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Ethnobotanical and Ethnopharmacological Studies of Medicinal Plants in the Southern Mediterranean: Tangier-Tétouan Region, Northern Morocco

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ABSTRACT

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Copyright: © 2025 Youssef *et al.* This is an openaccess article distributed under the terms of the <u>Creative Commons</u> Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. Plants have been invaluable natural resources for nutrients and therapeutic compounds, playing a vital role in traditional medicine worldwide. In the Tanger-Tétouan region (Tanger-Assilah, Tétouan, Fahs-Anjra, and M'diq-Fnideq), aromatic and medicinal plants are integral to addressing various health issues. However, ethnobotanical knowledge of this region remains underexplored. This study aims to document ethnobotanical knowledge in the Tangier-Tetouan region, northern, Morocco. The surveys were conducted using 765 questionnaires across two campaigns in 2023 and 2024. The study documented the medicinal and aromatic plants used in the region, based on data collected from 760 participants belonging to diverse socio-demographics between November 2023 and September 2024. Using structured questionnaires and analytical metrics, including Frequency of Citation (FC), Relative Frequency of Citation (RFC), and Use Value (UV), the study identified 171 plant species across 55 botanical families, with Lamiaceae, Asteraceae, Fabaceae, Apiaceae, and Poaceae being predominant. Commonly used species include Thymus satureioides, Rosmarinus officinalis, and Salvia officinalis. Leaves, fruits, and seeds were the main parts used, primarily for gastrointestinal and respiratory ailments. Traditional remedies were mostly administered orally as decoctions or infusions. Approximately half of the respondents reported satisfaction with the treatments' effectiveness. This research highlights the continued relevance of plant-based remedies and provides a foundation for pharmacological studies to explore bioactive compounds, potentially contributing to pharmaceutical development or offering natural alternatives in modern medicine.

Keywords: Southern Mediterranean, Tanger-Tétouan Region, Northern Morocco, Aromatic and Medicinal Plants, Ethnobotanical, Ethno-pharmacological.

Introduction

The use of medicinal plants in traditional healthcare has been a fundamental practice for centuries. Approximately 391,000 plant species are cataloged worldwide, each possessing distinct medicinal properties. Notably, 88% of these plants—about 31,000 species—are recognized for their actual or potential therapeutic value.¹ Ancient civilizations such as the Sumerians, Egyptians, Greeks, and Romans documented their knowledge of these plants in medical texts.² During the Middle Ages, Arab scholars played a pivotal role in preserving and disseminating this knowledge, while Europeans expanded their pharmacopoeia during the Age of Discovery by introducing numerous plants from the New World.³ In Africa, the use of medicinal plants is deeply embedded in local traditions, with traditional healers playing a central role in healthcare.

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This knowledge, often passed down through generations, is particularly rich in sub-Saharan Africa, a region known for its exceptional biodiversity.⁴ Morocco, with its 4,500 species and subspecies of vascular plants, is renowned for its rich variety of aromatic and medicinal plants.⁵ The indigenous Berber people have utilized these plants for centuries, drawing influence from both Mediterranean and Arab civilizations that have shaped the region's medical heritage.⁶ Consequently, the use of aromatic and medicinal plants (AMPs) in Morocco represents a fusion of cultural and medicinal knowledge.⁷ The Tanger-Tetouan region, situated between the Mediterranean Sea and the Rif Mountains, is characterized by unique biodiversity. This ecological richness offers a variety of plants with exceptional medicinal and aromatic properties, which have been utilized for generations by the region's inhabitants.⁸ Despite the advancement of modern medical practices, the centuries-old traditions of harvesting and using medicinal plants continue to thrive in this region.9 However, the global decline in cultural knowledge of medicinal plants poses a significant threat to these valuable resources.¹⁰ This decline is fueled by factors such as cultural homogenization, modernization, and the undervaluing of traditional practices.11 Additionally, Morocco's plant diversity faces threats from overexploitation, climate change, and habitat loss.¹² In light of these challenges, ethnobotanical surveys are essential for documenting indigenous knowledge, ensuring the conservation of biological resources, and fostering sustainable use practices. These surveys play a crucial role in engaging policymakers to develop effective strategies for preserving this heritage.⁷ The study aims to document ethnobotanical knowledge in the Tangier-Tetouan region to preserve her cultural heritage, identify the most commonly used

medicinal plants and their role in local healthcare practices, and promote sustainable use practices for the conservation of biological resources.

Materials and Methods

Study area

The Tanger-Tétouan region (Figure 1) is part of the Tangier-Tétouan-Hoceima region, which is one of the twelve regions of Morocco established under the latest territorial division of 2015. It comprises two provinces (Tétouan and Fahs-Anjra) and two prefectures (Tanger-Assilah and M'diq-Fnideq). It is located at the extreme northwest of Morocco, at the far northwest of the African continent, bordered to the north by the Mediterranean Sea, to the west by the Atlantic Ocean, to the south by the province of Larache and to the southeast by the Province of Chefchaouen.¹³ The area benefits from a notable geographical position, bordered by two distinct coastlines: the Mediterranean Sea to the north and the Atlantic Ocean to the west. Aside from the coastal plains, more than 65% of the regional territory is characterized by steep or heavily valleyed reliefs. To the west, there are low coastal plains with rich alluvial soils, threatened by flooding and salinization of terraces, particularly around Assilah. To the north and east, the hills are higher, with prominent relief and altitudes ranging from 160 to 400 meters.¹⁴ In the Tangier-Tétouan area, the temperature varies greatly both across time and space. It has two distinct seasons: a hot and dry summer and a somewhat chilly and wet winter, typical of the Mediterranean climate. Despite the fact that, nationally, this region receives the highest rainfall (between 100 and 700 mm), it is noteworthy that this precipitation is very irregular across all time scales.

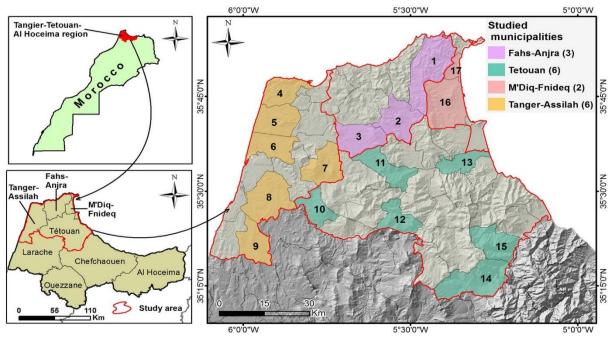


Figure 1: Geographical location of the study area

In terms of geographical distribution, precipitation follows two gradients: it increases in volume with altitude and also depending on the proximity of the Atlantic. Thus, the most irrigated areas are in the region of Tangérois. As we move away from the Atlantic, the slope overlooking the Mediterranean becomes drier.¹⁴

According to the 2020 population projections, Tanger-Tétouan-Al Hoceima Region has a population of 2,129,777 representing 5.92% of Morocco's total population. The urban population stands at 1,814,344 inhabitants, reflecting an urbanization rate of 85.18%, compared to the national rate of 63.4%. The relatively large population of the Tanger-Tétouan region, combined with its small area, makes it one of the most densely populated regions in Morocco, with a density of 606.4 inhabitants per km² in 2014. Furthermore, the prefecture of Tanger-Assilah has the highest population density in the region, with 1,119.3 inhabitants per km², followed by the prefecture of M'diq-Fnideq with 985.4 inhabitants per km^{2,14}

The localization of the various ethnobotanical survey sites and floristic surveys in the area studied was carried out using probability-stratified sampling techniques.¹⁵ In this context, the sample was divided into 17 layers, of which 4 belong to urban areas and 13 to rural areas (Table 1). Using a simple random sampling method, limited-sized samples were formed for each of the 17 layers, and then grouped to form the overall sample of 760 people.

This study explores the ethnobotany of aromatic and medicinal plants used in the Tangier-Tetouan region over a period of 6 months, from November 2023 to April 2024. The surveys were conducted using 765 questionnaires across two campaigns in 2023 and 2024. Approximately 201 people declined the invitation to participate; some cited insufficient knowledge of the topics discussed, while others chose not to participate for unspecified personal reasons. Interviews using a structured questionnaire were conducted during peak hours in places frequented by the local population, such as markets, mosques, and cafeterias, as well as at their homes, without time limits.

Socio-economic status were categorized into low, middle, and high based on income and access to resources, as self-reported by participants. Professional groups included farmers, housewives, civil servants, herbalists, and individuals with no specific profession. Data analysis employed Frequency of Citation (FC), Relative Frequency of Citation (RFC), and Use Value (UV) to evaluate the prevalence and significance of plant use.

The questionnaire was structured into two sections: the initial section focused on the informant's demographics, encompassing age brackets (under 20 years, 20 - 35 years, 35 - 50 years, 50 - 65 years, and over 65 years), gender (male and female), educational background, family status, socio-economic status, place of residence, occupation, and source of information (Table 2).

Table 1: Distribution of surveys by layers

Ethnobotanical Survey

Province	Layer Names	Layer	Number of		
		number	surveys		
Fahs-Anjra	Jouamaa	1	45		
	Anjra	2	45		
	Taghramt	3	45		
Tanger-	Tanger	4	45		
Assilah	Gzanaya	5	45		
	Hjer nhal	6	45		
	Dar chaoui	7	45		
	Had gharbiya	8	45		
	Sidi yamani	9	45		
Tétouan	Tétouan	10	45		
	El ouad	11	45		
	Oulad ali	12	45		
	mansour				
	Beni yadder	13	45		
	Jbal hbib	14	45		
	Ain lahcen	15	45		
M'diaq-	Fnidaq	16	45		
fnidaq	Alliyin	17	45		
	Total	17	765		

The subsequent section delves into the plants used, their method of use, plant parts used, diagnosis, method of preparation, administration and storage, dosage, plant type, harvesting period, toxicity risk, outcomes, and potential adverse effects (Table 3).¹⁶ The study followed the Nagoya Protocol's guidelines on access to genetic resources and the equitable sharing of benefits, as specified in the Convention on Biological Diversity. The traditional knowledge provided by participants was both respected and safeguarded, and any use of this information outside of scientific publications required the consent and agreement of the traditional knowledge holders.¹⁷

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Categories of diseases

The main objective of this ethnopharmacological study was to scientifically assess and validate traditional medicinal systems and the remedies employed within them. To obtain a thorough understanding of therapeutic diversity, field surveys often categorize medicines according to their use.¹⁸

Utilizing the World Health Organization's classification, we categorized diseases based on body systems (WHO).¹⁹ This established method is consistent with traditional ethnomedical practices. It is noteworthy that specific diagnostic labels was combined with symptom descriptions to accurately identify various diseases. Since some informants did not always use medical terminology, we collected as much information as possible about each disease to ensure accurate classification.²⁰ In this study, diseases were classified using both the use reports from local informants and the WHO's systematic categorization method.¹⁸ Each mention of a plant used to treat a specific disease was recorded as a separate use report.

Data analysis

The information gathered from the survey forms was inputted into a computer, then processed and analyzed statistically using Microsoft Office Excel 2020, XLSTAT and Minitab software to generate tables and graphs. Socio-demographic data of participants were analyzed by simple descriptive statistics, employing percentages and frequencies. Ethnobotanical data were subjected to analysis through the following metrics:

Relative frequency of citation (RFC)

Based on the local therapeutic importance of each plant species, the RFC was calculated according to the following formula:

 $RFC = \frac{FC}{N}$ Eqn. 1

Where FC denotes the number of participants citing the use of a plant species, N represents the total number of participants, and (0 < RFC < 1).²¹

Use Value (UV)

The Use Value (UV) is a commonly used indicator to assess the relative importance of a local species, particularly plants. The formula used to calculate this index is as follows:

$$UV = \frac{U}{N}$$
 Eqn. 2

Where U represents the number of uses mentioned by each informant, and N refers to the total number of informants.^{22,23}

Table 2: Socio-demographic and socio-economic profile of informants

Parameter	Category	Number of	Percentage
		Surveys (N = 765)	
Age	Less than 20 years	95	12%
	Between 20 and 35 years	133	17%
	Between 35 and 50 years	262	34%
	Between 50 and 65 years	180	24%
	More than 65 years	95	12%
Gender	Female	319	42%
	Male	441	58%
Educational Level	Illiterate	355	46%
	Primary	197	26%
	Middle School	112	15%

	High School	66	9%
	University	35	5%
Marital Status	Single	238	31%
	Married	490	64%
	Other (widowed, divorced)	37	5%
Socioeconomic status	High	45	6%
	Medium	268	35%
	Low	452	59%
Occupation	Unemployed	74	10%
	Farmer	265	35%
	Herbalist	60	8%
	Civil Servant	101	13%
	Housewife	260	34%
Source of Information	Bibliography	63	8%
	Herbalist	182	24%
	Pharmacist	27	4%
	Experience of Others	488	64%
Locality	Rural	630	82%
	Urban	135	18%

Results and Discussion

A survey was conducted with 765 participants from the Tangier-Tetouan region, including herbalists, skilled villagers, traditional healers, and ordinary residents (from towns, villages, and douars). The results indicate that women are the primary users of medicinal plants, accounting for 58% of the total usage, while men represent 42%. This gender predominance can be attributed to several cultural and social factors. In rural areas, women often serve as the custodians of traditional knowledge regarding medicinal plants, taking responsibility for family health and primary care. This greater involvement in healthcare likely explains their higher usage of medicinal plants (Figure 2). These findings align with national researches that have been conducted,²⁴⁻²⁷ as well as international studies.^{28, 29}

The ethnobotanical survey also revealed the age distribution of medicinal plant use in the Tangier-Tetouan region. The most represented age group was 35 to 50 years old, which constituted 34% of the users. This was followed by the 50 to 65 age group (24%), the 20 to 35 age group (17%), those under 20 years old (13%), and finally, those over 65 years old (12%). This distribution suggests that the use of medicinal plants is particularly significant among middle-aged adults, likely due to their roles in family healthcare and their knowledge of traditional remedies. Elderly individuals continue to use medicinal plants, reflecting the persistence of traditional practices among older generations. In contrast, the relatively low proportion of young users may indicate either a reduced transmission of traditional knowledge or a preference for modern medical treatments (Figure 3). These results are consistent with national studies, 24,30 and international researches.^{29,31,32} Traditional medicine was predominantly used by the married respondents (64%), compared to 31% of single individuals and 5% of widowed or divorced people (Figure 4). Married people, particularly women, tend to seek economical and effective ways to care

for their families and children. These findings corroborated previous national studies,^{24,26,30} as well as studies conducted in the Maghreb region.³²

Moreover, rural areas represented the majority of users, with 82% of respondents compared to only 18% in urban areas (Figure 5). Several factors can be responsible for this predominance of medicinal plants use in rural areas. Firstly, direct access to plants in their natural environments allows rural inhabitants to rely easily on traditional remedies. Additionally, knowledge and practices related to medicinal plants are often better preserved and transmitted across generations in these regions. In contrast, in the urban areas, the easy access to modern healthcare and pharmaceuticals reduces the reliance on traditional remedies. These findings are consistent with previous national researches,^{33, 25} and studies from North Africa.³⁴

With respect to educational level, illiterate individuals constituted the majority of medicinal plant users (46%), followed by those with primary education (26%), secondary education (15%), and high school (9%). Users with a university education represent the smallest group (4%) (Figure 6). This distribution suggests that the use of medicinal plants is more widespread among individuals with lower educational levels. This may reflect greater adherence to traditional practices in these groups, as well as limited access to modern healthcare. In contrast, individuals with higher education levels preferred contemporary medical treatments, potentially indicating a decline in the transmission of traditional knowledge about medicinal plants among this segment of the population. These results are in line with previous national studies,^{25,26,35} as well as studies in the Maghreb region.^{31,32}

Most users (64%) relied on the experience of others, highlighting the importance of oral transmission and empirical knowledge within the community. Herbalists were the second most consulted source, representing 24% of users, which indicated significant trust in specialized traditional practitioners. Written resources, including books

and other references, accounted for only 8% of information sources, suggesting limited use of documented resources in the region. Lastly, pharmacists were the least consulted source, representing just 4%, which may reflect the limited integration of modern pharmaceutical advice into traditional healthcare practices (Figure 7). This distribution revealed a clear preference for traditional knowledge and personal advice, which can influence awareness and education strategies concerning the use of medicinal plants. These findings are consistent with those of Maache $(2024)^{24}$ and El-Assri $(2021)^{30}$, but do not agree with that of Kachmar $(2021)^{33}$, which stated that 54% of respondents preferred to consult herbalists.

Impact of socio-economic factors on medicinal plant utilization

The ethnobotanical study revealed that 59% of users belong to a low socio-economic status, indicating a higher reliance on traditional remedies due to their affordability and accessibility. In contrast, 35% of users were from a middle socio-economic status, often using these remedies alongside modern treatments, while only 6% were from a high socio-economic status, reflecting limited dependence on medicinal plants due to greater access to contemporary healthcare (Figure 8). These findings aligned with earlier studies which highlighted that traditional practices are more preserved among economically disadvantaged groups.³⁵⁻³⁷

Regarding professional distribution, farmers constituted 35% of respondents, underscoring their proximity to natural resources and traditional knowledge. Housewives represented 34%, reflecting their significant role in family healthcare with the use of medicinal plants. Civil servants accounted for 13%, indicating that traditional remedies remain relevant even among those with modern healthcare access. Herbalists made up 8%, showcasing their specialized knowledge, while 10% of respondents reported no specific profession (Figure 9).

This diverse professional representation underscores the cultural importance and practical use of aromatic and medicinal plants across socio-economic and professional groups. Many users cite extensive experience and perceive these treatments as having fewer adverse effects compared to conventional medicine. These findings are consistent with previous studies.^{30,33}

The use of medicinal plants in Tangier-Tetouan region

The study results show that leaves are by far the most used part, representing approximately 34% of total usage. This predominance can be explained by the high concentration of active compounds in leaves, as well as their ease of collection and preparation. This was followed by fruits and seeds, with 13.31% and 11.50% of total usage, respectively, highlighting their important role in traditional remedies. Aerial parts and flowers were also significant, each representing around 11% of usage. Stems, whole plants, roots, rhizomes, and bulbs were less commonly used, with percentages ranging from 8% to less than 1% (Figure 10). This distribution indicates that, although various parts of plants are valued for their medicinal properties, leaves are particularly prized in the region, likely due to their therapeutic effectiveness and accessibility. These results are consistent with the findings from previous studies.^{25,26,38}

For the preparation of remedies, decoction (31.37%) and infusion (18%) were the most commonly used methods for preparing medicinal plants, indicating a preference for effective and accessible methods of extracting active ingredients. These were followed by cataplasm (13.62%), fumigation (9.50%), and maceration (8.09%), which were moderately used, while powder (5.79%), crushing (4.50%), raw (3.5%), essential oils (3%), and cooking (3%) were the least common in terms of usage (Figure 11). This distribution indicates a preference for preparation methods that maximize the extraction of active principles while being accessible and easy to perform. The results reflect a rich tradition of herbal medicine in the region, where various methods are employed to harness the medicinal properties of plants. The present findings corroborated the findings from previous studies conducted in Morocco and Algeria.^{25,26,31-33}

The most common mode of administration was oral administration, accounting for 58% of the total. This high percentage highlights the preference for ingesting plant-based remedies, likely due to the ease of consumption and direct delivery of active compounds to the body. This

was followed by inhalation (14.66%), reflecting the importance of respiratory treatments, which are often used for ailments like colds and respiratory infections. Rinsing accounted for 12.81% of cases, suggesting its role in treatments for oral and throat conditions. Massage accounted for 8.80% of the total, indicating the use of topical applications for skin and muscle-related issues. Other methods of administration made up 6%, showcasing a variety of less common but still relevant practices (Figure 12). This distribution showed a high reliance on oral consumption, but also highlighted the versatility of plant-based remedies in the treatment of a wide range of health issues through various methods of administration. These results are largely similar to those of other studies.^{39,40}

The results showed that water was the most common solvent accounting for 47% of the total number of solvents used, this may be due to its availability, safety, and effectiveness in extracting active compounds. Using the plant directly was the second most common method standing at a frequency of 32%, reflecting a preference for simplicity and direct application. Oil and honey, each at a frequency of 9%, highlight their importance in traditional remedies for their unique properties, such as oil's effectiveness in extracting fat-soluble compounds and honey's preservative qualities and health benefits. Milk was the least used solvent at 3%, suggesting its application in specific traditional contexts (Figure 13). Overall, the results indicated a preference for accessible, simple, and effective methods, with water and direct plant use being predominant, while traditional solvents like oil and honey remain relevant. These results are consistent with the findings from the work of Jeddi et al. (2021)³⁵, and Belhaj et al. (2020).40

Furthermore, 49% of users reported a complete cure, indicating significant efficacy of medicinal plants in treating certain conditions. While 39% of users reported symptom relief, highlighting the importance of plants in alleviating discomfort and pain, even if they did not lead to a complete recovery. About 8% of the participants observed a change without being able to qualify it as a cure or relief, suggesting varied effects that warrant further investigation. Finally, 4% of users noted other types of results, which could include side effects or unexpected improvements (Figure 14). This distribution of results highlights the positive perception of plant-based remedies in the region while emphasizing the need for additional research to fully understand the extent and limitations of their efficacy, which is in line with previous reports.^{30,35}

The survey results showed that spring is the most preferred collection period, accounting for 44.27% of the total collection, this is likely due to the optimal growth conditions such as mild temperatures and adequate rainfall during spring. The next most preferred collection period after spring is summer, which accounted for 25.14% of the total collection. This may be attributed to high temperatures and longer days which favour the maturation of certain plants. In autumn, the collection decreased significantly to 7.41% due to the end of the growing season and the onset of cooler weather. Winter was the least favorable period of collection with only 4.69% of the total collection, and this may be due to cold temperatures and potential frost conditions during this season. However, some plants were harvested year-round, representing 18.33% of the total, likely due to robust species (Figure 15). Understanding these seasonal variations is crucial for sustainable harvesting practices and supply chain management, while ensuring the quality and potency of the plants for effective phytotherapy.

