Medicinal Plant Diversity in the Market of Cibinong and Ciluar, Bogor

Siti Susiarti	Research Center for Biology, Indonesian Institute of Sciences, Cibinong, Indonesia
Nissa Arifa	Research Center for Biology, Indonesian Institute of Sciences, Cibinong, Indonesia
Elis Napisatunnaqiah	Faculty of Mathematics and Natural Sciences Education, Indonesia University of Education
Corresponding email	nissaarifa89@gmail.com

ABSTRACT

The pattern for documenting plants in various regions is a form of understanding the importance of plant resources in society. Plant resources are a natural asset that used as medicine, for example for the communities around Cibinong Market and Ciluar Market, Bogor. The purpose of this study was documenting species of plants, parts used and processing methods for medicinal plants. The used method was data collection and direct observation at Cibinong Market and Ciluar Market. Interviews were conducted directly with traders of vegetables, spices and potpourri. The data from the observations showed 43 species of plants are used as medicine with an knowledge from generation to generation.

Keywords: Cibinong market, Ciluar market, medicinal plants, traders

INTRODUCTION

Indonesia has abundant plants including medicinal plants. Traditional medicine culture includes the use of medicinal plants since ancient times and has been preserved from generation to generation. In the use of medicinal plants, each region has different ways. People in Indonesia have clearly defined cultural characteristics and identities, so it is suspected that there is a high probability that people's perceptions and conceptions of vegetable resources in their environment are different, including in the use of plants as traditional medicines (Rifai, 1998 in Putri, 2016).

Traditional medicine is part of the cultural system in society which has enormous potential benefits in the development of public health. The use of traditional medicines forself-care tends to decline (Izzudin, 2015). As a first step is very helpful to know a medicinal plant is from the knowledge of traditional people from generation to generation.

Medicinal plants are known based on human experience and the compounds that are useful for preventing and healing disease and perform certain biological functions. The parts of plants commonly used for treatment are rhizomes, stems, leaves, flowers, fruit and bark. Plants can be used to fulfill human daily needs. Use of plants that are important in human life, namely use as food and medicinal materials. According to Apriliani *et al.* (2014) food plants are plants that can be eaten and consumed by humans. Increased public awareness of health has led to an increase in the function of plants to be consumed, namely not only in

terms of the nutritional composition, appearance and taste, but also paying attention to their impact on the health of the body (Astawan, 2003). While medicinal plants are all species of plant species that can be used to reduce and heal pain, increase endurance, kill germs and repair damaged organs (Radam *et al.*, 2016).

From the description above, the used parts of plant are very important to be studied further, because there are still many species of plants whose traditional uses are not yet known, especially the use of medicinal plants in Cibinong Market and Ciluar Market, Bogor. This understanding can be used for the benefit of society in preserving and using plants properly.

METHODS

The study was conducted with interviews and direct observations at traditional markets in Cibinong and Ciluar, Bogor. Cibinong is the capital of Bogor regency district. Interviews were conducted with several selected sources around 20 traders, including: spice traders, vegetable traders and potpourri traders. In addition, data collection were carried out with observations the collection in the Herbarium Bogoriense, Biology Research Center-LIPI Cibinong. Observations were made regarding: the local name of plants, the part used, how to use and the uses of medicinal plant.

RESULTS AND DISCUSSION

The people knowledge about medicinal plants is passed down from generation to generation through interaction between society and their environment (Suansa, 2011). It shows traditional knowledge has the opportunity to be further developed according to scientific principles, so it can grow into an inventory of knowledge in the future.

The results of this research showed that 43 species, from 37 genera and 28 families, were used as traditional medicine. These species are used for approximately 24 kinds of symptoms to treat health, such as high blood pressure, diabetes, and cholesterol. The families of plant are used for traditional medicine are: *Zingiberaceae* (7 species), *Amaryllidaceae* (4 species), *Apiaceae*, *Cucurbitaceae*, and *Fabaceae* (3 species), *Brassicaceae* (2 species), while the other families are only one species (Figure 1).

The various parts of medicinal plants are used consist of 13 species of leaves, nine types of flowers, eight types of fruits, six types of rhizomes, six types of tubers, and one type of bark. Leaves are the most part is used as medicine, because it is the easiest parts to find. Furthermore, the leaves also produce complex compounds that have biological activity, therefore it is widely used in the medical field (Setyowati *et al.*, 2017).

