

Ethnopharmacology Study Of Medicinal Plants Used By Batak Community In Pasaribu Tobing Sub-District Of Tapanuli Tengah District Of North Sumatra Province

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**Ethnopharmacology Study Of Medicinal Plants Used By Batak Community
In Pasaribu Tobing Sub-District Of Tapanuli Tengah District Of North
Sumatra Province**

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ABSTRACT

Keywords:

Etnofarmakologi, plant,
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Ethnopharmacology is an effort to explore and discover new compounds in natural products that are related to the use of traditional medicines that apply to certain ethnic groups. This study has been conducted of ethnopharmacology medicinal plants that utilized the Batak community in Pasaribu Sub District Tobing District Central Tapanuli North Sumatra Province. Methods of this study include observational studies and ethnopharmacology studies. The results showed that the plants that are used as medicine in Pasaribu Tobing Subdistrict include 36 tribes consisting of 61 species, with the most commonly used tribe is Zingiberaceae of 9.83%. The most popular medicinal plants are used as antiseptics. The leaves are part of the most stout plants in use by 41.79%. The treatment of medicinal plants is mostly done by boiling 33.33% and the use of medicinal plants are the most widely used by drinking method by 56.61%.

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1. INTRODUCTION

Based on the 2017 Research on Medicinal Plants and Herbs, Indonesia has biological natural resources consisting of 2,848 species of medicinal plants with 32,014 medicinal herbs¹. Based on WHO, IUCN and WWF records, more than 20,000 species of medicinal plants are used by 80% of the world's population (WHO, 2005). Indonesian traditional medicine is an Indonesian cultural heritage, which is desired to be used in the public health service system is an empirical reality, to achieve healing and improve health standards that are passed down from generation to generation, and are sustainable, and are inseparable from people's lives, without being scientifically proven (MOH RI, 2000). Knowledge about the use of these medicinal plants is a national cultural heritage based on knowledge and experience that has been passed down from generation to generation to the present generation, so that various high-quality medicinal ingredients are created.

Medicinal plants are all types of plants that are known to have good properties in helping to maintain health and treating a disease. Medicinal plants also play an active role in maintaining health, maintaining stamina and treating disease. Medicinal plants are very closely related to traditional medicine, because most of the utilization of medicinal plants has not been based on clinical laboratory testing, but rather based on experience in their use.

The factors underlying the use of traditional medicines are the very expensive factory medicines so that people are looking for alternative treatments that are cheaper, the side effects caused by traditional medicines are very small compared to modern medicines, the chemical elements contained in traditional medicines are the basis modern medical treatment today². The results of study ethnopharmacology from Tumbang Rungan Village Forest in Palangkaraya Cerak Kalimantan which is efficient as traditional medicines showed nine plants including scientific data have been collected regarding active compounds and their pharmacological effects, and the results could become a reference for further research to develop the local potential of Central Kalimantan in traditional medicine⁴.

Ethnopharmacology itself is a field of science that studies the overall reciprocal relationship between local communities and their natural environment, including knowledge systems about plant

natural resources. Ethnopharmacology is an effort to explore and discover new compounds in natural products that are closely related to the use of traditional medicines that apply to certain ethnic groups that have been passed down from generation to generation.

Many ethnopharmaceutical studies around the world, including in Indonesia, reported use of herbal plants for processing healing, which has been used for generations in society each^{8,9}. Ethnopharmacy is an emphasized approach to explore and inventory local knowledge of an ethnic community or group about the use of a materials for treatment. Although cultural diversity in Indonesia contribute to the breadth of knowledge this traditional¹⁰, the access is very limited. Traditional knowledge usually passed down orally and frequently specific. Therefore, knowledge is often held by tribal leaders, village heads, elders, or traditional healers on particular community or tribe¹¹.

Research conducted by Mulyani et. Al in 2020 related to ethnopharmacological studies in the community in Dawuan District, there were 40 species belonging to the 27 families with the most number, namely euforbiaceae, which are utilized by the community in Dawuan District. Regarding the use of medicinal plants, use parts of plants such as leaves, stems, flowers, seeds, fruit, roots, rhizomes, sap and all parts to maintain health and cure diseases³. Research conducted by Batoro et.al, a total of 181 species plants (68 family) determinate of Tengger and Java people existing in the region. Family ethnomedicine plants that have large members includes Umbelliferae (3 species), Apocynaceae (4 species), Gramineae (6 species), Myrtaceae (7 species), Euphorbiaceae (8 species), Fabaceae (10 species), Zingiberaceae (10 species), Solanaceae (12 species) and Asteraceae (15 species).The number of plants used to treat more than 60 diseases^{6,7}.

Pasaribu Tobing District is a sub-district in Central Tapanuli, North Sumatra Province. Pasaribu Tobing District has an area of 103.36 km² which consists of 8 villages. Pasaribu Tobing District itself is bordered by Parmonangan District to the north, West Sorkam District to the south, Sorkam District to the west, and Sorsorgadong District and Humbahas Regency. As a continuation of this research, further research can be carried out on the use of plants that focus on certain diseases, for example in research with an ethnopharmaceutical approach of immunomodulatory medicinal plants⁵ in certain tribes.

2. METHOD

This research was conducted by distributing questionnaires to five (5) traditional healers in Kec. Pasaribu Tobing, Central Tapanuli Regency, North Sumatra Province. Besides that, conducting interviews using a voice recorder, and camera and recording the results of the interview. The five healers are grouped according to their characteristics, including gender, experience in using traditional medicines and how to acquire traditional healing skills. This study used an observational research method with a descriptive approach. The sample was selected based on the sampling technique (proposive sampling). The sample was selected based on certain considerations, in this case it was considered that the most knowledgeable about medicinal plants to be interviewed were physicians, community leaders and the general public.

Based on this observation, it is known that the data of potential informants (traditional healer) for the Batak people who are eligible to be interviewed are based on the recommendation of the traditional head and the people who often seek treatment. Interviews were conducted with 5 traditional healers from 4 villages in the Pasaribu Tobing District, Central Tapanuli Regency. The percentage of male healers is 40% and the female caregivers are 60%. Expertise in the field of traditional medicine is mostly obtained by heredity, the percentage is 60% and learning from others is 40%. Work experience as a traditional healer for 5-20 years and >30 years respectively 60%. Interviews were conducted with five traditional healers in Pasaribu Tobing District, Central Tapanuli Regency, North Sumatra Province, there were 61 species and 37 families of efficacious medicinal plants, parts used, processing techniques, and diseases treated. Taxonomically medicinal plants can be grouped in table 1 below.

Table 1. Number of medicinal plant species used by the Batak Community in Pasaribu Tobing District

No	Tribe / Familia	Total	No	Tribe/Familia	Total
1	Acanthaceae	1	17	Lauraceae	1
2	Actiniduaceae	1	18	Lamiaceae	2
3	Amaryllidaceae	1	19	Mackinlayaceae	1
4	Annonaceae	1	20	Malvaceae	1
5	Anacardiaceae	1	21	Musaceae	1
6	Apiaceae	2	22	Myrtaceae	2
7	Apocynaceae	1	23	Oxalidaceae	1
8	Arecaceae	2	24	Pandanaceae	1
9	Asteraceae	3	25	Phyllanthaceae	1
10	Balsaminaceae	1	26	Piperaceae	3
11	Bromeliaceae	1	27	Poaceae	4
12	Caricaceae	1	28	Portulacaceae	1
13	Clusiaceae	1	29	Rutaceae	2
14	Convolvulaceae	1	30	Rubiaceae	1
15	Cucurbitaceae	2	31	Simaroubaceae	1
16	Crassulaceae	1	32	Solanaceae	3
17	Euphorbiaceae	4	33	Verbenaceae	1
18	Fabaceae	3	34	Zingiberaceae	6
19	Pandanaceae	1	35	Lauraceae	1
20	Phyllanthaceae	1	36	Lamiaceae	2
21	Piperaceae	3	37	Mackinlayaceae	1
22	Poaceae	4	38	Malvaceae	1
23	Portulacaceae	1	39	Musaceae	1
24	Rutaceae	2	40	Myrtaceae	2
25	Rubiaceae	1	41	Oxalidaceae	1
26	Simaroubaceae	1	42	Verbenaceae	1
27	Solanaceae	3	43	Zingiberaceae	6
TOTAL					61

3. RESULTS AND DISCUSSION

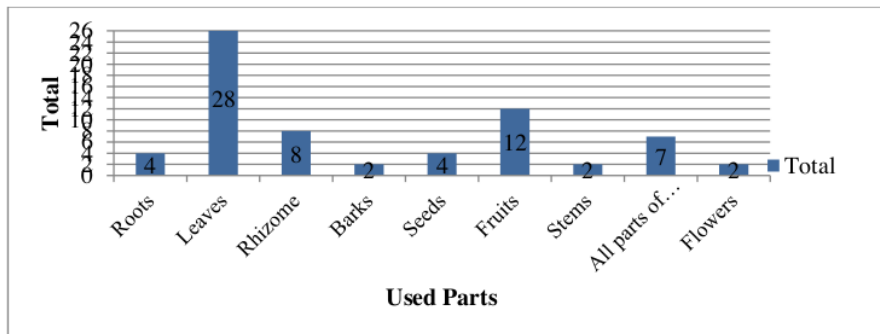
Based on the results of this study there are several medicinal plants that were obtained, some of them are cultivated medicinal plants, some grow wild and live around the surrounding community settlements.

The part of the plant that is often used as medicine by healers

Based on the results of interviews conducted with healers in utilizing plants, certain parts of plants are utilized by the village community because they have properties for the treatment of several diseases that can be cured by using certain parts such as leaves, fruit, rhizomes, stems, roots, bark, seeds, flowers and all parts of plants. All are believed to be used for treatment because they are believed to have efficacy. The presentation level of the utilization of these plant parts is shown in the table 2 and graphic below.

Table 2. Percentage of plant parts used as medicinal ingredients

No	Bagian Tumbuhan	Jumlah	Prosentase
1	Root	4	5.97
2	Leaf	28	41.79
3	Rhizoma	6	8.95
4	Barks	1	1.49
5	Seeds	4	5.97
6	Fruits	12	17.91
7	Stems	2	2.98
8	All parts of the plant	8	11.94
9	Flower	2	2.98
TOTAL		67	100



Picture 1. Number the part of the plant that is often used as medicine by the Batak Community as Medicine

Based on the data obtained from the interview results, showed that the parts of the plants used by the five traditional healers included the roots at 5.97%, leaves at 41.79%, rhizomes at 12.69%, the bark at 1.63%, seeds at 5.97%, fruit by 17.91%, stems by 2.98%, all parts of the plant by 11.94%, and flower parts by 2.98%. Based on the data obtained, the most commonly used part of the plant is the leaf, which is 41.79%, because it is used as a traditional medicine because the leaves are generally soft because they have a high water content (70-80%). In addition, the leaves are a place for the accumulation of photosynthesis which is thought to contain elements (organic substances) that have healing properties. The most abundant substances found in leaves are essential oils, phenols, potassium compounds, and chlorophyll. This is shown by the same as described in similar ethnobotanical studies, that the most used part of the plant is the leaf, followed by all parts of the herb and fruit. shows as a conservative effort towards the preservation of medicinal plants⁴.

Based on the results of interviews with healers, it was found that several kinds of chronic diseases, communicable and non-communicable diseases were treated using plants by the Batak people in Pasaribu Tobing District. For example, infectious diseases such as diarrhea, and plants that are used to treat there are turmeric, curcuma, *kencur* (aromatic ginger). The plants are crushed and the starch is taken and then drunk before eating 3 times. Guava leaves are also used as a treatment for diarrhea by preparing 8 pieces of guava leaves to boil and drink 2 times a day before or after meals. Large stomach due to difficulty defecating or constipation. The treatment uses papaya fruit that is ripe, added with coconut milk, mixed, and then eaten. Sweet potatoes are roasted to be eaten in the morning, 2 pieces of *Dewa* leaves are eaten raw, *kepok* bananas can be eaten directly or boiled or baked, Chinese ketapang can also be used for constipation problems by preparing 7 pieces of Chinese

ketapang leaves and boil it with water until it boils then drink the boiled water from the plant that is used to treat diabetes, namely Chinese teak leaves by boiling 7 dry Chinese teak leaves and then drinking the boiled water, pirdot leaves are also used as diabetes medicine by boiling 7 pieces pirdot leaves and then drink the boiled water, the life-sustaining leaves are also used as a medicine for diabetes by ingesting 2 leaves directly once a day. Hearing or nerve disorders can be treated by grinding *ciplukan* leaves and adding coconut oil in massage or massage in the ear.