Floristic analysis and traditional therapeutic uses

The floristic analysis of the Tangier-Tetouan region revealed a significant wealth of aromatic and medicinal plants used in traditional medicine, encompassing 171 species across 55 botanical families (Table 3). When compared to the entirety of Morocco, which hosts approximately 4,200 species of vascular plants, with 800 to 1,000 of these recognized for their medicinal properties, this regional diversity represents a substantial proportion of the national botanical wealth.⁴¹ This diversity can be attributed to the region's favorable climatic conditions, as well as local cultural practices that emphasize the use of plants in traditional medicine.

Table 3: List of therapeutic plants utilized by the people living in the Tanger-Tetouan region, northern Morocco

Species/Family	Common	Type of	Part	Solvent	FC	RFC	UV	Disease/Disorder Treated
	name	Plants	used					
Acacia albida Delile.	Talh	S	BA-	W	27	0.035	0.038	Diabetes/ Dermatological/ Metabolic
(Fabaceae)			RT					
Agave americana.l	Sabra	S	FL-L	NS	69	0.090	0.097	Gastrointestinal/Dermatological
(Agavaceae)								
Agave sisalana perrine	Sissel	S	FL	NS	6	0.008	0.013	Diabetes
(Agavaceae)								
Allium cepa L. (Liliaceae)	Bsal	С	В	NS	89	0.116	0.118	Neurological/ Hair Care/ Dermatological
Allium porrum L. (Liliaceae)	Borro	С	L	NS	13	0.017	0.021	Dermatological
Allium sativum L. (Liliaceae)	Touma	С	В	O-NS	114	0.149	0.158	Diabetes/ ENT /
								Metabolic/Cardiovascular
Aloysia citrodora Palau.	Louiza	С	L	M-W	73	0.095	0.102	Gastrointestinal/ Neurological
(Verbenaceae)								
Alpinia officinarum Hance.	Khodnjal	Int	RH	W	13	0.017	0.021	Osteoarticular/ Respiratory
(Zingiberaceae)								
Ammi majus L. (Apiaceae)	Tlillan	S	SE	W	41	0.054	0.059	Genitourinary/ Gastrointestinal
Ammi visnaga (L.) Lam.	Bechnikh	S	FR-SE	W-M	40	0.052	0.058	Diabetes/Cardiovascular/
(Apiaceae)								Gastrointestinal
Anacyclus pyrethrum (L.) Lag.	Takdicht	S	SE-RT	NS	17	0.022	0.027	Gastrointestinal
(Asteraceae)								
Anacyclus radiatus Loisel.	Hallal	S	L-RT	W	61	0.080	0.084	Neurological/ Oral-Dentals/
(Asteraceae)								Osteoarticular/ Dermatological/
Apium graveolens L.	Krafess	С	L	W	12	0.016	0.020	Gastrointestinal/Oral-Dentals
(Apiaceae)								
Arbutus unodo L. (Ericaceae)	Sassenou	S	BA-L-	W-NS	51	0.067	0.072	Metabolic/ Gastrointestinal/ Diabetes
			FL					
Aristolochia baetica L.	Berztam	S	RH-L	W-NS	49	0.064	0.071	Dermatological/ Genitourinary
(Aristolochiaceae)								
Artemisia absinthium L.	Chiba	С	ST-L-	W-NS	42	0.055	0.061	Respiratory/ Gastrointestinal
(Asteraceae)			FL					
Artemisia herba-alba Asso.	Chih	С	ST-	W-M-NS	65	0.085	0.088	Dermatological/Genitourinary/Respirato
(Asteraceae)			WP-L					ry/Diabetes/Neurological
Asparagus officinalis L	Sakkoum	S	WP	W	26	0.034	0.037	Gastrointestinal /Oral-Dentals
(Asparagaceae)								
Asphodelus microcarpus L.	Berwak	S	RT	W	47	0.061	0.068	Dermatological/ Gastrointestinal/ ENT
(Asparagaceae)								
Atractylis gummifera Salem.	Choka	S	RT	NS	13	0.017	0.021	Hair Care/ Dermatological
(Asteraceae)	hmar							
Avena sativa L. (Poaceae)	Khortal	С	L-SE	W	25	0.033	0.035	Gastrointestinal/ Respiratory/
								Cardiovascular/ Metabolic
Beta vulgaris L.	Barba	С	L	NS-W	27	0.035	0.038	Genitourinary/
(Amaranthaceae)								Gastrointestinal/Metabolic
Brassica fruticulosa Cirillo.	Harchae	С	SE-	W	10	0.013	0.016	Respiratory /Gastrointestinal
(Brassicaceae)			WP					

Brassica nigra L.	Khardal	S	FL	W	11	0.014	0.017	Diabetes/ Respiratory
(Brassicaceae)	khal							
Brassica oleracea f. alba DC.	Malfouf	С	L	W	10	0.013	0.016	Gastrointestinal/ Metabolic
(Brassicaceae)								
Brassica oleracea L.	Kromb	С	L	NS-W	16	0.021	0.026	Diabetes/ Metabolic
(Brassicaceae)								
Brassica rapa L.	Laft	С	RT	W	10	0.013	0.016	Respiratory/ Diabetes
(Brassicaceae)	mahfor							
Brassica rapa var.	Laft	С	L	W-NS	27	0.035	0.038	Cardiovascular/ Respiratory/ ENT
(Brassicaceae)								
<i>Bryonia dioica</i> Jacq.	dib Aneb	S	RT-FR	W	28	0.037	0.041	Osteoarticular/ Gastrointestinal
(Cucurbitaceae)								
Calendula arvensis M. Bieb.	Jamra	S	FR-L	W	95	0.124	0.127	Diabetes/ Metabolic/ Osteoarticular/
(Asteraceae)								Gastrointestinal
<i>Camellia sinensis</i> L. kuntze	Atay	Int	L	W	37	0.048	0.052	Dermatological/ Gastrointestinal
(Theaceae)								
Cannabis sativa L.	Kkif	С	SE-FL	NS-W	28	0.037	0.039	Cardiovascular/ Dermatological/ Hair
(Cannabaceae)								Care
Capparis spinosa L.	Kappar	S	FR-	W-M	76	0.099	0.106	Osteoarticular/ Diabetes
(Capparaceae)			WP-					
			RT					
Capsicum annuum L.	tahmira	С	FR	NS-W	31	0.041	0.044	Dermatological
(Solanaceae)								
Capsicum frutescens L.	Sodaniya	С	FR	W	15	0.020	0.026	Dermatological/ Diabetes
(Solanaceae)								
Caralluma europaea	Daghmous	S	L	W	74	0.097	0.105	Diabetes/ Genitourinary
(Apocynaceae)								
Carum carvi L. (Apiaceae)	Karwiya	С	SE	W	44	0.058	0.063	Osteoarticular/ Gastrointestinal
Ceratonia siliqua L.	Kharoub	S	L-B	W-NS-H	37	0.048	0.051	Gastrointestinal
(Fabaceae)								
Chamaerops humilis L.	Ddoum	S	FR-RT	NS-W-M	31	0.041	0.043	Gastrointestinal/ Hair Care
(Arecaceae)								
Chenopodium album L.	Braymel	S	L-S	W-H	12	0.016	0.018	Genitourinary/ Gastrointestinal
(Amaranthaceae)								
Chenopodium ambrosioides L.	Mkhinza	С	ST-L	NS	113	0.148	0.156	Gastrointestinal/ Dermatological/ENT
(Amaranthaceae)								
Cicer arietinum L. (Fabaceae)	Homiss	С	RT	NS-W	24	0031	0.035	Oral-Dentals/ Genitourinary
Cinnamomum camphora L.	Cafour	Int	L	W	2	0.003	0.009	Respiratory
(Lauraceae)								
Cinnamomum zeylanicum	Karfa	Int	BA	W-NS	24	0.031	0.035	Genitourinary/ Gastrointestinal
Blume. (Lauraceae)								
Citrullus colocynthis (L.)	Hdej	S	FL-	NS	23	0.030	0.034	Oral-Dentals/ Diabetes/ Dermatological
Schrad. (Cucurbitaceae)			RT-					
			ST-B					
			31-D					
Citrullus vulgaris Schrad.	Dalah	С	SI-Б FL-L	NS	22	0.029	0.034	Neurological/ Gastrointestinal

