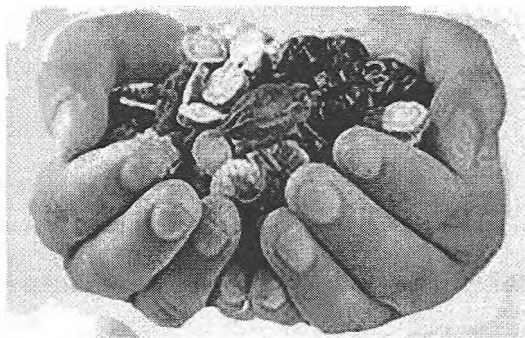


# ***Folk medicine***

## ***Ethobotany in Azerbaijan Region***



**Sayyara Ibadullayeva    Mohammad Zaefizade**  
**Ilhama Jafarli            Seyed Shiva Asbaghian Namin**

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**Professor Valida M. Ali-zade**

***Institute of Botany National Academy of Sciences of***  
***Azerbaijan***

**Doktor . Eshagh Rasouli**  
**Islamic Azad University Ardabil - Iran**  
***“Medicinal Plant Institute”***

***Authors:***

**Professor . Sayyara J. Ibadullayeva**  
(Head of "Ethnobotany" lab. of Institute of Botany of ANAS, Baku, Azerbaijan)

**Dr. Mohammed Zaefizadeh** (Head of Medicinal Plants Research Centre, Ardabil Branch, Islamic Azad University, Islamic Republic of Iran)

**Dr. Seyed Shiva Asbaghian Namin** (Pharmacist, Ardabil, Islamic Republic of Iran)

**Dr. Ilhama A. Jafarli** (Surgeon, MD., MRCS, FACS, FEBPS, Baku, Azerbaijan)

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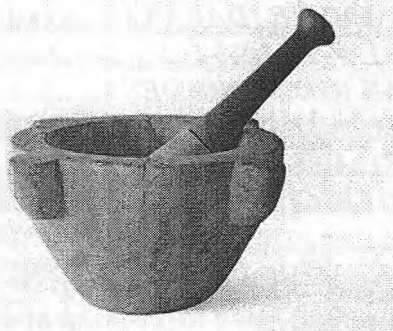
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**This book is dedicated to use of medicinal herbs by virtue of the folk medicine methodology. At the same time, background information about the first use of herbal plants is provided. The book also illustrates a number of ways of ethnotherapeutic treatment of different diseases by using herbal plants commonly found in the Republic of Azerbaijan and Iran**

## ***PREFACE***

The healing (medicinal) properties of plants have known to mankind since ancient times. Azerbaijanian treated their diseases by extracts prepared from thousands grass of plants cover, roots of plants, fruits and vegetables. Natural medicines and their using by people have been successfully tested by the time. Even there was a time when scientific medicine zealously related to folk medicine - quackery, but today recognizes its importance.

By the rapid develoment of the industry in twenty-first century, the production and use of chemical extracts have been significantly expanded . As a result, some diseases, especially infectious diseases would pass in acute form in the past, later beganis found in chronic forms. The main reason for this were overuse and unnecessary implementation of the chemical drugs in diseases.

Proceeding from the foregoing, the main goal was to study effectiveness of ethnobiology methods of azerbaijanian.

Nowdays, the utilllization of medicinal plants are multilateral: use of medicinal herbs juices, raw in salads, brewing, baking, ointments and etc. Biologically active substances of plants directly affect the areas with pathological processes, and along with the treatment of the patient; it also strengthen the protective functions of the organism.It

should be noted, prepartes made from plants had never lead to any consequences.

Book has been drawn up on the basis of Memorandum of Understanding between Institute of Botany of ANAS, (Azerbaijan Republic) and Medicinal Plants Research Centre, Ardabil Branch, Islamic Azad University (Islamic Republic of Iran).

*From authors*

## **ABOUT ETHNOBOTANICAL HISTORY OF MEDICINAL PLANTS**

Study of the medicinal plants and their use has been started since the ancient periods – Primitive community of the history. Even the primitive man tried wide use of plants to survive. Information about the medicinal plants passed orally from generation-to-generation before the discovery of writing.

Afterwards sets of scientific transactions about medicinal plants were written. The Sumers creating medicinal sciences related with three subjects – astronomy, religion and mathematics on the base of medicinal plants presented interesting information. Babils changed the Sumers 4 thousand years B.C. further the Assyrians getting achievements earned by the Sumers in the fields of medical and pharmaceutical sciences developed them much more. On the regulation purposes of cure by means of plant-based medicine they applied measure and weight ways, put writing system in order and caused more wide study of the medicinal plants.

Egyptians' code of medical transactions named "Papyrus-Ebersa" contained of 7 Volumes is a very valuable and historical work dedicated to the study and use of the medicinal plants.

Scientific names of certain medicinal plants, their receipt time-tables and rules of use at different diseases have been described with a special accuracy in this work. India, China, Greece, Egypt, Iran and Rome have played a significant role in the field of medicinal plants study. Many human diseases and their cure methods were indicated in the ancient Chinese medicine.

The most ancient and well-known code of the Indian medicine “Ayur Veda” (Life Science) was written in 2600 B.C. Indian physician Sushurta generalised all medical literatures until Asklipida’s activities in this work. Botanical description, geographical spread areas, collection date, rules of their use at different diseases of separate medicinal plants were shown here. The medicinal plants as: rhubarb (*Rheum* L.), cinnamon (*Cinnamomum* L.), ginger (*Zingiber Adans.*), ginseng (*Panax* L.), hemp/kenaf (*Cannabis* L.) were already known in world markets.

Wide information about Assyria tsar Ashshurbanipalan’s medicinal plants (660-s on B.C.)the clay boards in Nineveh are remaining in the ancient libraries of the world. Rules of medicinal plants’ use at certain diseases were indicated on these writings.

Unfortunately archeological excavations didn't completely explain the ancient medicinal plants for us. The initial writings on the culture monuments and sculptures in India and China make us to know use of plants on the cure purposes. Interesting information about special use of plants was met on the Sanskrit, Ancient Jewish, Chinese, Greek and Roman culture monuments and sculptures.

Ancient Greece has also played a great role in the development of medicine and pharmaceuticals. Medical science started its development in the Hippocrates' period (460-377-s B.C.). Significant role of the medicinal plants in development of medical science was noted at every page of Hippocrates collection named "Corpus Hippocraticum" which was created during his activities as a physician and it didn't lose its importance up today. It seems some of this information was extracted from the Egyptian medicine. Hippocrates indicated 236 plant species used as cure means in the Ancient Greek medicine.

The first medicinal encyclopedia or cure encyclopedia belongs to Avlu Cornelu Celsuya (the end of the 1<sup>st</sup> Millennium B.C.). Azii Dioscorid – a physician of the Roman Army presented a list of about 500 medicinal plants in the half of the 1<sup>st</sup> Millennium A.D. that were known and widely used at that time. This book played a role not only for botanists but at the same time for pharmacologists as a specific source.

A well-known physician and pharmacologist Claudius Galen came from the Ancient Rome (129-201-s A.D.) greatly served in new medicinal plants' study. He wrote about 200 works in the field of medicine as a founder of science of the Technology for Medicinal Forms. Two works of them belong to Botany which is of an important significance and plays a great role in medicine. C.Galen's works were repeatedly translated into Arabian, Syrian, Persian and The Ancient Jewish languages.

He was the first person who initiated obtaining of preparations, ointments and extractions from the raw material of plants. Today these medicinal preparations called "Galen preparations" hasn't lost their significance in medicine yet.

During the Arabians Rule the works created in medical and pharmacological fields a great son of the Tadjik people, physician and pharmacologist – Abu-Ali ibn-Sina (known as Avicenna in Europe) won glory in all over the world. The mankind noted 1000-th Anniversary of the great representative of the Arabic school of medicine – Avicenna in 1980. His collection of "The Canon of the Medicinal Science" consisted of 5 Volumes was repeatedly translated into many languages of the world and became a Guidebook of Arabian and European scientists in the Medieval Centuries.

Avicenna presented wide information about 900 medicinal plants in his books.

First Arabians made an independent form of Pharmacology as science and established schools providing qualification on this field.

A pharmacopoeia book titled as “Garabeddin Kabir” was written as well as several theoretical and practical activities were implemented related to use and study of the medicinal plants. In the subsequent periods – IV Millennium a Latin man – botany compiler by the name Arileem appeared.

A graduate of the ancient Chinese school Li-Shi-Chjeniya (1522-1596) in the book of “Bases of Pharmacognosy” gave detailed information about the character of many cure means.

Physicians of the Ancient India have cured many diseases by means of medicines of plant sources along with blood-letting. Also the plants grown in India (especially food plants) were carried to Roman Empire. Many of these plants including giant fennel (*Ferula* L.) were accessed into the European medicinal practice. If the medicinal plants would be considered from the medical point of view one can say “we live in the world of plant” as it’s said in the ancient Buddha medical secrets.

In IX-X Centuries Dioskorid, Galen and Arileem's works about Botany were first translated into European languages as: Italian, French, English and German. However the original works about The European Botany appeared very lately – in XV-XVI Centuries. This information has been partly extracted from Latin and Greek botanists.

Russian monarchs also have already started dealing with study of the medicinal plants and their use on the cure purposes in XI Millennium. In the early years of the XVII Millennium an enterprise named "Aptekarski prikaz" (The druggist's order) was founded in Kremlin of Moscow that managed medicinal and drugstore activities all around Russia. In the early years of the XVIII Millennium a well-known druggist Messerschmitt is sent to Siberia on the purpose of study medicinal plants more deeply and thoroughly.

In the XIX Millennium the most comprehensive information on use of the medicinal plants was ascertained by the researcher George Everson investigating Egypt when studying cigarette. The researcher collected separate parts of the book "Drug preparation for all parts of the organism" into one. There are lots of receipts here used by the ancient Egyptians for cure of many diseases. They consist of a compound structure of

different ointments and mixtures. Oils, balsams and resins with aroma were widely spread in this period. But cure significance of the plants as: aloe (*Aloe Torun*), plantain (*Plantago* L.), castor-bean (*Ricinus communis*) was known.

In the late XIX Millennium a well-known botanist of Siberia P.N. Krylov issues a collection book presenting comprehensive information on aboriginal medicinal plants of Siberia and Altay. About 180 different medicinal plants were collected these years.

Even 850 years ago the names of many medicinal plants and their use instruction were shown in the works of the great Azerbaijan poets and philosophers Nizami Ganjevi and Muhammad Fizuli. Curative significance of mummy (at body injure), saffron (*Crocus*) at (fever), cucurbit (*Cucurbita*) (at worms and diarrhea), mint (*Mentha*) (at gastrointestinal disease) was indicated in the well-known “Khamisa” (five great poems). the great Azerbaijan poet and philosopher Muhammad Fizuli who lived in the XVI Millennium gave extended information in his works “Sahhat və merez” (Health and Diseases) and “Sohbatul esmar” (Dispute of Fruits). Curative significance and harmful effects of fruits is said in the work of “Sohbatul esmar” (Dispute of Fruits).

A rich flora and vegetation cover has been formed in the territory of Azerbaijan. More than 5000 high sporous, bear-seeded and flowered plant species in this ancient Country that majority of them are useful and widely used plants in different fields of the national economy. About 1500 medicinal plants researched and being researched in the Azerbaijan Republic are being studied in a complex by botanists, pharmacognosts, pharmacologists and clinicians and an opportunity for their use on medicinal purposes is being created at present. For example: oleander (*Nerium* L.), valerian (*Valeriana* L.), barberry (*Berberis* L.), horse-tail (*Equisetum* L.), marjoram (*Origanum majorana*), pot-marigold (*Calendula* L.), orchis (*Orchis* L.), hawthorn (*Crataegus* L.), dog-rose (*Rosa canina*) et al. [Mustafayeva, 2015].

About 2500-3000 plant species have spread in the territory of the Ardabil of Western Azerbaijan.

Resource of raw material of the curative medicinal plants is not inexhaustible and infinite. As a result of anthropogenic factors the natural resources of the valuable medicinal plant species are being continuously exhausted which causes threat of their lose. They should be protected and properly kept rules of their sustainable use. Just that is why the Ordubad National Park named

after Hasan A. Aliyev, The Shahbus State Natural Reservation, Lengthways-Araz Reservation, Gekgel National Park in Small Caucasus, Eldar Shamy (*Pinus eldarica*) Reserve, Ag-Gel Reserve, Hirkan National Park in Talysh, Zagatala Reserve in the Great Caucasus and tens of other parks, reserves and reservations have been established to protect the nature of the Azerbaijan Republic. A sustainable use of the medicinal plants is required to transfer them to the future generation.

Besides, there are a number of preserved fields in Western Azerbaijan, particularly in Ardabil area. Scientific and Ethnobiological History of Study of Medicinal Herbs of Western Azerbaijan.

Medicine has always played a significant role in Iranian culture and civilization, one of the oldest and strongest in the world. Archeological finds at the site of the "Torched City" in Sistan-Baluchestan province speak of a surgical operation on the skull of a 13-year-old girl suffering from hydrocephalus some 4850 years ago. Iran, which straddled east and west, came to be known as the Middle Empire. The term "Iran" derives from "Aryan" and has a history stretching over 7000 years. Medicine, physicians and hospitals have been of great account in Iran since Median, Achaemenian, Parthian and Sassanid dynasties. Under Achaemenians the most important

medical reference was Avesta, a collection of sacred Zoroastrian writings. Other sacred books dealt with medicine as well. Zoroastrians believed *Thrita* was the first physician in Iran. Mazdaism led by *Zoroaster* would teach people practical and scientific treatment of diseases.

Another Iranian faith was Ecbatana founded by *Senapour Ahum Setut* a student of *Zoroaster*, 100 years after the emergence of Mazdaism. *Senapour* and 100 of his students would treat patients. Medical science reached its peak in ancient Iran with the establishment of Gondi Shapoor University by *Shapoor the First* (241-271 AD). He founded the university after overwhelming Roman Emperor *Valerianus*. In the sixth century (AD) *Khosrow Anooshirvan* (531-579 AD), a Sassanid monarch, contributed to the education center a lot. In 489 (AD) the world-class faculty in Edessea city close to Syria was shut down. That prompted Christians, Nestorian scientists in particular, to flood the palace of the Sassanid monarch. The university of Athens closed down in 529 (AD). That led to migration of Neo-Platonic philosophers in Athens and Alexandria to Iran. They rose to prominence in Gondi Shapoor University where they later thought various courses. *Khosrow Anooshirvan* invited all famous scientists teaching at Gondi Shapoor to forge an assembly which can be

identified as the first medical science academy in the world. Courses were offered in Pahlavi language in Gondi Shapoor. Among the most prominent scientists who thought at the university were *Bakhtishoo* whose children, grandchildren and great-grandchildren followed his line-practicing medicine for 6 generations (259 years), and the *Masooyas* (780-857 AD) who were originally Nestorian. In later centuries with the dawn of Islam, Gondi Shapoor proved instrumental in promoting Islamic Science, which shortly swept the world. This opened a new chapter in the medicine practiced in Iran and other Islamic countries. Iranian sciences absorbed Islamic concepts when Islam found its way into Iran.

In the early years of the Abbasid dynasty, *Ibn-e Moghaffa* (724-759 AD) translated medical texts from Pahlavi to Arabic. Abbasid statesmen would urge translator to translate scientific books from foreign languages, Sanskrit in particular, to Arabic. This paved the way for formation of an independent Islamic offshoot in medicine. At this stage Arabic became the official language of many Islamic countries. Many Iranian Muslim scientists would now write in Arabic. *Ali-ibn-e Rabn Tabari* wrote the first Islamic-era medical book "Ferdous-ul-hekmah" in 236 A. H.

Tabari is also credited with teaching an ingenious- *Mohammad Ibn Zakariya Razi (Razes)*- who later rose to prominence.

*Razes* (865-925 AD) was the most famous clinical physician in Iran and Islamic nations. His works completed by those of Avicenna were instrumental in history of medicine. In the late 800s and early 900s *Razes* penned his first book. He wrote over 56 books, says *Biruni* (972-1048 AD). The most important of them was "Al-hawi" a comprehensive medical encyclopedia. By own account, he spent over 15 years to complete "Al-hawi". This affected his sight and led to muscular dystrophy. "When physician is a no-show" also known as "Poor people's medicine", includes simple instructions for treatment of diseases. Poor people could use it not to pay visit fees. Just like all other books written at that era, *Razes'* books were all in Arabic. *Ali-ibn-e Abbas Majussi Ahvazi* (930-994 AD) a physician who exclusively looked after King *Azod-od-dowleh Dailamy* was a famous physician who authored "Kamel-os- sana'at fi-tebb" a.k.a. "Tebbol maleki".

Avicenna was a prominent physician of the late 900s and early 1000s who systematized medicine in Islamic Iran. All his books and papers on medicine except for "Nabz" (Pulse), "Anatomy"

and "Judiyeh" were in Arabic. His "Canon in medicine" gave medicine a shot in the arm. It was used for centuries as a major medical reference in the world, particularly in Europe.

Major advances were made in pharmacy and pharmacology by the ninth century.

"Qarabadin"(Pharmacopoeia) by *Shapoor ibn-e Sahl Jondi Shapoori* was an indication of such advances. Drug stores and hospitals would use the book, which was in Arabic for centuries. Another major work on pharmacology was "Al-abnieh an-el hadayeq-ul-advieh" by *Abu Mansoor Mowaffaq ibn-e Heravi* (11<sup>th</sup> century) written in Farsi.

From the 1000s to 1200s several famous physicians emerged who wrote in Farsi. They tried to give Farsi a shot in the arm by writing their books in Farsi and by coining new medical terms in Farsi. Among the most prominent of them were *Mushref-ul Zaman Mohammed Ilaqi*, a student of *Bahmanyar* who was in turn a student of *Avicenna* and *Ali ibn-e Abbissadeq Neyshaboori* (995-1077 AD) a.k.a. Second Hypocrite and author of "Sharh-e Fosol Boqrat"(Commentary of hypocrites books).

*Seyed Ismaeel Jorjani* (1045-1137 AD) was a prominent physician who revived medicine in an era dominated by stagnation."Zakhireh kharazmshahi" which appeared in Farsi was part and parcel of Iran's

Traditional Medicine. He penned other books on medicine in Farsi, too. In later centuries there was a tendency to write in Farsi, many books appeared in Arabic though. Avicenna's "Canon in medicine" was still dominant during the 1200s and 1300s AD. All medicine texts were either abstractions of "Canon in medicine" or interpretation of what it said. Among the most prominent physicians of this era were *Qotb-eddin Shirazi*, *Najib-ul-din Samarqandi*, *Sadid-ul-din Kazerooni*, *Jamal-ul-din Mohammad ibn Afsavaei* and *Burhaneddin Nafis ibn Evaz Kermani*.

"Ma-la-yasol Tabib Jahlo" by *Yousef ibn Ismaeel Khoei* was a book on materia and medica in Arabic. One of the Farsi books on materia and medica in this era was "Ekhtiyarate - Badi'ee" by *Ali-ibn Hussein Ansari (1329-1404 AD)*. In the 1500s AD physicians shifted to a new style: brief and in-depth writing. So books written in this century were not reference books anymore. Prominent physicians of the 1400s included *Mohammad Sabzevari*, author of "Qavanin ul-alaj", in Farsi and *Faqih Shirazi* author of "Tashrih-ul-abdan" and "Kefayeh mojahediyeh" in two volumes, the first of which dealt with theoretical medicine and the second with practical medicine. *Sultan Ali Gonabadi* is the author of "Dastoor-ul-alaj" and *Yousef-ibn Mohammad Yousef Tabib Heravi* wrote a couple

of poetry collections on medicine in Farsi. He also penned "Hefz-ul seha". *Hakim Alaeddin Tabrizi* is another author who wrote "Kamel alaei" which put medical terms in alphabetical order.

On the list of physicians in the 1600s and early 1700s are *Kamal-ul-din Gilani* author of "Jame-ul-Javame" in psychology, *Mohammed Mo'men Hosseini Tonekaboni Deylami* a.k.a. *Hakim Mo'men* author of "Tohfah-ul-mo'menin" on simple and combined medicine, *Mohammad Hashem ibn Mohammad Taher Tehrani* author of "Mesbah-ul-khazayen" and "Meftah-ul-dafayen". The latter appeared in Farsi. Superstition led Iran's Traditional Medicine into decline in the 1700s AD. No prominent figure rose to revive *Avicenna's* methods or introduce a new version of traditional medicine.

Modern medicine gradually offset traditional medicine. With the establishment of Dar-ul-fonoon, which was a polytechnique college patterned after European schools, European physicians were invited over to teach in this center. That was how Iranian physicians learned about western medicine and wrote books on the modern medicine practiced in the west. Among Dar-ul-fonoon's physicians were *Bolak*, an Austrian, *Schlimher*, a Dutch, *Tolojan* a French

and Iranian *Abulhassankhani*. That was how Iranian medicine set foot on a modern path, and what once was synonymous with Iran's history became a thing of the past. However there were physicians who tried to stand up to modern western medicine by writing books, among them *Mirza Babay-e-Shirazi (Malek-ul-Atebba)* who authored "Jouhariyeh".

Modern medicine secured a firm foothold offsetting the spread of Iran's traditional medicine. However since traditional medicine was an integral part of Iran's culture, it never faded.

At present some books of medicinal plants in comparison with the ancient books lag behind. We consider specialists dealing with medicinal plants should:

- be enriched from the archives;
- study the structure of the plants used at making of medicinal preparations;
- new books should be published in integration of their personal investigations. We can transfer our world values to the future generations through this way only.

## MEDICO -ETHNOBOTANICAL INVENTORY IN THE AZERBAIJAN FLORA

*Azerbaijan Republic* – is the biggest country in the Caucasus Region of Eurasia. It is situated in Caucasus – in the basin of the Caspian Sea that is on the crossing of Europe and Central Asia. Its area is 86.600 km<sup>2</sup> (11,5% – forests, 1,6% – water basins, 50% – cultivated lands, including: 27% pastures, 36,9% the other/miscellaneous lands). The nature of Azerbaijan differs with its specific and original varieties, so rich flora and a harmonious vegetation cover is formed in the area. There are about 1.000 genera contained all plant groupings, about 5.000 plant species with higher spore, naked and covered seeds, flowers belonged to 200 families, in this ancient Country that are nearly 70% of the Caucasus flora; 5% of them are regional endemic and rare plants. Azerbaijan flora is rich with its semi-genera of the 3-rd era for ex: ironwood (*Parrotia persica*), acacia (*Acacia lencoranica*), oak (*Quercus sp.*), Caucasian persimmon (*Diospyros lotus caucasica*) et al. All of these are mainly met in Talysh Zone.

The solvable role in flora biodiversity belong to perennial grasses (66,4%), on the 2<sup>nd</sup> place annual ephemera and ephemeroïds (23,4%), the

rest are other plants. The Azerbaijan flora is also differed with its 435 species of rich tree and bush plants.

These plants have formed a special plant cover as well as almost all areal types of Caucasus Region as: ancient, forest, desert, semi-desert, caucasus, boreal, steppe, xerophyl, adventive et al can be met.

One can consider the Azerbaijan flora like a source of medicinal, essential oils and generally row material rich of bioactive substances. To render effective medical aid by using vegetation cover of Azerbaijan, update treatment-and-prophylactic medical products preparation and use is the most actual question of present-day.

However modern understanding of scientific research of medicinal and aromatic plants in Azerbaijan has been commenced since the 20<sup>th</sup> of the last century. I.Y.Hajjiyev [1938], Isayev Y.M., [1940], A.A.Grossheym [1948], I.I.Karyagin [flora Azerbaijanana 1950-61], F.Y.Gasimov [1968], L.I.Prilipko [1970], I.A.Damirov [1974; 1988], N.M.Ismayilov [1975], E.R.Ahmedova [1982; 1984; 1993], A.A.Fyodorov [1979], Qasimov M.A. [1992-2005], Aliyev N. [1998] who remained special scientific contribution for the development of Botany in our Country and present collaborators of the Institute of Botany of the Azerbaijan National

Academy of Sciences: M.A.Gasumov (1968-2011); S.V.Serkerov (1975-2015), E.N.Novruzov (1978-2011), S.J.Ibadullayeva (1984-2015), N.P.Mehdiyeva (1989-2011), S. A. Zeynalova (1991-2011), S.J.Mustafayeva (1992-2011), and many other doctorants carried out research works on medicinal and aromatic plants of our flora. For many years our specialists have periodically made expeditions to regions of our Republic; chemical structure and pharmaceutical properties of the collected plant species have been studied, several preparations made as well as valuable results were achieved. 800 species of medicinal, 850 species of essential oil plants have been collected and defined during the initial inventory of our flora.

About 400 of them were tested in medicine and economical significance of 55 species of them were defined. More than 100 new sources of valuable medicinal substances as: alcaloid, cumarine,aromatic,terpenecompounds,sesquiterp en lactones and lecorin, salocidene, ethedrine, mellictine, berberine, tauremizine, santonine, seslozide, radiotinine, radiotinol, plumbagin, safronal and cochotimol were ascertained.

The obtained substances and medicinal preparations have been patented. Biochemical researches have been directed towards change, interrelations of effecting substances' acquisition in the medicinal plants (alcaloids, coumarine, saponine, essential

oils et al), mutual selection of essential oil plants depending on the environmental effects and exchange of substances. The most valuable and comprehensively studying essential oil plants spread in different areas of Azerbaijan as: *Nepeta* L. [Mamedova and Ibadullayeva 2011], *Thymus* L. [Kasumov, 2006], *Ziziphora* L., *Artemisia* L. [Serkerov and Aleskerova, 2006], *Ligustrum* L., *Pimpinella* [Mehdiyeva, 1990] *Chaerophyllum* L. [Zeynalova S., 1993] *Achillea* L. [Mustafayeva, 1989] and representatives of the *Apiaceae* L. family – *Grammosciadium* DC., *Heracleum* L., *Cuminum cyminum*, *Carum carvi* L. and *Coriandrum* L. species [Ibadullayeva, 1999; 2001; 2004; 2013; 2015].

According to the systematic classification the majority of the plants accessed into the Azerbaijan medicinal flora are of *Magnoliophyta* Department (1461 species – 94,6%) and plants in a very few number are of *Polypodiophyta* & *Lychenopty* Department (each have got 26 species – 1,7%), *Pinophyta* Department (18 species – 1,2%), *Equisetophyta* Department (6 species – 0,4%), *Gnetophyta* Department (3 species – 0,2%), *Bryophyta* & *Lycopodiophyta* Department (each have got 2species – 0,13%) and *Ginkophyta* Department (1 species – 0,06%) [ Mehdiyeva, 2011].

More species in *Magnoliopsida* Class – *Asteraceae* Dumort. (160 species), *Fabaceae* Lindl. (102 species), *Lamiaceae* Lindl. (97 species), *Rosaceae* Juss. (82 species); of the Families: *Apiaceae* Lindl. (72 species), and *Brassicaceae* Burnett; and the next are of: *Rununculaceae* Juss. (46 species), *Caryophyllaceae* Juss. (39 species), *Chenopodiaceae* Vent. (38 species), *Scrophulariaceae* Juss. (31 species), *Polygonaceae* Juss. (30 species), *Boraginaceae* Juss. (30 species), *Euphorbiaceae* Juss. (25 species), *Malvaceae* Juss. (24 species), *Solanaceae* Juss. (19 species) and *Rubiaceae* Juss. (17 species). Medicinal plants of these families are more widely spread in the forest and meadow cenozes.

Leading families of the *Liliopsida* Class – *Poaceae* Barnhart (47 species) and *Orchidaceae* Juss. (28 species), as well as the followings are: *Cyperaceae* Juss. (19 species), *Liliaceae* Juss. (15 species), *Alliaceae* J. Agardh (12 species), *Hyacinthaceae* Batsch and *Juncaceae* Juss. (each have got 11 species), *Iridaceae* Juss. (8 species) and *Amaryllidaceae* J. St.-Hil (7 species) families.

The indicate families and medicinal species included into these families are in the leading place of the floristic spectrum of Azerbaijan in whole. Genera richer with medicinal plants from the taxonomic point of view are: *Potentilla* L., *Rumex* L., *Orchis* L., *Euphorbia* L., *Salvia* L., *Centaurea* L., *Viola* L., *Galium* L., *Stachys* L.,

Erisimum L., Allium L., Artemisia L., and chenopodiumL..

Geographical relief of Azerbaijan is of factors effecting enough onto the medicinal plants' areal. 940 species of the medicinal plants have been spread as follows: middle-mountainous, 870 species – low-mountainous, 800 species– desert and foothills, 4003 species– high-mountainous, 250 species– subalpine and 75 species alpine mountainous belts. They are mainly met in the vegetation types as: weed, forest-bush, mountainous-meadow, as well as mountainous-xerophytes, forest, rocky-stony, mountainous-grayish, arid-grayish, savannah, watery-marshy, psammophyte-literal and meadow.

135 species of the medicinal plants in whole are officinal species accessed into the Pharmacopoeia [1987; 1989]. At the same time these plants are medicinal plants used at: 800 species folk medicine, 220 species scientific and 160 species practical medicine, 220 species pharmacology, 300 species veterinary.

Resources of the following plants as: 4.000 ton liquorice, 50-60 ton *Astragalus* L., 12 ton *Berberis* L. barberry root, 27ton haw and 3,5 ton haw-thorn flower, 400ton sea-buckthorn fruit, 30 ton *elecampane* inula, 14ton *Heracleum*, 136 ton

*Hypericum perforatum* L., 7ton *Rhamnus L.-buckthorn* fruit, 6 ton *Tilia lime*, linden, 23 ton *Rubia tinctorum-madder*, 54 ton sumach, 500 ton liips, 8,3 ton *Helichrysum Mill.*, 10 ton *Achillea L.* and other valuable plants have been ascertained as well maps of their spreading areals were compiled in the Republic.

On the result of the biological and ecological researches possibility of 350 species of aromatic plants introduction was realized. *Crocus sp*, *Grindelia sp*, *Geranium sp*, *Rosa sp* of the cultivated species and chemical content of the essential oils of acacia, *Heracleum sp* and *Ligustrum sp*, their aromatic properties et al beeng researched they were recommended for production [Ibadullayeva, 2001; 2004]. Productive species of Rose (Gazanlig, Girmizi, Krim, Raduga) have been planted for 10-s of hectars in the Zagatala Essential Oil Plant Cultivating Farms; much economic profit was gained of them through obtaing valuable essential oils in the period of the former Soviet Union. Unfortunately activities of the Zagatala Plant for Essential Oil Production have been stopped for more than 20 years.

Essential oils are a compound of natural substances that have been especially used on scientific and commercial purposes in many production enterprises for many years. They are

mainly an cosmetic, medicinal ,food production, aromatherapevtic and phytotherapevtic purposes Essential oils of: eucalyptus, lavender, *Carium carvi* L., *Cuminum* L., *Heracleum* L., Mentha et al are the strongest and effective antifu means. Recently cancer desease has begun to be cured by means of the essential oils of Thyme, rozmarin and *Salvia* sp. [Ibadullayeva S., 2007; Gasimov F., 2009; Sh. Asbaghan Namin, 2014].

Even during The 1<sup>st</sup> War physisians cured gangrena, tuberculosis and other deseases by means of essential oils when there was a deficite of medicaments. Essential oils of vegetables as: garlic, onion and *Juniperus* L. dissolve gallstones and urinary calculus, at the same time essential oil of *Juniperus* strenghtens memory by affecting onto human hormons. Essential oil obtained of: pine, lemon, *Saturea*, coreandr, incense and redwood nearly creates an iron barrier between the human body and his spirit, releases tiredness, stops exciteness, strengthens clear consuecness as well as refreshes and rebuilds memory. Essential oil is also widely used in culinary. Essential oils occupy the 1<sup>st</sup> place in the production of cosmetic means and perfumery. As essential oils have got a wide range of applying they became a field of interest of many scientists recently and chemical content of these oils began

to be investigated as well as bioactive substances of their content caused a big interest.

Specific roles of essential oils have been identified in the plant chemistry, so these oils being accumulated in special canals are saving a complex of several bioactive substances inside them. They also positively affect onto the plant resistance and save them from several stress factors. Hormones necessary for plants are much more concentrated in the essential oils. These valuable oils can be obtained from plants' flower, fruit, crust/peel, leaf, seed and wood. Essential oils are volatile oily substances that provide plants with specific aroma. They contain of oils 0,01 to 10% essential oils. Melting temperature of the essential oils changes between 160-240°C. Each plant has got its certain qualitative and quantity content. Content of their components can be consisting of up to 300 substances. Natural essential oils are a compound of bioactive substances and main content consists of phenols and terpene compounds. At the same time essential oils positively effect onto the plans' resistance and save them from several stress factors.

Today obtaining and evaluation of medicinal plants and their essential oils' pure and especially main substances is very significant

from the both scientific and economical point of view. The results achieved by the Azerbaijan scientists prove that antimicrobial, antiviral, antioxidant antifungal activeness of essential oils of the essential oil plants belonged to the region are valuable to make medicinal preparations of them [Ibadullayeva et al, 2001; 2010, Aghabeyli, 2006; Zeynalova, 2007]. Besides, availability of use of pharmacological peculiarities of the essential oils in medical, cosmetic and other fields through their study was defined by us.

Essential oils obtained of the following species as: *Thymus*, *Saturea*, *Ziziphora*, *Cuminum*, *Chaerophyllum*, *Heracleum* have been tested in the production of various dosage articles, new alcohol free drinks, confectionary, canned and marinade as fragrant means in both single and composition state and some of them were patented.

There is a big resource of many plants with tanning property of medicinal significance in Azerbaijan that gives opportunity of use in both medicine and leather production. *Rheum* L., *Limonium* Mill. sea lavender and other plant extractions have been recommended in production and the extraction obtained of pomegranate peel is used in industry, at the same time tanning properties of these plants are applied in pharmaceutics

[Ibadullayeva et al, 2008]. Wastes of *Alcea*, *Tagetes*, *Opuntia*, *Berberis*, *Sambucus*, *Rhamnu*, *Hypericum*, *Peganum* and also vegetable as: (tomato, eggplant, beet et al) processing are applied in carpet manufacture as colouring means. Extractions obtained of many cultivated dye plants as: (false safron, safron, henna, basma (a hair dye) et al) have been set into production. Safron is the most valuable medicinal and essential oil plant of colouring plants. It has got 3 species as a wild form in the Azerbaijan flora as well as its *Crocus sativus* being in the culture is widely used as a medicinal plant. Azerbaijan scientists have arranged its cultivation by creating new clones of its bulbs on the propagation purposes.

It becomes clear from all of the above-said so Azerbaijan flora is not rich with its medicinal and aromatic plants (MAP) only but it is also rich with the plants that accumulate lots of other useful properties within their content.

50% of the sold plants in the world market are food plants, 25% are cosmetic and 25% plants are of medicinal purposes. According to the statistic data (2005) 1000 plant species of 9000 spread in the niebour country Turkey are medicinal and about 1000 plants are aromatic ones; the country gains a profit of approximately \$US 60-70 mln due to its export. Though about

1000 plant species of a bit more than 5000 spread in the Azerbaijan flora are aromatic, id est essential oil plants, more than 1547 are medicinal plants [Mehdyeva, 2011] the Azerbaijan Country can not achieve any profit of it on export purposes. It's possible bringing much income to the Country in the case of these plants use within the Country and on export purposes. From the other hand to use the essential oils on cure purposes thanked to foundation of 'Aromatherapy' clinics, change of food additives by essential oils production of pure and organic products (for ex.: aromatizations of teas, canned making and conservation, perfumery, and cosmetic means production et al) and their use would change our Country into a modeller and moderner one as well as a contact of the science with the production be created.

Several scientific researches have been carried out in this field. Almost synthetic means are more used in aromatization of the imported food products or the food products processed in the Republic of Azerebaijan. In order to prevent it a little essential oils of some plants have been obtained and first of all they were tested in aromatization of tea (because of the confidentiality of production data names of plants are not called); only 30gr essential oil was enough for aromatization of 1 ton tea. It is notable that natural essential oils are already being used in tea

production in the Republic of Azerbaijan. According to the calculations the import of the synthetic aromatic means into the Republic is twice more expensive than the natural essential oil obtaining.

The medical scientists worldwide have not been sufficing to modern medical ways for treating patients for the past few decades. The view of human being of his surroundings in the 1960s and 1970s prompted him to re-assess the nature around him and his inter-actions with nature. This re-assessment caused him to realize that the technological trend he was pursuing had caused great damage to him and the nature and the damage was rising. Thus, he concluded in the course of the re-assessment that he must endeavor to preserve the earth and the nature. Hence, scientists were obliged to center their research in every field on preservation of nature. The idea spread to scientists of the medical community who reviewed treatment methods of illnesses and pains, both medically and medicinally. They concluded that they had to make an essential return to nature to treat illnesses of human beings. By recognizing complementary medicine, they paved the way for finding new treatment methods conforming to preservation of nature.

Scientists of the medical community thus endeavored to examine the medical knowledge of different nations to find a proper status for traditional medicine in the Primary Health Care (PHC) and Health Care System (HCS). By defining that status, the integration of traditional and modern medicines will gain sense and meaning.

Traditional medicine dates back more than 3000 years in Iran. Iranians were the first people to establish the first empire (The Persian Empire) in the world. They also established the university called Gondi Shapoor. With arrival of Islam in Iran and the great motive of Muslims to gain knowledge, medical knowledge in particular, Gondi Shapoor University served as a link between the Islamic medicine and medical science in other communities. Medical knowledge of Iranians and the countless pieces of advice in Islam for learning, prompted Muslim scientists, such as Avicenna and Razes, to theorize medical knowledge in Iran. Works of those scientists were translated into different languages. Some of these books such as Canon in Medicine written by Avicenna were used in European scientific centers for more than 600 years.

Although the Iranian traditional medicine was influenced by modern medicine, being an integral part of culture of the Iranian people; it continued to prevail

despite great pressure from modern medicine. Fortunately, scientists working at universities as well as state officials have been paying attention to it in the past two decades. The Iranian traditional medicine is currently endeavoring to gain a proper place within the PHC and HCS system.

more significance, recently. Such an improvement, which will give social welfare a shot in the arm, will be a non-starter without education and health care. We seem to have been provided with a fair opportunity to build a world where all humanity enjoys individual social and environmental support. However many people around the world do not have access to health care and other basic services in physical, psychological, social and economic welfare. There have been great advances as far as medicine is concerned.

Huge death tolls sparked by out break of diseases are non-existent nowadays. Many diseases are now a thing of the past. Life spans are increasing by the day thanks to medical and other scientific advances. Death rate among children under five has registered a drastic fall. There has been a tangible decrease in the number of deaths among expecting mothers. Deficiency still exists despite all this progress and success. Human need for prevention, control and treatment of diseases paved the way for advances in medicine. To meet ever-increasing

needs we had to turn to modern technology in both treatment methods and drug therapy. This had such acute side effects that sometimes jeopardized human's long and intermediate term health.

Turning to synthetic drugs has become one big problem of modern medicine. Technology-based therapies have also given rise to new diseases. This sets the stage for man to pay increasing attention to traditional and complementary medicine. In recent years many articles have appeared in journals and books focusing on these issues. Failure of the modern medicine to treat chronic diseases such as arthritis and cardiovascular diseases etc., changes in health criteria, medical prospects offered by complementary medicine and a growth in people's tendency to remain healthy are the reasons behind revival of the complementary medicine. In traditional medicine physician creativity and efficiency are more tangible for both patient and doctor. Psychological findings reveal this can play a surprising role in treatment. In modern medicine technology replaces physician proficiency. This makes physician proficiency intangible. Technology reduces to a minimum the relationship between patients and doctor, which is instrumental in treatment. Driven by technology advances, the modern medicine separates physiological, psychological, social,

preventative and curative aspects. Maybe an increasing overspecialization under modern medicine is to blame for this problem. Thus traditional medicine, which views these different aspects altogether focusing on bio-psycho-social therapies and makes use of natural products and herbal medicines in particular, is on the rise.

Supporting the traditional medicine, studying its treatment, techniques and tools and promoting the modern medicine, that is to give a more prominent role to physician proficiency, to rebuild patient- physician relationship and to simultaneously turn to bio-social therapies - can cut costs of leading a healthy life. That all countries and scientific forums are paying undivided attention to traditional medicine bears testimony to this accomplished fact.

Iran's Traditional Medicine (ITM) has its origin in pre-Islamic Iranian medicine and Greek, Indian and Egyptian medicine. Over long years the ITM secured a firm foothold not only in Iran but also in the vast part of Europe and India sub-continent proving crucial in promotion of medicine as a whole.

In other words, the ITM could be similar to an alloy made up of Indian, Chinese, Mesopotamian, Egyptian, Greek and particularly Aryan metals which turned into

an all new matter with Post-Islamic medicine serving as a catalyst. It retained its original features yet had new distinctive attributes.

### **Liver And Gallbladder Ducts Illnesses**

Throughout the history, living organisms have been always in investigation, so living creatures used from nature mutually. According to historical data, 20 thousand year BCE people lived in caves had learnt to use plants as medicine and food, tried to distinguish between harmful and useful plants. After people started their agricultural activities, their knowledge about plants had been increased. It is known that people used agricultural plants in 6000-2000 BCE. Description of plants, their register, plant systematics had been learnt by Chinese, Indian and Egyptian scientist (2000-3000 BCE) (Abu Ibn Sina; Nuh Afandi, hand writings, Hehbulayev 1991). Ancient Greek Scientists by giving first classification of plant world, had founded the beginning of plant classification. By the learning all these, useful properties of plants were discovered and herbs were used in treatment of different illnesses.

Treated properties of a number of plant and fruit, their usage in tradition medicine, treatment methods are known by people in Azerbaijan. These treatment methods has not lost its importance in the scientific -technical century. Even Scientific medicine today admits its important. As it is known, most of the plants and fruits that involve Azerbaijan flora have medical importance and people used in treatment of some or another illnesses. A number of investigations have been carried out by Azerbaijani scientists (Ibadullayeva et al, 2007; 2010; 2011; 2012; 2014; 2015) and given information about treatment not only with plants but also with balm and ephir oil [Ibadullayeva et al., 2007; 2013; 2015].

Azerbaijan ethnobiology has a long history and we aim to develop this area and investigate wild flora.

Medical plants, fruit-berry tree and bushes that used in traditional medicine are known in Azerbaijan flora. A variety of diseases are cured through these kinds of plants. Phytotherapy is widely used in modern medicine. Medicine that is made of plants never threatens life. It is especially given information about herbs that are used in treatment of liver and other diseases in the article. These are followings.

***Rosa canina* L.** consists of thorned bushes. Leaves are alternate, elliptical or obovate and sharp toothed. Flowers are large - up to 5 cm and are situated at the end of the stem transversely. Petals and sepals are 5 and consist of oblong corolla. It has a number of stamen and pistils. Fruit is pulpy and consists of jagged rose hips with inside hairy seeds. It ripens in August -September and stays till winter.

Chemical structure: Fruit include abundant of vitamins, ascorbic acids, philloxynon and pigments (rubixanthin, lycopene), fermium, calcium, mangan, magnesium, phosphor, microelements, riboflavin, provitamin A, vitamin K,P, E and carotin. It includes 2,5-5,5% vitamin C, 9,8mq% carotin, 14% pectin substances, 1,9% lemon acid, 23,9% general sugar, 18,6% invert sugar, 5% sakharoza, 8,9% pentoza. Seeds include oil, carotin and vitamin E. Ascorbin acid (1-1,5%) is observed in the leaves as well. Stem, leaves and roots consists of substance (80%), oil mixtures 1%, organic substances 0,5%, mineral substances 0,5%.

Its fresh fruit is used to prepare syrup (*Sirupus fructus Rosae*), extact and vitamin mixtures (*Cholosasum*). The fruit of the plant is successfully used for cholesistit and hepatit.

- it needs to keep dog rose seeds in 250 ml cold boiled water for 30 minutes then to heat until it boils and wait for 5-10 minutes. It is possible to

take it with a spoon of honey or lemon juice 2-3 times a day.

2 spoons of the fruit infused (it is better to infuse in a thermos ) in 2 glasses of water for 25 minutes may be taken 3 times a day in hot state 20 -40 minutes before meal.

From ancient times, this plant is used as a medicine in a number of diseases. According to its rich compound dog rose has a great deal of benefit (Cholosasum). So, it includes A, B1, B2, P, K and C vitamins, protein, minerals, bases, magnesium, calcium and phosphorus ions. Dog rose increases the immun system, prevents inflammatory process and helps common cold. It calms down nerve system, decreases the risk of kidney and gallbladderstones; takes stomachache, assists to clean intestines and beneficial for coronary heart diseases; increases appetite and decreases blood pressure and normalizes metabolism ; it has diuretic properties .

-in order to prepare dog rose tea 2 spoons of the fruit is chopped and 250 ml hot water is added and left for 10 minutes.

- it possible to use dog rose in order to lose weight: 3 spoons of fruit is added into a liter hot water and left for 12 hours.

It must be taken 30-40 minutes before meal 3 times a day during fortnight .

- 3 spoons of dog rose fruit and 6 spoons of maize stigmata must be infused (not to boil) in a half liter hot water and left for 12 hours and 100 gram must be drunk before meal for 3 months.

***Ribes nigrum*** L. - shrubs, and in 1-2 m height, the stem is straight and branching. Lower branches are almost always lies on the ground. The stem is dark-gray or reddish-brown, the young bark is yellowish-gray color. The leaves are alternate, stalk, up to 10cm in length, heart shaped, the upper side of leaves is smooth, matte, while the down is vascular and hairy with golden spots. Flowers are 5-12 units, carolla consists of 5-petals, hanging brushed, is 5-8 cm.

Chemical composition: the composition of fruits is (vitamin C (400-570 mg /%), B, P vitamins, A provitamin, organic acid (citric and apple acid), sugar (glucose, fructose), glycosides, flavonoids, pectins, antocionids (cyanides delphinidin) and nitrogen. Mineral substances (mg /%): Sodium-32, potassium-372, calcium-36, manganese-35, iron-1, phosphorus-33. Buds consists of 175 mg /%, 450 mg button /%, flowers and 270 mg /%, and other parts the amount of ascorbic acid 470 mg /% s.

The effect: has a diuretic effect, removes salts from the body, and increases protection ability of a liver. In particular, it is useful in the liver virus hepatitis, diabetes and anemia.

Black currants have very rich chemical composition. Mostly, rich in vitamin C. Therefore, the composition of berries are full of with antioxidants. Slows down the aging process of the body, the body is

restored, and protects the body from poisons, toxins and free radicals. Black currant has a very positive effect on the immune system. This berry is very important for children, older people. As well as the composition of Group B vitamins, vitamin K, folic and pantothenic acids, black currants is rich with iron. It is very useful for people suffering from anemia. Moreover, there is another element potassium. Potassium helps the body to release excess fluid and salt, and as a result, improves the condition of people with cardiovascular and renal diseases. It is beneficial for the treatment and prevention of atherosclerosis. Increases appetite, improves exchange processes, lowers blood sugar. Therefore, berries can be used successfully in the diet in order to lose weight. Black currant has inflammatory, anti-rheumatic and antiseptic properties. It is useful for capillaries and veins and improves their elasticity. During bronchitis is very good and has anti-inflammatory effect of blackcurrant juice. For this reason, leaves are added to a variety of grass by doctor-phytotherapevts (5, p13-17).

*Vesc Fragaria* L. is perennial grass with creeping stems, plant height is 10 cm. leaves are long stalked, leaves are sophisticated with rounded edges and large toothed. Flowers up to 2 cm in diameter, thick haired, 5 membered flowers collected from the group of flowers. Fruit is nut and has pulpy carolla. Flowering begins in late May and June-July, the fruit grows. Has rounded fruit, yellowish-white color.

*Chemical composition:* fruit contains vitamin C (50mg%), carotenoids (5mq%), B group vitamins, folic acid, sugar 15%, apple, lemon, salicylic acid, a small amount of vaccine ingredients, essential oils, pectins, anthocyanins compounds

( 3 galactose pellarqonid and 3 glycoside cyanides), iron salts, phosphorus, cobalt, manganese, and there is an enormous amount of potassium. Many phenolic compounds and flavonoids found in cultivated types. The leaves contain vitamin C (120-200 mg%), flavonoids (quercetin derivatives), carotenoids, cumarins, essential oil and vaccination(9%). The fruit are full of with polivitamins. The leaves of diuretic, and to reduce the nitrogen in blood.

Usage abd intake method - the fruit is a valuable nutrient and medicinal plant.

Pink colored and fragrant strawberries are very useful fruit. Strawberries have plenty of iron and phosphorus ions. Moreover, C, B, and vitamin K. Strawberry reduces amount of cholestrine in the vein and eliminates blockage. strawberry that is

a very good antioxidant increases immune system and regulates digestive system; eliminates intestinal worms, it is diuretic and removes harmful substances in the body, strengthens the gum, decreases temperature and reduces stress; has a positive effect on healing rheumatism and liver diseases; moistures, freshens the skin. Leaves, in well-drained condition, can be used as a tea. Strawberry can effect on digestion if it is eaten in hungry state. Strawberry mixed with milk can be used for cleaning; can be consumed as compot and jam; fresh and dried leaves and fruits have a diuretic and choleric effect, the removal of salts in the body, for gout, artroz, arthritis and rheumatic diseases is very effective; is useful for liver (viral hepatitis), diabetes and anemia hypochromic as well. It is considered indispensable medicinal plants in treatment of kidney diseases.

*Zea mays* L. annual agricultural plant grown. The height of the body up to 3 m in width and 3 cm, non-branched, lower part of the plant is stem. has a fringed root system, leaves shifts, long, linear, folded in the upper part and lower part is bare. Male flowers are broomed formed, female flowers with a lot of leg, is located between the leaves.

*Chemical composition:* Body and silks contain vitamin K, pantothenic and ascorbic acid, carotenoids, steorid, saponin and oils. Silks have carotenoids, K, B1, B2, C, D, E vitamins, glycosides (1.2%), oil (2.5%), the etheric items (0.2%), saponins (3.2%), gum (3.8%), inozit, alkaloids (0.05%), sitosterol, cryptosantine, stiqlmasterol, alkaloids, resins (2.7%), sugar and bitter substances.

Usage and acceptance procedure: cholagogue, diuretic, normalize the metabolism and blood clotting process, liver disease, especially effective in gallbladder stones; is used for the trauma created by kidney stones - nephritis, diabetes and other diseases; as blood stoooper substance in Hipoprotrombinea in different types of bleeding. Cholecystitis, cholangitis, heratit is determined in different bleeding processes. In particular, for chronic liver disease infused maize silks should be taken for a long time. This removes excess fluid in the body and regulates metabolism. Maize silks effect on the nerve system

sedatively; is defined as a metabolism activator and appetite decreasing drug. Corn oil (daily dose 50-70 gr) decreases the amount of cholesterol in the blood and is determined for treatment of atherosclerosis. At the same time, it is effective for the treatment of skin diseases; eliminates kidney stone and gall bladder stone pain. Glutamine acid in its composition is indispensable in the treatment of depression, epilepsya, progressive dystrophy and polimielit. Maize silk has been used in traditional and scientific medicine since ancient times. In the treatment of many diseases, inflammatory diseases of the kidney and urinary tract, gastritis, obesity, tuberculosis, diabetes, hypertension, skin diseases, varicose veins, sterility, potency weakness, insomnia, nerve disorders, atherosclerosis and effective natural cancer prevention maize is an effective and natural mean. One of the main benefits of maize silk is a diuretic and choleric properties. It improves the flow of bile. Maize silk has antibacterial and anti-inflammatory properties so, it eliminates pain and spasms of kidney diseases. By regular usage of maize silk regulates blood sugar, as well as the low level of cholesterol; is one of the best natural ways to prevent stress; eliminates nerve tension, the mental and physical fatigue and provides normal sleeping. In Obesity, kidney and urinary tract diseases maize silk is made in the following methods:

- 5 tablespoons of maize silk in 400 ml of water is boiled on a low heat for 30 minutes; waited for 3 hours. After this period, is filtered and is taken 3 times per day, each 30 ml after meal.
- against obesity maize silk infusing is taken every 3 hours 50 ml to accept and maize silk is not recommended for skinni people.
- tablespoons maize silk is infused in 2 cups of boiling water within 30 minutes, 3 times a day 30 minutes before meals (The daily dose) should be taken. extract from the plant especially from its silk has diuretic effect. Contains linolin acid (vitamin F) reduces the amount of cholesterol in the body and helps the expulsion of lipids. Phytosterol has Antixelerotic effects. Vitamin E weakens protein metabolism, prevents the accumulation of cholesterol in cappilliaris.

***Coriandrum sativum* L.** annual grass plant, including up to 70 cm in height, and has stem. Its stem is bare, thin and hollowed. Leaves are long and toothedi, the lower part of the stem with a short stalk, twofeathered. The upper leaves are sitting down, feathered, divided into 2-3 parts, linear. Flower group is complex umbrella, the umbrella is a 3-leafed. Flowers are small, receptacle is 5 based, fruits are toothed, white or pink flowers carolla.

Chemical composition: the composition of the plant cocsists of essential oil (0.2%), sitral (62%),

sitronellal, heraniol and linoleic items. In addition, B1, B2, C vitamins, various organic acids, cumarins and flavonoids are found. A key component of the composition of the essential oil of lemon leaves, which are odorous substances sitral and sitronellal.

Usage and acceptance procedure: is used as a component of mixtures against hemorrhoids gastrointestinal, bile; Facilitates digestion, has analgesic effect (particularly headache); is particularly used in liver diseases (viral hepatitis); Eliminates brain fatigue; regulates the activity of the cardiovascular system. Chopped leaves of the plant are Spasmolotica and sedative. Casmin that is made of the plant has an antiplatelet and anticoglian effect. Lomaherpan cream applied to the face rush has antivirus effect. Contains combined extracts and essential oil and exists in the composition of "Dormiplant", "Novo-Passit", "Persen", "Nervoflukus", "Qastrovit", "Enerqotonik", "Altaleks" drugs. In addition, the plant is widely used in the intestines diskensia, cholecystitis, cholangitis, kidney stone, urine tracts diseases, angina, and climacteric syndromes (2, pp. 138-144). affecting Antibacterial is used in frunculose, herpes, stomatitis and parodontoses.. The young leaves are used in cookery. The smell of lemon essential oil is used in parfumeriy.

***Foeniculum vulgare*** Mill. biennial herbaceous plant, and up to 2 m in height, rounded bushy, branching from the upper body. The leaves are alternate, lower leaves stalky, numerous, featherlike-divided, linear, while the upper leaves are almost settled. Flowers are small, yellow, petal 5 was formed intricate floral group. Hanging fruit length is 10 mm, the width is equal to 4mm.

*Chemical composition:* fruits contains 6% essential oil, the main ingredient anetol (up to 60%) fenxon, pinene, metilxavikol and 18% fatty oils. 0.6% of organic substances, mineral substances are considered to be 0.5%. Ripe fruit is considered qualytive raw material.

Usage and intake methods: solution made of fruit is used in liver diseases, meteorism. Fennel that homeland is the Mediterranean countries has 2 types; rich with vitamins A, C and B group vitamins, as well as potassium, magnesium, calcium, minerals. Fennel is used in most of the hepatitis diseases. In addition, increases appetite, facilitates digestion, is used in treatment of eye diseases, develops metabolism, temperature reduction, eliminates the lack of blood, cardiovascular diseases, diseases of the throat, helps to eliminate stress. In addition, the respiratory tract, rheumatism, antibacterial and antikanserogen effect are known.

*Anethum graveolens* L. annual grass plant, is equal to the height of 40-120 cm. The main root is subtle, frigate, and branching. Its stem is straight or slightly bent, branching, elongated light green and green, thin layered. The leaves are alternate, was feathered, length 30 cm, 4-25 cm in width. Lower leaves, stalk, 4-12 cm in length, the middle and upper leaves of the short stalk sedentary. Flowers are complex, multirawed, flower umbrella is 7-30 cm in diameter. Flowers are small, bisexual, five membered, yellow, petal, narrow, wrapped up in peak. The fruits hanging, loose ellipsed, 3-7 mm in length, width 1,5-4 mm, yellowish-brown color. The aboveground part of the plant smells sweet-spicy aromatic and delicious. In June-August blossoms, the fruit grows in August-September (3, pp. 103-105).

*Chemical composition:* Contains essential oil (2-4%), and its main component karvon (40-60%), limonene (19-40%), fillandren, dihidrokarbon and other terpenoids. Furanoxromons is part of the fruits. Seeds contains 20% fatty oils, seed 0,56-1,5% essential oil containing a large amount (16%), carbon-containing substances, plenty of vitamins (C, B1, B2, PP, P), carotenoids, potassium salts, calcium, phosphorus, iron, folic acid and flavonoids (quercetin, kempferol) are available.

*Usage and taking methods:* is spazmolotic and has precipitation ability, diuretic effect. Together with raw fennel is a very valuable as precipitation

and effective medicines against metabolism. The leaves are used in hypochromic anemia. Containing ascorbic acid, carotene and iron are. In hypertension is used as a diuretic. Medicine gained from fennel fruit increases the secretion of the pancreas, spazmolotic, decreases cough, diuretic, and increasing the function of the activity of the intestine and antibacterial pharmaceutical plant. Furanoxromons in dill expand coronar and peripheral veins. Dill has A, C and B group vitamins, as well as iron, potassium, calcium, phosphorus, rich in salts. In addition to the food and cosmetics industries essential oil of dill is widely used in medicine. Has a calming effect, regulates the activity of the cardiovascular system. Eliminates insomnia; is very useful against liver diseases; the best pain killer; accelerates the healing of wounds. Eliminates cough. Reduce blood cholesterol; is applied in Gall bladder disease prevention.

***Rosmarinus officinalis* L.** is evergreen strong branching shrub, height is 0,5-1,5 m; yellowish-brown body is cracked; young stems are, thick and white haired. The leaves settled, face to face, the edges are linear, the length is 3-4 cm, shiny dark green upper side and lower side with sharp ridges. Brushed flowers are collected; receptacle is bellformed and twoparted. Flower carolla is dark-blue, two lipped, upper lip is deep twoparted, lower lip is the freckled and has 2 narrow lines. Fruit consists of 4 smooth, rounded-egg receptacles.

*Chemical composition:* leaves include  $\alpha$ -pinene, essential oil (30%), camphene (20%), borneol (10%), cineole (10%), borneolaseat (up 7%) and the other terpenoids. In addition, the composition of the diterpenoids (carnizol, carnozid acid), vaccine ingredients, triterpene acids (oleic and ursol), found in rosemary and pirrolidin alkaloid groups (4, pp 189-195).

*Usage and acceptance procedure:* as a Medicinal plant rosemary leaves are used in diseases, such as gall bladder (especially compromising the expulsion), anti-inflammatory, as increasing weakness, cardiac neurosis, neuritis and cold, gynecological practice and menstration disorders. Fresh leaves and stem is used to inhalate in common cold, balm is put on the pain of rheumatism and for applying radiculite; includes European and British pharmacopoeia.

Rosemary has a good effect on memory. In modern medicine, rosemary are also used as a light sedative during migraine and digestive problems. A group of co-workers from the University of Northumbria in a test conducted on the effects of rosemary oil. In British Psychological Society conference, Dr. Mark Moss as a result of the benefits of research confirmed aroma of this plant effects on short-term memory, as accelerator. Rosemary oil has a spazmolotic, antiseptic and anti-inflammatory impact during inhalation and extrenal applying. Extracts and essential oil-containing medicines combined canefron N, Marathon, Pulmeks, Tussidermil N are example;. Antihistamine effective.

*Thymus serpyllum* L. evergreen, branching, small shrub plant with thin woody stem. Straight flowering stems is in the height of 2-15 cm. The leaves are faced with a short stalk, ellipsed edges, a medium-sized. The average length of the leaves on the stems is 5-10 mm, width 1,5-3,5 mm. The head has a group of flowers. Flowers are narrow bell formed, receptacle is haired.

*Chemical composition:* Contains Thimola (50%), carvacrol, terpinin, terpineol, singiberin, borneol, vaccine ingredients, flavonoids, resin, ursol and oleic acids; 18% contains in the extractive and dry substances, organic and mineral substances is not more than 1%.

*Usage and taking methods:* contains bitter substances so has an appetive effect, has healing properties in gastrointestinal, liver, pancreas disease. As infusing, baking and extracts is used in inflammation of the upper respiratory diseases, tuberculosis, diphtheria and bronchial asthma. "Pertussin"s the main component is thyme. It is taken as extrenal procedure in muscles and peripheral nerve system diseases, is regarded as an aromatic bath; in acute and chronic respiratory diseases brewing extracts, bronchial asthma and tuberculosis are applied. As a bactericidal drugs is used against anti-convulsive, firming, soothing, healing, anti-worm medicine. Good melliferous plant. At the same time is used in parfumery. In Bulgarian

medicine is used for bronchial asthma, peptic ulcer disease, loss of appetite, flatulence and diarrhea. Rheumatism, angina, nerves and skin diseases is recommended by adopting in the form of a bath. In German medicine, flowers are used as aromatic baths in cough. In French medicine, it is recommended in spasmolytic, helminth against the renewal of epithelial tissues, burns from acids (10g per one liter of water); children Rheumatism: 2 ml of the plant extract, 1g of rosemary, lavender 1g, soda 350.0. is made in the form of bath. In Austrian medicine infusing is used against gastritis, flatulence, cramps. is infused 5gr 250 ml in Solid state. The daily dose is 500 ml. In Polish medicine is used against bactericidal, anti-inflammatory, kidney, liver, neuralgia, rheumatic fever, bronchitis and bronchial asthma. It is possible to take in cough and stomach discomfort as the following mixture. Plant is used as pain killer in radiculitis and nevritis and extract "*pertussin*" is used with bronchitis and other respiratory diseases. Balm is used in therapeutic bath, skin diseases (6, pp. 825-827).

- 20 g thyme flowers, 10 g of pepper, 10 g to 10 g of spring adonis yarrow, 10 g cumin, plantain 10 g, 10 g of a mixture of 2 teaspoons sehceyi 250 ml 3 cups of water for 10 minutes every other day should be taken by infusing. For

external usage: 1-2 tablespoons of the plant for 2 cups of boiling water are used by infusing.

Folk Medicine: A strong inflammatory (has Timola), anti-convulsive, sedative, analgesic drug, has the effect of healing and vermifugal; is used in Hypertension, atherosclerosis, neuralgia, radiculitis, Thyrotoxicosis (goiter), neurosis and hysteria diseases; is appointed in Vermifugal, diaphoretic, as a matter neuralgia, gastrointestinal pain. Brewing and solution of the leaves are used in heart disease, constipation, liver diseases. In addition, it is considered useful to implement in diseases such as hypertension and atherosclerosis.

***Mentha piperita* L.** planted in a cultural way, is a perennial herbaceous plant, 30-100 cm in height. Straight body, branching, fourtongued, deciduous, sometimes bare or has short hair. horizontal branching thin, knotted, it has a fringed root system. Leaves cross, facing a short stalk, oblong-egg, taped, importantly Heart Shaped, dark green upper side and lower side is light green. Flowers are small, with the body lying at the receptacle flowers and flower spiky group meeting. Receptacle is tubular, 5 toothed and purple. Petal is irregular, dark-purple color.

*Chemical composition:* leaves contain 2.7% of essential oils, flowers up to 6%, while the body is 0.3%. ; includes Carotene (40mg%), ursol and oleic acids, triterpens, puleqon, phytoncids, hesperidin, flavonoids and betaine. Leaves contain menthol. Organic ingredients, 1%, while mineral substances containing 1%,. Special aroma causes smell of essential oils, in particular due to the fact mentolun. This has local anesthesia, srazmolotic, analgesic and antiseptic effect, with the reflector in Caronar expands blood vessels. Olimetin (Olimetinum), enatin (Enatinum), pine (Anestezol), validol, Zelenin drops and other medicines containing menthol. Solution is used as a sedative by 1:20. freshly harvested leaves are used to make preparations such as valocardin and milocardin, carvalol (1, p. 132-138).

*Usage and intake method:* Mint is spasmolytic, analgesic, antiseptic, bile and yelqovucu property. Stimulating the cardiovascular system, to be analgesic hypertension, angina, rheumatism and is very effective in the treatment of atherosclerosis. It is recommended for the treatment of Upper respiratory tract, bronchial asthma and bronchiectasis. In bile duct and intestine Diskenition has a good effect; Improves digestion and appetite; is applied in Gastritis, ulcers, colitis, enterkolit, flatulence, breathlessness, vomiting and diarrhea diseases; was included in herbal tea in thr treatment of Gall stones, hepatitis and cholecystitis diseases. Taking mint continuously in strengthens and soothing hysteria, fatigue, migraine, along with a positive impact on disease, but also has a diuretic effect. Since the majority of delicious blends of aromatic and medicinal plants are included. Bathrooms are applied external. This application can be in form of drop, mikustura, tablets (validol) and pencil form. Since the composition of the menthol leaves are used in angina, gastric and intestinal pains. Mentolun valerianla validol blend, a mixture of paraffin is used in the form of a pencil in migren. In addition, the leaves increase appetite, are applied in shortness of breath and vomiting. German doctors stomachaches, meteorizm, Austrian and Bulgarian doctors leaves brewing, baking and oil gastro-intestinal spasm, meteorism, diarrhea, shortness

of breath and vomiting bile, liver diseases (stones, jaundice, kidney pains) and advise determining headaches. They also need to be taken baths; is used as a component of tea as perspiration, food, as well as confectionery, and cosmetics industries, in the preparation of toothpaste and powders. the leaf extract and tea is used in the increasing the acidity of stomach, gall bladder. Essential oil is prepared, freshening, medicinal tea, flavored water, juice and so on. Infusing is assigned to patients for kidneys, joints, urinary tract salt, stone, as well as gastrointestinal regulate blood circulation and reduces pain. Mint pepper oil which is famous for its unique flavor and freshness is widely used in confectionery factory, perfumes, cosmetics, toothpaste, as well as in the preparation of various kinds scented soaps. There are a number of modern medicine preparations are made of pepper mint. So, while oil is part of "Zelenin drops", "validol", "Valokordin as" part of the heart drugs. Ore (tincture) is the best medicine to relieve the pain in the stomach. In particular, liver diseases - hepatitis, liver enlargement, anemia is considered indispensable medicinal plants.

- 2 tablespoons plant, 2 cups boiling water by infusing (Thermos) 3 times a day, every time it needs to drink 30 minutes before a meal (The daily dose).

- Peppermint oil (*Oleum Menthae piperitae*). containing 50% of the menthol is used in dental practice, leather rush and mialgiyada. Is considered a contraindication to hypotension.

***Matricaria recutita* L.** annual grass plant, whether you have a weak body, height 60 cm, base branching, thickset-sırımlı, the upper part of the leaves. The leaves are alternate, 2-5 cm in length, sit down, line, and tapered 15-20 mm of flowers, the flowers are white, tongued, including a built yellow tubular. Receptacle is bare and longand edge of flowers is curved.

*Chemical composition:* composition of flowers is 0.8% essential oil, terpens, valuable substance matrix, matricarin and xamazulin. In addition, the composition of the flavonoids, polysaccharides, carotenoids and ascorbic acid were found. 1% of organic matter and mineral substances does not exceed 0.5%.

Usage and intake procedure: has sedative effect on the nerve system, anti-inflammatory, antiseptic, blood stopping, analgesic, perspirative, bile, astringent, softening and anti allergic feature; is appointed for nerve system disorders, neurosis, hysteria, chorea, epilepsy, neuralgia, trigeminal inflammation and dismenorrea. Chamomile is used in diseases of the respiratory system, such as a weak purgative cough substance; are usedgastrointestinal tract gastritis, peptic ulcer

disease, enterocolit, non-specific colitis, cholecystitis, hepatitis, intestinal diseases and flatulence. is included in many mixtures Kidney, urine tract and diatese. is appointed for angina, stomatitis and peridontit, eczema, burns frunculyose.

- 2 cups boiling water 2-3 tablespoons flowers by infusing ( in Thermos), should be taken 3 times a day.

- When applying external 2 cups boiling water 4-6 tablespoons flowers will be evaporated. Flowers are antispasmodic and antiallergic. It is taken as part of the solution, and mixtures. As part of the essential substance of the romazulan dezodorasion an inflammatory and mouthwash, to compress, is designated for the treatment of enteritis and colites; has poor antiseptic and astringent effect. Raw material must be dried in open, green and good ventilated places or 35-40°C temperatures, drying cupboard. Chamomile is a very powerful antiseptic, with anti germ and virus features; has very good effect in the use of chamomile infusing in Angina, pharyngitis.

- A tablespoon of dried flowers *Matricaria recutita* brewed in a cup of boiling water, filtered and used as a gargle several times during the day. the brew chamomile is used antritis, sinusitis and wash the nasal cavity and chamomile oil (1-2 drops in the path of the nose) is more effective. Chamomile has also very good calming effect on the human nerve system. For this reason, a very

soothing chamomile medicines intended for children and adults. A cup of chamomile tea before going to bed at night (a cup of boiling water + a teaspoon chamomile) is made by adding a teaspoon of honey. In addition, this tea helps to reduce high fever. Chamomile brew increases the ability to defend the liver, bladder and urinary tract infections in the best effect; is widely used in cosmetology. Brew cleanses the skin, fights inflammation, makes hair more shiny, strong and vibrant, and helps dandruff.

***Inula helenium* L.** straight-bodied, herbaceous perennials, plant height of 1-2 meters. Large leaves are alternate, oblong-ellipsed edges toothed unequal. Flowers are like a big basket, equality body is at its peak. Outside flowers are tongued, golden-green, while the middle ones are tubular. Roots are brownish-gray color, short, small, length is 20 cm, width up to 2-3 cm.

*Chemical composition:* roots and rhizomatous root include essential oil composition, alantolacton (1-3%), and 44% inulin triterpenoid lacton saponin- psevdoinulin, inulenin, resin, vaccination,  $\beta$ -sitositerin triterpene saponin, a significant palmitic, vinegar and benzoic acids. content of the leaves 3% essential oil, C and E vitamins, vaccinations items (9.32%), lacton (1.19%), fumarin, vinegar and propanoic acids, complex Galen, lacton, inulin and has alkaloids. Hippocrates, the father of medicine valued the plant.

- needed to take in by infusing 20 g root in 200 ml of water in 30 minutes 3 times a day.

*Usage and intake methods:* used for bronchitis, pneumonia, asthma, tuberculosis and diphtheria disease is being used. inflammatory quality depending on the nature of the liver and biliary tract, gastritis, colitis, diuretic effect are determined diseases. Plantain is used in the case of diarrhea, chronic enterkolit, constipation, loss of appetite. Rhizomatous roots is helpful for bronchitis,

tracheitis, pulmonary tuberculosis, asthma, diseases. The quality of medicinal plants cough stopping and disinfecting. Solution is considered endemic goitre as well as gastritis, ulcers, radiculitis, and duodenal ulcer disease. High antihelmint (especially ascarids) is effective drug plant. In particular, 1: 100 and 1: 1000 concentration chasing parasites. And rhizomatous roots preparation is applied for (crushed, briquette), respiratory diseases, especially in the composition of mixtures. The preparation called alanton has a very good effect in a 0.12 gr dose 3 times a day after meals peptic ulcer disease within 6-8 weeks.

- 2 teaspoons adding a cup of boiled water stored in thermos. 1/3 cup 3 times a day, 20-40 minutes before a meal should be taken. In order to infuse a tablespoon of the root with 2 cups of water must be warmed over the fire within 10-15 minutes; is advisable to take 1-2 tablespoons every other hour. In acute renal diseases and pregnancy, adoption of this plant is prohibited. Skin diseases (leishmaniose, eczema, skin rash) filtered through the roots and put on skin in hot condition. Tibetan medicine is considered plantain valuable. In Bulgarian medicine roots infusing is used in palpitations, headaches, epilepsy and diphtheria. The composition of the

ancient recipe for the treatment of skin diseases is as follows:

- 180 g to 360 g of valerian root is boiled in water and mixed with 120 g of bacon and butter. In Rheumatism is determined in together with the other plant.

- 2 tablespoons water in a cup of valerian root infused in 30 minutes, 10 minutes, cooled, 0.5 cup 2-3 times a day is taken an hour before a meal.

- 2 teaspoons crushed valerian root boiled 0.5 cups of cold water stored in 8 hours 30 minutes 4 times a day before meals are taken.

- 20 g per 100 g of 70% solution valerian root of alcohol stored in 8-10 days. 20 drops are taken 3 times a day 20 minutes before meals.

Must not be taken during pregnancy. Because premature birth may occur.

***Taraxacum officinale* Wigg.** - Drug dandelion

Synonyms: Pharmacy dandelion, dandelion, pergu, milkgrass, hairy, milkweed

*Botanical characteristics:* perennial herbaceous plants, and pulpy short and small branches, whether straight rooted. Leaf umbrella is bare, with the length of 10-25 cm deep boatformed-feathered, gradually narrowing, of the long-winged stalk. flower group length is 30 cm, cylindrical, hollow, bare edges, like a soft, hairy spider web. Flowers bisexual, tongueshaped and light yellow in color, large basket accrue, with a diameter of 5 cm.

*Chemical composition:* The roots contain bitter glycosides (taraksatsin and taraksasepin), triterpene compounds, 24% inulin, resin and fatty oils. in Veterenary is applied for gastrointestinal diseases.

Usage and intake procedure: roots of bitter substances appetizers, natural liver diseases and has bile remover effect; is considered most popular source of medicinal plants with artichoke in liver disases. According to medical studies, these plants improve the function of the liver. In particular, liver diseases such as hepatitis B, dandelion is used. At the same time, helps to remove excess accumulated nicotine and alcohol in gallbladder from body.

• a tablespoon Dandelion root is added 200 ml (one cup) of boiling water is infused on boiling

water bath for 15 minutes and cooled to room temperature, filtered. 3-4 times a day, every time 1/3 cup is taken 15 minutes before meal. It is used in Cholesistid, hepatoxolesists, anasitqastrits, oroniki constipation, during obesity and atherosclerosis, as well as used as a means to improve appetite and digestion increases.

*Artemisia absinthium* L. perennial herbaceous plants, whether it is up to 2 m in height. Roots diversified, short, vertical and woody. All of the above-ground parts of the yellowish-white in color, covered with dense hair. There is a distinctive, sharp smell of wormwood. Stems numerous, thickset, the upper side of leaves broomed-branching. Lower leaves are usually wilt during flowering. Umbrellas and lower stalk have leaves, the length of 20 cm, egg, elongated, elegant taped, was completesided, 1-5 mm in length. Stem leaves are alternate. Summit leaves are settled, and completesided. Tubular yellow flowers, like a balloon, is up to 4 mm in diameter. After floerting becamess bare, leaves on the outside are linear, the inner side is ellipsoid. Flowers form a large group of flowers.

*The chemical composition* of grass and flowers within the 2% essential oil, the main ingredient tuyon, tuyol, fellandren, seksiviterpen absintin lactones, anabsintin, artabsin, bitter taste of raw ingredients, which are flavonoids and vaccinations.

Composition of plant is vaccine ingredients, artemizin flavonoidi, organic acids, carotenoids and ascorbic acid. Inulin contains the root structure. Extracts are widely used in animals, such as antilelminif [Ibadullayeva et al., 2015].

*Usage and intake method:* The rule adopted by the use of vegetable (whole and splited) and flowers quality appetizers, such as the gastrointestinal system booster is used in brewing and the composition of mixtures. As useful as raw materials in brewing and baking. Scientific medicine studied the bitter substance contained mainly increases appetite, energy is restored. It can be compared with a very bitter chinin. Bitter substance contained in wormwood (absintin) and other items are useful gastrointestinal, in particular, stimulates the pancreas function. Wormwood enhances the activity of the central nerve and hematopoietic system, asthenia, fatigue, anemia, and epilepsy, the treatment of diseases guarantees. Since the composition of ingredients stops cough, are used in the prophylaxis antipyretics and malaria, and treatment of influenza and acute respiratory diseases. Particularly successfully are appointed hipersection accompanied by diseases of the stomach. At the same time committed is very effective in the treatment of diseases acute and chronic hepatitis B and C virus, cholecystitis. Wormwood as well as for the treatment of diseases of the liver and gall bladder tracts are included to mixtures. Compostion full of diuretic and anti-inflammatory ingredients. The drug is used for

prophylaxis and treatment of diseases such as flatulence, dismenorrea, kidney kidney stone and vermifugal. In recent years, wormwood is applied to intestinal diseases. Infusing of wormwood as a drug is used to compress externally, to eliminate worms such as ascarids.

- 0.5 teaspoon plant infused in 250 ml boiling water, cooling for 10 minutes 3 times a day for 1.5 hours before or after a meal, must ne taken in (The daily dose). The course of treatment is 2-3 weeks. During pregnancy, the setting is considered a contraindication. Increases the liver's ability to defend.

***Menyanthes trifoliata* L.** buckbean is perennial herbaceous plants, and wetland plant. Root is long and reptiles. peak of the roots is slightly lifted, consisting of 3 parts of the junction leaves a long stalk. Stalk's length is 20 cm, the base has expanded and the sheath of a dice. Completesided leaves are bare, or ellipssed or eggshaped. Axis length is 30 cm in spring flowers. Matte-pink flowers are several cm in diameter. heavy brush is 3-7 cm in length.

*Chemical composition:* the composition of the leaves consists of bitter glycosides (loganin and svezil), vaccine ingredients, flavonoids, organic and mineral substances; is used for gastrointestinal tract disorders in cattle and calves.

Usage and intake methods: Contains bitter substances used during weakness in the gastrointestinal system, in particular, chronic gastritis, gastric secretor, loss of appetite, bile and diuretic, the general malaise; is especially effective in gall bladder stone disease.

- 2 tablespoons of dry leaves infused in 0.5 liters of boiled water (The daily dose) (Thermos), 20-40 minutes before a meal is taken 2-3 times a day; is included bitter compositions. Leaves (whole and split) are quality appetizers, the best bitter solution is body firming. Water buckbean is used in improving digestion, migraine, hepatitis and other liver diseases,

- A glass of water is added a tablespoon of dried leaves and infused for 15 minutes. Is taken 30 minutes before a meal, a glass a day

- 2 teaspoons of the leaves is added on a cold glass of water, mixed with a tablespoon every eighth hour and taken 3 times a day (time to hepatitis and cholecystitis).

## **Cardiovascular Diseases Treatment**

The curative properties of the herbs have known to mankind since ancient times. “If there are thousand diseases, be aware there are more than thousand cures” said our ancient ancestors used thousands of herbs, flowers, plant roots, fruits and vegetables in the plant cover and cured their disease by medicines obtained of plants. Such natural medicines have been successfully tested while the people got acquainted and used. Also they haven’t lost their significance even today – in the age of technical progress, vice versa they increased it. Even scientific medicine that approached to folk medicine jealously before also recognizes its importance today.

Several methods of folk medicine providing the conservation of the data that are being acquired on the base of etnobiological information attract our traditional culture remained among people through research of use at cardiovascular diseases on scientific bases for the future generation have been indicated below.

This information created by our people was a method tested for centuries. Data acquisition was mainly carried out on the base of individual conversations with representatives of older generation who better knows the folk medicine ways and deals with healing through all his life

***Crataegus sanguinea* Pall.** It is used for different purposes in the practice of medicine. Its infusion of flower and fruit is used at heart failure as a cardio-tonic substance, tachycardia, angio-neuroses, first stages of hypertonia, insomnia, hypertireises accompanied by tachycardia, blood circulation deficiency especially in climacteric periods and atherosclerosis. A 'cardioviolent' preparation is obtained of its water extraction.

Hawthorn known as a healing herb still widely used in folk medicine at cardiovascular disease treatment for a long time. Much information was provided how hawthorn is useful at treatments as: vasodilator, heart failure, high pressure regulating, nervine et.al.

In traditional medicine stems with young leaves, fruits and flowers of hawthorn is used in wet and dry state. Its flowers and fruits are mainly used inside as tea extraction or in milled state as pills.

***Leonurus cardiaca* L.** Preparations obtained of the herb are used at the following diseases as: neurosis, hypertonia, coronary heart disease, hyperthyroidism, insomnia and distonia. Besides it is appointed by physician at gastrointestinal neurosis, meteorism and spastic colitis.

All ground parts of the *Leonurus cardiaca* L. species: thin stems, leaves and flowers, seeds are widely used in folk medicine and scientific medicine at diseases as high blood pressure, cardiovascular and diseases of nervous. 20gr of fresh delicate collected plant parts place into a glass saucer, mix with 80ml 70% alcohol, keep the mixture within 4-6 weeks in a dark place and each 2 days stir up the mixture. You may take 10-15 drops in the morning and evening after filtering the solution obtained in this way.

***Equisetum arvense* L.** – its infusion and in cooked/boiledis state were used at heart disease in medicine practice.

***Strophanthus* Genus** – its ellipse shaped leaves are opposite to each other and have got sharp peaks. Its flowers are cymous, flowers crown is green, straight, pipe-like, with 5 petals, ribbon-like ant its tip is exsessively curve. Its fruit is cut lengthwise, horizontally slit-spaced, dehiscent when ripe, free, has

got numerous seeds with panache. The seeds are oblong and their tips are round.

*Strophanthus gratus* Franch. and *Strophanthus hispidus* DC species are used on the medicinal purposes. Its seeds are used as raw materials. *Strofantin* K (as an injection of 0.025%) is a cardiotoxic medicine. Qualitative medicine K. *strofantin* is obtained from its seeds as raw material. This medicine is applied at acute cardiovascular failure and acute myocardial infarction. It is highly effective. It starts to effect in 5-10 minutes and in 15-30 minutes it reaches its maximum.

***Thymus serpyllum* L.** – Its leaves infusion and solution are very useful at heart diseases, constipation and liver diseases as an inflammation-absorbent in Azerbaijan medicine. Besides, is applied at hypertension and atherosclerosis disease.

***Digitalis purpurea* L.** is a poisonous plant. All of the organs of this plant have got cardiac glycosides. It was revealed purpurea A glycoside, digilan A, digilan B, a and b acetyldigitoxins, glucose, aglycon in the content of its leaves; steroid saponins (digitonin), flavanoides (luteolin and its glucoside), caffeine, choline substances in the content of its leaves and seeds; it is used at II and III degrees of blood circulation disorders and hypertension diseases. It increases diuresis in swellings and strengthens heart

muscle. It subjects to vomiting, arrhythmia, and cumulation when is excessively used. Even it can cause cardiac arrest and death. Its leaves are high-quality cardiotoxic medications. In the state of powder and water solution it is medicinal substances as: digitoxin, gitoxin and cardigit. These medicines are successfully used at chronic cardiovascular failure (decompensation), mitral defects, myocardial dystrophy, heart rate and other disorders, hypertension, coronary sclerosis, retarding arrhythmia and paroxysmal tachycardia. Cumulative effect of this plant should be treated under a control of qualified physicians.

***Inula helenium* L.** – at the following diseases: heart diseases, hypertonia, toothache, shortness of breath / dyspnoea and weight loss / malnutrition, colitis, liver, bile, and urinary tract diseases and swellings is quite effective. Valerian is considered valuable Tibetan medicine. Infusion of its roots is used at diseases as: palpitations, headaches, epilepsy and diphtheria in Bulgarian medicine. It is used from time to time at: headaches, epilepsy, heart attacks and menstruation in folk medicine.

***Claviceps purpurea* (Fr.) Tul.** Been dried raw material of cultivated and ripe *Claviceps purpurea* (Fr.) Tul. rye ergot is qualitative medicinal herb has got a complex mechanism effect. According to its pharmaceutical characteristics due to ergotamine and ergometrine in its content it reduces uterine muscle tonus. According to its other characteristics it is prescribed at cardiovascular diseases as it is mainly an alpha adrenergic blocker.

***Convallaria transcaucasica* Utkin ex Grossh. and *Convallaria majalis* L.** species are used at neuro-circular distonia of cardiac-type, hysteria, toxic goitre of slight form diseases trait in Western Europe since Medieval Ages. Treatment is more effective when treating by means of Valerian and Hawthorn. You should drink the solution of spoonful herb with 200ml boiling water infused in thermos (o dose for 24 hour). 1-2 tablespoons for 3-4 times a day should be taken before eating every day. Flowers, leaves and grass of *Convallaria majalis* as a raw material contains very effective corglicon used at cardiovascular diseases.

It is used as an eye and outside fomentation at treatment of several as cardiac, as a diuretic at various etymology swellings, neurosis, epilepsy, temperature.

***Valeriana officinalis* L.** It is more used at weakness according to neurosis, nervous system. According to their hypertensive and spasmolytic characteristics it is also used at hypertension, cardio-neurosis and stenocardia disease. Valerian is also successfully applied at diseases as: spastic colitis, chronic diarrhea and gastro-intestinal neurosis. Taking valerian impacts pretty well at hyperfunction of the thyroid gland, body shiver (chorea), epilepsy and early climacteric complaints. At the same time its use gives very good result at: loss of appetite, strengthening the body's bile and pancreas system diseases. Its roots contain up to 2% essential oil, borneol, izovalerian acid, camphene, pinene and other terpens. It calms nervous system and affects as a spasmolytic. It is used at: weakness of neural origin, cardiovascular neurosis, cardiac attacks, extrasystole, flatulence and constipation. It is usually taken in proportion of 1 cup of boiling water 1 tablespoon roots infused in thermos 3-4 times a day per 1/3 glass each time. Its roots in powder state 1-2gr can be taken 3-4 times a day. An extract of valerian (T-ae Valeriane) teens and young adults can take 20-30 drops 2-3 times a day; depending on the age of the children. 15-30 drops of valerian essential solution 2-3 times a day; dried valerian extract 1-3 tablets 2-3 times a day; lily of the valley - valerian - adonizid drops 15-20 drops 2-3 times a

day; analeptic (1 part valerian root, 2 parts mint leaves, 2 parts clover and 1 part 2 part hops) is very useful to take. There are carvolol (valokardin), Zelenin drops et.al. in the content of other mixtures.

***Urtica dioica* L.** It normalizes asthenia, anaemia, arterial hypotension and metabolism. It is used at the following diseases as: neurosis, hysteria, bronchitis, pneumonia, bronchial asthma, tuberculosis, diphtheria, loss of appetite, diarrhea, constipation, gastritis and entirecolitic epilepsy and atherosclerosis. It is used at: hepatic, renal and the bile tract diseases, diuretic and anti-inflammatory drugs such as nephritis, pyelonephritis, and cystitis. It is used as to treat as cardiovascular diseases of I-II degrees.

***Schisandra chinensis* (Turcz.) Baill.** Its root, stem and fruit are used. It tones central nervous system by stimulating heart and breath, reduces mental and physical stress and gradually eliminates impotency. It increases the activity of peripheral and central nervous system. It helps to healing of acute and chronic diseases as: gastrointestinal, respiratory, kidney, and blood diseases. People in the Far East drink infusion of its fruits like tea.

***Panax ginseng* C.A.Mey.** Only root of the plant is used. Its chemical content is quite interesting to study. As the herb is being researched however its therapeutic aspects still are not quite clear. Ginseng was called as: "a herb-man", "an arth-man» an ancient Eastern myth. According to legends it returns old age back to younger, makes patients healthier, makes people wiser, helps to cure many epidemics diseases like: pestilence, plague and smallpox. Ginseng was known in China and Southeast Asia. European countries became aware of it in the XVII Century. It stimulates the nervous system, liquidate nervous and mental anxiety, effects hypotensively, renders a very positive impact on the treatment of neurosis and impotencies, disorders unknown cause, weakening the body's defence capability, is being used at stressful situations and infectious diseases. It gives a general tonus to organism, stimulates the central nervous system (tekrarlanir, 4 setir yuxari bax!) and eliminates mild depression. It affects pretty well at chronic lung disease, anaemia, diabetes, hypo and hyper gastritis. It quickly heals stomach ulcer, increases appetite and normalizes intestines activity. It regulates blood flow to the heart. Eliminates sexual weakness occurred of various reasons. However the use of this medicine without necessity is not acceptable. It significantly improves efficiency of use of the medicine together with vitamins. Ginseng is not toxic and can be used for a long

time. Patients are advised to make an appointment with low doses of the medicine. It is irreplaceable roots contain stimulator of the central nervous system, hypotonia, neurasthenia and physical fatigue.

***Mentha piperita* L.** It has got spasmolytic, analgesic, antiseptic, choloretic and gas-releasing properties. It is used at therapy of hypertension, angina, rheumatism, toothache and atherosclerosis diseases as it is a spasmolytic, analgesic, antiseptic, cardiovascular system stimulator (especially headaches). It is recommended for treatment of upper respiratory tract – bronchial asthma and bronchiectasis. It perfectly effects at intestine dyskinesia and bile ducts. It improves digestion and appetite. It is used at gastritis, peptic ulcer disease, colitis, entirecolitis, flatulence, shortness of breath, vomiting and diarrhea diseases. It was included into the tea plant at gallstone, hepatitis and cholecystitis diseases. Continuous taking mint strengthens and calms organism; along with a positive impact on disease as: hysteria, fatigue, migraine and also renders a diuretic effect. As it is delicious aromatic it is included into the majority of medicinal herbs composition. It is applied externally as a bath. It is usually in the state of drops, mixture, tablets (validol) and pencil-shaped. Since its leaves contain menthol it is used at: stomach and intestinal colics. It is recommended at: neuralgia, toothache, antiseptic,

analgesic and due to its inflammatory nature, – at bronchitis and bronchiectasis diseases. Its blend of menthol with valerian is used as validol, with paraffin – as pencil - shaped migraine, as valocordin. Besides, its leaves are used for increasing appetite, at shortness of breath and vomiting. German physicians advice it at: diarrhea, meteorism; taking its fresh and dried leaves together with soup, salad, vegetables and meat products. It is widely used within the content of tea as bile-expelling and sudatory; in food, confectionery and perfume industry; in preparation of toothpaste and powders. Make an infusion of 2 tablespoons plant in 2 cups of boiling water in thermos, take 3 times a day, every time you need to drink 30 minutes before meals (the daily dose). Oil of *Oleum Menthae piperitae*. 50% of menthol is used at dentist practice 1-3 drops; *mentholum* is used at skin rash and myalgia.

***Melissa officinalis* L.** Its infusion as sedative medicine is successfully used at: neuroses, fatigue, vegetative-vascular distonia and high sexual sensitivity. Besides, it is used at: intestines colic, cholecystitis, cholangitis, nephrolith, urinary tract disease and angina as well as at stenocardia and climacteric syndromes. It perfectly effects at external use at onto the skin antibacterial, antiviral, furunculous, herpes, stomatitis and parodontoses. This herb in combination and as an infusion effects as sedative,

spasmolytic, analgesic and hypotensive one. The juice of its young leaves before flowering are used in cookery. As the smell of lemon in its leaves are essential oil based is used in perfumery.

***Tribulus terrestris* L.** On the purpose of prophylactics and therapy it is used at: atherosclerosis, coronary heart disease and hypertension. Blood pressure is reduced, headache and sounds in ears are lost by lowering amount of lipoproteins by means of this device at therapy of atherosclerosis. This preparation regulating lipid and carbohydrate changes reduces amount of saccharin in the blood at diabetes in the background of atherosclerosis. Contributes for widening and opening of peripheral arteries.

***Adonis vernalis* L.** As it consists of numerous ascorbic acid it is regarded as a spring salad. Its dried herbs are used at: influenza, tonsillitis, bronchitis, hay fever, and rinosinusites. As *Adonis vernalis* L. has got weak sedative and hypnotic features it is used in the cases of migraine, neurosis and weakness. Its roots are cough suppressant substances. Saponines containing in it is very useful especially to stop dry cough. It improves blood supply to heart and lungs by reducing heartbeat. It is considered purposeful if you add some mallow onto this herb it would be appropriate to use in cases of colds and coughs. It

improves blood supply to heart and lungs by reducing heartbeat. It normalizes hyperfunction of thyroid gland.

*Erysimum diffusum* Ehrh. A cardioviolent is produced of *E. diffusum* as a raw material. Cardioviolent being a complex is used at rheumatic heart defects, cardiosclerosis, heart-blood circulatory deficiencies and even at vegetative stenocardia neuroses.

*Nigella sativa* L. According to some sources Turkey is considered to be the birthplace of this herb and from there it has spread to other countries. However for thousands of years many of these herbs are being cultivated in Africa, Turkey, Egypt and other countries. Since the ancient period up to day it has being used in folk medicine as healer at different diseases (renal, cardiovascular, diabetes, sexual dysfunction et.al.). According to the historical archival sources – the herb that seed cure all diseases except of death was announced.

*Nigella sativa* is an erected, thin-stemmed and finely branched herb. It is grass plant height of which is 15-50cm depending on condition. Its fine leaves are divided into feather-shaped parts placed on stem with an alternative raw. Its flowers are heart-shaped or egg-shaped and have originated of five dark blue or white petals with

small wavy edges. Approximately 30-50 breeding pollens are located in the middle part. After pollination a five-clove fruit is originated. There are antenna-shaped sharp grooves on the tip of each clove. Black seeds similar to small onion seed mature inside the fruit. Five species of *Nigella* Genus happen in Azerbaijan. They can be met in lowland, mountainous and foothill, crop plots, grassy and drought slopes, fallow land and wormwood areas. All organs of *Nigella* can be used. On this purpose its upper part is recommended as a tea infusion and seeds in milled state is advised to swallow with water.

As *Nigella* seeds are oily essential oil is obtained from them. It is used inside on the purpose of therapy as well as render a massage onto various hurting places.

***Glycyrrhiza glabra* L.**— Liquorice is a perennial herb with branched, deep-rooted, spread in the wild and known in folk medicine and scientific medicine long ago. Height of its cylindrical stem reaches from 50cm up to 1 meter and even more depending on its spread area.

The herb has rhizomatous stem and a couple of branches develop on the upper part of the body. As the roots grow deeply and laterally a lot of root shoots are formed along the rhizomatous

roots. That is why thick cover of liquorice is originated around its spread area.

Feather-like composite leaves completed in a single leaf are located on the stem; and there are 9-13 even more leaves on each leaf stalk. Fruit-shaped pale purple flowers located in the upper part of the stem. After flowering fruits called fruit bean are formed. On the couple of each fruit-been there are 3-5 pieces of raspberry colour and rather kidney-shaped small seeds. One can see these fruit-been even in winter on the stem.

According to their appearance of bitter liquorice sometimes they confuse with sweet liquorice. That is why please pay attention. As it seems based on its name the sweet liquorice has a sweet taste of all underground and above-ground parts. And the bitter liquorice tastes entirely bitter. Stem of the sweet liquorice is pale raspberry colour. Stem of the bitter liquorice is gray. Leaves of sweet liquorice are bigger than bitter ones. Cluster flowers of sweet liquorice are bigger and violet colour.

Root of *Glycyrrhiza glabra* is mainly used in folk medicine and scientific medicine. It's being used at cardio-vascular diseases including high pressure lowering, inflammation of the respiratory tract, constipation, strengthening reproductive

(sexual) system et.al. On this purpose liquorice root is used in infusion, powder, baking, boiling and extract state.

Surface parts of the sweet liquorice can be used as tea infusion in the flowering period of the herb. One can also eat its young shoots as vegetables when it is fresh and not dry. In all cases it is useful when is used a little. It should not be taken too much.

Liquorice resources in the lowland and highland regions of Azerbaijan are much enough. They happen on the edges of streams and canals, planting areas around the sowing areas in large quantities in the vicinity of each location supplied with water flow.

***Allium sativum* L.** According to historical sources garlic has been used by sportsmanship and running races since the very ancient times in Greece; at the construction of the pyramids in Egypt and considered and to be protected from a malefice for employees working in the garlic.

The subsequent researches confirmed that this valuable herb really increases power of human body and has got unique healing properties of many diseases. That is why garlic is of great importance in scientific medicine and folk

medicine at treatment of cardiovascular system and reduce high blood pressure, diabetes and nervous system diseases.

Considered to be the original homeland of Central Asia this herb is grown in all temperate climate, vineyards and orchards. Possessing sharp smell this species of Alliaceae Family is 40-80cm high depending on soil conditions perennial *Herbaceous* herb. It has got subterranean bulbs and the bulbs are with cloves. There are flat and long leaves on the lower half part of its stem. The upper part is usually leafless. Its leaves are with parallel veins and sharp tips whether the stem is festooned. Lots of small bulbs are formed in flower group besides the flowers.

Garlic is introduced by its cloves. Each bulb has got 10-20cloves. The cloves regularly linked with the stem. Each clove is covered with a diaphragm separately.

3 species of the *Allium* genus is known in Azerbaijan. An *A.sativum*, *Allium cepa* L. and *Allium ursinum* L. The number of Floral garlic cloves are 5-10pieces and outside ones are bigger while the middle cloves are smaller. The bulb of garlic and green surface portion of the herb are eatable or used in preparation of different food

products. Garlic should be reproduced by bulb cloves. If garlic would be reproduced by means of bulbs that are on the stem the garlic will be grown single-cloved and less yield. Garlic product should be collected and delivered after getting its leaves to dry. One should be careful when eating raw garlic as those with low blood pressure and gastrointestinal diseases may have a negative impact. That is why we must not forget to take advice a physician.

***Rubus sanguineus* Friv.** Wild perennial shrubs naturally spread along with roadsides, gardens, in the edges of ditches, around backyard fence. Its very branched stems and surrounded with whitish hair and thick spread tenacious thorns. Its curve, hooked and tenacious thorns are even on its leaves. These thorns well protect the plant from being eaten by animals. Young shoots of blackberry bent down and touching the ground sooner is tied and forms knots to a new plant roots around. So, blackberry plant is capable to spread by its scion tendril several meters away from it and increase into bush. It is almost difficult to clean it up from a widespread area.

Depending on its species there are triple composite leaves on its stems (eg, on fruitless species). On the stems of fruit-bearing species there are five composite leaves. Id. est. there are 5 leaves on

general stalk linked with smaller stalk on its stem; the 2 leaves situated below them are smaller. The flowers located on the stem are single or assembled group of flowers and is forked like a cluster of grapes. Flower crown consists of 5 petals. It is pink or white colour. Stamen and pistila are of large number. The fruits are red at first and get darkened into black when they are fully ripened. Its fleshy pseudo fruits are a cluster of number of small and round-shaped small fruits. According to the scientists 15 species of *Rubus sanguineus* Genus happen in Azerbaijan. Almost they are met in all regions of the Country.

Since the ancient times the herb known in folk medicine as a healer had been used at therapy of many diseases as: cardiovascular diseases and high blood pressure, foot tumour, mouth cavity and throat infections et.al.; and at present it is retaining its significance its significance. All its organs are being used as a healing. Its leaves are collected and dried even before the flowering. They are used in milled state of what brew tea and drink half an hour before meal in the morning and evening lilamar by gulping. For infusion a teaspoonful herb and a cup of boiling water should be taken. It can be taken for months with intervals. Its fruits are eaten and used as jam, stewed fruit and compote.

*Foeniculum vulgare* L. It is widely spread in many countries all around the world in wild form. Knowing significance of *Foeniculum vulgare* people have begun to cultivate it. *F.vulgare* belonged to Umbelliferae is a herbaceous perennial herb. Height of its stem can be 1-2 meters, depending on soil and climatic conditions. People who know the benefits of the herb have begun to cultivate it as vegetable plant in their private plots.

*F.vulgare* is erected herb and has got a cylindrical stem. The leaves of the lower part of the stem are big and long stalked. And the leaves of the upper part of the stem are small and stalkless. There are composite umbrella flowers consisting of a couple of yellow flowers on the upper part of the stem. After flowering cylindrical fruits are formed of two parts on which mature the seeds of a few millimetres in length. *F.vulgare* is widely spread in the wild of Davachi - Khachmaz Regions. They cultivate it as a vegetable plant in private plots too. On medicinal purposes seeds and roots of *F.vulgare* are used. Young shoots and leaves are eaten as vegetable. *F.vulgare* is used in folk medicine at: anaemia, heart disease, also at the treatment of gastrointestinal and respiratory diseases. On this purpose, it is advisable to collect fruits and seeds of the herb in the period of maturation. And its roots should be collected after seed maturation,

washed, cut and dried in a less shady place. *F. vulgare* Its tea infusion is based on the rules that already we know. Its roots and seeds can also be used in milled and/or cut states *F. vulgare* Its fruit gives a positive result to kids and adults at gastrointestinal pain when mixing its fruit with dry mint leaves in equal proportion and infusing to use.

***Hippophae rhamnoides* L.** The herb belonged to *Angustifolia* Family has been known in folk medicine since the ancient times. It is popular as a healing herb because mainly it has got valuable vitamins like: A, E, K, P, F and useful for human body mineral substances like: Mg, Fe, Al, Si, Ti in its content.

Tea infusion obtained of leaves and flowers as well as the young shoots of Sea Buckthorn herb is used in folk medicine since the ancient times at: anaemia, vitamin failure, joint pains and other diseases. During the subsequent investigations its positive effect at diseases like: cardiovascular, gastrointestinal diseases and sexual dysfunction have been studied and proven.

This healing herb has been widely spread in many countries including Azerbaijan. It happens in lowland, mountainous and foothill regions. Height of this tree-plant widely spread in the wild depending on soil and climatic conditions can be

5-8 meters. Bark of the tree trunk is thick and gray. Trunks are branched. The trunks have got irregularly located sharp and tough prickles. Thorns are able to protect the herb well. Even is not so easy to collect Sea Buckthorn fruits as requires more attention and carefulness.

Long and sharp-end leaves short stalks located alternatively on trunk branches attracts attention. Veins visible in the centre extend along with in the middle of each leaf. The buds are located under leaves. Flower and fruit buds are located close to each other. The flowers are hardly noticeable star-shaped. Flowers are arranged in the form of ears in whole. Flowering happens in May. After flowering juicy, sour tasted fruits like small berries are formed. Its ripen fruits are yellowish or orange. As the fruit stalks are firm fruits on the plant able remain in winter.

As seeds of Sea buckthorn are much oily Sea buckthorn oil is obtained of it in industry and in household use. One can use fruit, leaves, bark and young shoots of Sea buckthorn can be used as a tea infusion. Its fruits, can be used to cook jams, compote. Reproduction can be made through the shoots of the plant and trunk cuttings.

## Use Of Wild Plants At Skin Diseases

The herbs collected for cure of dermatovenereological diseases including suppuratives, scabs and eruption generate a special interest.

Data about 23 species of wild plants spread in the Azerbaijan flora and widely used in folk medicine (in skin diseases) during Ethnobotanical Researches have been acquired: *Lycopodium clavatum* L., *Pinus sylvestris* L., *Quercus robur* L., *Morus alba* L., *Rheum rupestre* Litv., *Chelidonium majus* L., *Ribes nigrum* L., *Rosa canina* L., *Filipendula ulmaria* (L.) Maxim., *Agrimonia eupatoria* L., *Melilotus officinalis* (L.) Pall., *Peganum harmala* L., *Hypericum perforatum* L., *Hippophae rhamnoides* L., *Origanum vulgare* L., *Plantago major* L., *Viburnum opulus* L., *Bidens tripartita* L., *Sanbucus nigra* L., *Tussilago farfara* L., *Helichrysum plicatum* DC., *Tanacetum vulgare* L., *Matricaria chamomilla* L., *Taraxacum officinale* Wigg., *Verbascum densiflorum* Bertol., *Centaurium umbellatum* Gilib. Areal and biological features of these plants in the flora have been studied; parts used as medicine and phases of plants have been specified as well as their medicinal significance and curative properties defined.

Complex researches to identify ethnic use of medicinal, food, aromatic and all useful plants in general have been carried out in 2007-2011; the acquired data were registered as well as new use

potentialities of more than 100 wild plants were appeared through consultations with physicians and local people [Ibadullayeva et al. 2011]. The wild medicinal herbs collected for cure of dermatovenereological diseases bore a great interest. On the result of the researches carried out below information related to the use of bioecological and phytotherapeutic properties of some wild plants especially at dermatovenereological diseases including their use at other diseases was provided (table 1).

On the result of the carried out investigations it has been known that a part of the studied plants takes a wide range in the flora and it is possible to use them as a biological base of raw materials. However, there are some plants that are threatened as they are collected without any limit. Taking into account in-situ collections of such plants have been created and the seeds collected were reintroduced in their initial natural populations.

**Table:****Bioecological and ethno-pharmacological properties of some wild herbs**

<b>№</b>	<b>Names of speci in Latin</b>	<b>Blooming and insemination periods</b>	<b>Lifestyle</b>	<b>Ecological peculiarities</b>	<b>The partused on the medicinal purposes</b>	<b>What diseases are they used at</b>
1	<i>Lycopodium clavatum</i> L.	VIII-IX	Perennial	It is met in middle and upper mountain belts – undergrowth	spores	heat rash, diathesis and different pus-free eruptions
2	<i>Pinus sylvestris</i> L.	III-IV.	Perennial	It is met in a mountain, in upper borders of a forest	leaves and buds	heat rash, some skin diseases, scab, pharyngitis, anti cough and rachitis as well as diuretic

3	<i>Quercus robur</i> L.	V-IX	Tree	It originates mountainous forests	Bark and sometimes fruitcase/b ox	stomatitis, gingivite, chronical tonzillite, gastroenteric bleeding, diarrhea, stomach keen ache, burn and skin diseases
4	<i>Morus alba</i> L.	IV - VI	Tree / Bush	It is cultivated at the same time met along the river- banks in tugai forests	bark of its trunk and roots, matured fruits and leavs	cardio-vascular system, anaemia, scarlatina, angina, chickenpox, stomach ulcer, rheumatism, worm driving out, cold, epilepsy and itch
5	<i>Rheum rupestre</i> Litv.	IX-X	Perennial	It has spread in stony slopes, bush, middle mountain belt	Roots and rhizome/ root stock of 3-4- yearred plants in summer months	in big doses a weak laxative, in little doses as appetite improver, contracting, skin diseases and bile driving out

6	<i>Chelidonium majus</i> L.	V-IX	Perennial	It is met in forests, open areas, areas under crops and littery areas	Surface part of the plant	warts, wounds, ulcers, skin tuberculosis, skin cancer, liver, jaundice and bile diseases
7	<i>Ribes nigrum</i> L.	V – VII	Bush	It is cultivated in the most regions of Azerbaijan as a cultivar	Leaves and berries	avitaminosis, kidney diseases, cold, gastritis, cholestite, anaemia, rheumatism, infection, respiratory passage diseases, skin diseases, salt driving out, tuning of heart-vascular system

8	<i>Rosa canina</i> L.	V-IX	Bush	It is met in the areas beginning from plain to middle mountain belt – treeless bushy and grassy slopes, river-banks, glades and roadsides	Completely matured fruits	avitaminosis, scurvy, hemorrhagic diatesis, cholelithiasis, hepatitis, kidney and bladder, gastroenteric diseases, anti burns, wounds and infections
9	<i>Filipendula ulmaria</i> (L.) Maxim.	VI-VIII	Perennial	It is met in wet grassy lands of middle mountain belts	rhizome/ rootstock and surface part, flower	cold, diarrhea, dysentery, different skin diseases, eczema, worm driving out and diuretic, bleeding of stomach and lungs

10	<i>Agrimonia eupatoria</i> L.	VI-IX	Perennial	It is met in forest regions, cut forests of a middle mountain belt, open areas, bush and meadows	surface part in the period of flowerence	chronical diseases of liver, rheumatism, chronical diseases of gastroenteric diseases of mouth cavity and pharinx, foot dislocations and skin ulcers
11	<i>Melilotus officinalis</i> (L.) Pall.	V-IX	Biennial	It is spread in grasses, bush, along roads, canals, furrows of areas beginning from plain to subalpine belt	Its herb and thin part of its trunk in the period of flowerence	respiratory diseases, expectorant, breast-softening means, gas-deducing means, ulcer, furuncle, purulent wounds' treatment and rheumatism

12	<i>Peganum harmala</i> L.	V-VIII	Perennial	It is generally met in groups and dispersedly in dry areas, grave-yards and steppe of plain areas of 1700m high of w.s.l.	Its all parts	Nervous, diseases-epidemic encephalitis, parkinsonism, cold, malaria, rheumatism, itch and stomach diseases; as diuretic and sweat driving out
13	<i>Hypericum perforatum</i> L.	V-IX	Perennial	It is mostly met in grassy slopes, river beds, weedy and bushy areas of forest regions beginning from lowlands up to subalpine belt	Its surface part	gastroenteric inflammation, cholecystitis, hepatitis, cystitis, stomatitis, pharyngitis, tonsillitis, angina, rheumatism, tuberculosis, inside bleeding, furuncle, mastitis, abscess, burn, worm driving out and diuretic

14	<i>Hippophae rhamnoides</i> L.	III-X	Tree/ Bush	It is mainly met in river beds, on the banks of mountain rivers, seldom in rocky areas, sandy grounds, tugai forests up to uppermountain belt (about 1900-2000m of w.s.l.)	Its fruit	hypo- and avitami- nozes, trophic ulcers, stomatitis, respiratory passages, skin tuberculosis, cancer diseases, stomach ulcer, burns, radiation
15	<i>Origanum vulgare</i> L.	VI-VII	Perennial	It is met in forest edges, bushes, grassy areas beginning from lowlands up to subalpine belt	Its surface part in the period of flowerenc e	mouth cavity diseases, tooth aches, erysipe- las, furuncle, skin rashes, rheumatism, cholesistit, stomach spasm, paralysis, epilepsy, for appetite and anti cough

16	<i>Plantago major</i> L.	V-X	Perennial	It is met in meadows, forests and bushes, roads, humid and sandy areas beginning from plain up to subalpine belt	Its leaf (humid or dry), grass and juice	stomach ulcer, gastroenteric diseases, stomach and duodenal guts ulcers, anti cough, whooping cough, phlegmons and burns.
17	<i>Viburnum opulus</i> L.	V-IX	Bush	It is met in forests, river banks, among bushes up to middle mountain belts	bark of its trunk and fruit	rheumatism of joints, improves arterial pressure by increase of heart musculature, and as a laxative

18	<i>Bidens tripartita</i> L.	VII-X	Annual	It is met in humid areas, forests, in the edges of marshy areas, in the edges of trenches of plains, low mountain belt	Its lower leaves and young tips	gastritis, ulcer, bleeding diarrhea, inside bleedings and as analgetic means
19	<i>Sanbucus nigra</i> L.	V-IX	Bush	It is met in humid, dark and stony areas of low, middle and seldom in upper mountain belts	its florescence and fruit	german measles, measles, inflammation of respiratory tracts, pharyngitis, avitaminosis, malaria, diabetes, kidney diseases, diuretic.