Based on the process of using the plant parts, The most way of medicinal plants are processed by being direct consumption (*lalaban*) around 40.5% and for tradition (*tradisi siraman*), the used part of plants is flowers. The plants are processed by being boiled or direct consumption, namely poh - pohan (*Pilea melastomoides*), kemangi (*Ocimum sanctum*), singkong (*Manihot utilissima*) and selada air (*Nasturtium officinale*). Furthermore, processing by brewing around 24.5%, the steps of this process are mashing the parts of plant and then brewed with hot water, because it is related to the active compound contained in the plant, namely tannins, it dissolve easily in water and its oxidation products dissolved in water (Angestiarum, 2014). Then, the processed by boiling is 19%, which the ingredients are boiled in hot water for a few minutes. The fewest processing method is shredding around 16%, it

used to treat stomach ulcers and heartburn in children (Figure 2). *Zingiberaceae* is a family of the plant that is usually processed by being shredded such as *Curcuma domestica*, *Zingiber cassumunar*, *Zingiber officinale*, *Curcuma mango*, *Curcuma xanthorrhiza*. It is used for external treatment by drinking or affixing to a certain part in the body.

Figure 1. Families of plant are used for traditional medicine

Zingiberaceae is the most used family in traditional medicine at seven types. In general, the rhizomes of *Zingiberaceae* contain aromatic, tonic and simultaneous compounds. The bioactive compounds, namely: curcumin, glycosides and flavonoids, are the largest group of phenolic compounds found in nature. The colour of substances are red, purple, blue and yellow in plants (Setyowati *et al.*, 2017).

The uses of rhizomes from *Zingiberaceae* by the Cibinong market traders are treating ulcers, bloating and colds. Meanwhile, the use of turmeric rhizome in Banjar Baru is mostly used as a refreshing drink, food coloring, cooking spices, medicinal ingredients and canned drinks. Furthermore, turmeric is used to increase the produce of breastfeeding, treating wounds, stomach aches, increase appetite and facilitate childbirth (Ashari, 1995 in Kuntorini, 2005), because turmeric contains active chemicals for treating diseases caused by bacteria or viruses and increased endurance. Turmeric contains curcumin which giving a yellow color, it has also an anti-bacterial potential (Winarto, 2004 in Kuntorini, 2005). In addition, people in Cibinong uses tuberto maintain the health of female area, increase the produce of breastfeeding, diabetes, colitis and gout, such as bawang dayak. Meanwhile, the Dayak people use bawang dayak as a medicine for diarrhea by boiling the pieces of the tubers and drinking it. Moreover, it is believed to treat cancer and this plant has very bitter taste (Hoesen, 2009).

The number of plants used from the *Zingiberaceae* has been described above. But, there is one interesting species, namely temu kunci (*Boesenbergia rotunda*). It is used by women to trigger the release of breast milk. The contains of this plant are chalcone, cardamomin and pinostrobin. Chalcone is one of flavonoid group and has been studied as a therapeutic, especially as antitumor, antibacterial, and anti-inflammatory drug (Boumendjel, 2009).

There are about 18 types of vegetables known by the people of Cibinong Market and Ciluar Market, including antanan, katuk, poh-pohan, spinach, and cassava. These vegetables are typical Sundanese vegetables because they have been consumed by the community for a long time. The knowledge of direct consumption (*lalaban*) has been passed down from

generation to generation. The consideration for choosing the type of vegetables and how to consume them are based on the type of disease to be treated.

The most inventory plants at the Cibinong community can treat flatulence and ulcers, it is because the local community is often attacked by this disease. So, they are looking for various alternative ways to treat it. The advantage of traditional medicine than modern medicine is relatively low side effects.

In the other hand, based on interview with community of Cibinong, Bogor has bathing ceremony (*siraman*) for women with seven months of pregnancy. This tradition is known as bathing ceremony with seven types of flowers (*siraman kembang 7 rupa*), according to the word, which means the flowers used for the shower must be seven kinds and the flowers must not be less than seven kinds because it has been known from the parents. After observing, it turns out that the seven kinds of flowers have a good philosophy for the child in the womb, such as rose (*Rosa chinensis*) symbolizes the mother where the human body is carved, the costa jasmine (*Brunfelsia uniflora*) symbolizes every action always involves the heart, kembang sepatu (*Hibiscusrosa-sinensis*) which defines the strongest of soul spiritual to success both inner and outer, simplicity, erase the sadness, tranquility and the next generation of ancestor.