Impaired vision can be treated by consuming the *tekokak* fruit directly or by boiling it, the leaves of *Cocor Bebek* also used by grinding the leaves of *Cocor Bebek* by grinding them directly or by adding rice and massaging the nerves near the eyes. The nature of the leaves of *Cocor Bebek* itself is cold. Malaria is treated by crushing papaya leaves and taking the juice to drink directly or you can also boil papaya leaves. The data can be seen in table 3.

Table 3. Data on Efficacious Plants Used by the Batak Community as Medicine.

No	Local Name/Indonesian Name	Latin Name	Family	Used Parts	Processing Method	Usage	Efficacy
1	Sambung nyawa	<i>Gynura procumbens</i>	<i>Asteraceae</i>	Stem dan tubers	Boiled	Drink	Reducing fever, and dysentery
2	Goti china / Jati china	<i>Senna alexandrina</i>	<i>Fabaceae</i>	Leaves	Boiled	Drink	Anti-inflammatory, antibacterial, constipation, fever, edema, and skin disease
3	Dingin-dingin / Cocor bebek	<i>Kalanchoe pinnata</i>	<i>Crassulaceae</i>	Leaves	Crushed / Grounded	Sticked	Fever, boils, and headaches
4	Galinggang / Ketapang china	<i>Cassia alaya</i> L.	<i>Fabaceae</i>	Leaves	Boiled	Drink	Thrush, constipation, and worms.
5	Sambiloto	<i>Andrographis paniculata</i>	<i>Acanthaceae</i>	Leaves	Boiled	Drink	Malaria, DHF, menstrual pain.
6	Patah tulang	<i>Euphorbia tirucalli</i>	<i>Euphorbiaceae</i>	Leaves	Crushed / Grounded	Sticked	Accelerate wound healing, and broken bones.
7	Sangge-sangge holi / sereh wangi	<i>Cymbopogon nardus</i> L. Rendle	<i>Poaceae</i>	Stem	Boiled	Drink	Fever, inflammation, and toothache.
8	Sangge-dangge / Sereh	<i>Cymbopogon citratus</i>	<i>Poaceae</i>	Stem	Boiled	Drink	Anti-cancer, anti-diabetic, and anti-fungal.
9	Napuran / Sirih	<i>Piper ornatum</i>	<i>Piperaceae</i>	Leaves	Boiled	Drink / Sticked	Anti-fungal, antioxidant, anti-viral.
10	Rimbang / Tekokak	<i>Solanum torvum</i>	<i>Solanaceae</i>	Fruits	Boiled	Drink / Eaten langsung	As an antibiotic, blood

