

INVESTIGATION OF CHLOROPYRAMINE IN THE ROTTING BIOLOGICAL MATERIAL

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One of the important areas of forensic toxicological examination is the study of putrid corpses and exhumed corpses on the presence of substances that could be the cause of poisoning. Organic substances in the putrescent biological material subjected to chemical transformations, they can not be found in the observations. Only a fraction of substances stored in cadavers unchanged for a long time, so study the term storage of the substance in biological material during its decay is an actual problem.

Chloropyramine hydrochloride (suprastin) belongs to the group of antihistamines. This drug is characterized toxicity, in overdose, self-medication can cause intoxication. For the diagnosis of poisoning antihistamines is important to apply the results of chemical and toxicological studies. The aim of this work is to develop techniques isolating, purifying extracts, assay of Chloropyramine in biological material in its decay, depending on the term of storage.

The model mixtures 10,0 g of liver tissue with 1000,0 μg Chloropyramine hydrochloride and a control samples were used for investigation. They were left deposited at a temperature of 5 ° C - 7, 14, 21 and 28 days. Isolation of Chloropyramine was performed by a modified method of Stas-Otto - with ethanol acidified with acid oxalate. This method is recommended for forensic toxicological analysis of biological material in its decay. Chloroform extracts were purified by extraction of impurities with hexane and TLC-method: stationary phase - plates Sorbfil PSTH-AF-A, the system of organic solvents - ethylacetate – methanol - 25% solution of ammonia hydroxide (85:10:5), reagent for the detection - Dragendorff reagent (sensitivity of reagent -1-3 μg in the samples); $R_f^{\text{Chloropyramine}} = 0,60-0,63$.

Quantitative determination of Chloropyramine was performed UV spectrophotometry after TLC purification. Optical density values were measured on an SF-46, cell thickness 10 mm; λ_{max} 312 \pm 2 nm, reference solution – extract from control sample. Isolation of Chloropyramine with ethanol acidified with acid oxalate from biological material to determine – 35,2 \pm 4,5 % of the substance.

Research term storage of Chloropyramine for 7, 14, 21 and 28 days was performed by the developed technique. It was established that after 21 days of storage of the substance in the decay of the corpse in the liver can detect 13,8% Chloropyramine; after 28 days storage discover Chloropyramine impossible.