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ETHNO-MEDICINAL STUDY OF HERBS USED BY RURAL AND TRIBAL COMMUNITY IN BETUL DISTRICT OF MADHYA PRADESH, INDIA

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ABSTRACT: The investigation on the local knowledge about traditional herbal medicine is becoming increasingly important in defining strategies and actions for conservation of medicinal plants. This study therefore considered worthwhile to collect information from local rural and tribal population living in Betul district of Madhya Pradesh (India) concerning the use of medicinal plants; identify the most important species used; determine the relative importance of the species surveyed and calculate the informant consensus factor (ICF) in relation to medicinal plant use. Data collection relied predominantly on qualitative tools to record the interviewee's personal information and topics related to the medicinal use of specific plants. The present study revealed that 119 plant species grown in the study region are in use by rural and tribal community in traditional medicine for the treatment of various diseases. Most of the locals interviewed dealt with well-known safe medicinal plants such as, *Allium sativum, Acacia arabica*, *Emblica offficinalis*, *Momordica charantia* and *Ocimum sanctum* with use value of 0.62, 0.54, 0.52, 0.51, and 0.50 respectively. Dental, inflammation-pain and female problems scored the highest ICF of 0.85, 0.78, and 0.77 respectively. The literature from different Indian traditional systems of medicine evidenced some concordance with the solicited plant uses mentioned by the rural and tribal informants.

INTRODUCTION: Betul is one of the marginally located southern districts of Madhya Pradesh, lying almost wholly on the Satpura plateau. It occupies nearly the whole width of the Satpura range between the valley of the Narmada on the north and the bearer plains on the south. It forms the southernmost part of the Bhopal Division. The District extends between 21º 22´ and 22º 24´ North Latitude and between 77º 10´ and 78º 33´ East Longitude and forms a compact shape, almost a square with slight projection on the East and the West. The district covers an area of 10043 km² and population is 13,95,175 as per 2001 census.

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Density of the Population is 138/km². The district is rich in tribal population. The tribal population of the district as per 2001 census is 5,49,907.

The study area is essentially a highland tract, divided naturally into three distinct portions, differing in their superficial aspects, the character of their soil and their geological formation. The northern part of the district forms an irregular plain of the sandstone formation. It is a well-wooded tract, in many places stretching out in charming glades like an English park, but it has a very sparse population and little cultivated land. In the extreme north a line of hills rises abruptly out of the great plain of the Narmada valley. The central tract alone possesses a rich soil, well watered by the Machna and Sampna rivers, almost entirely cultivated and studded with villages. To the south lies a rolling plateau of basaltic formation (with the sacred town of Multai, and the springs of the Tapti river at its

highest point), extending over the whole of the southern face of the district, and finally merging into the wild and broken line of the Ghats, which lead down to the plains. This tract consists of a succession of stony ridges of trap rock, enclosing valleys or basins of fertile soil, to which cultivation is for the most part confined, except where the shallow soil on the tops of the hills has been turned to account.

The climate of Betul is fairly healthy. Its height above the plains and the neighborhood of extensive forests moderate the heat, and render the temperature pleasant throughout the greater part of the year. During the cold season the thermometer at night falls up to freezing point; little or no hot wind is felt before the end of April, and even then it ceases after sunset. The nights in the hot season are comparatively cool and pleasant. During the monsoon the climate is very damp and at times even cold and raw, thick clouds and mist enveloping the sky for many days together.

The district is rich in forest and biodiversity. Main timber species of Betul forest is Teak. Many miscellaneous types of trees such as Haldu, Saja, Dhaoda etc. are also found in ample. Minor forest produce of commercial importance such as Tendu leaves, Chironji, Harr, Amla have been collected in large quantity from the forest of the district for hundreds of years.

Practices of traditional medicine are based on hundreds of years of belief and observations, which predate the development and spread of modern medicine [1]. Our ancestors started to learn from nature by tasting and using what was available. It is well known that old civilizations have flourished with the use of the natural plants for various daily needs, such as food, shelter, clothes and medicine [2]. During the past decade, traditional systems of medicine have become a topic of global importance.

Current estimates suggest that, in many developing countries, a large proportion of the population rely heavily on traditional practitioners and medicinal plants to meet primary health care needs. Although modern medicine may be available in these countries, herbal medicines (phytomedicines) have often maintained popularity for historical and cultural reasons. Concurrently, many people in developed countries have begun to turn to alternative or complementary therapies, including medicinal herbs [3, 4, 5].

In rural areas especially in tribal community, the herbal medicines and their market is poorly regulated and herbal products are often neither registered nor controlled. Assurance of the safety, quality, and efficacy of medicinal plants and herbal products has now become a key issue in industrialized and in developing countries. Both general consumers and health-care professionals need up-to-date and authoritative information on the safety and efficacy of medicinal plants [6, 7]. Adequate experience and proper handling of herbal medicine requires the licensing of knowledgeable and professional herbalists and regulating the procedures of medicinal plant handling, storage and methodology of use, to avoid malpractice and mistreatment.

In India, the rural and tribal community is an integral part of the biodiversity of the forests since ages. A large number of ethnic aboriginal tribes are there who live in and around forests in Madhya Pradesh and practicing traditionally with various medicinal herbs available in their surroundings for the cure of ailments. The main tribal groups of Betul district are Gond and Korku. The objective of the present ethnopharmacological survey was to elaborate on the number, status, method of use and indication of ethnically important medicinal plants and species prevailing in tribal community of the districts.

MATERIALS AND METHODS:

Survey area and its climate: Betul is one of the marginally located southern districts of Madhya Pradesh (**Fig. 1**), lying almost wholly on the Satpura plateau. It occupies nearly the whole width of the satpura range between the valley of the Narmada on the north and the bearer plains on the south. The average rainfall is 1083.9 Millimeters in the district of which 90 percent falls during the monsoon season. During winter (November to February) the average temperature ranges from 10° to 27 °C whereas in summer an average of 29 °C and a high temperature reach 47 °C. Climate is monsoonal between June to September and temperatures average is 19 ° to 30 °C.

The ethnopharmacological survey was conducted in 53 villages of tribal population during February 2012 to October 2013. The villages were selected based preliminary interviews conducted during April to September 2012 in 102 villages to find out the potentials of ethnical practices by rural and tribal community using medicinal plants in traditional way for curing the different ailments.

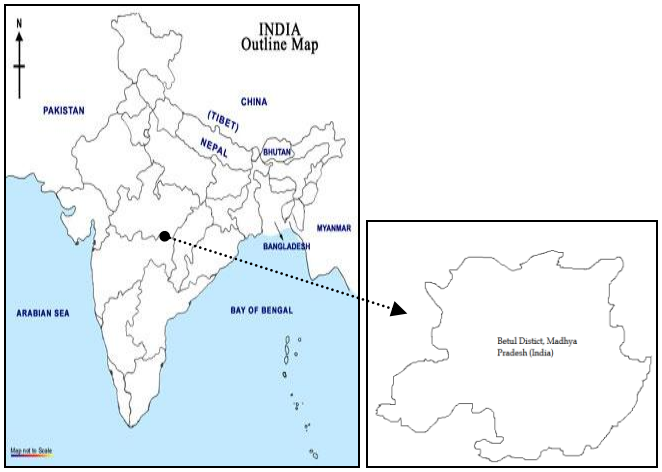

FIG. 1: MAP SHOWING THE LOCATION OF BETUL DISTRICT

Interviews: The survey was conducted during the period April 2004 to October 2006. A total of 105 Elders (40 traditional practitioners, 15 village heads, 25 women, 25 men) from 92 households participated in the study. The age of the informants ranged between 45 and 70 years, with an average of 61.25 years. Most of them belong to the families, which still have a strong connection with traditional agriculture for their day-to-day needs. Interviewees were informed that there is no jeopardy and they have the right to refuse responding to inquiries of the interviewers, and they are free to withdraw at anytime. The choice of the individual informant to be interviewed was of fundamental importance to the reliability of the gathered information. The elders who participated were identified by community members as those who were most knowledgeable in traditional medicine.