11	Napuran na rara	<i>Piper ornatum</i>	<i>Piperaceae</i>	Leaves	Boiled	g Drink / Sticked	circulation As anti-cancer
12	Ute pangir / Jeruk purut	<i>Citrus x hystrix</i>	<i>Rutaceae</i>	Fruits	Diris / Boiled	Rubbed / Drink	Antiseptic, prevent nausea
13	Jelok / Labu / waluh	<i>Cucubita maxima duchenes</i>	<i>Cucurbitaceae</i>	Fruits	Boiled	Eaten	Healthy eyes, anti-free radicals
14	Manggis	<i>Garcinia mangostana</i>	<i>Clusiaceae</i>	Kulit Fruits	Boiled	Drink	Antioxidants
15	Temu lawak	<i>Curcuma xanthorrhiza</i>	<i>zingiberaceae</i>	Rhizoma/ tubers	Crushed / Grounded / Squeezed	Drink	Maintain liver function, and reduce blood fat
16	Hunik / Kunyit	<i>Curcuma longa</i>	<i>zingiberaceae</i>	Rhizoma/ tubers	Crushed / Grounded / Squeezed	Drink / Sticked	Cure ulcers, fever, and diarrhea
17	Pege / Jahe	<i>Zingiber officinale</i>	<i>zingiberaceae</i>	Rhizoma/ tubers	Crushed / Grounded / Squeezed	Drink	Overcome coughs, and headaches, expedite the respiratory system, lower cholesterol
18	Uci-uci / Binahong	<i>Anredera cordifolia</i>	<i>Basellaceae</i>	Leaves dan seluruh bagian tanaman	Crushed / Grounded / Boiled	Drink	Antioxidants
19	Baong na rara / Bawang merah	<i>Allium cepa</i>	<i>amaryllidaceae</i>	tubers	Crushed/ Grounded	Rubbed / Eaten	Antiseptic
20	Flowers raya / Kembang sepatu	<i>Hibiscus rosa sinensis</i>	<i>malvaceae</i>	Flowers / Leaves	Boiled	Drink	Antioxidant, cholesterol-lowering, hypertension
21	Gambir / Kemiri	<i>Aleurites moluccane</i>	<i>Euphorbiaceae</i>	Fruits	Crushed	Eaten / Smear	Ulcer, diarrhea, fungal infections, overcoming bowel movements
22	Pisang si tabar / Pisang kepok	<i>Musa paradisiaca</i>	<i>Musaceae</i>	Sap, Fruits, stem	Boiled	Eaten langsung / Sticked	antidote, lubricant, antipyretic
23	Acimun / Mentimun	<i>Cucumis sativus L.</i>	<i>Cucurbitaceae</i>	Fruits	Shredded	Eaten / Drink	High blood pressure, ulcer, acne, sore throat.

24	Bunga pacur / Pacar air	<i>Impatiens balsamina</i> L.	Balsaminaceae	Leaves	Crushed / Boiled	Sticked / Drink	Efficacious blood circulation
25	Kemunting cina / Tapak darah	<i>Catharanthus roseus</i> L.	Apocynaceae	Leaves	Crushed / Boiled	Sticked / Drink	Antidiabetic, heals wounds
26	Jintan	<i>Trachyspermum roxburghianum</i>	Apiaceae	Biji	Boiled	Drink	Anti-allergic, neutralizing toxins, ulcers, antibacterial, diabetes
27	Siangit/ kecimbing / Bandotan	<i>Ageratum conyzoides</i>	Asteraceae	Leaves, stem	Boiled	Drink	Stimulant, fever, antioxidant
28	Mangga	<i>Mangifera indica</i>	Anacardiaceae	Leaves, Fruits	Boiled	Drink	Controls blood pressure, and improves digestion.
29	Honas / nanas	<i>Ananas comosus</i>	Bromeliaceae	Fruits	Shredded	Drink	Constipation, intestinal worms, inflammation
30	Kumis kucing	<i>Orthosiphon aristatus</i>	Lamiaceae	Leaves	Boiled	Drink	Antihypertensive.
31	Pote-pote / Lamtoro	<i>Leucaena leucocephala</i>	Fabaceae	Leaves	Boiled	Drink	Control blood sugar, overcome insomnia, inflammation of the kidneys, ulcers, hypertension
32	Pandan / Leaves pandan wangi	<i>Pandanus amaryllifolius</i>	Pandanaceae	Leaves	Boiled	Drink	Helps meet nutritional sources, overcome insomnia, and constipation, overcome premature aging
33	Lotok-lotok / Ciplukan	<i>P. angulata</i> L.	Solanaceae	Leaves dan Fruits	Boiled	Drink	Diabetes, measles, fever, hemorrhoids, as an antioxidant
34	Apapaga / Pegagang	<i>Centella asiatica</i>	Mackinlayaceae	Leaves	Boiled	Drink	Epilepsy, stroke, and