Citra currantium L.RanjCFRN.S3.80.0500.054Dermaological/ GentourinaryCitras timon L. (Rutaceae)HamedCFR-FLW-NS3.50.0460.048Dermaological/ Gentourinary/ RepiratoryCitras timon L. (Rutaceae)LechinCFRNS1.70.0220.027Dermaological/ RespiratoryConvolutions althaooider L.AnosfalSFL-FRW-NS1.70.0220.027Dermaological/ RespiratoryConvolutions althaooider L.AnosfalSFL-FRW-NS1.70.0220.031Diabetes/ Metabolic/ Costorointes/Convolutions althaooider L.AnosfalSL-SFW670.0880.004Respiratory/Genthourinary/Hair Care/Corrigiola telephilifolia Pourr.SarphinaSL-SFW670.0880.004Respiratory/Genthourinary/Hair Care/Constrained SciencesKKKN1.80.0240.023Gasterinites/Inal/ GentorrinaryCucardinationBascithCKKW1.80.0240.022Gasterinites/Inal/ Gentorrinary/ Castrointes/Inal/CucardinateshardKSBA-LW1.80.0240.023Gasterinites/Inal/CucardinateshardKKW-NSH1.80.0240.023Gasterinites/Inal/CucardinatesFLKW1.80.0250.035Gasterinites/Inal/CucardinatesFLW <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>									
Circus lines I. (Rutaceae)HamedCFR-FLW-NS3.50.0460.048Dermatological/ Genitourinary/ RespiratoryCirrus srinesis L. (Rutaceae)LechinCFRN.NS1.70.0220.027Dermatological / RespiratoryCirrus sinensis L. (Rutaceae)LechinCFL-FRW6.60.0680.029Respiratory/ ConcordiularConvolution antivam L.AsocialSFL-FRW6.70.0270.030Diabetes/ Metabolic/ Gastrointestinal(Convolutiona diffuence)KarboarCSEW2.10.0270.030Diabetes/ Metabolic/ Gastrointestinal(Convolutiona diffuence)SarphinSL-STW7.00.0880.094Respiratory/Genitourinary/Hair Care/(Corryophylineces)KrKrKrKrDiabetes/Diabetes/Diabetes/(Cucurbitaceas)KrKrKrKrDiabetes/Diabetes/(Cucurbitaceas)Karoanfr.SEBA-LW1.80.0240.029Gastrointestinal/(Cucurbitaceas)Karoanfr.SEBA-LW1.80.0240.029Gastrointestinal/(Cucurbitaceas)Karoanfr.SEBA-LW1.80.0240.029Gastrointestinal/(Cucurbitaceas)Karoanfr.SEBA-LW1.80.021Gastrointestinal/(Cucurbitaceas)SaroanSI.A-TW1.80.021Ga	Citrus aurantium L.	Ranj	С	FR	NS	38	0.050	0.054	Dermatological/ Genitourinary
Citrus reticuluit Blaco (Rutacea)Mandari CCFRNS120.0160.018Genitouriary / Respiratory(Rutacea)CFL-FRW-NS170.0220.027Derantological / RespiratoryCornolvalue situane L (Convolvalue scatcea)CFL-FRW660.0860.028Respiratory' OscoarricularCornolvalue situane L (Convolvalue scatcea)KaubourCSEW210.0270.030Diabetes/ Metabolis/ GastrointestinalCornigidal telephiliplia Parre, SarghinaSL-STW670.0880.0290.031Neurological/ GastrointestinalCornigidal telephiliplia Parre, SarghinaSL-STW670.0880.0290.031Neurological/ GastrointestinalCornigida telephiliplia Parre, Sarghina exitane Detecse, Cucambia mexitane Detecse, Cucambia mexitane Detecse, Cucambia mexitane Detecse, Cucambia mexitane Detecse, Cucambia mexitane Detecse, Cucambia mexitane Detecse, Curambia mexitane Detecse, <th>,</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	,								
(Rataccav)CFL-RW-NS170.0220.027Dematological / Respiratory(Ganovious ethnolies L.AassfalSFL-RW6.00.000Respiratory/ Osteoarticular(Ganovious ethnoles L.AassfalSFL-RW6.00.002Respiratory/ Osteoarticular(Ganovious ethnoles C.KabourCSEW210.0270.030Dabetes' Metabolic/ Gastrointestinal(Apiacear)TTW6.70.0880.094Respiratory/Genitourinary/Hair Care'(Garyophyllaceas)KTKTTTDabetes(Cucurbitizeas)BastikhCSFW180.0240.029Gastrointestinal' Gastrointestinal(Cucurbitizeas)TKamoonIntSEW-NS-H160.029Gastrointestinal' Gastrointestinal(Cucurbitizeas)TKamoonIntSEW-NS-H0.029Gastrointestinal' Gastrointestinal(Cucurbitizeas)TTNavoSBA-LW180.0240.029Gastrointestinal'(Cucurbitizeas)TTNavoSBA-LW150.020Gastrointestinal' Gastrointestinal'(Cucurbitizeas)TTSSL-FLW150.020Gastrointestinal' Gastrointestinal'(Cucurbitizeas)TTNavoSR-FLW150.020Gastrointestinal' Gastrointestinal'(Cucurbitizeas)SR-FL	Citrus limon L. (Rutaceae)	Hamed	С	FR-FL	W-NS	35	0.046	0.048	
Citrue sinensis L. (Ratareens)LechinCFL-RW-NS170.0220.027Dermanological / RespiratoryConvolvations diffuencide LAnesfalSFL-RTW660.0860.092Respiratory' OstoaarticularConvolvations diffuencide LKashourCSEW210.0270.030Diabates' Metabolie/ Gastrointestinal(Apricea)NSL-STW670.0880.094Respiratory' Centiourinary/Hair Care'(Careyba)NNNNNN0.021Monological / Castrointestinal(Careyba)NNNNNNNN(Careyba)NNNNNNNN(Careyba)NNNNNNNNN(Careyba)NNNNNNNNNNNN(Careyba)NNN	Citrus reticulata Blanco	Mandari	С	FR	NS	12	0.016	0.018	Genitourinary / Respiratory
Convolvalues all acoulds L. (Convolvaluesce)AnesfalSFL-RTW660.092Respiratory/Oncoarticular (Convolvaluesce)Coriandrum saitvum L. (Capiacea)KasbourCSEW210.0270.030Diabetes' Matabolic/ Gastrointestinal 	(Rutaceae)								
(Convolvalaccae)KasbourCSSW210.0270.030Diabetes' Metabolie/ Gastrointestinal(Apiacear)Corrigiola telephifpila Pourr, SarghinaSL-ST.W6.70.0880.094Respiratory/Genitourinary/Ilair Care' DiabetesCucarnismento L, (Cucarnistaceae)HaetikhCLN220.0290.013Neurological/ GastrointestinalCucarnismento L, (Cucarnistaceae)HaetikhCSEW180.0240.029Gastrointestinal/ GenitourinaryCucarnismento IL, (Cucarnistaceae)KamounIntSEW.NS-H600.0780.022Genitourinary/ GastrointestinalCutarnism opinium L, (Cupressaceae)KamounIntSEW.NS-H600.0780.022Genitourinary/ Gastrointestinal/(Cupressaceae)FLW150.0200.025Genitourinary/ Gastrointestinal/(Cupressaceae)FLW150.0200.025Genitourinary/ Gastrointestinal/PateceaeyFLW150.0200.025Genitourinary/ GastrointestinalChateraceaeyIberiFLW150.0200.025Genitourinary/ GastrointestinalCynonon detylor L PonceeoFR-STNS-W430.0560.061Gastrointestinal/ Diabetes/Cynonon detylor L PonceeoFR-STNS-W430.0560.061Gastrointestinal/ Diabetes/Cynonon detylor L PonceeoFR-STNS-W430.052	Citrus sinensis L. (Rutaceae)	Lechin	С	FL-FR	W-NS	17	0.022	0.027	Dermatological / Respiratory
Coriandrum safraum I.KasbourCSF.W210.0270.030Diabetes/ Metabolic/ Gastrointestinal (Apinecae)Corrigida ledephi/fola PourSaglinaSL-ST.W670.0880.094Respiratory/Geni/ourinary/Hair Carc DiabetesCacurbin molo L.BaetikhCLNS220.0290.031Neurological/ GastrointestinalCacurbin maxima Duchesse.hmar KraaCSEW180.0240.029Gastrointestinal/ GenitourinaryCacurbin maxima Duchesse.hmar KraaCSEW180.0240.029Gastrointestinal/ Genitourinary(Courbin maxima Duchesse.hmar KraaCSEW180.0240.029Gastrointestinal/ Genitourinary(Courbinacea)KanounIntSEW-NE150.0200.025Genitourinary/ Gastrointestinal/(Couressacea)FLFLW150.0200.025Genitourinary/ Gastrointestinal/(Couressacea)FLFLW150.0200.055Diabetes/ Gastrointestinal/Cymosopon citratus.KharchefCFR-STN-N460.0600.061Gastrointestinal/Cymosopon citratus.KharchefCFR-STN-N450.061Gastrointestinal/ Diabetes/Cymosopon Litratus.KharchefCFR-STN-N450.0160.018Octoarciular/ AradiovascularCymosopon Litratus.Nigin RielSRH<	Convolvulus althaeoides L.	Anesfal	S	FL-RT	W	66	0.086	0.092	Respiratory/ Osteoarticular
(Apiacear)SargbinaS A L-ST.U W AA CA C NB C A C DiabetsC DiabetsCacumis modelsBaetikhC LNS220.020.031Neurological/ Gastrointestinal(Cacurbi for (Cacurbita maxim Duchsen.Imar Kras Mar KrasC SKNS0.0240.021Gastrointestinal/ Guitourinary(Cacurbita maxim Duchsen.Imar Kras Mar KrasC SKNS180.0240.021Gastrointestinal/ Guitourinary(Cacurbita maxim Duchsen.Imar Kras Mar KrasNSKNS1600.0780.021Gastrointestinal/ Guitourinary(Cacurbita maxim Duchsen.Imar Kras Mar KrasNSNS150.020.025Gastrointestinal/ Guitourinary/ Gastrointestinal(Carlersseare)Imar KrasSIFI.NNS150.0200.025Gastrointestinal/ Cardiovascular(Carlersseare)IberiImar KrasCFR-TIN-NS430.0560.061Gastrointestinal/ Cardiovascular(Marcacea)IberiImar KrasCFR-TIN-NS430.0560.018Gastrointestinal/ Imar Kras(Materacea)IberiImar KrasSRHW120.0160.018Oatointestinal/ Cardiovascular(Materacea)Jagia RielSRHW120.0160.018Gastrointestinal/ Imar Kras(Materacea)Jagia RielSL-WPNS-W<	(Convolvulaceae)								
Corrigiolar telephilfoliar Pourr, Carrigiolar telephilfoliar Pourr, Carrigiolar telephilfoliar Pourr, Carrigiolar telephilfoliar Pourr, Carrigiolar telephilfoliar Pourr, Bactikh Carrigiolar Mana Kraa Carrigiolar Castrointestinal Carrigiolar Mana Kraa Carrigiolar Mana KraaSL-STW670.0880.094Respiratory/Genitourinary/Hair Care' DiabetesCucurbitareacy (Cucurbitareacy)Bactikh Caminum cyminum L, Caminum cyminum L, Camona Kamou (Carrigiolar Castrointestinal (Capiceace)NarsCSEW180.0240.029Gastrointestinal/ Genitourinary/Cyminum cyminum L, (Capiceace)Kamou AsrouSBA-L SW180.0240.029Oral-Dentals/ Gastrointestinal/ Castroint	Coriandrum sativum L.	Kasbour	С	SE	W	21	0.027	0.030	Diabetes/ Metabolic/ Gastrointestinal
(Caryophyllaceae)RTInterpretationDiabetesCarumis melo L.BaetikhCLNS220.0290.031Neurological/ Gastrointestinal(Cucurbit aceae)CSEW180.029Gastrointestinal/ Genitourinary/(Cucurbit aceae)CSEW180.029Gastrointestinal/ Genitourinary/ Gastrointestinal/(Apiaceae)CSEW180.029Oral-Dentals/ Gastrointestinal/(Apiaceae)FLW180.0200.029Oral-Dentals/ Gastrointestinal/(Curpressaceae)FLW150.0200.025Gantourinary/ Gastrointestinal/(Curpressaceae)FLFLNeurological / CardiovascularCardiovascularCyman humilis L.KharehefCSTRTW-NS460.0600.055Diabetes/ Gastrointestinal(Auteraceae)IberiFLKarchefCSTRTNS-W430.016OatsDiabetes/ Gastrointestinal(Auteraceae)IberiFLCSTRTNS-W430.065Diabetes/ GastrointestinalDiabetes/(Auteraceae)NgimSRHW-NS110.0140.018Osteoarticular/ RespiratoryDatactio cardu (Apiaceae)NgimSRHW-NS110.0140.010Neurological(Diadeterin aceyptian L.GiadaCB-LNS-W270.035Gastrointestinal/ Cardiovascular(Diadeterin aceypticemium aceyptian	(Apiaceae)								
Cucumi mela L. (Cucurbitaneas)Bactikh CCLNS220.0240.024Neurological/ GastrointestinalCucurbitan maxima Duchesne. (Cucurbitaceas)Inmar Kran CCSEW180.0240.028Gastrointestinal/ GenitourinaryCucurbitan axima Duchesne. (Cucurbitaceas)Inmar Kran CCSEW180.0240.028Genitourinary/ GastrointestinalCurdinum cyminum L. (Cucurbitaceas)KamounIntSEW-NS400.0240.0290.021Genitourinary/ GastrointestinalCupressus sempervices L. (Cupressace)AsrouSBA-LW180.0240.0200.025Genitourinary/ Gastrointestinal/ CardiovascularCymopogen citratus. (Cupressace)MarssitaSL-FLW150.0200.025Genitourinary/ Gastrointestinal/ CardiovascularCymon humilis L. (Asteracea)MarssitaSL-FLW150.0260.061Gastrointestinal/ Diabetes/ Gastrointestinal/ CardiovascularCymon dactylon L (Poaceae)NgimSRHWNS430.0560.061Gastrointestinal/ CardiovascularObacuta CardinSRHWNS100.0140.017NeurologicalOpacina Cardin L (Apiaceae)JamelSRHWNS400.0520.056Gastrointestinal/ CardiovascularOpacina Cardin L (Apiaceae)JamelSRHWNS400.01	Corrigiola telephiifolia Pourr.	Sarghina	S	L-ST-	W	67	0.088	0.094	Respiratory/Genitourinary/Hair Care/
(Cacurbita cascina Duchesne, Inmar Kraa (Cacurbita maxima Duchesne, Inmar Kraa (Cacurbita cascina Duchesne, (Cancibita cascina Duchesne, (Cancibita cascina Ca	(Caryophyllaceae)			RT					Diabetes
Currivia maximaMmar KraaCSEW180.0240.029Gastrointestinal/GenitourinaryCurritum cynimum L.KamounIntSEW-NS-H600.0780.082Genitourinary/Gastrointestinal(Apiaceae)Curress sempervirens L.AsrouSBA-LW180.0240.099Oral-Dentals/Gastrointestinal/(Curpressaceae)FLW180.0240.0200.025Genitourinary/Gastrointestinal/(Curpressaceae)FLW150.0200.025Genitourinary/Gastrointestinal/(Curpressaceae)KharchefCS FI-RIW-NS460.0600.065Diabetes/Gastrointestinal/(Cynard numifis L.KharchefCS FI-RIW-NS460.0600.061Gastrointestinal/Diabetes/(Cynard solymus L.KharchefCS FI-RINS-W430.0560.016Gastrointestinal/Diabetes/(Cynard adcejlon L (Poaceae)NigmSRHW120.0160.018Osteoarticular/RespiratoryDacyloctenium aegyptium L.djaja RjelSRHW120.0150.013Oral-Dentals/ Gastrointestinal/(Asteraceae)NigmSRHW120.0150.013Oral-Dentals/ Gastrointestinal/CharteraeuSLW-NS110.0140.017Seconticular/ CardiovascularDiabetes/GastrointestinalCS-MNS-W960.0250.013Oral-De	Cucumis melo L.	Baetikh	С	L	NS	22	0.029	0.031	Neurological/ Gastrointestinal
(Cacurbitaceae)KamounIntSEW-NS-H600.0780.082Genitourinary/ Gastrointestinal(Apieceae)<	(Cucurbitaceae)								
Caminum L.KamounIntSEW-NS-H600.0780.082Genitourinary/Gastrointestinal(Apiaceac) <t< th=""><th>Cucurbita maxima Duchesne.</th><th>hmar Kraa</th><th>С</th><th>SE</th><th>W</th><th>18</th><th>0.024</th><th>0.029</th><th>Gastrointestinal/ Genitourinary</th></t<>	Cucurbita maxima Duchesne.	hmar Kraa	С	SE	W	18	0.024	0.029	Gastrointestinal/ Genitourinary
(Apiaceae)Capressars sempervirens L.AsrouSBA-L-W180.0240.029Oral-Dentals/ Gastrointestinal/ Neurological / Cardiovascular(Copressaceae)FLV150.0200.025Genitourinary/ Gastrointestinal/ Neurological / CardiovascularCymbopoon citratus, (MarshiaSL-FLW150.0200.025Genitourinary/ Gastrointestinal/ Neurological / CardiovascularCymara hundlis L.KharchefCST-RTW-NS460.0600.065Diabetes/ Gastrointestinal/ Diabetes/ Gastrointestinal(Asteraceae)IberiVVST0.0160.016Gastrointestinal/ Diabetes/ CardiovascularCynara scolynus L.KharchefCFR-STNS-W430.0560.061Gastrointestinal/ Diabetes/ CardiovascularCynara scolynus L.KharchefCFR-STNS-W430.0160.018Osteoarticular/ RespiratoryDacylocetanian aegyptium L.djai RjelSRHW-NS110.0160.018Osteoarticular/ CardiovascularDacuas caron L. (Apiaceae)JaadaCB-LNS-W400.0520.056Gastrointestinal/ CardiovascularDiarcetifik iscosa L.BiramelSL-WNS-W400.0520.056Gastrointestinal/ CardiovascularDiarcetifik iscosa L.BiramelSRHWNS200.0350.010Osteoarticular/ CardiovascularDiarcetifik iscosa L.Biramel	(Cucurbitaceae)								
Cupressa sempervirens L. (Cupressaceae)AsrouSBA-L FLW180.0240.029Oral-Dentals/ Gastrointestinal/ Neurological / CardiovascularCymbopogon citratus.MarssitaSL-FLW150.0200.025Genitourinary/ Gastrointestinal/ CardiovascularCymara humilis L.KharchefCST-RTW-NS460.066Diabetes/ GastrointestinalCynara colymus L.KharchefCFR-STNS-W430.0560.061Gastrointestinal/ Diabetes/ CardiovascularCynara colymus L.KharchefCFR-STNS-W430.0560.061Gastrointestinal/ Diabetes/ CardiovascularCynara colymus L.KharchefCFR-STNS-W430.0560.061Gastrointestinal/ Diabetes/ CardiovascularCynara colymus L.KharchefCFR-STNS-W430.0560.061Gastrointestinal/ CardiovascularCynara colymus L.Ajaja RjelSRHW120.0160.018Osteoarticular/ RespiratoryDactoscarota L. (Apiaceae)NjemSRHW-NS110.0140.017NeurologicalDitrichia viscosa L.BiramelSRHW270.0350.010Osteoarticular/ CardiovascularChartereenSarkhSRHW270.0350.010Osteoarticular/ CardiovascularChristeria Viscosa L.BiramelSRHW270.0350.010Osteoar	Cuminum cyminum L.	Kamoun	Int	SE	W-NS-H	60	0.078	0.082	Genitourinary/ Gastrointestinal
(Cupresseeae)FLNeurological / CardiovascularCymbopogon citratus. (MarssitaSL-FLW150.0200.025Genitourinary/ Gastrointestinal/ CardiovascularPoaceae)ST-RTW-NS460.0600.065Diabetes/ Gastrointestinal(Asteraceae)Iberi </th <th>(Apiaceae)</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	(Apiaceae)								
Cymbopogon citratus.MarssitaSL-FLW150.0200.025Genitourinary/Gastrointestinal/ CardiovascularPoaceae)	Cupressus sempervirens L.	Asrou	S	BA-L-	W	18	0.024	0.029	Oral-Dentals/ Gastrointestinal/
Poaceac)CardiovascularCynara humilis L.KharchefCST-RTW-NS460.0600.065Diabetes/ Gastrointestinal(Asteraceae)Iberi </th <th>(Cupressaceae)</th> <th></th> <th></th> <th>FL</th> <th></th> <th></th> <th></th> <th></th> <th>Neurological / Cardiovascular</th>	(Cupressaceae)			FL					Neurological / Cardiovascular
Cynara humilis L. (Asteraceae)Kharchef (beriCST-RTW-NS460.0600.065Diabetes/ Gastrointestinal(Asteraceae)IberiVVVVVVVVCardiovascular(Asteraceae)romiVVVV0.0660.061Gastrointestinal/Diabetes/ Cardiovascular(Asteraceae)romiVVV0.0160.018Osteoarticular/ RespiratoryDactyloctenium aegyptium L. (dpaceae)djaja RjelSRHWV100.0140.017NeurologicalDactyloctenium aegyptium L. (dpaceae)djaja RjelSRHW-NS110.0140.017NeurologicalDaucus carota L. (Apiaceae)JaadaCB-LNS-W960.1250.056Gastrointestinal/ CardiovascularDittrichia viscosa L. (Asteraceae)BiramelSRH-WNS470.0350.010Osteoarticular/ CardiovascularDryopterify filis-mas (L.) (Asteraceae)SarkhSRH-WNS60.0080.037GastrointestinalIs indowing agnotic af thunb. (Asteraceae)SarkhCLWNS60.0080.037GastrointestinalIs indowing agnotic filis-mas (L.) (Asteraceae)SarkhSRH-WNS60.0380.037GastrointestinalIs indowing agnotic filis-mas (L.) (Riscaea)MzahCLWNS6	Cymbopogon citratus. (Marssita	S	L-FL	W	15	0.020	0.025	Genitourinary/ Gastrointestinal/
Asteracea)İberi(Asteracea)KharchefCFR-STNS-W430.0560.061Gastrointestinal/ Diabetes/ Cardiovascular(Asteracea)romiCardiovascular(Asteracea)NjemSRHW120.0160.018Osteoarticular/ RespiratoryDacyloctenium aegyptium L.djaja RjelSRHW-NS110.0140.017Neurological(Poaceae)JaadaCB-LNS-W400.0520.056Gastrointestinal/ CardiovascularDittrichia viscosa L.BiramelSL-WPNS-W960.1250.135Oral-Dentals / Gastrointestinal/(Asteraceae)JaadaCB-LNS-W960.0520.056Gastrointestinal/ CardiovascularOryopteris filix-mas (L.)SarkhSRH-W270.0350.010Osteoarticular / CardiovascularSchott. (Dryopteridaceae)SRH-W270.0350.010Osteoarticular/ CardiovascularElaeganaceaeSRH-W270.0350.010Osteoarticular/ Cardiovascular(Rosaceae)SRH-W270.0350.010Osteoarticular/ CardiovascularIcalagnaceae)SRH-W270.0350.010Gastrointestinal(Rosaceae)RT-LKaliplusSLW290.0380.042Gastrointestinal/ Respiratory/ENT(Apiaceae)RT-L <t< th=""><th>Poaceae)</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>Cardiovascular</th></t<>	Poaceae)								Cardiovascular
Cynara scolymus L.KharchefCFR-STNS-W4.30.0560.061Gastrointestinal/Diabetes/ Cardiovascular(Asteracea)romiCFR-STNS-W120.0160.018Ostoarticular/ RespiratoryDactyloctenium aegyptium L.djaja RjelSRHW120.0160.018Ostoarticular/ RespiratoryDactyloctenium aegyptium L.djaja RjelSRHW-NS110.0140.017NeurologicalDactyloctenium aegyptium L.djaja RjelSRHW-NS400.0520.056Gastrointestinal/ CardiovascularDactyloctenium aegyptium L.djaja RjelSRHW-NS400.0520.056Gastrointestinal/ CardiovascularDacus carota L. (Apiaceae)JaadaCB-LNS-W400.0520.055Oasto articular/ DematologicalDittrichia viscosa L.BiramelSL-WPNS-W960.150.155Oral-Dentals / Gastrointestinal/(Asteracee)SarkhSRH-W270.0350.010Osteoarticular/ CardiovascularElaeagnas angustifolia L.tortTmarIntFRNS60.0380.037Gastrointestinal(Baeganaceae)IntFRW-NS290.0350.037Gastrointestinal(Rosaceae)IntFRW-NS290.0380.042Gastrointestinal(Apiacea)MzahSLWNS200.0350.0	Cynara humilis L.	Kharchef	С	ST-RT	W-NS	46	0.060	0.065	Diabetes/ Gastrointestinal
Asteracea)romiCardiovascularCynodon dactylon L (Poaceae)NjemSRHW120.0160.018Osteoarticular/ RespiratoryDactyloctenium aegyptium L.djaja RjelSRHW-NS110.0140.017Neurological(Poaceae)BiramelSL-WPNS-W400.0520.056Gastrointestinal/ CardiovascularDatuts carota L. (Apiaceae)JaadaCB-LNS-W400.0520.135Oral-Dentals / Gastrointestinal/Dittrichia viscosa L.BiramelSL-WPNS-W960.1250.135Oral-Dentals / Gastrointestinal/C(Asteraceae)SarkhSRHW270.0350.010Osteoarticular/ CardiovascularBelaeganus angustifolia L.tork TmarIntFRNS60.0080.037GastrointestinalC(Baegnaceae)SWTWNS290.0350.010Osteoarticular// CardiovascularC(Rosacea)TTRT-LRespiratory/ CastrointestinalC(Baegnaceae)NZVN290.0350.037Gastrointestinal/ Respiratory/ ENTC(Rosaceae)RT-L </th <th>(Asteraceae)</th> <th>lberi</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	(Asteraceae)	lberi							
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Dactyloctenium aegyptium L.djaja RjelSRHW-NS110.0140.017Neurological(Poaceae)Daucus carota L. (Apiaceae)JaadaCB-LNS-W400.0520.056Gastrointestinal/ CardiovascularDitrichia viscosa L.BiramelSL-WPNS-W960.1250.135Oral-Dentals / Gastrointestinal/(Asteraceae)Image: Cardio agentication of the cardio agentica		romi							
(Poaceae)Daucus carota L. (Apiaceae)JaadaCB-LNS-W400.0520.056Gastrointestinal/ CardiovascularDittrichia viscosa L.BiramelSL-WPNS-W960.1250.135Oral-Dentals / Gastrointestinal/(Asteraceae)	Cynodon dactylon L (Poaceae)	Njem	S	RH	W	12	0.016	0.018	Osteoarticular/ Respiratory
Daucus carota L. (Apiaceae)JaadaCB-LNS-W400.0520.056Gastrointestinal/ CardiovascularDittrichia viscosa L.BiramelSL-WPNS-W960.1250.135Oral-Dentals / Gastrointestinal/(Asteraceae)USE CardiovascularDryopteris filix-mas (L.)SarkhSRH-W270.0350.010Osteoarticular/ CardiovascularSchott. (Dryopteridaceae)ST-LUSE CardiovascularElaeagnas angustifolia L.tork TmarIntFRNS60.0080.037Gastrointestinal(Biaganceae)USE CardiovascularEriobotrya japonica Thunb.MzahCLW270.0350.037Genitourinary/(Rosaceae)Respiratory/GastrointestinalChypteriaceae)USE CardiovascularEriobotrya japonica Thunb.MzahCLW270.0350.037Genitourinary/(Rosaceae)Respiratory/GastrointestinalChypteriaceae)USE CardiovascularEucalyptus camadulens.KaliplusSLWNS290.0350.037Genitourinary/(Myrtaceae)USE CardiovascularEucalyptus camadulens.KranfelIntFLW1030.1350.141Respiratory/DiabetesEugenia caryophyllata Thunb.KranfelIntFLW320.0680.073Oral-Denta	Dactyloctenium aegyptium L.	djaja Rjel	S	RH	W-NS	11	0.014	0.017	Neurological
Dittrichia viscosa L.BiramelSL-WPNS-W960.1250.135Oral-Dentals / Gastrointestinal/ Osteoarticular / Dermatological <i>Chyopteris filix-mas</i> (L.)SarkhSRH-W270.0350.010Osteoarticular / Dermatological <i>Dryopteris filix-mas</i> (L.)SarkhSRH-W270.0350.010Osteoarticular / CardiovascularSchott. (Dryopteridaceae)TTFRNS60.0080.037Gastrointestinal <i>Elaeagnaceae</i> TTFRNS60.0080.037Genitourinary/ <i>Gostaceae</i> TTWNS-W290.0350.037Genitourinary/ <i>Choaceae</i> TTWW-NS290.0380.042Gastrointestinal/ <i>Chyopteris camaldulens</i> .KaliplusSLWNS-W960.1350.141Respiratory/Diabetes <i>Eucalyptus camaldulens</i> .KaliplusSLWNS-W970.0350.043Oral-Dentals/ Genitourinary/Hair Cardiovascular <i>Guytus camaldulens</i> .KaliplusSLWNS-W290.0380.042Gastrointestinal/ <i>Chyopteris informational camalyptus camaldulens</i> .KaliplusSLWNS290.0380.041Respiratory/Diabetes <i>Chyopteris informational campophylitata Thunb</i> .KranfelIntFLWS20.0680.073Oral-Dentals/ Genitourinary/Hair Cardiovascular<	(Poaceae)								
(Asteraceae)SarkhSRH- ST-LW270.0350.010Osteoarticular/ DematologicalSchott. (Dryopteridaceae)ST-LST-LSt-LSt-CSt-CSt-C <i>Elaeagnas angustifolia</i> L.tork TmarIntFRNS60.0080.037Gastrointestinal(Elaeagnaceae)St-CSt-CSt-CSt-CSt-CSt-CSt-C <i>Eriobotrya japonica</i> Thunb.MzahCLW270.0350.037Genitourinary/ Gastrointestinal(Rosaceae)St-CSt-CSt-CSt-CSt-CSt-CSt-C <i>Eryngiun ilicifoliun</i> Lam.ZerikaSMTW-NS290.0350.042Gastrointestinal/Respiratory/ENT <i>Guargenia</i> KaliplusSLW1030.1350.141Respiratory/Diabetes <i>Guyrtaceae</i> St-CST-CSt-CSt-CSt-CSt-C <i>Eugenia caryophyllata</i> Thunb.KranfelIntFLW520.0680.073Oral-Dentals/Genitourinary/Hair Card <i>Guyrtaceae</i> St-SW320.042OtabetsSt-S <th< th=""><th>Daucus carota L. (Apiaceae)</th><th>Jaada</th><th>С</th><th>B-L</th><th>NS-W</th><th>40</th><th>0.052</th><th>0.056</th><th>Gastrointestinal/ Cardiovascular</th></th<>	Daucus carota L. (Apiaceae)	Jaada	С	B-L	NS-W	40	0.052	0.056	Gastrointestinal/ Cardiovascular
Dryopteris filix-mas (L.)SarkhSRH- ST-LW270.0350.010Osteoarticular / CardiovascularSchott. (Dryopteridaceae)ST-LST-LSt-LSt-LSt-LSt-LSt-LSt-LElaeagnas angustifolia L.tork TmarIntFRNS60.0080.037Gastrointestinal(Elaeagnaceae)St-LSt-LSt-LSt-LSt-LSt-LSt-LSt-LSt-LEriobotrya japonica Thunb.MzahCLW270.0350.037Genitourinary/ Genitourinary/ Respiratory/Gastrointestinal(Rosaceae)TSt-RLW-NS290.0380.042Gastrointestinal/ Respiratory/ENTEucalyptus camaldulens.KaliplusSLW1030.1350.141Respiratory/DiabetesEugenia caryophyllata Thunb.KranfelIntFLW520.0680.073Oral-Dentals/ Genitourinary/ Hair Care(Myrtaceae)SSTW320.0420.046Dermatological/ Metabolic	Dittrichia viscosa L.	Biramel	S	L-WP	NS-W	96	0.125	0.135	Oral-Dentals / Gastrointestinal/
Schott. (Dryopteridaceae)ST-LElaeagnus angustifolia L.tork TmarIntFRNS60.0080.037Gastrointestinal(Elaeagnaceae)Eriobotrya japonica Thunb.MzahCLW270.0350.037Genitourinary/(Rosaceae)Eryngium ilicifolium Lam.ZerikaSWT-W-NS290.0380.042Gastrointestinal(Apiaceae)Eucalyptus camaldulens.KaliplusSLW1030.1350.141Respiratory/ Diabetes(Myrtaceae)Eugenia caryophyllata Thunb.KranfelIntFLW520.0680.073Oral-Dentals/ Genitourinary/ Hair Care(Myrtaceae)Euphorbia peplis L.HallilaSSTW320.0420.046Dermatological/ Metabolic	(Asteraceae)								Osteoarticular/ Dermatological
Elaeagnus angustifolia L.tork TmarIntFRNS60.0080.037Gastrointestinal(Elaeagnaceae)Eriobotrya japonica Thunb.MzahCLW270.0350.037Genitourinary/ Respiratory/Gastrointestinal(Rosaceae)Eryngium ilicifolium Lam.ZerikaSWT-W-NS290.0380.042Gastrointestinal/ Respiratory/ENT(Apiaceae)Eucalyptus camaldulens.KaliplusSLW1030.1350.141Respiratory/Diabetes(Myrtaceae)Eugenia caryophyllata Thunb.KranfelIntFLWS20.0680.073Oral-Dentals/ Genitourinary/ Hair Care(Myrtaceae)Eughnorbia peplis L.HallilaSSTW320.0420.046Dermatological/ Metabolic	Dryopteris filix-mas (L.)	Sarkh	S	RH-	W	27	0.035	0.010	Osteoarticular / Cardiovascular
(Elaeagnaceae)Eriobotrya japonica Thunb.MzahCLW270.0350.037Genitourinary/ Respiratory/Gastrointestinal(Rosaceae)Katipium Lam.ZerikaSWT-W-NS290.0380.042Gastrointestinal/ Respiratory/ ENT(Apiaceae)KT-LEucalyptus camaldulens.KaliplusSLW1030.1350.141Respiratory/ Diabetes(Myrtaceae)KarafelIntFLW520.0680.073Oral-Dentals/ Genitourinary/ Hair CareEugenia caryophyllata Thunb.KranfelIntFLW520.0420.046Dermatological/ MetabolicEuphorbia peplis L.HallilaSSTW320.0420.046Dermatological/ Metabolic	Schott. (Dryopteridaceae)			ST-L					
Eriobotrya japonica Thunb.MzahCLW270.0350.037Genitourinary/ Respiratory/Gastrointestinal(Rosaceae)Respiratory/GastrointestinalEryngium ilicifolium Lam.ZerikaSWT-W-NS290.0380.042Gastrointestinal/ Respiratory/ ENT(Apiaceae)RT-LEucalyptus camaldulens.KaliplusSLW1030.1350.141Respiratory/ Diabetes(Myrtaceae)Regenia caryophyllata Thunb.KranfelIntFLW520.0680.073Oral-Dentals/ Genitourinary/ Hair Care(Myrtaceae)Eugenia caryophyllata Thunb.KranfelIntFLW520.0420.046Dermatological/ MetabolicEuphorbia peplis L.HallilaSSTW320.0420.046Dermatological/ Metabolic	Elaeagnus angustifolia L.	tork Tmar	Int	FR	NS	6	0.008	0.037	Gastrointestinal
(Rosaceae)Respiratory/GastrointestinalEryngium ilicifolium Lam.ZerikaSWT-W-NS290.0380.042Gastrointestinal/ Respiratory/ ENT(Apiaceae)RT-LRT-LImage: Comparison of the comparison	(Elaeagnaceae)								
Eryngium ilicifolium Lam.ZerikaSWT-W-NS290.0380.042Gastrointestinal/ Respiratory/ ENT(Apiaceac)RT-LEucalyptus camaldulens.KaliplusSLW1030.1350.141Respiratory/ Diabetes(Myrtaceae)Eugenia caryophyllata Thunb.KranfelIntFLW520.0680.073Oral-Dentals/ Genitourinary/ Hair Care(Myrtaceae)Euphorbia peplis L.HallilaSSTW320.0420.046Dermatological/ Metabolic	<i>Eriobotrya japonica</i> Thunb.	Mzah	С	L	W	27	0.035	0.037	Genitourinary/
(Apiaceae)RT-LEucalyptus camaldulens.KaliplusSLW1030.1350.141Respiratory/Diabetes(Myrtaceae)Eugenia caryophyllata Thunb.KranfelIntFLW520.0680.073Oral-Dentals/ Genitourinary/ Hair Care(Myrtaceae)Euphorbia peplis L.HallilaSSTW320.0420.046Dermatological/ Metabolic	(Rosaceae)								Respiratory/Gastrointestinal
Eucalyptus camaldulens.KaliplusSLW1030.1350.141Respiratory/ Diabetes(Myrtaceae)Eugenia caryophyllata Thunb.KranfelIntFLW520.0680.073Oral-Dentals/ Genitourinary/ Hair Care(Myrtaceae)Euphorbia peplis L.HallilaSSTW320.0420.046Dermatological/ Metabolic	<i>Eryngium ilicifolium</i> Lam.	Zerika	S	WT-	W-NS	29	0.038	0.042	Gastrointestinal/ Respiratory/ ENT
(Myrtaceae)Eugenia caryophyllata Thunb.KranfelIntFLW520.0680.073Oral-Dentals/ Genitourinary/ Hair Care(Myrtaceae)Euphorbia peplis L.HallilaSSTW320.0420.046Dermatological/ Metabolic	(Apiaceae)			RT-L					
Eugenia caryophyllata Thunb.KranfelIntFLW520.0680.073Oral-Dentals/ Genitourinary/ Hair Care(Myrtaceae)Euphorbia peplis L.HallilaSSTW320.0420.046Dermatological/ Metabolic	Eucalyptus camaldulens.	Kaliplus	S	L	W	103	0.135	0.141	Respiratory/ Diabetes
(Myrtaceae) Euphorbia peplis L. Hallila S ST W 32 0.042 0.046 Dermatological/ Metabolic	(Myrtaceae)								
<i>Euphorbia peplis</i> L. Hallila S ST W 32 0.042 0.046 Dermatological/ Metabolic	<i>Eugenia caryophyllata</i> Thunb.	Kranfel	Int	FL	W	52	0.068	0.073	Oral-Dentals/ Genitourinary/ Hair Care
(Euphorbiaceae)		Hallila	S	ST	W	32	0.042	0.046	Dermatological/ Metabolic
	(Euphorbiaceae)								

