

Malay Medical Manuscript of The Book of Tib Mss2515: An Analysis of Skin Diseases Treatment

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Abstract

The book of Tib MSS2515 is considered a complete manuscript discussing medicine in the Malay world. The study aims to assess the use of traditional medicine and its treatment of skin diseases [focuses on shingles, leprosy, and abscess] in the MSS2515 manuscripts. Textual studies and data extraction are applied using philological methods in identifying diseases and treatment and their categorisation. The pharmacological aspect of [materia medica] is analysed by comparing scientific reports in Google Scholar and PubMed and matching the ingredients with the purpose. Findings showed there are 35 formulations for three types of skin diseases. Part of the pharmacology and its use in the manuscripts is supported with contemporary scientific evidence. Scientific studies should be intensified to confirm the safety and efficacy of formulations in Malay medical manuscripts, as their content has the potential to generate new drugs. This research also contributes to the preservation of Malay medical culture and heritage.

Keywords: Malay Medicine, Remedies, Shingles, Leprosy, Abscess

INTRODUCTION

Among the relics of previous generations of a nation are the treasures of science found in the form of manuscripts. Malay manuscripts exist worldwide, almost 22,000 (Harun, 2015). This large amount should be given attention as the manuscripts contain knowledge in various fields that a place's local wisdom and geography have worked out. The medical field is no exception because there are 100 more medical manuscripts (Mohd Affendi, 2019), and these manuscripts preserve the original perspective of Malay practitioners for several centuries, originating from various corners of the Malay World and containing thousands of formulations that are mostly unknown to the modern world (Mohd Shafri, 2021).

Several Malay medical manuscripts have been transliterated and published as complete volumes, among which are MSS2515, the Terengganu Museum Tib Book, MSS1292, MSS2999, Tayyib al-Ihsan al-Rahmah fi al-Tibb, the Medicine House on Pulau Penyengat, and MSS B 15. Studies conducted on Malay medical manuscripts include analysis from a language perspective and studies under specific medical themes such as dermatology and parasitology (Mohd Shafri, 2021). This study focuses on MSS2515 or Book of Tib: Malay Medicine, manuscripts that discuss Malay medicine in various diseases. In the manuscript, skin diseases come with the highest number from the point of view of category, treatment approach, and ingredients. Furthermore, there is a lack of research on skin diseases and treatments based on Malay medical manuscripts. As a result, it is appropriate for the study based on the Malay medical manuscript, the Book of Tib MSS2515, to focus on skin diseases [shingles, leprosy, abscess], treatments, and ingredients to be highlighted.

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MANUSCRIPT BACKGROUND

The corpus that emphasises the knowledge of traditional Malay medicine is grouped into a tib category. The Malay Manuscript Centre of the National Library of Malaysia has 40 manuscripts with that theme (Harun & Zawiyah 2013). MSS2515 is a book of medicine copied and owned by a Malay scholar from Pattani known as Ibrahim bin Muhammad Fabian and his writing was completed in 1829. It has 232 pages, is 21.4x16.8cm in size, and has a watermark 'Hertfordshire Made In England' with the queen in the crown circle. Currently, this manuscript is being preserved by the National Library of Malaysia (Hasnira, 2023). This book was transliterated by Harun Mat Piah and Zawiyah Baba.

MSS2515 debating various diseases in general. In the introduction section, the meaning of the writing, the conditions of being tabib, how to identify the disease, predict the compatibility of the drug, and the ability or not of the shaman to treat the patient. While in the disease and medicine division, there are also diseases and treatments for various diseases, although more focus is on typhoid disease and medication (Piah, 2015). Then, it discussed traditional Malay medicines for typhoid fever, cough, sinusitis, abdominal pain, constipation, haemorrhoids, kidney stone disease, eye pain, hair treatment, etc. The author also describes the use of medicinal plants such as ginger, henna, kaduk (piper stylosum), pretext nuts (mucuna biplicata), spinach, and more. For the treatment of spiritual diseases, several supplications from the verses of the Quran and hadith are used with spelling and *wafaq* (Hasnira, 2023).

This copy is best regarding its contents and the concept of talking about the Malay Book as the manuscript contains descriptions of various diseases characterised by herbal treatments, prayers, and mantras. The sequence of storytelling in the MSS2515 manuscript is also structured, namely the process of medicine, drug manufacturing, and disease identification (Harun & Zawiyah, 2014). For this reason, this manuscript is an option for looking at the treatment method, and the focus of the study is skin disease.

RESEARCH DESIGN

This research is qualitative using the methodology of library studies. The study sample was the MSS2515 Manuscript, a transliteration by Harun and Zawiyah (2014). The scope of this study is skin-related diseases focused on shingles, leprosy, and abscesses. The formulation number is specified for each treatment formulation in the original manuscript with the 2515/H/FXXX format, namely:

- 2515 refers to the manuscript entry number
- H refers to the page in the original manuscript
- F refers to the formula
- XXX number of formula sequences

References are made to the database, namely the Malay Letters Reference Centre [<https://prpm.dbp.gov.my/>] and *A Dictionary of Malayan Medicine*.

