

Date Name Group

Lab report from the practical lesson on biochemistry

Topic: Selected examinations in toxicology

Task 1: Thin-layer chromatography of selected drugs

Principle of TLC:

Results and evaluation:

Record appearance of each spot after each detection step. Measure distance of each spot as well as the solvent front from the start and calculate the R_f value.

	<i>Furosemide</i>	<i>Diclofenac</i>	<i>Tramadol</i>	<i>Mirtazapine</i>	<i>Metoprolol</i>
Appearance under UV					
Marquis + heat					
Mandelin + heat					
Dragendorff + heat					
Distance of spot from start (a)					
Solvent front from start (b)					
$R_f = a/b$					

Conclusion:

Were all drugs detected?

Task 2: Proof of ethanol by reaction with potassium dichromate

Principle:

Result/Observation:

Task 3: Estimation of ethanol in blood by means of gas chromatography – evaluation of chromatographic trace

Principle:

Results and calculation:

$(h_{et})_{CAL}$ $(h_{et})_{SAM}$

$(h_{is})_{CAL}$ $(h_{is})_{SAM}$

C_{St} (written at the chromatogram)

$$c_{et} \text{ in the sample} = \frac{\left(\frac{h_{et}}{h_{is}}\right)_{SAM} \times \left(\frac{h_{is}}{h_{et}}\right)_{CAL} \times C_{St}}{k} = \dots\dots\dots$$

Conclusion:

Task 4: Demonstration of rapid immunochemical test for detection of drugs in urine

Principle:

Result/Observation: