

# Ethnobotanical Survey of Medicinal Herbs in the Western Region in Syria (Latakia and Tartus)

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## Research Article

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# Abstract

## Context

The use of traditional Arabic medicine (TAM) has spread to treat various diseases in Syria since ancient time. They are cost-effective with fewer side effects and are more suitable for long-term use compared with chemically synthesized medicines.

## Objective

We conducted ethnobotanical and ethno-medicine research on plants traditionally used to treat various diseases in Western region of Syria.

## Methods

Field surveys were conducted during July 2019-December 2020 to document ethnobotanical information through oral interviews and designed semi-structured questionnaire from local herbalists (Tabib Arabi) and the elderly people and others who were familiar with traditional uses of plants particularly for medicinal. The queries were repeatedly made to increase the reliability of the data, during the field survey of 475 local inhabitants of 70 villages.

## Results

In this research we listed 258 medicinal plants belonging to 83 families in alphabetical order with the parts used and the method of preparation according to their therapeutic use. Of these studied plants, 185 are used to treat digestive disorders, 118 for respiratory diseases, 91 for several skin diseases, 87 for kidney and urinary tract disorders, 78 for diabetes, 18 for nervous system disorders, and a few plants for treatment the other diseases which are commonly spread in study area. The calculated results of medicinal use-value (MUV) showed that *Olea europaea* L., *Origanum syriacum* L. was ranked first (MUV= 0.934), while the lowest value was found for *Fumana thymifolia* (L.) Spach and *Cistus creticus* L. (MUV= 0.003).

## Conclusion

A large portion of the uses of medicinal plants mentioned in the research are still under study. There is no doubt that its study will provide many new data that could contribute to further pharmacological discoveries by identifying the active ingredients and their mechanism of effect by doing a lot of pharmacological work to confirm the alleged biological activities of these plants.

## 1. Introduction

Traditional medicine (TM), as defined by the World Health Organization (WHO), is the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement, or treatment of physical and mental illness. Some traditional medicine systems are supported by huge volumes of literature and records of the theoretical concepts and practical skills; others pass down

from generation to generation through verbal teaching. To date, in some parts of the world, the majority of the population continue to rely on their own traditional medicine to meet their primary health care needs. When adopted outside of its traditional culture, traditional medicine is often referred as “complementary and alternative medicine (CAM)” (Che et al. 2017). In the Physicians' Desk Reference (PDR) for herbal medicines, the popular uses of plants are called public uses (Montvale 2000, p.1). TM is often the first choice for providing primary health care in developing countries, and the WHO estimates that more than 80% of healthcare needs in these countries are met by traditional health care practices, being the cheapest and most accessible (WHO 2002, 2004, 2005). So that the WHO paid special attention to traditional medicine, and it issued its strategy for traditional (folk medicine) 2014-2023 (WHO 2013).

Ethnobotany is the scientific study of the relationships between people and plants. It was first coined in 1896 by the US botanist John Harshberger; however, the history of ethnobotany began long before that (Amjad et al. 2015, Mahmood et al. 2011, Campbell et al. 2002). It plays an important role in understanding the dynamic relationships between biological diversity and social and cultural systems (Amjad et al. 2015, Husain et al. 2008, Amjad et al. 2013). Plants are essential for human beings as they provide food, and medicines (Hameed et al. 2011, Alam et al. 2011, Ahmad et al. 2012). Ethnobotanical approaches are significant in highlighting locally important plant species, particularly for new crude drug sources; Documentation of indigenous knowledge, particularly medicinal values of plant species, provided various modern drugs (Amjad et al. 2015). The indigenous medicinal information of plants is also helpful to ecologists, pharmacologists, taxonomists, watershed and wild life managers in enhancing the prosperity of an area, besides listing the traditional uses (Mahmood et al. 2011, Ibrar et al. 2007).

Arabic traditional medicine (ATM) is one of the famous traditional medical systems, which is occasionally called Unani medicine, Graeco-Arabic medicine, humoral medicine, or Islamic medicine. The subject of traditional medicine in Syria has received little attention in the literature, and very little is known about the traditional medicinal substances used nowadays by the Syrian population to treat the most common diseases.

In 2017 the international center for information and networks for intangible cultural heritage in the Asia-Pacific region (ICHCAP) under the auspices of UNESCO, issued a book entitled Traditional Medicine in which the Syria Trust for Development in Section VII included traditional medicine in Syria within it (Falk et al. 2017).

Syria has a rich diversity of plants that are being used by local communities for medicinal purposes. Proper usages of local plants are common at the community and end-user level. For these reasons, the aim of the present investigation was to gather the uses of medicinal plants in the Western region in Syria (Latakia and Tartus), as a supplement for a national survey, and to document the information concerning the uses of medicinal plants, which may serve as the basis of knowledge for a more intensive scientific research.

## 2. Methods

### 2.1. Study area

Syria, country located on the east coast of the Mediterranean Sea in southwestern Asia. Syria is bounded by Turkey to the north, by Iraq to the east and southeast, by Jordan to the south, and by Lebanon to the

southwest. The study area is the coast and the western mountains of Syria which include Latakia governorate and Tartus governorate. (Figure 1).

This area have a Mediterranean climate with a long dry season from May to October. In the extreme northwest there is some light summer rain. On the coast summers are hot, with mean daily maximum temperatures in the low to mid-80s F (upper 20s C), while the mild winters have daily mean minimum reaching temperatures the low 50s F (low 10s C). Only above about 5,000 feet (1,500 meters) are the summers relatively cool. Inland the climate becomes arid, with colder winters and hotter summers. The coast and western mountains receive 30 to 40 inches (760 to 1000 mm) of precipitation annually. Yew, lime, and fir trees grow on the mountain slopes. In coastal region, plants include olive trees, grapevines, apricot trees, oaks, and poplars. Lemon and orange trees grow along the coast (Hamidé et al. 2021).

A reforestation project has been undertaken in the mountains of Latakia and Tartus, and most of forests are protected by the government. Commercially important forest plants include sumac, which is used as a spice, wild pistachio, which is important for its oil-rich fruit, laurel, which is used in the production of cosmetics, and mulberry, whose leaves are fed to silkworms. Pine tree and tobacco. Other useful plants are winter vegetables such as khubbayzah, a kind of spinach; Akkūb, a flowering plant (Hamidé et al. 2021).

The coastal strip is one of the Syria's traditional regions which is cultivated steppe. On the coast the fertile alluvial plains are intensively cultivated in both summer and winter. The region is the site of Syria's two principal ports of Latakia (Al-Lādhiqiyyah) and Tarṭūs. In rural areas, work takes place according to the seasonal rhythm of agriculture. Women generally share in much of the agricultural labor (Hamidé et al. 2021).

The Mediterranean port of Latakia is surrounded by a rich agricultural region and contains some industry. Because of its seaside location, the city is a major tourist center (Hamidé et al. 2021).

Agriculture constitutes an important source of income, fruits and vegetables include tomatoes, potatoes, melons, and onions. Olives, grapes, and apples are grown at high altitudes, while citrus fruits are cultivated along the coast. High-grade tobacco is grown in the area around Latakia (Hamidé et al. 2021).

Historically, the ancient Syrian Phoenice in the east coast of the Mediterranean Sea is one of the first civilizations to use alphabets on a large scale.

## **2.2. Field work and data collection**

Field surveys were conducted during July 2019-December 2020 to document ethnobotanical information through oral interviews and designed semi-structured questionnaire. 70 villages were visited for field research. 625 people were contacted, and 475 of them accepted to become our informants who have ethnobotanical experience, including local herbalists (Tabib Arabi) and the elderly people and others who were familiar with traditional uses of plants particularly for medicinal. The queries were repeatedly made to increase the reliability of the data. Interviews with the men were usually carried out in the "Mukhtar" house where they come together, and with women in their homes, bazaars and gardens. The Syria trust for development (which is a national development organization, and has a program which is called "Mashrouie" runs innovative microcredit programs that encourage economic growth in disadvantaged areas) helped us in data collecting.

The information gathered during the present study included socio-demographic characteristics of the interviewed informants (age, gender) and ethnopharmacological information, including the local and scientific name of the species, local names, plant parts used, modes of use, conservation method, administration mode and toxicity, all documented data were then translated into English and Latin.

### **2.3. Taxonomic identification of the species**

Medicinal plants being mentioned by the Informants were recorded with local names and photographed. Each reported medicinal plant species was gathered, compressed, dehydrated, mounted on herbarium sheets, and identified, the taxonomic identity of the plants was confirmed by Prof. Abdel Aleem Bello (PhD / Botanical Taxonomy) and Dr. Bayan Tiba (PhD / Botanical Taxonomy) Aleppo university, As far as possible, the name of the plants was updated by consulting the latest literature; generic and species names followed the plant list (<http://www.theplantlist.org>). All voucher specimens have been preserved during documentation and deposited in the Damascus University, faculty of pharmacy, pharmacognosy labs Herbarium for future reference.

### **2.4. Ethics approval and consent to participate**

The study was approved by the Ethics Committee of the University of Damascus. Before beginning data collection, we obtained verbal informed permission in each case site-wide and then individually before each interview. We also informed informants that it was an academic project and that the investigation was for research purposes only, and not for any financial or other benefits. Informants provided verbal informed consent to participate in this study; They were free to withdraw their information at any time. These informants freely accepted the interview.

### **2.5. Consent for publication**

The study has a consent for publication by the faculty of pharmacy - University of Damascus on 7/3/2021 .

### **2.6. Data analysis**

The data collected through interviews of the informants were classified and examined with the statistical program IBM® SPSS® Statistics 26, to determine the proportions of different variables such as ethnopharmacological data. Quantitative value indices were analyzed using different statistical quantitative tools i.e. the use reports (UR) of a species, and medicinal use value (MUV) (Chaachouaya et al. 2021).

#### **Medicinal use-value (MUV) and use reports (UR)**

The use reports (UR) of a species or its importance in the culture of a community is denoted by its mentioning rate or its mention frequency by informants. The UR of the species of plants being utilized was evaluated using the formula (Tenté et al 2012):

$$UR = Ni/n$$

Ni: the number of times a particular species was mentioned

n: the total number of times that all species were mentioned

The MUV of recorded medicinal plants was determined by applying the following formula (Tabuti et al. 2003):

$$\text{MUV} = \sum \text{UR}_i / N$$

$\sum \text{UR}_i$ : the total number of use reports per plants

N: the total of interviewees questioned for given medicinal species

The MUV rate will be more important if there are several useful records for a species, implying that the plant is significant, whereas they will be near 0 if there are few reports compared to its use (Chaachouaya et al. 2021, Yaseen et al. 2015).

## 3. Results

### 3.1. Demographic data of informants

In total, 475 local inhabitants of 70 villages were selected based on their experience in traditional uses of plants particularly for medicinal, (Table 1) show the age and gender wise distribution. All of them were interrogated using semi-structured questionnaires. Generally in Syria, both genders were interested in herbal medicines. While in the countryside (the study area), women are more interested in livelihood, treatment, plant collection and processing compared to men, so that the percentage of informants was 54.94% females, 45.05%, males, and most of them were older than 50 years.

**Table 1: Age and gender wise distribution**

Age Group	Gender	No. of Informants
Old (50+)	Male	145
	Female	163
Middle age (25+)	Male	65
	Female	85
Youngster	Male	4
	Female	13
<b>Total</b>		<b>475</b>

### 3.2. Ethnobotanical uses of plant species

A total of 258 plant species belonging to 83 families are recorded in the present study, which are being used for a variety of purposes by native people. The detailed inventory is provided in Table 2, which includes botanical names, followed by local name, family and ethnobotanical uses.

**Table 2: Ethnobotanical uses of plant species according to ethnomedicinal survey of Western region in Syria (Latakia and Tartus).**

