International Journal of Botany Studies
www.botanyjournals.com
ISSN: 2455-541X
Received: 15-02-2022, Accepted: 02-03-2022, Published: 17-03-2022
Volume 7, Issue 3, 2022, Page No. 142-144

Study and use of various biologically active substances contained in some medicinal plants belonging to the family rosaceae

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Abstract
The article examines the bioecological characteristics of 6 species of medicinal plants belonging to the family Roseceae, the biochemical composition of dry and wet species, their use in folk medicine in the treatment of some diseases, location, distribution area and geographical elements. During experimental research, the chemicals in the species vary depending on where they end up. The article provides detailed information on the species Cotoneaster integerrima, Sorbus subfusca, Grataegus pentagyna, Rubus buschii, Filipendula vulgaris, Alchemilla sericea.

Keywords: family, genus, species, pharmacology, extract, conservation

Introduction

Various biologically active substances in some medicinal plants of the Rosaceae family are widely used in the treatment of many diseases. The study and rational use of medicinal plants used in pharmacy, along with various plants, can be considered a source for the family of Rosaceae plants due to their pharmacological properties [2, 3].
Aqueous extracts and dried form derived from medicinal plants are more commonly used. Juices and extracts derived from freshly harvested medicinal plants are used immediately. This is mainly due to the lack of long-term storage. Sometimes the presence of various complexes of biologically active substances causes hydrothallic cleavage as a result of the activity of enzymes in plants that are not subject to natural conditions. To preserve the pharmacological properties, it is advisable to use a collection that is fresh and can be processed immediately and fast. The most commonly used method is conservation and drying under natural conditions [6].
For this purpose, the article examines the bioecological characteristics of 6 species of medicinal plants belonging to the family Roseceae, the biochemical composition of dry and wet species, their use in folk medicine in the treatment of some diseases, location, distribution area and geographical elements.
The study was conducted according to the following plan.

1. General information for each type based on literature and field research:
2. Carry out and analyze analytical research of wet and dried species:
3. To conduct a comparative study of the qualitative composition of biologically active substances in wet and dried raspberries, lady-mantle, hawthorn, ordinary raspberries, service tree,cotoneaster .
4. Under the influence of negative temperature, organic acids, flavonoids, tannins, polysaccharides, etc. in the species. to make a comparative analysis:
5. Carryng out a comparative analysis of biologically active substances in dried hawthorn, cotoneaster:
6. Carryng out a comparative analysis of the quality of aqueous extracts obtained from fruits:
7. Carrying out instructions for collection and drying of medicinal plants belonging to the Rosaceae family.

In addition to organic matter, plants also contain minerals, which are also found in ash when burned. The composition of minerals in plants depends on the composition of the soil, moisture, plant biology, etc. it can vary depending on [1]. Macro and microelements are also found in plants belonging to the Roseceae family. It may vary depending on the specificity of macronutrients.

Method and methodology of research: Researchs compiled based on Soviet scientists (Arzamastsev A.P, Hammerman A.F, Muravyeva D.A, Chelombitko V.A, Yakovlev G.P, Samylina I.A), foreign researchers (Wagner H ., Tschurich A.) and Azerbaijani scientists (Aliyev N, Ibadullayeva S, Gurbanov E.). Based on the researchers, plants systematics, development and standardization of rational herbal medicines and other international standards were used. In the methodology of the research to make a comparative analysis of the chemical composition of medicinal plants, to compile experiments on the storage and use of raw materials based on biologically active compounds, physicochemical, technological, mathematical methods [2, 3, 4].
Gender Cotoneaster Medic. - Cotoneaster
C.integerrima Medic., Gesch.-.Full edge leaf cotoneaster.

It is shrubs (nanophanerophytes) at a height of 1 m, flowering occurs in May-July. The fruits ripe in August. The color is red, up to 1 cm in diameter, ballon shaped or egg-shaped. The seeds are propagated by birds. It is found in the upper mountain belt and subalpine slopes up to 2200 m, on rocky, rocky mountain slopes, in the bushes around the forest, in open areas. It is light-loving, drought and heat tolerant plant, grows in sunny places. It is less demanding on soil and grows well on calcareous soils. In ancient times, due to its beneficial properties, it was used in the treatment of many diseases. The healing properties of the cotoneaster, have long been known in ancient China and Central Asia.This also eliminated stomach and intestinal problems. During the period of application for therapeutic and prophylactic purposes, the beneficial effects of fruits and flowers on the cardiovascular system, normalization of digestion and blood pressure, elimination of insomnia, nervous tension and extreme diseases have been found. Promotes the development of metabolic processes in the heart muscle, dilates blood vessels [2, 6].

In addition to flavonoids, dried and wet fruits contain plant polyphenols, anthocyanins, tannins, polysaccharides, phenolcarboxylic and organic acids, oils, as well as macro and microelements.There are also vitamins in fruits and flowers useful for the human body . These are carotene, provitamin A, C, E, K., as well as trace elements of iron Fe, magnesium Mg, potassium K, calcium Ca, sugar, sorbitol, zinc, manganese, copper and tannin. The species is described from Europe.

Euro-Caucasus. (Pl.) Refers to the geographical elements [5].

Gender Sorbus L.- Service tree.

S.subfusca (Ledeb.) Boiss- Brown service tree.

It is a 3 m high shrub (nanophanerophyte). Flowering occurs in May-June, fruiting in August-September. The fruits are collected when fully ripe. The fruits have a pleasant sour taste. In medicine, it is used in diseases of the gastrointestinal tract and respiratory tract. It is often used as a freshly harvested, and sometimes after drying in special ovens.

Freshly harvested fruits can be stored in cold places or frozen all winter. The fruits are rich in sugars, organic acids [malic, citric, salicylic acids] and resinous substances. In addition, the fruits contain carotene, C, B1, B2, etc. contains vitamins. Therefore, the fruits are widely used in medicine as a vitamin raw material. They make tea from dried fruits and use it more in avitaminosis.

Dried fruits are used as part of a "vitamin collection" or as a separate tea for avitaminosis and liver diseases. In addition, they make syrups and jams from freshly harvested fruits and use them in anemia and liver diseases, as well as in the confectionery industry.

Brown service tree is rich in flavonoids, steroids, vitamins C, P, B2, E, fatty oils, aromatic and cyanogenic compounds, vaccines, phenolic carbon and organic acids, carotenoids and anthocyanins [6].

It is found on forest edges, in beech forests, in steppes, in upper mountain belts and up to 2000 m in high mountain forest belt, on rocky, rocky mountain slopes, in bushes at the edge of forests. The species is described from Iran. Widespread in South-West (Iran) Asia, East, South Caucasus. Caucasus. (Rs.) Refers to the geographical elements [5].

Gender Grataegus L.-Hawthorn

G.pentagyna Waldst.et Kit.- Five -nest howthorn.

It is a tree 8 m high (microphanerophyte). Flowering in May-August. The bark of the branches is gray, the young branches are piley hairy, sometimes bare. The thorns are thin, numerous, 5-10 mm long. The fruits are, ballon shaped black, blue layered and red fruit peel, with dry, straight cup-shaped leaves at the ends. The core is 3-5 pieces, almost smooth. The fruits ripen in September-October. Jam is made from the fruit. There are many vitamins contain in hawthorn, especially C, A, E, P, K, B, iron, magnesium, calcium, aluminum, silver, manganese minerals, many amino acids, trace elements, organic acids, glucose, antioxidants, essential oils, etc. Biologically active substances in hawthorn fruits, flavonols, tannins, carotenoids, triterpene saponins (oleanolic and ursolic acid), sugar, organic acids, pectins, oils, in the flowers - flavonols (up to 2%, hyperoside, quercetin and vitexin), caffeine and ursolic acids, acetylcholine, choline and trimethylamine, quercetin, tannins, ascorbic acid, carotene, triterpene saponins are found in the leaves. They can collect chromium from the soil through five-nest hawthorn roots.

Some of the substances in this berry that are beneficial to the human body are rare in nature. Due to its rich composition, hawthorn are considered to be one of the most useful berries for human health. Hawthorn is especially useful for the cardiovascular and nervous systems. The beneficial substances in it dilate the heart vessels, reduce the excitability of the nervous system. Hawthorn tones the heart muscle, relieves tachycardia and arrhythmias. Increases the supply of oxygen to the heart and brain, improves metabolism, helps fight insomnia, lowers blood cholesterol levels. Hawthorn is very good for the elderly. It is called the "medicine of the old heart." This berry is very good for people who have had a heart attack. Hawthorn is also used against inflammation and germs.

Up to the middle mountain range, it forms bushes at the edges of forests. The species is described from Hungary. Widespread in Europe, the Mediterranean, Southwest (Turkey), Asia and the Caucasus. The western old Mediterranean. (Pl.) Refers to the geographical elements [5].

Gender Rubus L.-Blackberry

R.buschii Grossh. ex Sinjkova -Bush.

