

# CARBOHYDRATE COMPOSITION OF *PHOENIX DACTYLIFERA* L. FRUITS FROM IRAQ FLORA

Al Dzizhani Anver, Sydora N. V.

National University of Pharmacy, Kharkiv, Ukraine

sydora2005@gmail.com

**Introduction.** In the Muslim countries the dates fruits have been popular since ancient times. Dates have been famous for their healing properties. It was believed that the fruits of date palms give strength, endurance, increase life expectancy. About 80 percent of the world trade in dates is in Iraq. In Iraq, among the 420 varieties of dates, there are varieties that are not found in other countries - Halavi, Khadravi and Saiger. Given the availability of raw materials, as well as the insufficient level of study of the chemical composition of dates, collected in Iraq, a comparative phytochemical study of their chemical composition is promising for expanding the information on BAC of fruits of *Phoenix dactylifera* L.

**Aim.** The aim of this work is the comparative study of carbohydrate composition and polysaccharides quantitative content in varieties of dates - Halavi, Khadravi and Saiger.

**Materials and methods.** The object of the study was the fruits of dates. Extraction of polysaccharides from the raw material was carried out with water. For this, 100 g of raw material was poured into two liters of hot water, the extraction was carried out for 30 minutes. Extraction was carried out thrice. The resulting extract was combined and evaporated, water-soluble polysaccharides were precipitated with 96% ethanol. The polysaccharides were separated by centrifugation, dried and weighed. The qualitative composition of polysaccharides was determined by chromatographic method (paper chromatography) after acid hydrolysis by 10% solution of sulfate acid with heating. Chromatography was carried out in solvent system butanol-acetic acid-water (4: 1: 2). As reference samples were used L-arabinose, D-xylose, D-glucose, D-fructose. The resulting chromatograms were dried, processing with aniline phthalate and dried. The quantitative content of polysaccharides was determined gravimetrically. The resulting polysaccharides are crystalline, shiny, yellow-brown substances.

**Results and discussion.** As a result of the study, pentoses (L-arabinose, D-xylose) were stained red, hexoses (D-glucose, D-fructose) - brown.

**Conclusions.** It has been established that all investigated varieties are contain glucose and fructose, arabinose is contained in the "Khadravi" variety, xylose is found in the "Saiger" variety. The quantitative content of water-soluble polysaccharide complex (%) was: variety "Halavi" 40.7%, variety "Khadravi" - 39.9%, variety "Saiger" - 41.04%.