

## Species of Plants used for Natural Care Beauty by Gayo Womens in Bener Meriah

Ernilasari<sup>1\*</sup>, Saudah<sup>2</sup>

<sup>1,2</sup>Universitas Serambi Mekkah, Aceh, Indonesia

\*Corresponding Author: [ernilasari@serambimekkah.ac.id](mailto:ernilasari@serambimekkah.ac.id)

**Abstract.** *The utilization of plants as traditional cosmetics has been used by Gayo women in Bener Meriah Regency for generations. The use aims to maintain natural beauty to minimize the use of chemicals that often cause many side effects. Information related to the species of plants used has not been recorded properly, so it is feared that the information will be degraded over time. This study aims to find out about the species of plants used as natural beauty care ingredients by Gayo women in Bener Meriah. This research used an exploratory survey method. Sampling was conducted by snow ball sampling. Samples included housewives from the Gayo tribe, teenagers, and people who use plants as hair care. Data were analyzed descriptively qualitatively and data were displayed in the form of tables and figures. The results showed that there are 45 species of plants used in the beauty care of Gayo women spread in diverse families. Rutaceae and Poaceae are the families with the most species, totaling 6 species.*

**Keywords:** *ethnocosmetic, gayo womens*

### 1. Introduction

Indonesia is the largest archipelago that has a very high level of biodiversity, especially its flora, which reaches 40,000 species (Prameshti, et al., 2020; Al Manar, 2018). Of these, there are around 9,606 plant species that have pharmaceutical effects (Ziraluo, 2020; Widodo, et al., 2019; Rizki & Leilani, 2019). Indonesian people have always had lifestyles that tend to utilize plants for clothing, food, herbal medicines, pesticides, traditional events, industrial raw materials and cosmetics (Nasir, et al, 2016; Anisatu, et al., 2020; Isna, et al., 2019). Cosmetics are materials or preparations used on the outside of the human body (epidermis, hair, nails, lips and external genital organs or teeth and oral mucosa which aim to clean, scent, change appearance, prevent body odor or eliminate unpleasant odors, and care for the body (Radhika, et al., 2019; BPOM, 2020; Evariste, et al., 2018).

The utilization of plants as beauty treatments among Indonesian people has been carried out for generations. The use of herbal cosmetics is still in demand by the public because it has minimal side effects compared to chemical-based cosmetics. Treatments that use chemical-based cosmetics often cause problems. Chemical bonds that occur between chemicals and the skin can cause irritation and cause dangerous side effects (safari, et al, 2020; Neneng & Sri, 2020). Certain chemicals can affect health problems, fertility problems, miscarriages, and cancer (Muhammad, et al., 2015).

Gayo ethnic women in Bener Meriah Regency are one of the communities that still maintain the use of plants as traditional cosmetics. Each ethnicity has its own way of utilizing plants in accordance with its local wisdom, but this knowledge is only passed down orally from generation to generation without written documentation, so it is feared that this knowledge will be degraded over time. So, in this case the science of Ethnobotany plays an important role to study information about the utilization of various species of plants in a community in a particular region in order to protect the intellectual

property of local communities. In this study, the utilization of various species of plants used as natural care beauty in Gayo tribal women in Bener Meriah district, with the aim of providing data and information to the wider community about the species of plants used and how they are used.

## 2. Method

This study was conducted among women in five sub-districts of Bener Meriah district. The method used in this study was an exploratory survey. Data collection was conducted using semi-structured interviews with informants/correspondents who had been selected by snow ball sampling and direct observation of the species of plants used as traditional cosmetics. The correspondents are Gayo women who have experience in using plants as traditional cosmetics and are respondents who are recommended on a rolling basis by one respondent and another (Irsyad, et al., 2013). Research parameters include the species of plants used, organ parts used, uses, types of treatments, making direct observations of the types of plants used in the field (Rizki & Leilani, 2019). The research plants were identified at the MIPA Laboratory of Universitas Serambi Mekkah. Plants obtained from the results of observations.

## 3. Results and Discussions

Traditional cosmetics are beauty products made using natural and traditional ingredients, often derived from plants, spices, or other natural ingredients and processed traditionally either singly or in mixtures, which have been used for generations based on experience from various cultures (Neneng & Sri, 2015). Traditional cosmetics are generally produced without the use of chemicals or synthetic additives commonly found in modern beauty products. The species of plants used as traditional cosmetics in the beauty care of Gayo women are shown in Table 1.

Table 1 shows that there are 45 plant species used in beauty care by Gayo women. The most widely used species come from the Rutaceae and Poaceae families, totaling 6 species and the most utilization category is for skin and facial care.

Rutaceae is a citrus family that has a high amount of diversity, reaching 154 genus around 2100 species (Herdianto, et al., 2007; Siti, et al., 2021; Wei, et al., 2015). These plants have very high diversity, especially members of the genus *Citrus* (Nurhasanah & Pandu, 2019). The properties and benefits of citrus fruits are contained in the orange peel. Essential oil from sweet orange has biological activities as antiseptic, antispasmodic, sedative, bipnotic and tonic. Lemon essential oil can be used as antirheumatic, antiseptic, antitoxic, astringent, antibacterial, diaphoretic, diuretic, antihypertensive, insecticidal, and antifungal. So that in this study the rutaceae tribe was used to eliminate dandruff due to fungal infection (Rahma, et al., 2018). Bali Orange peel contains several chemical compounds, namely: alkaloids, flavanoids, lycopene, vitamin C, as well as pectin and tannin which have activity as antioxidants that have been formulated into anti-aging creams (Eka & Siti, 2015; Rafsanjani & Putri, 2015). In addition, essential oils in citrus peels have been widely used by the chemical industry such as perfume, as an enhancer of citrus aroma in drinks and food and have been used to make soap (Imroah & Yunimar, 2021; Yustinah, 2016). The utilization of plants in this study is used both singly and mixed with other herbs. The addition of several plants will maximize the efficacy of a sedian in its application for beauty care (Hartanto, et al., 2014). These plants are obtained by the community around the house, in the garden and in traditional markets.