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
1.	<i>Abies cilicica</i> (Antoine & Kotschy) Carrière	شوح (Shouh)	Pinaceae	Rs	0.036	An aromatic oil and the resin is used externally as an antiseptic, it helps in relaxing the muscles, and to rid of unpleasant odors of the body.
2.	<i>Acanthus syriacus</i> Boiss.	أكنسا (Akensa)	Acanthaceae	L	0.018	An infusion of the leaves is used externally to ease irritation
3.	<i>Acer syriacum</i> Boiss. & Gaill.	قصب سوري (Qyqab souri)	Aceraceae	F	0.09	Sugary maple juice is produced in a primitive way, by inserting tubes into the tree trunk on spring days between February and March, Maple fruits are used to treat diabetes, urinary infections, and prostate disorders.
4.	<i>Achillea falcata</i> L.	قاصصوم (Qauesoum)	Asteraceae	R	0.181	A decoction of roots is used as diuretic.
5.	<i>Achillea fragrantissima</i> (Forssk.) Sch. Bip.	ألفيه (Alphieh)	Asteraceae	L	0.072	An infusion of the leaves is used for fever, common cold, hay fever, absence of menstruation, dysentery, diarrhea, loss of appetite, gastrointestinal (GI) tract discomfort, and to induce sweating.
6.	<i>Achillea millefolium</i> L.	إشبته النجارية (Eshbet alnajareen)	Asteraceae	L, FI	0.127	An infusion of the leaves and flowers is used for asthma and common cold, and for treat urinary infections.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
7.	<i>Achillea maritima</i> (L.) Ehrend. & Y.P.Guo	أخيليا (Akhelia)	Asteraceae	L	0.654	An infusion of leaves is used as a cough suppressant and expectorant, anthelmintic, for varicose veins, menstrual pain relief, diuretic, urinary disinfectant, hemorrhoids.
8.	<i>Acorus calamus</i> L.	عرق سوس (Arak aker)	Acoraceae	R	0.134	A decoction of roots is used as diuretic and tonic.
9.	<i>Adiantum capillus-veneris</i> L.	كزبارة (Kezbarte el-bier)	Pteridaceae	L	0.581	An infusion of leaves is used for cleansing respiratory system, asthma, and for gastrointestinal disorders such as jaundice, diarrhea, also it is used as a diuretic agent.
10.	<i>Aeluropus lagopoides</i> (L.) Thwaites	رجل الارباب (Rejel alarnab)	Poaceae	L	0.065	A fresh green leaves are used as a tonic.
11.	<i>Agrimonia eupatoria</i> L.	شجارات البراغيث (Shajarat el-baraghith)	Rosaceae	W, Fl	0.109	An infusion of whole herb with flowers is used for cough, diabetes, diarrhea, and jaundice, and used as diuretic, and infusion of flowers is used as gargle for the symptomatic relief of minor inflammations of the mouth and throat, and the decoction of flowers is used for skin diseases anti-itch, relieve congestion of hemorrhoids.
12.	<i>Agropyron junceum</i> (L.) P.Beauv.	هشيشة القامه الرابليه (Hasheshet elqameh elraweleh)	Poaceae	R	0.054	A decoction of roots is used as diuretic.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
13.	<i>Alcea setosa</i> (Boiss.) Alef.	كحتمى (Khetmi)	Malvaceae	Fl, W	0.781	An infusion of flowers is used as demulcent, expectorant, diuretic, emollient, digestive, decongestant, anti-rheumatic, the juice of the plant is used to treat injuries, burns.
14.	<i>Alchemilla vulgaris</i> L.	كاف ال-اساد (Kaf el-assad)	Rosaceae	Ap	0.094	An infusion of aerial parts is used for stomach problems, mild diarrhea, diabetes, and anti-obesity.
15.	<i>Allium cepa</i> L.	ال-باسال (Al-basal)	Alliaceae	Bb	0.909	A juice of the fresh bulb is used internally for cough, asthma attacks, typhoid, and the roasted bulb is eaten for diabetes, A juice of the fresh bulb is used externally for whooping cough, back pain, neck pain, and warts.
16.	<i>Allium trifoliatum</i> Cirillo	ثوم الباري (Thoum bari)	Alliaceae	Bb	0.887	Fresh bulb is used for hypertension treatment, vermifuge, diseases of the gastrointestinal tract, and urinary tract infection, relieve atherosclerosis, diabetes, anti-inflammatory, the bulb oil is used topical for rheumatism, dandruff, scabies, fungi, and treating insect bites.
17.	<i>Alnus orientalis</i> Decne.	النجات (Nagat)	Betulaceae	L, Bk	0.054	A decoction of leaves is used for treatment of rheumatism, hemorrhoids and for wound healing, a decoction of bark is used for insect bites, and skin irritations.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
18.	<i>Ammi visnaga</i> (L.) Lam.	كهلج (Khelleh)	Apiaceae	Sk, Sd	0.872	Sticks of this plant used to clean the teeth, and seeds decoction used as a diuretic, antispasmodic and for bladder stones. Also it is used as a smooth muscle relaxant for asthma, and whooping cough.
19.	<i>Amygdalus communis</i> L./ <i>Prunus dulcis</i> (Mill.) D.A.Webb	لوز (Lawz)	Rosaceae	Sd	0.781	Sweet almond seed oil is used internally for constipation and for bronchial diseases and asthma, and for digestive system, and externally the oil is used for skin diseases, massage and to nourish the skin, also it is used in traditional recipes for hair care.  Bitter almond seed oil is used topically for increasing hair growth, and to relieve mild pain.
20.	<i>Anagallis arvensis</i> L.	عين القيت (Eyn el-qet)	Primulaceae	Ap	0.163	Despite the toxicity of the herb, an infusion of aerial parts is used to treat rheumatism, diuretic, expectorant, and it is also used in the treatment of gout.
21.	<i>Anchusa azurea</i> Mill.	زلاء (Zalaa')	Boraginaceae	W	0.218	A cooked herb is used as diuretic in bladder and kidney stones, tonic, fever, cough and asthma.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
22.	<i>Anthemis cotula</i> L.	عقوان ناتن (Eqhowan naten)	Asteraceae	Fl, Ap	0.09	Hot boiled of flowers is used topically to treat hemorrhoids and insect repellent, and internally for menstrual cramps and pain and intestinal ailments, The plant is toxic and causes miscarriage, an aerial parts powder is used as a very effective insecticide.
23.	<i>Anthemis tinctoria</i> L.	عقوان اسفار (Eqhowan asfar)	Asteraceae	Fl	0.247	An infusion of flowers is used as diuretic, and for menstrual, migraine, and relaxing.
24.	<i>Arachis hypogaea</i> L.	فستق ابيد (Fostok abeed)	Fabaceae	Sd	0.672	A seeds are an important source of protein used to provide the body with energy, peanut butter is used to improve mood and reduce feelings of tiredness and fatigue, and stimulate blood circulation.
25.	<i>Arbutus andrachne</i> L.	كاتلاب (Katlab)	Ericaceae	L, F, R	0.083	A decoction of leaves and fruits is used for urinary infections and cystitis and urethritis, diuretic and as tonic for digestive system and antispasmodic, A decoction of roots is used for lowering high blood pressure, Its ripe fruits are eaten causing diarrhea.
26.	<i>Arctium lappa</i> L.	اركاتوين (Arkatuin)	Asteraceae	L, Sd, R	0.098	A decoction of leaves and seeds and roots is used as diuretic and for diabetes.
27.	<i>Arisarum vulgare</i> O.Targ.Tozz.	كابوع الراهب (Kabue el-raheb)	Araceae	R	0.101	A decoction of roots is used for constipation and rheumatism.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
28.	<i>Aristolochia sempervirens</i> L.	أريتسها (Aretesheh)	Aristolochiaceae	W, Ap	0.203	An edible herbs, an aerial parts are used as liver tonic.
29.	<i>Armeniaca vulgaris</i> L.	مشمش (mushamash)	Rosaceae	F	0.487	Dried Fruits are used to strengthen the body's immunity.
30.	<i>Artemisia herba-alba</i> Asso.	شيه ابياد (Shieh abiad)	Asteraceae	L	0.709	An infusion of leaves is used for cancer, nerve system disorders, heart diseases, diabetes, to increase appetite, and anthelmintic.
31.	<i>Artemisia verlotiorum</i> Lamotte.	شيه فالوه (Shieh farloweh)	Asteraceae	L	0.036	A decoction of leaves is used as anthelmintic, and for diabetes, respiratory problems, diarrhea, the powder of leaves is used for skin diseases, sores, wounds.
32.	<i>Arum dioscoridis</i> Sm.	لوف (Louf)	Araceae	L	0.414	A cooked leaves are used for digestion disorders treatment, asthma treatment, internal bacterial infection, and anthelmintic.
33.	<i>Asparagus officinalis</i> L.	هليون (Heliun)	Asparagaceae	R, Sh	0.636	A cooked roots and shoots are used for urinary tract diseases, lowering blood pressure, analgesic, and anti-inflammatory.
34.	<i>Asphodelus microcarpus</i> Salzm. et Viv.	أيسالان (Aesalan)	Alliaceae	W	0.029	The juice of this plant has been applied dermatologically to treat cutaneous lichen, even though the plant is poisonous.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
35.	<i>Avena sativa</i> L.	شوفان (Shofan)	Poaceae	Sd, Pe	0.72	The bran husk of seed is a mealy nutritive herb used for weight reduction, and constipation, the whole grinded seeds are used for diabetes, hypercholesterolemia, diuretic, and antispasmodic, and tonic for the nervous system.
36.	<i>Bellis sylvestris</i> Cirillo	كهاروف (Kharoof)	Asteraceae	S	0.152	An infusion of stems is used in the treatment of catarrh, rheumatism, arthritis, liver and kidney disorders, as a blood purifier, A mild decoction may ease complaints of the respiratory tract, rheumatic pains and painful or heavy menstruation.
37.	<i>Beta vulgaris</i> L.	سلك (Solk)	Amaranthaceae	Ap	0.723	An green parts of the herb are eaten to treat constipation, diabetes, anemia and general weakness, and is used for hypertension.
38.	<i>Bidens pilosa</i> L.	حسيكه وباريه (Hosikeh wabarieh)	Asteraceae	Ap	0.105	A decoction is used for digestive disorders, fresh aerial parts are used to treat bites, wounds.
39.	<i>Borago officinalis</i> L.	لسان اثار (Lisan athaur)	Boraginaceae	L, Sd, F	0.701	An infusion of leaves and seeds and flowers is used for treatments for infections, respiratory complaints, depression, arthritis, asthma, and the fresh leaves are used as mealy nutritive herb and diuretic.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
40.	<i>Calendula arvensis</i> M.Bieb.	العين الباقار (Ain El-Baqar)	Asteraceae	Ap	0.098	An infusion of aerial parts is used as a remedy for skin problems and is applied externally to bites and stings, sprains, wounds, sore eyes, varicose veins.
41.	<i>Capparis spinosa</i> L.	القبار (Cabar)	Capparaceae	Sh, R	0.629	A young shoots pickled either in vinegar or preserved in granular salt are used for diseases of the nervous system, back pain, liver diseases, the fresh roots are used topically for back pain and rheumatism.
42.	<i>Capsella bursa-pastoris</i> (L.) Medik.	كيس الراية (Kees elraie)	Brassicaceae	L	0.101	A decoction of leaves is used for treat sores and menstrual pain, hypertension, diuretic and relieve stomach acid.
43.	<i>Capsicum annum</i> L.	الفلفل (Flefeh)	Solanaceae	F	0.694	The fresh fruits are used for common cold, and it soaked in olive oil and used topically for joint pain and back pain.
44.	<i>Carissa edulis</i> (Forssk.) Vahl	القارون (Airon)	Apocynaceae	R	0.094	A preparation from root is used topically for lichen disease.
45.	<i>Carduus argentatus</i> L.	الخرفيش السعير (Kharfiesh sagheer)	Asteraceae	Ap	0.836	A decoction of aerial parts is used for liver diseases and low blood sugar, and cases of infertility.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
46.	<i>Carduus pycnocephalus</i> L.	لسان القلب (Lesan el-kalb)	Asteraceae	L	0.589	A decoction of leaves of the plant are used to treat the diseases of the gallbladder and liver, and hepatitis, tonic, diabetes and atherosclerosis, reduce cholesterol in the blood, stimulates digestion and strengthens the appetite, anti-worms.
47.	<i>Carex stenophylla</i> Wahlenb.	نميس (Namees)	Cyperaceae	W	0.08	A decoction of grass is used as diaphoretic and carminative.
48.	<i>Carthamus tenuis</i> (Boiss. & Blanche) Bomm.	مكسة (Makseta)	Asteraceae	Ap	0.68	The aerial parts of the plant are boiled, then squeezed and fried in oil as a nutrient.
49.	<i>Carthamus tinctorius</i> L.	اسفر (Isfer)	Asteraceae	Sd	0.243	A seed oil is used to prevent heart disease, dysmenorrhea, amenorrhea, postpartum abdominal pain, pain of joints.
50.	<i>Celosia cristata</i> L.	عريف (Eurif aldiyk)	Amaranthaceae	L, Sd	0.265	The leaves decoction is used as an antidiarrheal, seed decoction is used as a laxative, in cases of cough, and dysarthria urination, and for pain.
51.	<i>Centaurea calcitrapa</i> L.	كليب (Kilybeh)	Asteraceae	L	0.625	The fresh leaves are used as appetite enhancer, and for diarrhea, the cooked leaves are edible as special traditional Syrian recipe known as Syrian saleeg.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
52.	<i>Centaurea cyanus</i> L.	نادر (Nada amber)	Asteraceae	Fl	0.083	An infusion of flowers for treating fever, constipation and urinary tract infections, Cornflower floral water is used topically as antiseptic agent.
53.	<i>Centaurium erythraea</i> Rafn	كونتارهه (Kontareeh)	Gentianaceae	Ap	0.254	An infusion of aerial parts is used for diabetes, and for digestive system disorders, and topical it is used to treat sores.
54.	<i>Cephalanthera kurdica</i> Bornm. ex Kraenzl.	وركيد (Orkid)	Orchidaceae	T	0.069	Orchid powder (Salep) is extracted from orchid tubers, and it is the main ingredient of the winter Syrian traditional drink with milk, which is used for reducing heartburn, indigestion.
55.	<i>Cephalaria joppensis</i> (Rchb.) Coult. ex DC.	تكتاك (Tactak)	Dipsacaceae	L	0.021	An infusion of leaves is used to treat diabetes, digestive disorders, and as a laxative and diuretic.
56.	<i>Ceratonia siliqua</i> L.	كاروب (Carob)	Fabaceae	F	0.592	The carob fruits are soaked in water (1 kilogram to two liters of water) for three hours, then placed on a strong fire for about an hour, after which it cools, and we filter it with a clean piece of gauze, then add two cups of sugar for sweetening and preservation, and add to it Damask rose water, it is used for the treatment of heartburn, and reduce the frequency of vomiting, constipation, and increased breast milk.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
57.	<i>Cercis siliquastrum</i> L.	زمنزارة (Zamzareek)	Fabaceae	Fl, Bk	0.029	The honey of flower's nectar is used in the treatment of some diseases, such as anemia, general weakness, fatigue, stress, and the infusion of flowers and bark is used as a tonic, and for digestive disorders.
58.	<i>Chrozophora tinctoria</i> (L.) A.Juss.	غوبيره (Ghubyreh)	Euphorbiaceae	L	0.032	The fresh leaves are used as diuretic, and for kidney stones.
59.	<i>Cichorium intybus</i> L.	هندوبا (Hinduba)	Asteraceae	L, R	0.85	An infusion of leaves is used for improving immunity, protecting the heart, and for cancer, and eye inflammation, the fresh leaves are used as diuretic, laxative, and slimming, the roasted of roots for liver diseases, the leaves are edible as special salad.
60.	<i>Cirsium amani</i> Post.	قاسوان (Qaswan)	Asteraceae	L	0.01	A decoction of leaves is used as expectorant and diuretic.
61.	<i>Cistus creticus</i> L.	كردا وباريه (Koreda wabareeh)	Cistaceae	L, G	0.003	An infusion of leaves is used as an expectorant, and as an emmenagogue, the gum of its tree is solved with olive oil and topical is used for bronchitis.
62.	<i>Cistus salviifolius</i> L.	كردا بيدة (Koreda bayda)	Cistaceae	Ap	0.007	A decoction of aerial parts is used as anti-diarrheal and digestive teas, and for diabetes and gastrointestinal ulcers.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
63.	<i>Citrus limon</i> (L.) Osbeck	ليمون حامد (Limun hamd)	Rutaceae	F	0.861	A fresh juice of fruits is used for flu, common cold, the dried peels of fruits are used for diseases of stomach, intestine and urinary tract.
64.	<i>Citrus × aurantium</i> L.	برتوكال (Bortokal)	Rutaceae	F	0.88	A fresh juice of fruits is used for refreshing and anti-cough and flu, and aromatic oil of peels is used inhalation as a decongestant.
65.	<i>Clematis flammula</i> L.	زايان (Zayyan)	Ranunculaceae	L, Fl	0.04	The ancient use of the leaves and flowers is for gout and arthritis both orally as an infusion, and topically with olive oil, also the dried grinded of leaves and flowers is used for vitiligo topically with a vinegar. Some caution is advised due to reports of toxicity.
66.	<i>Cochlearia officinalis</i> L.	حاشيشة الملاك (Hasheshate elmalaek)	Brassicaceae	W, Ap	0.232	A fresh herb is used as tonic and nutritious agent, an infusion of aerial parts is used internally for rheumatism and as a diuretic, while the external applications a decoction is used as a mouthwash for diseases of the mouth, throat and larynx.
67.	<i>Convolvulus betonicifolius</i> Mill.	مادده بيدا (Maddadeh byda)	Convolvulaceae	Ap	0.101	A decoction of aerial parts is used internally for fever, loss of memory, insomnia, and as antispasmodic, laxative, diuretic.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
68.	<i>Convolvulus cantabrica</i> L.	مادداه (Maddadeh)	Convolvulaceae	L	0.094	An infusion of leaves is used as diuretic, and for kidney stone.
69.	<i>Convolvulus sepium</i> L.	لبلب السياج (Leblab elsiaj)	Convolvulaceae	R, Fl	0.101	A decoction of roots and flowering herbs are used to treat constipation.
70.	<i>Coriandrum sativum</i> L.	كزبرة (Kuzbara)	Apiaceae	Sd	0.68	A decoction of seeds is used for intestinal inflammation, weight loss and intestinal gas, treating narrowed arteries, diabetes.
71.	<i>Cornus sanguinea</i> subsp. <i>australis</i> (C.A.Mey.) Jáv.	كورانه مودامته (Koraneh modamate)	Cornaceae	F, Fl	0.076	An infusion of fruit and flowers is used for rheumatism and menstrual bleeding and as tonic.
72.	<i>Crataegus monogyna</i> Jacq.	زعرور (Zaaroor)	Rosaceae	F	0.603	A decoction of fruits is used for cardiovascular diseases, hypertension, sexual weakness, cancer and diabetes.
73.	<i>Crepis reuteriana</i> Boiss. / <i>Crepis syriaca</i> (Bornm.) Babc. & Navashin	سوراجا (Souraga)	Asteraceae	W	0.018	The fresh young leaves are resemble a dandelion and they are confused and this wild edible plant is used as salad for relieve joint diseases pain, appetizer.
74.	<i>Cupressus sempervirens</i> L.	سارو اكهدار (Saru akhdar)	Cupressaceae	L	0.236	A decoction of leaves and cones is used as an antispasmodic and for treating colds, flu and sore throats, Externally cypress oil is used for varicose veins and hemorrhoids and as antirheumatic.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
75.	<i>Cucurbita Pepo</i> L.	كرفس (Kare elkousa)	Cucurbitaceae	Sd	0.589	The dried and roasted seeds and the oil are used to get rid of intestinal worms, especially tapeworms. also used to relieve the symptoms of benign prostatic hyperplasia in the elderly. and for vomiting in pregnant women. also for seasickness.
76.	<i>Cyclamen persicum</i> Mill.	بلكهور (Bakhkhour Maryam)	Primulaceae	L, T	0.069	Its leaves are wrapped with rice like grape leaves which is called (ybraq or warak enab) and cooked. and it is used in cases of impotence by eating it, the herb boiled is used to expel abdominal worms, constipation, rheumatism and lack of sensation in the limbs in patients with diabetes and peptic ulcers. Externally, the tubers are used to treat boils, sores and festering wounds. The tuber is grinded and placed in a piece of cloth then placed on it, but it is toxic. must be used carefully. Skin burns are also treated by drying leaves, grinding them and spraying their powder on the burns.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
77.	<i>Cynodon dactylon</i> (L.) Pers.	عشبة نجيل (Najeel)	Poaceae	R	0.174	A decoction of roots is used internally as bile tonic, fever repellent, anthelmintic, to get rid of toxins and arthritis, diuretic, helps to slim, and externally used for urticaria and skin eczema.
78.	<i>Cydonia oblonga</i> Mill.	سفرجل (Sapharjal)	Rosaceae	F	0.53	The fruits juice is used for gastric acidity, and as astringent and intestinal disinfectant, it contributes to the treatment of peptic ulcers and intestinal upset, and in the treatment of diarrhea, intestinal infections and constipation, and quince is considered a diuretic and thus helps in cleaning the body from toxins, and commonly the fruits jam is prepared to use for some medicinal and nutritional uses mentioned above.
79.	<i>Cynoglossum creticum</i> Mill.	لسان العلكب (Lisan elkalb)	Boraginaceae	L, R	0.069	Fresh or dried young leaves are used internally in the form of infusions or boiled as antipyretic and diuretic, useful for lung diseases, antispasmodic, and the decoction of roots is used as analgesic for cough, and the fresh leaves are used as salad, and externally the oil of herb is used for sores, and for treating skin infections.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
80.	<i>Cyperus rotundus</i> L.	سود (Sued)	Cyperaceae	T, Sd	0.105	A decoction of tuber part is used for digestion, bedwetting, diarrhea, diabetes, inflammation, and gastrointestinal disorder, the oil of seeds is used topically for permanent hair remove and for burns.
81.	<i>Dactylis glomerata</i> L.	عشايعه عشايعه عشايعه (Espaieeh)	Poaceae	R	0.007	Gargling with boiled roots for dental pain, and applying the decoction of boiled roots to the skin to treat a rash, and internally, drinking boiled roots as a diuretic, and for cystitis and rheumatism.
82.	<i>Datura stramonium</i> L.	داتورا (Datura)	Solanaceae	R	0.014	Although it is a toxic plant, a decoction of roots is used for some skin diseases.
83.	<i>Daucus carota</i> L.	جزار باريه (Jazar barieh)	Apiaceae	R, L, Sd	0.68	The juice of roots is used for intestinal infections, and stomach ulcers, and used as diuretic for kidney patients, the leaves decoction is used as antiseptic for skin, the seeds decoction is used as diuretic for those with kidney problems, an infusion of the roots, leaves and seeds is used for acne and skin infections, and for eczema.
84.	<i>Dianthus strictus</i> Banks ex Sol.	كورنفيل باريه (Koronfel barieh)	Caryophyllaceae	F	0.123	A decoction of fruits is used for toothache topically, and sometimes this decoction is used internally as liver tonic and laxative.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
85.	<i>Dianthus caryophyllus</i> L.	كروان (Koronfel baladi)	Caryophyllaceae	Bu	0.047	A decoction of buds is used for treatment of gum infections, gastrointestinal disorder, wounds, throat, and used as vermifuge.
86.	<i>Ecballium elaterium</i> (L.) A. Rich.	أجور (Ajour eljagal)	Cucurbitaceae	F	0.516	A fresh juice of fruits is used for liver diseases, jaundice and sinusitis by nasal administration (just one drop of juice is inhaled in each nostril), and topical it is used for eczema.
87.	<i>Echinops viscosus</i> Rchb.	رأس العبد (Ras elabed)	Asteraceae	S, R, L	0.05	A decoction of stem and root and leaf is used for renal disorders.
88.	<i>Echium glomeratum</i> Poir.	عشاشة (Hasheshet elafaa)	Boraginaceae	Ap	0.032	A decoction of aerial parts is used as folk remedy internally for dry mouth and belching, and used for rheumatic, and treatment of diabetes, and used as diuretic, and topically is used for wound healing.
89.	<i>Elymus repens</i> L. Gould = <i>Agropyron repens</i> (L.) P.Beauv.	نجيل (Najeel)	Poaceae	R	0.148	A decoction of roots is used as laxative, diuretic, diaphoretic in cases of fever, and for cystitis.
90.	<i>Ephedra campylopoda</i> C.A.Mey.	كوداب (Kodab)	Ephedraceae	W	0.098	A decoction of whole herb is used for reducing arterial blood pressure and used for respiratory diseases such as asthma and chest infections.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
91.	<i>Epipactis latifolia</i> (L.) All.	الانتارة الف (Antare f)	Orchidaceae	T, Rm, L	0.061	A decoction of plant tubers used to treat gout, rheumatism. The rhizomes powder are used to treat nervous disorders, and aphrodisiac. Infusion of leaves is given in fever, and it is used as an enema in the case of colitis and intestinal colic and hemorrhoids.
92.	<i>Equisetum arvense</i> L.	الزنبق الخيل (Zanab elkhyl)	Equisetaceae	L, Sh	0.636	An infusion of leaves and shoots is used for kidney stones and has diuretic effect, for gout.
93.	<i>Eremopyrum orientale</i> (L.) Jaub. & Spach.	القماح الشقيه (Qamha sharkieh)	Poaceae	R	0.083	A decoction of roots is used to clean wounds.
94.	<i>Eremostachys laciniata</i> L. Bunge	الحوذوبول (Hoznobul)	Lamiaceae	R, Fl	0.236	A decoction of root and flower is used for allergy, headache and liver diseases, sedative.
95.	<i>Erica manipuliflora</i> Salisb.	الاجرام (Ajram)	Ericaceae	Fl	0.592	A decoction of flowers is used as diuretic, sedative, and for treating gout and urinary tract infection. The heather honey is commonly used as tonic, anti-asthma, expectorant. anti-rheumatism, arthritis, laxative, dysmenorrhea, disinfectant for the respiratory tract, and useful in acute nephritis, bladder and urinary tract infections, prostate pain and enlargement, relieving nerve pain, treating insomnia and depression.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
96.	<i>Eriobotrya japonica</i> (Thunb.) Lindl.	أكيدنيا (Akedenia)	Rosaceae	L	0.534	An infusion of leaves is used as sedative, and for diabetes, liver tonic, respiratory diseases.
97.	<i>Eruca sativa</i> Miller.	جرير (Jarjeer)	Brassicaceae	L, Sd	0.85	A fresh leaves are used for sexual weakness and blood purification, diabetes, anti-toxicant, oil from seeds is used for hair tonic, burns, skin lesions, the leaves are edible as special salad.
98.	<i>Eryngium creticum</i> Lam.	كورسانه (Korsanneh)	Apiaceae	R, L	0.781	A decoction of roots and leaves is used for liver diseases, poisonous, insect bites, anemia and infertility problems, the whole plant is edible as special salad.
99.	<i>Eucalyptus globulus</i> Labill.	كنا الشام (Kenna el-Sham)	Myrtaceae	L	0.861	An infusion of leaves is used as inhalation for respiratory diseases.
100.	<i>Eupatorium album</i> L.	غابحه (Gaphech)	Asteraceae	Ap, R	0.083	An infusion of aerial part and roots is used as expectorant and diuretic.
101.	<i>Euphorbia paralias</i> L.	الهاب (Halab)	Euphorbiaceae	R, Rm	0.247	A decoction of roots and rhizomes is used for getting rid of phlegm and relieving congestion of the respiratory system, for cases of gout and arthritis, and it is used in cases of constipation.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
102.	<i>Ficus carica</i> L.	أشجار (At-tīn)	Moraceae	F	0.818	The dried fruits externally for wounds, the milk of the fruit is used topical for warts, orally the decoction is used for catarrh and bronchitis, and for diabetes, hypertriglyceridemia, laxative.
103.	<i>Filipendula ulmaria</i> L. Maxim.	عشيرة عكليل (Eklil abiad)	Rosaceae	Ap	0.061	An infusion of aerial parts is used as diuretic.
104.	<i>Foeniculum vulgare</i> L.	شومرا (Shomra)	Apiaceae	Sd	0.527	An infusion of seeds is used as carminative, digestive, increased breast milk and diuretic and in treating of respiratory and gastrointestinal disorders.
105.	<i>Frankenia hirsute</i> L.	همراه (Hamrah)	Frankeniaceae	W	0.007	A herb is used in cosmetics due to its astringent action.
106.	<i>Fraxinus Syriaca</i> L.	دردار (Dardar)	Oleaceae	L	0.527	An infusion of leaves is used for facilitate digestion, treat tracheitis, strengthening the immune system, it is famous for its honey of which is called (Asal El-Dardar) means Syrian ash-tree honey.
107.	<i>Fumana thymifolia</i> (L.) Spach	ورد عشم (Ward elsham)	Cistaceae	Ap	0.003	An infusion of aerial parts is used against common cold, flu and as diuretic and analgesic properties and it is recommended for pain during menstruation.
108.	<i>Galium aparine</i> L.	بالسكا (Balsaka)	Rubiaceae	Ap	0.014	An infusion of aerial parts is used as diuretic.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
109.	<i>Genista acanthoclada</i> DC.	شبيك (Shweek)	Fabaceae	Ap	0.018	An infusion of aerial parts is used to treatment of the respiratory diseases, rheumatic disorders, diabetes and ulcer.
110.	<i>Geranium crenophilum</i> Boiss.	عبريت (Ebret elraee)	Geraniaceae	Fl	0.127	An infusion of flowering herb as analgesic and antiseptic and topical is used to stopped bleeding.
111.	<i>Gladiolus segetum</i> Ker Gawl.	دم الغزال (Dam elgazal)	Iridaceae	Ap	0.083	An infusion of aerial parts is used for stomach pain, delayed menstruation, gout.
112.	<i>Glaucium flavum</i> Crantz	مامثا سفرا (Mametha safra)	Papaveraceae	W	0.098	A decoction of whole plant is used in the treatment of wounds, burns and hemorrhoids, and it is used in the form of cough medicines and is used as a mild sedative. It was used in the past as a diuretic and galactagogue.
113.	<i>Gundelia tournifortii</i> L.	أككوب (Akkoub)	Asteraceae	R, S, L	0.636	A decoction of roots and stems is used for improving digestion, and increasing sexual ability in both sexes, and treating diabetes, also it is used as liver tonic, anti-constipation, and the fresh leaves are used within traditional recipes in food after removing the spines, where it is boiled and then fried in ghee or olive oil.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
114.	<i>Hedera helix</i> L.	البلبل (Leblab)	Araliaceae	L	0.243	The multiplicity of types of this plant in Syria, including the small "ivy", the madadeh <i>Calystegia sepium</i> (L.) R. Br., the <i>Convolvulus arvensis</i> L. field ivy, and the "crow's cowl", and the commonly used is the <i>Convolvulus althaeoides</i> L. "khatami ivy" widely spread in coastal villages, and it is used as animal fodder because they contain great nutritional value that reflects positively on production. also a decoction of leaves is used externally for to treat arthritis and warts, and for treatment of sores, wounds, burns, and fingernails as a dermal paste which it is placed on the affected places.
115.	<i>Hibiscus esculentus</i> L.	الباميه (Bamieh)	Malvaceae	F, Sd, P	0.098	An edible pod-like fruits can be used fresh or dried, an infusion of the roasted seeds is used to treat diabetes, it facilitates the digestion process, due to its high content of fiber, it is used in the treatment of sore throats, arthritis, asthma, and urinary infections.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
116.	<i>Hordeum bulbosum</i> L.	شعير الشعير (Shaeer bosaily)	Poaceae	W	0.141	The barley water as infusion is used the chest pain, coughs, and topically used for scabies, and melasma, and the barley tea as decoction is used as diuretic and anti-constipation, and for the treatment of common colds, and nerve infections, also the sprouted barley is used as antioxidant.
117.	<i>Humulus lupulus</i> L.	شعيرة الشعيرة (Gengel)	Cannabaceae	Fl	0.41	An infusion of flowering parts is used as anxiolytic, and digestive tonic.
118.	<i>Hypocoum pendulum</i> L.	شعيرة الشعيرة (Barbara penduleh)	Papaveraceae	R	0.01	A decoction of roots is used as diaphoretic and diuretic.
119.	<i>Hypericum perforatum</i> L.	شعيرة الشعيرة (Hashesheta elqalb)	Hypericaceae	Ap	0.341	An infusion of aerial parts is used internally for cases of constipation and spasms, and as antiseptic and analgesic, externally for the treatment of wounds and ulcers.
120.	<i>Hypericum triquetrifolium</i> Turra.	شعيرة (Aran)	Hypericaceae	Fl	0.243	An infusion of flowers is used as anxiolytic, and antidepressant.
121.	<i>Inula viscosa</i> L.	شعيرة الشعيرة (At-tayun)	Asteraceae	L, Fl	0.694	A decoction of leaves is used externally for burns, wounds, cutaneous leishmaniasis, and the oil of the flowers is prepared in olive oil to use topically. and it is used orally for anemia, respiratory problems, ulcers of the gums, diarrhea.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
122.	<i>Iris unguicularis</i> Poir.	الزنبق الأزرق الزنبق الأزرق (Aouenate)	Iridaceae	Sd, L, Rm, Fl	0.04	An infusion of seeds, rhizomes, leaves and flowers is used for treating colds, influenza, malaria, toothache, trauma and for diabetics, and the volatile oil is used for preparing perfume is used due to its aromatic smell close to the smell of violet.
123.	<i>Jasminum fruticans</i> L.	ياسمين الباري (Yasmin bari)	Oleaceae	Fl	0.16	An infusion of flowers is used internally to relieve liver pain resulting from its inflammation, it is used in the treatment of stomach and intestinal pain and headache as a result of burning heat stroke, and it is also used externally in the treatment of skin ulcers and burns.
124.	<i>Juglans regia</i> L.	جوز (Jauz)	Juglandaceae	Sd, F, L	0.86	A decoction of seeds and leaves is used orally for sexual impotency, blood purification, lymph gland enlargement, and bleeding, and topically is used for scrofula disease, sores, blisters, the fresh fruits are used for poor memory, strengthen immunity.
125.	<i>Juncus acutus</i> L.	الاسيل (Aseil)	Juncaceae	Sd, R	0.083	This is a toxic plant, but rarely a decoction of seeds is used for treatment diarrhea, anemia, and as hypoallergenic, and a decoction of roots is used in the treatment of some skin diseases.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
126.	<i>Juniperus communis</i> L.	أرار (Arâr)	Cupressaceae	F	0.549	A decoction of fruits is used for rheumatism, paralysis, tuberculosis, anemia, diuretic, and for urinary tract infection.
127.	<i>Juniperus drupacea</i> Labill.	أدرش أدرش (Adrish)	Cupressaceae	F	0.043	A decoction of the Syrian juniper fruits is used for treating the nervous disorders, kidney and bladder diseases, and used as antispasmodic.
128.	<i>Juniperus oxycedrus</i> L.	شربين (Sherpeen)	Cupressaceae	F,	0.105	Decoction of berries was used internally as tea for diabetes, obesity, bronchitis, and pneumonia, and externally is used for chronic eczema and other several skin diseases.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
129.	<i>Lactuca saligna</i> L.	لبنان (Khas bari)	Asteraceae	L	0.127	A decoction of leaves drink before bed for those who suffer from insomnia. because of its analgesic property, it is used to relieve intestinal colic pain in cases of irritable bowel syndrome. It is used in mental illnesses as a sedative for nerves and as a remedy for tension and frustration, and epilepsy and also removes depression, also lettuce leaves infusion is used to increase sweating, relieve gout, and as antipyretic, diuretic, and to remove stones from the kidneys, also used to eliminate thirst and it is useful in cases of summer heat and sunstroke, and as tonic, aperitif, and a decoction of leaves is used externally as a tonic for hair.
130.	<i>Lamium album</i> L.	لانيون (Lamiun)	Lamiaceae	Fl	0.04	A decoction of flowers without calyx is used as analgesic and for gynecological diseases.
131.	<i>Lathyrus aphaca</i> L.	لبنان (Jelban bari)	Fabaceae	Sd	0.061	The seeds - cooked, only use when immature is used for respiratory tract infection, and anti-obesity, anti-constipation.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
132.	<i>Lagenaria siceraria</i> (Molina) Standl.	قاريا قاريا (Qarea elyaqteen)	Cucurbitaceae	Sd	0.207	A decoction of seed and its oil is used internally for cases of high blood pressure, kidney disease as diuretic, it is useful for liver, stomach, intestine, diabetes, obesity, and for removing worms and topically is used for rashes.
133.	<i>Laurus nobilis</i> L.	قاريا (Gar)	Lauraceae	L, F	0.923	The industry of Aleppo laurel soap in Syria from laurel oil in the Syrian coast, especially the Kassab region with olive oil, and this industry has developed so that it produces one of the best types of soap in the world. An infusion of leaves is used to treat common cold, flu, and bronchitis, to facilitate digestion, appetite, stomach and intestinal infections, diabetics, relief from fatigue and psychological frustration, and used as body refreshment, and for migraine and headache relief. Gargle with laurel leaves water, which helps to clean the mouth, throat and nose, and to calm tooth ache. Laurel fruits oil is used externally to relieve rheumatism, joint and muscle pain, treat mycosis, skin diseases, psoriasis, and treat boils and premolars. Aromatic laurel leaves water is used for cosmetic purposes, to cleanse the face, and to relieve acne and pimples.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUJ	Ethnobotanical Uses
134.	<i>Lavandula stoechas</i> L.	كحوزاما (Khozama)	Lamiaceae	Ap	0.774	A decoction of aerial parts is used antispasmodic in colic pain and for various diseases of the central nervous system, such as epilepsy and migraine and urinary tract infections, also used as analgesic, sedative and antiseptic properties., while a decoction of aerial parts is used topically for wounds, and eczema.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUJ	Ethnobotanical Uses
135.	<i>Lavatera punctata</i> All.	كحبة زهر (Khobezeah)	Malvaceae	L, Fl	0.916	<p>A decoction of leaves are used in cases of bronchitis, cough accompanied by dry sputum that makes it easier to pass and harshness of the voice, and as a sedative to relieve minor pain and inflammation of the membranes, it can also be used to treat inflammation of the digestive system and is useful in relieving constipation, ulcers, hemorrhoids, urinary system infections and used as diuretics, useful in case asthenia. It can also be used externally to treat skin diseases and used for wounds, sores, insect stings and hemorrhoids. A decoction of flowers is used as a pain reliever for throat pain and used as a gargle for the mouth and throat. Also the mucilage of leaves is also useful for the skin and used for preparing cosmetic creams that nourish the skin and remove wrinkles, it is also used in the manufacture of soap and shampoo. Making dips with boiled mallow leaves soothes uterine congestion.</p>

