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Biochemical Composition And Medical Value Of Pharmacy Chamomile

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ABSTRACT

Chamomile has been used in scientific and folk medicine since ancient times and is still widely used in medicine due to its high medicinal properties. The beneficial effects of the flavonoids, essential oils and other biochemicals contained in it prevent and fight many diseases in the body thanks to its positive effects.

KEYWORDS

Pharmacy chamomile, flavonoids, antioxidants, immunity.

INTRODUCTION

Chamomile (Matricaria recutita L.) is one of medicinal plants widely used in veterinary medicine due to its rich chemical composition. Flower extracts of this plant are used as anti-inflammatory, antispasmodic and disinfectant component. Antispasmodic effect is due to the presence of flavonoids in chamomile, which are hydrophilic substances and therefore are extracted with polar solvents. Hydrophobic compounds such as chlorophyll, carotenoids and other lipophilic components are extracted from chamomile flowers in large quantities using non-polar extractants [1,2]. Tunisia chamomile (Matricaria recutita), in addition, has leishmaniacidal and amoebicidal characteristics, as well as antihelmintic effect [14].

"Matricaria recutita L" is an annual herb of Asteraceae family. In scientific medicine, chamomile flowers are widely used as an anti-inflammatory, antispasmodic, antiallergic component. Pharmacological effect of chamomile preparations is due to the presence of essential oil in it, the main components of which are chamazulene,

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flavanoids, derivatives of apigenin, luteolin, quercetin, coumarins [13].

Chamomile (Matricaria perforatae) grows in meadows, steppes, in weedy places. Its flower baskets contain essential oil (0.2–0.8%) of a peculiar blue color, which is due to chamazulene, flavonoids, coumarins, triterpene alcohols, ascorbic acid, carotene and other components [4, 6, 7]. Pharmacy chamomile is used externally and internally as an anti-inflammatory, anticonvulsant, antiseptic, antispasmodic, choleretic agent [3, 5].

Chemical composition of Chamomile (Matricaria perforatae):

Humidity 7.77 %;

Ash 9.09 % (a.w.);

Flavonoids 1.96 %;

Tannins;

Vitamin C;

Pigments 17.3%: Chlorophylls 17%, Carotene 0.15%, Essential oil 0.60% [7].

The content of minerals Content of mineral elements, mg/100g in fragrant and pharmacy chamomile:

Zn 2.82 3.00;

Pb 0.02 0.01;

Mg 160.0 125.0;

Na 87.30 79.65;

Fe 30.94 26.72;

Cu 39.43 28.71;

K 715.00 824.56;

Ca 597.20 833.78;

Cd 0.01 0.01.

Analysis of the data obtained using UV spectroscopy showed that chamomile extracts contain phenolic compounds which are represented by tannids, phenol carboxylic acids, flavonoids (quercimeritrin, luteolin-7-glucoside), coumarins (herniarin), as well as cis- and trans -bicycloesters related to polyyne (acetylenic) compounds, bisabolol. In addition, when the herb is extracted with water, mono- and oligosaccharides, pectins, amino acids, amino alcohols (choline) are extracted. The content of bisabolol and cis-ene-incycloesters was not found in fragrant chamomile. The presence of these classes of compounds determines the pharmacological action of extracts of chamomile and chamomile fragrant as drugs with anti-inflammatory and bactericidal action [8].

Main components of fragrant camomile essential oil are farnesene (assists in epithelization and granulation of tissues [10, 11]), bizabololacid A (having spasmolytic and anti-inflammatory effects [11]), herniarin (having spasmolytic effect [12], N-indicycloephyr (with spasmolytic effect [9]) and farnesol. The main properties of chamomile are associated with its essential oils. It should be noted that essential oil of fragrant chamomile differs from chamomile in the absence of chamazulene. Chamomile essential oil has bright antioxidant characteristics. Its anti-inflammatory and analgesic pecularities have been confirmed by scientific studies (by Arnold in 1927). Good results were obtained in treatment of vaginal candidiasis with chamomile extract [14].

CONCLUSION

Biochemical analysis of Pharmacy chamomile showed its practical significance in medicine, traditional medicine and pharmaceuticals. It has been proven that antioxidant properties of the plant strengthen the immune system as well as many other useful properties, are

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associated with curative substances in its composition.

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