

Фармак

Фармак



НАУКА В ОСНОВІ ВСІХ ПРОЦЕСІВ

**ЗБІРНИК МАТЕРІАЛІВ
X НАУКОВО-ПРАКТИЧНОЇ КОНФЕРЕНЦІЇ
З МІЖНАРОДНОЮ УЧАСТЮ
ШКОЛИ МОЛОДИХ НАУКОВЦІВ
АТ «ФАРМАК»**

**«НАУКА ТА СУЧАСНЕ
ФАРМАЦЕВТИЧНЕ ВИРОБНИЦТВО»**

Київ 2022

In Poland, as well as in neighboring Germany, which is a leading country in the EU countries in terms of the level of development and introduction into production of new pharmaceuticals, almost all pharmacies are engaged in extemporaneous production aimed at maximally satisfying the individual needs of patients.

In comparison with other European countries with a developed pharmaceutical sector, there are pharmacies per 100 000 populations: in Spain – 46 pharmacies, in Italy – 30 pharmacies, in Great Britain – 21, in Germany – 26 pharmacies.

Licensing of the pharmaceutical activities of pharmacies is subject to the uniform norms of the EU regulatory framework, but there are certain peculiarities. For example, in Belgium, in case of opening a new pharmacy, the license can be transferred only during the first five years of operation. In many EU countries, licensing regulation is carried out by granting licenses in compliance with licensing conditions to a pharmacy institution and a specific manager (example of Austria).

Conclusions. EU countries have introduced systems of self-regulation in the pharmaceutical industry, which allows relevant organizations to take an active part in the development and implementation of important legal documents, increase the level of pharmaceutical assistance and protect the interests of pharmaceutical specialists. The strategy of reforms of the pharmaceutical sector of the EU countries is aimed at maximum satisfaction of the patient's needs regarding quality medicines and safety of use, promotion of availability of medicines and responsible use of medicines in view of costs and effectiveness.

CHEMICAL SAFETY AS A COMPONENT OF THE PROFESSIONAL TRAINING OF DOCTORS FOR THE SAFETY OF THE USE OF MEDICINES FOR PATIENTS

Ishchenko A. A.

Introduction. Chemical safety, handling of chemical substances are priority areas that integrate the international community and are components of the sustainable development of mankind. In June 1992, a United Nations (UN) conference on environment and development was held in Rio de Janeiro. The main principles of the international strategy in the field of chemical safety were determined: understanding the chemical factor as an integral danger for the environment and human health; creation of institutions at the international and national levels that specialize in chemical safety issues; activation and expansion of activities related to risk assessment of the production and use of chemical compounds; creation of a unified system of classification and labeling of chemical substances; development of programs that will help reduce the negative impact of

chemical compounds; prevention of illegal international circulation of toxic and dangerous substances; exchange of data on toxic compounds and associated risk factors for the environment and human health; strengthening the national potential for the rational use of chemicals.

The purpose of the study is to determine chemical safety as a component of the professional training of doctors for the safety of the use of medicinal products for patients.

Research methods: theoretical – research and analysis of scientific literature on the training of future doctors in the context of the competency approach, modern concepts of chemical safety, biochemical training (analysis, synthesis, comparison, generalization), substantiation of the components of chemical safety (analysis, synthesis, comparison, generalization, classification, systematization), creation of a model of formation of competence in chemical safety of future doctors in the process of learning bioorganic and biological chemistry (modeling) – empirical: diagnosis of components, criteria, indicators and levels of formation of competence in chemical safety of future doctors in the process of learning bioorganic and biological chemistry (questionnaire, observation, testing); statistical – processing of experimental data, confirmation of their reliability (Pearson criterion).

Research results and their discussion. According to the results of a comprehensive analysis of scientific and methodological sources and international legal documents, three approaches to the interpretation of the concept of "chemical safety" as a component of: civil safety and life safety (man-made hazards and their consequences) have been identified; environmental safety; of the international strategy for the work and handling of chemical substances.

The definition of the concept of "chemical safety" as a set of normative, legal and practical measures that minimize the negative impact of chemical substances during their production, storage, transportation, sale, use, and disposal through concerted work in the spheres of legal, economic, ecological and hygienic has been specified and supplemented. and educational activities.

The components of chemical safety recorded in international and national documents, which are necessary for the professional training of future doctors, have been established: an understanding of the chemical factor as an integral danger to human health; knowledge of methods of labeling chemical products; compliance with safety measures for working with chemical products throughout the entire life cycle.

It has been proven that chemical safety is a component of professional training, formation of general and professional competencies of future doctors, namely: general culture (behavior with chemicals, household chemicals); promotion of a healthy lifestyle; prevention of population diseases; protection and preservation of public health; provision of emergency medical aid in emergency situations (related to

chemical accidents).

It was established that the biochemical issues related to the outlined aspects of the formation of competence of future doctors in chemical safety (poisoning by rotenone, nitrites, nitrates, organic solvents, bismuth salts, arsenates, cyanides, exhaust gases, ethanol; toxicity to the body of ammonia, carbon(II) oxide, 3,4-benzopyrene; neutralization of ammonia; formation of pathological forms of hemoglobin; detoxification function of the liver). In the context of modern definitions of chemical safety, an urgent need for the development of theoretical and methodical foundations for the formation of professional competence of future doctors and necessary in professional training for the safety of the use of medicinal products for patients has been revealed.

Conclusions. The chemical safety competence of the future doctor is substantiated as an integral property of the individual characterizing the readiness to collect, analyze, interpret modern data on the impact of chemical compounds on human health, use the acquired knowledge, skills and abilities for safe handling of chemical substances in the process of the life cycle for carrying out successful treatment and prevention activities and the safety of the use of medicines for patients.

ANTI-CELLULITE CREAM CONTAINING USED COFFEE GROUNDS

Kaplia K., Fedorova O.

Introduction. Cellulite (gynoid lipodystrophy), commonly referred to as the "orange peel effect", is a typical female problem that appears mainly on the thighs and buttocks. Cellulite is a complex disease involving the microcirculatory and lymphatic systems, the extracellular matrix, and the presence of excess subcutaneous fat that accumulates in the dermis.

Today, coffee extracts have a wide spectrum of action, so they can be used in many areas of cosmeceuticals and the cosmetic industry. Caffeine stimulates metabolism, promotes the removal of toxins from the body, reduces puffiness of the eyes, accelerates the drainage of the lymphatic system from adipose tissue, improves blood microcirculation in capillary vessels, exhibits anti-cellulite properties, activates lipolysis and releases excess fat from adipocyte cells by reducing their size.

Thus, the study of the use of caffeine in cosmetology is a promising direction for the development of industry and medicine.

The aim of the work. To develop an optimal formulation of an anti-cellulite cream for the effective treatment of cellulite in women, as well as sustainable use of coffee residues (used coffee grounds).

Materials and methods. The research was conducted based on the data of articles from such information resources as the bibliographic and abstract databases Scopus, Sci-finder[®]. Analytical and logical methods have been used.

Used coffee grounds were applied as the main ingredient of the cream formula. Formula developed in our research is presented below.

<i>Ingredients</i>	<i>%, мас</i>
<i>Cosmetic base</i>	60
<i>Essential oils (grapefruit, rosemar)</i>	5
<i>Olive oil</i>	10
<i>Jajoba oil</i>	12
<i>Used coffee grounds</i>	10

Qualitative reactions and TLC were applied to identify caffeine in a sample of used coffee grounds and they showed positive results.

Cosmetic creams are stored in dry rooms with a relative humidity of no more than 70%, at a temperature of higher than +5 °C and not higher than +25 °C.

Results and discussions. Used coffee grounds were applied to effectively use caffeine in the fight against cellulite. Today, the usage of coffee residues can be a promising and economically profitable direction of industrial development. The use of coffee residues includes the extraction of a wide range of nutrients, and biologically active substances, and the subsequent production of cosmetic and pharmaceutical products based on them. The usage of coffee residues allows us to obtain the desired active substances by reusing organic raw materials, thus implementing the concept of sustainable development in practice. Considering that coffee is the most popular product in the world, the amount of coffee residues will provide a sufficient amount of BAR for the implementation of efficient ecological production of various cosmeceutical products, in particular anti-cellulite cream.

Caffeine, which belongs to methylxanthines, is the most carefully evaluated ingredient in drugs for the treatment of cellulite.

Published studies have shown that an emulsion with caffeine resulted in a 17% reduction in the diameter of fat cells compared to a control.

It is also worth noting that the use of coffee grounds in the composition of the cream will provide the effect of a scrub, which, despite the pharmacological effect of caffeine, will have a stimulating physical effect.