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Frends communits I. Fasodah S L NS-W 9 0.012 0.016 Gasterinistimal Freus carica L. (Moraccae) Karmous C IFR NS-O 41 0.054 0.038 Gasterinistimal Freus carica L. (Moraccae) Karmous C S.F.RT W 21 0.027 0.030 Gasterinistimal Freusing anguardial value for Lamon C I. W 14 0.018 0.022 Gasterinistimal Freusing anguardial value for Lamon C I. W 13 0.017 0.021 Diabaccal Geltem apprint L. Lassita S L.ST W 15 0.020 0.025 Respiratory Glubacceae) R K K K K K K K Glubacceae Lawaya S L.ST W 15 0.020 0.025 Respiratory Hellanthus annuas L Awaya S L.ST W 15 0.020 0.031 Matabalic Charceae) Lawaya S L.ST W 81 0.106 0.112 Diabaccal Charceae Chair C SE W-NS <td< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>									
Fores caries 1. (Moracear)KarmorsCL-FRNS-O410.0540.055Gastrointestinal/ MethodicFoundiand wingbort Mill.BabassCSE-RTW2100.0270.030Gastrointestinal/ Respiratory(Optacears)	Ferula communis L.	Fasoukh	S	L	NS-W	9	0.012	0.016	Gastrointestinal
Poncinculum vulgarer Mill.BasbasCSSN210.0270.030Gastrointestinal Respiratory (Alterease)Practine angustified Valu.if LamCI.W140.0180.022Gastrointestinal Respiratory(Oraceace)Factoria angustified Valu.if LamCI.W140.0180.022Gastrointestinal Respiratory(Papaveracea)GabasFactoriaFactoriaVV150.0330.035Dematological/ENT/Cardiovascular(Papaveracea)Soss AarkIntKSL-STW150.0200.021Oral-Datals/Gastrointestinal(Pabacea)Soss AarkIntKKVN150.0200.021Dematological/ENT/Cardiovascular(Paberacea)Soss AarkIntKSL-STWN150.0200.031Metabolic(Patheracea)LawayaSL-STWN150.0200.031Metabolic(Adem Mellor I, Cardiacean)ChemchSLNN101012Dabeted/Neurological/Respiratory(Internew)ChemchSL-STWN1010.05112Dabeted/Neurological/Respiratory(Cardioacean)ChemchSLNN130.16Metabolic10.00S(Cardioacean)CSNN130.17Unbeted/Neurological/RespiratoryS(Cardioacea									
(Apiaceae)CLW1.40.0180.022Genitorinary' Outsouricellar' RespiratoryFrancine argustificita Vabb.úr LassikaSP.A.RTW1.30.0170.021Diabetes' MetabolicFumorie officinalis 1.ChahmatSP.A.RTW1.30.0170.021Diabetes' MetabolicGenitom aparite LLessikaSI.A.STW2.50.0330.035Dematological' FNT / Cardinvascular(Rubiaceae)Genitom aparite LLessikaSI.A.STW2.50.0300.025Respiratory(Rubiaceae)LawayaSL.STW1.50.0200.025Respiratory(Rubiaceae)LawayaSL.STW1.50.0200.025Respiratory(Rubeaceae)ChairCSEW-NS2.70.0350.037Gastrointestinal(Rubeaceae)ChairCSEW-NS2.70.0350.037Gastrointestinal(Rubeaceae)ChairCSEW-NS2.70.0350.031Metabolic(Cupresseeceae)ChairCLNS-W-M2.20.0290.031MetabolicLawanduk dentati LKlvanaSLM-W-N3.50.0460.047Respiratory/Gentourinary/Gentourinary/Gentourinary/Gastrointestina(Lawanduk amuth/HilhilaSL-FLM-W-NS5.50.0720.077Respiratory/Gentourinary/Gastrointestina(Lawa						41			Gastrointestinal/ Metabolic
Fractional anguestifyind Vahl.tir IsanCI.WI.40.0180.022 0.021 0.0210 0.0210Genitourinary/ Orientical/Seprintary 1000000000000000000000000000000000000	Foeniculum vulgare Mill.	Basbas	С	SE-RT	W	21	0.027	0.030	Gastrointestinal/ Respiratory
ConcerningControlSPA.RWSOutputOutputDescenticular RespiratoryFamair algifcinals L.CalvasSL-STW250.0330.035Dermatological 'ENT/ CardiovascularGuilam aparine L.LesvikaSL-STW250.0330.057Dermatological 'ENT/ CardiovascularGubaceae)RTRTRTRTRTRTRTRTHolen halfs L (Araliaceae)CSEW-NS210.027RespiratoryGubaceae)CSEW-NS270.035Gastrointestinal Oest-carrieularHolen hus annus LAwayaCSEW-NS270.035Gastrointestinal Oest-carrieularIniperus phoeniceaChairCSEW-NS270.035Gastrointestinal Oest-carrieularIniperus phoeniceaArabarSL-STW830.016GastrointestinalCarrena daria L (Astraceae)KihosCLN-NS350.046GastrointestinalCarrena daria L (Astraceae)KihosCLN-NS550.072RespiratoryConstructurary/CastrointestinalCarrena daria L (Astraceae)HalhalSL-FLM-W-NS550.072RespiratoryCestinationary/GastrointestinalCarrena daria MiffidiMainSL-FLM-W-NS550.072RespiratoryCestinatorinary/GastrointestinalCarrena daria MiffidiAdessCSNS470.016 </td <td>(Apiaceae)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	(Apiaceae)								
Function officientifis L (reparences) (aluma parine L. Caluma parine L. Caluma parine L.Chanka to lossSPA-RT NN130.0170.021Disbetes' Metabolic (Parine Scalama parine L. Caluma parine L.ClossicaSISNSNSNSNSNSNSNNN <td>Fraxinus angustifolia Vahl.</td> <td>tir Lsan</td> <td>С</td> <td>L</td> <td>W</td> <td>14</td> <td>0.018</td> <td>0.022</td> <td>•</td>	Fraxinus angustifolia Vahl.	tir Lsan	С	L	W	14	0.018	0.022	•
(Paparerace)felousGalian quariae I.,LessikaSL-STW250.030.035Permatogical/ENT/Cardiovascular(Bubacex)NNV0.0610.057Ond-Dentals/ Gastrointestinal(Fabera helix La Aralaceax)IawayaSI.STW150.0200.025Respiratory(Helionthus annuals LNavayaSV.STV150.0200.025Respiratory(Micraceay)chernelCSEW-NS210.0250.031Metabolic(Micraceay)chernelCSEW-NS270.050.013Inderest/Neurological/Respiratory(Garrenee)chernelCSEW-NS1330.17Onitestinal/Onceraticular(Jamiceas)CLNS-WA1330.170.101Metabolic(Lamaceas)KitzmaSLM-NS530.040.01Respiratory/Genaticular/(Lamaceas)KitzmaSLM-NS530.020.01Respiratory/Genaticular/(Lamaceas)KitzmaSLM-NS530.020.01Respiratory/Genaticular/(Lamaceas)HallalSLM-NS530.020.01Respiratory/Genaticular/(Lamaceas)HallalSLM-NS530.020.01Respiratory/Genaticular/(Lamaceas)HallalSLM-NS530.020.01Respiratory/Gena									
Gallum aparine L, (Rubiacea)LessikaSSLSW250.0330.035Demanological/FNT/ Cardiovascular (Rubiacea)Glycyrritiz glabra L, (Gabacea)NSNNNN0.0610.0610.012Oall-Demisly GastrointestinalGloba oddy (Gabacea)L (Rubiacea)RuwaySL-STW150.0200.025Repiratory GastrointestinalMelianthus annus L, (Astroccea)NawarCSEW-N210.0350.037Gastrointestinal/OstcoarticularMelianthus annus L, (Astroccea)CSEW-N210.0290.01Melabelic(Astroccea)CSEW-N130.170.186Respiratory/OstcoarticularIndipersi phenetica LKhzanaSLM-W1330.170.186Respiratory/OstcoarticularCapresceacySR.RW-NS350.0460.047Respiratory/OstcoarticularLavandula dentati L, CapresceacyKhzanaSL.RW-NS350.0460.047Respiratory/Genitourinary/GastrointestinalLavandula kontrifidaHilblaSL.RTW-NS350.0470.010Cenitourinary/GastrointestinalLavandula kontrifidaHilblaSL.RTW-NS350.0170.010Respiratory/Genitourinary/GastrointestinaLavandula kontrifidaHilblaSL.RTNS820.0270.010Cenitourinary/Gastrointest		Chahmat	S	PA-RT	W	13	0.017	0.021	Diabetes/ Metabolic
(Rubinear)Kus	(Papaveraceae)	felous							
Orgyrprizing (Psyrpr	Galium aparine L.	Lessika	S	L-ST	W	25	0.033	0.035	Dermatological/ ENT/ Cardiovascular
KTKTHedera helix L. (Araliaceae)LawayaSL-STW150.0200.025RespiratoryHelianthus annus L.NawarCSEW-NS210.0270.035RespiratoryHelianthus annus L.NawarCSEW-NS270.0350.037Gastrointestinal/OsteoarticularInniperspheencea L.ÁranarSL-FLW810.1060.112Diabetes/ Neurological/Respiratory(Cupressaceae)Lartence satiru L. (Asteracea)İkhossCLNS-W-M220.0290.031MetabolicLartence satiru L. (Asteracea)İkhossCLNS-W-M220.0290.031MetabolicLartence satiru L. (Asteracea)IkhossCLNS-W-M230.1440.186Respiratory/Osteoarticular/(Lamiaceae)KKzamaSL.EM-W-N350.0460.047Respiratory/Genitourinary/Derastological(Lamiaceae)PAKLeFLM-W-NS550.047Respiratory/Genitourinary/Gastrointestin ad/ Neurological/ITMT distrointestin ad/ Neurological/ITMTMetabolic(Lamiaceae)KKSNS-W480.0590.064Dermatological/Osteoarticular/Respiratory(Lamiaceae)KKSNS-W130.0170.018Respiratory/Josteoarticular/Respiratory(Lamiaceae)KKSNPNU130.0170.020Genitourinary <td>(Rubiaceae)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	(Rubiaceae)								
Normal Strength Index anial set.LawayaSL-STW150.0200.025RespiratoryHelianthus annuus L.NawarCSEW-NS210.0270.030Metabolic(Asteraceae)chemch $=$ <	Glycyrrhiza glabra L.	sous Aark	Int		NS	47	0.061	0.067	Oral-Dentals/ Gastrointestinal
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Andream Vagere L. (Poaceae)ChairCSEW-NS270.0350.037Gastrointestinal/ OsteoarticularJuniperus phoenicea L.ÅaråarSL-FLW810.1060.112Diabetes/ Neurological/ Respiratory(Cupressaceae)KhossCLNS-W-M220.0290.031MetabolicLaruandula dentata L.KhzamaSLM-W1330.1740.186Respiratory/Ostoarticular/(Lamiaceae)SL-RTW-NS350.0460.047Respiratory/Ostoarticular/Lavandula multifidaHlihlaSL-RTW-NS550.0460.047Respiratory/Ostoarticular/Lavandula stochas L.HalhalSL-RTW-NS550.0460.047Respiratory/Genitourinary(Lamiaceae)PAPAVaronological/ENTVaronological/ENTVaronological/ENTVaronological/ENTLavandula stochas L.HennaIntLW-NS820.0590.064Cardiovascular(Lamiaceae)Varonological/ENTVaronological/ENTVaronological/ScientestinalVaronological/CoreaceVaronological/CoreaceLavandula stochas L.HennaIntSN-W820.0590.064Dermatological/Scientestinal(Lamiaceae)Varonological/ENTVaronological/ENTVaronological/ENTVaronological/CoreaceVaronological/CoreaceLavandula stokefuelKatasSNN130.01	Helianthus annuus L.	Nawar	С	SE	W-NS	21	0.027	0.030	Metabolic
Jaingenz Boenicea I.ÅaràarSL-FLW810.1060.112Diabetes/ Neurological/ Respiratory(Cupressaceae)Lactuca sativa L. (Asteraceae)LkhossCLNS-W-M220.0290.031MetabolicLaronalula dentata L.KhossCLM-W1330.1740.186Respiratory/Osteoarticular/ Genitourinary/DernatologicalLaronalula dentata L.KhossCLM-W-NS350.0460.047Respiratory/Osteoarticular/ Genitourinary/DernatologicalLavandula multifidaHihlaSL-RTW-NS350.0460.047Respiratory/Genitourinary/DernatologicalLavandula stoechas L.HihlaSL-RTW-NS350.0460.047Respiratory/Genitourinar	(Asteraceae)	chemch							
Cupresseacea)Lactuca sativa L. (Asteraceae)LkhossCLNS-W-M220.0290.031MetabolicLavandula dentata L.KhzamaSLM-W1330.1740.186Respiratory/Osteoarticular/ Gastrointestinal/ CareeLavandula stoechas L.HalhalSL-FLM-NSS50.0720.077Respiratory/Genitourinary/Gastrointestin al/ Neurological/ENTLawandula stoechas L.HalhalSL-FLM-NSS50.0720.077Respiratory/Genitourinary/Gastrointestina al/ Neurological/ENTLawandula stoechas L.HalhalSL-FLM-NSS50.0720.077Respiratory/Genitourinary/Gastrointestinal al/ Neurological/ENTLawandula stoechas L.HennaIntLW-NS850.0630.069Cardiovascular(Lamiaceae)LTenna lintLSENS-W480.0630.064Dermatological/Osteoarticular/Respirato ry/Gastrointestinal(Fabaceae)LCardiaIntSEH-W-M120.0160.018Respiratory/ DiabetesLupinus argustifolius L.kalb FolSLW <td>Hordeum vulgare L. (Poaceae)</td> <td>Chair</td> <td>С</td> <td>SE</td> <td>W-NS</td> <td>27</td> <td>0.035</td> <td>0.037</td> <td>Gastrointestinal/ Osteoarticular</td>	Hordeum vulgare L. (Poaceae)	Chair	С	SE	W-NS	27	0.035	0.037	Gastrointestinal/ Osteoarticular
Laruca sariva L. (Asteraceae)IkhossCLNS-W-M220.0290.031MetabolicLavandula dentata L.KhzamaSLM-W1330.1740.186Respiratory/Osteoarticular/ Gastrointestinal/ Gastrointestinal/ Gastrointestinal/ Idmitary/DermatologicalLavandula multifidaHilihaSL-RTNeNS350.047Respiratory/Genitourinary/DermatologicalLavandula stochas L.HalhalSL-RTNeNS550.0720.077Respiratory/Genitourinary/Gastrointestin al/Neurological/ENTLavandula stochas L.HalhalSL-RTNe-NS550.0720.077Respiratory/Genitourinary/Gastrointestin al/Neurological/ENTLavandula stochas L.HalhalSL-RTM-W-NS550.0720.071Respiratory/Genitourinary/Gastrointestin al/Neurological/ENTLavandus stochas L.HalhalSL-RTM-W-NS550.0720.071Respiratory/Genitourinary/Gastrointestin al/Neurological/ENTLavandus stochas L.HennaIntLW-820.1070.114Dermatological/Osteoarticular/Respirato ry/Gastrointestinal(Latraceae)rehal HabIntSEW450.0590.064Dermatological/Osteoarticular/Respirato ry/Gastrointestinal(Lauraceae)kettanSMN130.0160.018Respiratory/ Diabetes(Lauraceae)kettanSMNN130.0160.017Diabetes	Juniperus phoenicea L.	Àaràar	S	L-FL	W	81	0.106	0.112	Diabetes/ Neurological/ Respiratory
Lavandula dentita L. (Lamiaceae)Khzama KhzamaSLM-W1330.1740.186Respiratory/Osteoarticular/ (Gastrointestinal/ Genitourinary/DermatologicalLavandula multifidaHibilaSL-RFW-NS350.0460.047Respiratory/Genitourinary(Lamiaceae)PAItaliaSL-FLM-W-NS550.0720.077Respiratory/Genitourinary/Gastrointestina al/ Neurological/ENTLavandula stoechas L.HalhalSL-FLM-W-NS550.0720.077Respiratory/Genitourinary/Gastrointestin al/ Neurological/ENTLavasonia inermis L.HennaIntLW-820.1070.114Dermatological/ENTLavasonia inermis L.HennaIntLW-820.0590.064Dermatological/Osteoarticular/Respirator (r/Gastrointestinal(Lythraceae)Lrehad HabIntSEW480.0630.069Cardiovascular(Jauraceae)Lrehad HabIntSEW480.0630.064Dermatological/Osteoarticular/Respirator (r/Gastrointestinal(Lauraceae)ketanSWPW130.0170.020Geniourinary(Fabaceae)KattanSVPW130.0170.020Geniourinary(GastrointestinalSLW350.0460.047Respiratory/ Gastrointestinal(Malva shpanica L.KatbanSLW310.017 <td< td=""><td>(Cupressaceae)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	(Cupressaceae)								
(Lamiaceae)Gastroinestinal/ Genitourinary/DermatologicalLavandula multifidaHilhlaSL-RTW-NS3.50.0460.047Respiratory/Genitourinary(Lamiaceae)PALavandula stoechas L.HalhlaSL-FLM-W-NS5.50.020.07Respiratory/Genitourinary/Gastrointestin(Lamiaceae)PALavasonia inermis L.HennaIntLW-R2.0100.014Dematological/ENT(Lythraceae)FSENS-W4.80.0530.069Cardiovascular(Fabaceae)FFNS5.50.0590.064Dematological/Osteoarticular/Respirato(Fabaceae)FSEW4.50.0590.064Dematological/Osteoarticular/Respirato(Jauraceae)KariatTaniaSEMW4.50.0590.064Dematological/Osteoarticular/Respirato(Jauraceae)KariatSSMPM1.30.0160.018Respiratory/ DiabetesLupinus pilosus L. (Fabaceae)TarmasSEW1.10.0140.017DiabetesMalva hispanica L.KabbizzaSLW3.50.0460.047Respiratory/ GastrointestinalMalva hispanica L.BekollaSLW3.50.0460.047Respiratory/ Gastrointestinal(Malva ceae)SLWMS3.50.0460.047Respiratory/ GastrointestinalMalva hispanica L.Beko	Lactuca sativa L. (Asteraceae)	Lkhoss	С	L	NS-W-M	22	0.029	0.031	Metabolic
Arrian and any and a multifiedHilhlaSL-RT-W-NS350.0460.047Respiratory/Genitourinary(Lamiaceae)PALavandula sbeechas L.HalhalSL-FLM-W-NS550.0720.077Respiratory/Genitourinary/Gastrointestin al/ Neurological/ENTLavandula sbeechas L.HalhalSL-FLM-W-NS550.0720.077Respiratory/Genitourinary/Gastrointestin al/ Neurological/ENTLavasonia inernis L.HennaIntLW-820.1070.114Dermatological/ENTLavasonia inernis L.HennaIntSENS-W480.0630.069Cardiovascular(Iythraceae)EENS-W480.0630.069Cardiovascular(Fabaceae)EENS-W480.0630.069Cardiovascular(Brassicaceae)EENS-W480.0630.064Dermatological/Osteoarticular/Respirato ry/Gastrointestinal(Lauraceae)kettanEH-W-M120.0160.018Respiratory/ Diabetes(Fabaceae)EWN130.0170.020Genitourinary(Fabaceae)TarmasSEW110.0140.017Diabetes(Jupinus pilosus L. (Fabaceae)TarmasSEW110.0140.017DiabetesMarva silvestris I.BekollaSL-FLW-NS310.0410.043Gastrointestinal/Metabolic(Ma	Lavandula dentata L.	Khzama	S	L	M-W	133	0.174	0.186	Respiratory/Osteoarticular/
Lavandula multifidaHilhaSL-RT-W-NS350.0460.047Respiratory/Genitourinary(Lamiaceae)PALavandula stoechas L.HalhalSL-FLM-W-NS550.0720.077Respiratory/Genitourinary/Gastrointestin al/ Neurological/ENTLawsonia inermis L.HennaIntLW-820.1070.114Dermatological/Hair Care(Lymaceae)Kespiratory/Genitourinary/Gastrointestin al/ Neurological/ENTGardiovascular(Fabaceae)Kespiratory/GenitourinaryKespiratory/Genitourinary/Gastrointestinal (CardiovascularDermatological/Osteoarticular/Respirato ry/GastrointestinalLinum usitatissimum L.crehad HabIntSEW450.0590.064OntsRespiratory/JabetesLinum usitatissimum L.ZariàtIntSEH-W-M120.0160.018Respiratory/ Jabetes(Fabaceae)KettanSWPM130.017OzooGenitourinary(Fabaceae)SWPW350.0460.047Respiratory/ Gastrointestinal(Malvaceae)SMPMN130.017OzooGenitourinaryMarka silvestris L.KhobizzaSLW350.0460.047Respiratory/ Gastrointestinal(Malvaceae)SLWM100.017Diabetes(Malvaceae)SLWNM0	(Lamiaceae)								Gastrointestinal/
(Lamiaceae)PALavandula stoechas L.HalhalSL-FLM-W-NS550.0720.077Respiratory/Genitourinary/Gastrointestin al/ Neurological/ENTLawsonia inermis L.HennaIntLW-820.1070.114Dermatological/ Hair Care(Lythraceae)SENS-W480.0630.069Cardiovascular(Fabaceae)SENS-W480.0630.069Cardiovascular/Respirato(Fabaceae)SEW450.0590.064Dermatological/Osteoarticular/Respirato(Fasasceace)SEW450.0590.064Dermatological/Osteoarticular/Respirato(Lauraceae)kettanSWPW130.0170.020Genitourinary(Fabaceae)SWPW130.0170.020Genitourinary(Fabaceae)SWPW130.017DiabetesLupinus pilosus L. (Fabaceae)TarmasSEW110.0140.017DiabetesMalva silvestris L.BekollaSL-FLW-NS310.0160.047Respiratory/ Gastrointestinal(Malvaceae)SL-FLW-NS310.0160.047Respiratory/ Gastrointestinal(Malvaceae)SL-FLW-NS310.101Dermatological/ <tr<tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Genitourinary/Dermatological</td></tr<tr<>									Genitourinary/Dermatological
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(Lamiaceae)IntLW-820.1070.114Dermatological/ENTLawsonia inermis L.HennaIntLW-820.1070.114Dermatological/Hair Care(Lythraceae)IntÅdessCSENS-W480.0630.069Cardiovascular(Fabaceae)IntSESEW450.0590.064Dermatological/Osteoarticular/Respirato ry/Gastrointestinal(Brassicaceae)IntSEH-W-M120.0160.018Respirator/ Diabetes(Lauraceae)kettanIntSEH-W-M130.0170.020Genitourinary(Fabaceae)TarmasSEW110.0140.017Diabetes <i>Lupinus angustifolius</i> L.KabbrolzaSLW350.0460.043Gastrointestinal(Malva hispanica L.KabbizzaSLW-NS310.0140.013Gastrointestinal/Metabolic(Malva caee)SL-FLW-NS310.1500.161Permatological/Marus isivestris L.BekollaSM-PM-W1150.1500.161Permatological/(Iamiceae)SWPM-W1150.1500.161Permatological/(Iamiceae)SWPM-W1150.1500.161Permatological/(Iamiceae)SWPM-W1150.1500.161Permatological/(Iamiceae)SWP	(Lamiaceae)			PA					
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(Lythraceae)CSENS-W480.0630.069Cardiovascular(Fabaceae)Lepidium sativum L.rchad HabIntSEW450.0590.064Dermatological/Ostecoarticular/Respirato ry/Gastrointestinal(Inum usitatissimum L.ZariàtIntSEW450.0590.064Dermatological/Ostecoarticular/Respirato ry/Gastrointestinal(Lauraceae)ZariàtIntSEH-W-M120.0160.018Respiratory / Diabetes(Hauraceae)KettanTSEW130.0170.020Genitourinary(Fabaceae)TarmasSEW110.0140.017DiabetesMalva hispanica L.RhobizzaSLW330.0410.043GastrointestinalMalva silvestris L.BekollaSMPM-W1150.1500.161Dermatological/Marrubium vulgare L.AmariwSMPM-W1150.1500.161Dermatological/Marrubium vulgare L.BanonjSFL-W910.1190.125Diabetes/Hair	(Lamiaceae)								al/ Neurological/ENT
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(Fabaceae)rchad HabIntSEW450.0590.064Dermatological/Osteoarticular/Respirato ry/Gastrointestinal(Inuun usitatissimum L.ZariàtIntSEH-W-M120.0160.018Respiratory / Diabetes(Lauraceae)kettan </td <td>(Lythraceae)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	(Lythraceae)								
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In the second of	(Fabaceae)								
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(Lauraceae)kettanLupinus angustifolius L.kalb FolSWPW130.0170.020Genitourinary(Fabaceae)Lupinus pilosus L. (Fabaceae)TarmasSEW110.0140.017DiabetesMalva hispanica L.KhobizzaSLW350.0460.047Respiratory/ Gastrointestinal(Malvaceae)KhobizzaSL-FLW-NS310.0410.043Gastrointestinal/ Metabolic(Malvaceae)Karubian vulgare L.AmariwSWPM-W1150.1500.161Dermatological/ Gastrointestinal/Diabetes/Hair Care/ NeurologicalMatricaria chamomilla L.BanonjSFL-W910.1190.125Diabetes/Hair	(Brassicaceae)								ry/Gastrointestinal
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(Fabaceae)TarmasSEW110.0140.017DiabetesMalva hispanica L.KhobizzaSLW350.0460.047Respiratory/ Gastrointestinal(Malvaceae)NSL-FLW-NS310.0410.043Gastrointestinal/ MetabolicMalva silvestris L.BekollaSL-FLW-NS310.0410.043Gastrointestinal/ Metabolic(Malvaceae)Number of the second se	(Lauraceae)	kettan							
Lupinus pilosus L. (Fabaceae)TarmasSEW110.0140.017DiabetesMalva hispanica L.KhobizzaSLW350.0460.047Respiratory/ Gastrointestinal(Malvaceae)Malva silvestris L.BekollaSL-FLW-NS310.0410.043Gastrointestinal/ Metabolic(Malvaceae)Marrubium vulgare L.AmariwSWPM-W1150.1500.161Dermatological/(Lamiaceae)Marrubium sulgare L.BanonjSFL-W910.1190.125Diabetes/Hair	Lupinus angustifolius L.	kalb Fol	S	WP	W	13	0.017	0.020	Genitourinary
Malva hispanica L.KhobizzaSLW350.0460.047Respiratory/ Gastrointestinal(Malvaceae)Malva silvestris L.BekollaSL-FLW-NS310.0410.043Gastrointestinal/ Metabolic(Malvaceae)Marrubium vulgare L.AmariwSWPM-W1150.1500.161Dermatological/(Lamiaceae)Matricaria chamomilla L.BanonjSFL-W910.1190.125Diabetes/Hair	(Fabaceae)								
(Malvaceae)Malva silvestris L.BekollaSL-FLW-NS310.0410.043Gastrointestinal/ Metabolic(Malvaceae)Marrubium vulgare L.AmariwSWPM-W1150.1500.161Dermatological/(Lamiaceae)Matricaria chamomilla L.BanonjSFL-W910.1190.125Diabetes/Hair	Lupinus pilosus L. (Fabaceae)	Tarmas		SE	W	11	0.014	0.017	Diabetes
Malva silvestris L.BekollaSL-FLW-NS310.0410.043Gastrointestinal/Metabolic(Malvaceae)Marrubium vulgare L.AmariwSWPM-W1150.1500.161Dermatological/(Lamiaceae)EEEEEEEEMeurologicalMatricaria chamomilla L.BanonjSFL-W910.1190.125Diabetes/Hair	Malva hispanica L.	Khobizza	S	L	W	35	0.046	0.047	Respiratory/ Gastrointestinal
(Malvaceae)Marrubium vulgare L.AmariwSWPM-W1150.1500.161Dermatological/(Lamiaceae)EEEEBanonjSFL-W910.1190.125Diabetes/Hair Care/	(Malvaceae)								
Marrubium vulgare L. Amariw S WP M-W 115 0.150 0.161 Dermatological/ Gastrointestinal/Diabetes/Hair Care/ Neurological Matricaria chamomilla L. Banonj S FL- W 91 0.119 0.125 Diabetes/Hair	Malva silvestris L.	Bekolla	S	L-FL	W-NS	31	0.041	0.043	Gastrointestinal/ Metabolic
(Lamiaceae) Gastrointestinal/Diabetes/Hair Care/ Neurological Matricaria chamomilla L. Banonj S FL- W 91 0.119 0.125 Diabetes/Hair	(Malvaceae)								
Matricaria chamomilla L. Banonj S FL- W 91 0.119 0.125 Diabetes/Hair	Marrubium vulgare L.	Amariw	S	WP	M-W	115	0.150	0.161	Dermatological/
Matricaria chamomilla L. Banonj S FL- W 91 0.119 0.125 Diabetes/Hair	(Lamiaceae)								Gastrointestinal/Diabetes/Hair Care/
									Neurological
(Asteraceae) WP Care/Genitourinary/Gastrointestinal/	Matricaria chamomilla L.	Banonj	S	FL-	W	91	0.119	0.125	Diabetes/Hair
	(Asteraceae)			WP					Care/Genitourinary/Gastrointestinal/
	(