Data Extraction and Classification

Data are extracted by categorising traditional treatment materials based on plants, animals, and the like. Data classification is also generated alphabetically based on the vernacular name of the material. The scientific name, formulation number and element of the treatment substance are also indicated.

Comparative Analysis of Manuscript Content with Contemporary Scientific Reports

Comparative analysis compares traditional treatment using plants, animals, and other plants and animals based on the original manuscript with papers published in modern scientific databases. This means that the findings in scientific research that align with the traditional treatment materials in the original copy are a sign of the validity of the use of the treatment. However, the absence of scientific research findings highlighting a treatment ingredient does not mean the treatment material is not authentic. This is because modern scientists poorly study the various ingredients of traditional Malay medicine and individual formulations. In the meantime, modern scientific literature sources, such as PubMed and Google Scholar, have been adopted as this database is the

most effective source of clinical and biomedical data evidence. In addition, PubMed only accepts peer-reviewed articles, while Google Scholar accepts peer-reviewed articles and vice versa. The scientific evidence search technique with Boolean Operator was applied in this study by applying the following procedures:

- a. Only focus on research features, whether in vitro, ex vivo, animal studies, randomised control trial research, or human-related case studies.
- b. Using any part of pharmacology [*materia medica*] applied in clinical studies.

The search technique used in this research aims to guarantee that the scientific evidence for the pharmacological part [*materia medica*] is relevant and has a reliability feature.

ANALYSIS AND DISCUSSION

Data Extraction and Categorisation of the Contents of the Book MSS2515

Classification of Skin Diseases

The transliteration of the Book of Tib MSS2515 text shows that 34 traditional treatment formulations were identified for three types of skin diseases [shingles, leprosy, and abscess] (Table 1).

Table 1 List of Diseases and Medicinal Ingredients

No.	Quotes in Manuscripts	Materials
Shingles		
MSS2515/205/F001	MSS2515/205/F001 For shingles medicine, take the dudulang laut [<i>Naruvelia laurifolia</i>], the nyarang leaves [<i>Cyathula prostrata</i>] and the keremak betina leaves [<i>Eclipta alba</i>], and then crush and squeeze them and drink the water. The dregs are smeared on the body.	3 (herb)
MSS2515/205/F002	MSS2515/205/F002 For shingles, take halia lempoyang hutan [<i>Zingiber aromaticum</i>], hempedu landak [<i>Barleria prionitis</i>], and limau nipis water [<i>Citrus mecia</i>] then crush everything and squeeze and drink the starch. The dregs are smeared on the body.	3 (2 herbs and 1 other ingredients)
MSS2515/205/F003	MSS2515/205/F003 For shingles, take the root of the limau kapas tree [<i>Citrus aurantifolia</i>] and rub it with the dirt from pantat buyung [<i>earthen vessel</i>] and put it on the shingles.	2 (1 herb and 1 other ingredient)
MSS2515/205/F004	MSS2515/205/F004 For shingles, take the contents of three unripe pinang [<i>Areaca catecu</i>], the hujung melukut [<i>Oryza sativa</i>] and the mata kunyit [<i>Curcuma longa</i>] and crush them and then put it on the shingles.	3 (herb)
MSS2515/205/F005	MSS2515/205/F005 Take a handful of pokok jarum-jarum merah leaves [<i>Ixora coccinea</i>] and then burn them and then take the beri merah [<i>Rubus idaeus</i>] and dip them in a bowl and then drink the water.	2 (herb)
MSS2515/205/F006	MSS2515/205/F006 For shingles, take the root of the limau (<i>Citrus mecia</i>), rub it with the dirt from pantat buyung [<i>earthen vessel</i>] and put it on the shingles.	2 (1 herb and 1 other ingredient)
MSS2515/205/F007	MSS2515/205/F007 For shingles, take the kemiri [<i>Aleurites moluccana</i>], minyak lenga [<i>Sesamum indicum</i>] and gelam skin [<i>Melaleuca cajuputi</i>] then chew these three with sirih pinang [<i>Piper betle</i>] then spray it on the shingles.	4 (herb)
MSS2515/205/F008	MSS2515/205/F008 For shingles medicine, mix the soil from the wood climbing termites with pinang kelat water [<i>Areaca catecu</i>] and place it on the shingles.	2 (1 herb and 1 other ingredient)
MSS2515/205/F009	MSS2515/205/F009 For shingles medicine, take the leaves of the kacang kayu tree [<i>Cajanus cajan</i>], hujung melukut [<i>Oryza sativa</i>], mata kunyit [<i>Curcuma longa</i>] and the kemiri filling [<i>Aleurites moluccana</i>], then chew and spray on the shingles.	4 (herb)
MSS2515/206/F010	MSS2515/206/F010 For shingles medicine, take the leaves of the pokok pulai [<i>Alstonia angustiloba</i>] then burn. Take the ashes and mix them with warm water and put them on the shingles.	2 (1 herb and 1 other ingredient)
MSS2515/206/F011	MSS2515/206/F011 For shingles medicine, take the base of the rotan tawar shoot [<i>Calamus aquatilis</i>] then crush it with the hujung melukut [<i>Oryza sativa</i>], the mata kunyit [<i>Curcuma longa</i>] and put it on the shingles.	3 (herb)
MSS2515/206/F012	MSS2515/206/F012 For shingles medicine, take the leaves of terung [<i>Solanum melongena</i>], the hujung melukut [<i>Oryza sativa</i>] and the mata kunyit [<i>Curcuma longa</i>], crush them and smear on the body.	3 (herb)
MSS2515/206/F013	MSS2515/206/F013 For fire shingles, take seven lada sulah [<i>Pepper nigrum</i>], three slices of cekur [<i>Kaempferia galanga</i>] and three slices of bawang merah [<i>Allium cepa</i>] then chew with sirih pinang [<i>Piper betle</i>] and spray them on the shingles.	4 (herb)
MSS2515/206/F014	MSS2515/206/F014 For shingles or kelemayah, take batu merah [<i>Timonius lasianthoides</i>] and crush it with hujung melukut [<i>Oryza sativa</i>], mata kunyit [<i>Curcuma longa</i>] and air bermalam [water stored overnight for medical purposes] and put it on the shingles.	4 (3 herbs and 1 other ingredient)
MSS2515/206/F015	MSS2515/206/F015 For shingles, take the leaves of sirih [<i>Piper betle</i>] dry then chew them and spray them on the shingles.	1 (herb)
Leprosy		
MSS2515/206/F016	MSS2515/206/F016 For chicken skin or almond [leprosy], take the susuh ayam tree [<i>Tabernaemontata</i>], melada pahit root [<i>Brucea javanica</i>], durian jantan root [<i>Durio zibethinus Murr</i>] and	4 (herb)

	the root of the saga besar [<i>Abrus precatorius</i>] then cook them all and drink. When the water is fresh, then discard the spices and put a new spice and boil and drink until it heals.	
MSS2515/206/F 017	MSS2515/206/F017 This is a scrub medicine when bathing to make it disappear, that is, pantat tanjung leaves [no information, maybe Patah Tulang [<i>Euphorbia tirucalli</i>]], roll it round and rub it all over the body.	1 (herb)
MSS2515/206/F 018	MSS2515/206/F018 It's powder after the bath, which is the buah cengkering [<i>Erythrina fusca</i>], the hujung melukut [<i>Oryza sativa</i>] and the mata kunyit [<i>Curcuma longa</i>] crush and put them all over the body.	3 (herb)
MSS2515/207/F 019	MSS2515/207/F019 When leprosy disappears, then the spell of the patient's body so as not to return the disease. Take the lidah mara leaves [<i>Ouratea spp.</i>], here's the prayer on the spell: Bismillah ir- Rahman ir-Rahim O sahi, O sumu'llah I know the origin of your Bisnu You become the yellow water Return thou to the yellow water Do not destroy the existence of God If you destroy God's existence Your disobedience to God I bear the secret of Allah Thanks to Lailaha illallaha illallah Muhammad the Messenger of Allah After the spell, take buyung that the patient used for bath, his wet cloth and sekupang emas dinar and then drift it all to the river.	4 (1 herb and 3 other ingredients)
MSS2515/207/F 020	MSS2515/207/F020 "For leprosy medicine, that is, all swollen bodies, then take the cengkik [<i>Eugenia aromatica</i>], the terasi [<i>Glochidion rubrum</i>], and the tawas [<i>Alum</i>] in the same quantity, crush it, put it in lenga oil [<i>Sesamum indicum</i>] then blend in. Then put the oil on leprosy.	4 (3 herb and 1 other ingredient)
MSS2515/207/F 021	MSS2515/207/F021 Drinking medicine for leprosy, take one buah pala [<i>Myristica fragrans</i>], seven bunga cengkik [<i>Eugenia aromatica</i>], halia merah [<i>Zingiber officinale</i>], jelawai [<i>Terminalia subsobatulata</i>], jahar hitam [<i>Cassia siamea</i>], manjakani [<i>Croton candatum</i>], one onion [<i>Allium cepa</i>] and three pinches of jintam hitam [<i>Carum carui</i>], then boil everything until the water of one ling [half cupak] remains half ling [343ml] then drink.	8 (8 herb)
MSS2515/207/F 022	MSS2515/207/F022 For leprosy medicine, take the limau purut [<i>Citrus hystrix</i>], three heads of bawang putih [<i>Allium sativum</i>], a clamp of jintan putih [<i>Cuminum cyminum</i>] and jintan hitam [<i>Nigella sativa</i>], a handful of susu harimau leaves [<i>Lignosus Rhinocerus</i>] and crush them all with air cendana [<i>Santalum album</i>] and massage on the sore side.	6 (herb)
MSS2515/207/F 023	MSS2515/207/F023 "For leprosy medicine, take three limau purut [<i>Citrus hystrix</i>], then boil and rub them with a cup of minyak lenga [<i>Sesamum indicum</i>] and massage on the sore side.	2 (herbs and other ingredients)
MSS2515/208/F 024	MSS2515/208/F024 For leprosy medicine, take the menjarum putih root [<i>Isora coccinea</i>] and cendana [<i>Santalum album</i>] and rub the two until the water comes out and put it all over the body.	2 (herb)
MSS2515/208/F 025	MSS2515/208/F025 What it means: For leprosy medicine, take the rumput jari cicak [<i>Selaginella plana</i>], the hujung melukut [<i>Oryza sativa</i>] and the mata kunyit [<i>Curcuma longa</i>] then crush them and put them on the body.	3 (herb)
MSS2515/208/F 026	MSS2515/208/F026 For leprosy medicine, take the asam jawa leaves [<i>Tamarindus indica</i>], inai leaves [<i>Lawsonia inermis</i>] then crush them with air cuka masam [vinegar] and wrap them on the swelling.	3 (2 herbs and 1 other ingredients)
MSS2515/208/F 027	MSS2515/208/F027 For leprosy medicine, keladi hitam sprouts [<i>Alocasia longiloba</i>], the hujung melukut [<i>Oryza sativa</i>] and the mata kunyit [<i>Curcuma longa</i>] with watery limau purut [<i>Citrus hystrix</i>] or vinegar then paste it on the swelling.	4 (3 herbs and 1 other ingredient)
MSS2515/208/F 028	MSS2515/208/F028 This is massage medicine, take kumkuma [<i>Curcuma domestica</i> Loir], abara, dakim man ya, pikal santri, ipas skin [no information], halba [Trigonella foenum-graecum] and pulut hitam [<i>Oryza spp</i> L.], boil everything and drink.	7 (3 herb and 4 unknown items)
MSS2515/208/F 029	MSS2515/208/F029 It's a massage medicine, take cendana [<i>Santalum album</i>], khalambak [<i>Aquilaria malaccensis</i>], kesturi [<i>Citrus x microcarpa</i>], canang [no information], kaduk [<i>Piper stylosum</i>], Sundal malam [<i>Polianthes tuberosa</i>], kulit manis [<i>Cinnamomum zeylanicum</i>], sepang [<i>Biancaea sappan</i>], kederang [<i>Hymenocardia mallicibii</i>], cengkik [<i>Eugenia aromatica</i>], buah pala [<i>Myristica fragrans</i>], cekur kembar [<i>Kaempferia galanga</i>] and jintan putih [<i>Cuminum cyminum</i>] then mix everything and cook, then put the oil on the box and massage the body with it.	14 (herbs and 1 other ingredient)
Abscess		
MSS2515/213/F 030	MSS2515/213/F030 For abscess medicine, take the jambu air shoots [<i>Syzygium aqueum</i>], the hujung melukut [<i>Oryza sativa</i>] and the mata kunyit [<i>Curcuma longa</i>] then crush and put it around the abscess eye.	3 (herb)
MSS2515/213/F 031	MSS2515/213/F031 For abscess medicine, take the sabut [<i>Cocos nucifera</i> L.] and the kayu jati Cina [<i>Phyllanthus pulcher</i>] then burn it until it burns and crush it with water. Then put water on the abscess.	3 (1 herbs and 2 other ingredients)
MSS2515/213/F 032	MSS2515/213/F032 For abscess medicine, take the leaves of the naga buana [<i>Phyllanthus pulcher</i>], then crush it with the hujung melukut [<i>Oryza sativa</i>] and the mata kunyit [<i>Curcuma longa</i>] and put it on the abscess.	3 (herb)
MSS2515/213/F 033	MSS2515/213/F033 Meaning: For abscess medicine, take beras [<i>Oryza sativa</i>], hujung melukut [<i>Oryza sativa</i>] and mata kunyit [<i>Curcuma longa</i>] then crush it with water and put it on the abscess.	3 (herbs)

