

**Physicochemical properties and storage stability of lemon slices (citrus limon)
dried with oven and cabinet dryer**

ABSTRACT

This study aimed to investigate the changes in the quality of lemon dried with oven and cabinet drying methods at different temperatures (40°C, 50°C and 60°C) in three months of storage and packaged in different packaging materials (aluminium laminated polyethylene (ALP) and low-density polyethylene (LDPE)). All lemon slices dried at different temperatures were achieved at <12.95% moisture content and water activity <0.60 to produce microbiologically safe products. As the drying temperature increased in both drying methods, the redness (a*) decreased, while the lightness (L*) and yellowness (b*) values increased. A significant increase in vitamin C and total phenolic content (TPC) was observed with increasing drying temperature at 60°C for both drying methods. After 3-months of storage, lemons dried with cabinet drying at 60°C and packaged in ALP had better retention of vitamin C (42.84 to 13.77 mg/100g – 26% reduction). Dried lemon using a cabinet dryer at 50°C and packed in ALP and LDPE exhibited the lowest loss of total phenolic content (10.72% and 10.71%). In short, drying methods, drying temperature, and packaging materials significantly affected the physicochemical properties of dried lemon slices.