Only practitioners, who utilized medicinal plants as part or all of their therapeutic activity, were selected and regarded as professional because they treated patients outside their immediate circle of family and friends. Interview length ranged from 50 to 100 min. In planning the methodology for this study, the team avoided the use of a census questionnaire approach. Alternatively, the interviewers relied predominantly on qualitative tools such as informal meetings, open discussions and overt observation, which enabled the presentation of accurate account of the interviewee's knowledge routed via oral sources. Data collected through direct interviews were immediately registered on field notebooks especially designed for ethnopharmacology survey. As this project was funded by Centre for Development Action and Community Research (CDACR) and aimed to study development issues as well, the interview also aimed to assess several aspects such as herbal sources of the medicinal plants and socio-economic situation in the communities, in addition to the personal education, source and extent of practitioner's knowledge and willingness to be enrolled into a local union and society.

Plant material: The identity of each plant species mentioned by the interviewees was verified and confirmed by a professional botanist using live specimens and photographs. A medicinal and traditional use was accepted as valid only if it was mentioned by at least five independent practitioners. Samples of these herbs were collected, given a herbarium specimen number and voucher samples were kept at the herbarium sections of CDACR and at School of Pharmacy, People's University, Bhopal (India). Some of the plant species mentioned are known to be rare or endangered species, so they were not easy to find and collect during the study (**Table 1**).

Data analysis: Informants consensus factor (ICF) and relative importance of plant use [8, 9, 10].

For data analysis, informant consensus factor (ICF) was employed to determine how homogenous the collected information is. All citations were placed into ailment categories for which the plant was claimed to be used. ICF values will be low (near 0) if plants are chosen randomly, or if informants do not exchange information about their use. Values will be high (near 1) if there is a well-defined selection criterion in the community and/or if information is exchanged between informants.

The ICF is calculated as in the following formula:

$$ICF = Nur - Nt / Nur - 1$$

where Nur is the number of use citations in each category and Nt is the number of species used.

The use-value (UV), a quantitative method that demonstrates the relative importance of species known locally, was also calculated as according to the following formula:

$$UV = \sum U / n$$

where UV is the use value of a species; *U* is the number of citations per species; *N* is the number of informants.

The values of UV and ICF are shown in **Table 1** and **Table 2** respectively.

Literature survey: Literature from traditional systems of medicine was screened to find out supportive citations concerning the plants of interest.

RESULTS AND DISCUSSION: In the present study informants identified 119 plants and herbs that are used by rural and tribal community in traditional medicine for the treatment of various diseases in the study area (**Table 1**). Most of the locals interviewed dealt with well-known safe medicinal plants such as, *Allium sativum*, *Acacia arabica*, *Emblica offficinalis*, *Momordica charantia* and *Ocimum sanctum* with use value of 0.62, 0.54, 0.52, 0.51 and 0.50 respectively. Dental, inflammation-pain and female problems scored the highest ICF of 0.85, 0.78, and 0.77 respectively.

The literature from different Indian traditional systems of medicine evidenced some concordance with the solicited plant uses mentioned by the rural and tribal informants. Medicinal plants are usually used internally or externally which depends on the illness. The internal use of the medicinal plants consisted mainly of drugs used to relief stomach ache, gastric trouble/spasm, back ache, joint pain and muscle pain as well as constipation, cough, asthma and kidney or bladder stones. Traditional herbal drug practitioners (Vaidyas) advise the oral consumption of these plants. The external use of medicinal plants in this area consisted mainly of drugs for wound, inflammation and irritations of the skin (skin dryness with cracks, fungal infections, scabies, snake bite and insect bite), and mucous membranes (irritations and infections of the mouth and gums, and hemorrhoids).

Infusion and/or decoction are almost the common method of preparation of medicinal plants to be used internally, however, without knowing neither the real differences between the two methods nor their effect on the final product. In very rare cases, other methods of preparation and use were recorded like direct applications in the form of powdered plant material or paste. Almost all the external remedies prepared from medicinal plants are prepared in ghee (clarified butter; most commonly used in India) and most of them added with minute quantity of curcuma.

During the study it was interesting to note that the number of plants used daily by the locals is very limited in comparison with the substantial number of medicinal plants found in the rural and forest area. Moreover, very few people in this area appear to know much about the use of medicinal plants and the related information seems to be lost through younger generations.

In traditional herbal practice, the practitioner should select the proper part of a plant that contains particular active constituents because this is well known that the various plant parts (organs) contain the active constituents in different quality and quantity [11, 12, 13]. The rural and tribal users of medicinal plants in the study area are not fully aware of this fact. Despite of some recorded errors in selecting the proper plant part to use, the vast majority of the informants addressed the true plant part based on traditional heritage rather than a scientific knowledge, suggesting the poor experience concerning the appropriate prescription.

As a result of the study, many plants which have already been investigated pharmacologically by researchers justify their recommended traditional medicinal uses in rural and tribal community. For instance, *Allium cepa* and *Allium sativum* were screened for potential immunomodulatory action, and their ethanolic extracts showed augmented activity of the natural killer cells *in vitro*, which sustains their claimed medicinal uses for infections and cancer [14]. Furthermore, the ethanolic extract of *Cassia tora* seed exhibited pronounced hypolipidemic activity in WR1339 induced hyperlipidemia in rats [15]. Functional gastro-intestinal diseases as the irritable bowel syndrome are very common in the population and are

characterized by a broad spectrum of symptoms which mostly are related to spastic or paralytic intestinal function without defined histopathological changes of the tissue. Most of the informants have been using the plants material and fresh juice for gastric trouble since time immemorial. Intestinal spasmolytic effects of *Glycyrrhiza glabra* containing polyherbal formulation have been investigated [16]. The bioactivity directed fractions from extract of *Evolvulus alsinoides*, *Convolvulus pluricaulis* and *Centella asiatica* were screened and reported to be associated with pronounced memory enhancing activity in animal models [17].

In the course of study it was found that the great attention is paid to infertility issues for both men and women. Consequently, a number of preparations are offered to treat infertility, vaginal infections, child bearing, delivery and breast-feeding, where on the other hand, some other healers provide women with prescriptions for abortion and contraception. Child health receives considerable attention from healers. Herbs are prescribed for treating baby indigestion, cramps, jaundice, dehydration, constipation, eye infections and flu. Other ailments include the treatment of toothache, headache, muscle and rheumatic pains, burns, skin infections, allergies, cuts, wounds, eczema, eye infections and contraception. Rural healers prescribe medicine for all symptoms that reflect a lack of general well being. Their rationale is that "all herbs have already been tried hundreds of years ago by our ancestors" and/or "we have tried and tested them individually". According to all the informants, the rural and tribal traditional healing practice is also divided along gender lines. Women practitioners treat women and children using herbs while male healers are more concentrate on male disorders.

It was also found that rural community is more religious and ethnically believes in magic treatments by healers and the god or goddess. For instance, they are not willing to treat the measles with medicinal products. Most of people are willing to do traditional POOJA (Ethnic and traditional prayer of their goddess) to cure measles.

The potential use of plant extracts in cosmetic formulation has been increased during last couple of years, mostly due to the poor image of animal-derived extracts. Informants gave very limited answer for the use of plant materials in cosmetic preparations. A little number of plants is mentioned to be used for such a purpose.

