

substance into the base of ointment; (4) Quality control of the combined ointment; (5) Packaging of finished product.

Conclusion: It was developed the technology of preparation of a new, original, combined ointment containing izohydralfural, methyluracil and benzocaine, which will be the basis for the Technological Laboratory Regulation for manufacture of investigational series of product.

Key Words: izohydralfural, methyluracil, benzocaine, technology, ointment.

355. CHAMOMILLAE FLOS AS A VALUABLE RESOURCE IN THE NEW TRENDS OF NEUROLOGICAL DISORDERS

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Introduction: *Matricaria chamomilla* L. is a well-known and a long used medicinal plant. The rational phytotherapy trends impose strict control of the plant material used to treat ailments. Therefore, the source and the quality of the raw material is highly important for obtaining a herbal medicinal product with certain biologic activity. Our aim was to obtain, standardize (TLC, UPLC) and biologically evaluate a hydro-alcoholic extract from chamomile flowers (ethanol 50 %; 2.5 g/100 mL) of known origin.

Materials and Methods: The phytochemical analysis used thin layer chromatography (TLC) and liquid chromatography techniques (UPLC). Since most of the pharmacological properties of chamomile extracts are known, we used several in vitro (Folin –Ciocalteu assays, scavenging capacity against DPPH and ABTS radical) and in vivo (radial plus maze, forced swimming, Y test) tests to assess its potential in neurological disorders such as Parkinson and Alzheimer. The animal model was induced by intracerebroventricular (i.c.v.) injection of scopolamine and all surgical procedures were conducted under aseptic conditions with sodium pentobarbital anesthesia, to minimize animal suffering and to reduce the number of animal used (white, Wistar male rats, b.w 200±50g). The animal's behavioral activities within pharmacological tests were statistically analyzed with two-way analysis of variance (ANOVA). All results are expressed as mean ± standard error of mean (S.E.M.).

Results: TLC and UPLC confirmed the presence of luteolin and apigenin glycosides, as well as caffeic and chlorogenic acids. Apigenin-7-glucoside amounted up to 0.42%, higher than the European Pharmacopoeial limit (minimum 0.25%). Total polyphenol content of the extract was 68.70 ± 2.55 mg GAE/g. The investigated extract had a good scavenging activity both against DPPH radical (IC₅₀ = 47,8 ± 1,4 µg/mL) and ABTS cation (IC₅₀ = 21,4 ± 0,2 µg/mL), comparable with the IC₅₀ values of the chosen standard (caffeic acid). The scopolamine-treated rats exhibited disorientation, a decreased exploratory activity, a low percentage of the time spent and number of entries in the open arm within elevated plus-maze test and a decreased swimming time and increased immobility time within forced swimming test. Intraperitoneal administration of chamomile extract in doses of 25 mg/kg b.w. or 75 mg/kg b.w. significantly induced anxiolytic- and antidepressant-like effects. Moreover, short memory was improved considerably as compared to the positive control group.

Conclusions: Our results suggest that the chamomile extract rich in polyphenols, especially apigenin-7-glucoside ameliorates scopolamine-induced anxiety and depression in laboratory rats. Thus, the results of the present study indicate that a standardized chamomile medicinal product may have clinical applications in the management of anxiety, depression and memory impairment related to dementia.

Key words: neurologic disorders, chamomile, standardized extract, antioxidant

356. STUDY OF SPECTRAL AND CHROMATOGRAPHIC METHODS ISOFLAVONOIDS.

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Introduction: Isoflavones are a subclass of plant phenolic compounds belonging to the major classes of flavonoids with the chemical structure of which is based on a skeleton composed of 15 carbon atoms. Such studies have indicated that there is a lower incidence of breast and other cancers common in menopause effect, antioxidant activity and other benefits. We aimed to analyze the spectral and chromatographic methods buds extracts obtained from: soybean (*Glycine max*), dill (*Anethum graveolens*) and anise (*Pimpinella anisum*) to demonstrate the presence of pure isoflavones and obtaining the product mix, with another methods we try demonstrated antioxidants effect.

Materials and methods: Using various methods of analysis, chromatographic methods, spectrophotometric, we analyzed the antioxidant compounds such as isoflavones polyhydroxylic class and class oxidase antioxidant enzymes (peroxidase, catalase and polifenoloxidaza) extracts obtained from the plants mentioned above.

We also analyzed the antioxidant activity by determining the inhibition of DPPH radical and we evaluate the total polyphenol content (TPC) of extracts obtained.

Discussion results: The results of chromatographic spectra UV / Vis obtained demonstrate isoflavonoids in all analyzed extracts. Also, all analyzed extracts contain significant amounts of antioxidant enzymes.

Results and Conclusions. The presence of these compounds argues parallels. The results that came out in the content of polyphenols and antioxidant activity are very good. So, in vitro demonstration plants proprieties analyzed antioxidants are important factors in fighting free radicals.