

**DEVELOPMENT OF THE METHOD FOR DETERMINATION ALBENDAZOLE
IN THE ANTHELMINTIC PASTILLES FOR CHEWING**

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Introduction. Albendazole is a benzimidazole (5-propylthio-1H-benzimidazole-2-yl) carbamic acid methyl ester that was first approved as an anthelmintic for use in humans over 30 years ago. Nowadays WHO recommends albendazole for the prophylactic treatment of helminth infections worldwide. Its vermucidal activity mainly depends on inhibiting the absorption of molecules that are critical for parasite growth; the drug's mechanism of action is through binding to intracellular microtubules and preventing their elongation.

Pastilles with albendazole were developed at the Department of Pharmaceutical Technology of Drugs of NUPh, they are designed for chewing, which speeds up the absorption and onset of action of the

active pharmaceutical ingredient and can be used by children and adults. They can be prepared in chemists, and as required of legislation of Ukraine, components of medicine must be identification and quantity determined and medicine form must be stability.

Aim. To develop a spectrophotometric method of quantitative determination based on the physico-chemical properties of albendazole.

Materials and methods. UV spectrophotometer Evolution 60S (USA), analytical balances Axis (Poland), a standard sample of albendazole, pastilles with albendazole for chewing, dishes Class «A», reagents and solvents that meet the requirements of the State Pharmacopoeia of Ukraine (SPU).

Results and discussion. During developing of the spectrophotometric method for determination of albendazole in pastilles, the character of the spectrum of the alcohol solution was studied and it was found that the maximum of a 0.001% solution of the compound is observed at a wavelength of 296 nm. It was necessary to investigate the subordination of standard solutions of albendazole to the basic law of Bouguer-Lambert-Ber. Found that when used as a solvent ethanol (96%) R in 296 nm absorption peak observed linear relationship within albendazole concentrations from $2,0 \cdot 10^{-4}$ – $2,0 \cdot 10^{-3}$ %. The results of albendazole quantitative determination by the new spectrophotometric method corresponds to the parameters of linearity, specificity, accuracy, precision.

Conclusions. The described technique is worked out on experimental samples of a new dosage form, which consist of albendazole as an active compound exhibiting anthelmintic action.

IDENTIFICATION OF 6-GINGEROL IN DRY EXTRACT OF ZINGIBER OFFICINALE AND TABLETS ON ITS BASIS

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Introduction. Medicinal ginger (*Zingiber officinale* Roscoe) is a perennial herb of the ginger family (*Zingiberaceae*). It is cultivated in many tropical and subtropical countries, including Australia, Nigeria and Haiti, and China and India are the world's leading producers of ginger. In folk medicine, ginger is used to treat colds, rheumatism, sore throats, and digestive disorders such as dyspepsia, vomiting, gastritis, nausea, and diarrhea.

Recently, ginger has attracted attention due to its wide range of pharmacological activity, such as antitumor, antioxidant, anti-inflammatory, antidiabetic, cytotoxic and antiplatelet with low toxicity.

The main bioactive components of ginger are essential oils, and phenolic compounds such as gingerols and shogaols, which are responsible for the particular pungent taste of the plant. Preliminary pharmacological studies have allowed associating the hypoglycemic and antioxidant activity of ginger with the content of the phenolic compound 6-gingerol. This confirms the relevance and feasibility of its use for creation of drugs for the treatment of type 2 diabetes. Therefore, we have developed a solid dosage form containing, as an active pharmaceutical ingredient, a dry extract of medicinal ginger.

Aim of the work: to study dry ginger extract and tablets based by thin layer chromatography (TLC) to determine the possibility of 6-gingerol identification in their composition and subsequent introduction of these methods in the regulatory documentation.

Materials and methods. The studies were performed using the TLC method in an ascending manner on plates coated with a layer of silica gel (manufactured by Sorbfil).

Test solution: About 0.1 g of dry ginger extract (manufactured by Medagroprom, Dnipro) was placed in a 50 ml volumetric flask and 30 ml of 40% ethanol was added. Dissolved when heated and stirred in a water bath, cooled and brought to the mark with the same solvent and mixed thoroughly.