**Table 1.** Plants used as beauty treatments for Gayo tribe women in Bener Meriah

No	Local Name	Spesies	Family	Used
1	Pinang	<i>Areca catechu</i>	<u>Arecaceae</u>	1, 5
2	Beras	<i>Oryza sativa L</i>	Poaceae	1, 6
3	Beras ketan hitam	<i>Oryza sativa Linn. var glutinosa</i>	Poaceae	6
4	Beras ketan putih	<i>Oryza sativa Linn. var glutinosa</i>	Poaceae	6
5	Kunyit	<i>Curcuma longa</i>	Zingiberaceae	1
6	Pegagan	<i>Hydrocotyle asiatica</i>	Apiaceae	1
7	Jeruk Sayur	<i>Cutus sp.</i>	Rutaceae	1
8	Jeruk Nipis	<i>Citrus aurantifolia</i>	Rutaceae	1, 3, 7
9	Jeruk Bali	<i>Citrus grandis</i>	Rutaceae	6
10	Jeruk Purut	<i>Citrus hystrix</i>	Rutaceae	6
11	Jeruk Lemon	<i>Citrus limon</i>	Rutaceae	6
12	Pepaya	<i>Carica papaya</i>	Caricaceae	1, 5
13	Temulawak	<i>Curcuma xanthorrhiza</i>	Zingiberaceae	1
14	Urang Aring	<i>Eclipta prostrata</i>	Asteraceae	3
15	Sirih	<i>Piper betle L</i>	Piperaceae	5, 7
16	Sirih Merah	<i>Piper aduncum L.</i>	Piperaceae	5, 7
17	Alpukat	<i>Persea americana</i>	Lauraceae	1
18	Timun	<i>Cucumis sativus</i>	<u>Cucurbitaceae</u>	1
19	Bengkuang	<i>Pachyrhizus erosus</i>	<u>Fabaceae</u>	1
20	Tomat	<i>Solanum lycopersicum</i>	Solanaceae	1
21	Lidah Buaya	<i>Aloe Vera</i>	Asphodelaceae	1, 3
22	Strawberry	<i>Fragaria sp.</i>	Rosaceae	1
23	Cocor Bebek	<b><i>Alisma plantago-aquatica</i></b>	Alismataceae	1
24	Pisang Nur	<i>Musa sp.</i>	Musaceae	1
25	Kopi	<i>Coffea sp.</i>	Rubiaceae	1
26	Kayu manis	<i>Cinnamomum cassia</i>	Lauraceae	6
27	Jintan	<i>Cuminum cyminum</i>	Apiaceae	6
28	Kapulaga	<i>Elettaria cardamomum</i>	Zingiberaceae	6
29	Bunga Lawang	<i>Illicium verum</i>	Illiciaceae	6
30	Jambu Biji	<i>Psidium guajava L.</i>	Myrtaceae	1
31	Sereh	<b><i>Cymbopogon citratus</i></b>	Poaceae	5
32	Pisang mas	<i>Musa sp.</i>	Musaceae	1
33	Jarak pagar	<i>Jatropha curcas</i>	Euphorbiaceae	2
34	Nangka	<i>Artocarpus heterophyllus</i>	Moraceae	1
35	Kemiri	<i>Aleurites moluccana</i>	Euphorbiaceae	1, 3
36	Wortel	<i>Daucus carota</i>	Apiaceae	1
37	Mawar	<i>Rosa sp</i>	Rosaceae	4
38	Kenanga	<i>Cananga odorata</i>	Annonaceae	3
39	Kelapa	<i>Cocos nucifera</i>	Arecaceae	3
40	Daun Pacar	<i>Lawsonia inermis</i>	Lythraceae	3, 4
41	Jahe	<i>Zingiber officinale</i>	Zingiberaceae	3
42	Gambir	<i>Uncaria gambir</i>	Rubiaceae	2
43	Belimbing Wuluh	<i>Averrhoa bilimbi</i>	Oxalidaceae	4
44	Tembakau	<i>Nicotiana tabacum</i>	Solanaceae	6
45	Rumput Teki	<i>Saccharum officinarum</i>	Poaceae	8

Keterangan: Kategori pemanfaatan: (1) Skin and Face, (2) 2) Lips, (3) Hair, (4) Nails, (5) Organs Genital, (6) Postpartum, (7) Deodorization, (8) Teeth and Mouth

Table 1. also shows that there are 8 categories of utilization used by Gayo women. Skin and facial care is the most frequently used category, with 23 species. While the least utilized category is dental and oral care, which is one species. The number of skin and facial problems causes many Gayo women to pay more attention to skin and facial care when compared to the care of other limbs. These cosmetic preparations are usually in the form of masks and scrubs. Rice flour contains amylose, amylopectin, hydralized,

amylum/dextrin and kojic acid which can whiten the skin as a result of amylum fermentation during soaking. Therefore, rice flour is used as one of the basic ingredients of cosmetics, because it has the efficacy to make facial skin healthy, moisturize the skin, and brighten the skin (Nabila & Rahmiati, 2020). In addition, rice flour is also efficacious as a scrub to remove dead skin cells (Raymoend, et al., 2022). Table 1. also shows that the most widely used plant organs are leaves followed by fruits, flowers, roots and stems.

#### 4. Conclusions

The results showed that there were 45 plant species used as natural care beauty by Gayo women. The most widely used species come from the Rutaceae and Poaceae families with six species each. The most used care category is for skin and facial care.

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