One type of plant can treat several diseases including *kucai* (*Allium tuberosum*) can treat high blood pressure and cholesterol. Celery (*Apium graveolens*) can treat high blood pressure, cholesterol, rheumatism, while nutmeg (*Myristica fragrans*) treats diabetes, flatulence and appetite.

The vegetable traders in Cibinong Market are more diverse than the vegetable sellers at the Ciluar Market, due to the wider area of the Market. There are two species that have high economic value, such as single garlic and bawang dayak. Both are rarely found for sale in the market, because to get these two species, sellers buy from outside Cibinong as well as it is quite expensive and not many people know the benefits of single garlic and bawang dayak.

Bawang dayak (*Eleutherine bulbosa*) can maintain the health of female area, increase the produce of breastfeeding, treat diabetes, colitis and gout. While the use of bawang dayak in Central Kalimantan is believed to treat breast cancer, drugs to lower blood pressure (hypertension), diabetes, lower cholesterol, cure ulcers, colon cancer and prevent strokes. The use of bawang dayak can be used in fresh, simplicia, sweets and in powder form. The potential of bawang dayak as a multi-functional medicinal plant can be used as an ingredient in modern medicine (Krismawati and Sabran, 2016).

There are about 18 species of vegetables known by the people of Cibinong Market and Ciluar Market that can be used as food and medicinal ingredients, including antanan (*Centella asiatica*), katuk (*Sauropus androgynus*), poh-pohan (*Pilea melastomoides*), spinach (*Amaranthus hybridus*) and cassava (*Manihot esculenta*).

Antanan (*Centella asiatica*) is a plant that can be used as traditional medicinal herbs or herbal medicine because it contains several bioactive compounds such as asiaticosides in the form of glycosides. Asiaticosida is effective in increasing vitality and memory and overcoming senility which is closely related to nucleic acids. Some of the properties of the antanan plant are as a medicine for nervous weakness, fever, bronchitis, diabetes, psychoneurosis, hemorrhoids, and high blood pressure, an appetite enhancer, and to maintain vitality (Sutardi, 2016). In addition to asiaticosides, this plant also contains resins, tannins, essential oils, sitosterols consisting of oleic acid glycerides, linoleic, palmitic, stearic, sentoic and centellate which are useful for boosting the body's immune system. Antanan plants contain madecoside glycoside compounds in the leaves and petioles and these compounds have anti-inflammatory. Antanan can be consumed in the form of a concoction or single

ingredient (Sutardi, 2016). Likewise, according to Januwati and Yusron (2005), these herbs are used by the community in fresh, dry or concoctions (herbal medicine).

Katuk (*Sauropus androgynous*) has many benefits in medicine such as treating fever, ulcers, dirty blood, and increasing the produce of breast milk. Katuk leaves can be consumed in the form of a stew, used as vegetables or extracts form with standardized herbal medicinal preparations (Margono, 2013). Katuk is a plant with high protein, fat, vitamins and minerals. In addition, katuk leaves also contain tannins, saponins, and papaverine alkaloids (Nindiyaningrum *et al.*, 2014). In addition, the high content of beta carotene in katuk leaves can help healthy eyes and skin. The high iron content is also useful for helping the production of red blood cells (Ganie, 2003). Katuk leaves are consumed by processing them into vegetables or direct consumption, besides that, katuk leaves are also available in extract or pill form (Merlyna, 2009).

The leaves of poh-pohan (*Pilea melastomoides*) are often consumed by people as direct consumption (*lalaban*) because they have a soft texture and have a distinctive aroma. Poh-pohan are a medicinal plant because of its active compounds. The results of the phytochemical test in poh-pohan leaves showed steroid / triterpenoid, alkaloid and flavonoid compounds (Amalia, 2006). Triterpenoid compounds have physiological activities, so that they are widely used as drugs for the treatment of diabetes, menstrual pain, snake bites, skin disorders, liver damage and malaria (Haq *et al.*, 2018).

Spinach (*Amaranthus* spp.) contains anthocyanins and included in food plants which are generally consumed by processing them into vegetables. Spinach also has resistance to environmental changes, both biotic and abiotic stress, so it is easy to cultivate (Khanam and Oba, 2013). Spinach leaves contain protein compounds, carotenoids, vitamin C, minerals and fiber, phenolic and flavonoids, as well as vitamin A (Khandaker *et al.*, 2008; Khanam and Oba, 2013). Spinach is also good for people with anemia (Denanath *et al.*, 2009). In addition, spinach serves as a source of protein, fiber, phosphorus, zink and vitamin E. Paranthaman *et al.* (2012) said that spinach contains 13 types of flavonoids which function as antioxidants, antibacterial, and anticancer agents. The phenolic compounds in spinach such as gallic acid, cafeic acid, routine, ferulic acid and quecertin have structures that play a role in scavenging free radicals.