MSS2515/213/F034	MSS2515/213/F034 For abscess, take the pedal ayam [<i>Gallus domesticus</i>] and wash the yellow membrane in it, then roast or fry it and then eat it with rice or just eat it.	1 (other materials)
MSS2515/213/F035	MSS2515/213/F035 For abscess, take rabuk [<i>Arenga pinnata</i>] and put it on the abscess and burn it until it is charred.	1 (other materials)

Based on Table 1, shingles-type skin disease comes with the highest number of treatment methods, with 15 traditional treatment approaches compared to other skin disease categories. Boil disease comes with the lowest number of treatment methods, which is only six treatment approaches. There are variations of mixed ingredients in the skin disease treatment, namely ingredients with more than four ingredients (4 formulations), ingredients with four ingredients (7 formulations), ingredients with three ingredients (12 formulations), ingredients with two ingredients (7 formulations) and ingredients of one ingredient (4 formulations). If observed, the skin disease treatment with a combination of 3 traditional ingredients is the number one of the most used mixed ingredients. Skin rubs are the most common approach in treating skin diseases, with 14 repetitions of their use. The method of spells containing the tawhid word and the Prophet Muhammad PBUH is also used in the MSS2515/207/F019 ingredients.

In addition, based on the transliteration of the text of the Book MSS2515, traditional ingredients in treating skin diseases are divided into three categories: plant-based materials, animal-based materials, and materials based in addition to plants and animals. This classification is displayed in Table 2, Table 3, and Table 4 follows:

Table 2 Plant-based ingredients

Vernacular Name	Modern scientific names	Formulation number (2515/H/FXXX)	Used parts of the plant
Asam jawa	<i>Tamarindus indica</i>	MSS2515/208/F024	Leaves
Batut merah	<i>Timonius lasiantboides</i>	MSS2515/206/F014	Unspecified [usually, leaves]
Bawang putih	<i>Allium sativum</i>	MSS2515/206/F022	Fruit [bulb]
Bawang merah	<i>Allium cepa</i>	MSS2515/206/F013	Fruit [bulb]
Beras	<i>Oryza sativa</i>	MSS2515/213/F033	Grain
Beri merah	<i>Rubus idaeus</i>	MSS2515/205/F005	Fruits
Bijan/Lenga	<i>Sesamum indicum</i>	MSS2515/205/F007 MSS2515/207/F020 MSS2515/207/F023	Seeds Seeds Seeds
Buah keras	<i>Myristica fragrans</i>	MSS2515/207/F021 MSS2515/208/F029	Fruits Fruits
Buah pinang	<i>Areaca catecu</i>	MSS2515/205/F004	Fruits
Cekur	<i>Kaempferia galanga</i>	MSS2515/206/F013 MSS2515/208/F029	Unspecified [usually, rhizome]
Cendana	<i>Santalum album</i>	MSS2515/208/F029	Seeds
Cengkering	<i>Erythrina fusca</i>	MSS2515/206/F018	Fruits
Cengkih	<i>Eugenia aromatica</i>	MSS2515/207/F020 MSS2515/207/F021 MSS2515/207/F029	Flower
Cuka	<i>Vinegar</i>	MSS2515/208/F026 MSS2515/208/F027	Water Water
Dudulang laut	<i>Naravelia laurifolia</i>	MSS2515/205/F001	Fruits
Durian Jantan	<i>Durio zibethinus Murr</i>	MSS2515/206/F016	Root
Gelam	<i>Melaleuca cajuputi</i>	MSS2515/205/F007	Skin
Halba	<i>Trigonella foenum-graecum</i>	MSS2515/208/F028	Seeds
Halia merah	<i>Zingiber officinale var rubrum</i>	MSS2515/207/F021	Unspecified [usually, rhizome]
Hempedu landak	<i>Barleria prionitis</i>	MSS2515/205/F002	Unspecified [usually, leaves]
Hujung melukut	<i>Oryza sativa</i>	MSS2515/205/F004 MSS2515/205/F009 MSS2515/206/F011 MSS2515/206/F012 MSS2515/206/F014 MSS2515/206/F018 MSS2515/208/F025 MSS2515/208/F027 MSS2515/213/F030 MSS2515/213/F032 MSS2515/213/F033	Grain
Inai	<i>Lawsonia inermis</i>	MSS2515/208/F026	Leaves
Jahar hitam	<i>Cassia siamea</i>	MSS2515/207/F021	Leaves