The ICF values obtained for the categorized ailments are shown in **Table 2**. Twenty nine ailment categories were reported, namely, galactogogue, anticancer, wound healing, anaemia, constipation, snake bite, diabetes, leprosy, aphrodisiac, diuretic, tuberculosis, rheumatism, piles, paralysis, liver problems, hypolipidemic, respiratory problems, blood purifier, immunomodulator, kidney stone and urinary problems, nervous system problems, digestive problems, cholera, fever, skin disorders, measles, gynecological and female problems, inflammation and pain, dental care and problems. ICF values obtained for the reported categories indicate the degree of shared knowledge for the treatment of ailment by medicinal herbs. The highest ICF (0.85) was scored for the dental care and problems including ailments like pain in gum, bleeding from gum and toothache. Inflammation and pain, which include the relief from joint pain, muscular inflammation and pain, backache, headache, migraine and body pain, recorded the second highest ICF value (0.78).

Thirty two species, representing 26.89% of the total plant species listed in this survey, were used for treatment of digestive problems. gynecological and female problems was cited as the category with the third highest ICF (0.77), where only nine plant species were reported, indicating a high agreement among the informants for this particular use. The fourth level of ICF values (0.75) was recorded for measles category. Skin disorders were ranked as the fifth ailment with ICF value of 0.70.

The least ICF in this ranking was found to be for plants used as anticancer and galactogogue with ICF value of 0.14 and 0.05 respectively. These categories recorded a lower ICF, which could be attributed to the civilization trend of the society and the tendency of the people to follow orthodox medicine in these modern society recognized ailments. With this study it is noteworthy, that many medicinal plants, which known to be used for the treatment of various illnesses were not

mentioned at all by the locals although many of them are native plants to the study area. Unfortunately, the latter observation highlights the fact that much of the ethno pharmacological heritage in the area has been lost within successive young generations.

The phenomenon of significant contraction in the variety and extent of medicinal plant usage in the rural and tribal area suggest that the indigenous medicine of the area is diminishing and may disappear. This is paradoxical at a time when there is an increasing interest worldwide in herbal medicines. A diverse or wide collection of medicinal plant species and the knowledge concerning their medicinal use function as the raw material for new drug development research. Therefore, the decline in the regional knowledge base concerning medicinal plants will severely limit the potential of ethnobotany and ethnopharmacology for drug discovery. Ethnobotanical and ethnopharmacological research is very crucial and integral in the development of drugs from natural sources. The information obtained on identification, preparation, clinical use, gathering, and preservation of medicinal plants dramatically facilitates the search for new drugs, and the time needed for drug development programs [18].

Since many plant species are indicated as potential resource for treating various diseases such as constipation, snake bite, diabetes, leprosy, aphrodisiac, diuretic, tuberculosis, rheumatism, piles, paralysis, skin, liver and digestive system diseases, this should encourage further research in these fields. The present pharmacological surveys document and the traditional medical use of plants would be worthwhile to further explore the search for new active components and drug development programs.

TABLE 1: PLANTS AND HERBS USED FOR TREATMENT OF VARIOUS HUMAN AILMENTS BY RURAL AND TRIBAL COMMUNITY IN BETUL DISTRICT OF MADHYA PRADESH

#	Scientific name [Voucher specimen]	Local name	Family name	Origin	Status	Part used	Methods of use	Recommended uses	UV	Reported common literature uses in traditional system of medicine *
1.	*Abroma augusta* Linn. [AAu-01]	Kopas, Bone kopash	Sterculiaceae	I	Und	Fresh and dried root-bark	Fresh Juice, Infusion	i. As uterine tonic, ii. Wound, iii. Regulates menstrual flow	0.11	Uterine disorders
2.	*Abrus precatorius* Linn. [AP-02]	Rati	Fabaceae	N	C, D	Root, leaf and seed	Decoction	i. To treat painful part of inflammed sections of the gums, ii. Skin disorders, iii. Mild purgative	0.08	i. Purgative, ii. Emetic, iii. Tonic, iv. Aphrodisiac
3.	*Acacia arabica* Linn. [AAr-03]	Babul	Leguminosae	N	C	Bark, gum, leaf, pod	Infusion, Decoction	i. Diarrhoea, ii. Teeth Disorders, iii. Eczema, iv.Tonsillitis, v.Conjunctivitis, vi. Epiphora, vii.Leucorrhoea, viii. Gargles	0.54	i. Diarrhoea, ii. Skin disease, iii. Teeth disorders
4.	*Acanthus ilicifolius* Linn. [AI-01]	Maraneli	Acanthaceae	I	Und	Root	Decoction	i. Asthma, ii. Paralysis, iii. Snake bite	0.13	i. Rheumatism, ii. leucorrhoea

5.	*Achyranthes aspera* Linn. [AAs-03]	Apamarg	Amaranthaceae	N	C	Whole plant	Infusion	i. Asthma, ii. Coughs, iii. Cholera, iv. Skin Diseases	0.11	i. Skin disorders, ii. Eye disease, iii. Renal dropdy
6.	*Aconitum ferox* Wall. [AFA-01]	Mahoor	Ranunculaceae	N	C	Root	Infusion	i. Fever, ii. Earache, iii. Toothache, iv. Urinary trouble	0.25	i. Leprosy, ii.Fever, iii. Cholera, iv. Sore throat, v. Gastric disorders
7.	*Acorus calamus* Linn. [AC-02]	Boch	Araceae	N	Und	Rhizome and root stocks	Decoction	i. Bitter, ii. Wound iii. Emetic, iv. Laxative, v. Diuretic, vi. Carminative vii. Joint pain	0.17	i. Aromatic, ii. Bitter, iii. Carminative, iv. Emetic, v. Stimulant, vi. Stomachic
8.	*Adhatoda vasica* Nees. [AV-03]	Adusa	Acanthaceae	N	C	Leaf, root, flower	Decoction	i. Bronchitis, ii.Schizophrenia, iii. Obesity, iv. Fever, v. Rheumatism	0.24	i. Nervine tonic, ii. Emetic, iii. Stomachic, iv. Resuscitative,
9.	*Aegle marmelos* Corr. [AM-03]	Bel	Rutaceae	N	C	Leaves, Stem bark and fruit	Infusion and fresh juice fruit	i. Cholera, ii. Diarrhea, iii. Convulsions, iv. Nausea, v. Chronic stomachache	0.22	i. Diarrhoea, ii. Laxative, iii. Antipyretic, iv. Carminative
10.	*Allium cepa* Linn. [AC-02]	Piyaj	Liliaceae	N	C	Bulb	Infusion	i. Earache, ii. Sun-stroke, iii.Hypertension, iv. Blood purifier, v.Antiinflamatory, vi. Aphrodisiac	0.12	i. Stimulant, ii. Expectorant, iii. Aphrodisiac, iv. Antibacterial, v. Anti-oxidant
11.	*Allium sativum* Linn. [AS-06]	Lahsun	Alliaceae	N	C	Bulb	Decoction and juice	i.Antidiabetic, ii.Antiinflammatory, iii. Anticancer, iv.Hypolipidemic, v. Headache, vi. Wound healing, vii. Tuberculosis viii. Skin disease	0.62	i. Duodenal ulcer, ii. Dyspepsia, iii. Rubifacient, iv. Hypolipidemic, v. Antidiabetic, vi Cough
12.	*Aloe barbadensis* Mill. [AB-02]	Ghee kunvar	Liliaceae	N	C	Leaf pulp	Fresh pulp	i. liver troubles, ii. Jaundice, iii. Fever, iv. gonorrhoea, v. Spleen disorder, vi. Rheumatism, vii. Piles, viii. Dysmenorrhoea, ix.Sterility in women	0.45	i. Alternative, ii. Bitter, iii. Cooling, iv. Purgative, v. tonic, vi. Anthelmintic, vii. Asthma

13.	*Alstonia scholaris* R. [AS-04]	Shaitan wood	Apocynaceae	N	Und	Stem bark and Twig	Decoction	i. Colic pain, ii. Leprosy, iii. Pimple, iv. Pyorrhoea v. Galactogauge vi. Asthma vii.Respiratory trouble	0.16	i. Malarial fever, ii. Anaemia, iii. Indigestion, iv. General debility v. Stomach ailments
14.	*Amomum subuletum* Roxb. [ASu-02]	Badi Elaeechi	Zingiberaceae	I	D	Seed	Decoction	i. Itching, ii. Respiratory disorders	0.14	i. Respiratory disorders
15.	*Andographis paniculata* (Burm. F.) Wall. [AP-01]	Kirayat	Acanthaceae	N	C	Whole herb	Decoction	i. Febrifuge, ii. Alterative, iii.Anthelmintic, iv. Stomach complaints, v. Debility, vi. Diabetes, vii. Consumption, viii.Influenza, ix. Bronchitis, x. Itches xi. Piles	0.11	i. Fever, ii. Dysentery, iii. Jaundice, iv. Influenza, v. Bronchitis, vi. Itches
16.	*Annona reticulata* Linn. [AR-01]	Ramphal	Annonaceae	N	C, D	Bark, Fruit	Fresh juice, Infusion	i.Hypertension, ii. Antiseptic	0.10	i. insecticidal, ii. Anthelmintic, iii. Astringent
17.	*Annona squamosa* Linn. [AS-01]	Seetaphal	Annonaceae	N	C	Bark, Leaf, root, seed, fruit	Fresh fruit juice, Decoction	i. Hair care, ii. Aphrodisiac, iii. Cardio-tonic	0.15	i. Cardio-tonic, ii. Aphrodisiac
18.	*Areca catechu* Linn. [AC-03]	Supari	Arecaceae	I	R	Fruit	Infusion	i. Venereal sores, ii. Syphilis, iii. Dysentery, iv. Cholera, v. Small pox	0.08	i. Toothache, ii. Pyorrhea, iii. Gum diseases, iv. Worms
19.	*Argemone maxicana* Linn. [AM-01]	Satnashi	Papaveraceae	N	C	Root, Stem, Latex	Infusion	i. Eczema, ii. Skin disorders, iii. Jaundice, iv. Asthma	0.09	i. Blood purifier, ii. Laxative
20.	*Aristolochia indica* Linn. [AI-02]	Isvaramuli	Aristolochiaceae	N	D	Root, leaves and seeds	Decoction and Fresh Juice	i. Tonic, ii. Stimulant, iii. Emetic, iv. Impotency, v. Dry cough, vi. Snake bite, vii. Controls menstruation	0.14	i. Stimulant, ii. Cough iii. Digestion, iv. Dyspepsia,
21.	*Asparagus adscendens* Roxb. [AAd-01]	Musli	Asparagaceae	N	C	Root, milky latex	Decoction	i.Aphrodisiac, ii. Tonic, iii. Galactagogue, iv. Diarrhoea, v. Senile Debility	0.21	i. Diarrhoea, ii.Demulcent, iii. Immunomodulator

22.	*Asparagus racemosus* Willd. Var. [ARa-01]	Satawar	Liliaceae	N	C	Whole herb	Infusion	i. Refrigerant, ii. Antiseptic, iii. Alterative, iv. Galactogogue, v. Aphrodisiac	0.16	i. Cardiac abnormality, ii. Antidysenteric, iii. Demulcent, iv. Aphrodisiac, v. Diuretic
23.	*Azadirachta indica* Linn. [AI-05]	Neemb	Meliaceae	N	C	Bark, leaf, seed	Decoction, Infusion	i. Skin disorders, ii. Hair care, iii. Burn, iv. Eczema, v. Worms, vi. Gingivitis, vii. Measles, viii. Diabetes, ix. Rheumatism	0.11	i. Antiseptic, ii. Tonic, iii. Spermicidal, iv. Rheumatism, v. Blood purifier
24.	*Balanites aegyptica* L. Delile [BA-01]	Hingan	Balanitaceae	I	C, D	Fruit pulp, bark and seed	Fresh pulp and Decoction	i. Anthelmintic, ii. Purgative, iii. Skin diseases, iv. Whooping cough	0.20	i. Antiseptic, ii. Cough, iii. Spasmolytic, iv. Antimicrobial
25.	*Bauhinia vahlii* Wt. & Arn. [BV-01]	Sihari	Caesalpiniaceae	I	D	Fruit and seed	Infusion	i. Aphrodisiac, ii. Dysentery, iii. Stomach ache, iv. Treating antifertility in women	0.16	i. Tonic, ii. Vermifuge, iii. Aphrodisiac
26.	*Boerhavia diffusa* Linn. [BD-01]	Punarnava	Nyctaginaceae	N	C	Whole, root	Infusion	i. Dropsy, ii. Asthma, iii. Fevers, iv. Stomach disorders, v. Kidney stones, vi. Bladder stones, vii. Anti-infective, viii. Tonic, ix. Respiratory diseases, x. Anaemia, xi. Liver disorders	0.26	i. Diuretic, ii. Asthma, iii. Fevers, iv. Stomach, v. Antiseptic
27.	*Bombax malabaricum* DC. [BMa-01]	Semal	Malvaceae	N	C	Bark	Decoction	i. Diarrhoea, ii. Dysentery, iii. Diuretic, iv. Nutritive, v. stimulant	0.34	i. Astringent, ii. Dysentery, iii. Diuretic
28.	*Butea monosperma* (Lamk) Taub. [BMo-02]	Palash	Fabaceae	N	C	Root, bark, flower, seed, gum and leaf	Infusion and decoction	i. Contraceptive, ii. Tuberculosis, iii. Piles, iv. Urinary complaints, v. Diarrhoea, vi. Dysentery, vii. Dog bite, viii. Leprosy	0.27	i. Diabetes, ii. Diarrhoea, iii. Wounds, iv. Indigestion, v. Gastroenteritis, vi. Fever, vii. Tuberculosis
29.	*Cardiospermum halicacabum* Linn. [CH-01]	Jyotishmati	Sapindaceae	N	C	Leaf, root	Infusion	i. Diuretic, ii. Laxative, iii. Anti-inflammatory. iv. Rheumatism, v. Nervous disorders	0.15	i. Diaphoretic, ii. Diuretic, iii. Laxative, iv. Anti-inflammatory

