DEVELOPMENT OF SPECTROPHOTOMETRIC METHOD OF PENTOXIPHYLLINE QUANTIFICATION

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Introduction: Obliterating endarteritis is a disease that usually affects the arteries of legs and usually develops in people up to 35-50 years old, mainly in men. This is a systemic disease, accompanied by persistent spasm, and subsequently clogging of arterial vessels. The disease is developed due to inflammation, the inner layer of an artery wall thickens, and then obliteration of the vessel may occur. Inflammatory and dystrophic processes develop also in the surrounding adipose tissue, which makes it denser and compresses the vessel from the outside, which further disrupts the blood flow in it. Pentoxyfylline (3,7-dimethyl-l-(5-oxohexyl)-3,7-dihydro-lH-purinc-2,6-dione) belongs to the group of peripheral vasodilators that inhibits the aggregation of thrombocytes and erythrocytes, reduces the increased concentration of fibrinogen in the blood plasma and enhances fibrinolysis, helping to reduce blood viscosity and improve the rheological properties of blood.

Aim: The aim of our work was to check the possibility of usage of ultraviolet spectrophotometry method for the quantification of penthoxyfilline and the development of a procedure for its assay for the active pharmaceutical ingredient and tablets.

Materials and methods: We used the analytical balance Axis ANG-200 and the measuring glass wear of class A. For the spectrophotometric investigations we used the spectrophotometer Evolution 60S. The statistical studies were carried out by the common procedure.

Results and discussion: The electron absorption spectra of pentoxyfylline in water and in sodium hydroxide solution were studied. It was found that its spectra in water and sodium hydroxide solution have the absorption maximum at 275 nm and 271 nm respectively. The specific absorbance of pentoxyfylline in water solution in the maximum at 275 nm was calculated. Its metrological characteristics were determined. As the spectrophotometric quantification of pentoxyfylline can be carried out by the methods of specific absorbance and the method of standard the corresponding procedures were developed. The validation characteristics that prove the possibility of the suggested methods for the assay of pentoxyfylline were obtained.

Conclusions: The simple UV spectrophotometric procedure for the assay of pentoxyfylline that provides good accuracy of the results both for the substance and tablets has been developed.

DEVELOPMENT OF THE METHOD FOR DETERMINATION ALBENDAZOLE IN THE ANTHELMINTIC PASTILLES FOR CHEWING

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Introduction. Albendazole is a benzimidazole (5-propylthio-1H-benzimidazole-2-yl) carbamic acid methyl ester that was first approved as an anthelmintic for use in humans over 30 years ago. Nowadays WHO recommends albendazole for the prophylactic treatment of helminth infections worldwide. Its vermicidal activity mainly depends on inhibiting the absorption of molecules that are critical for parasite growth; the drug's mechanism of action is through binding to intracellular microtubules and preventing their elongation.

Pastilles with albendazole were developed at the Department of Pharmaceutical Technology of Drugs of NUPh, they are designed for chewing, which speeds up the absorption and onset of action of the