly different ($p < 0.05$) compared to fresh ciku slabs and commercial dried fruit. The color measurement of dried product showed that L* and b* values significantly decreased ($p < 0.05$), whereas the a* value increase was not significantly different ($p > 0.05$) compared to fresh ciku slabs. In addition, sun-dried ciku retained a total polyphenol content (TPC) that was relatively low ($p < 0.05$) compared to fresh ciku.

Keyword: Color; Drying kinetics; *Manilkara zapota*; Product quality; TPA; TPC