such as vitamin D. In folk medicine, eggshells are often used in connection with the scaly calcium content which is completely absorbed by the body and has no side effects. We considered obtaining calcium citrate by conducting an experiment.

## Materials and methods.

1. We assemble the shell from cooked or raw eggs. Sushi it. After the shell has dried, we rub it into a powdery mass.

2.One one teaspoon of powder is poured into a cup and squeezed out the juice of one lemon.

3. A reaction occurs with the formation of a foam. The foam is periodically beaten stirring the solution. Leave the mixture overnight.

4. After 12-24 hours a mixture of white color is obtained. Take 1-2 teaspoons during meal. The mixture is stored for 1-2 days and then spoiled. Take approximately once a week for prophylaxis. When adding lemon juice to crushed lemon acid, calcium carbonate(CaCo<sub>3</sub>) reacts with citric acid(C<sub>6</sub>H<sub>8</sub>O<sub>7</sub>) and calcium citrate is obtained:

 $(Ca_3(C_6H_5O_7)_2): 2C_6H_8O_7 + 3CaCO_3 = Ca_3(C_6H_5O_7)_2 + 3CO_2 + 3H_2O_3)$ 

Assimilation of calcium citrate for the dissolution of which in the stomach hydrochloric acid is not required to remove 44 percent. As a result, under reduced acidity from calcium citrate, the body receives 11 times more calcium than carbonate. That is, if you have high acidity, then it is better to apply the crushed egg shell. If the acidity is lowered, it is better to quench the egg shell powder with lemon juice. a dose-dependent effect of the pharmacotherapeutic calcium activity is also noted. In low doses, this metal is absorbed better than in high doses.

Conclusion. Summing up the work done, the following conclusions should be noted.

1. The mixture obtained can be used to accelerate the healing of broken bones and to fill the calcium deficit. We recommend daily consumption of 3 teaspoons of the biopreparation obtained by maceration for 7 days.

2. The percentage of calcium ions from the eggshell assimilable with lemon juice is about 50 percent, therefore it is recommended to use lemon juice for obtaining the extract of the crushed shell. To improve the taste, you can add a few spoons of honey.

3. The stability of the extract is increased by pasteurization at 84-87C for 5 minutes and conditioning in the refrigerator in a sterile, tightly closed container of dark color

## SYNTHESIS AND DEVELOPMENT OF QUALITY CONTROL METHODS OF PERSPECTIVE SUBSTANCE OF 2-((5-((2,5-DIMETHOXYPHENYL)AMINO)-1,3,4-THIADIAZOL-2-YL)THIO)-N-(NAPHTHYLENE-1-YL)ACETAMIDE WITH DIURETIC ACTIVITY

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**Introduction.** The quality, efficacy and safety of medicines is one of the most important prerequisites for their use in pharmacotherapy. Due to the presence on the pharmaceutical market of a large number of trademarks of medicinal preparations, penetration into the sphere of civilian sales of counterfeit medicines, the main task of researchers is to ensure the quality of new substances by standardization at the stage of their development.

**Aim.** Synthesis and development of quality control methods of perspective substance of 2-((5-((2,5-dimethoxyphenyl)amino)-1,3,4-thiadiazol-2-yl)thio)-N-(naphthylene-1-yl)acetamide with high diuretic activity.

**Materials and methods.** The subject of the study was a patented promising 2-((5-((2,5-dimethoxyphenyl)amino)-1,3,4-thiadiazol-2-yl)thio)-N-(naphthylene-1-yl)acetamide substance. The

required reagents for resynthesis of the substance were obtained and purified using standard techniques. The temperature melting points were determined using the appliance Electrothermal IA9100X1 (Bibby Scientific Limited, UK). Elemental analysis of the nitrogen content was performed by the Dumas method. UV spectrum was taken on a "Thermo Fisher Scientific EVOLUTION 60S" device in ethanol within the wavelength range 190-1100 nm. <sup>1</sup>H NMR spectra were recorded on a Varian Mercury 200 MHz device, solvent - DMSO-d6, tetramethylsilane (TMS) was used as an internal standard. The chemical shifts were shown on the scale  $\alpha$  (ppm). Reaction control and substance identity were performed by TLC on Silufol UV-254 plates. Detection of the chromatogram was carried out in the UV rays of the device "Irradiator chromatographic UVC 254/365" (mode 254 nm). The purity of the synthesized compounds was confirmed by TLC method using Sorbfil plates in a solvent system of toluene-acetone-ethanol-ammonia (45: 45: 7: 3). Quantitative determination: the precise mass of the test substance (0,100 g) was dissolved in 20 ml of glacial acetic acid, stirred until complete dissolution and titrated with a 0.1 M solution of chloric acid with potentiometric determination of the end point of the titration. The quantitative determination was performed using 702 SM Tetrino "Metrohm" automatic titrator (Switzerland) with a volume of 10 ml burette.

**Results and discussions**. 2-((5-((2,5-Dimethoxyphenyl)amino)-1,3,4-thiadiazol-2-yl)thio)-N-(naphthylene-1-yl)acetamide 3 was synthesized by alkylation of 5-(2,5-dimethoxyphenyl)amino-1,3,4-thiadiazole-(3H)-2-thione 1 by  $\alpha$ -naphthalanilide 2 of chloroacetic acid with short-term heating of the starting components in equimolar proportions in aqueous-ethanol medium in the presence of an equimolar KOH amount according to the scheme:



The purity test, namely the determination of the accompanying impurities, was carried out using thin-layer chromatography. Elemental analysis, UV and <sup>1</sup>H NMR spectroscopies were used for identification and qualitative reactions were performed for the corresponding functional groups according to the SPhU.

For quantitative determination of the active substance in the substance 3, a volumetric method, acid-base titration in a non-aqueous medium, was used. The main advantage of this method is to identify with sufficient accuracy very weak bases, their salts and multicomponent mixtures usually without first separating them.

**Conclusions.** The synthesis was performed and the methodology for quality control of promising substance of 2-((5-((2,5-dimethoxyphenyl)amino)-1,3,4-thiadiazol-2-yl)thio)-N-(naphthylene-1-yl)acetamide with diuretic activity was made.

## SIMULTANEOUS SPECTROPHOTOMETRIC DETERMINATION OF IRON(II) AND TOTAL IRON WITH 1,10-PHENANTHLOLINE

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**Introduction.** When 1,10-phenanthroline is added to a solution containing both iron(II) and iron (III), a reddish orange iron(II) complex and a yellow iron(III) complex form immediately. The iron(II) complex has an absorbance maximum at 512 mµ, at which wave length there is little absorption by the