

The objective of the study is to determine the total content of major chemical constituents, the alkaloids, in different vegetable drugs of *W. Somnifera* micropropagated in vitro grown in greenhouse and open field.

Materials and methods: Roots, aerial parts, leaves of *W. somnifera* plants obtained by micropropagation in vitro grown in greenhouse and open field. Qualitative identification of alkaloids were provided by series of special chemical reactions (Bouchardat reagent, Dragendorff reagent, tannic acid, phosphomolybdic acid, phosphotungstic acid, picric acid, picronic acid). Quantitative study was effectuated by isolation with chloroform in separated funnel. After drying of chloroform extract with alkaloids in acids medium were determined the total content of alkaloids by titrimetric method with solution of Sodium hydroxide.

Discussion results: The qualitative study results demonstrated that alkaloids are present in all vegetable drugs, but more effective in root (*Withaniae radices*). The results of quantitative study denote that the total contain of alkaloids in vegetable drugs *W. folia* and *W. herba* obtained from greenhouse consist 1.154% in leaves and 1.016% in aerial parts. In vegetable drugs obtained from the open field plants the results was less, respectively *W. folia* – 0.851%, *W. herba* – 0.784%. Comparison, the highest content of total alkaloids there is in *W. radices* (1.415%) grown in open field than in decreasing *W. folia* (1.154%; 0.851%) and *W. herba* (respectively – 1.016%; 0.784%).

Conclusion: The phytochemical study of three vegetable drugs obtained from sp. *W. somnifera*, grown in the climate conditions of Moldova may be the good source of tropane alkaloids, especially *W. radices*.

Key Words: *Withania somnifera*, alkaloids, vegetable drug, qualitative and quantitative study.

352. UV SPECTROPHOTOMETRIC METHOD VALIDATION OF ANALYSIS OF A NEW SUBSTANCE WITH PRONOUNCED ANTIMYCOBACTERIAL ACTIVITY

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Introduction. Tuberculosis is a curable disease and Antimycobacterial remedies are applied successfully more than 40 years. However, TB is a major public health problem, especially for developing countries, including Moldova. Increased incidence of tuberculosis requires the development and standardization of new concepts and therapeutic remedies.

Aim of the study. UV spectrophotometric method validation of a new antimycobacterial substance for quantitative analysis of its in pure substance.

Material and methods. Spectrophotometer UV (Agilent 8453); electronic balance (OHAUS), 1E-4,4-dimethyl-1-(4-nitrophenyl)-2- (1H-1,2,4, triazole-1-yl) -1-penten-3on.

Results. According to the study conducted, the absorption spectrum was analyzed using a spectrophotometer UV, highlighting absorption maxima at 201 nm and 301 nm. There were analyzed five different concentration ethanol solution and built calibration chart of the solution. They were determined and validated the following parameters: repeatability, specificity, accuracy, reproducibility. A defined mode and conditions necessary for conducting spectrophotometric analysis.

Conclusions. In the study were investigated the numerical values of some qualitative parameters of a new chemical molecule, which are the basis for further stability studies and formulation of medicinal forms.

Key words: 1E - 4,4 - dimethyl- 1 -(4 - nitrophenyl) - 2 - (1H - 1,2,4, triazole- 1 -yl) - 1 - penten- 3on, UV spectrophotometry.

353. POLARIMETRY AS A METHOD USED IN QUALITY CONTROL OF DIFFERENT PHARMACOTHERAPEUTIC GROUPS CHIRAL DRUGS

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Introduction: Chiral compounds that are found in all pharmacotherapeutic groups, and represent a major potential in curing degenerative diseases possesses the property to rotate the plane of polarization of light, so they are optically active phenomenon that can be observed and investigated using a polarimeter. Polarimetric method is widely used in pharmaceutical analysis for determining the optical activity of drug substances, their quantitative and qualitative assessment.

The purpose of this paper is to estimate the importance, actuality and usefulness of polarimetric method in the analysis of chiral drugs from different pharmacotherapeutic groups.

Materials and methods: In order to determine statistically the rate of recommendation of polarimetric method in the research of drug substances by various states pharmacopoeia, to highlight the benefits of polarimetric method was performed meta-analysis of Romanian Pharmacopoeia ed. X (FR), the European Pharmacopoeia 8th ed. (Ph. Eur.), United States Pharmacopoeia 2nd ed. (Ph. USP), British Pharmacopoeia 2013 (BPH.), The information published in specialized periodicals.

Results: In FR ed. X there are 83 drug substances using specific rotatory power is an index of quality, which constitute 12.77% of the total number of substances. For comparison, in European Pharmacopoeia this number is about 15.3 times higher. However, the use of this physical constant for quantitative determinations of is quite limited and this despite the fact that polarimetry as an optical method polarimetry can be used successfully in dosing chiral drug substances.

Conclusion: There is a great number of pharmaceutical substances with optical properties included in pharmacopoeia. Polarimetric method can be proposed as an alternative for the dosage of various pharmacotherapeutic groups chiral substances, as a quick, accessible, accurate and non-destructive method.