35	Pinang	<i>Areca catechu</i>	<i>Areaceae</i>	Fruits, Leaves dan Sap	Grounded / Crushed	Eaten	neuropsychiatric disorders. Treating worms infection, as a stamina enhancer, strengthens the gums.
36	Karambir / Kelapa	<i>Cocos nucifera</i>	<i>Areaceae</i>	Fruits / coconut water		Drink	Preventing premature aging, as an isotonic.
37	Cengkeh	<i>Syzygium aromaticum</i>	<i>Myrtaceae</i>	Flowers	Boiled	Drink	Antiseptic, analgesic, antispasmodic, antibody.
38	Hunik na boter / Kunyit putih	<i>Curcuma zedoaria</i>	<i>Zingiberaceae</i>	Rhizoma/ tubers	Crushed / Grounded / Boiled	Drink	Cancer, tumors, ulcers, and appetite enhancer.
39	Kencur	<i>Kaempferia galanga</i>	<i>Zingiberaceae</i>	Rhizoma/ tubers	Crushed / Grounded / Boiled	Drink	Eliminates dirty blood, colds, stomach ulcers, diarrhea
40	Gadong andor / Ubi jalar	<i>Ipomoea batatas</i>	<i>Convolvulaceae</i>	Tubers	Boiled / dibakar	Eaten	Prevent diabetes, control blood pressure
41	Kecubung	<i>Datura metel</i>	<i>Solanaceae</i>	Leaves	Boiled	Drink	Drugs for constipation, asthma, inflammation, and swelling.
42	Kemangi	<i>Ocimum xcitriodorum</i>	<i>Lamiaceae</i>	Leaves	Boiled	Drink / Eaten	Antioxidant, eliminates bad breath
43	Tobu / Tebu	<i>Saccharum arundinaceum</i>	<i>Poaceae</i>	Stem	Grounded	Smeared / ditetesi	Antidiabetic, healthy muscles, heart, gums
44	Lada /merica	<i>Piper nigrum</i>	<i>Piperaceae</i>	Biji	Crushed	Drink	Stabilize blood pressure
45	Gadong / ubi kayu	<i>Manihot esculenta</i>	<i>Euphorbiaceae</i>	Tubers	Boiled / Shredded	Drink / Eaten	Cancer prevention, overcoming heart pain
46	Ri / Alang-alang	<i>Imperata cylindrica</i>	<i>Poaceae</i>	Akar	Boiled	Drink	Heartburn, kidney pain,

47	Temu kunci	<i>Boesenbergia rotunda</i>	<i>zingiberaceae</i>	Rhizoma/ tubers	Crushed / Grounded / Boiled	Drink	nosebleeds Laxative phlegm, increase appetite.
48	Sembung	<i>Blumea balsamifera</i>	<i>Asteraceae</i>	Leaves	Boiled	Drink	Pain in the chest, menstrual pain, increased appetite, swelling, diarrhea
49	Adas	<i>Foeniculum vulgare</i>	<i>Apiaceae</i>	Leaves	Boiled	Drink	Overcoming anemia, flatulence, heart disease, and cancer
50	Sirsak / durian belanda	<i>Annona muricata</i>	<i>Annonaceae</i>	Leaves	Boiled	Drink	Increases body resistance, lowers bad cholesterol
51	Meniran	<i>Phyllanthus urinaria</i>	<i>Phyllanthaceae</i>	Leaves	Boiled	Drink	Hepatitis, rheumatism
52	Botik / Pepaya	<i>Carica papaya</i> L.	<i>Caricaceae</i>	Leaves	Boiled	Eaten	Stomachache , menstrual pain, as an antibacterial and diuretic.
53	Siku-siku / Rumput mutiara	<i>Hedyotis corymbosa</i> (L.) Lamk	<i>Rubiaceae</i>	Seluruh bagian tanaman	Crushed / Grounded	Sticked	Antiseptic
54	Kayu manis	<i>Anredera cordifolia</i>	<i>Lauraceae</i>	Kulit stem	Boiled	Drink	Regulate blood sugar levels
55	Ata boang / Jambu biji	<i>Psidium guajava</i> L.	<i>Myrtaceae</i>	Leaves	Boiled	Drink	Relieves diarrhea, stomach pain, depression, diabetes, and sleep disorders
56	Calincing	<i>Oxalis corniculata</i>	<i>Oxalidaceae</i>	Leaves	Boiled	Drink	Stamina enhancer, difficulty urinating, hypertension , menstruation
57	Tungke ali / Pasak bumi	<i>Eurycoma longifolia</i>	<i>Simaroubaceae</i>	Biji, stem, akar		Eaten langsung	Stamina enhancer, anti-cancer,

