

Approaches comparison of standardization of Lavender herbal raw materials

Vitalii Husiev*, Victoriya Georgiyants, Natalya Burd, Olha Mykhailenko

National University of Pharmacy

*Corresponding author e-mail: gusev11vitalik@gmail.com

Introduction. Humanity has been using plants of the *Lavandula* L. genus since ancient times. They have found their use in many fields, such as medicine, cosmetology, perfumery and folk medicine. It is also very important for pharmacy. *Lavandula angustifolia* (Lamiaceae) is the most commonly used plant of this species. The is fairly well researched today. The most important product extracted from it is undoubtedly the essential oil, which is used as a component of dermatological remedies. The flowers are usually used for its production, and the herb is used to make weak sedatives and analeptics. Together with the annexation of Crimea, Ukraine has lost a natural source of raw materials Lavender, so studying the possibility of cultivation of this plant in other regions of the country is especially relevant.

The aim. The aim of the work is to study and compare the main quality indicators of medicinal plant raw materials *L. angustifolia*, presented in the articles of the State Pharmacopoeia of Ukraine (2020) [1] and other Farmacopoeia.

Materials and methods. The subject of Pharmacopoeia Articles on the flowers of *L. angustifolia*, contained in the current editions Ukrainian and major world pharmacopoeias (European Pharmacopoeia 9.0, British Pharmacopoeia 2017, U.S. Pharmacopoeia 40 – National Formulary 35, Japanese Pharmacopoeia 17); EMA/HMPC/143181/2010. A comparative analysis of the quality indicators specified in these pharmacopoeia articles and directives was performed. The indicators of quality indicators of essential oil in monographs that present in the European and British Pharmacopoeia.

Results. The creation of monographs for aromatic plants such as *Lavendula* requires testing on both the plant material and the essential oil it produces. The tasks of the new study are to conduct macroscopic studies of the plant material of lavender herb, then analyze foreign matter, numerical indicators (moisture content, ash, extractive substances), as well as quality control by thin layer chromatography and gas chromatography analysis of the essential oils, which is an important step in identifying the qualitative raw materials. All plant parts contain the essential oil; the largest amount is concentrated in the flowers – up to 3%. Lavender flowers contain nylon acid, coumarin, herniarin, tannins. Components: linalor, eucalyptol, α -pinene, α -pinene, geraniol, etc. Based on the analysis of the submitted data, it was found that the US Pharmacopoeia and the Japanese Pharmacopoeia do not contain articles on medicinal plant raw materials of *L. angustifolia*, in the European and the British also present articles on essential oil. Ukrainian Pharmacopoeia includes articles on flowers and oil of *L. angustifolia*, and also on medicinal raw materials of *L. latifolia*.

Conclusion. Standardization of the herb Lavender proper is not presented in any of the studied pharmacopoeias, which indicates the prospect of determining the basic principles of its analysis.

References

1. The State Pharmacopoeia of Ukraine / State Enterprise "Ukrainian Scientific Pharmacopoeia Centre for Quality of Medicinal Products". — 2-nd edit. — Addition 4. — Kharkiv: State Enterprise "Ukrainian Scientific Pharmacopoeia Centre for Quality of Medicinal Products", 2020. — 600