Medicago sativa L. (Fabaceae)	Fassa	С	L-SE	W-NS	21	0.027	0.030	ENT/ Cardiovascular
Mentha piperita L.	Naànaà	S	L-ST	W-NS	24	0.031	0.035	Respiratory/ Neurological
(Lamiaceae)	abdi							
Mentha rotundifolia L.	Mchachtro	S	L	W-NS	78	0.102	0.108	Diabetes/ Gastrointestinal/ Respiratory
(Lamiaceae)								
Mentha cervina L.	Manta	С	L	H-W	14	0.018	0.022	Respiratory/ Osteoarticular
(Lamiaceae)								
Mentha pulgium L.	Fliou	С	L	W-H	108	0.141	0.145	Respiratory/ ENT/ Neurological
(Lamiaceae)								
Mentha spicata L.	Naànaà	С	L-ST	W-NS	41	0.054	0.058	Neurological /
(Lamiaceae)								Respiratory/Genitourinary
Mentha suaveolens Ehrh.	Marssita		L	W	53	0.069	0.075	Gastrointestinal/ Respiratory/
(Lamiaceae)								Dermatological
Mercurialis annua L.	Zotifa	S	ST-	W	18	0.024	0.029	Genitourinary/ Diabetes
(Euphorbiaceae)			WP-L					
Morus alba L. (Moraceae)	Tout	S	L	NS	59	0.077	0.081	Diabetes/ Metabolic
Muscari comosum (L.) Mill.	Bessila	S	В	NS-W	8	0.010	0.014	Gastrointestinal/ Osteoarticular
(Asparagaceae)								
Myrtus communis L.	Rihan	С	L	W	85	0.111	0.013	Cardiovascular/ Respiratory/ Hair Care/
(Myrtaceae)								Genitourinary
Nerium oleander L.	Defla	S	L-RT	W-NS	95	0.124	0.116	Oral-Dentals/ Osteoarticular/ Diabetes
(Apocynaceae)								
Nigella sativa L.	Sanouj	Int	SE	NS-W-H-	96	0.125	0.128	Osteoarticular/ Respiratory
(Ranunculaceae)				М				
Ocimum basilicum L.	Hbak	S	L	W	27	0.035	0.132	Cardiovascular/ Gastrointestinal/Hair
(Lamiaceae)								Care/ ENT
Olea europea L. (Oleaceae)	Zaytoun	С	L-FR	W-NS	117	0.153	0.037	Osteoarticular/ Oral-Dentals/
								Gastrointestinal/ Dermatological/
								Diabetes/ Hair Care
<i>Olea europea</i> var. sylvestris	Lberri	S	L	W-NS	20	0.026	0.029	Metabolic/ Gastrointestinal/Diabetes
Mill. (Oleaceae)								
<i>Opuntia ficus</i> indica (L.) Mill.	Hendiya	С	FR-FL	W-NS	16	0.021	0.167	Genitourinary/ Gastrointestinal
(Cactaceae)								
Origanum majorana L.	Merdedoch	С	L-PA	NS-M-W	59	0.077	0.029	Gastrointestinal/ Respiratory/
(Lamiaceae)								Neurological/ Osteoarticular
Origanum vulgare L.	Zaatar	S	L-ST	W-M-H	81	0.106	0.026	Genitourinary/
(Lamiaceae)								Gastrointestinal/Respiratory
Oryza sativa L. (Poaceae)	Rouz	Int	SE	W-NS	81	0.106	0.080	Gastrointestinal/ Osteoarticular
Papaver rhoeas L.	Balaàman	S	FL	W	30	0.039	0.111	Dermatological / ENT
(Papaveraceae)								
Peganum harmala	Harmal	Int	L-FL-	W	15	0.020	0.108	Dermatological/ Genitourinary/
(Zygophyllaceae)			SE					Osteoarticular
Persea gratissima C.F.Gaertn.	Lavoca	С	L-FR	M-NS	12	0.016	0.043	Dermatological/ Cardiovascular
(Lauraceae)								
Petroselinum sativum Hoffm.	Maàdnous	С	L-ST-	W	94	0.123	0.025	Osteoarticular/ Genitourinary
(Apiaceae)			WT					