58	Asom / Jeruk nipis	<i>Citrus aurantifolia</i>	<i>Rutaceae</i>	Fruits	Diiris	Drink	malaria Fever, heartburn
59	Boratan mandi-mandi / Gelang biasa	<i>Portulaca oleracea</i>	<i>Portulacaceae</i>	Semua bagian tanaman	Boiled	Drink	Dysentery, and sedative
60	Marangin-angin / Pecut kuda	<i>Stachytarpheta jamaicensis</i>	<i>Verbenaceae</i>	Seluruh bagian tanaman	Boiled	Drink	Sore throat, hepatitis
61	Pirdot / Cep cepan lembu	<i>Saurauia bracteosa</i>	<i>Actinidiaceae</i>	Leaves	Boiled	Drink	As an antidiabetic

Diseases that are usually treated by the five traditional healers in Pasaribu Tobing District, Central Tapanuli Regency include breast cancer, digestive disorders, lungs, stomach pain, dizziness, sore throat, broken bones, internal and external diseases, insane or not. sane, sprains, black cough, dengue fever, high blood pressure, jaundice, difficulty giving birth, bad breath, mouth sores, fatigue, lack of appetite, itching, swelling of the body, stomach, kidneys, diarrhea, wounds burns / cuts), difficulty defecating and urinating, malaria, high fever, coughing, diabetes, aches, nervous disorders, venom and hearing loss. This data is presented in Table 2, from the results of interviews where traditional medicine is still very much needed by the Batak community in Pasaribu Tobing District. Traditional medicine is more trusted by the Batak people, because of the cost factor that is spent and the patient can recover. Therefore, people in Pasaribu Tobing sub-district trust more in traditional medicine itself more.

4. CONCLUSION

Based on the results of research regarding the utilization of plants used as medicinal ingredients by traditional healers in the Pasaribu Tobing District, Central Tapanuli Regency, it was concluded that medicinal plants used as traditional medicinal ingredients in Pasaribu Tobing District totaled 61 types of plants and were divided into 36 tribes/families and the most widely used, namely from the Zingiberaceae family amounting to 9.83%. Leaves are the most used 41.79%. Most processing method is done by boiling 33.33%. How to use the most widely used by drinking 56.41%.

REFERENCES

- [1] Riset Tumbuhan Obat (2017), Depkes RI.
- [2] Fau, Ammano, 'Pemanfaatan Jenis Tanaman Yang Digunakan Sebagai Bahan Pembuatan Jamu Di Daerah Sekitar Teluk dalam Kabupaten Nias Selatan', *Jurnal Education and Development Institut Pendidikan Tapanuli Selatan*, 8.2 (2020), 561-66.
- [3] Mulyani, Yani, Rendi Sumarna, and Patonah, „Kajian Etnofarmakologi Pemanfaatan Tanaman Obat Oleh Masyarakat Di Kecamatan Dawuan Kabupaten Subang Provinsi Jawa Barat”, *Jurnal Farmasi Galenkia*, 6.1 (2020), 37–54.
- [4] Qamariah, N. (2018). Empirical and Ethnopharmacological Study of Efficacious Medicinal Forest Plants from Tumbang Rungan Village, Pahandut Regency, Palangkaraya City, Central Kalimantan. *Anterior Jurnal*, 18(1), 98 106. <https://doi.org/10.33084/anterior.v18i1.424>.
- [5] Bhagawan, W.S., Y.S Aziz, and P.R.T Pamungkas, 'Pendekatan Etnofarmasi Tumbuhan Obat Imunomodulator Suku Tengger Desa Ngadas, Kabupaten Malang, Indonesia', *Journal of Islamic Medicine*, 4.2 (2020), 98.105.

- [6] Batoro, J., & Siswanto, D. (2017). Ethnomedicinal survey of plants used by local society in Poncokusumo district, Malang, East Java Province, Indonesia. *Asian Journal of Medical and Biological Research*, 3(2), 158–167. <https://doi.org/10.3329/ajmbr.v3i2.33563>.
- [7] Batoro, J., Hakim, L., & Rahardi, B. (2019). Traditional Knowledge Sacred Area : Holly Sites (Pedanyangan) in Tengger Tribe of East Java , Indonesia. *Advances in Life Sciences*, 9(1), 1–6. <https://doi.org/10.5923/j.als.20190901.01>
- [8] Sujarwo W, Keim AP, Savo V, Guarrera PM, Caneva G. Ethnobotanical study of Lohoh: Traditional herbal drinks from Bali (Indonesia). *J Ethnopharmacol* [Internet]. 2015 ; 169 (January) : 34–48. Available from : <http://dx.doi.org/10.1016/j.jep.2015.03.0797>.
- [9] Sujarwo W, Arinasa IBK, Salomone F, Caneva G, Fattorini S. Cultural Erosion of Balinese Indigenous Knowledge of Food and Nutraceutical Plants. *Econ Bot* [Internet]. 2014 Dec 18;68(4):426–37. Available from: <http://link.springer.com/10.1007/s12231-014-9288-1>
- [10] Supiandi MI, Mahanal S, Zubaidah S, Julung H, Ege B. Ethnobotany of traditional medicinal plants used by Dayak Desa Community in Sintang, West Kalimantan, Indonesia. *Biodiversitas J Biol Divers* [Internet]. 2019 Apr 19;20(5):1264–70. Available from: <https://smujo.id/biodiv/article/view/3505>.
- [11] Sutarto A. Sekilas Tentang Masyarakat Tengger. In: *Pembekalan Jelajah Budaya, Balai Kajian Sejarah dan Nilai Tradisional*. Yogyakarta; 2006. p. 1–15.
- [12] Munawaroh, S, M M S Wilis, and S M Arum, *Pemberdayaan Masyarakat Dalam Melestarikan Budaya Literasi Serta Tanaman Toga*”, *Jurnal Abdidas*, 1.6 (2020), 729–34.
- [13] Nasoichah, C., Susilowati, N., & Restiyadi, A., (2021). Pertanggalan Pustaka Laklak dan Naskah Bambu di Bagas Godang Huta Godang, Mandailing Natal. *Sangkhakala*. 24(4). 75-86. <http://dx.doi.org/10.24832/bas.v22i1.458>.
- [14] Nasution, A. D. M., Amna, U., & Halimatussakdiah, H. (2019). Skrining Fitokimia Daun Jarak Pagar (*Jatropha curcas L.*) dari Kota Langsa. *QUIMICA: Jurnal Kimia Sains dan Terapan*, 1(1), 11-15. <https://www.ejurnalunsam.id/index.php/JQ/article/view/1688>.
- [15] Nasution, A., Chikmawati, T., Walujo, E. B., & Zuhud, E. A. (2018). Pemanfaatan Tumbuhan Obat Secara Empiris pada Suku Mandailing di Taman Nasional Batang Gadis Sumatera Utara. *Jurnal Bioteknologi & Biosains Indonesia (JBBI)*, 5(1), 64-74. <https://doi.org/10.29122/jbbi.v5i1.2772>.
- [16] Nasution, N., Cahyani, I., & Permadi, T. (2020). Nilai-Nilai Karakter dalam Tradisi Lisan Upacara Adat Mandailing. *Seminar Internasional Riksa Bahasa*. 716-720.
- [17] Oktoba, Z. (2018). Studi Etnofarmasi Tanaman Obat untuk Perawatan dan Penumbuh Rambut pada Beberapa Daerah di Indonesia. *Jurnal Jamu Indonesia*, 3(3), 81- 88. <http://repositori.uin-alauddin.ac.id/4457/>.
- [18] Rahardjo, S. S. Ma’rufah. S. Febrinasari, R. P. Sudarsono, J. (2020). *Pengobatan Komplementer Herbal*. FK UNS: Surakarta.
- [19] Silalahi, M., Purba, E. C., & Mustaqim, W. A. (2019) *Tumbuhan Obat Sumatera Utara Jilid II : Dikotiledon*. UKI Press, Indonesia, Jakarta.
- [20] Silalahi, M., Walujo, E. B., & Mustaqim, W. (2018). Etnomedisin Tumbuhan Obat oleh Sub-etnis Batak Phakpak di Desa Surung Mersada, Kabupaten Phakpak Bharat, Sumatera Utara. *Jurnal Ilmu Dasar*, 19(2), 77-92. <http://repository.uki.ac.id/83/>.

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