At a height of 1.5 m, it is a bush (nanophanerophyte). It blooms from May to August. The flowers are white and fragrant. The fruit ripens about 1 month after flowering. The fruit is oblong and conical in shape, red, black,

crimson and yellow in color. The fruits of the blackberry are eaten fresh. It is used to make liqueurs, wine, spirits, juices, compotes, syrups, marmalades and jams. Blackberries are also of medicinal and dietary importance. Used as a diuretic. The fruit contains sugar [glucose, fructose and sucrose], pentazone, organic acids [apple, lemon, salicyl, etc.], various vitamins and pectin. Blackberries contain 7-10% sugar (glucose, fructose and a small amount of sucrose), 1-1.5% organic acid (apple, wine, lemon, salicylic acid), 1.8% pectin, carotene, C and B vitamins. Blackberries grown in the wild contain more sugar, organic acids, vaccines, pectin, dyes, vitamin C and carotene. The mineral content of blackberries (mg / 100 g) is as follows: calcium-30, copper-low, iron-1, magnesium-low, manganese-2, phosphorus-30, potassium-17.5, selenium-1, sodium -2, zinc-0.4 [2,3,6].
Blackberries are also very rich in minerals. 100 grams of blackberries help meet up to 30 percent of our daily manganese needs. It is also rich in copper. It provides up to 20 percent of our daily copper needs. Blackberries also contain a small amount of minerals such as magnesium, zinc, potassium, iron, calcium and selenium.
They boil the dried roots in water and use them as a medicine against tuberculosis. Blackberry leaves are infused as a tea and gargled as a disinfectant for sore throats. In addition, the leaves are cooked in cow's oil and used as an ointment during burns. It is from the middle mountain range to the high forest boundary, subalpine slopes, beech forests, rock cliffs. The species is described from the Caucasus. General prevalence Caucasus. Caucasus. Refers to the geographical elements.
Gender Filipendula Mill.-Dropwort

F. vulgaris Moench (= F.hexapetala Gilib.) – Common dropwort

It is a herbaceous perennial herb (hemicriptophyte) 30-60 cm tall, blooms white in June and July. Dropwort is a plant known since ancient times. The ancient Romans and Egyptians used dropwort as food. Dropwortis mostly grown in France, Italy, China and America. There are white, green and purple varieties ofropwort. Dropwort is rich in vitamins A, B1, B2, C, protein and minerals.
In Sweden, dropwort is called the "queen of the meadows."Dropwort is an excellent choice for delicate, clean and beautiful skin due to its rich content of nutrients, including lipids, minerals and flavonoids. Dropwort has soothing properties that help restore balance and soothe dull or tired skin. Contains derivatives of salicylic acid that lighten skin color and exfoliate.
In Azerbaijan, dropwort grows mostly around the Kura and Araz rivers, and the most common species is greendropwort. It is up to the high mountain range, in meadows, bushes, summer pastures, as well as in chalk and limestone sediments and on rocks. The species has been described from Europe. Widespread in Europe, Arctic, Asia Minor, North America. Euro-Siberian. (Pl.) Refers to the geographical elements [5].
Gender Alchemilla L.- Lady-mentle.
A.sericea Willd. – Silk lady-mentle.
It is a short-stemmed perennial herb (hemicriptophyte) 10-20 cm tall, blooms white and yellow in June-August. The chemical composition of silk lady-mentle has unique healing properties. It is rich in tannins (up to 8% tannins in the roots, up to 3% in the air), bitterness, lipids, catechins, lecithin, lignin, oleic, ellagic, luteonic and linoleic acids, flavonoid glycosides, steroids, coumarins. The leaves contain large amounts of ascorbic acid (about 200 mg), zinc, manganese and borax.
According to research, phytosterols (steroids) in dropwort have a stimulating effect on progesterone. Its steroids regulate metabolic processes, help to normalize the function of the heart muscle and blood vessels, increase the body's defenses.
Due to its rich composition and beneficial properties, Alchemilla is widely used in traditional medicine. It is used as a diuretic, anti-inflammatory, expectorant, wound healing, astringent. Infusions and decoctions in the dry state are used in diseases of the upper respiratory tract, pneumonia, bronchitis and bronchial asthma, as an anti-inflammatory and expectorant of tuberculosis, in inflammatory processes of the gallbladder and bladder, liver. Biliary tract, spinal cord diseases, rheumatic pains, diabetes, etc. is used. The species is described from the Caucasus. It is found in rocky places in the South-West (Iran), Asia Minor and the Caucasus. Caucasus. (Pl.) Refers to the geographical elements [5].

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