

## **CREATE TEST SIMULATOR TRAINING CHEMIST (PHARMACIST) - ANALYST**

Kirichenko D.A., Makhnutin I.D., Kha Dyk An, Moroz V.P.

National University of Pharmacy, Kharkiv, Ukraine

[anchem@ukrfa.kharkov.ua](mailto:anchem@ukrfa.kharkov.ua)

Currently, the control of knowledge of students in educational institution is not possible without the use of test technologies, in particular computing. It is known that the test has three main closely related functions: control, training and educational. This is important in the training of general specialists of chemical and pharmaceutical profile – future chemists and pharmacists -analysts.

The object of our work was to create test simulators for knowledge control of students of the National University of Pharmacy on subjects “Analytical Chemistry”, “Analytical chemistry and instrumental methods of analysis”. Previously we studied the experience of several leading domestic and leading the CIS educational institutions: Russian Chemical-Technological University D. I. Mendeleev, St. Petersburg Chemical-Pharmaceutical Academy and others.

Materials and methods. On the first stage was chosen about 20 objects to create test simulators – mostly pharmaceutical preparations of inorganic nature described in State Pharmacopoeia of Ukraine and other pharmacopoeias. Number of them are used in the food industry, agriculture, and as reagents in pharmaceutical analysis, etc... In the future, this list will significantly expand. Each of the test simulators consists of a package of 20 tests, in which a particular object is analyzed (for example, pharmaceuticals, etc...). Students answer questions of the qualitative analysis (identification of cations and anions) and the quantitative analysis (classical and instrumental methods). For computer implementation of these tasks, we used «MyTestX». It is a system of programs, including the program of testing of students, test editor and results log. «MyTestX» allows you to work with 10 types of tasks: single choice, multiple choice, establishing the order of the sequence, establishing conformance and others. In these tasks (single choice, multiple choice, an indication of the order), you can use one to ten (inclusive) of the options answer. Program «MyTestX» is perfected over 10 years and has two versions one of which is nonprofit. Any educational institution, student or teacher can use it for free on the basis of the license agreement.

Conclusions. Generated test simulators can be used for knowledge control for second-year students of the National University of Pharmacy of different departments before the final module control, and for third-year student and up in the study of special subjects (pharmaceutical chemistry, etc...), for the fourth-year students before writing the license examination “KROK 1” at the context of preparation of students for the subject “Methods of Pharmacopoeial analysis,” which is taught at the Department of Analytical Chemistry, National University of Pharmacy.