Jambu air	<i>Syzygium aqueum</i>	MSS2515/208/F030	Shoot
Jarum-jarum merah	<i>Isora coccinea</i>	MSS2515/205/F005	Leaves
Jelawai	<i>Terminalia subspatulata</i>	MSS2515/207/F021	Unspecified [usually, leaves]
Jintan putih	<i>Cuminum cyminum</i>	MSS2515/207/F021	Seeds [pepper seeds]
Jintan hitam	<i>Nigella sativa</i>	MSS2515/208/F029	Seeds [pepper seeds]
Kacang kayu	<i>Cajanus cajan</i>	MSS2515/205/F009	Leaves
Kaduk	<i>Piper stylosum</i>	MSS2515/208/F029	Leaves
Kayu jati Cina	<i>Phyllanthus pulcher</i>	MSS2515/208/F031	Trunk
Kederang	<i>Hymenocardia wallichii</i>	MSS2515/208/F029	Stems and leaves
Keladi hitam	<i>Alcasia longiloba</i>	MSS2515/208/F027	Sprout
Kemiri	<i>Aleurites moluccana</i>	MSS2515/205/F007 MSS2515/205/F009	Fruits Fill out
Keremak betina	<i>Eclipta alba</i>	MSS2515/205/F001	Leaves
Kesturi	<i>Citrus x microcarpa</i>	MSS2515/208/F029	Fruits
Khalambak	<i>Aquilaria malaccensis</i>	MSS2515/208/F029	Trunk
Kulit manis	<i>Cinnamomum zeylanicum</i>	MSS2515/208/F029	Skin
Kumkuma	<i>Curcuma domestica Loir</i>	MSS2515/208/F028	Rhizome
Lada sulah	<i>Piper Nigrum</i>	MSS2515/206/F013	Seeds [pepper seeds]
Lamah-lamah	<i>Unidentified</i>	MSS2515/205/F006	Root
Lempoyang	<i>Zingiber aromaticum</i>	MSS2515/205/F002	Unspecified [usually, rhizome]
Lidah mara	<i>Ouratea spp</i>	MSS2515/207/F019	Leaves
Limau kapas	<i>Citrus aurantifolia</i>	MSS2515/205/F003	Root
Limau nipis	<i>Citrus mecia</i>	MSS2515/205/F002	Water (extraction)
Limau purut	<i>Citrus hystrix</i>	MSS2515/208/F027 MSS2515/207/F023	Water (extraction) Fruits
Manjakani	<i>Croton caudatum</i>	MSS2515/207/F021	Seed
Mata kunyit	<i>Curcuma longa</i>	MSS2515/205/F004 MSS2515/205/F009 MSS2515/206/F011 MSS2515/206/F012 MSS2515/206/F014 MSS2515/206/F018 MSS2515/208/F025 MSS2515/208/F027 MSS2515/213/F030 MSS2515/213/F032 MSS2515/213/F033	Rhizome
Melada pahit	<i>Brucea javanica</i>	MSS2515/206/F016	Root
Menjarum putih	<i>Isora coccinea</i>	MSS2515/208/F024	Root
Naga buana	<i>Phyllanthus pulcher</i>	MSS2515/213/F032	Leaves
Nyarang	<i>Cyatula prostrata</i>	MSS2515/205/F001	Leaves
Pala	<i>Myristica fragrans</i>		
Patah tulang	<i>Euphorbia tirucalli</i>	MSS2515/206/F017	Leaves
Pinang	<i>Areca catecu</i>	MSS2515/205/F008	Fruit
Pulai	<i>Alstonia angustiloba</i>	MSS2515/206/F010 MSS2515/206/F011	Leaves Leaves
Rabuk	<i>Arenga pinnata</i>	MSS2515/213/F035	Fine hairs at trunk
Rotan tawar	<i>Calamus aquatilis</i>	MSS2515/206/F011	Leaves
Rumput jari cicak	<i>Selaginella plana</i>	MSS2515/208/F025	Leaves
Sabut	<i>Cocos nucifera L.</i>	MSS2515/208/F031	Leather coir
Saga besar	<i>Abrus precatorius</i>	MSS2515/206/F016	Root
Sepang	<i>Biancaea sappan</i>	MSS2515/208/F029	Unspecified [usually, leaves]
Sirih	<i>Piper betle</i>	MSS2515/205/F007 MSS2515/206/F013 MSS2515/206/F015	Leaves Leaves Leaves
Sundal malam	<i>Polianthes tuberosa</i>	MSS2515/208/F029	Not specified [usually, flowers]
Susu harimau	<i>Lignosus Rhinocerus</i>	MSS2515/207/F022	Leaves (Stem)
Susu ayam	<i>Tabernaemontana</i>	MSS2515/206/F016	Whole plant
Terasi	<i>Glochidion rubrum</i>	MSS2515/207/F020	Not specified [usually leaves]
Terung	<i>Solanum melongena</i>	MSS2515/206/F012	Leaves

Table 3 Animal-based ingredient ingredients

Vernacular Name	Modern scientific names	Formulation number (2515/H/FXXX)	Used animal parts
Anai-anai	<i>Coptotermes curvignathus</i>	MSS2515/205/F008	Nest
Ayam	<i>Gallus domesticus</i>	MSS2515/206/F034	Gizzard

Table 4 Ingredients based on other than plants and animals

Vernacular Name	Modern scientific names	Formulation number (2515/H/FXXX)	Used parts
Air bermalam	<i>Overnight water</i>	MSS2515/206/F014	Water
Daki Pantat buyung	<i>Carbon stains</i>	MSS2515/205/F003 MSS2515/205/F006	Charcoal
Dinar emas	<i>Gold coin</i>	MSS2515/207/F019	Coin
Tawas	<i>Cassia alata</i>	MSS2515/207/F020	Mineral stone

According to Table 2, the traditional medicinal ingredients for treating skin diseases in the book Tib MSS2515 tend to be plant-sourced ingredients, which is 70 compared to animal-based ingredients and others. The hujung melukut [*Oryza sativa*] and the mata kunyit [*Curcuma longa*] are the most frequently used plants, with 11 repetitions. Leaves are found in plant parts most often used to treat this disease.

