antioxidant system, manifested in a decrease in glutathione peroxidase (GPx) and catalase (CAT) activity ($p<0.05$ compared to the control group). Melatonin showed a significant antioxidant effect manifested in attenuation of both lipid and protein peroxidation in the kidney tissue, along with an increase in the GPx and CAT activity compared to untreated animals ($p<0.05$).

The obtained results show the ability of melatonin to reduce the severity of damage and prevent kidney dysfunction associated with acetaminophen over dose. Treatment with melatonin was suppressed the progression of oxidative stress in kidney tissue through the limitation of lipid and protein peroxidation and activation of the key antioxidant enzymes. Results of research complement to existing data on the nephroprotective activity of melatonin and substantiate the high therapeutic potential and prospects of melatonin use as adjunctive therapy of drug-induced nephropathy.

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VOLTAMPEROMETRIC DETERMINATION OF THIORIDAZINE AS ITS S, S'-DIOXIDE, OBTAINED BY CARO ACID

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Known synthetic drug thioridazine (syn. thioridazine hydrochloride, ridazine, sonapax, melleryl, tioryl) belongs to the original piperidine fentanyl and is widely used as a neuroleptic, sedative, thymoleptic and sedative drug in medical practice. It detects a mild antidepressant effect. The most effective disorders are accompanied by fear, stress, and excitement. The dose is 50-100 mg per day. Medicine is produced in tablets of 10, 25 and 100 mg for children - 0.2% suspension and syrup. For determination of basic substance content in the substance acidimetric method in the medium of glacial acetic acid and acetic anhydride (potentiometric titration) is recommended, in tablets and pills – direct UV spectrophotometry method.

The aim of our study was to develop a simple, selective and fast enough, and cost-effective way to assay thioridazine at 10 mg tablet sonapax, produced at pharmaceutical plant AT (Jelenia Góra, Poland), based on previous drug oxidation in an acidic medium using potassium hydrogenperoxomonosulfate to the corresponding S, S'-dioxide with the subsequent voltammetric determination of its recovery after wave of mercury drops at -0,41 B (SCE). Formation in the studied reactions S,S'-dioxide is due to electrophilic attack β-oxygen atom of peroxoacid peroxide group on sulfur atoms of during minute. In the process of electrochemical reduction polarograms S,S'-dioxide thioridazine experienced two waves of E_n: at - 0.41 V (restoration to the S-oxide) and slightly less at - 0.72 V (SCE), height is proportionally increased depending on the concentration of the analyte. As we have chosen the analytical wave with peak potential at - 0.41 V (SCE). It was experimentally found that the dependence of peak current strength of the recovery potentials S,S'-dioxide thioridazine in - 0.41 V (I, mA) on the concentration (C, mol / l) in the concentration range from $2.0 \cdot 10^{-5}$ to $1{,}6 \cdot 10^{-4}$ mol / l by the equation: $I = (0{,}18 \pm 0{,}03) \cdot 10^{5} \cdot c$ (correlation coefficient r = 0,98). The content of thioridazine by a method of the standard was determined. The reproduction of the signal (peak height of the current restoration of thioridazine potential - 0.41 V (SCE) in the test solution Rcc thioridazine hydrochloride $7{,}37 \cdot 10^{-5}$ mol / l (10.00 ml of the drug taken for analysis) characterized by the RSD = 3,27 for $n = 5$; $P = 0{,}95$).

Therefore, the method for quantitative determination of thioridazine tablets of 0.01 g by variable-current voltammetry method as S, S'-dioxide thioridazine (E_n = - 0.41 V (SCE) obtained by using Caro acid is developed. RSD = 3,27% ($n = 5$, $P = 0{,}95$). The results were in good agreement with those of BhP (δ = -1,01%).