

ESSENTIAL COMPOUNDS OF *NERIUM OLEANDER FLOWERS L.*

Koval A., Sydora N.V.

National University of Pharmacy, Kharkiv, Ukraine

sydora2005@gmail.com

Introduction. *Nerium oleander* -shrub or small tree from family Apocynaceae. All parts of this plant are contain the toxic elements: cardiac glycosides, saponins, digitoxigenin, oleandrin, oleondroside, nerioside. Because of this, the use of raw materials of this plant in medicine and pharmacy is limited. Analyzing the degree of research on the chemical composition of this plant, it can be concluded that some classes of biologically active substances (BAS) have not been studied. To expand the information on the chemical composition of *Nerium oleander L.* flowers, it is relevant to study the essential compounds of this raw material.

Aim. The aim of our study was to investigate the component content of essential compounds of *Nerium oleander L.* flowers.

Materials and methods. The object of study was the flowers of *Nerium oleander L.* collected in September 2016 in Botanic garden of National university of Karazin V.N. Considering that the raw materials are poisonous, collected of flowers was carried in gloves. For experiment used dry raw material. Raw material dried under cover in a dry, well-ventilated place. The raw materials were stored in paper bags. The qualitative and quantitative content of compounds established by Gas Chromatographic-Mass Spectrometric method in chromatograph 5973N/6890N MSD/DS Agilent Technologies, mass spectrometer detector 5973N. A weighed sample of raw material (0.5 g) was placed in a 20 ml vial and was added the internal standard. As an internal standard used the tridecane (50 mkg on a sample), followed by calculation the resulting concentration of the internal standard, which is then used for the calculations. In the process of distillation volatile compounds are adsorbed on the internal surface of the reflux condenser. Adsorbed substances is washed off after cooling the slow addition of 3 ml of pentane in a dry vial for 10 ml. For quantitative calculations used the method of internal standard.

Results and discussion. Were identified 17 essential compounds: aromatic (benzaldehyde); terpenoids (caryophyllene, caryophyllene oxide, linalool, nerol, squalen); aldehydes, ketones, higher alcohols and hydrocarbons (dodecanale, tetradecanale, tricosane, pentacosane, hexacosane, nonacosane. In most high concentration (mg/kg) are content linalool (14,3), benzaldehyde (12,5), caryophyllene (12,8) and caryophyllene oxide (15,3).

Conclusions. The qualitative composition and quantitative content of volatile substances of *Nerium oleander L.* flowers is established.