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
136.	<i>Lepidium sativum</i> L.	رشاد (Rashad)	Brassicaceae	L, Sd	0.487	A decoction of leaves is used for kidney disorders, diuretic, kidney stone, to increase breast milk in female, and tonic, it used to regulate the menstrual cycle in women, and to reduce blood sugar for diabetics. and triglyceride levels and blood cholesterol level, the oil of seed is used as hair tonic.
137.	<i>Linum pubescens</i> L.	كيتان (kettan)	Linaceae	Sd	0.25	Seeds oil is used as laxative and for obesity. The seeds are used in treatment of urinary tract infections and hypertriglyceridemia.
138.	<i>Lonicera orientalis</i> Lam.	الاساله (Asaleh)	Caprifoliaceae	Ap	0.05	An infusion of aerial parts is used for respiratory infections.
139.	<i>Lotus corniculatus</i> L.	كرن العزال (Karn elgazal)	Fabaceae	R, T	0.04	An infusion of roots is used for constipation and snakebite, and prostate diseases, peptic ulcers, helps to eliminate the problem of frequent urination, cough, treatment of rheumatism, diarrhea. The tubers powder is used externally in getting rid of boils and burns, especially in diabetics, and in the treatment of fungi and nail fungi that grow on the skin.
140.	<i>Lotus gebelia</i> Vent.	رجل الاسفور الجاباليه (Rejel el-asphor aljabalyeh)	Fabaceae	R	0.014	A decoction of roots is used as diaphoretic and carminative.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
141.	<i>Malus silvestris</i> L. Mill.	تفاح (Tofah)	Rosaceae	F	0.89	Apple cider vinegar is used orally for slimming and reducing blood lipids, externally, it is used to treat skin diseases, remove corns, and as an antiseptic, and to treat lichen.
142.	<i>Malva sylvestris</i> L.	كhubbeizeh (Khubbeizeh)	Malvaceae	L, Fl	0.916	A decoction of leaves and flowers is used orally for cough as expectorant, sedative for sleep problems, digestion problems, and mouth sores, and externally for skin diseases.
143.	<i>Marrubium vulgare</i> L.	فرايون الابيض (Fraceon abyad)	Lamiaceae	L	0.08	A decoction of leaves is used as expectorant.
144.	<i>Matricaria aurea</i> (Loefl.) Sch.Bip.	بابونج داهبي (Babunaj dahabi)	Asteraceae	Fl	0.549	The flower decoction or infusion is used orally for fever, coughing and heart diseases, chest pain, headache, and kidney stone, and its used to treat skin infections, burns, wounds, eczema.
145.	<i>Matricaria chamomilla</i> L. (Loefl) Sch.Bip.	بابونج اادي (Babunaj a'adi)	Asteraceae	Fl	0.716	The flower decoction or infusion is used orally for chest diseases, treatment of stomach ache, diabetes, antispasmodic.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
146.	<i>Medicago ciliaris</i> (L.) Krock.	فاسا (Fasa)	Fabaceae	Fl, L	0.407	An infusion of flowers and leaves is used to treat menopause, diabetes, respiratory infections, dermatitis, gastrointestinal disorders, arthritis, and kidney problems, as it helps to increase breast milk production for breastfeeding mothers, and for coughing.
147.	<i>Melia azedarach</i> L.	ززالاكت ززالاكت (Zanzalakht)	Meliaceae	Sd, L	0.134	The tree is a repellent to insects and mosquitoes, and the seed oil is used externally to strengthen and lengthen hair, and to treat eczema, cramping pain and nerve pain, and boiled leaves are also used to prevent hair loss and strengthen hair, also housewives put daisies and leaves under bedspreads and carpets so as not to be exposed to the moth.
148.	<i>Melica angustifolia</i> Boiss. & Blanche.	مالكا دايكا (Malika dayka)	Poaceae	Fl	0.04	A decoction of flowers is used as diuretics and antispasmodic, analgesic and is used to treat stomach pain. One of the uses of this plant is that it is packed in small bags and placed in wardrobes for its scented effect.
149.	<i>Melissa officinalis</i> L.	مليسا (Mellisa)	Lamiaceae	L	0.647	A decoction of leaves is used orally as carminative, antispasmodic, depression, anxiety, cough, respiratory infection.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
150.	<i>Mentha pulegium</i> L.	نعنع نانا (Nana bari)	Lamiaceae	L	0.858	A decoction of leaves is used orally as antiseptic, menstrual complaints, diaphoretic, sedative, itching, common cold, respiratory tract disorder, antispasmodic.
151.	<i>Menyanthes trifoliata</i> L.	نعنع نافل (Nafelmaa)	Menyanthaceae	L	0.083	A decoction of leaves is used to treating rheumatism and arthritis, and improving digestion, increasing appetite and weight, stimulating secretion of glands, and tonic.
152.	<i>Michauxia campanuloides</i> L'Hér.	نعنع كافراون (Kafraoun)	Campanulaceae	R, S, L	0.15	Roots and stems are peeled and eaten raw. Young leaves are sautéed with onions and oil and used as a nutritious and digestive stimulant.
153.	<i>Micromeria myrtifolia</i> Boiss. & Hohen.	نعنع (Zufa)	Lamiaceae	L	0.632	A decoction of leaves is used externally for wounds, sores, skin diseases, and its used orally for colic and cold, heart diseases, digestive system and asthma, expectorant, carminative.
154.	<i>Myrtus communis</i> L.	نعنع (Aass)	Myrtaceae	L	0.73	A decoction of leaves is used for diarrhea, respiratory tract diseases, and topically for hemorrhoids.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
155.	<i>Nigella sativa</i> L.	حَبَبَتِ الْبَارَكَةِ (Habbet barakeh)	Ranunculaceae	Sd	0.738	Seeds are ground finely and used as expectorant, carminative, impotency in male, antispasmodic, hypoglycemic, oil used topically for skin diseases, hair growth, and orally to strengthen the body's immunity.
156.	<i>Nerium oleander</i> L.	دِفْلَه (Dephleh)	Apocynaceae	F, R	0.036	A toxic plant, rarely the juice of fruits is used topically with careful administration for anal fissure, an oil which is extracted from the peel of the roots is used for topically treating psoriasis and dandruff diseases.
157.	<i>Olea europaea</i> L.	زَيْتُون (Zaitoon)	Oleaceae	L	0.934	A decoction of leaves is used for diabetes, high blood pressure, and slimming, the olive oil is used for coughing, vasodilator, laxative, hyperacidity and stones in kidney, and its used topically for skin diseases.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
158.	<i>Ononis hirta</i> Poir. & <i>Ononis spinosa</i> L.	شبرك شبرك (Shabrak)	Fabaceae	R, Fl, L	0.054	A decoction of roots is used to treat kidney and bladder stones, as a diuretic, and for gout, cystitis, excessive fluid retention and rheumatism, and is also popularly used for slimming and antitussive. Externally, it was used for the healing of wounds, eczema and the other skin disorders, also an infusion of leaves and flowers is used as astringent, and antiseptic.
159.	<i>Opuntia ficus-indica</i> L. Mill.	تن اسابر (Tin alsabr)	Cactaceae	F, L	0.698	Fresh fruits and leaf extract or juice are used orally as laxative, anti-inflammatory, carminative, digestive, and are used topically for sun burns, skin care, burn, wound.
160.	<i>Origanum syriacum</i> L.	زوبا'ا زوبا'ا (Zoba'a)	Lamiaceae	Ap	0.934	A decoction of aerial parts is used for catarrh, carminative, diuretic, headache, rheumatism, antiseptic, neck stiffness, stomach cramps, stomach discomfort, indigestion, cholesterol reduction, expectorant, diuretic.
161.	<i>Orlaya daucooides</i> L. Greuter	هورتمنه (Hortmeneh)	Apiaceae	W	0.28	It is cooked as a mixture with other types of an edible herbs, and this is called (marshousheh).
162.	<i>Oryzopsis miliacea</i> L. Asch. & Schweinf.	ريزه نايمه (Rezieh naemeh)	Poaceae	W, R	0.04	A decoction of grass and roots is used as diuretic.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
163.	<i>Osyris alba</i> L.	مكّنس (Maknis)	Santalaceae	W	0.025	A decoction of whole plant is used rarely for diarrhea and dysentery.
164.	<i>Paliurus spina-christi</i> Mill.	شبهان شابهان (Shabhan)	Rhamnaceae	F	0.007	A decoction of fruits is used as anti-rheumatic, diuretic, and for diarrhea, and used to lowering cholesterol and triglyceride levels in the blood, and as antihypertensive.
165.	<i>Papaver rhoeas</i> L.	شكاك النومان (Shakaek alnuman)	Papaveraceae	Fl	0.407	A decoction of flowers is used for whooping cough, headache, and has hypnotic effect, analgesic, as relieves stress.
166.	<i>Paronychia argentea</i> Lam.	زهرت المسه (Zahret el-maseh)	Caryophyllaceae	Fl	0.64	An infusion of flowers is used as diuretic, and for kidney stone.
167.	<i>Petroselinum sativum</i> Hoffm.	بكدونس (Bakdoones)	Apiaceae	Fl	0.65	An infusion of flowers is used for anemia, and calms nerves, and for treating bruises, insect bites and rough skin, and anti-toxic, it helps reduce inflammation and also helps cleanse the liver.
168.	<i>Phaseolus vulgaris</i> L.	فاسوليه (Phasolieh)	Fabaceae	F, Bu	0.6	The fruits are boiled and taken as a diuretic and a treatment for kidney diseases, diabetes, joint diseases and rheumatism. Also, grind the buds and place them in the form of dermal paste on the affected area.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
169.	<i>Phlomis longifolia</i> Boiss. & Blanche	اللاهب (Laheeb)	Lamiaceae	Ap	0.047	It is a bee plant and a source of nectar and pollen, and an infusion of aerial parts is used for cases of rotting and pus.
170.	<i>Phragmites communis</i> Trin.	كساب بري (Kasab bari)	Poaceae	S, R	0.04	A decoction of stem and root is used as diuretic, also the ashes of plants with apple cider vinegar are used in the treatment of alopecia. Peasants sometimes using the green parts of plant after cutting it to prepare organic fertilizers.
171.	<i>Phillyrea media</i> L.	الزارود (Zarwd)	Oleaceae	W	0.014	An infusion of the plant is used as a diuretic, menstrual, and mouthwash.
172.	<i>Pistacia atlantica</i> Desf.	البطم (Batm)	Anacardiaceae	F, G	0.094	The fruits of the mastic are called green ivory in the Syrian countryside, fresh green fruits is used in the treatment of liver diseases, tumors, joint diseases, and for the treatment of colds and headaches, the treatment of joint pain, gum tree is useful in treating scabies, wounds and fungal diseases, the traditional Jarmashi bread with the fruits of the mastic, where the green fruits give it a delicious taste and gives great energy and vitality, Mastic tree keeps poisonous insects away.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
173.	<i>Pinus brutia</i> Ten.	سانوبار بروتي (Sanobar bruti)	Pinaceae	Bk, G, Rs	0.047	A decoction of the bark is used topically for wounds as a soothing plaster. A boiled extract of the gum of Calabrian pine is also used as a pain reliever for rheumatism, and a resin is used for colds, constipation and chronic bronchitis. Externally, the tar was incorporated into an ointment, or tar shampoo, and employed as a remedy for such chronic skin diseases such as psoriasis and eczema, and similar skin problems, and is used internally for hemorrhoids, as an astringent for diarrhea, and for cough remedies.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
174.	<i>Pinus halepensis</i> Mill.	شجرة السانبار (Sanobar halabi)	Pinaceae	Bk, Bu, Sd	0.229	The infusion of bark, buds and needles is used in the treatment of kidney and bladder diseases, antihelminthic, antiseptic and diuretic. Treatment of mucous membranes and respiratory diseases, such as: colds, coughs, tuberculosis, influenza, bronchitis, stuffy nose, and in herbal baths as a treatment for rheumatic diseases, and it is used in the form of compresses, and pine seed oil is used in the treatment of cold, cold and rheumatism symptoms, and is useful For various skin problems, such as: wounds, burns, boils, and sores, and to relieve muscle and nerve pain.
175.	<i>Pistacia lentiscus</i> L.	شجرة الباتيم (Batem)	Anacardiaceae	L, G	0.25	An infusion of leaves is used internally to treat respiratory problems such as: sore throat, bronchitis, allergies, and asthma, stomach ulcers, and the mastic gum is used to relief throat sore and stomach aches, diabetes, jaundice and gastrointestinal disorders, and topically is used for wounds and burns healing, haemorrhoids.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
176.	<i>Pisum elatius</i> M.Bieb.	بازلة بارية (Bazela barieh)	Fabaceae	P, Sd	0.214	A decoction of pods is used for diabetes, digestion tonic, irritable bowel (IBS), lipid-lowering, and the seed powder is used to treat some skin diseases topically.
177.	<i>Plantago lanceolata</i> L.	لسان الحمل (Lisan elhamal)	Plantaginaceae	L, Sd	0.167	An infusion of leaves and seeds is used as expectorant, and slimming.
178.	<i>Platanus orientalis</i> L.	دلب (Delb)	Platanaceae	Ph	0.112	The phloem is used as phlegm remover.
179.	<i>Plumbago europaea</i> L.	خاميشه (khamisheh)	Plumbaginaceae	Fl	0.01	An infusion of flowers is used topically for treating alopecia and psoriasis.
180.	<i>Portulaca oleracea</i> L.	بقلة (bakleh)	Portulacaceae	W, Fl	0.614	A fresh herb is used as tonic and laxative. An infusion of flowering herbs is used for kidney disorders and improve digestion, prevention of heart disease and cancer, and for weight reduction, stomach diseases, and bone strengthening.
181.	<i>Polygala supina</i> Schreb.	مستادرة موftaresheh (Mostadera moftaresheh)	Polygalaceae	W	0.018	A decoction of whole plant is used as an anthelmintic and expectorant.
182.	<i>Polygala amara</i> L.	الغالي (Amber ghali)	Polygalaceae	Fl	0.007	An infusion of flowering herb is used as diuretic, tonic, digestive, and expectorant.
183.	<i>Polygonum maritimum</i> L.	ببببب (Batbat)	Polygonaceae	Fl	0.065	A decoction of flowering herb is used as analgesic, antiseptic, astringent, bile tonic, laxative, diuretic, tonic, anthelmintic.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
184.	<i>Populus nigra</i> L.	شجرة الحور (Hour aswad)	Salicaceae	Bk, Bu	0.17	An infusion of bark and buds is used for fever, gout, kidney disease, prostatic hypertrophy, prostatitis, colds, influenza, toothache also it is used topically for burns, hemorrhoids, and rheumatism.
185.	<i>Poterium spinosum</i> L.	شجرة البان (Ballan)	Rosaceae	R	0.174	A decoction of roots is used internally as expectorant, digestive, diuretic, anti-diarrhea, and for diabetics, while a decoction of aerial parts is used topically for hemorrhoids.
186.	<i>Primula vulgaris</i> Huds.	زهرة الربيع (Zahrata elrabee)	Primulaceae	Fl, R	0.069	An infusion of flowers and roots internally is used as expectorant, and externally it is used for eczema.
187.	<i>Prunella orientalis</i> Bornm.	شجرة الكلاا شجرة السامرا (Kelaa elsamra)	Lamiaceae	Ap	0.094	An infusion of aerial parts is used internally for hypertension.
188.	<i>Prunus avium</i> (L.) L.	كرز (Karaz)	Rosaceae	S, F	0.425	Cherry stalk infusion is used as a sedative, helps in losing weight, is good for the liver, and is a diuretic in for kidney stone. The fruits are nutritious and useful for diseases of the respiratory tract infections.
189.	<i>Prunus divaricata</i> Ledeb.	شجرة الجانريك (Janerek)	Rosaceae	F	0.272	Cherry plum fruits are used as an appetite suppressant, as it helps in the digestion of food, and to prevent kidney disease, and to control blood pressure.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
190.	<i>Prunus mahaleb</i> L.	مهلاب (Mahlab)	Rosaceae	F	0.069	The mahlab cherry is used in the manufacture of "pastries" and "sweets", and the decoction of the necks of the cherries of the mahleb is used in the treatment of kidney diseases.
191.	<i>Prunus persica</i> (L.) Batsch.	دوراك (Doraak)	Rosaceae	F	0.305	Fruits juice is used for digestive disorders, helps fight constipation, kidney disease, and rheumatism.
192.	<i>Psoralea bituminosa</i> L.	زفتية زفتية Owayneh zeftieh	Fabaceae	Fl, L	0.025	An infusion of flowers and leaves is used externally to treat some skin diseases such as psoriasis, vitiligo, and skin ulcers.
193.	<i>Pteridium aquilinum</i> (L.) Kuhn	سركاس elneser	Pteridaceae	R, L	0.21	A decoction of root is useful in treating varicose veins and chronic headaches, also is used as laxative and anthelmintic, the crushed leaves are applied to pain, the sufferer in this case will feel severe pain, but it will end after a short time, it is used for back pain, rheumatism, arthritis, gout.
194.	<i>Punica granatum</i> L.	رمان (Rumman)	Punicaceae	F, Bk	0.454	The fruit juice is used for mouth sores, cough, malabsorption syndrome, hypercholesterolemia, the bark is used as anthelmintic, and for diarrhea, amebic dysentery, antibacterial, ulcer.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
195.	<i>Pyrus syriaca</i> Boiss.	أجاس (Ajas)	Rosaceae	F	0.101	Fresh fruit is used to improve digestion, and to lose weight, while its syrup is used as a diuretic and laxative.
196.	<i>Quercus calliprinos</i> Webb	قنديان (Cendyan Ady)	Fagaceae	Bk	0.083	A decoction of bark is used as antiseptics and to treat gastrointestinal tract (GIT) disorders such as chronic diarrhea, dysentery, and jaundice. It is used topically for hemorrhoids and wound healing.
197.	<i>Quercus infectoria</i> G.Olivier	قنديان (Ballot)	Fagaceae	F, Bk	0.105	A decoction of fruits and bark is used as anti-bleeding and pain reliever, and helps in digestion, blood purification, coughing, and topically is used for eczema treatment.
198.	<i>Quercus ithaburensis</i> Decne.	قنديان (Cendyan)	Fagaceae	S, Bk, F	0.13	A decoction of stem and bark and fruit is used for cancer, fever, bed wetting, high blood pressure and ulcer.
199.	<i>Raphanus raphanistrum</i> L.	فجل بري (Fejel barri)	Cruciferae	R, L, S	0.516	A decoction of roots is used as diuretic, anti-cancer, and for rheumatism, and the dried roots is used for liver diseases, a decoction of leaves and stems as diuretic.
200.	<i>Rhamnus alaternus</i> L.	نابك (Nabak)	Rhamnaceae	L	0.123	A decoction of leaves is used as a diuretic, laxative, hypotensive drug and for the treatment of diabetes.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
201.	<i>Rhus coriaria</i> L.	شومق (Sumac)	Anacardiaceae	F	0.338	A decoction of fruits is used internally for respiratory tract infection, and coughing, colds and influenza, bronchitis, and is used for digestive disorders, constipation and stomach disorders, while a gargling is used for sore throat and mouth. A boiled sumac peel is used to treat skin fungus, burns and skin ulcers.
202.	<i>Rhus cotinus</i> L.	بوكاس (Bakas)	Anacardiaceae	W	0.098	A decoction of herb is used to prepare an herbal tea for treatment of diarrhea, mouth inflammation and gastric and peptic ulcers, also it is used as antiseptic, anti-inflammatory while topically it is used for hair loss, leg sweating and wound-healing.
203.	<i>Rhus tripartita</i> (Ucria) Grande	أرينه (Aryneh)	Anacardiaceae	W	0.05	A decoction of whole plant is used as diuretic, and for kidney stone.
204.	<i>Rosmarinus officinalis</i> L.	عكليل الجبال (Eklil aljabal)	Lamiaceae	L	0.901	An infusion of leaves is used respiratory diseases, heart disorders, to enhance memory, enhance the body's immunity, treat headache, antidepressant, and tonic.
205.	<i>Rubia aucheri</i> Boiss.	روبيا (Robia)	Rubiaceae	R	0.047	A decoction of roots is used internally for kidney and bladder stones, and topically for strengthening of hair.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
206.	<i>Rubus fruticosus</i> G.N.Jones	توت العليق (toot alealiq)	Rosaceae	F, R	0.047	An infusion of fruits and root is used for kidney stone, glycemic, atherosclerosis, hypotensive, and anticoagulant.
207.	<i>Rubus sanctus</i> Schreb.	توت العليق (Dees)	Rosaceae	F, L	0.323	An infusion of fruits is used as diuretic and laxative and general tonic. A decoction of leaf is used for disorders of the gastrointestinal tract, the respiratory tract.
208.	<i>Rumex conglomeratus</i> Murray	رمان (Hamad)	Polygonaceae	Ap, R	0.08	An infusion of aerial parts and roots of the plants are used as diuretic and improve digestion, analgesic, coughs of all kinds, colds and bronchitis.
209.	<i>Rumex obtusifolius</i> L.	رمان (Homedah)	Polygonaceae	L	0.05	An infusion of leaves is used for mouth ulcers, for anemia, adjust sugar, improve blood circulation, the cooked leaves are edible as special traditional Syrian recipe known as Syrian saleeg.
210.	<i>Ruscus aculeatus</i> L.	الرفوف (Safandar)	Alliaceae	L	0.014	A decoction of leaves and fruit peels are astringent, and for menstruation, hepatitis, colon disorders, venous insufficiency, hemorrhoids, asthma, uterine infections, and a diuretic for cases of urinary system infections, and is also used in the treatment of jaundice, and urinary tract stones, also it is used to heal broken bones, and twisted joints.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
211.	<i>Salix alba</i> L.	سوسف ابياد (Sasaf abiad)	Salicaceae	L, Pe	0.087	A decoction of leaves and peels are used for intermittent fevers, arthritis, gout, bladder infections and high temperature.
212.	<i>Salvia aramiensis</i> Rech.f.	ميراميةا (Meiramiea)	Lamiaceae	L, R	0.847	An infusion of leaves is used for stomach and colon disorders, regulator and sterilizer for uterine diseases in women, intestinal antiseptic, diuretic, a decoction of roots is used for treating diabetes.
213.	<i>Sambucus ebulus</i> L.	بايلاسن (Baylasn)	Caprifoliaceae	Fl, Sd	0.24	An infusion of flowers and seeds is used in the treatment of diabetes, constipation, abdominal gas, cold and flu symptoms.
214.	<i>Sarcopoterium spinosum</i> L. Spach	بالان شوكي (Ballan shawki)	Rosaceae	R, Sd	0.265	A decoction of roots is used topically for treating joints and spinal disc, a decoction of seeds for hemorrhoids, diabetes.
215.	<i>Saponaria officinalis</i> L.	سبونيا ايسلاغ (Aslag)	Caryophyllaceae	R	0.28	A decoction of roots is used for getting rid of phlegm and relieving congestion of the respiratory system, for cases of gout and arthritis, and it is used in cases of constipation.
216.	<i>Sarothamnus scoparius</i> (L.) W.D.J.Koch	وازال (Wazal)	Fabaceae	Fl, Sd, Br	0.047	A decoction of flowers and seeds and soft branches is used to treat urinary disorders.
217.	<i>Scabiosa syriaca</i> L.	سكابيا زارت الـجرب (Zaret el-jarab)	Dipsacaceae	Ap	0.029	The juice of aerial parts is used for treatment of scabies topically.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
218.	<i>Scandix pecten-veneris</i> L.	موشيت الزهراء (Moushet elzahra)	Apiaceae	Ap	0.025	A wild green leafy is edible and it is used in the Mediterranean diet, which are either consumed boiled by just adding Syrian olive oil, or in pies.
219.	<i>Scutellaria baicalensis</i> Georgi.	داركا (Darka)	Lamiaceae	Ap, R	0.021	A decoction of aerial parts and roots as diuretic, also is used for asthma, mental and nervous distress, insomnia, epilepsy, dysmenorrhea.
220.	<i>Securigera securidaca</i> (L.) Degen & Dorfl	سوبايرا (Sobaira)	Fabaceae	Sd	0.567	A decoction of seeds is used for diabetes, hyperlipidemia, high blood pressure, gastric reflux, and externally it is used for wound healing.
221.	<i>Setaria viridis</i> (L.) P.Beauv.	ليزيك (Lezeek)	Poaceae	L, S, W, Sd	0.076	A decoction of leaves and stems for stimulating digestion, The plant is crushed and mixed with water then used as an external application in the treatment of psoriasis, bruises, various wounds, cutaneous eczema, vaginal gonorrhoea. While the seed is used as diuretic, febrifuge, refrigerant and tonic, to treat intestinal infection with parasites and worms, jaundice, and to reduce swelling of the legs and feet in patients with urinary tract diseases, swollen lymph nodes, and help in cases of cystitis.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
222.	<i>Silybum marianum</i> (L.) Gaertn.	كرفس البحر كرفس البحر (kharfish)	Asteraceae	Sd	0.683	A decoction of seeds is used to treat Crohn's disease, ulcerative colitis, and inflammation of the gastrointestinal tract, and is used as an immune system booster, to prevent cancer, and to treat liver diseases and liver infections, cleanse the liver from accumulated toxins, contribute to the production of breastfeeding milk, treat a lack of appetite and indigestion, dyspepsia, aphrodisiac for women and men, and diabetics, varicose veins, for the treatment of congestion of the uterus and uterine infections.
223.	<i>Smilax aspera</i> L.	عنب الهذه عنب الهذه عنب الهذه (Enab elhaieh)	Smilacaceae	R	0.047	Root powder used as a male aphrodisiac and increases fertility, and for arthritis and gout, flatulence and carminative, chronic neuropathy, and for cough and colds, fatigue, muscle pain and weakness, useful as treatment for low sexual desire, impotence, headache, gout, liver damage, indigestion, fluid retention and fever. also it is used for treating psoriasis, herpes, skin problems, foot fungus, wounds, ulcers.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
224.	<i>Solidago virgaurea</i> L.	أسا عذاب (Asa eldhab)	Asteraceae	Fl	0.025	A decoction of flowers is used to treat diabetes and kidneys disorders, intestinal diseases, diseases of the digestive system and stomach. The plant secretes a sticky substance known locally as "Nashiha", which is taken from the Syrian dialect, meaning the sticky substance that attracts dust and soil.
225.	<i>Sorbus flabellifolia</i> (Spach) Hedl.,p.p.3144	غوبيرة (Gobaira)	Rosaceae	F	0.058	A decoction of fruits is used for kidney diseases, diabetes, rheumatism, disorders of the uric acid, and menstruation disturbances.
226.	<i>Sorghum halepense</i> L. Pers.	حليان (Halyan)	Poaceae	W	0.043	It's a poison plant, and the plant is used for the treatment of urinary tract disorders, diuretic, kidney stone.
227.	<i>Stachys officinalis</i> L. Trevis.	قستارن (Qastaran)	Lamiaceae	R, Ap, L	0.04	A decoction of roots and aerial part is used as diuretic and tonic agent, also the fresh leaves are placed directly on sores and wounds to speed up their healing.
228.	<i>Stellaria media</i> (L.) Vill.	نجمية (Najmyeh)	Caryophyllaceae	R, Ap	0.018	A decoction of roots and aerial part is used topically for cleaning wounds. Also it is used internally for rheumatism, and gout.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
229.	<i>Styrax officinalis</i> L.	شجرة المصباح شجرة المصباح (Mahlab)	Styracaceae	G	0.203	<p>It is attributed to Jableh and is called styrax gabalite, a sticky gum that resembles very white honey called lactic honey. Milky is the gum that is extracted from the styrax tree (in English snowbell bush, in Arabic Maiah). The gum extracted from the tree is used as an incense and it is used to treat cough as expectorant, respiratory tract infection, cold, hoarseness. Externally, it is used as an antiseptic to treat wounds, ulcers, rheumatism, gout and joint diseases. Also it is used as a fixative in the manufacture of perfumes, and the gum resin called (Al-A'bhira) is used in the manufacture of a sacred aromatic incense used in churches. Burning a plant is used to keep snakes away.</p>
230.	<i>Symphytum officinale</i> L.	شجرة الحنظل شجرة الحنظل (Synfiton)	Boraginaceae	R, Ap	0.436	<p>A decoction of roots and aerial part is used topically for wounds healing, and internally is used as expectorant.</p>