20	<i>Tussilago farfara</i> L.	III-VI	Perennial	It is met in glades and clayey soil areas, river banks of plain up to highlands about 2200m height of w.s.l.	its florescene and leaves	kidney, bile channals different diseases, ascaridoz, blood rehabilitation and some skin diseases
21	<i>Helichrysum plicatum</i> DC	VI-VIII	Perennial	It is met in dry rocks, sandy and soily lakes beginning from middle mountain belts up to subalpine belts	its florescene	gastroenteric diseases, liver diseases, diarrhea, sweat riding out, headaches, joint aches, jaundice, itch, worm riding out
22	<i>Tanacetum vulgare</i> L.	VI-IX	Perennial	It is met in meadows, stony slopes beginning from middle mountain belt up to subalpine belt	its florescene and leaves	dyzenthery, stomach catharrah, anaemia, jaundice, as bile riding out ödqovucu kimi, liver, kidney diseases, diabetes, rheumatism, malaria and cold

23	<i>Matricaria chamomilla</i> L.	VI-VIII	Annual	It is met in meadows, savannahs and glades	anthodium and flowers	chronical colitis, eczema, cleaning of pygment spots, burns, chronical liver diseases, jaundice, bladder, kidney, skin diseases, profilactics of malaria, anaemia, rheumatism and insomnia
24	<i>Taraxacum officinale</i> Wigg.	V-VIII	Perennial	It is met in meadows, bushes, sowing areas, roadsides of middle and subalpine belts	root and surface part	gastroenteric and kidney diseases, worm riding out, angina, dentals inflammations, heat, diabetis, anti cough, anti thirst, rheumatism and in strengthenin of organizm

25	<i>Verbascum densiflorum</i> Bertol.	VI – X	Biennial	It is met in plain areas up to middle mountainous belt – forest edges, dump, river banks.	petals	gall bladder, liver diseases, gastritis, dispepsia, ulcers, pleuritis, lungs and spleen diseases, worm riding out an iuredic
26	<i>Centaurium umbellatum</i> Gilib.	VI - X	Annual	It is spread in middle mountainous belt – forest edges, bushy and grassy areas.	surface part	rheumatism, diabetes, lungs diseases, whooping cough, kidney aches, bladder inflammation, epilepsy, deuretic and regulates function of liver

**MEDICINAL PLANTS MOSTLY USED IN  
THE AZERBAIJAN AND IIR-an FLORA  
ARE THE FOLLOWINGS  
*DRYOPTERIS FILIX-MAS* (L.) SCHOTT.**



Its roots are used in medicinal purposes which has got poisonous effect. There are nitrogen-free poisonous substances in the content of the roots that are floroglucine and oily acids. Filicales (*Dryopteris filix-mas*) juice cures wounds and ulcers. If the root of a male filicales brewing then adding into a bath it would help very much for rheumatism pains and paralich of leg muscles. Even, sleeping in a bed of freshly collected fenugreek leaves is very useful.

## *EQUISETUM ARVENSE L.*



Its green coloured fruitless stalks collected during whole summer period are used in medical purposes. Horsetail has mainly got diuretic and blood preventing effects. Besides, its fluid extraction is used in diuretic edemas (related to violation of blood circulation), bladder inflammation, pleuritis with broad diuretic exudate, dysentery, rheumatism, ulcers of mouth and pharynx, lung tuberculosis, lead poisoning, diarrhea

## *PINUS SILVESTRIS* L.



There are resins, essential oil, vitamin C, bitter substance called 'pinipicrin', phytoncids, as well as antocians in the content of its prickl/needle and peel. In medicine its leaf-buds are used against cough, pharingit; it is the most effective curetive plant in some dermatic diseases, rakhit, intertrigo, herpes, against cardial defects happening at children by the way of having a bath with fluid extraction prepared of its leavs. Moreover, it is also characterised with its bactericide effect onto skin irritations in cure of wounds and diuretic effect.

## *JUNIPERUS COMMUNIS L.*



Its fruits are used in medicinal purposes. It consists of followings in its content: essential oil, pinene, camphen (camfen), sabinen, cadinen, borneol, sugar, reseine and pectine substances, camfora, mineral salts, yellow amorph substance uniperin, vinegar, ant acid and apple acid. In scientific medicine and folk medicine it is used being in the content of different mixtures as diuretic, against cough, gall-removing, improving digestion brew and decoction. Besides, for its antibacterial effect in reumatizm and neuralgia, it is used in the content of “Vishnevskaya” liniment.

## ***BETULA PENDULA* ROTH.**



In the period of floweresence its buds and leavs are used in medicinal purposes. In medicine it is used in boiled and brewed states as diuretic and bile-removing means, hypo and avitaminoses. Its nastoyka (1:5 ratio in 90° spirit) is used in cure of wounds, severe and chronical exemas, reumatizm, scab, leishmaniasis, during stomach ackes, stomach ulcers, edemas, as vermifuge (ascarides and tape-worm). In spring its fresh juice is used in reumatizm, podagrah, scurvy, edemas.

## ***FAGUS ORIENTALIS* LIPSKY.**



Its woods and nuts are used in medicinal purposes. Its nuts are eatable. Resin is obtained of pistachio wood's distillation. Resien contains vinegar acid and creozite. And the creozite consists of different fenols. There are fat oil, nitrogen substances et al in the content of its peeled nuts. The creozite in the content of the resien has got strong bacteriocide and anti-parazitar effects. It is applied as drugs in catarrah of upper bronchial canals, pneumonia, initial phases of tuberculosis, different derma-diseases.

## *QUERCUS ROBUR L.*



Its peels and sometimes bolls are used for medicinal purpose. Its peel is collected from its young green brunches, dried and cut/grinded in the early spring. There are about 20% tinning agents, protein substances, starch, pectine substance, flavanoid-cverstine, levuline et al in the content of an oak rind; and 5-8% tinning agents, starch, protein substances, suger and fat oils in the content of its boll. All parts of an oak-tree have got phytoncide and desinfectant effects. Watery infusion of an oak-tree rind posessing anti-inflammatory, contracting and anti-diharreal effects they are used in the following diseases: stomatitis, gingivites, chronical tonzillites, pharingite, stomach and gut bleeding, complex cure of burn and dermatic diseases; its mixture with glicerine is used in perspiration of hands and feet, diarrhea and stomach colic.

## *FICUS CARICA L.*



Its matured fruits are used in medicinal purposes. There are sugar, poly-saccharids, phosphatids, fat oil, lecithine, organic acids, B<sub>1</sub>, B<sub>2</sub>, B<sub>6</sub>, PP, C, D, carotene vitamins, macro- and micro-elements (K, Ca, Mg, Fe, Zn, Al et al), sumbucine-chloride and sumbucine-anidinein in the content of the ficus fruit. *Ficus* (Fig-tree) leaves contain furocumarines, essential oil, resin substances, organic acids – apple acid and lemon acid and other acids, rutine and vitamin C. Fig is used in heart-vascular diseases, anemia, also in weakness as strengthening means, in catarrhal diseases as decoction; it is also used in dry cough, sore throat, bronchial asthma as an expectorant; kidney diseases as a diuretic; in diarrhea, dysentery; to prevent vomiting; as an analgesic, vermifuge as well as in cure of skin wounds.

## **MORUS ALBA L.**



Its matured fruits, leaves, rind of its trunk and barks of its root are used in medicinal purposes. Leaves of white mulberry (*Morus alba*) contain organic substances, vitamin C, sugar substances, tanning agents et al; its fruits contain of sugar, organic acids, pectine substances, vitamins C, B<sub>1</sub>, different amino-acids, flavonoids, essential oils sign, carotin; and its seeds contain 24-35% fat oil. In folk medicine infusion made of the leaves of white mulberry, its fresh fruits and boiled condensed juices (called in Azerbaijani language or –behmez) are used at diseases of heart-vascular system, anaemia, scarlatina, itch, ulcer diseases of stomach and duodenum, angina (as rinsing); bath of its fruits is used in reumatizm. Watery infusion made of its root's bark is used as vermifuge; watery infusion made of its leaves is used in catarrhal as anti-fever, in epilepsy; lymiment made of its leaves and bark is used in scab disease.

## *URTICA DIOICA* L.



It grows and spreads in every part of Azerbaijan – from lower mountainous belt till the highest one, on sites with garbage dumps, in pastures, in orchards and gardens. Its leaves are used in medicinal purposes. The leaves contain vitamins C, K<sub>1</sub>, B<sub>2</sub>, pantothenic acid, tannins and protein substances, phytosterol, iron salts. It is used in scientific medicine at bleeding of: kidneys, stomach, lungs; as an activator of heart-vascular system and respiratory system. It is used in hypovitaminosis, bleeding and difficult curing ulcers at children. Its infusion is used as anti-cough, worm-repelling and for reducing amount of sugar in the blood. Also when washing hair by nettle (*Urtica* L.) infusion it strengthens the hair roots.

## ***RHEUM RIBES L.***



The 3-4-year plants roots and rootstocks are used in medicinal purposes in summer months. It contains antraglycozide, tanoglycozide, gluco-reum-emodine, reochrizine, and tanning agents. There are Vitamin C, rutine, organic acids and much calium salts in its leaves and flowers. Powder of rhubarb (*Rheum L.*) is used in medicine: in big dose as a weak purgative, and in little doses for increasing appetite and as a contracting medicine, in dermo-diseases, as gall releasing means and in meteorizm. *Rheum L.* is used as: root powder, dry extraction, watery infusion, syrup and drug.

## ***RUMEX CONFERTUS* WILLD.**



Its leaves are collected in the blossom period, in the fruit maturation period and its rootstocks are collected in autumn. Rootstocks contain organic acids (tanning agents, pirogal, dock), vitamin K, essential oils, a few amount of ferrum, antraglucozides, chrizophanol and emodyne possessing bacteriocide effects. Its leaves and trunk contain flavanoids, in a big amount of Vitamin C and organic acids. Powder, watery infusion, boiled and fluid extraction made of its rootstock and fruits are used in gastric and intestinal diseases, dispepcias, enterocolits, diorrhea, dysentery et al, appetite increasing, anemia, at gut clearance on the result of poisoning, in the case of crack existence in the lower part of a thick gut – anus, at anacide gastrit, ulcer stomotids, gingivits. *R.confertus* in big doses have got a purgative effect, and in little doses an effect to prevent diarrhea and gall releaseing effect.

## ***BERBERIS VULGARIS L.***



There is berberine alkaloid in all parts of barberry (*Berberis L.*) besides its matured fruits. It also contains occiakantine, tanning agents, resin, vitamin C, organic acids, sugar, pectine substances, carotinoids, and the most significant is berberin. In scientific medicine it is used as watery infusion, tincture and spirit extraction at inner bleedings, inflammation of bladder and liver, gall bladder diseases, cure of leishmaniasis, scurvy, rachitis, anaemia, malaria, reumatizm, gastric and intestinal diseases, jaundice, sacchar diabete, quinsy, cough and anti-inflammation at eye diseases.

## ***CHELIDONIUM MAJUS L.***



Its trunks with leaves, flowers, buds and matured fruits are used in medicinal purposes. It contains chelidonine (hemi-chelidonine), cheliritrin, oxichelidonone alkaloids, also essential oils, vitamin C, amine acid, lemon acid and amber acid. Burning and astringent brown milk of *Chelidonium L.*celandine is used in the folk medicine to cure warts, wounds, ulcers; its juice is used at jaundice, as diuretic, analgesic, at dermo-diseases, tuberculosis of skin, cancer of skin, liver and gall diseases.

## ***RIBES NIGRUM.***



Its berries and leaves are used in medicinal purposes. The berries are usually collected when they are completely matured. Before they use it the berries are placed into special drying rooms and dried at 50-60°C. The berries of *Ribes nigrum* L. black currant contain about 300 mg/% vitamin C, sugar, pectine substance, phosphor acid, essential oil, tanning agent, vitamins P, B, carotin, kalium salts, phosphor and ferrum salts. There are phytoncides and 250 mg/% vitamin C. Currant is eaten as fresh berry, jam and paste. It is used at avitaminosis, kidney diseases as diuretic, inflammation as a sweat bearer, gastritis,

cholecistit, enterokolits, at intestinal diseases cure, anaemia, for appetite increase, anti-reumatizm, at infectious diseases, to increase a tone at heart-vascular system, at diseases of the upper respiratory ways in medicine. Watery infusion of its leavs is used at dermo-diseases, at releasing oxalat and uric acids out of organism.

## *ROSA CANINA* L.



In medical purposes its fruits are collected when they are completely matured. The fruits contain glucosides with flavanoids, tanning substances, colouring substances, nitrogenous substances, protein substances, sugar, pectin, essential oil, organic acids, Vitamin K, Vitamin C and mineral salts. As its fruits contain especially natural vitamins its oil is used at the following diseases: avitaminosis, scurvy, anaemia, haemorrhagic diathesis cure at children, after a serious illness to increase body resistance against infections, as a gall releaser at bilious canal diseases, at cholecistitis, hepatitis and other diseases of liver, as a diuretic at kidney and bladder diseases, at gastric and intestinal diseases, at burns and wounds cure.

## *SORBUS AUCUPARIA L.*



Its fruits are used in medical purposes. The fruits contain glucosa, fructose, sacharoza, apple acid, lemon acid and vinegar acid, carotine (20mq-100q), vitamins C (200mq-100q) and P, bitter substances and tanning agents, flavonoids, catechins et al. Juice and infusion of its fresh fruits and its dry fruits broth are used at gastric and intestinal diseases, mainly at dysentery, as a diuretic, at sachar diabetic, as a purgative, as a blood restoration means, sweat releasing and at avitaminosis.

## *RUBUS IDAEUS L.*



Its fruits and leaves are used in medical purposes. Its fruits contain essential oil, apple acid, lemon acid, salicylic acid, caproic acid, 8% sugar, secretion, vitamins C, B, P, carotene, dye substance, potassium salt, copper salt, pectin, nitrogenous substances, tanning substances and anthocyanins. Infusion of its dry fruits, gelatin and jam are used at inflammation and fever especially to get children sweat. Berries, as an expectorant at bronchitis, as blood restorer at bleeding, anti-vomiting, to increase appetite, as well as slightly diuretic. Raspberry juice is usually added into children's preparations in pharmacological practice to make better tastes of mixtures.

## **CRATAEGUS PENTAGYNA WALDST ET KIT.**



Its fruits and flowers are used in medical purposes. Fruits and flowers of *Crataegus* hawthorn contain about 10 flavonoids, saponins, lemon acid, coffeic acid, chlorogenic acid, tanning agents, vitamin C; its seeds contain amigdaline glucozide, choline and fat oil. Besides, sugar and protein substances, carotene, essential oils and sorbit. Hawthorn is used in scientific and folk medicines. Hawthorn reduces excitation of cardial muscls, strengthens its contraction, improves blood circulation of brain and heart, prevents arythmia and tachicordia and liqudates feelings of heaviness on the heart area. It is also used at hypertireosis as a soothing means of the central nervous system. Inside reception is appointed as an extraction, infusion, drops or within the mixtures. Besides, jam and kissel are made of its fruits (through boiling).

## ***GLYCYRRHIZA GLABRA L.***



Its roots and rootstock are used in medical purposes. Its roots contain kalium and calcium salts of the glycoside-shaped saponine-glicerizin acid, flavonoids, a big amount of sugar, pectine substances, resin, bitter substances, starch, mineral salts, sign of essential oil and asparagin. Powder, condensed watery extraction, dry extraction and sweet syrop of glabra root are usually used. Preparations made of glabra root are widely used as: week purgative, expectorant and anti-cough. It is in the content of breast elixir, diuretic, breast, stomach, purgative assortments. Besides, glicerizine and preparations of glabra root regulate water and salt exchange of an organism [188, 203]. It greatly effects at stomach ulcer, inflammation processes, Addison disease, whooping cough, pulmonary tuberculosis, dry bronchitis, anti-poison at meet and mushrooms poisoning, at dermo-diseases 2 % liniment together with antibiotics, at exema, worms and other deseases cure.

## ***PEGANUM HARMALA L.***



All parts contain alkaloids, harmin, harmalin, harmalol and peganine the most significant of which is harmin. A harmin-hydrochloride preparation is obtained from harmin. It is used in several nervous diseases in medicine including epidemic encephalitis, Parkinsonism et al. Its infusion and broths are used in folk medicine for inflammations, malaria, rheumatism, scabies. It is used in Iranian folk medicine as a diuretic, sweat releaser and for stomach diseases.

## ***RHUS CORIARIA L.***



Its young and tender leaves and fruits are only used in medical purposes. Sumach leaves contain a big amount of a very valuable tanning agent (12,5-21 %), about 20 % of which is tannin substance, apple acid, vinegar acid, flavonoids, vitamin C, gallium acid et al. Its fruits contain tanning agent, flavonoid, essential oil, fat and resin substances, organic acids, vitamins C, K and ash elements. Its leaves are usually collected in the blossom period. Its fruits and leaves are used as tincture, tea infusion and fluid extraction. It is used in scientific and folk medicines at malaria, stomach ache, bloody diarrhea, dysentery, sugar diabetes and to increase appetite.

**ZIZYPHUS JUJUBA MILL**  
(*ZIZYPHUS SATIVA* GARTN.)



Its fruits contain sugar, organic acids, tanning agents, vitamin C, carotene, rutine, coumarins, pectine substances; additionally iodine compounds have been ascertained in the content of its not ripened fruits. Its leaves contain alcoloids, glycosides, saponins, tanning agents, resin substances, organic acids, vitamin C, ash elements, flavonoids, coumarine derivatives and 1,7% anesthesia substance. The leaves have got phytonicide effect. Its root contain 12-15% tanning agents. For the medicinal purposes its fruits, roots and leaves are used. In the scientific and folk medicines its not ripened fruits are used at cure of tea infusion of its leaves is used at: lungs diseases as soothing means, anti-inflammation, anti-cough; and spirit extraction made of its root peel is used as stimulator at physical and intellectual tiredness, as a resistance supporter after a long period sickness.

## *MALVA SYLVESTRIS* L.



In medicine only one species is used. It has spread in all regions of Azerbaijan beginning from the low mountainous belt till the middle mountainous belt including mountains, fields, orchards, among bushes and spaces. Its flower and calyxes are used as medicine. Flowers contain secretion, antocyan glycozide, malvine, carotene, vitamin C, sugar and dye/colouring substances. Its leaves and flowers are used as infusion, broth and plaster bar. In medicine its flowers infusion is used as anti-cough and at pharyngitis, respiratory diseases, stomach-gut tract diseases and for gargling. Besides, its leaves are externally used as plaster bar in cold and inflammation processes.

## ***ALTHAEA OFFICINALIS L.***



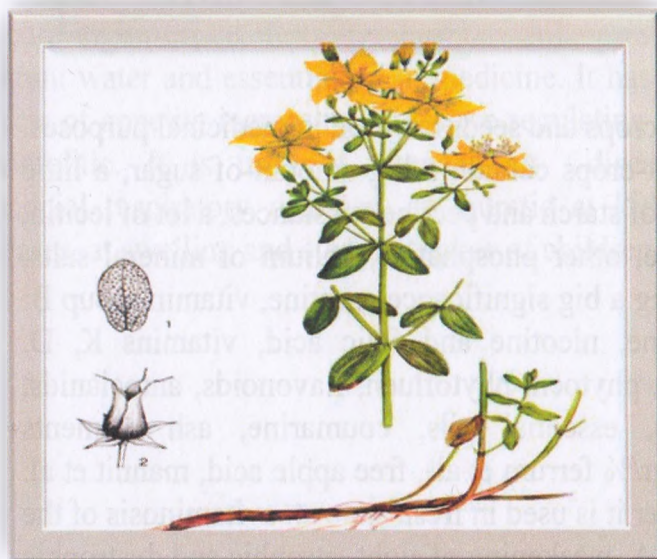
Its roots are used in medicinal purposes. The root contain: 35% secretion substance, 37% starch, sugar, asparagin acid, pectin substances, detain, about 10% fat oil. Its leavs and flowers contain thick essential oil. Alcea/hollyhock is used at resepiratory diseases as anti-inflammation, softening and expectorant, stomach ulcer, diarrhea, keen gastritis, enterocolitis, stomach gripes, bladder-inflammation, throat rinsing, washing of eyes. Dry, thick, fluid extractions, powder, juice and iflusion are made of alcea/hollyhock root and is added into different additives.

## ***HYPERICUM PERFORATUM L.***



Its surface part is used in medicinal purposes. It contains: photo-active antracene derivatives, flavanoids, essential oils, tanning agents, resins, saponins, antocian, seril spirit, alcaloid signs, carotine, nicotin acid, vitamins C, P, PP, cholin, tocopherol and organic acids. It has got regenerative, anti-inflammation, closing up and contracting effects. It is used at diseases as: stomouch and guts inflammation – gastritis, stomouch and guts ulcers, enterocolit, cholecistit, hepatit, cistit, stomatit, pharingit, tonsillit, angina, reumatizm, tuberclosis, inner bleeding, furuncles, mastitis, abcess, wounds, burns as well as, like diuretic, and vermifuge.

