

INVESTIGATION OF SOME ANTIRETROVIRAL DRUGS BEHAVIOUR IN THIN LAYERS OF SORBENT

Al Rajab Sarah, Burian G. O.

National University of Pharmacy, Kharkiv, Ukraine

anna_chem@ukr.net

Introduction. Chromatography in thin layers of the sorbent according to the literature data, is today one of the most common methods for the determination of substances in the pharmaceutical, forensic, chemical and chemical-toxicological analysis, and is widely used to determine the purity and impurities in pharmaceutical analysis.

For chromatographic researches from the group of antiretroviral drugs was chosen zidovudine, which is nowadays is widely used for treatment of various viral infections including human immunodeficiency either as a separate substance or as a compositional part of multicomponent medicines.

That is why the constant improvement among the existed analysis methods and researches about new methods of identification and assay for zidovudine has a great interest for analysts and can have a valuable practical importance.

Materials and methods. For our researches two type of chromatographic plates: Sorbfil and Merck have been chosen.

As a detectors have been chosen such reagents as: Dragendorff reagent, FPN reagent, Van Urk reagent, Iodine vapors, UV light, mercuric sulphate with 0.05% diphenylcarbazone solution in chloroform, 1% *o*-tolidine solution and some other reagents.

As a movable phases have been chosen systems of solvents of acidic character; systems of solvents of alkaline nature and systems of solvents of neutral character.

Results and discussion. As it has been stated according to the data of the conducted investigations, the limit of zidovudine detection in all the suitable systems chosen for its identification is 2 mkg on both types of chromatographic plates mentioned above.

The most suitable systems for the identification in our experiment, appropriate for carrying out investigation about zidovudine identification by TLC method on plates Sorbfil and Merck are systems of alkaline character using Dragendorff reagent, UV light, 1% *o*-tolidine solution and iodine vapours as detectors on plates after their evaluation.

Conclusions. The systems of solvents and detectors mentioned above can be taken for identification of zidovudine by thin layer chromatography method on the plates Sorbfil and Merck.