30.	*Careya arborea* Roxb. [CA-01]	Kumbi.	Lecythidaceae	I	C	Bark and root	Decoction	i. Body pain, ii. Fever, iii. Cold and cough	0.06	i. Leucoderma, ii. Antipyretic, iii. Throat infection
31.	*Carica papaya* Linn. [CP-02]	Papita	Caricaceae	N	C	Leaf, fruit pulp, seed	Fresh fruit juice, Infusion	i. Digestive, ii. Dyspepsia, iii. Respiratory disorders, iv. Laxative, v. Bronchitis	0.14	ii. Digestive, ii. Dyspepsia, iii. Respiratory disorders
32.	*Carum carvi* Linn. [CC-01]	Jeera	Umbelliferae	I	C	Seed, root	Infusion	i. Skin disorders, ii. Piles, iii. Stomachic, iv. Carminative, v. Scabies	0.26	i. Stomachic, ii. Carminative
33.	*Caryophyllus aromaticus* Linn. [CAr-04]	Lavang	Myrtaceae	I	C	Flower bud	Infusion	i. Teeth care, ii. Wound iii. Burn	0.19	Antiseptic
34.	*Cassia tora* Linn. [CT-02]	Chirotiya	Caesalpiniaceae	N	C	Leaf and seed	Infusion	i. Skin disease, ii. Diabetes, iii. Hyperlipidemia	0.55	i.Antimicrobial, ii. Liver protection, iii. Jaundice
35.	*Catharanthus roseus* Linn. [CR-01]	Sada suwagan	Apocynaceae	N	C	Leaf	Infusion	i. Diabetes, ii. Fever, iii. Dysentery, iv. Scabies, v. Epilepsy, vi. Cancerous wounds	0.40	i. Cancer, ii. Emetic, iii. Hypotensive, iv. Sedative, v. Antiviral
36.	*Celastrus paniculata* Willd. [CP-01]	Malkangi	Celastraceae	N	C	Seed, oil	Decoction, Infusion	i. Rheumatic pain, ii. Leprosy, iii. Abortion, iv. Leucoderma, v. Bitter, vi. Paralysis, vii. Beriberi, viii. Aphrodisiac	0.27	i. Nervine stimulant, ii. Memory-booster, iii. Promotes menstrual flow
37.	*Centella asiatica* Linn. [CAs-01]	Brammi	Appiaceae	N	C	Whole herb	Infusion	i. Memory enhancer, ii. Anti-stress, iii. Stimulant, iv. Skin disease	0.12	i. Brain tonic, ii. Anti-anxiety, iii. Rejuvenator, iv. Hair-tonic
38.	*Convolvulus pluricaulis* Choisy [CPl-01]	Shankhpushi	Convolvulaceae	N	C	Whole herb	Infusion	i. Memory enhancer, ii. Anti-stress, iii. Stimulant	0.11	i. Brain tonic, ii. Antiseptic
39.	*Coriandrum sativum* Linn. [CSa-02]	Dhana	Apiaceae	N	C	Seed, leaf	Decoction	i. Menstrual disorders, ii. Skin diseases	0.31	Carminative
40.	*Costus speciosus* Koening ex. Retz. [CSp-01]	Kebu	Zingiberaceae	I	C, D	Rhizome	Decoction	i. Asthma, ii. Anaemia, iii. Bronchitis, iv. Leprosy, v. Flatulence, vi. Constipation, vii. Fever, viii. Skin diseases ix.	0.15	i. Bitter, ii. Astringent, iii. Cooling, iv. Purgative, v. Aphrodisiac, vi. Anthelmintic, vii. Depurative, viii. Febrifuge,

								Inflammation.		ix. Expectorant, x. tonic
41.	*Croton tiglium* Linn. [CT-01]	Jamalgota	Euphorbiaceae	N	C, D	Seed, oil	Decoction	i. Purgative, ii. Anti-inflammatory	0.16	i. Purgative, ii. Alopecia, iii. Anti-inflammatory
42.	*Curcuma longa* Linn. [CL-01]	Haldi	Zingiberaceae	N	C	Rhizome, flower	Infusion	i. Cholera, ii. Cough iii. Throat, iv. Fever, v. Syphilis, vi. Wound vii. Malaria	0.12	i. Asthma, ii. Skin disease, iii. Wound, iv. Intestinal worms, v. Liver complaints
43.	*Curculigo orchioides* Gaertn. [CO-01]	Kali musli	Hypoxidaceae	I	C, D	Root	Decoction	i Tonic, ii. Aphrodisiac, iii. Piles, iv. Jaundice, v. Asthma	0.07	i. Demulcent, ii. Restorative, iii. Tonic,
44.	*Cyperus scariosus* R. Br. [CS-01]	Nagarmotha	Cyperaceae	N	C	Tuber	Infusion	i. Pain killer, ii. Stomachic, iii. Antiseptic, iv. Aromatic, v. Urinogenital infections	0.11	i. Stomachic, Astringent, iii. Aromatic
45.	*Datura metel* Linn. [DM-01]	Dhatura	Solanaceae	N	C	Leaf, root, seed	Infusion	i. Fever, ii. Diarrhoea, iii. Skin diseases, iv. Painful swelling, v. Antispasmodic	0.17	i. Emetic, ii. Asthma, iii. Aphrodisiac, iv. Dandruff, v. Anticancer
46.	*Dillenia indica* Linn. [DI-01]	Chalita	Dilleniaceae	I	D	Fruit, leaf	Infusion	i. Wound burns, ii. Dysentery	0.06	i. Fever, ii. Stomach disorder
	Diospyros peregrine (Gaertn.) Gurke [DP-01]	Kendu	Ebenaceae	I	C, D	Bark, fruit, root	Infusion	i. dysentery, ii. Menorrhagia, iii. Diarrhoea, iv. Hypoglycaemic	0.10	i. Chronic dysentery, ii. Menorrhagia, iii. Healing of burn wound
47.	*Dolichos biflorus* Linn. [DB-01]	Kurti	Fabaceae	I	D	Leaf, seed	Decoction	i. Menstrual complaints, ii. Bronchial asthma, iii. Piles, iv. Burns	0.09	i. Rheumatism, ii. Urinary troubles, iii. Leucorrhoea, iv. Menstrual troubles
48.	*Eclipta alba* (L.) Roxb. [EA-01]	Bhangra	Asteraceae	N	C	Leaf	Leaf juice	i. Gastric troubles, ii. Fever, iii. Cough, iv. Ulcer, v. Wounds, vi. Malaria, vii. Snake bite, viii. Jaundice, ix. Promoting hair growth	0.36	i. Cough, ii. Hepatic disorder, iii. Asthma, iv. Bronchitis, v. Headache, vi. Migraine
49.	*Elettaria cardamom* (L.) Maton [EC-01]	Elaeechi	Zingiberaceae	I	D	Dried fruit, seed	Decoction	i. Digestive, ii. Carminative, iii. Cardiac tonic, iv. Burning sensation, v. Nausea, vi. Asthma, vii. Bronchitis, viii. Stimulant	0.25	i. Abortifacient, ii. Aromatic, iii. Acrid, iv. Cooling, v. Carminative, vi. Cardiac Tonic, vii. Digestive, viii. Diuretic, ix. Expectorant

50.	*Emblica offficinalis* Gaertn. [EO-01]	Aawala	Euphorbiaceae	N	C	Fruit, leaf, seed	Infusion	i. Antiemitic, ii. Fever, iii. Indigestion, iv. Burn, v. Wounds, vi. Stomach Complaint, vii. Diabetes, viii. Dysentery	0.52	i. Acidity, ii. Urinary Trouble, iii. Vomiting, iv. Leucorrhoea, v. Biliary Colic, vi. Urticaria, vii.Conjunctivitis, viii. Dysentery
51.	*Euphorbia tirucalli* Linn. [ET-01]	Kopol	Euphorbiaceae	I	C, D	Latex	Fresh latex	i. Body pain, ii. Eczema, iii. Scabies, iv. Rheumatism, v. Laxative	0.18	i. Cough, ii. Earache, iii. Emetic, iv. Laxative v. Rubefacient, vii. warts
52.	*Evolvulus alsinoides* Linn. [EAl-01]	Shankhpushpi	Convolvulaceae	N	C	Whole herb	Infusion	i. Memory enhancer, ii. Anti-stress, iii. Stimulant	0.24	Brain tonic
53.	*Feronia limonia* (L.) Swingle [FL-01]	Kaith	Rutaceae	N	C	Fruit, Leaf	Fruit pulp, Decoction	i. Jaundice, ii. Dysentery, iii. Diarrhoea, iv. Laxative, v. Stomachic	0.13	i. Jaundice, ii. Dysentery, iii. Diarrhoea, iv. Laxative
54.	*Ferula foetida* Regel. [FF-01]	Hing	Apiaceae	I	C, D	Gum resin	Infusion	i. Aphrodisiac, ii. Carminative, iii. Anti-spasmodic	0.22	i. Aphrodisiac, ii. Carminative
55.	*Ficus racemosa* Linn. [FRa-01]	Umar	Moraceae	I	C, D	Bark, fruit	Decoction	i. Diabetes, ii. Dysentery, iii. Leprosy, iv. Urinary complaints, v. Dysentery, vi. Piles, vii. Carminative	0.13	i. Cuts, ii. Insect bites, iii. Boils, iv. Bruises, v. Swellings, vi. Bleeding piles
56.	*Ficus religiosa* Linn. [FRe-02]	Pipal	Moraceae	N	C	Bark, Leaf	Decoction	i. Astringent, ii. Laxative, iii. Cooling, iv. Alterative, v. Mumps	0.16	i. Astringent, ii. Laxative, iii. Cooling
57.	*Garcinia xanthochymus* Hook f ex T. Anders [GX-01]	Jharami	Clusiaceae	N	C, D	Fruit	Infusion	i. Digestive, ii. Emollient, iii. Demulcent, iv. Cooling, v. Dysentery, vi. Astringent, vii. Diarrhea	0.32	i. Diarrhea, ii. Dysentery, iii. Goitre, iv. Antiscorbutic
58.	*Gloriosa superba* Linn. [GS-01]	Kalhari	Liliaceae	N	C	Leaf, tuber	Decoction	i. Anthelmintic, ii. Abortifacient, iii. Fevers, iv. Wounds, v. Asthma, vi. Gonorrhoea, vii. Leprosy, viii. Piles	0.20	i. Anthelmintic, ii.Antipyretic, iii. Bitter, iv. Depurative, v. Digestive, vi. Emetic, vii. Expectorant
59.	*Glycyrrhiza glabra* Linn. [GG-01]	Mulathi	Leguminosae	I	C	Root	Infusion	i. Stomachic, ii. Expectorant, iii. Rejuvenator, iv. Constipation, v.	0.34	i. Stomachic, ii. Demulcent, iii. Expectorant, iv. Rejuvenator