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUJ	Ethnobotanical Uses
231.	<i>Tamarix articulata</i> Vahl	الترفا (Tarfa)	Tamaricaceae	L, W	0.09	The plant farash smoke is used for cold, the salt which is collected from trees is used to treat eye diseases. Its leaves are cooked to help treat spleen diseases, and it is anti-diarrhea and jaundice, for the treatment of toothache as gargle, and cups of its wood are prepared to take advantage of its properties, and it is placed on the head for those affected by lice and nits in order to get rid of them, and the ashes of farash is scattered on wet sores and dries them, especially sores That is from burning fire.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
232.	<i>Tamus communis</i> L.	الجموح الجموح الجموح (Jarmoua')	Dioscoreaceae	R, T, F	0.007	All parts of the black bryony plant, especially fruits are highly toxic, causing severe abdominal pain, staining and burning in the mouth, vomiting and diarrhea. Fruits often poison children due to their attractiveness, and cause burns and blister the mouth and digestive system, as well as skin contact with plant sap, especially fruit sap. To its sensitivity, redness and swelling. Some local people use (cutting the roots or tuber) externally, as it is applied to the site of pain in cases of rheumatism and sciatica, as it increases the blood flow to the skin where the roots are applied. And internally it is used for diabetes.
233.	<i>Tanacetum vulgare</i> L.	الجموح الجموح الجموح (Hasheshe t eldood)	Asteraceae	Ap	0.018	An infusion of aerial parts is used as digestive stimulant, and to treat coughs, respiratory tract infections and gastritis, and to expel intestinal worms, and to treat rheumatism, venereal diseases and neurological diseases. It is also used externally to treat wounds. The aromatic scent of the plant is used to repel certain types of ants.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
234.	<i>Taraxacum officinale</i> (L.) Weber ex F.H.Wigg.	تارخاشقون تارخاشقون (Tarkhashqoun)	Asteraceae	W	0.64	An infusion of whole plant is used as diuretic, general tonic, and slimming, and for liver diseases, digestive disorders, diabetes, gallstones, detoxifying, colon conditions, joint pain, rheumatism and gout. Also it is used topically to treat skin diseases such as psoriasis, eczema, acne, itching and varicose veins.
235.	<i>Teucrium chamaedrys</i> L.	بأخورة (Bakhoura)	Lamiaceae	W	0.018	An infusion of whole plant is used for treatment the kidney stones.
236.	<i>Teucrium polium</i> L.	جوديه (Jowdeh)	Lamiaceae	Ap	0.61	A decoction of the aerial parts of the herb is used to treat jaundice, peptic ulcer, arthritis, rheumatism, and intestinal and renal colic, and for cold diseases, and for cases of poor appetite and indigestion, and it is a diuretic and menstruation, and it is cooked with eggs and eaten as a treatment for abdominal pain.
237.	<i>Thymus syriacus</i> Boiss.	زاتار (Zaatar)	Lamiaceae	L	0.84	An infusion of leaves is used as anti-cough, expectorant, bronchitis, carminative, antispasmodic, anthelmintic, and it is used for treating diabetes.
238.	<i>Trifolium campestre</i> Schreb.	أسفار (Asfar)	Fabaceae	W	0.007	An infusion of plant is used for coughs, colds, fevers, and as antirheumatic.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
239.	<i>Trifolium pratense</i> L.	نافل (Nafel elmourooj)	Fabaceae	L	0.014	An infusion of leaves is used as diuretic, and anti-inflammatory.
240.	<i>Trifolium purpureum</i> Loisel.	بارسيه (Barseem orguwani)	Fabaceae	Ap	0.029	An infusion of aerial parts is used for diarrhea, cough, insomnia, and nervousness.
241.	<i>Trifolium repens</i> L.	نافل (Nafel)	Fabaceae	Ap	0.03	An infusion of aerial parts has is used in the treatment of coughs, colds, fevers, acute bronchitis, and for menopausal syndrome, and it is used topically for skin infections.
242.	<i>Trigonella foenum-graecum</i> L.	هلبيه (Helbeh)	Fabaceae	Sd	0.541	A decoction of seeds is used as antitussive, hypercholesterolemia, galactagogue, atherosclerosis, diabetes, blood pressure, heartburn, cold, inflammations, topical massage for joint and bone pain, kidney stone, and to gain weight, the oil of seed is used topically for breast enlargement.
243.	<i>Triticum aestivum</i> L.	هنتاه (Hentah)	Poaceae	Sd, Pe	0.694	An infusion of seeds is used orally for constipation and obesity as the bran husk is used, external its used as compresses for skin itch.
244.	<i>Tussilago farfara</i> L.	فرفرا (Farfrah)	Asteraceae	Fl	0.174	A decoction of flowers is used to treat productive cough with sputum, and it is used in diseases of the respiratory system and bronchopulmonary.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
245.	<i>Ulmus canescens</i> Melville	شجرة النشتم شجرة النشتم (Nashem)	Ulmaceae	Bk, L, Pe	0.083	A decoction of the bark and leaves is used to stick soft wounds. If soaked with vinegar, it is used to expel phlegm. The crushed peels with white medical vaseline is used to dress the affected skin areas, astringent, cleanser for the skin, especially in cases of impetigo, freckles and freckles, Eau d'Orme water is used in cleaning and disinfecting wounds and in washing eyes affected by conjunctivitis.
246.	<i>Urtica dioica</i> L.	كرايس (Kurrails)	Urticaceae	Fl, Sd, R	0.687	An infusion of flowering part and seeds and roots is used orally for rheumatism, joint and chest pain, diabetes, anemia, digestive diseases, kidney disease, gall and diuretic, cough and respiratory system, and for cessation of nosebleeds, the oil is used for cases of hair loss and cases of burns.
247.	<i>Verbascum thapsus</i> L.	بوسير ابياد (Boseer abiad)	Scrophulariaceae	Fl, L	0.054	A decoction of flowers and leaves is used as diuretic.
248.	<i>Verbena officinalis</i> L.	هشيشة (Hasheshet elawjaa)	Verbenaceae	Ap	0.065	An infusion of aerial parts is used as antispasmodic and general tonic.
249.	<i>Valeriana officinalis</i> L.	شجرة الناردية شجرة الناردية (Nardien)	Caprifoliaceae	R	0.163	A decoction of roots is used as sedative and hypnotic, for treating mild sleep disorders and nervous tension.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
250.	<i>Verbascum tripolitanum</i> Boiss.	لوبيده (Lopedeh)	Scrophulariaceae	Fl	0.007	A decoction of flowers is used as expectorant and diuretic.
251.	<i>Vicia faba</i> L.	فول (Fool)	Fabaceae	Sd	0.403	Seeds are used as tonic, diuretic, beneficial to the heart, and good for women in the menopause stage, maintains the level of sugar in the blood, and Increased hemoglobin rate.
252.	<i>Vicia hybrida</i> L.	باكية (Baikieah)	Fabaceae	Sd	0.05	Its seeds are used against smallpox and erysipelas, and for skin edema. It is not used as a foodstuff due to its toxic elements that do not go away until after soaking in cold water for 24-36 hours, and then it is cooked with salt water.
253.	<i>Vigna sinensis</i> (L.) Savi ex Hausskn.	لوبيا (Lowbiah khadra)	Fabaceae	Sd, S	0.41	Green seeds and stems are used cooked to rid the body of toxins, to slim, to protect the heart, to diabetics, to depressive states.
254.	<i>Viola suavis</i> M.Bieb.	بانفسج (Banafsaj)	Violaceae	Fl, L	0.556	An infusion of flowers and leaves is used to treat bronchitis and to facilitate spotting in respiratory tract infections. And it is used in the form of compresses for the eyelids affected by conjunctivitis, and in hot baths for the feet to treat insomnia.

