practically insoluble in water and in ethanol 96 %, miscible with light petroleum (40-60 °C). The relative density is 0.921. The refractive index is 1.474.

Identification of fatty oils in all samples was done by thin-layer chromatography (article 2.3.2 «Identification of fatty oils by thin-layer chromatography», method A). Plate was examined in daylight. The obtained chromatograms of three sunflower oil samples correspond to the typical chromatogram of reference solution (maize oil). In all chromatograms four spots of fatty oils were clearly visible. They were the same as the spots in the reference solution chromatogram. Rf value was determined for all four spots. It was 0.68, 0.70, 0.73, 0.76 respectively in all oil samples and correspond to the Rf value of fatty oils from maize oil. The brightest was the third spot on all chromatograms of sunflower oil samples.

Other necessary main tests parameters were determined by the requirements of the EurPh (SPhU). The obtained results are given in the table below.

Table 1

Results of tests parameters determination of three sunflower oil samples

Tests	Schedryiy dar (Щедрий Дар)	Tsarska (Царська)	Schebpak Щебпак	EurPh (SPhU)
Acid value	0.27	0.27	0.34	maximum 0,5
Peroxide value	3.38	3.42	6.85	maximum 10,0
Unsaponifiable matter	1.33 %	0.71 %	1.47 %	maximum 1.5 %
Alkaline impurities	missing	missing	missing	missing

Conclusions. The obtained results of qualitative parameters estimation of three samples of sunflower oils – Schedryiy dar «Щедрий Дар», Schebpak «Щебпак», Tsarska «Царська» showed their correspondence to the requirements of the EurPh article «Sunflower oil, refined».

DEVELOPMENT OF METHOD FOR THE TEST «DISSOLUTION» FOR SILDENAFIL CITRATE TABLETS

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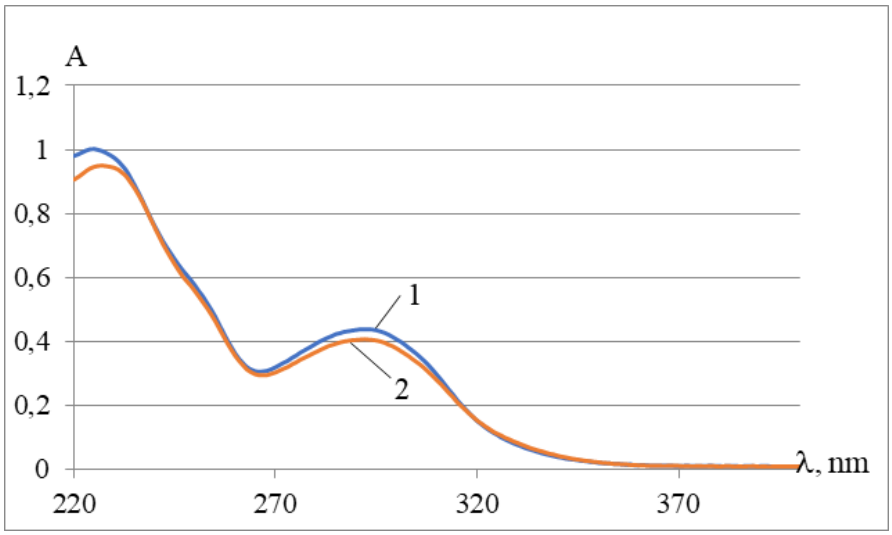
Introduction. The rapid development of sexual medicine in the last decade has significantly raised the level of standards and requirements for the diagnosis and treatment of profile patients. However, the problem remains with erectile dysfunction (ED), the prevalence of which tends to increase. In the general population of men, about 10% suffer ED, and in the group of men 40-70 years – up to 52%. According to American and European recommendations, phosphodiesterase type 5 inhibitors (FDE5) are first-line drugs in the treatment of patients suffering from ED. The «Viagra» (sildenafil citrate), registered in 1998, is currently considered a «gold standard» in the treatment of EDs. Active ingredient of sildenafil in Ukraine is more than 50 names. Recently, due to the imperfection of patent law in Ukraine, the threat of penetration of all kinds of falsifications, counterfeits and pirate copies of dasgs of sildenafil has increased. Such copies, as a rule, arrive without compliance with the technologies, do not correspond to the original bioequivalence and clinical efficacy products, they are attributed to the results obtained in the course of the study of the patented medicinal products. Therefore, the development of new methods for the quantitative determination of sildenafil is a topical issue of the present.

