

## **Effect of Moisture Content and Postharvest Storage Conditions on Some Properties and Quality Attributes Of Red Lentil**

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Red lentil (*Lens culinaris*), an important pulse crop in Canada, is mainly consumed as split or whole cotyledon (“football”) with the seed coat removed by dehulling, with which the cooking quality and taste of red lentil will be improved. However, related information on the variability in physical properties, mechanical properties, chemical components and quality attributes of red lentil under different storage conditions are not readily available, which are useful for processors, marketers, breeders, as well as growers. The objective of this study is to investigate the optimum moisture content and postharvest storage conditions affecting the milling efficiency of red lentil by measuring its quality attributes. Red lentil of three initial different moisture contents of 10.0%, 11.5%, 13.0% wb, respectively, were kept in storage at two different extreme temperature of 5°C and 30°C. Tests on physical properties, mechanical properties, chemical components and quality attributes, such as bulk density, particle density, terminal velocity, static coefficient of friction, protein content, starch content, dehulling quality and cooking quality, were conducted at monthly or bimonthly intervals. The influence of moisture content and postharvest storage conditions on physical properties of red lentil in terms of dimensions, seed colour, seed wrinkling and seed coat staining were investigated using image technology. A laboratory Satake pulse dehuller and Mattson cooker were used to evaluate the dehulling efficiency and cooking time of red lentil.