DATE SEED: A GREAT SOURCE OF BIOACTIVE COMPOUNDS WITH
ANTIOXIDANT POTENTIAL

Yasmina Halabi¹, Chaimae Nasri¹, Hicham Harhar¹, Abdelkebir Bellaouchou¹, Mohamed Tabyaoui¹

¹ Department of Chemistry, University Mohammed V, Morocco
halabiyasmina@yahoo.fr

The date palm (Phoenix dactylifera L.) is a popular fruit among Middle Eastern countries. Indeed, it is a staple food for millions of people in these countries. Besides, Date palm plays an important economic, social and ecological role for people living in arid and semi-arid areas. Date seeds, also known as pits or seeds, are waste products from date processing and packaging plants. Therefore, seeds contain many precious substances such as carbohydrates, vegetable oil, dietary fiber, bioactive polyphenols, and natural antioxidants. The latter can be used in many applications such as the formulation of food supplements, cosmetics, or alternative medicine[1]. In south Moroccan folklore, date seeds are frequently used for making non-caffeinated coffee or for making eyeliner kohl and hair coloring by ladies. They can also be used as an alternate feed ingredient for cattle to increase their weight[2]. Phytochemical profiling indicates the presence of some important compounds such as polyphenols, flavonoids, tannins, carotenoids, saponins, terpenes, anthocyanins, and leucoanthocyanins with a lack of tannins gallic and cardiac glycosides[3]. Likewise, date seed oil contains 38.71-50.08% of saturated fatty acid and 48.89-60.77% of unsaturated fatty acid with lauric and oleic as the main ones, respectively. The quantitative analysis of date seed extract showed a high amount of phenolics, flavonoids, and tannins content. It also contains an important amount of alkaloids and saponins. The inhibitory activity by DPPH, ABTS, and FRAP of date seed extract shows that Moroccan date palm seeds have a high antioxidant potential. It can be considered as a great source of natural antioxidants and bioactive compounds having a decent biological process, therapeutic, medicinal, and purposeful values.