

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Although dates' exact origin is uncertain, they were first known to be cultivated in the Fertile Crescent between Egypt and Mesopotamia as early as 4000 B.C. Date palms fare best in tropical and subtropical regions. Today, dates have been consumed not only for its rich sweet flavor but also for its benefits for our health.

Date proteins contain 23 different types of amino acids, some of which are not present in popular fruits such as oranges, apples, and bananas. The protein content of dates ranges from 1% to 7% and includes essential amino acids required for the metabolic functioning of the human body. Dates contain a significantly large amount of fiber. The daily consumption of 100 g of dates provides approximately 50–100% of the recommended daily amount of fiber (Ayad et al, 2020).

Dates are a rich source of vitamins and minerals and contain at least 15 different minerals such as magnesium, manganese, phosphorus, iron, calcium, potassium, sodium, and zinc. The percentage of each mineral in dried dates varies between 0.1 and 916 mg/100 g of date flesh. Dates also have high levels of copper, selenium, potassium and magnesium, average concentrations of manganese, iron, phosphorus, cobalt, fluorine, zinc, and calcium, as well as small quantities of boron (Niazi et al, 2017).

Other part of date is date seed/pit. Date seeds or date pits are usually discarded as materials with no use or value. Date seeds may have extractible high value-added components and were examined because they may have an extractable high value-added components for including in functional foods, for example, studies have found that date seeds contains free radical scavenging abilities. Phytochemicals mainly present in date seeds includes

flavonoids, sterols, phenolic acids and tocopherols. Hesperidin is major flavonoid present in date seeds. Hesperidin has beneficial affect against cancer, atherosclerosis and prevent from bone loss. Phenolic acids includes hydroxybenzoic protocatechuic, coumaric, ferrulic and caffeic acids (Niazi et al, 2017).

## **1.2 Objectives of the Study**

1. To create a product that contains the benefit of both the fruit and the seed of dates
2. To create an opportunity in the business and culinary world