								Muscular pains, vi. Mouth ulcers, Baldness, vii. Corns, viii. Sore throat,		
60.	*Gmelina arborea* R. Br. ex Schult [GA-02]	Gudmar	Asclepiadaceae	N	C, D	Leaf	Decoction	i. Gastric troubles, ii. Diabetes, iii. Urinary complaints, iv. Appetiser, v. Colic pain, vii. Wounds, viii. Cardiotonic, ix. Digestive, x. Diuretic,	0.33	i. stomachache, ii. Purgative, iii. Cough, iv. Anthelmintic, v. Antipyretic, vi. Astringent, vii. Bitter
61.	*Gossypium indicum* Medik [GI-01]	Kapus	Malvaceae	N	C	Seed	Decoction	i. Expectorant, ii. Aphrodisiac, iii. Abortifacient, iv. Nervine tonic, v. Diuretic	0.19	i. Demulcent, ii. Laxative, iii. Expectorant, iv. Aphrodisiac
62.	*Gymnema sylvestre* Roxb. [GS-01]	Jugani	Verbenaceae	I	C	Leaf, root	Infusion	i. Blood purifier, ii. Carminative, iii. Headache, iv. Epilepsy, v. Fever, vi. Snake bite, vii. Throat swelling, viii. Malarial fever, ix. wounds	0.28	i. Acrid, ii. Bitter, iii. Anthelmintic, iv.Galactogogue, v. Laxative, vi. Stomachic, vii. Burning sensation
63.	*Helianthus annuus* Linn. [HA-01]	Surajmukh	Asteraceae	N	C	Oil, flower, seed	Infusion, decoction	i. Colic, ii. Diarrhoea, iii. Eye diseases, iv. Inflammation, v. Wound, vi. Ulcers, vii. Respiratory diseases, viii. Hypercholestremia	0.24	i. Diarrhoea, ii. Eye diseases, iii. Inflammation, iv. Wound, v. Ulcers, vi. Respiratory diseases
64.	*Hemidesmus indicus* Linn. [HI-01]	Anantmool	Asclepiadaceae	I	C	Root, latex	Infusion	i. Stomach diseases, ii. Urinary diseases, iii. Inflammation, iv. Rheumatism, v. Skin diseases	0.07	i. Tonic, ii. Blood-purifier, iii. Appetizer, iv. Rheumatism
65.	*Hibiscus rosasinensis* Linn. [HR-01]	Jasuwant	Malvaceae	N	C	Flower	Infusion	i. Cough, ii. Urogenital, iii. Menorrhagia, iv. Bronchitis, v. Skin diseases,	0.08	i. Demulcent, ii. Hair tonic, iii. Abortifacient
66.	*Holarrhena pubescence* Wall ex DC. [HP-01]	Kurch	Apocynaceae	N	C	Bark	Decoction	i. Diarrhoea, ii. Dysentery, iii. Anthelmintic, iv. Snake bite, v. Fever, vi. Dry cough, vii. Menstrual complaints, viii. Asthma	0.06	ii. Aphrodisiac ii. Diarrhoea, iii. Dysentery, iv.Anthelmintic, v. Snake bite, vi. Fever

67.	*Lawsonia alba* Linn. [LA-01]	Mehandi, Maidi	Lythraceae	N	C	Leaf	Infusion	i. Hair dye, ii. Hair conditioner, iii. Astringent, iv. Gargle, v. Coolant, vi. Headache	0.11	i. Hair dye, ii. Hairconditioner, iii. Astringent
68.	*Linum usitatissimum* Linn. [LA-01]	Alsi dana	Linacea	N	C	Seed	Decoction, Infusion	i. Diuretic, ii. Respiratory diseases, iii. Joint pain	0.14	i. Diuretic, ii. Respiratory diseases
69.	*Madhuca indica* Gmel. [MI-01]	Mahua	Sapotaceae	N	C	Bark, flower	Decoction, infusion	i. Bronchitis, ii. Rheumatism, iii. Diabetes, iv. Piles, v. Orchitis, vi. Tonsillitis, vii. Eczema, viii. Galactagogue, ix. Astringent, x. Tonic	0.42	i. Galactagogue, ii. Astringent, iii. Tonic
70.	*Mentha spicata* Linn. [MS-01]	Pudinah	Labiatae	N	C	Whole herb, leaf	Decoction	i. Carminative, ii. Antiseptic, iii. Refrigerant, iv. Body heat, v. Toothache, vi. Intestinal worms	0.36	i. Carminative, ii. Flavouring agent, iii. Antiseptic, iv. Refrigerant
71.	*Momordica charantia* Linn. [MC-06]	Karela	Cucurbitaceae	N	C	Fruit, leaf	Infusion, Decoction	i. Piles, ii. Jaundice iii. Diabetes, iv. Anthelmintic,	0.50	i. Jaundice ii. Diabetes, iii. Anthelmintic
72.	*Mucuna pruriens* Bak. [MP-01]	Kaucnch	Leguminosae	N	C	Seed, root	Infusion, Decoction	i. Vigour. ii. Nervous system disorders iii. Diuretic, iv. Parkinsonism, v. Aphrodisiac, vi. Purgative, vii. Natural color	0.31	i. Nervine tonic, ii. Diuretic, iii. Purgative
73.	*Nerium indicum* Mill. [NI-01]	Kaner	Apocynaceae	N	C	Root	Infusion	i. Epilepsy, ii. Herpes, iii. Viral infection	0.15	Insecticide
74.	*Nyctanthes arbortristis* Linn [NA-01]	Harshringar	Oleaceae	I	C	Bark, leaf	Decoction	i. Pain killer, ii. Curing sciatica, iii. Antidandruff, iv. Asthama, v. Purgative	0.22	i. Respiratory disorders, ii. Hair growth, iii. Worms
75.	*Ocimum basilicum* (L) Hook. [OB-03]	Krishna tulsi	Labiatae	N	C	Leaf	Infusion, decoction	i. Carminative, ii. Digestive, iii. Stomachic, iv. Respiratory v. Diseases, vi. Skin diseases	0.52	i. Carminative, ii. Digestive, iii. Stomachic
76.	*Ocimum sanctum* Linn. [OS-02]	Tulsi	Labiatae	N	C	Leaf	Infusion, decoction	i. Carminative, ii. Digestive, iii. Stomachic, iv. Respiratory v. Diseases, vi. Skin diseases, vii. Teeth ache	0.56	i. Carminative, ii. Digestive, iii. Stomachic
77.	*Pandanus odoratissimus*	Kewda	Pandaneae	N	C	Flower	Infusion, decoction	i. Stimulant, ii. Nervine tonic, iii.	0.34	i. Stimulant, ii. Nervine tonic