It is spread in all mountainous regions of Azerbaijan. As a food additive, mainly its upper part and flowers are used. 10-13% tanning agents (in the flowering phase), 5-6% anthocyanin, 5% flavonoid, 7.5% resin, nicotine and ascorbic acid, Vitamins P and PP have been found in its content. 0.15% essential oil has been obtained from the plants' flowers collected in Guba Region. A big amount of the people use the plant extraction at digestive, liver and gall canal diseases on the medical purposes. As the essential oil of the plant is antibacterial its use is recommended in canned of easily spoiling products like meat and fish products. For this property it is used under the name "Tiptalbiu preparation" in medicine.



## ***DAUCUS CAROTA L.***



Its root-crops and seeds are used in medicinal purposes. The root-crops contain a big amount of sugar, a little amount of starch and pectine substances, a lot of lecitin, cellulose, other phosphatids, kalium of mineral salts, possessing a big significance carotene, vitamin group B: piridoxine, nicotine and folic acid, vitamins K, D. Besides, phytoen, phytofluen, flavonoids, antocianids, fat oils, essential oils, coumarine, ash elements (1,03mgr/% ferrum et al), free apple acid, mannit et al. Moreover it is used in fresh state at: avitaminosis of the vitamin A, weakening of sight, atrophic and dystrophic changes of eye epytel, avitaminosis of vitamin group B, toning up, colitis, liver, kidney, heart-vascular system

diseases, mineral exchange violations, a weak purgative, diuretic, anaemia, improvement of general resistance of organism, digestion improvement, milk secretion increasing means and its mixture with honey or sugar is used at respiratory ways catarrh.

### ***CARUM CARVI L.***

It is cultivated in Absheron as valuable plant of essential oil. Fruit of *Carium carvi* is used in scientific medicine. Its fruits contain: 3-7% essential oil, carvone, limonen and other components. Besides, there are about 20% fat oil, 22% protein and also flavanoid substances of cure significance. It is used as infusion, powder, fragrant water and essential oil in medicine. It has got effects of appetite increasing, digestive regulating and spasmolitic. It is used at stomach-gut diseases, bronchial respiratory diseases, as diuretic at kidney diseases, at swelling and stomach aches of children.

## *CORNUS MAS L.*



Cornel fruit contains: tanning agents, cornine glucozide, bitter and colouring substances, sugar substances, glucose, fructose, pectin substances, organic acids i.e. (lemon, apple, amber et al) and vitamin C. There are tanning agents in its leaves. Its watery infusion is used in folk medicine at diarrhea. Milling the stones of its fruits the powder fry in sunflower oil mix with honey; the obtained prepatration is used as anti-diarrhea. Or it is possible widely to use as anti-diarrhea at children by mixin its flower pollen with egg-yellow. Watery destillate obtained of its fruits “Zogal araqı”– “Cornel Vodka” at stomach-guts violations, its thick juice called “Zogal turşusu”– “Cornel Sour” at digestion improvement, its fresh juice or its dried fruits infusion in cold water is used at malaria as cooling means on an empty stomach. Watery infusion, natural juice, a kind of plastine called “turshu lavash”, of its fruits and leaves are used at diabetics, dysentery, swelling, digestion improvement and strengthening of organism.

## MENTHA PIPERITA L.



Only leaves of the cultivated ment is useful. Its leaves contain: about 2% essential oil, tanning agent, various organic acids, 65-70% mentol, flavonoids, a lot of carotene, ursol and oleanol acids et al. Menthol and mentol-acetate contained in the leaves of the cultivated mentha was adopted by the National Pharmacopoeia. In medicine menthol leaves are used as infusion, tincture and menthol water. In folk medicine it is used as “nanə cövhəri” (in Azerbaijani) – “menthol essence” in the cases of: stomach diseases, stomach ache occurred at children, swellings, as anesthesia of spasms, increasing appetite, preventing means of eructation, breathlessness, heartburn, vomiting, in the content of

gall releasing and calming assortments, as well as in the content of Traskov mixtura against asthma.

It is met in small canals or riverbanks in Azerbaijan. People use it in fresh or dried state. Depending on the ecological condition of *Menta* spread area the quantity structure of the essential oil changes. Essential oils have been collected in the following rate: in Nakhichevan AR, Shahbuz Region, Batabat Massive in the plant collected in water-runs 3,1%, in the plant collected in the Kurekchai bank of Toghana Village of Gek Gyel Region 2,6%, in the plant cultivated in the private plot in Badamdar Settlement 0,3%. Alterations in the quality content of the essential oil also have been observed. Main components of oil are the following substances: mentol – 58,8%, dihydrocarbon – 8%, menton – 6,1%. Acid number is 0,5-5; essence number is – 16,5-21,2; and after acetillation essence number became 105,8-171,3. In 70% spirit (1:2) is dissolved. Essential oil is in yellowish-green colour and smells as mentol.

On the result of several researches carried out on the essential oil of *Mentha* it was realized that it could be used as anticeptic, anesthetic, cooling, sedative, anti-nausea and anti-diarrea. In medicine it is used in cholecistit, hepatit, gall-stone and digestive violations. From another hand *Mentha* has been used as food additives in meat meals since the ancient period. The plant has got a specifically fine taste. Taking into account all of these *Mentha* plant and essential oil obtained of it can be widely applied in canned meat products and pastets.

## ***THYMUS CAUCASICUS* Willd.**



Its surface part is used in medicinal purposes. Thyme contains: essential oil with tymol, flavonoids, bitter substance, tanning agents, resin, fat substances, cuprum combinations in its ash and there are vitamin C in the content of its subserfice yuong parts. In scientific medicine its watery infusion is used as expectorant and anti-cough in the content of mixtures, at cold diseases sweat releasing, whooping cough and bronchitis. The tymol in the content of the essential oil has got a strong anticeptic and bacteriocide effects. In folk medicine watery infusion of thyme is used at: inner meteorism, stomach aches; its mixture with sugar at diarrhea; as digestion improving, dieruetic, worms releasing, heart attacks (mainly in teenager period), at insomnia, angina, its plaster bars in muscle and joint pains. Thyme includes into Pertussin which is much more used as anti-cough among children.

## *ORIGANUM VULGARE L.*



In medicinal purposes its upper part is used in the period of blossom. It contains essential oil, carvacrol, independent spirits, tannins, bitter substances, mineral salts, vitamin C, choline, flavonoids, tanning substances, geranylacetate et al. Origanum calms the central nervous system, increases pancreatic secretion of digestion system as well as bronchial and sweat glands, accelerates peristalsis of guts, renders anesthesia and desodorant effects to them. It is used both as internal and external in the infusion and broth states. In folk medicine it is used at: inflammation of erysipelas, mouth cavity, larynx, pharyngitis, tooth aches, furuncles, different types of skin eruptions, rheumatism, cholecystitis, stomach spasm, appetite absence, anti-cough, paralysis and epilepsy.

It is met in Azerbaijan around Ganja of the botanical and geographical region of Small Caucasus, in Gekgel, Dashkesan, all regions of the Nakhichevan AR, Talysh as well as towards Shamakhi and Guba-Gusar of the Great Caucasus. Only 1 species was spread in Azerbaijan.

People use its top with blossom in fresh and dry states. Amount of vitamin C in the plant is 56mg/%. In the phase of blossoming essential oil was obtained from the fresh mass 0,07-0,2% 1,4-2% and dry mass 0,2-0,7% of its surface part. Essential oil of the plant is a grayish and yellow substance. It is dissoluble (1:7) in the 90% spirit. When increasing amount of essential oils in spirit its colour changes and grows turbid. Essential oil of *Origanum vulgare* L. is pleasant-smelled and has got a pritty bitter taste. Acid number is 0,8-1,28; essence number is 7,6; after acetillation essence number became 54,88.

The main components of oil are: timol – about 2,2-6,7%, bisyclic sesquiterpens – 12,5%, free spirits – 12,8-15,4%, heranilacetat – 2,63% and other substances.

According to its antimicrobial property the essential oil obtained of *Origanum* is used in digestive violation and gall canals diseases. *Origanum* is effective in meat meals, in some species composition as food additives during “Tushonka” (stewed meat) canned processing.

## ***SALVIA OFFICINALIS* L.**



Its leaves are used in medicinal purposes. Leaf collection is required in September of the 1-st year vegetation, and the next years 3-4 times in the blossom period. The leaves contain: starch, resin, protein, tanning agents, mineral salts and essential oils. Its infusion is used as contracting, bacteriocide and anti-inflammation at sore throat, mouth cavity and tooth diseases, respiratory catarrhal inflammation. It includes into the assortment used at: breast, throat, stomach and anti-diarrhea. Newly collected leaves have got a bactericide effect.

## ***SATUREA HORTENSIS* L.**



Its surface part is used in medicinal purposes. Tannins, secretion substances and paracimol contained essential oils were ascertained in its content. It is investigated for its bacteriocide, anti-meteorism and spasmolitic effects. Besides, it is used at stomach-gut violations, liver and kidney diseases.

## *PLANTAGO MAJOR L.*



In medicinal purposes its leaves, grass, juice made by pressing method and dried leaves. Through drying its juice some powder is obtained; and a granula called “plantaglucide” is prepared of the powder that is used against stomach ulcer. The leaves contain: aucubine glucoside, vitamins A, C, K, sumpheraphen, polysacharides, a little amount of alcoloides, bitter substances and tanning agents of phytoncides, enzymes, kalium salt, lemon acid and carotine. There are a lot of secretion, fat oils, protein substances, planteoza polysacharid in the content of the seeds. The content of which consists of: glucose, fructose, galactose, saponins, tanning agents and olein acid. Its watery infusion and extraction are used at regulation of

pancreas secretion, as well as at reduce and increase of gastric juice is appointed. Besides, it is used at: gastric and guts diseases, colitis, stomach ulcer and duodenal ulcer, against cough, enterite; thanked to its bactericide effect it is also used at a long time closing up ulcers, wounds, flegmonas, as cough preventing – at whooping cough, gut infections and dysentery. Its fresh leavs are used at wounds, burns, of purulent skin diseases, dislocations, cuts et al.

***RUBIA IBERICA* (FISCH.) C. KOCH.**



For the medicine purposes its roots and rootstock are used. The roots and rootstock contain: antraxinon and its derivatives, galyozine, purpurin, psevdopurpurin, ribnadin, lemon acid, apple acid and vinegar acid, sugar, pectine substances, mineral salts, protein and pectine substances. In scientific medicine powder, infusion of its root and its dry extraction like drugs are used at: gall-stone diseases, bile-stone and kidney diseases. Besides, it makes to melt: oxalat, phosphat and uretat salts, as well as it releases oxalat, phosphat, uretat and other salts out of organism.

## *SAMBUCUS NIGRA* L.



In medicinal purposes its florescence and fruits are used. Its flowers contain: volatile alcoloids-choline, flavonoids, secretion substances, apple acid, vinegar acid and valerian acid, resin substances, thick essential oils, paraphin-like substances, terpene and glucosides possessing sweat releasing effect, rutine, vitamin C; its fruits contain: alcoloids, glucosides, antocian pygments, mineral salts, volatile acids, vitamin C et al. In scientific and folk medicines it is used at: colds as a sweat bearer, respiratory inflammation as a preparation, angina, gum inflammation, pharyngitis, avitaminosis, as a weak purgative preparation for infants, as means anti-malaria, at sacharic diabetis, fevers, scabs and German measles. At stomach gripes of malaria a watery-spirity destillate called “kəndəlaş arığı” (in Azerbaijani) –

“*Sambucus* (elder) vodka” made of its fruits is used. It is used in watery infusion made of its flowers, leaves and fruits. The fresh fruits are used at reumatizm and neuralgia. Use of *Sambucus* (elder) roots infusion is recommended at diabetes, kidney diseases and edemas. Jem is made of its flowers and fruits.

## ***ACHILLEA MILLEFOLIUM L.***



Its leaves and flowers contain: vitamins K and C, essential oil, inuline, carotene, bitter substance, tanning agent, resin and achillein alcohol. Besides, it has got bactericide and anti-inflammation properties. Watery infusion or extraction of its grass, flowers and leaves are used at gastritis, digestion improvement, ulcer disease, bloody diarrhea; thanks to its coagulation character it is used at internal bleedings, blood restoring, anesthesia and appetite improving. It is used as drugs, infusion, extraction and herbal assortment.

## ***ARTEMISIA ABSINTHIUM* L.**



Its surface part contains: essential oils (0,5-2%), organic acids (amber, amine, salicile), tanning agents, ascorbic acid, carotene, flavonoids, phytoncids, lactons, cadinen, sabinen, chamazulen, bitter substances (glucoside-anabsintin), protein and starch substances. Medical significance of the species is high, it improves the digestion appetite. It increases secretion of digestive glands by rousing taste receptors in the mouth cavity. Essential oil of *Artemisia absinthium* effects onto the central nervous system as a stimulator as well as it renders regulating and spasmolitic effects onto stomach secretion diaphragm and heart activity. Its essential oils have got bactericide, bacteriostatic, desinfectioner and anti-parasitar.

## ***TANACETUM VULGARE L.***



Its floressence and leavs are used in medicinal purposes. The flower group and leavs contain: flavonoids, oxyflavonine phenolcarbon acids, bitter substance of tanacetine, tanning agent and essential oil. Its flowers and essential oil obtained of them are used at ascaridosis (as intestinal worm releasing), at tape-worms (in a powder form) and at giveing an enema (infusion (1:10) and extraction forms). Its infusion is successfully used at: enterocolitis, doudenal ulcer and stomach ulcer, diarrhea, fever, sweat releaser, head-aches, joint pains, menstruations passing by bleeding at teenager girls, keen gut diseases, jaundice, liver and gall canals diseases, cure of festering wounds, ulcers, scab on the skin. *Tanacetum vulgare* has got a phytoncide effect.

## *CICHORIUM INTYBUS* L.



Its root contains inuline, bitter substance, sugar, resin, organic acids, vitamin C et al. An aromatic substance called cychoreol derived of carbohydrat and proteins contained in the roots when frying its roots through pyrogenetic reaction; the cychoreol contains vinegar acid, valerian acid, acroleine, furfurol and furfurol spirit. In the scientific medicine it was ascertained by experimental way that interner reception of watery infusion of chicory pericarp calms the central nervous system, improves heart activity, reduces the rythm of cordial contractions. In folk medicine it is used as watery infusion to improve appetite and digestion, strengthen and stimulation the organism; at dysentery, stomach catharrah, anemia, jaundice, as gall releasing

means, at liver, spleen and kidney diseases and diabetes.

Besides,

in folk medicine a distillate is obtained of chicory roots which is called “kashnı aragı” (in Azerbaijani) –

“chicory vodka” that is rubbed on joints at reumatizm.

Watery infusion and boiled of the plant’s surface part,

root and seeds as well as the “kashnı aragı” distillate

are used at malaria and cold as a temperature reducing,

cooling, anti-thirsty and sweat releasing means. They

give a bath of its watery infusion to prevent children

from sunstroke.

## *INULA HELENIUM* L.



There are 13 wild species of it in humid places of the forest zones, Samur-Davachi lowland and up to Great Caucasus Sub-Alpian Belt of Azerbaijan. Only one species of them is used on medicinal purposes. In medicine its roots and rootstocks are used. Its roots and rootstocks contain: about 40% inuline, 1-3% essential oil that is called helenin. It is yellowish crystalline substance. Besides, it contains saponines, proazulene, pseudoinuline and vitamin E. Infusion and boiled *Inula* L. elecampane are used at cough, bronchitis, colds, stomach and gut diseases, duodenal ulcer and stomach ulcer. Thanks to the essential oil in the content of *Inula* L. elecampane it has got antiseptic, anti-inflammation and worm releasing properties.

## *MATRICARIA CHAMOMILLA L.*



In medical purposes its flowers are collected and dried at 40<sup>0</sup> C temperature in a basket on the places where air can well changed. The flowers contain essential oils, terpene, cadinene, nonilin and isovalerian acids, apigenin, herniarin, cholin, phytosterin, salicil, nicotin, ascorbin acids, carotine, glicerids of fat acids, secretion, sticky substance and flavonoids. In scientific medicine camomile preparations are internally recieved as a calming means at gut spasm and as an anti-inflammation means; at meteorism, as an anticeptic and anesthesia at diarrhea cure; and are externally recieved as anticeptic and anti-inflammation means, garglings, baths, enemas/lavages, plaster bars. In folk medicine it is used in the form of tea as calming means, anti-cramp, iuredic, weak purgative and at menstrual volations. As an exterier use it is used for bath at furuncles, eye-washing, festering wounds, reumatisms. Besides, it is recommended to use at bronchial astmah, anti-swelling, gastritis, enterit, exema, hair scurf at teenagers.

## *HELICHRYSUM PLICATUM* DC.



Its flowers contents are: essential oils, dye/colouring, tanning agents and bitter substances, carotene, vitamin C, K, ash elements, organic acids (apple acid), resin substances and flavonglucosides. New gallen preparation – flamine obtained of *Helichrysum plicatum* has adopted by the National Pharmacopy and is being applyied in scientific medicine at liver and gall canals' keen and chonical diseases. Besides, it is used at stomach, urinary canals diseases, as a worm releasing means (ascaridoz), as blood-restoring, stomach and gut diseases. As an exterier use its infusion and spirit extraction are used at cure of some dermo-diseases. Tea infusion of the grass, spirit extraction, dry concentrate (flamine) and fluid extraction.

## *CALENDULA OFFICINALIS* L.



In medicinal purposes its anthodium, roots, and leaves of the top of its trunk are used. Anthodium and leaves contain essential oil, calenuline, bitter substances, a yellow-redish substance, phytoncids, salicile and apple acid, saponine, organic substances, secretion, flavonoids, resin substances, glucosides, carotinoids, nitrogen substances, vitamin C et al. It acselerates regeneration and has got a closing up effect. Its raw material is used as essence, hot watery infusion and liniment. Besides, it is used at cure of burns, wounds, ulcers, for gargling of mouth cavity and throat, at angina, stomatitis, doudenal ulcer and stomach ulcer, gastritis, liver and gall canals diseases, at cordial diseases folowed by rythm violation, rachytis, furuncles, herpes, warts, callosities, phlebitis diseases, dislocations, eye diseases, frost-bites.

## *TUSSILAGO FARFARA L.*



In medical purposes its flower group and leaves are used. Its leaves are manually collected in the middle of spring months. Leaves and flowers contain secretion, tanning agents, essential oils, inuline, dextrine, saponins, ascorbic acid, apple acid, vinegar acid and the most significant effective substance – bitter glucoside-tussilagine. In the folk medicine its leaves infusion is used at stomach and guts tract, inflammation of kidney and bladder, inflammation of respiratory catarrh and lungs, also as an expectorant. Its fresh juice mixed with sugar is used lungs tuberculosis. Besides, its fresh leaves and water obtained by pressing the leaves are externally used at cure of festering wounds, ulcers, cracks. It helps much at hair-fall and scab on the head-skin and scurf; it gives fine results when mixing it with stinging nettle infusion and washing hairs 3-times a week.

## ***TARAXACUM OFFICINALE* WIGG.**



In the medical purposes. Its root and surface part are used. The root contains bitter substance, inulin, sugar, triterpene compounds, sterols, palmitic, oleic, fat oils consisting of glyceridlinol acids, protein substances, caoutchouc, sign of essential oil, carotene, secretion and tanning agents. Its pericarps and leaves contain vitamins C, B<sub>2</sub>, choline, nicotinic acid, saponins, protein, ferrum, calcium, manganese, phosphorus elements, lutein, taraxanthin, triterpene spirits. In folk medicine it is used to improve appetite, release gall, and as a purgative, calming, somnolent and expectorant. Bioactive substances containing it strengthen peristalsis of guts, on the result fermentation and suppuration processes get reduced. Besides, it is used at chronic colitis, exema, frunculioz, cleaning of pigment spots; Its oily infusions are used at cure of burns, dermatologic diseases, profilactics of malaria, anemia, bladder and kidney diseases and rheumatism. Its thick extraction, broth, oily infusion, fresh juice and milk are used.

## *ACORUS CALAMUS* L.



In medicinal purposes its rootstocks are used. The rootstock contain yevgenol, borneol, camfora, camfen, essential oils consisting of pynene, acoron glucoside, calyamen alcaloid, vitamin C, tanning agents, secretion, fytoncids, starch; and its leaves contain essential oil and tanning agents. *Acorus calamus* is used in medicine in boild, infusion, extraction and powder states. In medicine it is used to improve appetite, digestion improvement, release gases out of guts, encrease the tonuse of the central nervous system, as an expectorant, to release gall and diuretic; its spirit fluid is used to wash festering wounds, ulcers and diarrhea. In folk medicine it is used as a fine bactericide and insecticide means. During grippe epydemy it is required chewing this grass to privent the disease.

## ***FUMARIA OFFICINALIS L.***



In medicinal purposes its surface part is used. *Fumaria* L.fumitory contains several necessary alkaloids (protopin, cholidonin, sangvinarin et al), fumaric acid; and its leaves contain 240-370 mg/% vitamin C. In the scientific and folk medicines its infusion, tincture and spirit fluid extraction are used at avitaminosis, stomach and gut diseases, swelling, meteorism, anemia, jaundice, as a blood reduction at bleedings, to improve appetite. Delivery of fumitory plants spread in Azerbaijan and use on medicinal purposes is necessary.

## ***VERBASCUM DENSIFLORUM* BERTOL**



In medicine purposes its petals are used. They contain saponins, essential oil, secretion, tanning agents, sugar, flavonoids, dye/colouring substances, coumarins, vitamin C and caratinoids. In the scientific medicine it is used as a medicinal means for breast-softening, anti-inflammation, weak purgative; at herpes, exema, whooping cough, bronchitis, bronchial asthma, stomach and gut diseases; as anesthesia, anti-cramp, contracting and curtailing substances at pulmonary diseases and plevritis.