Comparative Analysis of Treatment Materials

This comparative analysis is done by comparing the traditional ingredients in the Book of Tib MSS2515 with modern scientific literature for the validity of the Malay medical manuscript. The findings of this comparison are shown in the following Table 5:

Table 5. Comparison of treatment materials with modern scientific literature

Formulation number (2515/H/FXXX)	The name of the vernacular	Modern scientific names	Scientific literature
205/F001	Dudulang laut	<i>Desmodium umbellatum</i>	Undetected
	Nyarang	<i>Cyathula prostrata</i>	The methanolic extract of <i>Cyathula prostrata</i> possesses anti-inflammatory and analgesic properties, which authenticates the use of the plant in the traditional treatment of ailments associated with inflammation and pain. (Ibrahim et.al, 2012)
	Keremak betina	<i>Eclipta alba</i>	<i>Eclipta alba</i> treats skin diseases such as <i>Atopic dermatitis</i> , immune system-related skin diseases, and <i>Vitiligo</i> (Galli et al. 2008).
205/F002	Lempoyang hutan	<i>Zingiber aromaticum</i>	Zerumbone from <i>Zingiber aromaticum</i> is effective as an anti-cancer agent, possibly because of its apoptosis-inducing and antiproliferative influences. (Kirana et. al, 2003)
	Hempedu landak	<i>Barleria prionitis</i>	In South India, <i>Barleria prionitis</i> is applied to treat leprosy and other skin diseases (Khare 2004). <i>Barleria prionitis</i> leaves are used to treat skin diseases (Shinde et al. 2020)
	Limau nipis	<i>Citrus mecia</i>	The citrus-based juice mixture is a potentially healthy beverage to prevent oxidative stress-induced premature skin ageing. (Kim et.al, 2016)
205/F003	Limau kapas	<i>Citrus aurantiifolia</i>	The skin of <i>Citrus aurantiifolia</i> blocks the reproduction of <i>Staphylococcus aureus</i> bacteria that cause skin infections (Ekawati et al. 2019)
205/F004	Buah pinang	<i>Areaca catecu</i>	Areca catechu can be used as a new anti-ageing component for cosmetics. (Lee, 1999)
	Hujung melukut	<i>Oryza sativa</i>	Rice ceramide supplementation can improve skin barrier function, reduce wrinkle severity, and reduce pigmentation. (Leo et.al, 2022)
	Mata kunyit	<i>Curcuma longa</i>	<i>Curcuma longa</i> is effective in the treatment of skin diseases, namely <i>Psoriasis</i> , <i>eczema</i> [<i>Atopic</i>

			<i>dermatitis</i>], <i>Scleroderma</i> and skin cancer (Kumar <i>et al.</i> 2023)
205/F005	Jarum-jarum merah	<i>Isora coccinea</i>	In vivo study confirmed the wound healing accelerating potential of IxME, as evidenced by faster wound contraction, higher hydroxyproline content, and improved histopathology of granulation tissue. Western blot analysis revealed that the topical application of <i>I. coccinea</i> methanol extract stimulates the fibroblast growth factor and Smad mediated collagen production in wound tissue. (Upadhyay, 2014)
	Beri merah	<i>Rubus idaeus</i>	The use of red berries protects the skin from UVB that causes wounds on the skin, i.e. scaly skin and wrinkles (Wang <i>et al.</i> 2019)
205/F006	Lamah-lamah	-	Undetected
205/F007	Kemiri	<i>Aleurites moluccana</i>	The use of dry <i>Aleurites moluccana</i> prevents skin inflammation (Silmara <i>et al.</i> 2015).
	Lenga/Bijan	<i>Sesamum indicum</i>	The effectiveness of sesame oil as a killer of microorganisms prevents infections and bacteria on the skin (Shasmita, 2015).
	Gelam	<i>Melaleuca cajuputi</i>	Scientific research on MCEO has revealed various pharmacological activities such as contact and fumigant toxicity, repellence, antibacterial activity and many more. (Noor, 2023)
205/F009	Kacang kayu	<i>Cajanus cajan</i>	<i>Cajanus cajan</i> serves as a drug that treats skin inflammation and its associated disorders (Schuster <i>et al.</i> 2016)
	Buah keras	<i>Aleurites moluccana</i>	<i>Aleurites moluccana</i> , is well-known in the tropical region as an anti-inflammatory herb. (Damayanti <i>et al.</i> 2021)
206/F010	Pulai	<i>Alstonia angustiloba</i>	Leaves, stems, and latex <i>Alstonia angustiloba</i> is used in the treatment of skin diseases (Ab. Rahim <i>et al.</i> 2022)
206/F011	Rotan tawar	<i>Calamus aquatilis</i>	Undetected
206/F012	Terung	<i>Solanum melongena</i>	<i>Solanum melongena</i> is used to treat skin diseases, namely eczema [<i>Atopic dermatitis</i>] and its associated inflammation (Mollik <i>et al.</i> 2010)
206/F013	Lada sulah	<i>Pepper nigrum</i>	Black pepper essential oil possesses promising potential to modulate the biological processes of tissue remodelling, wound healing, and metabolism. (Han <i>et al.</i> , 2018)
	Cekur	<i>Kaempferia galanga</i>	<i>Kaempferia galanga</i> is an Indian herbal medicine that has a long history from its point of view in treating skin diseases (Kumar 2020)
	Bawang merah	<i>Allium cepa</i>	Onion peel is one of the essential agricultural by-products rich in bioactive compounds and can be utilised as health-promoting ingredient, especially in pharmacological and biomedical fields. (Kumar <i>et al.</i> , 2022)
206/F014	Batut merah	<i>Timonius lasiantboides</i>	<i>Timonius lasiantboides</i> is used to treat skin diseases, i.e. blind sores [<i>scabies</i>] (Paul 2000)
206/F015	Sirih	<i>Piper betle</i>	In Sri Lanka, betel leaf juice is applied in the treatment of skin diseases (Arambewela <i>et al.</i> 2011)
206/F016	Susuh ayam	<i>Tabernaemontana divaricata</i>	<i>Tabernaemontana divaricata extract</i> is effective for treating skin diseases and blind sores (Warrier <i>et al.</i> 1996)
	Melada pahit	<i>Brucea javanica</i>	<i>Brucea javanica</i> contains Brusatol, a promising anti-inflammatory compound. (Yeshe <i>et al.</i> , 2022)
206/F017	Patah tulang	<i>Euphorbia tirucalli</i>	The crude hydroalcoholic extract of <i>Euphorbia tirucalli</i> L. demonstrated better outcomes in the healing process, acute inflammation and fibrosis. (Sauaia <i>et al.</i> , 2013)
206/F018	Buah cengkering	<i>Erythrina fusca</i>	<i>Erythrina fusca seeds</i> are used to reduce itching on the skin (Azmi <i>et al.</i> 2020)

