tradename Oxone) is a form with higher stability. Kinetic studies were carried out in buffer solutions under second-order conditions with $KHSO_5$ in the temperature 293 K. The reaction was followed by estimating the unreacted $KHSO_5$ as a function of time by using the iodometric method. 0.02 mol L^{-1} phosphate pH buffer solutions were used. The liberated iodine was titrated against 0.02 mol L^{-1} standard sodium thiosulphate solution. The method involves a titration against a blank followed by the titration against the unknown sample. The method is based formation of formic acid followed by iodometric titration of the unreacted $KHSO_5$. Calculate the amount of the formaldehide (FA) from the equation X(mg)=[(V_0 – V) × T × 10 , where V_0 is the volume of sodium thiosulphate consumed in the blank titration (ml); V is the volume of sodium thiosulphate consumed in the work experiment (mL); Titre T=0.3003 mg mL^{-1}

Results and discussion. According to the results of the study of the reaction kinetics, it was found that at pH 8.6-8.75 the interaction between FA and $KHSO_5$ occurs quantitatively and stoichiometrically for 3-5 min: 1 mole of FA consumes 1 mole of $KHSO_5$ (Fig.).

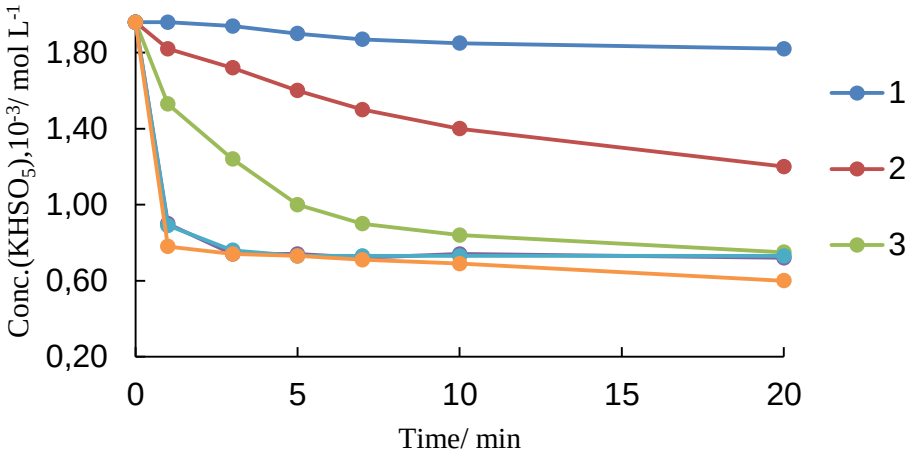

Fig. Kinetic curves of the formaldehyde oxidation reaction by $KHSO_5$.
c(FA) =1.24·10^{-3} mol L^{-1}; c($KHSO_5$) =(1.96)·10^{-3} mol L^{-1}. pH: *1* – 4.2; *2* – 6.1; *3* – 7.5; *4* – 8.6; *5* – 8.75; *6* – 9.5.

Methods for the quantitative determination of the content of the basic substance in the substance FA (Formalin) and the pharmaceutical preparation "Formidron" by the method of peroxoacidmetry (iodometric titration with control (reagent blank) experiment) were developed: at determination of 3.75 mg of formaldehyde RSD≤ 0.9%. The results are correct – they do not contain systematic error (δ<RSD). The advantage that differentiates it from the known ones is the absence of influence of related and auxiliary substances on the results of the analysis.

Conclusions. The obtained validation characteristics of the method for determining the content of formaldehyde in the drug "Formidron" meet the eligibility criteria for SPU, which indicates the possibility of its implementation in the practice of analysis of analytical laboratories.

IDENTIFICATION AND QUANTIFICATION OF PHENOLIC COMPOUNDS IN THE THICK EXRACT FOR THE TREATMENT OF DISEASES OF URINARY SYSTEM

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Introduction. Diseases of urinary system such as pyelonephritis, glomerulonephrithis, and cystitis form a big part of morbidity nowadays. The acute pathological processes can change into the

chronical processes. The treatment of the diseases of urinary system require the usage of antimicrobial treatment and anti-inflammatory therapy. But the usage of these medications are beneficial in the combination with the plant medications. The plant medications posses several types of medical action: antimicrobial, anti-inflammatory, diuretic and anti-oxidant. The plant medications are good in the long-term usage and can contribute to the compete recovery of a patient. The most popular dosage forms of plant medications are the extracts, herbal teas and tinctures.

Aim. Identification and quantification of the phenolic compounds in the thick extract for the treatment of the diseases of urinary system.

Materials and methods. The thick extract has been obtained from the patented medicinal herbal tea K-1® containing St. John's wort herb, Wild pansy herb, Peppermint, Tansy flowers, Horsetail field shoots, Coltsfoot leaf, Wild thyme herb, Elecampane rhizome and root, Sunflower flowers, Elder fruits, Common heather herb, Convallaria leaf; methods of pharmaceutical chemistry and pharmacognosy.

Results and discussion. The identification of phenolic compounds in the composition of the thick extract for the treatment of diseases of urinary system was carried out by the quality reactions and by the method of thin-layer chromatography. The groups of simple phenols, phenolic and cinnamic acids, flavonoids, and polyphenols were identified. Quantification of phenolic compounds in the composition of the medicinal herbal tea was carried out. The assay of simple phenols was carried out by the method of visible spectrophotometry, the assay of phenolic and cinnamic acids by the method of ultraviolet spectrophotometry (calculation for gallic and chlorogenic acids correspondingly), the assay of oxidizable polyphenols by the method of permanganatometry (calculation for tannin), and the assay of flavonoids was carried out by the method of ultraviolet and visible spectrophotometry (calculation for rutine).

Conclusions. The identification and the quantification of phenolic compounds in the composition of the thick extract for the treatment of diseases of urinary system were carried out. The results will be used for the standardization of the extract.

COMPARATIVE ESTIMATION OF QUANTIFICATION METHODS FOR QUININE SULPHATE IN THE COMPOSITION OF MEDICINAL FORM

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Introduction. According to the analytical data, every year it has been reported that around 247 million cases of malaria have been occurred, around the world of which 86% of the cases have occurred in sub-Saharian African countries. For example, due to the statistics in the 2018 year more than 5th to 95th percentiles of the reported death in African countries is due to malaria. About 90% of total death are children under the age of five.

Quinine is an organic substance which is alkaloid in nature, extracted from cinchona plant. It has been used as anti-malarial and for treatment of idiopathic muscle cramp for many years far back since before 1633. The discovery of quinine in 17th century was among the factors, which triggered development of therapeutically knowledge in the process of treatment of most infectious diseases. Quinine sulphate also has shown to have mild analgesic and antipyretic effect. This substance is the salt of quinine being combined with sulphate as an anion. Due to the situation with malaria disease, quinine sulphate is still widely used and is to be effective drug of choice in such condition of plasmodium falciparum malaria resistance, thus become a major drug to use in case of resistance to other ant malaria drugs. Around the year 2019 about 31 African countries recommended that quinine sulphate to be used as second line drug for treatment of uncomplicated malaria while, 32 countries recommended treatment of