



МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ И СОЦИАЛЬНОЙ
ЗАЩИТЫ НАСЕЛЕНИЯ РЕСПУБЛИКИ ТАДЖИКИСТАН

ТАДЖИКСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ
УНИВЕРСИТЕТ ИМ. АБУАЛИ ИБНИ СИНО



Материалы научно-практической
конференции молодых ученых
и студентов ТГМУ им. Абуали
ибни Сино с международным
участием посвящённой
«Году молодёжи»



РОЛЬ МОЛОДЁЖИ в развитии медицинской науки



ДУШАНБЕ
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СОЦИАЛЬНОЙ ЗАЩИТЫ НАСЕЛЕНИЯ
РЕСПУБЛИКИ ТАДЖИКИСТАН



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РОЛЬ МОЛОДЁЖИ В РАЗВИТИИ МЕДИЦИНСКОЙ НАУКИ

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hand, walking to needed location through the routes person has never taken before. Also sense of the time directly depends on the level of dopamine. In patients with post traumatic stress disorders and Parkinson's disease the dysfunction of permeability of dopamine to the basal ganglia is found.

Conclusions. Time perception varies in individuals, and depends on mood, physical state, mental tiredness, emotional and psychological state. Failing to manage the time, damages person's effectiveness and causes stress. The highest achievers manage their time exceptionally well. Thus, time perception should be exercised.

RESEARCH OF ALKALINE DECOMPOSITION OF POLYETHYLENE TEREPHTHALATE (PET) IN NON-AQUEOUS MEDIUM

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Increased consumption of polymeric materials results in accumulation of waste, which do not decompose, leading to air, soil and groundwater pollutions by partial decomposition products. The major share in the total mass of plastic waste is polyethylene terephthalate (PET) – about 25%, from which the polymer package is producing for many industries: cosmetic, food, chemical etc.

Research objective. Analyzing methods of recycling PET and offering the optimal and cheapest one, with safer chemical reagents and a maximum output of the reaction products.

Materials and methods. The object of the research was a polymer of polyethylene terephthalate (PET). The research methods were acid-base titration and experimental data analysis.

Results. There are several main areas of processing recycled PET, which can be divided into three main groups: mechanical, chemical and thermal. The most promising method is the chemical decomposition of PET waste to obtain fiber and film coating, as well as composite materials with new properties (S. Alakayeva, 2013). The latest industrial techniques use alkaline decomposition of PET and anhydrous ethylene glycol as a solvent. The advantage of this method is relatively low reaction temperature, thermal and chemical stability of the solvent, low cost of reagents, the absence of catalysts (D. Zakharov, 2003).

The optimal method is based on the research of Department of Chemistry and Materials Technology, Kyoto Institute of Technology, Japan (A. Oku, E. Yamada, 1997). According to the method ethylene glycol is used as a solvent, sodium hydroxide – as a single chemical agent, mild reaction conditions: $t = 150-180^{\circ}\text{C}$ for 15-60 minutes at the atmospheric pressure. Reaction products are ethylene glycol and sodium terephthalate, the latter is precipitated quantitatively to terephthalic acid by solution of sulfuric acid. The reaction occurs according to the equation: $\text{C}_6\text{H}_4(\text{COOCH}_2)_2 + 2\text{NaOH} \rightarrow \text{C}_6\text{H}_4(\text{COONa})_2 + (\text{CH}_2\text{OH})_2$.

Conclusions. The maximum output of terephthalic acid is determined to occur at 180°C for 15-20 minutes. Output of the reaction product amounts up to 80.7%. Depolymerization reaction rate constant is determined by method of sampling interval (every 10 min.) and acid-base titration of NaOH solution by 0,1 N HCl solution. The concentration of NaOH varies depending on the time of the reaction and quantitatively corresponds to depolymerization reaction rate. Based on the data, reaction rate constant is calculated, the average value of which is $0.014 \text{ l/mol}\cdot\text{min}$. The selected PET recycling technology is effective and easy to use.

MEANS OF PROFESSIONAL COMPETENCIES FORMATION IN FUTURE DOCTORS

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Introduction. Professional thinking improvement is an important issue of future doctors' personal development. The ability to critical, quick and reasonable thinking is the only way to effective practical activity. Professional thinking is based on the level of professional competencies that are taken by students while being in higher medical schools. Acquired professional competencies enable graduates to gain success in their professional activities in the future, and to be competitive in the labor market worldwide.

The aim of our research was to analyze means of formation of professional competencies that are acquired by students while learning in our University.

Materials and methods. It was analyzed the students work at different departments of university.

Results. In this research it was established that principally students use acquired in theoretical departments knowledge for the creation of systematic approach for analyzing medical information while training in clinical departments. The University Simulating Center provides training using special simulators for acquiring motor skills to perform certain manipulations and procedures. It is very important, that students also gain there the ability to professional thinking, decision making, demonstrating of leadership and organizational qualities, and their teamwork activity. Direct work with diagnostic equipment in the departments of functional diagnostics, clinical laboratory diagnostics, and X-ray diagnostics increases the ability and willingness of future specialists for usage of medical and technical equipment in their activities with patients. Usage of computers, interactive multimedia technology, modern 3D-applications and cloud technologies for the educational process in all departments of the University (medical informational systems Doctor Elex, OpenEMR, OpenDental; Wolfram Alpha) leads to certain benefits. They are the