



learning of personal environmental awareness and education based on ecological culture are still under discussion. According to teachers, the main condition for the successful formation of ecological culture of pupils is a skill mix of environmental educational material content of the practical activities of students in the natural environment.

Psychologists note that at different stages of their lives in different ways students understand and perceive the environment. In addition, each student has his other inherent features of cognitive activity, emotional life, liberty character behaviour, etc. Every pupil needs an individual approach based on the study and incorporation of psychological features of his personality [2, c. 85].

Therefore, to achieve positive results in environmental education it is important to note age and individual characteristics, traits, attitudes to learning needs and abilities of each student. Only developing environmental culture the teacher will be able to provide full and conscious perception of coherent educational material.

Primary school opens enormous opportunities for this, because of foundation of intelligence, the thinking structure, natural curiosity of children, and sincere interest in the environment.

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DETERMINATION OF THE CONCENTRATION OF CHITOSAN IN ITS ACIDIC SOLUTIONS

3. Chitosan is the second most common natural polysaccharide after cellulose on earth. It is the main constituent of the skeleton system of the cells in crawfish shells, cell structures of fungi and bacteria. Chitosan is composed of $\beta(1\rightarrow4)$ -linked 2-amino-2-deoxy- β -D-glucopyranose and is easily derived by N-deacetylation [2]. It is widely used in medicine, pharmaceuticals, agriculture, food, textile and other types of industries. Chitosan is known for its unique properties such as biocompatibility, forming complex compounds with metal ions, regenerative influence on the body tissues. Besides that, it appears to be non-toxic, fungistatic, hemostatic, and antibacterial [3]. The effective usage of chitosan requires reliable and accurate methods



for its quantitative analysis. The conductance-measuring methods that are used today are not accurate enough and slow, that is why it is necessary to develop a new way of determination of the concentration of chitosan in different solutions.

4. The research is aimed to determine the effectiveness of photocolourymetry as a method of analysis based on the measurement of the absorption level of the non-monochromatic radiation of the colored substances [1]. Since chitosan has a great potential to be used for the production of wound-dressing materials, ointments, creams and other kinds of medications, its solutions in 2% lactic acid were used for the analysis. First, the solutions of chitosan in 2% lactic acid with the following concentrations were prepared: 4%, 3%, 2%, 1,5%, 1%, 0,5%, 0,25%, 0,1%, 0,05% and 0,025%. The total number of the samples was 10. That was enough for the analysis to be made and calibrating chart to be drawn.

5. As solutions of chitosan are colourless, ninhydrin and p-dimethylaminobenzaldehyde (Erlisch's reagent) were used as dye agents. The aldehyde group of Erlisch's agent interacts with the aminogroup of chitosan resulting in the formation of a bright yellow base called Schiff's base. The brightness of the solutions increased with the increase of the concentration of chitosan in the samples. The other group of solutions turned blue after ninhydrin was added to them and the solution was boiled for an hour. The interaction of chitosan with ninhydrin results in formation of a blue complex compound called Ruemann's blue. The rate of radiation absorption and optical density were measured for all the samples prepared. The results obtained were presented in a form of a chart. The chart shows that the increase of the concentration of the solution results in the increase of optical density and decrease of the radiation absorption.

6. To make sure the results are accurate and can be used in the production of different materials and solutions, the following samples were prepared: 0,75% and 2,5% solutions of chitosan in 2% lactic acid. The analysis of the samples was made according to the method stated above. The results of the analysis and ones theoretically calculated according to the chart were very close to each other. That proves the fact the concentration of chitosan in different solutions can be determined with the help of photocolourymetry.



7. Thus, photocolormetry is proved to be an effective and accurate method for the quantitative analysis of chitosan.

8. REFERENCES

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COMMUNICATION AS A DRIVING FORCE OF EFFECTIVE PROFESSIONAL ACTIVITY OF EDUCATIONAL MANAGER

No person can live a single day without communication, in view of the fact that we are among the other people constantly. Every day a person who comes to work, both a leader and an employee, should interact. Communication as interaction suggests that members of a team of professionals contact with each other, exchanging information to build a joint venture, cooperation.

It is necessary to provide proper communication for the effective functioning of any organization. However, management practice gives an opportunity to state that the creating of an effective reliable information exchange system that would meet the requirements of completeness, adequacy, efficiency, and flexibility is one of the main problems in organizations.

Communication is a complex process that involves several interrelated steps each of them plays an important role in the understanding and perception of information by other person. The most common cause of low efficiency of communication is ignoring the fact that communication is the exchange, where every one takes an active part. The sender makes some message and sends it to the addressee (beneficiary) in the process of communication

Communication is a process of contact employees, departments, organizations, etc. [2, p. 56]. Its structure, implemented by G. Andreeva forma a fundamental principle of the analysis of communicative skills development. Communication allocates three major components: