

obtained for the total content of flavonoids: *Simphyti radices*-0,08%; *Agrimoniae herba*-1,39%; *Calendulae flores*-0,26% *Silybi fructus*-0,09%; *Menthae piperitae herba*-0,95 %. For chromatographic separation was developed a unique technique for all extracts, based on the use of the solvent system acetonitrile:purified water (80:20). The final results of dosing flavonoids by HPLC method are correlated with those obtained from UV-VIS spectrophotometric determination.

Conclusion: The obtained optimized extracts present the total concentrations of flavonoids, as evidenced by HPLC analysis and UV-VIS.

Keywords: vegetable products; flavonoid; extracts

20. THE STUDY OF COMPATIBILITY OF ECONAZOLE NITRATE AND BETAMETHASONE DIPROPIONATE

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Introduction: Econazole nitrate is an antifungal substance of the imidazole class that is successfully used in the treatment of different types of mycosis, especially those caused by agents as *Aspergillus flumigatus* and *Candida albicans*. According to WHO every fifth person is affected by a fungal disease. Mycoses are often associated with secondary infection followed by inflammation, that is why one of the possible drug combinations in the treatment of this disease is the combination between econazole nitrate and betamethasone dipropionate.

Purpose and objectives: Studying the compatibility of econazole nitrate and betamethasone dipropionate using different modern methods and analysis of the results from different perspectives.

Materials and methods: The research is based on the identification of econazole nitrate and betamethasone using the Infrared Spectrophotometry and the determination of the content of each substance in the mixture using UV-VIS Spectrophotometry and the HPLC chromatography.

Results: Infrared spectrums of econazole nitrate, betamethasone dipropionate and the mixture of econazole nitrate and betamethasone dipropionate (prepared from 1,0 g of each substance) show that there are few interactions between them. Infrared Spectrophotometry, as a modern method of analyse, is used only for identification of the substances, so it doesn't reveal any quantitative aspects. According to this, for testing forward the compatibility of the analyzed substances there were recorded UV-VIS spectrums using different solvents such as C₂H₅OH 96%, CH₃OH, HCl 0.1M (according to European Pharmacopoeia). The recorded UV-VIS spectrums show that the substances by themselves correspond by quantitative aspects, but the mixture of them doesn't correspond. The compatibility of econazole nitrate and betamethasone dipropionate was also tested using HPLC chromatography. Chromatograms of econazole nitrate, betamethasone dipropionate taken on their own mobile phase show quantitative correspondence, but chromatograms of the mixture taken on the mobile phase of each substance doesn't reveal any compatibility.

Conclusion: The study of compatibility of econazole nitrate and betamethasone dipropionate, based on using different modern methods, revealed that the substances are incompatible.

Keywords: econazole, betamethasone, compatibility, spectrums, chromatograms

21. MARKETING ACTIVITY IN COMMUNITY PHARMACY

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Introduction: Pharmacy Marketing is a modern pharmaceutical management that is based on the orientation of the patient as "customer orientation" marketing concept is considered the foundation of modern marketing management. The value of service oriented marketing activities

consist of information, ideas, advice and is intended to increase the value of the pharmaceutical product, so chemists promote professional pharmacy service and not just release drugs. Competition for patients is fierce and pharmacy service make the difference between a pharmacy and another because drugs in pharmacies are essentially the same, but the services do not. Pharmaceutical marketing strategic planning provides support for the assessment of the types of goods and pharmacy service offers by community pharmacy.

Purpose and objectives: The efficiency of developing a strategic plan for marketing pharmacy patient- centered and development pharmacy service-oriented, and implementing this in pharmacy practice.

Materials and methodes: Foundation of the marketing plan for a patient care, SWOT analyse, elaboration a service project.

Results: Close collaborative relationship between pharmacist and patient is the key to creating and sustaining demand for pharmacy product and service on a long-term basis in community pharmacies. Ability to expand a strategic marketing plan is an important component for pharmacists who want to promote their services. Considered ethical marketing practices can enhance the image of a pharmaceutical enterprise, strengthen consumer confidence, increase satisfaction and determine consumers to benefit further from the services provided by community pharmacy. By means of pharmaceutical services projects determine the skills and responsibilities of pharmacists as health professionals. Refocusing of pharmacy practice gives premises for implimentation of the concept of relationship pharmacy marketing, it refers to attracting, maintaining and enhancing patient relationships to create mutual benefit for the pharmacist and patient. Relationship marketing fits well with promotion pharmacy service, focuses on the pharmacist-patient, rather than releasing drugs, because patients cannot physically see or touch services, they must understand and experience them to derive benefits and appreciate their value.

Conclusion: Were proposed steps for pharmaceutical marketing strategic planning, which would help pharmacists to influence decision making process in pharmaceutical activity and determined the utility service projects in the delivery of pharmacy service.

Keywords: marketing activity, pharmacy service, productive relationships, customers, benefits

22. LYCOPENE – SOURCES AND BENEFITS

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Introduction: Lycopene is a bright red carotenoid pigment. Chemically, lycopene is a carotene, but it has no vitamin A activity. It's also known as rhodopurpurin (common name) and the scientific name is non-provitamin A carotenoid.

Materials and methods: Advanced bibliographic study.

Results: Carotenoids such as lycopene are important pigments found in pigment-protein complexes from plants, photosynthetic bacteria, fungi and algae. It is responsible for bright colors of the fruits and vegetables, has different functions in photosynthesis and protects photosynthetic organisms from damage due to excessive light. The fruits and vegetables with a high concentration of lycopene are: *sun dried tomatoes* (45902μg per 100 grams), *tomato purée* (21754μg per 100 grams); *guava* (5204μg per 100 grams); *watermelon* (4532μg per 100 grams) ; *tomatoes (cooked)* (3041μg per 100 grams) ; *papaya* (1828μg per 100 grams); *grapefruit* (1135μg per 100 grams); *sweet red peppers (cooked)* (484μg per 100 grams) ; *dried herbs & spices (basil)* (393μg per 100 grams) ; *liver (chicken, cooked)* (25μg per 100 grams). Although gac (*Momordica cochinchinensis* Spreng) has the highest content of lycopene of any known fruit or vegetable, up to 70 times more than tomatoes for example, due to gac's rarity outside its native region of southeast Asia, tomatoes and tomato-based sauces, juices, and ketchup account for more than 85% of the dietary intake of