No.	Name of Species	Common Name (Arabic Language)	Family	Part Used	MUV	Ethnobotanical Uses
255.	<i>Vitex agnus-castus</i> L.	كاف مريم (Kaf Mariam)	Verbenaceae	F, Sd	0.585	A decoction of fruits and seeds is used to reduce premenstrual symptoms, treat acne, and treat prostate enlargement.
256.	<i>Vitis vinifera</i> L.	كرمه بريه (Karmeh bareieh)	Vitaceae	F, Sd	0.21	Grapes fruits are popularly used as an optimal food to revitalize the body, especially the brain, and it is a good food for the heart, and is considered one of the most important sources of energy for muscles, besides the fruits are used for constipation and gout, the seeds are used as antihypertensives and reduce blood sugar, The seeds are used for menstrual cramps and period regulation, dried fruits called (zabeb for red and ashlamesh for white) are used to strengthen the body's immunity, and as general tonic, the seed oil is used as tonic for hair, and for skin diseases, the fruits vinegar also used for slimming.
257.	<i>Xanthium strumarium</i> L.	حسك (Hasak)	Asteraceae	Sd, L	0.054	A decoction of seeds and leaves is used for infertility and impotency in males, galactagogue.
258.	<i>Zea mays</i> L.	شباشل الزهر (Shabashel el-zurah)	Poaceae	Si	0.72	An infusion of corn silk is used for regulating blood sugar, reducing cholesterol, as diuretic for kidney stone, weight loss, gout, bedwetting.