Chemical compounds contained in cassava leaves (*Manihot esculenta*) include flavonoids and saponins which have the potential to be anti-inflammatory and antibacterial. Meanwhile, vitamin C in cassava leaves is useful for treating and preventing mouth sores or other oral disorders (Rachman *et al.*, 2016), the formation of collagen, an antioxidant compound, enhancing the work of the body's immune system and as a cancer preventive (Yendriwati, 2006). In addition, the presence of vitamin A plays a role in cell differentiation and turnover. The protein in cassava leaves is the amino acid methionine which will induce cysteine. Cystein is a growth factor in collagen synthesis. The presence of the above substances allows cassava leaves (*Manihot esculenta*) to be used as herbal medicine (Murray *et al.*, 2006).

Majakani (*Quercus infectoria*) is a plant that is widely used for traditional medicine due to its chemical content. Testing of mineral content found in this plant containing calcium, magnesium, phosphorus, oxygen, potassium, aluminum, carbon, zinc, iron, manganese, nickel and silica can be a good source for treating a number of diseases that are mainly caused by a deficiency of these minerals, such as osteoporosis which is caused due to a lack of calcium. In addition, this plant is also used as antibacterial, antifungal, anti-inflammatory, antioxidant and wound healing because based on the results of phytochemical screening, this plant contains phenols, flavonoids, steroids, triterpenes, tannins, saponins, alkaloids, small amounts of gallic acid and ellagic acid. In addition, this plant can also treat vaginal discharge

that occurs in women, due to the content of tannins and phenols in this plant which can damage the structure of the fungal cell walls (Himalaya, 2017).

The types of plants found in three markets in Bali are 52 species from 48 genera and 30 families (Sujarwo, 2018), which around 17 species are the same with Cibinong market. There are 13 types of medicinal plants used in Bali and nine types which are the same as the medicinal plants used in Cibinong, namely *Amaranthus hybridus*, *Allium cepa*, *Allium sativum*, *Myristica fragrans*, *Sauropus androgynus*, *Citrus aurantifolia*, *Boesenbergia rotunda*, *Curcuma longa*, and *Zingiber officinale*. Besides, it is also used as a spice, vegetables and several ceremonies. The types used for the ceremony are *Cananga odorata*, *Areca catechu*, and *Piper betle*. *Cananga odorata* and *Magnolia champaca* are considered sacred by Balinese for religious ceremonies. *Cananga odorata* is also an aromatic plant in Bali (Sujarwo and Arinasa, 2014).

Table 1. The Diversity of Medicinal Plants at Cibinong Market and Ciluar Market, Bogor

No	Local Name	Scientific name	Part used	Uses	How to use	Chemical content ^{*)}
1	Sedap malam	<i>Polianthes tuberosa</i> (Agavaceae)	Flower	Bathing ceremony (<i>Siraman</i>)	Mixed with water and flushes all over the body	Saponins, flavonoids, polyphenols
2	Bayam	<i>Amaranthus hybridus</i> (Amaranthaceae)	Leaves or all parts of the plant	Dysentery and digestion	Boiled, food ingredients	Potassium, iron, vitamin A, B, C
3	Bawang bombay	<i>Allium cepa</i> (Amaryllidaceae)	Tubers	Heart medicine	Mashed, filtered and mixed with garlic	Saponins, flavonoids, essential oil

4	Bawang putih	<i>Allium sativum</i> (Amaryllidaceae)	Tubers	Heart medicine	Mashed, filtered it and mixed with onion	Saponins, flavonoids, polyphenols and essential oils
5	Bawang putih tunggal	<i>Allium sativum</i> (Amaryllidaceae)	Tubers	High blood pressure	Mashed then poured with hot water and drink	Saponins, flavonoids, polyphenols
6	Kuai	<i>Allium tuberosum</i> (Amaryllidaceae)	Leaves	Lower blood pressure and Cholesterol	Brewed with hot water	Saponins, flavonoids, polyphenols
7	Kenanga	<i>Cananga odorata</i> (Annonaceae)	Flowers	Bathing ceremony (<i>Siraman</i>)	Mixed with water and flushes all over the body	Saponins, polyphenols
8	Seledri	<i>Apium graveolens</i> (Apiaceae)	Leaves	Rheumatism,cho lesterol, cough, blood high	Boiled, food ingredients	Saponins, flavonoids and polyphenols

9	<p>Antanan</p>	<i>Centella asiatica</i> (Apiaceae)	Leaves	Diabetes and back pain	Boiled, consumed directly	Alkaloids, flavonoids, saponins, terpenoids
10	<p>Wortel</p>	<i>Daucus carota</i> (Apiaceae)	Bulbs	Eyes drug	Juiced, food ingredients and drop on the eyes	Vitamins A, B, C, D, E, flavonoids, tiglath acid
11	<p>Pinang</p>	<i>Areca catechu</i> (Arecaceae)	Fruit; Malaysian region	Stamina enhancer, strengthens the grip of the gums on teeth and worms	Juiced and make into small pieces mixed with other ingredients	Alkaloids, saponins and flavonoids
12	<p>Kertas</p>	<i>Bougainvillea glabra</i> (Asteraceae)	Flowers	Bathing ceremony (Siraman)	Mixed with water and flushes all over the body	Ethheric oil, benzilic acetate, jasmon
13	<p>Selada air</p>	<i>Nasturtium officinale</i> (Brassicaceae)	Leaves or all parts of the plant	Lack of blood	Consumed directly	Iron, calcium, magnesium, vitamins A, B, saponin, polyphenols

14	<p>Lobak</p>	<i>Raphanus sativus</i> (Brassicaceae)	Tuber	Cholesterol and ever in children	Mixed with pineapple, filtered and drink it Shredded and put on the cante	Essential oil, rafanol, rafarin and vitamin C
15	<p>Pepaya jepang</p>	<i>Carica papaya</i> (Caricaceae)	Leaves	Back pain	Boiled	Alkaloids, saponins, papain enzymes
16	<p>Timun</p>	<i>Cucumis sativus</i> (Cucurbitaceae)	Fruit	High blood	Boiled, consumed directly	Saponins, vitamins B and C, glutathione
17	<p>Pare</p>	<i>Momordica charantia</i> (Cucurbitaceae)	Fruit	Diabetes and increasing breast milk	Mashed, then squeeze Boiled	Momordisina, saponins, alkaloids, resins, carantina
18	<p>Labu siem</p>	<i>Sechium edule</i> (Cucurbitaceae)	Fruit	High blood	Boiled	Saponins, alkaloids and tannins

19	<p>Daun singkong</p>	<i>Manihot esculenta</i> (Euphorbiaceae)	Leaves	Mag medicine, lack of blood	Boiled and consumed directly	Tannins, methionine, lysine, flavonoids
20	<p>Majakani</p>	<i>Quercus infectoria</i> (Fagaceae)	Fruit	Maintains of the female area's health	Mashed and brewed with water to made into herbal medicine	Tannins, flavonoids, steroids, triterpen, saponins, alkaloids, ellagic acid
21	<p>Bawang dayak</p>	<i>Eleutherine bulbosa</i> (Iridaceae)	Tubers	Maintaining of the female area's health, increasing of breast milk, diabetes, inflam- mation of the intestine and uric acid	Cut into small pieces, then poured with hot water, dried, pounded and then poured with hot	Alkaloids, flavonoids, glycosides, saponins, tannins and polyphenols
22	<p>Kemangi</p>	<i>Ocimum sanctum</i> (Lamiaceae)	Leaves	Body odor	Consumed directly and food ingredient	Essential oil, flavonoids, beta-carotene
23	<p>Kayu manis</p>	<i>Cinnamomum burmanni</i> (Lauraceae)	Bark	Diabetes and cholesterol	Mashed then brewed with hot water	Essential oil, tannins, calcium oxalate

24	Petai cina	<i>Leucaena leucocephala</i> (Leguminosae)	Seeds	Diabetes and worms	Consumed directly	Vitamin A and C, calcium
25	Bengkuang	<i>Pachyrhizus erosus</i> (Leguminosae)	Fruit	Allergies on skin and maintain healthy skin	Consumed directly, shredded and used as a mask	Vitamin E, pantothenic acid, riboflavin
26	Kecipir	<i>Psophocarpus tetragonolobus</i> (Leguminosae)	Fruit	Blood	Consumed directly and boiled	Vitamin C, Tocopherol
27	Kembang sepatu	<i>Hibiscus rosa sinensis</i> (Malvaceae)	Flower	Bathing ceremony (<i>Siraman</i>)	Mixed with water and flushes all over the body	Saponins, flavonoids, polyphenols
28	Biji Pala	<i>Myristica fragrans</i> (Myristicaceae)	Seeds	Increasing appetite and diabetes	Food ingredients and boiled	Saponins, essential oils, myristisin

