

**Title** Storage stability of dried macadamia nuts in different packaging materials  
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### **Abstract**

Macadamia is a nut producing subtropical tree originating from Australia. The kernels are rich in monounsaturated fatty acids and may reduce serum cholesterol when included in the diets. It can be assumed that this is due to a particularly high oleic acid content of the nut oil. Processing methods and storage condition (temperature, humidity and packaging materials) can have a major impact on changes in quality of macadamia nuts. This research was aimed to determine suitable storage condition (packaging materials and humidity) at ambient temperature to maintain superior quality of the nuts. The research was conducted at 27-30°C, 11-92% RH with two types of packaging materials, namely aluminum laminated foil oriented polypropylene/aluminum/polyethylene/ linear low density polyethylene (OPP/AL/PE/LLDPE) and Linear Low Density Polyethylene (LLDPE) under atmospheric pressure. The results show that the quality of dried macadamia nut in both packaging materials depends on humidity. At relative humidity below 40%, the quality of dried nuts has changed only little. In contrast, above 40% RH, the quality of the dried nuts in LLDPE bag has changed significantly in terms of equilibrium moisture content, water activity, colour and peroxide value when compared to dried macadamia nuts in OPP/AL/PE/LLDPE bag. Reducing sugar content in dried nuts in LLDPE bag was significantly lower than in dried nuts in OPP/AL/PE/LLDPE bag.