L: Leaves, S: Stem, R: Root, W: Whole Plant, Fl: Flower, F: Fruit, Sd: Seed, Rm: Rhizome, Rs: Resin, Ap: Aerial Parts, Bb: Bulb, Sk: Sticks, Sh: Shoots, T: Tubers, Bu: Buds, Bk: Bark, G: Gum, P :Pods, Ph: Phloem, Pe: Peel, Br: Branches, Si: Silk.

### 3.3. Botanical families of plants used

The most commonly mentioned family is Asteraceae (13.12%), followed by Fabaceae (8.49%), then Rosaceae (7.33%) and Lamiaceae (6.56%), Poaceae (5.79%), Apiaceae (3.08%), Anacardiaceae and Boraginaceae and Caryophyllaceae (1.93%), then Alliaceae, Brassicaceae, Cupressaceae, Malvaceae, and Oleaceae (1.54%), Caprifoliaceae, Cistaceae, Convolvulaceae, Cucurbitaceae, Fagaceae, Papaveraceae, Pinaceae, Polygonaceae, and Primulaceae (1.15%), Amaranthaceae, Apocynaceae, Araceae, Cyperaceae, Dipsacaceae, Ericaceae, Euphorbiaceae, Hypericaceae, Iridaceae, Myrtaceae, Orchidaceae, Polygalaceae, Portulacaceae, Pteridaceae, Ranunculaceae, Rhamnaceae, Rubiaceae, Rutaceae, Salicaceae, Scrophulariaceae, Solanaceae, and Verbenaceae (0.77%), then Acanthaceae, Aceraceae, Acoraceae, Araliaceae, Aristolochiaceae, Asparagaceae, Betulaceae, Cactaceae, Campanulaceae, Cannabaceae, Capparaceae, Cornaceae, Cruciferae, Dioscoreaceae, Ephedraceae, Equisetaceae, Frankeniaceae, Gentianaceae, Geraniaceae, Juglandaceae, Juncaceae, Lauraceae, Linaceae, Meliaceae, Menyanthaceae, Moraceae, Plantaginaceae, Platanaceae, Plumbaginaceae, Punicaceae, Santalaceae, Smilacaceae, Styracaceae, Tamaricaceae, Ulmaceae, Urticaceae, Violaceae, and Vitaceae (0.38%). (Figure 2)

### 3.4. Medicinal use plants (MUV)

Medicinal use plants (MUV) are utilized to find the most frequently used plant species in the study area. Its value ranged from 0.003 to 0.934 (Table 2). The calculated results of MUV showed that *Olea europaea* L., *Origanum syriacum* L. was ranked first (MUV= 0.934) followed by *Laurus nobilis* L. (MUV= 0.923), *Lavatera punctata* All., *Malva sylvestris* L. (MUV= 0.916), then *Allium cepa* L. (MUV= 0.909), *Rosmarinus officinalis* L. (MUV= 0.901), *Malus silvestris* L. Mill. (MUV= 0.89), *Allium trifoliatum* Cirillo (MUV= 0.887), while the lowest value was found for *Fumana thymifolia* (L.) Spach and *Cistus creticus* L. (MUV= 0.003).