## ***ASPARAGUS OFFICINALIS* L.**



It contains coumarin, sugar, saponins, asparagin, carotene, vitamin C, capsantin, fizalin, iodine fat oil, starch, tanning agents, signs of essential oils, flavanoids and chelidon acid. *Asparagus officinalis* is mainly used on the diuretic purposes in the nature. Besides, its watery infusion and spirit extraction improves liver fuction, effects onto heart's activity – strengthens heart contraction, slows its rythm, improves digestion as well as it is used at reumatizm, diabetis, pulmonary diseases, whooping cough, as an expectorant, reducing a high temperature, at kidney pains, bladder inflammation and epylepsy.

## *VACCINIUM MYRTILLUS L.*



In medical purposes its berries and leaves are used. Its leaves contain glucosides: arbutin, flavanol; hidroxinon, erisinol, ericolin, lots of tanning agents, various acids, vitamin C, phytoncids, saponins; its fruits contain about 20-22% sugar, organic acids, pectine, tanning agents, vitamins, glucose and fructose, lemon acid, apple acid, a little vinegar acid and lots of kalium-permanganat ( $KMnO_4$ -manganese). Arbutin has got a very strong anticeptic and disinfectioning effects; at the same time it regulates carbohydrat exchange in the organism, reduces amount of sugar in the blood. In the folk medicine its leaves are used in a boild state as diuretic, at night enuresis, reumatizm, form changing of joints.



## ***VACCINIUM VITIS IDAEA L.***



In medicinal purposes its leaves and ripened fruits are used. The leaves are collected before blossoming or in the early spring from the under snow. But the fruits are collected when they get matured. Cowberry (*Vaccinium vitis idaea*) has been spread in the forests and foot-hills of Great and Small Caucasus. Its leaves contain glucosids, arbutin, flavanol, hydroxion, ericolin, lots of tanning agents, gallic acid, ellagon acid, chinic acid, tartaric acid and vitamin C; the ripened fruits contain about 7% sugar, glucose, fructose, lemon acid, apple acid and benzoic acid, a few amount of wine acid, tanning substances, a lot of cellulose, vitamin C, sign of carotine and mangan. Leavs of Cowberry (*Vaccinium vitis idaea*) have got the following effects: diuretic,

antiseptic and contracting. And its ripened fruits are used to release worms and as anti-scurvy. In the folk medicine its leaves are used at liver diseases, hypoacid gastritis, joint form of reumatizm; its watery infusions are used at night enuresis. Watery infusions of its fruits are appointed for cooling drinks when thirsty, at fever and as a weak purgative. Its fresh fruits are applied at diarrhea and as a diuretic. It can render even a negative effect onto kidneys in big doses.

## ***HUMULUS LUPULUS L.***



Its bolls are used in medicinal purposes. The bolls contain dye/colouring and secretion substances, chomulin alcoholoid, bitter and fat substances, resin substances, organic acids, tanning agents and carotene. In medicine hop (*Humulus lupulus*) bolls are used as spasmolytic, anesthesia and calming means of nervous system. Its watery infusion of 10:200 ratio is used as calming and somnolent preparations. Its powder and spirit infusion are internally used to improve appetite. Besides, it is used as an anti-inflammation means at cystitis (diuretic), anti-cramp. And in the folk medicine hop (*Humulus lupulus*) infusion is used at gastritis, at worm invazias, at cystitis, iurethritis and as hair strengthening means.

## ***HIPPOPHAE RHAMINOIDES L.***



One of the plants used in Azerbaijan as a medicinal one is Sea-Buckthorn (*Hippophae rhamnoides*). Oils obtained of its fruits are used at the most difficult closing up wounds and burns. Since 1972 first in Azerbaijan 65 wild forms of the Sea-Buckthorn have been achieved and were commenced to research at the Institute of Genetics and Selection (present Genetic Resources Institute) of the Azerbaijan National Academy of Sciences. The plant is a valuable food and medicinal means. After proving that Sea-Buckthorn contains the major vitamins on the result of chemical analysis of Sea-Buckthorn fruits the interest onto this plant has increased much more and scientists began to call it a tree of "Polyvitamins". Juice output and amount

of oil, carotinoids and vitamins in its content is higher than the standard. Amount of oil in the content of fruit is 3,5-8,6%. Perspective forms also have been grown in the content of which amount of oil is 11,6%. At the same time according to quantity of its vitamin C it comes after dog-rose; according to quantity of its carotins it comes after carrot. It occupies the 2<sup>nd</sup> place after ginseng as a general strengthening means. As the amount of unsaturated oil acids in the content of its fruits are high enough its juice and oil can be used like a strategic product – *radioprotektor*. Some substances in its content can be used at closing up poisonous and toxic bullet wounds. At present research activities are being carried out on the direction of production of economical products, preparations and essences of medical significance on the base of the fruits wasteless technology. Technologies for production of pure Sea-Buckthorn oil and liquour have been worked out. Acclimatization of Sea-Buckthorn into different ecological environment is being carried out on the purpose of soils' erosion protection, recultivation, restoration contaminated on different grades and planting of greenery as well as food production.

**GRAMMOSCIADIUM PLATYCARPUM**  
**BOISS. ET HAUSSKN.**



There is information concerning to its availability in Caucasus – Near Caucasus, Garabagh and the Nakhichevan AR. It is a caucasian endemic plant being its sole spreading area in the Nakhichevan AR at present. Its essential oil is mainly accumulated in its seeds (1-2,34%). Essential oil is in the surface part of the plant too (1- 78%). Accumulation dynamics of the oil in the plant changes depending on the maturation of seeds. About 7% of oil's main content are esssens,

83,1% spirits, 76,5% are independent spirits but phenols are 0,05%. Acid number is 1,2-1,3; essence number is 20,5-35,45; afterwards ascetilation essence was 238-249.

During the carried out researches it was ascertained that this oil is active against several viruses and bacteria. It has got an antioxidant property that provides food conservation and saving them. Taking into account all of these and availability of a specific aroma in the content of the plants it is reasonable to conclude everyone can use this oil in both tea production and confectionary production. Essential oil of caropodium liquidates discomfort in digestive deseases; it releases flatulence and makes digestion better. It's enough adding a drop of essential oil to the food. Also upper part of Caropodium can be added into soup by milling together with seed. It would give a good aroma to the meal and liquidate alimentary canal disorder periodically met among solders.

## *MELISSA OFFICINALIS L.*



It has naturally spread in Great Caucasus and Talysh zones of the Republic. It is cultivated in the private plots of our regions. Lemon and amber acids, about 5% tanning agent were found. 0,08-0,1% essential oil has been obtained from its surface part. Acid number was – 3,54; essence number – 19,4; after ascetillation essence number – 152,3. It is well dissolved (1:7) in the 90% spirit, when amount increases it sharply grows turbid. The main content of oil is cytral – 60%, besides, there are citronellal – 5%, mirsen, heraniol cineol et al. The plant and the essential oil obtained of it are fine-smelled and they have got a bactericid property. A wide range of these specifications use is being demanded in canned production. It prevents spoiling and there is no negative effect.

Especially taking into account that Azerbaijan is a Country in the war situation everyone should know the necessity of use of canned food, teas, cooling beverages in kitchens of military colleges, guards produced by means of essential oils and essential oil plants.

Besides, certain medicinal teas were made by using essential oil plants. Natural resource of the collected plants in the wild has been studied. During the experimental researches the plants with abundant resource have been widely used, more than 50 plant teas were prepared, as well as these additives were added into black and green Azerbaijan teas.

# METHODS OF FOLK MEDICINE

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This is how the following herbal compound is prepared:

Divide the dry herbal raw materials into small portions, and mix them up in equal quantities. Add 2 or 3 tablespoon into 0.5 lt boiled water and brew. Take 3 times a day 30 or 40 minutes before the meal.

### Herbal Compound Used in Treatment of Atherosclerosis

- ❖ *Betula alba* (root, leaf), *Helichrysum arenarium* (bud), *Crataegus pentagyna* (flower), *Origanum vulgare*, *Hypericum perforatum* and *Falcaria vulgare* (flower and fruit), *Linum usitatissimum* (leaf), *Mentha piperita* (seed, leaf), *Rosa canina* (flower, leaf and seed).

Medical course is 3-4 weeks

- ❖ *Salvia sclarea* *Mentha piperita* *Tussilago farfara*, *Rosa canina* (flower, leaf and seed), *Menyanthes trifoliata* *Veronica verna*, *Rubus ibericus* and *Melilotus officinalis* (flower, leaf), *Crataegus pentagyna* and *Fragaria vesca* (root, leaf),

*Taraxacum officinale* (ground-based and carrot), *Thymus serpyllum* (leaf and flower), *Matricaria chamomilla* (flower), *Plantago major* (leaf and seed).

Medical course is 3-4 weeks

- ❖ *Melilotus officinalis* and *Calendula officinalis* (leaf and flower), *Mentha piperita*, *Linum usitatissimum*, *Origanum vulgare* and *Salvia sclarea* (leaf and seed), *Cichorium intybus* (body, leaf and flower).

Medical course is 7 weeks

### **Herbal Compounds Used in Treatment of Hypertension**

- ❖ *Leonuris quinquelobatus* (leaf and flower), *Veronica verna* & *Anethum graveolens* (leaf and seed), *Berberis vulgaris* & *Linum usitatissimum* (flower, leaf and seed), *Mentha piperita* (flower and seed).

Medical course is 3-4 weeks

- ❖ *Polygonum aviculare*, *Leonuris quinquelobatus* & *Acorus calamus* (leaf and flower), *Crataegus pentagyna*, *Rosa canina* & *Mentha piperita* (leaf, seed and flower), *Betula alba* (carrot, bud, leaf), *Valeriane officinalis* (leaf, carrot and flower).

Medical course is 4 weeks.

- ❖ *Achilleae millefolium*, *Leonuris quinquelobatus* & *Melilotus officinalis* (leaf and flower), *Glycyrrhiza glabra* & *Rumex acetosella* (carrot), *Mentha piperita* & *Origanum vulgare* (seed, and flower), *Veronica verna* & *Sorbus aucuparia* (leaf and seed),  
Medical course is 3-4 weeks.
  
- ❖ *Leonuris quinquelobatus*, *Achilleae millefolium*, *Melissa officinalis* & *Solanum nigrum* (leaf and flower), *Echinops orientalis* (seed and flower), *Plantago major* (leaf and seed).  
Medical course is 4 weeks.
  
- ❖ *Leonuris quinquelobatus* (flower and leaf), *Mentha piperita*, *Cichorium intybus*, *Matricaria chamomilla* & *Verbascum phlomoides*, *Rubus ibericus*, *Foeniculum vulgare* (flower, leaf and seed), *Rosa corumbifera* (body and flower), *Solanum nigrum* (leaf and seed), *Urtica dioica* (leaf), *Juglans regia* (flower), *Matricaria chamomilla* (flower, leaf).  
Medical course is 6 weeks.
  
- ❖ *Origanum vulgare*, *Hypericum perforatum*, *Acorus calamus* (seed and flower), *Juniperus communis* (leaf and seed), *Rosa corumbifera* (carrot and flower), *Mentha piperita* & *Plantago major* (leaf, seed and flower), *Polygonum aviculare* (leaf and flower).  
Medical course is 3-4 weeks.

- ❖ *Betula alba* (leaf and carrot), *Veronica verna* (leaf and flower), *Inula helenium* & *Rosa corumbifera* (flower and carrot), *Fragaria vesca*, *Mentha piperita* & *Ribes nigrum* (leaf, seed and flower), *Urtica dioica* (leaf and body), *Echinops orientalis* (seed and flower), *Taraxacum officinale* and *Equisetum arvense* (ground-based part of complete).  
Medical course is 3-4 weeks.

## Herbal Compounds Used in Treatment of Respiratory Diseases

- ❖ *Acorus calamus* & *Hypericum perforatum* (seed and flower), *Salvia sclarea*, *Mentha piperita* & *Fragaria vesca* (leaf, seed and flower), *Betula alba* (leaf and carrot), *Inula helenium* (flower and carrot).

Medical course is 3-4 weeks.

- ❖ *Valeriane officinalis* (seed and flower), *Hypericum perforatum*(leaf and seed) *Linum usitatissimum*(leaf and flower), *Achillea millefolium* (leaf, seed and flower), *Anethum graveolens* (ground-based part of complete).

Medical course is 3-4 weeks.

- ❖ *Carum carvi*, *Foeniculum vulgare*, *Fragaria vesca* and *Salvia sclarea* (leaf, seed and flower), *Thymus serpyllum*, *Melilotus officinalis*, *Calendula officinalis*, *Veronica verna* (leaf and flower), *Inula helenium* & *Glycyrrhiza glabra* (carrot), *Althea officinalis* (seed and flower), *Verbascum phlomoides* (flower), *Tilia cordata* (leaf).

Brew 2 or 3 tablespoonfuls of this compound in 0.5 lt boiled water, and take for 2 or 3 weeks. This will reduce phlegm, drop fever, and relieve headache within 2 or 3 days. Herbal tea leaves are not only taken orally for

treatment of common cold, but can also be used for the purposes of footbath, compresses, gurgling and inhalation. Sage, thyme, horsetail, yarrow, violet, calendula, perforate St. John's wort, and chamomile can be used as blended or separately for inhalation. 2 or 3 tablespoonfuls of grinded herbal compound is added into boiled water and is brewed for 10 minutes in a porcelain teapot. Then, the teapot is removed from the stove, and is covered by funnel paper. Now it is ready for oral and nasal inhalation.

*Althaea officinalis L.- Gulkhelmi sherbeti*: Take dry root of this plant in the ratio of 2:98 and brew tea. You can also resort to the following method:

Rp.: Inf.rad. Altaeae 6,0-180,0

Sir. Liquiritiae ad 200,0

M.D.S. 1 tablespoonful to be taken orally after every 2 hours (by adults)

*Thoracic elixir*: Made with the following ratio: liquorice root extract – 60 portions, ammonia – 10 portions, caraway oil – 1 portion, ethyl alcohol – 49 portions, and water – 180 portions. 20 to 40 drops should be taken 3 or 4 times a day (by adults).

*Pertussin*: Made with the following ratio: Thyme extract – 12 portions, potassium bromide – 1 portion, 80 per cent ethyl alcohol – 5 portions.

*Diaphoretic compound:* Composed of raspberry fruits – 2 portions, coltsfoot – 2 portions, oregano – 1 portion. Prescribed for lobar pneumonia, exudative pleurisy, bronchiectasis, pulmonary tuberculosis, and bronchial asthma.

## Herbal Compounds Used in Treatment of Gastro-Intestinal Diseases

Anti - inflammatory, demulcent, laxative, constrictive, analgesic, spasmolytic, and hemostatic plants are used for phyto treatment of gastro-intestinal diseases. By affecting microbes, such treatment is expected to restore the normal intestinal microflora without developing dysbacteriosis. Use of herbal plants enables us to heal damaged cells by restoring normal trophics (nutrition) of nervous, endocrine, and gastrointestinal systems.

It is recommended to use the following herbal compounds for curing diseases such as chronic gastritis, hypergastritis, and gastric and duodenal ulcer.

- ❖ *Acorus calamus*, *Hypericum perforatum*, *Linum usitatissimum*, *Mentha piperita*, *Plantago major*, *Leonuris quinquelobatus*, *Rubus nigrum*, *Salix alba* *Betula alba* (leaf, seed and flower).

Medical course is 1,5-2 the moon.

- ❖ *Althaea officinalis*, *Menyanthes trifoliata*, *Veronica verna*, *Fragaria vesca*, *Calendula officinalis*, *Urtica dioica*, *Hypericum perforatum*, *Linum usitatissimum*, *Mentha piperita*, *Tussilago farfara*, *Anethum graveolens* (leaf, seed and flower). Medical course is 2 the moon.

## Herbal Compounds Used in Treatment of Helminthiases

Use of drugs for curing helminthiases may cause extremely adverse reactions, particularly affecting the central nervous system and liver. Hence, it is more recommended to resort to medicinal herbs.

- ❖ *Valeriane officinalis* (leaf, carot and flower), *Inula helenium* (carot and flower), *Betula alba*, *Tanacetum vulgare* & *Artemisia absinthium* (leaf, carot and flower).

Medical course is 20-30 days

- ❖ *Flores cinae* is an antiparasitic medicinal herb, particularly for curing *Ascaris lumbriocoides*. An enema must be done to a patient in the evening of the first day after dianosing the disease. On the second and third days, the patient (mostly teenagers) must consume 5g of seeds of this herb 60 to 90 minutes before the meal. The patient should be put to an enema again in the evening. Below is the table which sets out age vs. dosage:

Age	Dosage (gram)
1-3	0,25-0,75
4-6	1-1,5
7-9	1,75-2,25
10-14	2,5-3,5
15	4,0
<b>Older</b>	<b>5,0</b>

### **Use Of Folk Medicine In Treatment Of Liver Disorder, Bile Ducts Diseases, And Chronic Pancreatitis**

Herbs with antispasmodic, antiallergic, and anti-inflammatory properties should be used in order to relieve spasm of bile ducts, to stabilize dieresis, and to expel gull pigments and toxins from the body. Below are the compounds relevant to the above diseases.

- ❖ *Helichrysum arenarium* & *Matricaria chamomilla* (flower), *Calendula officinalis* & *Achillea millefolium* (leaf and flower), *Linum usitatissimum* & *Plantago major* (leaf, seed), *Mentha piperita* & *Rosa canina* (leaf, seed and flower), *Urtica dioica* (leaf). Medical course is 21 days

- ❖ *Thymus serpyllum*, *Achillea millefolium*, *Origanum vulgare* (leaf and flower), *Linum usitatissimum*, *Rosa canina* (leaf, seed and flower), *Menyanthes trifoliata* (leaf, seed), *Helichrysum arenarium* (flower). Medical course is 20-30 days
  
- ❖ In case of chronic gastritis and jaundice, warm enema should be done by using chamomile solution 2 or 3 times a week. Phytotherapy of liver may require many years until remission is observed in inflammatory dystrophic pathology of liver tissues.

### Gallstone And Chronic Gastritis

- ❖ *Cichorium intybus* & *Capsella bursa-pastoris* (body, leaf and flower), *Helichrysum arenarium* (flower), *Hypericum perforatum* (seed and flower), *Mentha piperita* & *Tanacetum vulgare* (seed, leaf and flower), *Linum usitatissimum* (leaf and seed), *Frangula alnus* (seed), *Urtica dioica* (leaf). Medical course is 3 the moon.
  
- ❖ *Helichrysum arenarium* (flower), *Hypericum perforatum* (seed and flower), *Chelidonium majus*, *Foeniculum vulgare*, *Veronica verna*, *Zea mays* & *Linum usitatissimum* (leaf and seed), *Berberis vulgaris* (leaf ), *Taraxacum officinale*, *Mentha piperita* (ground-based part), *Polygonum aviculare* (flower, leaf and seed). Medical course is 2 the moon.

## Herbal Compounds Used in Treatment of Kidney Disorder and Urinary Tract Diseases

- ❖ *Acorus calamus*, *Hypericum perforatum* (flower and seed), *Quercus robur*, *Calendula officinalis*, *Polygonum aviculare*, & *Thymus serpyllum* (flower and leaf), *Linum usitatissimum* (leaf and seed), *Mentha piperita* & *Rosa canina* (seed, flower and leaf). Medical course is 1 the moon.
- ❖ *Sambucus nigra* (leaf), *Linum usitatissimum*, *Leonuris quinquelobatus* & *Melilotus officinalis* (flower and leaf), *Hypericum perforatum* (seed, flower), (seed, and leaf), *Tussilago farfara*, *Mentha piperita* & *Salvia sclarea* seed, flower and leaf).

The following compounds are very useful for curing kidney stones and concrements, including inflammatory diseases, such as pyelonephritis, cystitis, pyelocystitis.

- ❖ *Glycyrrhiza glabra*, *Mentha piperita* (seed and flower), *Solanum nigrum*, *Artemisia absinthium* (seed and leaf), *Achillea millefolium* (flower and leaf), *Rheum acetosa* (flower, seed and leaf). Medical course is 14-15 days.
- ❖ *Equisetum arvense* (ground-based part), *Mentha piperita*, *Ribes nigrum*, *Rosa canina* (flower, leaf and seed), *Hypericum perforatum* (flower and seed),

*Zea mays* (flower, leaf), *Petroselinum crispum* (leaf).

Medical course is 10-14 days.

The above prescriptions are applicable at the time of kidney pains, as well as in the form of herbal bath (39°C). The herbal mixture solution can be used preventively for two weeks within 6 or 8 weeks after expelling concrements. In addition, two glassfuls of this solution should be taken orally once a day after meal for two months during spring and autumn as peak seasons of infectious diseases. It is recommended to use this solution for 3 or 5 days following an operative approach to kidney stones. Besides, it would be useful to brew 5 or 6 tablespoonfuls of birdweed in one liter of water and take orally for 5 or 7 days on top of the above recommendation. In the context of folk medicine, kidney stone diseases may be challenged by oral administration of carrot juice mixed with honey in the proportion of 1:2 respectively as one tablespoonful 30 or 40 minutes after meal 3 times a day. This treatment should last 3 or 4 weeks, and is to be repeated after several months. Salt, spices, pickles, alcohol, and tobacco may not be consumed. Patients should consume water and other types of liquid (2 or 3 liters of fruit juice, herbal tea) according to their body weight. Oral administration of perforate St. John's wort solution before breakfast can prevent nocturnal micturition with children.

## Herbal Compounds Used in Treatment of Joint Disorders (Rheumatism and Rheumatoid Arthritis)

- ❖ *Viola tricolor*, *Thymus serpyllum* & *Melissa officinalis* (flower and leaf), *Solanum nigrum* (seed and leaf), *Hypericum perforatum*, *Origanum vulgare* & *Acorus calamus* (flower and seed), *Crataegus pentagyna* (fruit, flower and leaf). Medical course is 10-14 days
- ❖ *Juniperus communis* (fruit and leaf), *Linum usitatissimum* (seed and leaf), *Achillea millefolium*, *Melilotus officinalis* (flower and leaf), *Inula helenium* (flower and carrot), *Equisetum arvense* (ground-based part). Medical course is 10-14 days.

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