Phaneologi aurons Roch,SequaCSEN-H150.0200.017Dernatological MetabolicPhaneolia vulgaris L.LoabyaCSENS460.0600.125Metabolic/DiabetesPhaneolia vulgaris L.LoabyaCSENS460.0600.125Metabolic/DiabetesPhaneolia vulgaris L.NakhlaIratSE/STNS-W550.0720.024Cardiovascalar(Arreacea)IratSFW230.0300.065Garinisariy/Onal-Dantak(Myriacean)IratSFW420.0550.076Gastrointestinal/Genitourinary(Aplaceac)IratBalwaWPVVVV(Pianceaca)IratSBAW200.0260.060Respiratory/Dernatological/FNT(Pianceaca)IratSBAW200.0260.060Respiratory/Dernatological(Pianceaca)IratSBAW200.0260.060Respiratory/DernatologicalPiper inform L. (Piperaceac)BansSL-BW-N170.0220.020GastrointestinalPiper inform L. (Piperaceac)BansSL-BW-N190.1190.021Diabetes/GastrointestinalPiper inform L. (Piperaceac)SafasafSBA-LW240.0310.124Gastrointestinal/Genitourinary(Anacardinezea)LarickSafasafSBA-LW2									
Phasedas valgeris L. (Palacedas valgeris L. (Palacedas valgeris L.)I analysiaCSF.NS460.0600.125Metabulic/ Diabates: (Arciaceae)Phoenix datiof (L.) Mer. (Arceaceae)NakhlaIntSE-STNS-W550.0720.024Conditionascular(Myrtaceae) (Myrtaceae)IntSE-STNS <w< td="">200.005Gentoinrary/Oral-DentalsPhing inclife anisan L. (Myrtaceae) HawaHabatCSLSLW420.0550.076Gentoinrary/Oral-DentalsPhing inclife anisan L. (Myrtaceae) HawaTaylorSLSLW420.0560.066Respiratory/Dermatological/ENTPhing inferier Alton. (Parsecae)TaylorSBANS-W200.0260.060Respiratory/Dermatological/ENTPhing inferier L. (Pheraceae)BawaSBAW-NS110.0180.037Respiratory/Dermatological/ENTPhins sylverist L (funceae)SamwaSLBW-NS110.022Diabetes/ GantointestinalPhins sylverist L (funceae)SamwaSRT-LW280.0370.027Oatsaarial/ Castrointestinal/ CastrointestinalPhine digraft L (Saliceaee)Hyad SafafSRT-LW280.0310.124Gastrointestinal/ RespiratoryParata digraft L (Saliceaeea)SafafafSRT-LW280.0310.024Diabetes/ HarCare GastrointestinalPhyadia nigraft L (Saliceaeea)Safafaf</w<>	Phaseolus aureus Roxb.	Souja	С	SE	W-H	15	0.020	0.017	Dermatological/ Metabolic
(Fabreace)(NaklaIntSENS-WS0.702OrderCardioacularPromenta dialea (L) Mere,NaklaIntSEW230.0300.065Gastrointeary Oral-DentalsPinginella anisma L.HabaCSEW230.050Gastrointearinary Oral-Dentals(Apiaceae)bilawaWWKSE0.054Gastrointearinary Oral-Dentals(Apiaceae)bilawaWWKSE0.0340.045Gastrointearinary Oral-Dentals(Pinaceae)TaylaSB.ANS-W260.0340.046Respiratory Dermatological/ENT(Pinaceae)TaylaSB.ANS-W100.018Respiratory Dermatological/ENT(Pinaceae)SamoharSI.ABW-NS100.022Oactor intestinal/ Genitourinary(Nacardiaceae)SamoharSI.ABW-NS100.022Diabeter/ Gastrointestinal/ Genitourinary(Nacardiaceae)SafasafSI.ABW-NS1010.190.222Diabeter/ Gastrointestinal/ Genitourinary(Nacardiaceae)SafasafSBA-LW240.0310.124Gastrointestinal/ Genitourinary(Nacardiaceae)SafasafSBA-LW240.0310.124Gastrointestinal/ Genitourinary(Nacardiaceae)SafasafSBA-LW250.022Diabeter/ Matabolic(Partuaceae)SafasafSL-SNS-W <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Phoneix darcyifera L.NakhlaInt.SF-STNS-WS50.0720.024Cardiovascular(Arecease)Finance diois (L.) Mare.NivivraInt.SEW2.30.0300.055Genitourinary/ Oral-Dentals(Myrracease)FFFFFPinang diois (L.) Mare.TaylaCSF-STN4.20.0550.076Gastrointestinal/ Genitourinary(Aplacease)FRFRFFPinas ginearie L. (Pinacease)SonobarSBAW2.00.0260.006Respiratory/ Dermatological FNTPinas ginearie L. (Pinacease)BozarIntSEU-M140.0180.037Respiratory/ GastrointestinalPinas ginearie L. (Pinacease)BozarIntSEU-M140.0180.026Gastrointestinal GenitourinaryPinacia dimine GostBazarIntSEU-M100.027Oatecar/Gastrointestinal Genitourinary(Anacardíacease)FFFFFFPardina diba L. (Saliceaceae)SafasfSRAT.W280.037Oatecar/Gastrointestinal/ Genitourinary(Anacardíaceae)SafasfSRAT.W280.037Oatecar/Gastrointestinal/ Genitourinary(Anacardíaceae)SafasfSRAT.W280.037Oatecar/Gastrointestinal/ Genitourinary(Anacardíaceae)SafasfSRAT.W150.020Oa	-	Loubya	С	SE	NS	46	0.060	0.125	Metabolic/ Diabetes
(Arceaces)Pinnendi abica (L.) Merr.NwiwraIntSEW230.300.065Genitourinary/ Oral-DentalsPinnendi anisum 1.HabatCSF-W420.0550.076Gastrointestinal/ Genitourinary(Apitecea)HalwaWP-FPinne pinneter Aiton.TaydaSBA-NS-W260.0340.034Respiratory/ Dermatological FNT(Pinne pinneter Aiton.TaydaSBA-NS-W260.0220.060Respiratory/ Dermatological FNT(Pinne pinneter Aiton.TaydaSBAW-NS170.0220.029GastrointestinalPinne pinneter Aiton.TaydaSBAW-NS170.0220.029GastrointestinalPinne pinneter AitonBiamSL-BW-NS170.0220.029GastrointestinalPinnete animetica Def.BiamSL-BW-NS170.0220.029Gastrointestinal(Anacardiaceae)DroaSI-BW-NS170.022Dabetes/ Gastrointestinal/ Controarinary(Anacardiaceae)BiamSL-LW280.0310.124Gastrointestinal/ Respiratory(Anacardiaceae)KhalSL-SNS-W-H150.020Dabetes/ Metabolic(Portulace oleracea L.KajlaSL-STNS150.020Dabetes/ Metabolic(Portulace oleracea L.KajlaSR-TW-NS15	``´´								
Pinenta dioice (L.) Merr.NwirraIatSEW230.0300.065Genitourinary/Oral-Dentals(Myrecew)Pinapiella antsun L.IabatCSEW420.0550.076Gastrointestinal/ Genitourinary(Apiacea)hlavaWPFRFRFRFRFR(Pinaspinster Ai.OfnaTaydaSBANN<	Phoenix dactylifera L.	Nakhla	Int	SE-ST	NS-W	55	0.072	0.024	Cardiovascular
(Myrtacea)KaranCS.R.W420.0550.076Gastroinestinal/ Genitourinary(Apiacea)BlavaV <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Pinpinella anisum L.HabatCSE.W420.0550.076Gastrointestinal/ Genitourinary(Apineae)HawaWP-Finus pinaster Alton.TaydaSBA-NS-W260.0340.034Respiratory/ Dermatological/ENT(Pinaceae)FRFRFRFRFRFRFRFRPinas pinaster Alton.IbrarIbraSEBAW-AH10.180.037Respiratory/ DermatologicalPisoncia atlantica Desf.BtamSL-BW-NS170.0220.029GastrointestinalPisoncia atlantica Desf.BtamSL-BW-NS170.0220.037Respiratory/ GastrointestinalPisoncia atlantica Desf.BtamSL-BW-NS910.1190.027Oastorintestinal/ Genitourinary(Anacardiaceae)FRFRW-NS910.1190.027Oastorintestinal/ GenitourinaryPopulas alga L. (Salicaceae)SafasafSR-LW280.0370.027Oastorintestinal/ GenitourinaryPortulace oleraceae L.KafasafSBA-LW240.0310.024Oastorintestinal/ GenitourinaryPortulace oleraceae D.La SafasafSBA-LW240.0310.026Diabetes/ MatholicPortulace oleraceae L.KafasafSBA-LW-NS150.0200.034Respiratory/ Ostocarticular/Portulace oleraceae D.La SafasafSRT<	Pimenta dioica (L.) Merr.	Nwiwra	Int	SE	W	23	0.030	0.065	Genitourinary/ Oral-Dentals
(Apiacea)hiawaWP- FRPinus pinus pinus Alton.TaydaSBANS-WZ0.4260.484Respiratory/Dermatological/ENT(Pinacea)FRFPinus sythestris L. (Pinaceae)SawbarSBAW200.0260.606Respiratory/Dermatological/ENTPinus sythestris L. (Pinaceae)BzarIntSEWM-H140.1020.020Respiratory/DermatologicalPisacia attantica Dest.BtaraIntSEWM-H140.1020.020Respiratory/Gastrointestinal(Anacardiaceae)BtaraSLBWN S170.022Diabetes/ Gastrointestinal/ Genitourinary(Anacardiaceae)byad SafaafSRT-LW280.0370.027Osteoarticular/ Gastrointestinal/Populas alba L. (Saliceaee)byad SafaafSRA-LW240.0310.124Gastrointestinal/ Genitourinary(Anacardiaceae)byad SafaafSRA-LW280.0370.027Osteoarticular/ Gastrointestinal(Portulacaceae)byad SafaafSRA-LW280.0310.124Gastrointestinal/ Respiratory(Portulacaceae)KhalSLSTNS-W15V0.02Diabetes/ Hair Care/ Gastrointestinal/(Portulacaceae)EFLSNS-W15V0.02Diabetes/ Hair Care/ Gastrointestinal/(Portulacaceae)EFLKS0.030.026Diabetes/ Hair Care/ G									
FRFRPinus sylvestris L. (Pinaceae)TaydaSBA-NS-W260.0340.034Respiratory/ Dermatological/ENT(Pinaceae)FR	Pimpinella anisum L.	Habat	С	SE-	W	42	0.055	0.076	Gastrointestinal/ Genitourinary
Pinus pinaster Atton.TaydaSBA.NS-W260.0340.034Respiratory/Dermatological/ENT(Pines cylvestris L. (Pinecea)SamvbarSBAW-M200.0260.060Respiratory/DermatologicalPinus sylvestris L. (Pinecea)IbaraNBSB-HW-MS170.0220.037Respiratory/ GastrointestinalPistacia aluatica Dest.BamSL-BW-MS170.0220.039Gastrointestinal/Genitostinal(Anacratiaceae)SSR-BW-MS910.020.031Diabetes/Gastrointestinal/Genitostinary(Anacratiaceae)byad SafsafSRT-LW280.0370.027Osteoarticular/Gastrointestinal/(Anacratiaceae)byad SafsafSRT-LW280.0310.124Gastrointestinal/(Pontus align L. (Salicaceae)byad SafsafSRT-LW280.0370.021Osteoarticular/Gastrointestinal/(Portulace oleracea L.RajiaSL-STNS170.020.034Respiratory/Osteoarticular/(Pontus aceae)ImitedCImitedNS-W-I680.0890.026Diabetes/ Hair Care/ Gastrointestinal/(Pontus aceae)ImitedRaimaCBANS-W-I680.0810.026Diabetes/ Hair Care/ Gastrointestinal/(Pontus aceae)ImitedRaimaSL-RTW-NS350.0460.026Diabetes/ Hair Care/ Gastrointestinal/	(Apiaceae)	hlawa							
(Pinacear)FRPinas sylvestris L (Pinaceae)SanvbarSBAW200.0260.0600Respiratory/ DermatologicalPiper nigrum L (Piperaceae)IbzarIntSEW-M-H140.0180.0200.020GastrointestinalPisracia attantica Desf.IbzarSL-BW-MS170.0200.020Gastrointestinal(Anacarifiaceae)TTorouSL-BW-MS910.1190.022Diabetes/ Gastrointestinal/ Genitourinary(Anacarifiaceae)byad SafafSL-BW-MS910.1190.022Diabetes/ Gastrointestinal/ Genitourinary(Anacarifiaceae)byad SafafSL-BW-MS910.1190.021Diabetes/ Gastrointestinal/ Genitourinary(Anacarifiaceae)byad SafafSBA-LW240.0310.124Gastrointestinal/ Genitourinary(Anacarifiaceae)byad SafafSBA-LW240.0310.124Gastrointestinal/ Genitourinary(Anacarifiaceae)byad SafafSBA-LW240.0310.124Gastrointestinal/ Genitourinary(Anacarifiaceae)byad SafafSBA-LW240.0310.124Gastrointestinal/ RespiratoryPortulacea oferacea LBriffstond LCL-FRNS-W150.0200.034Gastrointestinal/ RespiratoryPortulacea oferacea LGastrointestinalCL-FRNS-W150.0400.024 <td></td> <td></td> <td></td> <td>FR</td> <td></td> <td></td> <td></td> <td></td> <td></td>				FR					
Prime sybers'is L. (Pinaceae)SawbarSBAW200.0250.060Respiratory' Dermatological <i>Piper nigrun</i> L. (Piperaceae)IbzarIntSEW-M-H140.0180.037Respiratory' Gastrointestinal <i>Pistacia antanica Dest.</i> BtamSL-BW-NS170.0220.029Gastrointestinal <i>Pistacia antanica Dest.</i> DrouSL-BW-NS910.190.022Diabetes' Gastrointestinal' Genitourinary(Anacardiaceae)FuSR-BW-NS280.0370.027Osteoarticular/ Gastrointestinal' Genitourinary(Anacardiaceae)byad SafasfSBA-LW280.0310.124Gastrointestinal' Genitourinary(Anacardiaceae)byad SafasfSBA-LW240.0310.124Gastrointestinal' Respiratory(Anacardiaceae)byad SafasfSBA-LW240.0310.124Gastrointestinal' Respiratory(PortulaceaeaL. (Salicaceae)SafasafSBA-LNS170.0220.039Diabetes' Metholic(PortulaceaeaL. (Salicaceae)SafasafSBA-LNS170.0220.034Respiratory' Osteoarticular'(Portulaceae)LmichC1-FRNS-W150.0200.034Respiratory' Osteoarticular'(Portulaceae)EFLCCFRW-NS350.0460.024Diabetes' Metholic'(Portulaceae) </td <td>Pinus pinaster Aiton.</td> <td>Tayda</td> <td>S</td> <td>BA-</td> <td>NS-W</td> <td>26</td> <td>0.034</td> <td>0.034</td> <td>Respiratory/ Dermatological/ENT</td>	Pinus pinaster Aiton.	Tayda	S	BA-	NS-W	26	0.034	0.034	Respiratory/ Dermatological/ENT
Piper nigrum I. (Piper acea)IbzarIntSEW-M-H140.0180.037Respiratory/ GastrointestinalPistacia atlantica Desf.BtamSL-BW-NS170.0220.029GastrointestinalPistacia atlantica Desf.BtamSL-BW-NS910.0210.020Gastrointestinal/ Genitourinary(Anacardiaceae)DrouSR-BW-NS910.0370.027Osteoarticular/ Gastrointestinal/ GenitourinaryPopulus alla L. (Salicaceae)byad SafsafSR-FLW280.0370.027Osteoarticular/ Gastrointestinal/ GenitourinaryPopulus nigra L. (Salicaceae)byad SafsafSR-FLW280.0370.027Osteoarticular/ Gastrointestinal/Populus nigra L. (Salicaceae)SafasafSR-FLW280.0370.0220.039Diabetes/ MetabolicPortulace oleracea L.RajlaSL-STNS170.0220.039Diabetes/ MetabolicPortulace oleracea L.RajlaSL-STNS170.0220.039Diabetes/ Metabolic(Portulaceaee)EEEEEEEParticus granutu L.RomanCBA-NS-W-H680.0890.026Diabetes/ Metabolic(Portulaceaee)EEEEEEEEParticus granutu L. (Fagaceae)BaloutSL. RNS-W-H680.0810.04<	(Pinaceae)			FR					
Pistueia atlantica Desf.BtamSL-B.W-NS170.0220.029GastrointestinalPistueia lentiscus L.DrouSL-BW-NS910.1190.022Diabetes/ Gastrointestinal/ Genitourinary(Anacardiaceae)Paulus afba L. (Salicaceae)byad SafsafSRT-LW280.0310.027Osteoarticular/ Gastrointestinal/ GenitourinaryPopulus nigra L. (Salicaceae)byad SafsafSRT-LW280.0310.124Gastrointestinal/ RespiratoryPortulaca oleracea L.RafiaSL-STNS170.0200.0310.124Gastrointestinal/ RespiratoryPortulaca oleracea L.RafiaSL-STNS150.020.034Respiratory/Osteoarticular/Portulaca oleracea L.RafiaCL-FRNS-W-II680.0890.026Diabetes/ MetabolicPrinus armeniacaLmichCL-FRNS-W-II680.0890.026Diabetes/ MetabolicQuercus suber L. (Fagaceae)BalouSR.FLW-NS350.0640.024Dermatological/ Gastrointestinal/HairChareaceaeER-SEUS170.025Osteoarticular/ Castrointestinal/NeurologicalPrince careaBalouSLNS670.0880.047Dermatological/ Gastrointestinal/NeurologicalPrince careaER-SEUS1830.047Dermatological/ Gastrointestinal/NeurologicalRetama monosperma (L	Pinus sylvestris L. (Pinaceae)	Sanwbar	S	BA	W	20	0.026	0.060	Respiratory/ Dermatological
(Anacrificeae)SESEPistacia lentiscus L.DrouSL-BW-NS9.10.1190.022Diabetes/ Gastrointestinal/ Ganitourinary(Anacrificeae)NatalSR-LNatureNatureNaturePopulus alba L. (Salicaceae)byad safsafSR-LNatureNatureNaturePopulus nigra L. (Salicaceae)SafsafSBA-LW240.0310.124Gastrointestinal/ RespiratoryPortulca oleracea L.SafsafSBA-LW240.0310.124Gastrointestinal/ Respiratory(Portulca oleracea L.SafsafSBA-LW240.0310.124Gastrointestinal/ Respiratory(Portulca ceneraSafsafSL-RNS-W150.0200.034Respiratory/ Ostoorticular/(Portulca ceneraLinichCL-RNS-W150.0200.034Respiratory/ Ostoorticular/(Interaceae)FI-RNS-W150.0200.034Respiratory/ Ostoorticular/(Interaceae)FI-RNS-W1680.0890.026Diabetes/ Hair Care/ Gastrointestinal/Hair(Interaceae)FI-RV-NS520.0810.014Dermatological/ Gastrointestinal/Hair(Interaceae)FI-RV-NS520.0810.047Dermatological/ Gastrointestinal/Hair(Interaceae)FI-RW-NS620.0810.040	Piper nigrum L. (Piperaceae)	Ibzar	Int	SE	W-M-H	14	0.018	0.037	Respiratory/ Gastrointestinal
Pistacia lentisms L. B. DrouS.L.B.W.NS910.1190.020Diabetes/ Gastrointestinal/ Genitourinary (Anacardiaceae)Populus alba L. (Salicaceae)byad SafsafS.R.T.W280.0370.027Osteoarticular/ Gastrointestinal (Anstrointestinal/ RespiratoryPopulus nigra L. (Salicaceae)SafsasafS.R.T.W280.0370.027Osteoarticular/ Gastrointestinal/ RespiratoryPortulace oleracea L.SafsasafS.B.A.LW.NS170.0220.030Diabetes/ MetabolicPortulace oleracea L.RajlaSL.STNS170.0220.030Diabetes/ Metabolic(Portulaceaee)UUUNSW170.0220.030Diabetes/ MetabolicPrinta gramatum L.RomanCL.F.NSW150.0200.030Diabetes/ Metabolic(Portulaceae)UEUUNSW150.0200.030Diabetes/ MetabolicPrinta gramatum L.RomanCBANSW-H680.0800.026Diabetes/ Hair Care/ Gastrointestinal/Hair(Portaceae)EUEUEUEUParita gramatum L.RomanSRTW-NS350.0460.024Diabetes/ Hair Care/ Gastrointestinal/Hair(Portaceae)EEUEUEUEGuerras suber L. (Fagaceae)BaloutSL.F.TVSS <t< td=""><td>Pistacia atlantica Desf.</td><td>Btam</td><td>S</td><td>L-B-</td><td>W-NS</td><td>17</td><td>0.022</td><td>0.029</td><td>Gastrointestinal</td></t<>	Pistacia atlantica Desf.	Btam	S	L-B-	W-NS	17	0.022	0.029	Gastrointestinal
(Anacardiaceae)byad SafsafSRT-LW280.0370.027Osteoarticular/ GastrointestinalPopulus alba L (Salicaceae)byad SafsafSRT-LW280.0370.027Osteoarticular/ GastrointestinalPopulus nigra L. (Salicaceae)SBKalW240.0370.0220.039Diabetes/ MetabolicPortulace oleracea L.RajlaSL-STNS170.0220.039Diabetes/ Metabolic(Portulacaceae)EEEEEEEPunica granatum L,RomanCL-FRNS-W150.0200.034Respiratory/ Osteoarticular/ Dermatological(Punceae)FR-SEFSEEEEEQuercus suber L. (Fagaceae)BaloutSRTW-NS350.0460.024Dermatological/ Gastrointestinal/Hair CareRetama monosperma (L.)RamSLNS670.0880.047Dermatological/ Gastrointestinal/Hair CareRitus communis LKarakSLM-W-NS670.0880.047Dermatological/ Gastrointestinal/NeurologicalRitus communis LAzzirSLM-W-NS670.0880.047Dermatological/ Hair Care(Gastrointestinal/ NeurologicalBi-FLEEEEERitus communis LAzzirSLM-W-NS670.0880.047Dermatological/ Hair CareRitus comm	(Anacardiaceae)			SE					
Populus alba L. (Salicaceae)byad SafsafSRT-LW280.0370.027Osteoarticular/ GastrointestinalPopulus nigra L. (Salicaceae)SafasafSBA-LW240.0310.124Gastrointestinal/ RespiratoryPorulaca oleracea L.RajlaSL-STNS170.0200.039Diabetes/ MetabolicPorulaca oleracea L.RajlaCL-STNS-W150.0200.034Respiratory/ Osteoarticular/Porulaca oleracea L.EmiciaCL-FRNS-W150.0200.034Respiratory/ Osteoarticular/Porulaca oleracea L.RomanCBA-NS-W150.0200.034Respiratory/ Osteoarticular/Punica granatum L.RomanCBA-NS-W-H680.0890.026Diabetes/ Hair Care/ Gastrointestinal/Hair(Puncaceae)FL-FL-FL-CareCarePanica granatum L.RomanSRR%-NS350.0460.024Diabetes/ Hair Care/ Gastrointestinal/Hair(Puncaceae)FL-FL-CareFL-CareCarePanica granatum L.RatmaSL <rt< th="">W-NS350.080.040OgenOgen(Puncaceae)FL-FL-FL-FL-CareCareCareCareReturn amonosperma (L.)RatmaSL<rt< th="">W-NS670.0880.047Dermatological/ Hair Care<tr<tr>Richus comminis L.Karta</tr<tr></rt<></rt<>	Pistacia lentiscus L.	Drou	S	L-B	W-NS	91	0.119	0.022	Diabetes/ Gastrointestinal/ Genitourinary
FL FL Populus nigra L. (Salicaceae) Safasaf S BA-L W 24 0.031 0.124 Gastrointestinal/Respiratory Portulace oleracea L. Rajla S L-ST NS 17 0.022 0.039 Diabetes/ Metabolic (Portulaceaceae) Punica granatum L. Roman C BA- NS-W 15 0.020 0.034 Respiratory/Osteoarticular/ (Puncaceae) Dermatological Punica granatum L. Roman C BA- NS-W-H 68 0.080 0.024 Dermatological/ Gastrointestinal/Hair (Puncaceae) FL- Care Quercus suber L. (Fagaceae) Balout S RT W-NS 65 0.046 0.024 Dermatological/ Gastrointestinal/Hair Care Balout S L NS 67 0.081 0.047 Dermatological Katama monosperma (L.)<	(Anacardiaceae)								
Populus nigra L. (Salicaceae) khalSafasaf khalSBA-LW240.0310.124Gastrointestinal/ RespiratoryPortulaca oleracea L.RajlaSL-STNS170.0220.039Diabetes/ Metabolic(Portulacaceae)NS-W150.0200.034Respiratory/ Osteoarticular/ DermatologicalI. (Rosaceae)NS-W150.0200.034Respiratory/ Osteoarticular/ Dermatological(Puncaceae)NS-W150.0200.034Respiratory/ Osteoarticular/ Dermatological(Puncaceae)RomanCBA-NS-W150.0200.034Respiratory/ Osteoarticular/ Dermatological(Puncaceae)RomanSRTW-NS350.0460.024Dermatological/ Gastrointestinal/Hair CareQuercus suber L. (Fagaceae)BaloutSRTW-NS350.0460.024Gestrointestinal/NeurologicalBaiss. (Fabaceae)RtamSLNS620.0810.047Gastrointestinal/NeurologicalGastrointestinalNarrakSLW-NS1630.047OsteoDermatological/Hair CareRuse paratylid Desf.NarakSLW-NS1830.2390.092Hair Care/Metabolic/Genitourinary/ Gastrointestinal/NeurologicalRuse paratylid Desfording L.AzzirSLM-W-NS1830.2390.092Hair Care/Metabolic/Gard	Populus alba L. (Salicaceae)	byad Safsaf	S	RT-L-	W	28	0.037	0.027	Osteoarticular/ Gastrointestinal
khalPortulaca oleracea L.RajlaSL-STNS170.0220.039Diabetes/ Metabolic(Portulacaceae) </td <td></td> <td></td> <td></td> <td>FL</td> <td></td> <td></td> <td></td> <td></td> <td></td>				FL					
(Portulacaceae)Prunus armeniacaLmichCLFRNS-W150.0200.034Respiratory/ Osteoarticular/ Dermatological <i>L</i> (Rosaceae)Fanica granatum L.RomanCBANS-W-H680.0890.026Diabetes/ Hair Care/ Gastrointestinal(Puncaceae)FR-SEFR-SEFR-SECareCare <i>Quercus suber L.</i> (Fagaceae)BaloutSRTW-NS350.0460.024Dermatological/ Gastrointestinal/Hair Care <i>Busini formationsperma</i> (L.)RtamSLNS620.0810.094Gastrointestinal/Neurological <i>Biss.</i> (Fabaceae)RtamSL.P.V-NS670.0880.047Dermatological/ Gastrointestinal/Neurological <i>Retama monosperma</i> (L.)RtamSL.P.W-NS670.0880.047Dermatological/ Hair Care <i>Retama monosperma</i> (L.)RtamSL.P.W-NS670.0880.047Dermatological/ Hair Care <i>Retama monosperma</i> (L.)RtamSL.P.W-NS670.0880.047Dermatological/ Hair Care <i>Retama monosperma</i> (L.)RtamSL.P.W-NS670.0880.047Dermatological/ Hair Care <i>Retama monosperma</i> (L.)RtamsSL.P.W-NS670.0880.047Dermatological/ Hair Care <i>Retama monosperma</i> (L.)RtamsSL.P.W-NS1830.2390.092Hair Care/Metabolic/ Genitourinary/ Gastrointestinal N	Populus nigra L. (Salicaceae)		S	BA-L	W	24	0.031	0.124	Gastrointestinal/ Respiratory
L(Rosaceae)Version of the second		Rajla	S	L-ST	NS	17	0.022	0.039	Diabetes/ Metabolic
Punica granatum L.RomanCBA-NS-W-H680.0890.026Diabetes/ Hair Care/ Gastrointestinal(Puncaceae)FR-SEFR-SEFR-SEFR-SEFR-SEFR-SEFR-SEQuercus suber L. (Fagaceae)BaloutSRT-W-NS350.0460.024Dermatological/ Gastrointestinal/HairQuercus suber L. (Fagaceae)BaloutSRT-W-NS550.0460.024Dermatological/ Gastrointestinal/HairRetama monosperma (L.)RtamSLNS620.0810.094Gastrointestinal/NeurologicalBoiss. (Fabaceae)RtamSLNS670.0880.047Dermatological/Rhus pentaphylla Desf.nsar KafSL.RTW-NS360.0470.086Dermatological/ Hair CareRicinus communis L.KarnakSLW360.0470.086Dermatological/ Hair Care(Euphorbiaceae)IIM-W-NS1830.2390.092Hair Care/ Metabolic/ Genitourinary/ Gastrointestinal/NeurologicalRubus ulmifolius SchottAkhlijSLW620.0810.051Dermatological/ Cardiovascular(Rosaceae)IIW-NS360.0470.255Gastrointestinal/NeurologicalRubus ulmifolius SchottAkhlijSLW-NS360.0470.255Gastrointestinal/Neurological/ CardiovascularRubus ulmifolius SchottAkhlijSLM-WS		Lmich	С	L-FR	NS-W	15	0.020	0.034	
FL-CareBARetama monosperma (L.)RtamSLNS620.0810.094Gastrointestinal/ NeurologicalBoiss. (Fabaceae)Rhus pentaphylla Desf.nsar KafSL-RT-W-NS670.0880.047Dermatological(Anacardiaceae)Ricinus communis L.KarnakSLW360.0470.086Dermatological/ Hair Care(Euphorbiaceae)Rosmarinus officinalis L.AzzirSLW360.0470.086Dermatological/ Hair Care(Lamiaceae)Rosmarinus officinalis L.AzzirSLW360.0470.092Hair Care/ Metabolic/ Genitourinary/ Gastrointestinal/ NeurologicalRosmarinus officinalis L.AzzirSLW620.0810.051Dermatological/ CardiovascularIndicaceaeFLW620.0470.55Gastrointestinal/ NeurologicalRunex acetosa L.HomaydaSL-RTW-NS360.0470.55Gastrointestinal(Polygonaceae)KM-NS360.0470.55GastrointestinalSalvia officinalis L.SalmiyaCLM-W1620.120.084Dermatological/ Diabetes/Metabolic/		Roman	С		NS-W-H	68	0.089	0.026	Diabetes/ Hair Care/ Gastrointestinal
Retama monosperma (L.)RtamSLNS620.0810.094Gastrointestinal/ NeurologicalBoiss. (Fabaceae)Rhus pentaphylla Desf.nsar KafSL-RT-W-NS670.0880.047Dermatological(Anacardiaceae)Kicinus communis L.KarnakSLWNS360.0470.086Dermatological/ Hair CareGeuphorbiaceae)Rosmarinus officinalis L.AzzirSLM-W-NS1830.2390.092Hair Care/ Metabolic/ Genitourinary/ Gastrointestinal/ NeurologicalRubus ulmifolius SchottAkhlijSLW620.0810.051Dermatological/ CardiovascularRumex acetosa L.HomaydaSL-RTW-NS360.0470.255GastrointestinalSalvia officinalis L.SalmiyaCLM-W1620.2120.084Dermatological/ Diabetes/Metabolic/	Quercus suber L. (Fagaceae)	Balout	S	FL-	W-NS	35	0.046	0.024	
Boiss. (Fabaceae)Rhus pentaphylla Desf.nsar KafSL-RT-W-NS670.0880.047Dermatological(Anacardiaceae)B-FLRicinus communis L.KarnakSLW360.0470.086Dermatological/ Hair Care(Euphorbiaceae)KarnakSLW360.0470.086Dermatological/ Hair CareRosmarinus officinalis L.AzzirSLM-W-NS1830.2390.092Hair Care/ Metabolic/ Genitourinary/ Gastrointestinal/ NeurologicalRubus ulmifolius SchottAkhlijSLW620.0810.051Dermatological/ Cardiovascular(Rosaceae)Kumex acetosa L.HomaydaSL-RTW-NS360.0470.255Gastrointestinal/Salvia officinalis L.SalmiyaCLM-W1620.2120.084Dermatological/ Diabetes/Metabolic/	Retama monosperma (L.)	Rtam	S		NS	62	0.081	0.094	Gastrointestinal/ Neurological
And a contract of the contract									-
Image: Antipart of the second secon	Rhus pentaphylla Desf.	nsar Kaf	S	L-RT-	W-NS	67	0.088	0.047	Dermatological
Ricinus communis L.KarnakSLW360.0470.086Dermatological/ Hair Care(Euphorbiaceae)Rosmarinus officinalis L.AzzirSLM-W-NS1830.2390.092Hair Care/ Metabolic/ Genitourinary/ Gastrointestinal/ Neurological(Lamiaceae)VV620.0810.051Dermatological/ Cardiovascular(Rosaceae)VKarnakSLW620.0470.255GastrointestinalRumex acetosa L.HomaydaSL-RTW-NS360.0470.255Gastrointestinal(Polygonaceae)SalmiyaCLM-W1620.2120.084Dermatological/ Diabetes/Metabolic/	(Anacardiaceae)			B-FL					
(Euphorbiaceae)AzzirSLM-W-NS1830.2390.092Hair Care/ Metabolic/ Genitourinary/ Gastrointestinal/ Neurological(Lamiaceae)SLW620.0810.051Dermatological/ Cardiovascular <i>Rubus ulmifolius</i> SchottAkhlijSLW620.0810.051Dermatological/ Cardiovascular(Rosaceae) </td <td></td> <td>Karnak</td> <td>S</td> <td>L</td> <td>W</td> <td>36</td> <td>0.047</td> <td>0.086</td> <td>Dermatological/ Hair Care</td>		Karnak	S	L	W	36	0.047	0.086	Dermatological/ Hair Care
Rosmarinus officinalis L.AzzirSLM-W-NS1830.2390.092Hair Care/ Metabolic/ Genitourinary/ Gastrointestinal/ Neurological(Lamiaceae)KKKKKKKKKRubus ulmifolius SchottAkhlijSLW620.0810.051Dermatological/ Cardiovascular(Rosaceae)KKKKSG0.0470.255GastrointestinalPolygonaceae)KKM-W1620.2120.084Dermatological/ Diabetes/Metabolic/	(Euphorbiaceae)								
(Lamiaceae)Gastrointestinal/ NeurologicalRubus ulmifolius SchottAkhlijSLW620.0810.051Dermatological/ Cardiovascular(Rosaceae)Rumex acetosa L.HomaydaSL-RTW-NS360.0470.255Gastrointestinal(Polygonaceae)Salvia officinalis L.SalmiyaCLM-W1620.2120.084Dermatological/ Diabetes/Metabolic/		Azzir	S	L	M-W-NS	183	0.239	0.092	Hair Care/ Metabolic/ Genitourinary/
Rubus ulmifolius SchottAkhlijSLW620.0810.051Dermatological/ Cardiovascular(Rosaceae)Rumex acetosa L.HomaydaSL-RTW-NS360.0470.255Gastrointestinal(Polygonaceae)Salvia officinalis L.SalmiyaCLM-W1620.2120.084Dermatological/ Diabetes/Metabolic/									Gastrointestinal/ Neurological
(Rosaceae)Rumex acetosa L.HomaydaSL-RTW-NS360.0470.255Gastrointestinal(Polygonaceae)Salvia officinalis L.SalmiyaCLM-W1620.2120.084Dermatological/Diabetes/Metabolic/		Akhlij	S	L	W	62	0.081	0.051	-
(Polygonaceae) Salvia officinalis L. Salmiya C L M-W 162 0.212 0.084 Dermatological/Diabetes/Metabolic/	-	-							
(Polygonaceae) Salvia officinalis L. Salmiya C L M-W 162 0.212 0.084 Dermatological/Diabetes/Metabolic/	Rumex acetosa L.	Homayda	S	L-RT	W-NS	36	0.047	0.255	Gastrointestinal
Salvia officinalis L. Salmiya C L M-W 162 0.212 0.084 Dermatological/Diabetes/Metabolic/	(Polygonaceae)	-							
(Lamiaceae) Respiratory		Salmiya	С	L	M-W	162	0.212	0.084	Dermatological/ Diabetes/Metabolic/
	(Lamiaceae)								Respiratory