### 3.5. Medicinal parts of the plant used

The analysis of the ethnobotanical data showed that coastal region was best suited to the medicinal plant and rangeland. Ethnobotanical use categories showed that leaves were commonly used parts for making indigenous recipes a (21.06%), followed by roots (13.6%) and flowers (11.4%) and seeds (11.2%) and fruits (10.93%) and aerial parts (10.1%) then the others parts of plant are rarely used (Figure 3).

### 3.6. Modes and conditions of medicine preparation

The analysis of the ethnobotanical data showed that the most of the herbal recipes (75.2%) were made from fresh material followed by their dried form (24.8%). The recipes in the most cases were obtained from single herb, but some of recipes were prepared together, and there is a famous local mixture called Damask tisane (*zhourate Shamieh*) or (Syrian *zahraa*) [117]. The major solvent was water (68%), honey (17%), seeds oil (10%) and vinegar (5%). A mode of traditional medicine preparation reported was an infusion (40.12%), followed by

decoction (21.35%), then other method such as juice, roasted, cooked, boiled, powder, and soak in oils (38.53%). Considered according to results that most of the plant preparations are used orally. (Table 2).

### 3.7. Ethno medicinal information about treatment the different diseases:

The results of questionnaires showed that 15% of the informants were diagnosed with their diseases by a doctor, and 38% were diagnosed with a conventional therapist, and 47% self-diagnosed their diseases, while the results of the questionnaires showed that the evaluation of the treatment by informants as following (64% relied on the disappearance of symptoms, and 22% Through the results of laboratory analysis, 14% adopted other methods such as chest radiography, adopting the attending physician's opinion and clinical observation of the improvement of skin diseases, and some of them depended on psychological comfort during treatment as evidence of improvement).

Of these studied plants, 185 are used to treat digestive disorders, 118 for respiratory diseases, including asthma, bronchitis and coughs, 91 for several skin diseases, 87 for kidney and urinary tract disorders, 78 for diabetes, 18 for nervous system disorders, and a few plants for treatment the other diseases such as enhance the body's immunity, hemorrhoids, fever, heart disorders, infertility and impotence, treating several types of cancer, increasing breast milk production, losing weight, lowering cholesterol, increasing weight, anemia, blood disorder, anti-toxicant, arthritis and pain, typhoid disorder, infections, gynecological diseases, eye inflammation, anti-toxicant, mouth sores (Figure 4); Many of them are still used today, especially those plants recommended for internal uses such as traditional medicinal teas, which mainly consist of remedies for obesity, weight loss, colds, colds, digestive disorders, abdominal pain, constipation and some skin diseases, and there are many factories that produce medicinal tisane.

## 4. Discussion

The use of traditional Arabic medicine (TAM) has spread to treat various diseases in Syria since ancient time. They are cost-effective with fewer side effects and are more suitable for long-term use compared with chemically synthesized medicines.

In this research a questionnaire was administered to the 475 informants (local inhabitants) of 70 villages through face-to-face interviews, we listed 258 medicinal plants belonging to 83 families in alphabetical order with the parts used and the method of preparation according to their therapeutic use. Of these studied plants, 185 are used to treat digestive disorders, 118 for respiratory diseases, 91 for several skin diseases, 87 for kidney and urinary tract disorders, 78 for diabetes, 18 for nervous system disorders, and a few plants for treatment the other diseases which are commonly spread in study area. The calculated results of medicinal use-value (MUV) showed that *Olea europaea* L., *Origanum syriacum* L. was ranked first (MUV= 0.934), while the lowest value was found for *Fumana thymifolia* (L.) Spach and *Cistus creticus* L. (MUV= 0.003).

Ethnobotanical use categories indicated that there is large use of medicinal herbs in the area of study, most of them are wild. Increased exploitation of medicinal plants by the local population, collectors and dealers of herbal medicines, in line with the demand from the pharmaceutical industry. This caused a sharp decrease in the occurrence and products of medicinal plants. Grazing, deforestation by cutting down trees for heating, and fires were mainly responsible for the reduction of medicinal plants. so that the government is working on

developing strategies to conserve wild plant diversity. Some people collect the medicinal plants for an income. They uproot and collect each part of the medicinal plants in non-scientific way. Thus, to date, a few articles devoted to traditional medicine of Syria have been published for one on the folk medicine in Aleppo governorate (Alachkara et al. 2011), and another for the use of "Zahraa" (Syrian traditional tisane) (Carmona et al. 2005), and third one on the medicinal plants in Golan (Said et al. 2002), which is an occupied Syrian territory.

It is hoped that this research will contribute a lot in providing a useful information on the conservation and sustainable use of the natural resources of the area.

The information contained in the questionnaire was compared with ethnomedicine studies in the countries surrounding Syria such as Lebanon (Taha et al. 2013), Jordan (Lev & Amar 2002; Al-Qura'n 2009), Palestine (Friedman et al. 1986; Kaileh et al. 2007), Iraq (Al-Douri 2000) and Turkey (Yesilada et al. 1995; Sezik et al. 2001). We noticed a similarity in a lot of traditional uses in Syria, Lebanon, Palestine, and Jordan, the reason for this is due to mutual history of these areas were previously called Bilad Al-Sham; and there is some similarity with a smaller number of folk uses between Syria and Iraq, and there is a difference in the folk uses described between Syria and Turkey.

We did not record significant differences in phytomedicines consumption customs between interviewees of different religions. In general, phytomedicines consumption was often explained and justified by interviewees as family tradition. We did not detect any gender-related differences in phytomedicines consumption. However, there weren't gender differences concerning the common traditional use of medicinal plants. The ethno-medicine data presented here imply that medicinal plants are important as food and particularly as medicine (traditional healing) for various local people. While chemical medicinal treatments are becoming commonplace, traditional medications are still of huge importance in many rural, poor and remote places.

There is no doubt that its study will provide many new data that could contribute to further pharmacological discoveries by identifying the active ingredients and their mechanism of effect by doing a lot of pharmacological work to confirm the alleged biological activities of these plants, and the possibility of developing new pharmaceutical formulas cannot be excluded depending on Syrian medicinal plants and their folk uses. as the discovery of artemisinin from *Artemisia annua*, based on ethnobotanical information (Acton & Klayman 1985), serves as evidence that it is possible to find new and effective medicines using data from traditional medicine.

## **Limitations**

There is insufficient information about the pharmacokinetic efficacy of the medicinal plant species in this study. These herbs that have been reported that have been used traditionally as adjuvant to relieve and treat some diseases.

## **Conclusion**

A large portion of the uses of medicinal plants mentioned in Syria are still under study. There is no doubt that its study will provide many new data that could contribute to further pharmacological discoveries by

identifying the active ingredients and their mechanism of effect by doing a lot of pharmacological work to confirm the alleged biological activities of these plants.

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This study did not receive any particular gift from funding companies in the public, commercial, or not-for-profit sectors.

### **Declaration of Competing interests**

We declare that there is no conflict of interest with any business organization concerning the study.

### **Authors' Contributions**

C.H.: Data collection, methodology, investigation, compiled the literature sources, data analysis, evaluation, and interpretation, realization manuscript, helped in data, and made a substantial contribution to data analysis. A.N.: Evaluation the clinical data, performed data analysis and drafted the manuscript. M.I.H.A.: Review & editing, designed the research and identification of plant species. All contributors understand and accepted the final document.

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### **Availability of data and material**

Supplementary materials related to this article may be obtained from the authors upon request.

## **References**

Acton N, Klayman D. 1985. Artemisitene, a new sesquiterpene lactone endoperoxide from artemisia annua. *Planta Med.* 51: 441- 442.

- Ahmad K.S., Kayani W.K., Hameed M., Ahmad F., Nawaz T. 2012. Floristic diversity and ethnobotany of Senhsa, District Kotli, Azad Jammu & Kashmir (Pakistan). *Pak J Bot.* 44: 195-201.
- Alachkara A, Jaddouh A, Elsheikh MS, Bilia AR, Vincieri FF. 2011. Traditional medicine in syria: folk medicine in Aleppo governorate. *Nat. Prod. Commun.* 6: 79- 84.
- Alam N., Shinwari Z.K., Ilyas M., Ullah Z. 2011. Indigenous knowledge of medicinal plants of Chagharzai Valley, District Buner, Pakistan. *Pak J Bot.* 43: 773-780.
- Al-Douri N. 2000. A survey of medicinal plants and their traditional uses in Iraq. *Pharm. Biol.* 38: 74- 79.
- Al-Qura'n S. 2009. Ethnopharmacological survey of wild medicinal plants in Showbak, Jordan. *J. Ethnopharmacol.* 123: 45- 50.
- Amjad M.S., Arshad M., Hussain M.Z. 2013. An overview of human-plant interaction in Nikyal rangeland district Kotli Azad Jammu and Kashmir. *Afr J Plant Sci.* 7(12): 571-576.
- Amjad M.S., Arshad M., Qureshi R. 2015. Ethnobotanical inventory and folk uses of indigenous plants from Pir Nasoor National Park, Azad Jammu and Kashmir, *Asian Pac J Trop Biomed.* 5(3): 234-241
- Campbell M.J., Hamilton B., Shoemaker M., Tagliaferri M., Cohen I., Tripathy D. 2002. Antiproliferative activity of Chinese medicinal herbs on breast cancer cells in vitro. *Anticancer Res* 2002; 22: 3843-3852
- Carmona MD, Llorach R, Obon C, Rivera D. 2005. Zahraa, a Unani multicomponent herbal tea widely consumed in Syria: components of drug mixtures and alleged medicinal properties. *J. Ethnopharmacol.* 102: 344-350.
- Chaachouaya N., Douirab A., Zidaneb L. 2021. COVID-19, prevention and treatment with herbal medicine in the herbal markets of Salé Prefecture, North-Western Morocco, *European Journal of Integrative Medicine.* Volume 42.
- Che C., George V., Ijnu T., Pushpangadan P., Andrae-Marobela K. 2017. Traditional medicine: pharmacognosy. [place unknown]: Academic Press. p.15.
- Falk E (Editor-in-Chief): Traditional medicine sharing experiences from the field, living heritage series, [Internet]. 2017. Korea: UNESCO; [cited 2021 March 21]. Available from: <http://www.ichngoforum.org/>
- Friedman J, Yaniv Z, Dafni A, Palewitch D. 1986. A preliminary classification of the healing potential of medicinal plants, based on a rational analysis of an ethnopharmacological field survey among Bedouins in the Negev desert. *J. Ethnopharmacol.* 16: 275- 287.
- Hameed M., Ashraf M., Al-Quriany F., Nawaz T., Ahmad M.A., Younis A., et al. 2011. Medicinal flora of the Cholistan desert: a review. *Pak J Bot.* 43: 39-50.
- Hamidé A. , Polk W., Smith C., Ochsenwald W., Commins D. et al. Syria. *Encyclopedia Britannica.* [Internet]. 2021. Chicago: USA; [cited 2021 March 21]. Available from: <https://www.britannica.com/place/Syria>

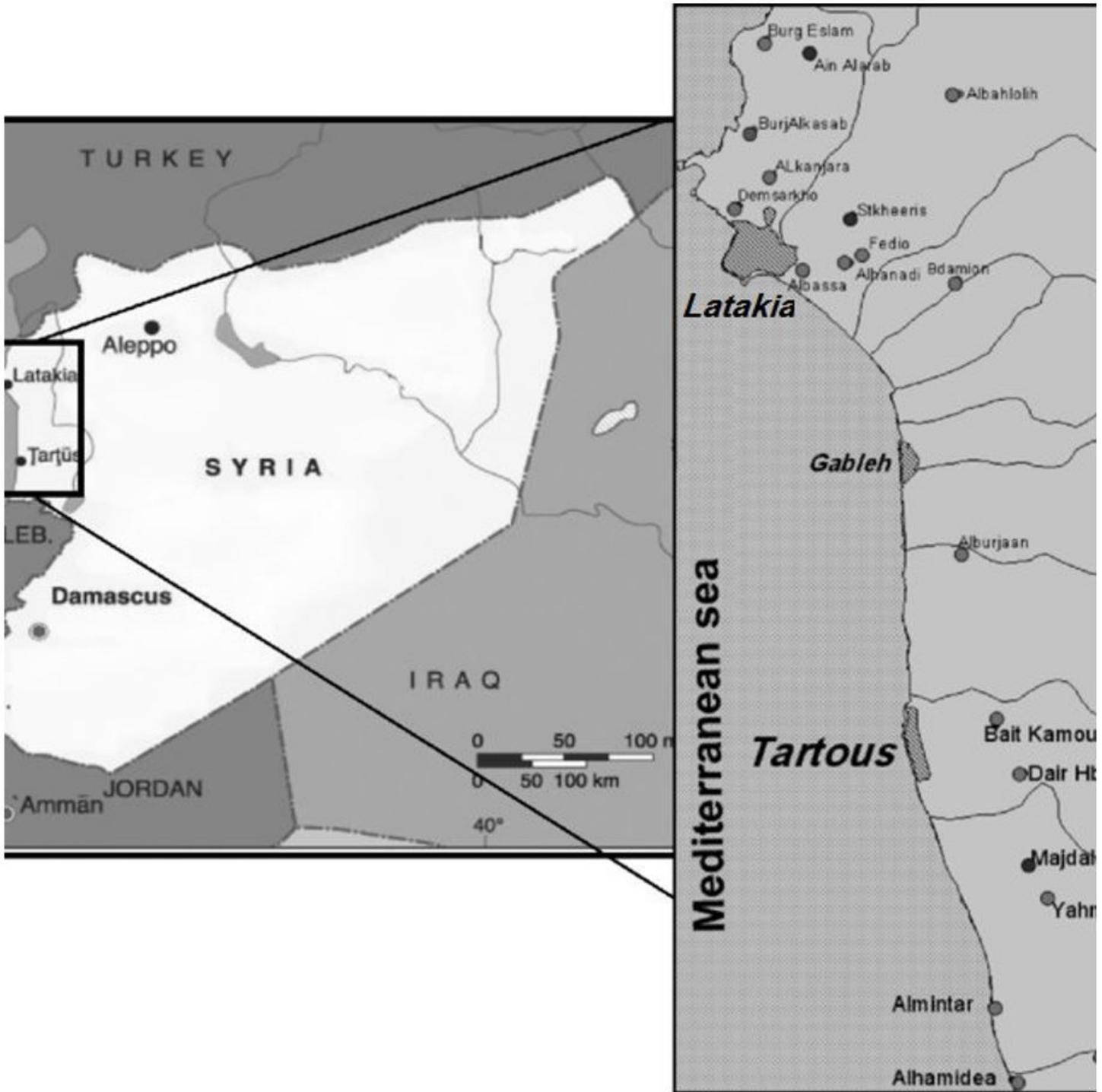
- Husain S.Z., Malik R.N., Javaid M., Bibi S. 2008. Ethnobotanical properties and uses of medicinal plants of Morgha Biodiversity Park Rawalpindi. *Pak J Bot.* 40(5): 1897-1911.
- Ibrar M., Hussain F., Sultan A. 2007. Ethnobotanical studies on plant resources of Ranyal hills, District Shangla, Pakistan. *Pak J Bot.* 39(2): 329-337.
- Kaileh M, Berghe WV, Boone E, Essawi T, Haegeman G. 2007. Screening of indigenous Palestinian medicinal plants for potential anti-inflammatory and cytotoxic activity. *J. Ethnopharmacol.* 113: 510- 516.
- Lev E, Amar Z. 2002. Ethnopharmacological survey of traditional drugs sold in the Kingdom of Jordan. *J. Ethnopharmacol.* 82:131-45.
- Mahmood A., Qureshi R.A., Mahmood A., Sangi Y., Shaheen H., Ahmad I., et al. 2011. Ethnobotanical survey of common medicinal plants used by people of district Mirpur, AJK, Pakistan. *J Med Plants Res.* 5(18): 4493-4498.
- Montvale NJ. 2000. PDR for Herbal Medicines. 2nd ed. [place unknown]: Medical Economics Company.
- Said O, Khalil K, Fulder S, Azaizeh H. 2002. Ethnopharmacological survey of medicinal herbs in Israel, the Golan Heights and the West Bank region. *J. Ethnopharmacol.* 83:251-265.
- Sezik E, Yesilada E. Honda G, Takaishi Y, Takeda Y, Tanaka T. 2001. Traditional medicine in Turkey - Folk medicine in Central Anatolia. *J. Ethnopharmacol.*75: 95-115.
- Tabuti J.R.S., Lye K.A., Dhillion S.S. 2003. Traditional herbal drugs of Bulamogi, Uganda: Plants, use and administration *J. Ethnopharmacol.*, 88 (1): p. 19-44, 10.1016/S0378-8741(03)00161-2
- Taha D, Knio, Zabta K, Zabta S, Kreydiyyeh, Elias S, Elias B. 2013. Survey of medicinal plants currently used by herbalists in Lebanon. *Pak. J. Bot.* 45: 543-555.
- Tenté A., Lougbégnon O., Houessou G., Dossou M., Codjia J. 2012. Etude ethnobotanique des ressources forestières ligneuses de la forêt marécageuse d'Agonvè et terroirs connexes au Bénin *Tropicicultura.* 30 (1): p. 41-48.
- World Health Organization (WHO): WHO traditional medicine strategy 2002–2005. [Internet]. 2002. Geneva. WHO Press [cited 2021 March 21]. Available from: <https://apps.who.int/>
- World Health Organization (WHO): WHO medicines strategy countries at core 2004-2007. [Internet]. 2004. Geneva: WHO Press. [cited 2021 March 21]. Available from: <https://apps.who.int/>
- World Health Organization (WHO): National policy on traditional medicine and regulation of herbal medicines - report of a WHO global survey. [Internet]. 2005. Geneva: WHO Press [cited 2021 March 21]. Available from: <https://apps.who.int/>
- World Health Organization (WHO): WHO traditional medicine strategy 2014-2023. [Internet]. 2013. Geneva. WHO Press [cited 2021 March 21]. Available from: <https://apps.who.int/>

