and bringing to 25.0 ml. All solutions are heated at 96-98°C for 20 minutes, then add a freshly prepared solution of 1 g / l carbazole and heat again.

The product colored red is characterized by a maximum light absorption at 530 nm, which was chosen by the analytical wavelength. When quantifying chondroitin sulfate in three samples of different dosage forms, it was determined that excipients do not contribute to optical density, which was confirmed by studies on placebo solutions and model mixtures, ie the method is specific for chondroitin sulfate.

Conclusions. The proposed method of photometric determination of chondroitin sulfate can be used to determine the active ingredient in medicines in the form of tablets and solutions for injection, as well as in monocomponent dietary supplements.

DEVELOPMENT OF METHODS FOR ISOLATION OF GLYCLAZIDE FROM URINE SOLID-PHASE EXTRACTION METHOD

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Introduction. Gliclazide among sulfonylurea derivatives is one of the most widely used antidiabetic drugs, which is part of the modern protocol for the treatment of type 2 diabetes. However, its uncontrolled use, particularly in Ukraine, can create a toxicological hazard, primarily related to the availability of the drug through over-the-counter leave, the specificity of the contingent due to old age, side effects, including the development of hypoglycemic conditions in overdose and other factors.

Thus, according to the FDA and *patientsville.com*, in many countries of the world in the period 2014-2019, more than 300 cases of acute gliclazide poisoning were registered under various circumstances. Fatal poisonings are mainly associated with suicide overdose. All such cases must be subject to forensic toxicological examination in accordance with the law.

Aim. The aim of the research was to develop a method of isolation of gliclazide from urine by solid-phase extraction (SPE) for analytical diagnosis of acute drug poisoning.

Materials and methods. Model urine samples were used as the object of study. Oasis HLB Extraction Cartridges, 150 mg, were used to isolate gliclazide by SPE. Quantitative determination of gliclazide in the extracts was performed by HPLC with UV detection on a liquid chromatograph "Milichrome-A-02" (AC "Ekonova", Novosibirsk). Analysis and processing of chromatograms was performed using the program "Analytics-Chrom".

Results and discussion. In domestic forensic toxicological laboratories, preference is given to liquid-liquid extraction as the main method of isolation, purification and concentration of toxicants. However, the use of the SPE method can significantly reduce the total time of the analytical study, reduce the cost of solvents and avoid a significant number of errors.

To achieve the goal of the study to 50 ml of a urine sample was added 1 ml of methanolic solution of gliclazide containing 200 μg of the drug. To isolate gliclazide by SPE, Oasis HLB Extraction Cartridges, 150 mg, were preconditioned with 1 ml of methanol and 1 ml of distilled water. After that, 1 ml of urine was passed through 5 cartridges and washed with 0.1 M hydrochloric acid solution. Elution of the toxicant was performed with 2 ml of methanol acidified with 0.1% hydrochloric acid solution. The obtained extracts were evaporated in a stream of nitrogen and the dry residue was dissolved in 200 μl of methanol. Detection of gliclazide in methanol extract

and its quantification was performed by HPLC. For the separation of substances used reversed-phase column Prontosil-120-5-C18-AQ size W2C75 mm, grain size of 5 μm ("Bischoff Analyzetechnik und Gerdte GmbH", Germany). Gliclazide was identified by the appropriate retention time of its standard sample. The peaks of the substances on the corresponding chromatograms of the methanolic solution of the standard sample of gliclazide and methanol eluate obtained from the sorbent of the cartridges were correlated in retention time (tR = 7.80 min). Quantitation of gliclazide in the obtained extracts was performed at a wavelength of 230 nm as a function of the peak area of the methanolic solution of a standard sample of gliclazide on the concentration.

It was found that under the conditions of TFE 17.39 ± 1.29 μg / ml (RSD = 6.01%) of the studied toxicant was excreted in the urine, which is about 87%. The limit of detection is 0.049 μg / ml, the limit of quantification is 0.129 μg / ml, the linearity of the method is in the range of 0.1-20.0 μg / ml.

Conclusions. The obtained results indicate that the developed method of isolation of gliclazide from urine by SPE method is suitable for analytical diagnosis of acute drug poisoning.

THIN LAYER CHROMATOGRAPHIC AND ANALYSIS OF METFORMIN

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Introduction. Currently, the well-known antidiabetic drug metformin (Siofor, glucophage, diformin, diguanid) is the main treatment regimen for diabetes mellitus 2 tons and pa, and is also widely used for weight loss in obesity. It is prescribed individually or in combination with other drugs. Long-term use, availability in the pharmacy network, side effects, an ever-growing number of patients with obesity and type 2 diabetes mellitus are the risk factors for uncontrolled use of the drug.and indicates the cause of the growth of acute poisoning with metformin .

Aim. Our study is to develop methods and TLC analysis of isa metformin for use in chemical and toxicological studies .

Materials and methods.. In chemical and toxicological studies, chromatography in thin layers of a sorbent rightfully occupies a leading place in the complex of means for identifying toxic substances.The possibility of a wide selection of sorbents and solvents allows you to select optimal conditions and makes the method universal for separating a large number of toxicological important substances. To begin with, we prepared several KSK silkogel plates. To solve this problem, we studied the detection of stains using more than twenty types of chemical reagents. Of these, Bouchard's reagent , Dragendorf , 1% iodine in 2% KJ , cobalt of the genus thiocyanate, iron II sulfate, Mandelin's reagent gave different spots. The limit of sensitivity of metformin to the indicated developers was determined .

Results and discussion. Determining the limit of sensitivity of metformin are presented in Figure -1 and Table-1.