METHOD DEVELOPMENT ALLOCATION OF URINE TRAMADOL

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Tramadol (tramadol gidrohlorid, Melanate, Limadol, Tradonal Retard, Tramal, Tramundin Retard, Ultram, Zydol, Biovail, Crispin) - RR, SS-trans-2-[(dimethylamino) methyl] -1- (m-methoxyphenyl) cyclohexanol gidrohlorid.

Tramadol is inferior to the activity of morphine, but virtually no therapeutic doses depresses respiration. In the case of long-term use may develop drug dependence. Excreted urine excreted within 3 days, about 90% of the dose, including about 30% - unchanged, metabolites are excreted as conjugates.

The aim of this work was the development of detection techniques of tramadol and its metabolites in urine.

To 10 ml of urine was added to 1 ml of aqueous solutions tramadol containing 100, 200, 500 and 1000 mg of the drug, leaving a day with periodic stirring. In parallel, put "idle" experiment. A day model mixture was acidified with 0.1 M hydrochloric acid to pH 2 - 3 and extracted three times with new portions of diethyl ether 5 ml. Essential layers rejected. Aqueous layers basified 50% sodium hydroxide natrium solution to pH 10 - 11 and extracted three times with new portions of 10 mL of chloroform. The resulting chloroform extract was filtered through a paper filter with anhydrous sodium natrium sulfate (0.5 g). Identification tramadol and his major metabolites in the urine we conducted one is the most affordable methods chemical - toxicological analyza- by tonkosloynoy chromatoghrafy. Assay preparation was performed specially designed extraction-photometric, ionometrychnoyu methods.

№	Of the drug, mcg	Highlight drug mcg	Highlight drug,%	Metrological specifications
1	1000,00	675,00	67,50	$\overline{X} = 64{,}60$
2	500,00	290,00	60,00	$S = 4{,}77$
3	200,00	106,00	63,00	$S_{\overline{X}} = 2{,}13$
4	100,00	65,50	65,50	$\Delta\overline{X} = \pm 5{,}90$
5	100,00	67,00	67,00	$\varepsilon = \pm 9{,}16$

The table shows that the method can provide 60,00-67,50% of tramadol urine. In parallel, to identify the most effective method of isolation of tramadol in urine were tested following extractant 4: 1-chloroform (60,16 ± 0,48); 2-mixture of solvents chloroform-n-butanol (9: 1) (80,06 ± 0,65); 3- mixture solvent of chloroform - isopropanol (9: 1) (84,53 ± 0,50); 4- solvent mixture of diethylether - etilatsetat (1: 1) (39,30 ± 0,44). The most effective solvent mixture is 2 and 3, which allows to allocate 84% of the tramadol.