	Linn. [POd-01]							Rheumatism		
78.	*Papaver somniferum* Linn. [PS-02]	Khas khas	Papaveraceae	I	C	Seed	Infusion	i. Insomnia, ii. Dysentery, iii. Pains, iv. Heat, v. Itching,	0.21	i. Strong analgesic, ii. Narcotic
79.	*Pedalium murex* Linn. [PM-01]	Bada Gogkaru	Pedaliaceae	N	C	Fruit	Decoction	i. Aphrodisiac, ii. Tonic, iii. Diuretic, iv. Demulcent, v. Impotence	0.10	i. Aphrodisiac, ii. Tonic, iii. Diuretic
80.	*Piper betle* Linn. [PB-02]	Pan	Peperaceae	N	C	Leaf	Infusion, decoction	i. Constipation, ii. Wounds, iii. Boils, iv. Digestive, v. Aromatic, vi. Stimulant, vii. Contraceptive, viii. Headache	0.24	i. Boils, ii. Wound, iii. Aromatic, iv. Stimulant
81.	*Piper longum* Linn. [PL-01]	Badee Peepar	Piperaceae	N	C	Bark	Infusion, Decoction	i. Asthama, ii. Cough, iii. Stimulant, iv. Gastric troubles	0.34	i. Carminative, ii. Respiratory disorders
82.	*Piper nigrum* Linn. [PN-01]	Kali mirach	Piperaceae	N	C, D	Seed	Infusion	i. Cough, ii. Sore throat, iii. Aromatic, iv. Stimulant, v. Asthma, vi. Voice clearance	0.36	i. Aromatic, ii. Stimulant, iii. Cough
83.	*Plantago ovata* Forsk. [POv-02]	Isabgool	Plantaginaceae	I	C	Seed, husk	Infusion, decoction	i. Constipation, ii. Dysentery, iii. Abdominal pain, iv. Piles	0.42	i. Constipation, ii. Dysentery
84.	*Pongamia glabra* Vent. [PG-01]	Karanji	Papilionaceae	N	C	Seed	Oil	i. Skin diseases, ii. UV screen, iii. Alopecia	0.20	i. Antiseptic, ii. wound
85.	*Prunus amygdalus* (L) Mill. [PAm-02]	Badam	Rosaceae	I	C	Seed	Infusion	i. Laxative, ii. Tonic, nervine tonic, iii. Skin diseases	0.11	i. Laxative, ii. Tonic, nervine tonic
86.	*Prunus armeniaca* Linn. [PA-03]	Jhardaloo	Rosaceae	I	Und	Seed	Infusion, decoction	i. Aphrodisiac, ii. Sedative, iii. Demulcent, iv. Asthma, v. Constipation	0.18	i. Aphrodisiac, ii. Sedative, iii. Demulcent, iv. Asthma
87.	*Psidium guajava* Linn. [PG-02]	Jam	Myrtaceae	N	C	Fruit	Fruit juice	i. Diarrhoea, ii. Digestive	0.26	i. Astringent, ii. Laxative, iii. Bactericidal
88.	*Pterocarpus marsupium* Roxb. [PM-02]	Bijasar	Papilonaceae	N	C	Latex, gum	Infusion	i. Diabetes, ii. Astringent, iii. Abdominal pain	0.35	Diabetes
89.	*Punica granatum* Linn. [PGr-03]	Unardana	Punicaceae	N	C	Seed	Infusion	i. Cough, ii. Digestive, iii. Piles, iv. Pimples, v. Dysentery, vi. Digestive	0.16	i. Bronchitis, ii. Antiseptic, iii. Digestive
90.	*Rauwolfia serpentina* Benth [RS-03]	Sarapgandh	Apocynaceae	N	C	Root	Infusion, decoction	i. Anti-hypertensive, ii. Hypnotic, iii.	0.40	i. Anti-hypertensive, ii. Hypnotic, iii.

								Sedative, iv. Increases uterine contractions in labour		Sedative
91.	*Ricinus communis* Linn. [RC-02]	Arandi	Euphorbiaceae	N	C	Seed	Infusion, oil	i. Rheumatism, ii. kin diseases, iii. Dandruff, iv. Constipation, v. Epilepsy, vi. Galactagogue, vii. Aphrodisiac	0.31	i. Rheumatism, ii. kin diseases, iii. Dandruff, iv. Constipation
92.	*Saccharum officnarum* Linn. [SOf-02]	Ganna	Poaceae	N	C	Stem	Stem juice	i. Diuretic, ii. Laxative, iii. Nutritive	0.11	Diuretic
93.	*Santalum album* Linn. [SA-02]	Chandan	Santalaceae	N	C	Wood	Infusion	i. Sedative, ii. Astringent, iii. Genito-urinary infections, iv. Diuretic, v. Coolant, vi. Blood purifier	0.27	i. Sedative, ii. Astringent, iii. Antiseptic
94.	*Sapindus trifoliatus* Linn. [ST-02]	Ashoka	Sapindaceae	N	C	Bark	Infusion, decoction	i. Uterine tonic, ii. Sedative, iii. Astringent, iv. Menorrhagia	0.15	i. Uterine tonic, ii. Sedative, iii. Astringent
95.	*Semecarpus anacardium* Linn. [SA-02]	Bhilwa	Anacardiaceae	N	C	Nut	Oil	i. Anaemia, ii. Fever, iii. Pimples, iv. Psoriasis, v. Sore throat, vi. Splenitis, vii. Sprain, viii. Toothache, ix. Wart, x. Tumor, xi. Wound	0.30	i. Dyspepsia, ii. Antiseptic, iii. Wound
96.	*Sesamum indicum* Linn. [SI-02]	Til	Pedaliaceae	N	C	Seed	Oil	i. Tonic, ii. Emollient, iii. Galactagogue, iv. Rheumatism, v. Piles, vi. Tumor	0.14	i. Rheumatism, ii. Piles, iii. Tumor
97.	*Shorea robusta* Roxb. [SR-02]	Saal	Dipterocarpeae	N	C	Bark	Infusion	i. Colic, ii. Astringent, iii. Aphrodisiac, iv. Spasm, v. Cancer	0.25	i. Colic, ii. Astringent, iii. Aphrodisiac
98.	*Sphaeranthus hirtus* Willd. [SH-02]	Gorakhmukh	Asteraceae	I	C, D	Whole plant	Infusion	i. Aphrodisiac, ii. Hepatitis, iii. Gastritis, iv. Tuberculosis, v. Vermifuge, vi. Alterative, vii. Tonic	0.04	i. Cough, ii. Hepatitis, iii. Gastritis, iv. Tuberculosis
99.	*Spilanthes oleracea* Linn. [SOl-02]	Akarkar	Oleraceae	I	C	Root	Infusion	i. Gout, ii. Scurvy, iii. Asthma, iv. Rheumatism, v. Insecticide	0.23	i. Asthma, ii. Rheumatism
100.	*Sterculia urens* Roxb. [SU-02]	Gond, Gad	Sterculiaceae	N	C	Bark, gum	Gum, Infusion	i. Laxative, ii. Demulcent	0.13	Laxative