Scolymus hispanicus L.	Garnina	S	FL-	NS-W	57	0.075	0.050	Respiratory/ Gastrointestinal
(Asteraceae)			RT-ST					
Sesamum indicum L.	Zanjlan	Int	L	W-M-H	28	0.037	0.224	Respiratory/ Genitourinary
(Pedaliaceae)								
Silene vulgaris Garcke.	Tghichta	S	L-RT	W	28	0.037	0.078	Dermatological/ Gastrointestinal
(Caryophyllaceae)								
Silybum marianum (L.)	Bozerwal	S	L-RT-	NS	13	0.017	0.039	Genitourinary
Gaertn. (Asteraceae)			SE					
Sinapis arvensis L	Bohamou	S	WP-	W	10	0.013	0.038	Dermatological/ Respiratory
(Brassicaceae)			SE					
Solanum lycopersicum L.	Maticha	С	FR	NS	20	0.026	0.020	Dermatological/ Genitourinary/
(Solanaceae)								Gastrointestinal
Solanum melongena L.	Danjal	С	FR-ST	NS	9	0.012	0.016	Gastrointestinal
(Solanaceae)								
Solanum nigrum L.	Baknina	S	L	NS	8	0.010	0.014	Gastrointestinal
(Solanaceae)								
Solanum tuberosum L.	Batata	С	RH	NS	46	0.060	0.014	Neurological / Gastrointestinal
(Solanaceae)								
Sonchus asper (L.) Hill.	Tifaf	S	L	W	37	0.048	0.064	Respiratory/ Metabolic/ Dermatological
(Asteraceae)								
Spinacia oleracea L.	Salk	С	L	NS	63	0.082	0.051	Cardiovascular/ Gastrointestinal
(Amaranthaceae)								
Tamarix gallica L.	Tarfa	S	FL-RT	W	20	0.026	0.086	Genitourinary/ Gastrointestinal
(Tamaricaceae)								
Tanacetum vulgare L.	Balsam	С	FR-	W	66	0.086	0.030	Osteoarticular/ Dermatological/
(Asteraceae)			RT-SE					Metabolic/Diabetes
Tetraclinis articulata Mast.	Àar-àar	S	L	W	27	0.035	0.089	Hair Care/ Diabetes/ Neurological
(Cupressaceae)								
Thapsia garganica L.	Nafaà	S	L-RT	W	17	0.022	0.037	Oral-Dentals/ Gastrointestinal/
(Apiaceae)								Respiratory
Thymelaea virgata	Matnane	S	L-RT	W	40	0.052	0.026	Genitourinary/ Diabetes/
(Thymelaeaceae)								Gastrointestinal
Thymus satureioides Coss.	Zàitra	S	L	M-W	196	0.256	0.055	Gastrointestinal/ Respiratory
(Lamiaceae)								
Trigonella foenum-graecum L.	Holba	С	SE	W-NS-M-	72	0.094	0.099	Respiratory/Gastrointestinal/ Diabetes
(Fabaceae)				0				
Triticum aestivum L. (Kmah	С	SE	W-NS	20	0.026	0.029	Gastrointestinal
Poaceae)								
Triticum turgidum L. (Zraà	С	SE	W-NS	14	0.018	0.021	Dermatological
Poaceae)								
Urtica dioica L. (Urticaceae)	Horika	S	RT-	W-NS	66	0.086	0.088	Genitourinary/ Osteoarticular/
			ST-L					Gastrointestinal
Vicia faba L. (Fabaceae)	Lfoul	С	SE	NS	53	0.069	0.073	Respiratory/ Cardiovascular
Vicia sativa L, Vicia ervilia L.)	Karsena	С	SE	W	13	0.017	0.020	Dermatological/ Gastrointestinal/
(Fabaceae)								Cardiovascular
Vitex agnus-castus L.	Kharwaà	S	FL	W	15	0.020	0.024	Genitourinary
(Lamiaceae)								

<i>Vitis vinifera</i> L. (Vitaceae)	Dalya	С	L	W-NS	40	0.052	0.055	Gastrointestinal/ Genitourinary/
								Dermatological
Zea mays L. (Poaceae)	Dra	С	SE	W-NS	26	0.034	0.035	Genitourinary/ Cardiovascular
Zingiber officinale Roscoe.	Sakinjbir	Int	RH	W-M-H	50	0.065	0.072	Osteoarticular/ Respiratory
(Zingiberaceae)								
Ziziphus lotus L.	Nbak	S	L-SE-	H-NS-W	56	0.073	0.078	Genitourinary/ Dermatological/Diabetes/
(Rhamnaceae)			RT					Gastrointestinal
Abbreviations:								

• Part used: B: Bulbs, FL: Flowers, FR: Fruits, L: Leaves, PA: Aerial Part, RH: Rhizome, RT: Roots, SE: Seeds, ST: Stem, WP: Whole Plant

• Type of plants: C: Cultivated, Int: Introduced, S: Savage

Solvent: H: Honey, M: Milk, NS: No Solvent, O: Oil, W: Water

The floristic biodiversity of the southern Mediterranean, particularly in the Tanger-Tétouan region, is characterized by the predominance of certain botanical families. The Lamiaceae (17 species), Asteraceae (16 species), and Fabaceae (14 species) play a central role in traditional medicine and local culinary practices. The Lamiaceae, including plants like mint and thyme, are widely valued for their antiseptic and relaxing properties, while the Asteraceae, such as daisies and dandelions, are renowned for treating inflammations and digestive issues. The Fabaceae, essential for their nutritional value and ability to enhance soil fertility, are integral to local diets and traditional remedies. The Apiaceae (13 species) and Poaceae (9 species) are also significant, offering both staple foods and medicinal plants, while the Brassicaceae (8 species) and Solanaceae (6 species) provide key vegetables and medicinal plants, despite the toxicity of some species.

