

# Evaluation Study of some Physical and Chemical Characteristics of Red and White Mulberry Fruits, a Local Variety *Morus sp.*

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**Abstract.** The results of the search for the physical characteristics of the red and white mulberry cultivars showed that there were no significant differences in the characteristic of the fruit length, as it reached 2.50 and 2.40 cm for the red and white cultivars, respectively. While the white mulberry variety excelled in the characteristics (fresh and dry weight of the fruit and the diameter of the fruit), reaching 3.09 g, 1.66 g, and 1.10 cm, respectively. The results of the study of chemical traits showed that there were significant differences in all the studied traits, where the red mulberry variety excelled in (content). moisture, percentage of juice, and percentage of acidity), which reached .14 73, 54.78, and 2.64%, respectively, while the white mulberry variety excelled in (the percentage of total sugars, the percentage of total soluble solids (TSS), the ratio of solids to acidity, and the ash content of the fruits) as it reached 8.14%, 9.60%, 9.60%, and 0.86g, respectively.

**Keywords.** *Morus sp.*, Red mulberry, White mulberry.

## 1. Introduction

Mulberry *Morus sp* belongs to the genus *Morus* and the family *Moraceae* and includes 24 species and 100 varieties [1] the height of the plant is about 3-15 meters, its vegetation is dense, the production of one tree ranges between 10-15 kg of fruits [3,2] it is grown in various regions such as Asia and southern Europe, southern North America, northwestern South America, and separate regions of Africa [4]. It is a deciduous tree that bears the decrease in temperatures in winter and the rise in summer. It can grow in almost all types of soil [5,6]. The berries are consumed fresh or in The work of jams and juices as healthy drinks, wines, canned berries, or its leaves are used in making tea in China [7,8] and the berries are considered a nutritious, tonic, appetizer, diuretic, and laxative, especially the ripe fruits, as they are used in the treatment of constipation, relieving the pain of angina, and treating anemia. Mulberry juice in the treatment of fevers, stomach ulcers and relieving coughs as a result of its fruits containing many beneficial compounds such as phenols, alkaloids, anthocyanins and antioxidants in addition to protein, carbohydrates, fiber, water, iron and potassium elements and various vitamins [9-11]. There are good numbers of mulberry trees that grow successfully in these conditions. climatic conditions of Basra Governorate, and because mulberry cultivation is witnessing an increasing demand at the present time, and due to the lack of studies on it, it was necessary to