Aim. To develop a spectrophotometric method of quantitative determination based on the physico-chemical properties of sildenafil citrate for further application for the test «Dissolution».

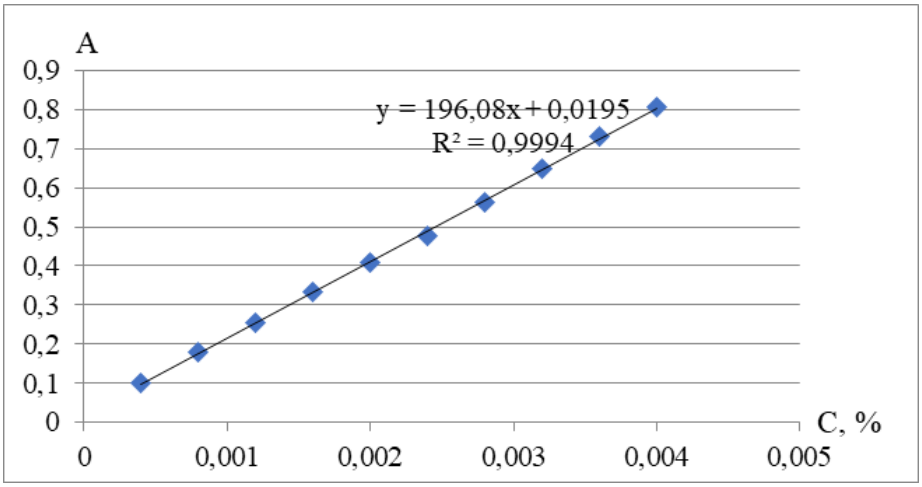
Materials and methods. UV spectrophotometer Evolution 60S (USA), analytical balances Axis (Poland), a standard sample of sildenafil citrate (series 1), dishes Class «A», reagents and solvents that meet the requirements of the State Pharmacopoeia of Ukraine (SPU).

Results. The spectrophotometric method is the most often used to perform a tablet dissolution test. According to the SPU, the quantitative content of sildenafil citrate in the substance is determined by liquid

chromatography. For spectrophotometric analysis, the presence of specific absorption peaks in the absorption spectrum of the compound under study is a prerequisite. We have studied the absorption spectra of sildenafil citrate in water and 0.1M hydrochloric acid solution, which are most often used as a medium for dissolving gastric soluble tablets. It has been experimentally established that the absorption spectrum of absorption of aqueous solution of sildenafil citrate is characterized by the presence of two absorption maxima at wavelengths of 225 nm and 293 nm. In the transition to an acidic solvent, the spectrum is almost unchanged, but the maxima are observed at wavelengths of 227 nm and 292 nm (Fig. 1).



To select the analytical wavelength it was necessary to investigate the subordination of standard solutions of sildenafil to the basic law of Bouguer-Lambert-Ber. Found that when used as a solvent 0.1M solution of hydrochloric acid in 292 nm absorption peak observed linear relationship within sildenafil citrate concentrations from 0.0004% to 0.004% (Fig. 2).



Conclusions. Thus, in order to further dissolve the test for tablets containing the active pharmaceutical ingredient sildenafil citrate, it is proposed to conduct tests in an environment of 0.1M hydrochloric acid solution with further determination of the amount of matter that has been transferred to the solution by spectrophotometric method.