

## The Study of the Chemical Composition of *Ruta graveolens* L. Species

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**Aim of study:** Study of the chemical composition of essential oil and morphological features in stages of development of *Ruta graveolens* L. plants cultivated in Absheron.

**Material and Methods:** *Ruta graveolens* L. study is based on phenological observations in stationary conditions on Beydeman and I.P.Lapin methods. By description and allocation of morphogenesis phases before other vital forms of plants was used the applied approach. Essential oils received by a hydro-distillation method. It has been identified by component composition of the gas-liquid chromatography method "PYE-Unicam 105". By anatomical studies have found and studied bodies in the vegetative structure and formation of regularity sxizogen and lizogen sites. Chemical and physico-chemical methods in phyto-chemical analysis analysis, using the bioactive substances in plant raw material enables the description and quantitative detection of plants.

**Results:** In the Caucasus, including the territory of Azerbaijan country cultivated only 1 species of *Ruta graveolens* L. in cultural condition. Height reached up to 40-60 cm is a gray blue medicinal plant. Yellow flowers are collected in thyroid shape or broom shrub group flower form. *Ruta graveolens* L. has in terrestrial part 0,7-1,2% of essential oil. The main components of the essential oil are methyl-p-nonilketon, methyl-p-qeptilketon, pinen, limonen, valerian, sineol and etc. Therefore are existed rutin, furokumarin, terpens, alkaloids. Furthermore, its composition has been identified tannins, resins, apple acid, bitter substances. Kumarin derivatives are typical plants for *Rutaceae* L. family. *Ruta graveolens* L. is 0.5% of kumarin in content, they are found mainly in the form of aqlikons or in the form of esters. Determination of the chemical structure of Kumarin carried out by taking into account their titrometric, polyarografic, spectrophotometric, fluorometric and other methods. By the development process of the plants are accumulated flavonoids collected in the entire inside bodies, which is the most important flavonoid of kversetin qlikozid is rutin. The amount of the Rutin depends on the buds and the fruits of development phase, the amount of rutin in buds is from 9.5% - to 12.5% and the amount of rutin in fruits are from 8% to 4%. *Rutaceae* family is rich with tannins; tannins are accumulated in different part of *Ruta graveolens* L... Their quantity and quality depend on biological factors (fenophases, plant age and etc.). Tannins are found dissolved in plant cells as localized in the Histo chemical reactions. Tannins are accumulated in bodies, branches and roots as in core rays of parenxim cells, as well as gathering in wood. But they are not localized in mechanical tissues and in cork. *Ruta graveolens* L. consisted by resins with essential oils, as well as it becomes part of the various organic compounds mixed with its own smell. Resin consisted by rezinols (diterpen-type carbohydrogen), resin acids and rezin alcohols (rezinols).

**Keywords:** *Ruta graveolens* L., morphology, essential oils, component and chemical composition