101.	*Styrax benzoin* Dryand. [SB-02]	Lubhan	Styacaceae	I	C, D	Latex, gum	Gum	i. Chronic cough, ii. Skin-disorders, iii. Expectorant, iv. Antimicrobial	0.41	Expectorant
102.	*Tamarindus indicus* Linn. [TI-02]	Imali	Fabaceae	N	C	Fruit	Fruit juice	i. Laxative, ii. Refrigerant, iii. Digestive	0.20	Digestive
103.	*Tamarix gallica* (L) Roxb. [TG-03]	Jhaoo	Tamaricaceae	I	C	Leaf, bark	Infusion	i. Ulcers, ii. Cough, iii. Fever, iv. Diarrhoea, v. Astringent	0.02	i. Cough, ii. Fever
104.	*Tephrosea purpurea* (L) Pers. [TP-03]	Saarpunkhi	Fabaceae	N	C	Root	Infusion	i. Tonic, ii. Laxative, iii. Blood-purifier	0.11	Anthelmintic
105.	*Terminalia arjuna* Linn. [TAr-03]	Arjoon	Combretaceae	N	C	Bark	Infusion	i. Cardiotonic, ii. Anti-anginal, iii. Tonic, iv. Astringent, v. Asthma, vi. Fractures, vii. Dysentery, viii. Hypolipidemic	0.21	i. Asthma, ii. Cardiotonic
106.	*Terminalia belerica* Retz. [TB-02]	Behada	Combretaceae	N	C	Leaf, fruit	Infusion	i. Coughs, ii. Sore throat, iii. Worms, iv. Eye diseases, v. Stomachic	0.34	Astringent
107.	*Terminalia chebula* Retz. [TC-02]	Harr	Combretaceae	N	C	Fruit, bark	Infusion	i. Stomach disorders, ii. Acidity, iii. Asthma, iv. Piles, v. Skin diseases, vi. Chronic ulcers	0.40	i. Astringent, ii. Stomach disorders, iii. Digestive
108.	*Thymus vulgaris* Linn. [TV-02]	Jangli ajwayan	Lamiaceae	N	C	Whole herb	Infusion	i. Respiratory disorders, ii. Diuretic	0.11	i. Cough, ii. Digestive
109.	*Tinospora cordifolia* Willd. [TC-03]	Gurbel	Menispermaceae	N	C	Stem, root	Infusion	i. Aphrodisiac, ii. Rejuvenator, iii. Anti-pyretic, iv. Immuno-modulator, v. Stimulant, vi. Diuretic, vii Asthma, viii. Rheumatism	0.33	i. Aphrodisiac, ii. Rejuvenator, iii. Asthma
110.	*Tinospora sinensis* (Lour.) Merr. [TS-03]	Badi durbel	Menispermaceae	N	C	Stem, root	Infusion	i. Tonic, ii. Immunostimulant, iii. Anti-inflammatory, iv. Antiallergic, v. Antimalarial, vi. Antidiabetic, vii. Hepatoprotective	0.26	i.Immunomodulator, ii. Diabetes
111.	*Trachyspermum ammi* (L) Sprague [TAm-02]	Ajwain	Umbelliferae	I	C	Leaf, root	Infusion	i. Stomach diseases, ii. Common cold, iii. Migraine, iv. Rheumatism, v. Mouth ulcer, vi.	0.41	i. Rheumatism, ii. Gastric disorders, iii. Cough

112.	*Tribulus terrestris* Linn. [TT-03]	Gokharu	Zygophyllaceae	N	C	Fruit	Infusion	Earache i. Tonic, ii. Diuretic, iii. Aphrodisiac, iv. Kidney stones,	0.23	Diuretic
113.	*Trigonella foenum-graeceum* Linn. [TF-06]	Methi dana	Fabaceae	N	C	Seed	Infusion	i. Purgative, ii. Antidiabetic, iii. Wound	0.14	i. Antiseptic, ii. Purgative
114.	*Urginea indica* (R) Kunth. [UI-03]	Jangli kanda, Van piyaj	Hyacinthaceae	N	C	Bulb	Infusion, fresh juice	i. Cardiotonic, ii. Asthma, iii. Rheumatism	0.26	Cardiotonic
115.	*Vitex negundo* Linn. [VN-02]	Nugundi	Verbenaceae	I	C	Leaf	Infusion	i. Analgesic, ii. Antipyretic, iii. Aphrodisiac	0.17	Aphrodisiac
116.	*Vitis vinifera* Linn. [VV-02]	Kalidraks	Vitaceae	I	C, D	Fruit	Decoction, Infusion	i. Laxative, ii. Refrigerant, iii. Demulcent, iv. Diuretic,	0.22	Constipation
117.	*Withania somnifera* Linn. [WS-03]	Asgandha	Solanaceae	N	C	Root	Infusion	i. Aphrodisiac, ii. General tonic, iii. Diuretic, iv. Nervine sedative, v. Adaptogenic, vi.Immunomodulator	0.17	i. Diuretic, ii. Immunomodulator
118.	*Zanthoxylum aromaticum* Willd. [ZA-02]	Jangli dhana, Van dhaniya	Rutaceae	N	C	Seed	Infusion	i. Fever, ii. Toothache, iii. Joint pain	0.33	Thirst regulator
119.	*Zingiber officinale* Roscoe. [ZO-03]	Sonth, Adarak	Zingiberaceae	N	C	Rhizome	Decoction, infusion	i. Aphrodisiac, ii. Carminative, iii. Aromatic, iv. stimulant, v. Increases prostaglandins	0.45	i. Cough, ii. Cold

N: native, I: introduced, C: common, D: decreasing, R: rare, E: endangered and Und: undetermined.
*Common use reported in literature of Indian traditional systems of medicine; Ayurveda, (Ayurvedic Pharmacopoeia of India[19, 20, 21])

TABLE 2: INFORMANT CONSENSUS FACTOR CATEGORIZED BY MEDICINAL USE FOR CORPORAL AILMENT

S. No.	Category	Species	% All species	Use citation	% All use citations	ICF
1.	Galactogogue	18	15.12	19	2.72	0.05
2.	Anticancer	7	5.88	8	1.14	0.14
3.	Wound healing	12	10.08	14	2.01	0.15
4.	Anaemia	15	12.60	18	2.58	0.17
5.	Constipation	13	10.92	19	2.72	0.22
6.	Snake bite	4	3.36	5	0.71	0.25
7.	Diabetes	7	5.88	9	1.29	0.25
8.	Leprosy	6	5.04	8	1.14	0.28
9.	Aphrodisiac	20	16.80	28	4.02	0.29
10.	Diuretic	24	20.16	38	5.45	0.37
11.	Tuberculosis	7	5.88	10	1.43	0.37
12.	Rheumatism	12	10.08	19	2.72	0.38
13.	Piles	6	5.04	10	1.43	0.44
14.	Paralysis	7	5.88	12	1.72	0.45
15.	Liver problems	10	8.40	19	2.72	0.50
16.	Hypolipidemic	10	8.40	20	2.87	0.52

17.	Respiratory problems	27	22.68	59	8.47	0.55
18.	Blood purifier	11	9.24	24	3.44	0.56
19.	Immunomodulator	10	8.40	22	3.16	0.57
20.	Kidney stone and urinary problems	19	15.96	43	6.17	0.57
21.	Nervous system problems	13	10.92	29	4.16	0.59
22.	Digestive problems	32	26.89	78	11.20	0.59
23.	Cholera	3	2.52	6	0.86	0.60
24.	Fever	21	17.64	52	7.47	0.60
25.	Skin disorders	10	8.40	32	4.59	0.70
26.	Measles	2	1.68	5	0.71	0.75
27.	Gynecological and female problems	9	7.56	37	5.31	0.77
28.	Inflammation and pain	8	6.72	33	4.74	0.78
29.	Dental care and problems	4	3.36	20	2.87	0.85

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