

of silica gel was coated with 5 µl of a solution and a solution of the witness substance, ibuprofen, in methylene chloride at a concentration of 5 mg / ml.

At the end of chromatography, the mixture was dried at 120 ° C for 30 min. Detection was carried out by lightly spraying a 10 g/L solution of potassium permanganate in diluted sulfuric acid onto the plate, heating at 120° C for 20 min. After cooling to room temperature, the plate was examined under a UV lamp in a chamber at a wavelength of 365 nm. The main spot on the chromatogram of the solution coincided in position, color and size with the main spot on the chromatogram of the witness substance - ibuprofen.

The presence of ibuprofen was also confirmed by HPLC. For this, the dry residue was dissolved in 1 ml of acetonitrile and the volume of the solution was diluted to 5 ml with the mobile phase. The following composition was used as the mobile phase: 0.5 parts by volume of phosphoric acid, 340 parts by volume of acetonitrile and 600 parts by volume of water were mixed, the volume was diluted to 1000 parts by volume with water for chromatography. The flow rate of the mobile phase is 2 ml / min.

The chromatographic column was the one with dimensions of 0.15 m in length and 4.6 mm in diameter; octadecylsilyl silica gel for chromatography (5 µm) was used as a filler, detected using a spectrophotometric detector at a wavelength of 214 nm. The volume of the injected sample was 20 µL.

For the identification of ibuprofen, a chromatogram of a solution of the ibuprofen witness substance was used. For this, 20 mg of the ibuprofen witness substance was dissolved in 2 ml of acetonitrile, and the volume of the solution was diluted to 10.0 ml with the mobile phase. The retention time of the ibuprofen peak was about 21 minutes. The HPLC method used was used to identify ibuprofen included in the liposomal preparation.

Conclusions: Methods have been developed to standardize the liposomal form of ibuprofen for topical use.

The developed methods for standardizing the liposomal form of ibuprofen can be used in the standardization of the liposomal form of ibuprofen and the development of a regulatory document for the liposomal dosage form of ibuprofen.

References

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Synthesis and research of biological properties of s-derivatives of 4-amino-5-(5-r-pyrazol-3-yl)-1,2,4-triazol-3-thiol

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Introduction. Bibliographic search includes antimicrobial, anti-fungal, anti-TB, antioxidant, anti-inflammatory, anxiolytic, fungicidal and other activities. The synthesis of substances that will contain in their structure simultaneously two pharmacophore fragments (pyrazole and triazole), will allow to obtain a number of potentially biologically active substances that could be used in medicine and pharmacy. For the above reasons, this area of work is relevant and practically significant.

Purpose of the research. Synthesis and study of physicochemical properties of new S-derivatives of 4-amino-5-(5-R-pyrazol-3-yl)-1,2,4-triazole-3-thiol and their further study on the toxicity of biological activity by *in silico* and *in vitro* methods.

Materials and methods. In the first stage, the starting material was resynthesized using diethyloxalate and acetone, after sequential reactions (hydrazinolysis, xanthate formation and subsequent cyclization in hydrazine hydrate) was obtained 4-amino-5-(5-methylpyrazole-3-yl)-1,2,4-triazole-3-thiol.

Then its alkylthio derivatives were obtained from the specified substance by adding the appropriate bromalkanes to an aqueous solution of the sodium salt of the starting thiol in an ethyl alcohol medium. For the synthesized substances, a complete physicochemical analysis was performed using IR- and UV- spectroscopy, ¹H NMR spectroscopy, chromatography mass spectrometry, which confirms their reliability and individuality.

In the second stage, in order to determine the pharmacological potential of the obtained compounds, a virtual screening was performed using the software product "PASS", and the program "GUSAR" was used for preliminary prediction of acute toxicity.

The last final stage of the work was the study of biological activity. To this end, a study of the synthesized compounds for antimicrobial and antifungal activity was performed. Antimicrobial activity was analyzed in *in vitro* studies using the method of "serial dilutions" on a liquid nutrient medium. Fungicidal activity was studied *in vitro* on fungi of the genus *C. albicans*.

Obtained results. As a result, 10 new substances were obtained. Physico-chemical parameters were studied, and the structure and individuality were confirmed. Indicators of acute toxicity, obtained by the virtual method, allow to previously classify the synthesized substances as low-toxic or almost non-toxic. Among all the obtained compounds, 2 substances showed insignificant antifungal activity.

Conclusions. In the course of the work the method of obtaining the starting material was optimized and the optimal conditions for obtaining its alkylthio derivatives were revealed, the

reactivity of S-derivatives of 4-amino-5-(5-R-pyrazol-3-yl)-1,2,4-triazole-3 was studied thiol. For alythio-derived S-derivatives of 4-amino-5-(5-R-pyrazol-3-yl)-1,2,4-triazol-3-thiol, promising directions for the study of biological activity have been established.

The peculiarities for controlling and checkuping settings of occupational dependability, health and healthy narrative claims in pharmacy basements, conditioned of the covid-19 epidemic in Georgia

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Introduction. The aim of the research was to study the peculiarities for controlling and checkuping settings of occupational dependability, health and healthy narrative claim in pharmacy basement, provisional of the covid-19 epidemic in Georgia. Occupational safety and health hygiene in pharmaceutical establishments is one of the components of labor rights and it is a socio-economic right, which includes a combination of labor rights and obligations, employment rights, safe environment, regulation of mandatory working hours, fair working hours, fair or regular working hours. Equal treatment, non-discrimination, instrumental and other rights. Working conditions is an important precondition for the rational use of staff working time and, in general, for the increase of their work efficiency is the normal working conditions and the establishment of a rational internal rules of work and rest in the company. Work should be carried out under normal, favorable conditions, and the planning of workplaces and its technological equipment should take into account as much as possible the modern advances in technology and technology, which essentially helps to reduce staff fatigue, save time, increase staff work capacity and ultimately, increase labor efficiency and success.

Labor relations in different countries of the world are governed by various laws and regulations, international recommendations. The purpose of the labor legislation in Georgia is to regulate the relationship between the employer and the employee through clearly defined legal regulation that excludes the exploitation of the employee and creates the possibility of work based on human dignity, freedom and self-development [1,2]. Accordingly, the purpose of labor legislation is to regulate private legal relations at the normative level to the extent that it is necessary for the proper social protection of workers [3,4].

Labor relations in Georgia are regulated by the Labor Code of Georgia, the Civil Code, and the Law of Georgia on Fire Safety. 12.05.1998, Technical Regulation "On Fire Safety Rules and Conditions"; By governmental decrees, by orders. The employer is obliged to provide the candidate