Yaseen T. 2010. *Phytophthora citrophthora* is the predominant *Phytophthora* species in Syrian citrus groves. *Phytopathologia Mediterranea*. 49(2): 205–211.

Yaseen G. et al. 2015. Ethnobotany of medicinal plants in the Thar Desert (Sindh) of Pakistan, J. *Ethnopharmacol.* 163: p. 43-59, 10.1016/j.jep.2014.12.053

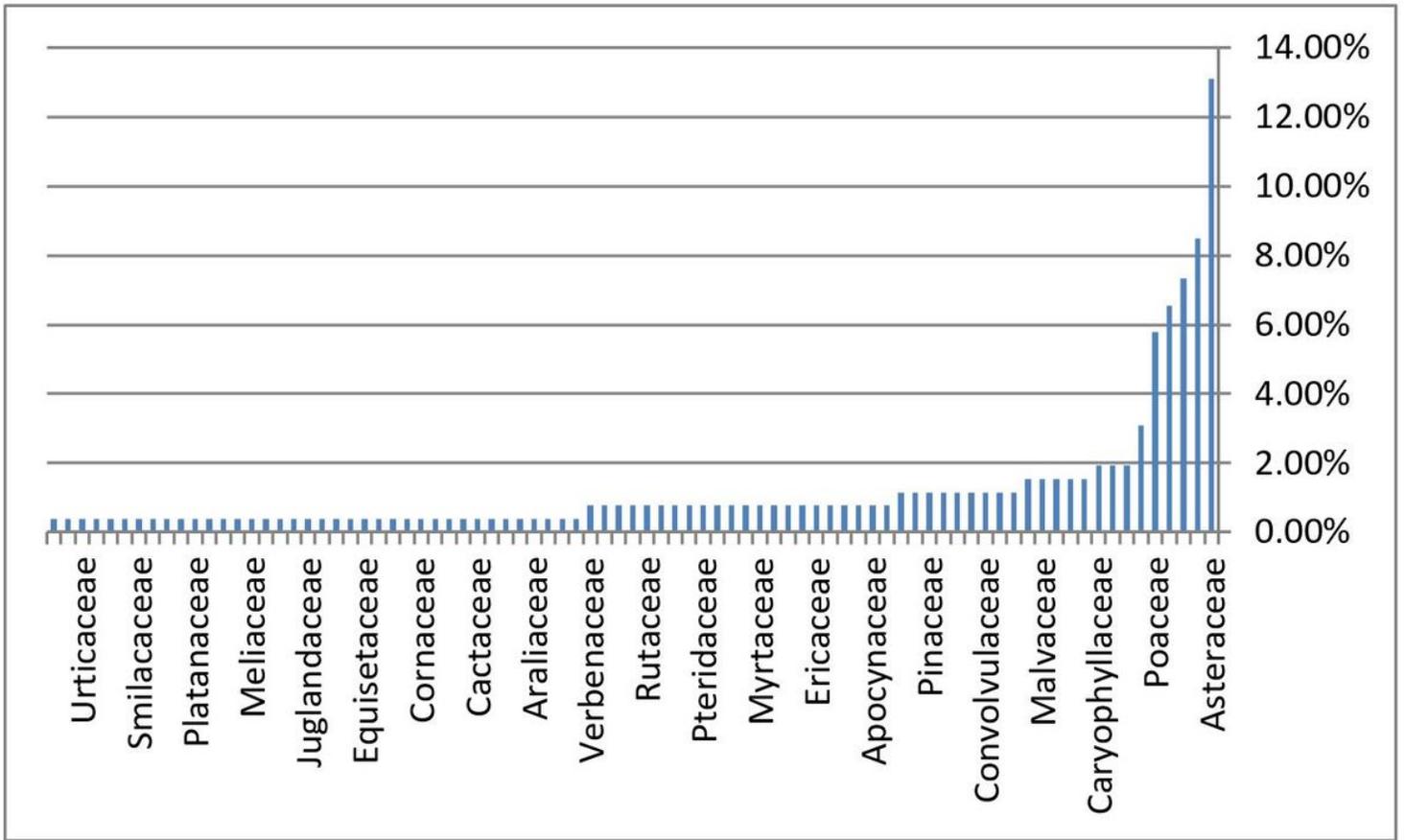
Yesilada E, Honda G, Sezik E, Tabata M, Fujita T, Tanaka T, Takeda Y, Takaishi Y. 1995. Traditional medicine in Turkey - folk medicine in the inner Taurus mountains. *J. Ethnopharmacol.* 46:133-152.

## Figures



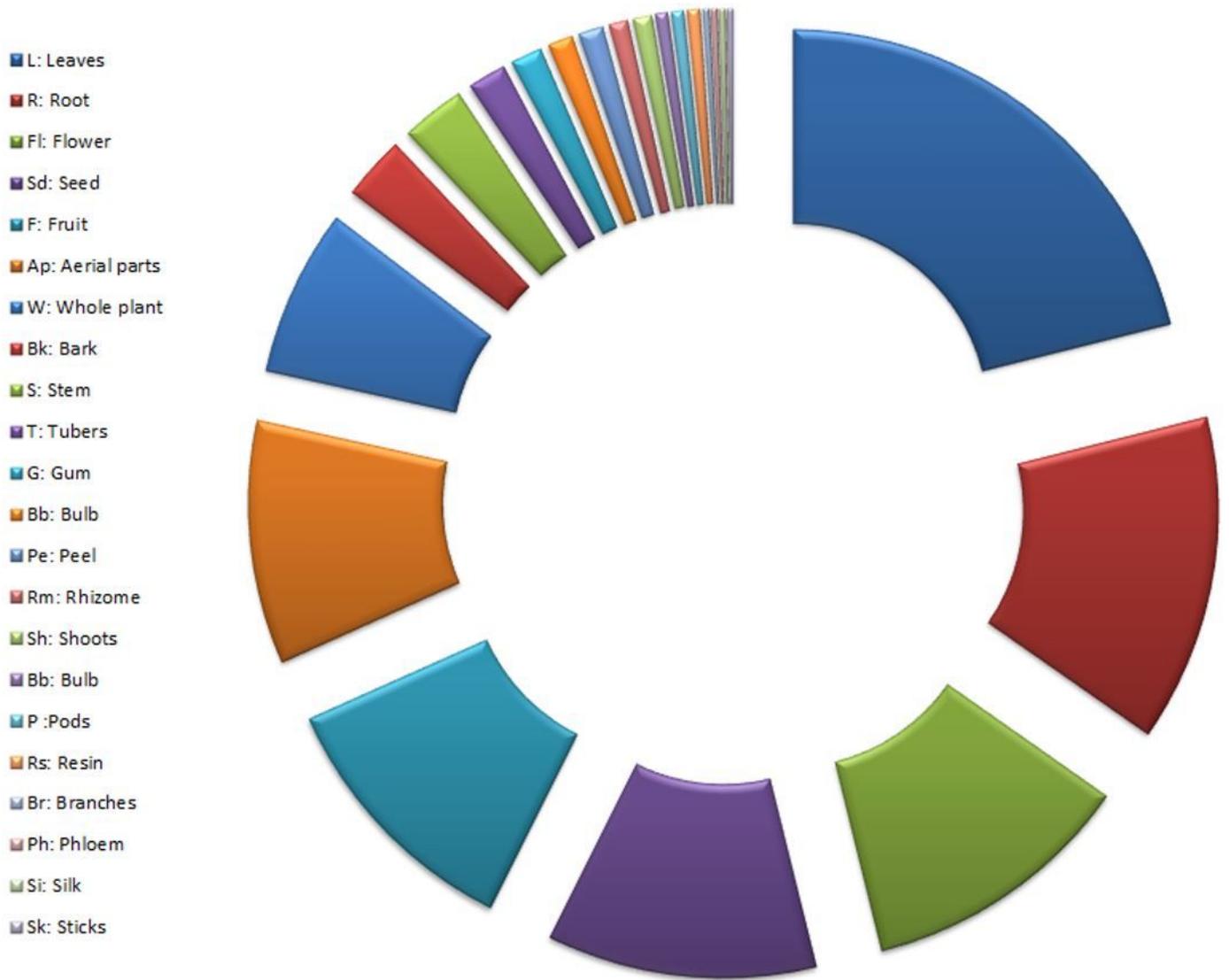
**Figure 1**

Geographical Location of the study area, Latakia & Tartus (Yaseen 2010). Note: The designations employed and the presentation of the material on this map do not imply the expression of any opinion whatsoever on the part of Research Square concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. This map has been provided by the authors.



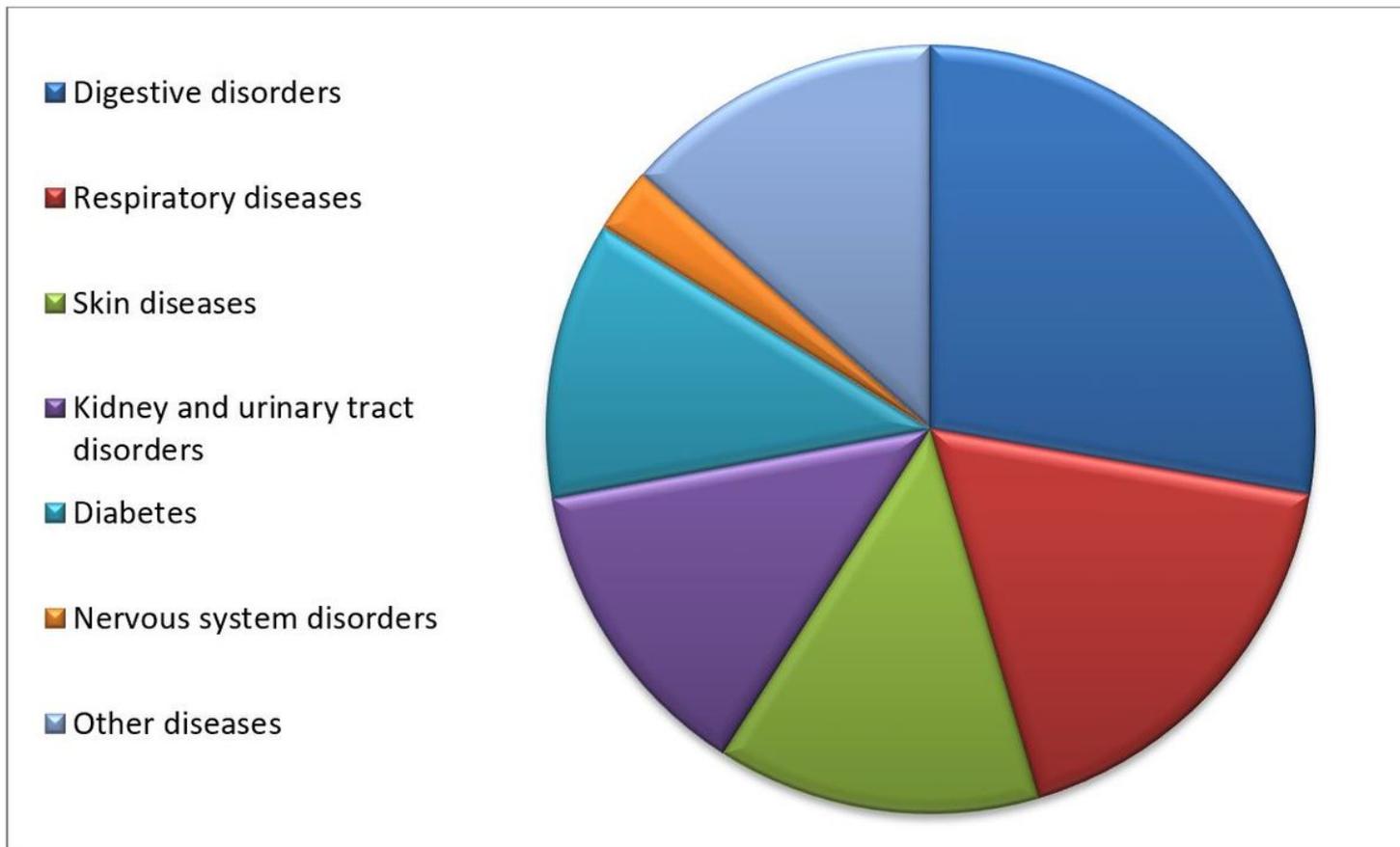
**Figure 2**

Plant families common used in ethnomedicinal survey of Western region in Syria (Latakia and Tartus).



**Figure 3**

Parts used for ethnomedicinal purpose of flora related to Western region in Syria (Latakia and Tartus).



**Figure 4**

Ethno medicinal information about treatment the different diseases related to Western region in Syria (Latakia and Tartus).

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