## THE DETERMINATION OF TRAMAL IN DROP OF SOLUTION BY TRAMAL SELECTIVE ELECTODEM (TSE)

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In chemical-toxicological studies we often have to deal with small amounts of samples with small amounts of certain substances, that analyze, the measurement electrode potential coefficient (EPC) in tramal solution were carried out on digital ionomer I-130. To reduce the rate of leakage of solution salt of bridge electrode, we used a capillary nozzle with length 1-1.5 cm and a diameter of capillary 0.5 mm. The attachment secured by capillary electrode. Electrode impedance electrode with a nozzle is in the range 17-20 ohms.

The initial solution of tramal hydrochloride wit a concentration 1.0•10<sup>-1</sup> M were prepared with substance tramal hydrochloride pharmacopoeial purity. Other solutions were prepared by consecutive 10-fold dilution to a concentration of 1.0•10<sup>-6</sup> M. The temperature of all solutions was equal. On the ion selective electrode (ISE) membrane for tramal and butt cap electrode were applied 1 drop of tramal solution and immediately gently were dried using filter paper. Then we applied on the ISE membrane 1drop of solution that investigates and summarized in a drop side butt cap electrode. The measurements of each tramal selective electrode (TSE) element were carried out every minute for 10 minutes. Most stable value system capacity observed for 3-7 minutes of measurements. For the small concentrations of the drug  $(1 \cdot 10^{-6} - 1 \cdot 10^{-5} \text{ M})$  the stability of potential is reduced, that is likely due to the surface-active phenomena. The interval of linearity of electrode function is  $(1.0\pm0.2)\cdot10^{-1}-(1\pm0.4)\cdot10^{-5}$  M with slope 56±1 mV for fifth minute of measurement. The minimum concentration is 3.2•10<sup>-5</sup> M that can be defined in these conditions. So, in 1 liter of tramal solution contains 9.6•10<sup>-3</sup> g, and detection limit in drop of solution ( $\approx 0.05$  ml) will be about 0.48 mg. The proposed method of determination of tramal in drops by the TSE for the drug can be used for pharmaceutical and chemical-toxicological analysis.