29	<p>Daun Salam</p>	<i>Syzygium polyanthum</i> (Myrtaceae)	Leaves	High blood Cholesterol	Boiled then filtered	Saponins, flavonoids and essential
30	<p>Katuk</p>	<i>Sauropus androgynus</i> (Phyllanthaceae)	Leaves	Boiled and increasing breast milk	The leaves are mashed and then attached on carbuncle, Food ingredients	Saponins, flavonoids, tannins and isoflavonoid
31	<p>Daun sirih</p>	<i>Piper betle</i> (Piperaceae)	Leaves	Whitish, cough and cleaning the eyes	Whitish: boiled, then use the water. Cough: boiled, then drink boiled water. Clean the eyes: brewed	Saponins, flavonoids, polyphenols and essential oils
32	<p>Mawar merah</p>	<i>Rosa chinensis</i> (Rosaceae)	Flowers	Bathing ceremony (<i>Siraman</i>)	Mixed with water and flushes all over the body	Polyphenols, saponins and tannins
33	<p>Soka</p>	<i>Ixora javanica</i> (Rubiaceae)	Flowers	Bathing ceremony (<i>Siraman</i>)	Mixed with water and flushes all over the body	Saponins, flavonoids, tannins, catachins

34	<p>Jeruk nipis</p>	<p><i>Citrus aurantifolia</i> (Rutaceae)</p>	Fruit	Cough medicine	Squeezed and mixed with honey	Essential oils, saponins, flavonoids, vitamin C, amino acids, acids sistrat
35	<p>Melati kosta</p>	<p><i>Brunfelsia uniflora</i> (Solanaceae)</p>	Flowers	Bathing ceremony (<i>Siraman</i>)	Mixed with water and flushes all over the body	Polyphenol, saponins and tannins
36	<p>Pohpohan</p>	<p><i>Pilea melastomoides</i> (Urticaceae)</p>	Leaves	Back pain, menstrual pain and high blood pressure	Consumed directly and food ingredients	Alkaloids, flavonoids
37	<p>Temu kunci</p>	<p><i>Boesenbergia rotunda</i> (Zingiberaceae)</p>	Rhizome	Increasing the produce of breastmilk	Mashed then brewed with warm water, squeezed and add some salt	Kalkon, cardamonin, saponins, flavonoids, essential
38	<p>Kunyit</p>	<p><i>Curcuma domestica</i> (Zingiberaceae)</p>	Rhizome	Ulcer	Mashed, squeezed and drink	Saponins, flavonoids, polyphenols and essential oil

39	Temu mangga	<i>Curcuma mangga</i> (Zingiberaceae)	Rhizome	Stomach-ache, ulcer, fever and bloating	Shredded or dried, then brewed with hot water and consumed directly	Saponins and flavonoids
40	Temulawak	<i>Curcuma xanthorrhiza</i> (Zingiberaceae)	Rhizome	Ulcer and increased appetite	Shredded, then squeezed and drink	Saponins, flavonoids, essential oil
41	Honje	<i>Etlingera elatior</i> (Zingiberaceae)	Interest	Measles, body odor and fever	Mashed and put on body, food ingredients and boiled	Saponins, flavonoids, polyphenols and essential oil
42	Jahe	<i>Zingiber officinale</i> (Zingiberaceae)	Rhizome	Cough and colds	Boiled	Saponins, flavonoids and essential oil
43	Bangle	<i>Zingiber purpureum</i> (Zingiberaceae)	Rhizome	Rheumatism, care for postpartum mothers and babies	Boiled and stick it on the baby as a protector	Saponins, flavonoids and essential oil

Note*: Amalia, 2006; Djumidi & Sujipto, 1997; Djumidi & Sujipto, 1999; Himalaya, 2017; Syamsuhidayat & Hutapea, 1993.

CONCLUSION

Based on a survey conducted at Cibinong Market and Ciluar Market, there are 43 species of plant diversity used, consisting of 37 genera and 28 families, which are used to treat 24 kinds of disease. Various kinds of plant parts are utilized by simple processing.

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NUMBER 1

JANUARY 2021

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