The less diverse families, such as Cucurbitaceae (5 species), Amaranthaceae, Lauraceae, Myrtaceae, and Rutaceae (4 species each), along with Anacardiaceae, Asparagaceae, Cupressaceae, Euphorbiaceae, Liliaceae, Oleaceae, and Rosaceae (3 species each), are equally crucial for local culture and medicine. For instance, the Rosaceae include fruit trees like apple, vital for the local economy, while the Oleaceae, with olive trees, are essential for olive oil production, a cornerstone of the Mediterranean diet. This plant diversity does not only highlight the importance of these species in the daily lives of local populations but also underscores the need to conserve this biodiversity to preserve ethnobotanical knowledge and the cultural identity of the region (Figure 16). Indeed, other ethnobotanical research has confirmed the significance of these key families in Morocco, 24,25,42 and in the Arab Maghreb.43-45

The results of the ethnobotanical study in the Tangier-Tetouan region (southern Mediterranean) show a high diversity of plants used for their therapeutic properties, with varying frequencies of citation (FC). Thymus satureioides Coss., with a FC of 196, was the most cited plant, followed by Rosmarinus officinalis L. (FC = 183) and Salvia officinalis L. (FC = 162), known for their antimicrobial and anti-inflammatory properties. Lavandula dentata L. (FC = 133) and Olea europaea L. (FC = 117) were also very common in traditional remedies. Plants such as Marrubium vulgare L. (FC = 115), Allium sativum L. (FC = 114), and Chenopodium ambrosioides L. (FC = 113) showed high citation frequencies, highlighting their importance in local treatments. Mentha pulegium L. (FC = 108) and Eucalyptus camaldulensis (FC = 103) were often used for their expectorant and antiseptic properties. The presence of Dittrichia viscosa L. (FC = 96) and Nigella sativa L. (FC = 96) underscores the diversity of medicinal uses. The variety of cited plants, including species with more modest FCs such as Nerium oleander L. (FC = 95) and Matricaria chamomilla L. (FC = 91), illustrates a rich tradition of phytotherapy, enabling the treatment of a wide range of ailments (Figure 17).

Traditional therapeutic uses

During the survey, twelve categories of illnesses were identified. Analysis of the collected data allowed for the identification of various ailments treated with medicinal plants in our study area (Table 4). Among these, gastrointestinal diseases were the most frequently treated with aromatic and medicinal plants, accounting for approximately 23% of uses. This highlights the importance of medicinal plants for digestive disorders in this region. This was followed by respiratory diseases (11.54%) and genitourinary diseases (11.38%), demonstrating that plants with expectorant, antiseptic, diuretic, and antibacterial effects play a crucial role in their treatment. Dermatological, neurological, and metabolic diseases were also well-represented, each accounting for about 8 to 9% of treatments. Osteoarticular and cardiovascular disorders comprised about 7% and 6% of uses, respectively, reflecting the use of plants for joint pain and heart problems. Diabetes and hair care each represented about 4%, while ENT and dental disorders were treated in about 2% of cases (Figure 18). This distribution showed a wide range of ailments treated with medicinal plants, illustrating the richness and diversity of traditional phytotherapy knowledge in this region. The results underscore the importance of these practices for local public health and the need to preserve this knowledge while encouraging further research to scientifically validate their efficacy and safety. Previous studies have reached the same conclusion, underlining that gastrointestinal, respiratory, genito-urinary, and skin disorders are most often treated with medicinal plants. $^{28,31,43,46-50}$

Relative frequency of citation (RFC) and use value (UV)

The dataset contained 171 observations for both RFC and UV, with no missing values, ensuring that the analysis was based on a complete sample. The minimum values for RFC and UV differ slightly, with RFC starting at 0.003 and UV at 0.009. However, the maximum values were almost identical, with RFC reaching 0.256 and UV reaching 0.255, indicating that both variables span nearly the same range.

With respect to central tendency, RFC had a mean of 0.055, while UV had a slightly higher mean of 0.058, suggesting that, on average, UV values were marginally greater than RFC values. The standard deviations were also similar, with RFC at 0.044 and UV at 0.043, indicating comparable levels of variability around their respective means. These findings suggested that RFC and UV exhibited very similar behavior in terms of range, central tendency, and variability, with only minor differences in their minimum values and means (Figure 19 and Table 5).Examining the quartiles, the 1st quartile for RFC was 0.022, while for UV it was 0.027, showing a slightly higher value for UV. The median values were also closely aligned, with RFC at 0.039 and UV at 0.042. The 3rd quartile values were similarly close, at 0.076 for RFC and 0.078 for UV. These results suggest that both variables have nearly identical distributions, with UV consistently showing slightly higher values across the distribution.

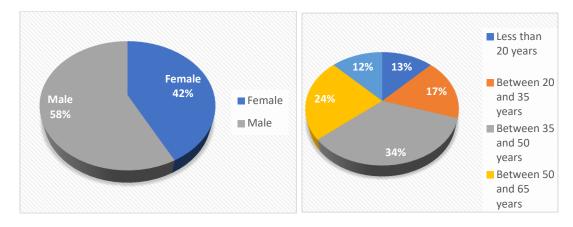


Figure 2: Distribution of respondents by gender

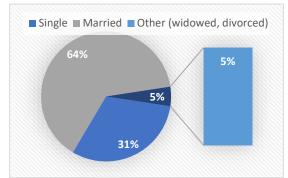


Figure 4: Use of medicinal plants by family situation

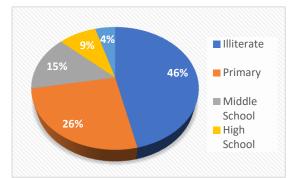


Figure 6: Distribution of surveys by level of education

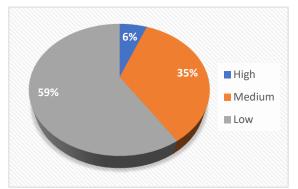


Figure 8: Use of medicinal plants by socio-economic status

Figure 3: Age class by number of people surveyed

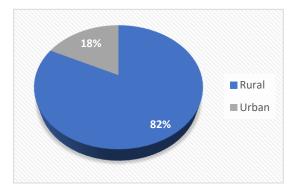


Figure 5: Distribution of respondents by housing type

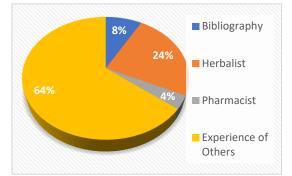


Figure 7: Distribution of surveys by source of information

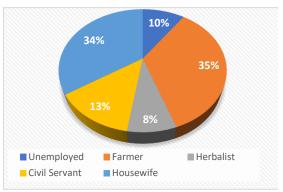


Figure 9: Use of medicinal plants by profession

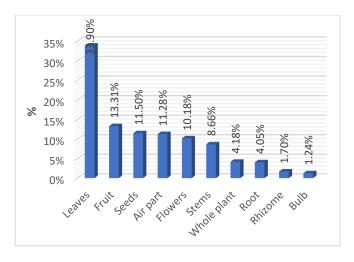


Figure 10: The used part of the plant in the Tangier-Tetouan region, northern Morocco

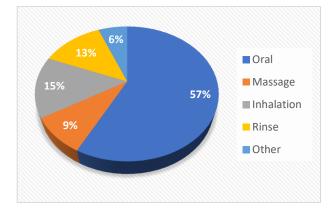


Figure 12: Method of administration of plants used in the Tangier-Tetouan region, northern Morocco

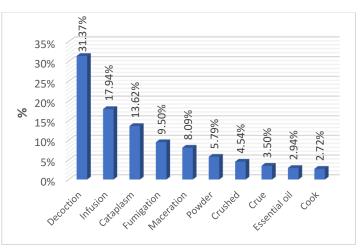


Figure 11: Preparation mode of the plants used in the Tangi Tetouan region, northern Morocco

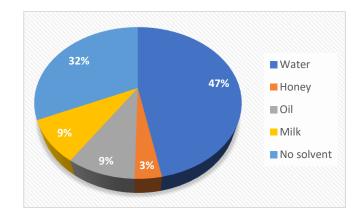


Figure 13: The solvent used for the preparation of plants used in the Tangier-Tetouan region, northern Morocco

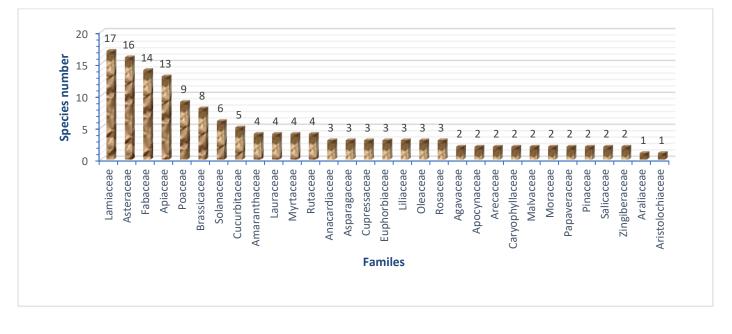


Figure 16: Botanical families most present in the Tangier-Tetouan region, northern Morocco

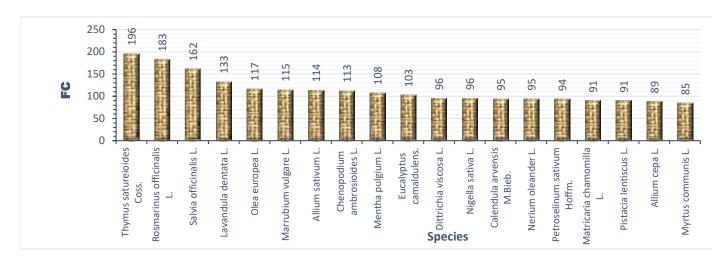


Figure 17: Main medicinal plants used in the Tangier-Tétouan region, northern Morocco

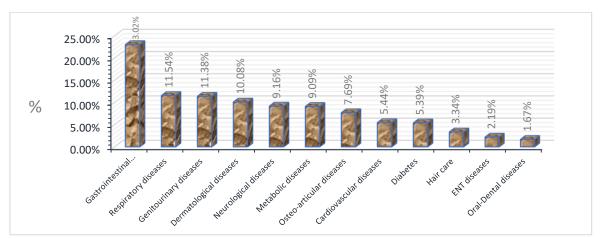


Figure 18: Percentage of illnesses treated with medicinal plants in the Tangier-Tetouan region, northern Morocco

Categories of	Manifestations				
Diseases					
Gastrointestinal	Digestive disorders (such as diarrhea, constipation, colic, and intestinal inflammations), baby diarrhea, dewormer, upset				
	stomach, throwing up, helminth infections, gastric ulcer, intestinal gas, Stomach inflammation, Bile stimulant, Spastic				
	colon, Dyspepsia, inflamed gallbladder, Stool softener, Strong laxative, Digestive aid				
Respiratory	throat clearing, pneumonitis, Common cold, Scratchy throat, bronchial inflammation, bronchial asthma, Whooping cough.				
Genitourinary	Urinary bladder issues, bladder retention, Renal inflammation, Kidney stones, Painful bladder syndrome, trouble				
	urinating.				
Dermatological	Spots, thermal injuries, itch mite infection, scratching urge, Fissures, Solar burn, Verrucae, adiposis edematosa, Breakouts,				
	Eczema, Dermatitis, Psoriatic plaques, Ecchymoses, skincare, leukoderma, Hyperpigmentation, skin thickening, Skin				
	ulcers, Skin ulcers, fungal nail infection, fungal skin infections,				
Metabolic	Excessive weight, elevated blood fats, High cholesterol, hyperthyroidism, hypothyroidism, Goiter, Cushing's disease,				
	Addison's disease				

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ENT	Outer ear infection, Middle ear infection, Ringing in the ears, auditory impairment, Nasal congestion, Nasal inflammation,
(Ear/Nose/Throat)	Sinus infection, Allergic rhinitis, Nasal growths, Pharyngitis, Laryngitis, acterial throat infection, epiglottis infection,
	Vocal cord nodules
Diabetes	Insulin-dependent diabetes, Non-insulin-dependent diabetes, Gestational diabetes, Hypoglycemia, Diabetic dermopathy
Cardiovascular	Cardiac node, dysrhythmia, High blood pressure, Irregular heartbeat, Palpitations, anal varices, weak heart,
	arteriosclerosis, varicosities
Osteoarticular	Osteoarthritis, Inflammatory arthritis, Osteoporosis, Gout, Ankylosing spondylitis, Joint inflammation, Tendinitis, Spinal
	degeneration, Paget's disease of bone, Psoriatic arthritis, Bone fractures, Joint dislocation, bone dislocation.
Oral-Dentals	Gum inflammation, dental discomfort, Periodontal diseases, Dental caries, tooth pain, tooth sensitivity, Oral care, dental
	hygiene, oral ulcers,
Hair Care	Hair treatment, Hair regrowth, Hair loss, Hair-pulling disorder, Folliculitis, stress-related hair shedding, Androgenetic
	alopecia, Tinea capitis, Seborrhea, inflammatory hair loss, Anagen effluvium?
Neurological	Amnesia, difficulty sleeping, anxiety, Nervousness, depressive disorder, Pain reliever, Nervous breakdown, Tranquilizer,
	Relaxant, Headaches, Fatigue, Dementia,

Table 5:	Relationship	between	UV	and	RFC
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Variable	Observations	Obs. with Missing Data	Obs. without Missing Data	Minimum	Maximum	Mean	Standard Deviation
RFC	171	0	171	0.003	0.256	0.055	0.044
UV	171	0	171	0.009	0.255	0.058	0.043

The variance and standard deviations for both variables are nearly identical, with RFC showing a standard deviation of 0.044 and UV at 0.043, indicating similar levels of variability in the data. The coefficient of variation (CV), which measures relative dispersion, was slightly higher for RFC (0.800) compared to UV (0.741), suggesting that RFC exhibited a slightly greater spread relative to its mean (Figure 20 and

(Table 6). In summary, the analysis reveals that RFC and UV have closely aligned statistical properties. Both variables display similar central tendencies, variability, and distributions, with only minor differences. The slightly higher coefficient of variation for RFC indicates that it has a bit more relative variability compared to UV.

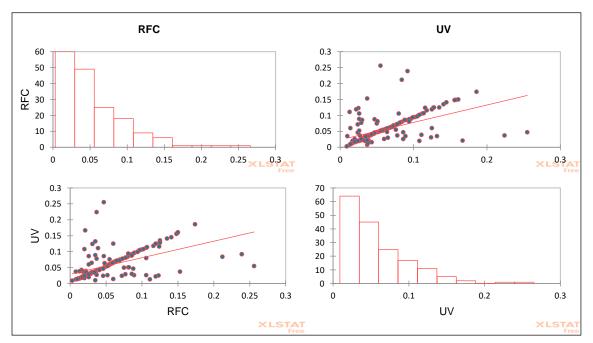


Figure 19: Correlation between UV and RFC

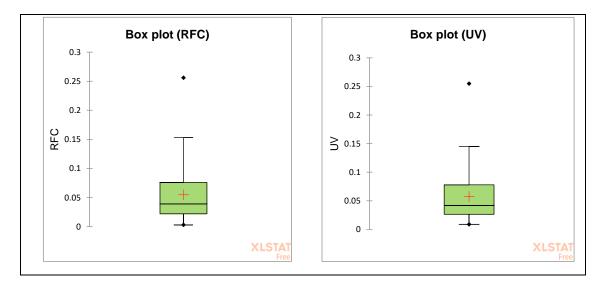


Figure 20: Box plot representations of the RFC and UV variable

Table 6:	Descriptive	Statistics	for Numerical Data	
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Statistic	RFC	UV	
Number of observations	171	171	
Minimum	0.003	0.009	
Maximum	0.256	0.255	
1st Quartile	0.022	0.027	
Median	0.039	0.042	
3rd Quartile	0.076	0.078	
Mean	0.055	0.058	
Variance (n-1)	0.002	0.002	
Standard deviation (n)	0.044	0.043	
Standard deviation (n-1)	0.044	0.043	
Coefficient of variation (n)	0.800	0.741	

Conclusion

The ethnobotanical survey in the Tangier-Tétouan region provided extensive insights into the use of medicinal plants in traditional herbal medicine. The results showed that the local population primarily relies on these plants for their healthcare, with a notable correlation between the frequency of plant use and demographic profiles, particularly among individuals aged 35 to 50 years, women, and those from lower socio-economic backgrounds. The floristic analysis identified 58 plant families, with 168 documented species, including significant ones such as *Thymus satureioides*, *Rosmarinus officinalis*, and *Salvia officinalis*. The varying RFC values indicate different levels of consensus and efficacy among informants, highlighting the versatility and importance of certain plants in traditional medicine. Leaves are the most commonly used plant parts, with decoction as the prevalent preparation method and

oral administration as the main route of intake. Most medicinal plants are used to treat digestive, respiratory, and genitourinary disorders. Despite improved access to modern healthcare, the study underscores the continued significant role of medicinal and aromatic plants in local disease treatment. The specific chemical properties of the plants explain their effectiveness in various disease categories, supporting their traditional use and providing a basis for future pharmacological and biological research. This data provides a valuable resource for understanding the medicinal flora of northern Morocco and preserving local knowledge and practices, while also opening up prospects for potential therapeutic applications of these plants.

Conflict of Interest

The authors declare no conflict of interest

Authors' Declaration

The authors hereby declare that the work presented in this article is original and that any liability for claims relating to the content of this article will be borne by them.

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