206/F019	Lidah mara	<i>Ouratea spp</i>	<i>Ouratea</i> spp. oil presents a great therapeutic potential for treating cutaneous wound healing. (Araújo, 2015)
207/F020	Cengkih	<i>Eugenia aromatica</i>	<i>Eugenia aromatica</i> as an applied drug to the skin to treat diseases (Bhowmik <i>et al.</i> 2012)
	Terasi	<i>Glochidion rubrum</i>	<i>Glochidion</i> is a very vast genus of more than 250 species. Most species under this genus are widely constituted with flavonoids and triterpenoid saponins. This group of plants is well-known among the tribes for their anti-cancer, hypotensive, diuretic, and other properties. (Sudhakar & Swetha, 2010).
207/F021	Pala	<i>Myristica fragrans</i>	After the extraction of bioactive components such as <i>myristicin</i> and <i>safrole</i> from <i>Myristica fragrans</i> , it was found that this plant is the most important herb for treating skin diseases, namely eczema [<i>Atopic dermatitis</i>] (Chung <i>et al.</i> 2012)
	Halia merah	<i>Zingiber officinale</i>	The compound in <i>Zingiber officinale</i> , 10-shogaol, as an antioxidant for human skin cell growth and a migration enhancer with potential to be a novel wound repair agent. (Chen <i>et.al</i> , 2012)
	Jelawai	<i>Terminalia subspatulata</i>	Mechanisms by which <i>Terminalia chebula</i> may strengthen full-thickness skin architecture to treat skin ageing and/or chronic wounds. (Swindell <i>et.al</i> , 2022)
	Jahar hitam	<i>Cassia siamea</i>	<i>Cassia siamea</i> is known in traditional medicine for the treatment of skin diseases (Tepsuwan <i>et al.</i> 1999)
	Manjakani	<i>Croton caudatum</i>	Undetected.
	Jintan hitam	<i>Nigella sativa</i>	Supplements containing <i>Nigella sativa</i> may be effective in treating a wide range of skin diseases, namely eczema [<i>Atopic dermatitis</i>], warts [warts], keratosis, psoriasis and sopak [vitiligo] (Nasiri <i>et al.</i> 2022)
S207/F022	Limau purut	<i>Citrus hystrix</i>	<i>Citrus hystrix</i> DC. peel essential oil has a perspective as an anti-melanoma agent. (Kulig <i>et.al</i> , 2022)
	Bawang putih	<i>Allium sativum</i>	Garlic has nanoformulations against various types of cancers, and it can potentially develop these agents as antitumor drugs. (Rauf <i>et.al</i> , 2022)
	Jintan putih	<i>Cuminum cyminum</i>	Study by Wang <i>et.al</i> (2022) strongly suggests that cumin is a potential skin-whitening agent for the cosmetic industry.
	Susu harimau	<i>Lignosus Rhinocerus</i>	<i>Lignosus rhinocerus</i> TM02 demonstrated the capacity to be a beneficial ingredient for skin care application. (Fung <i>et.al</i> , 2022)
	Cendana	<i>Santalum album</i>	<i>Santalum album oil</i> has proven its effectiveness in the treatment of skin diseases, namely eczema [<i>Atopic dermatitis</i>], psoriasis, warts [warts] and molluscum contagiosum (Moy <i>et al.</i> 2017)
208/F024	Menjarum putih	<i>Ixora coccinea</i>	The promising <i>Ixora coccinea</i> methanol extract (IxME) showed potent antimicrobial, antioxidant activities, with significant fibroblast proliferation-inducing activity compared to all other extracts. (Upadhyay, 2014)
208/F025	Rumput Jari cicak	<i>Selaginella plana</i>	<i>Selaginella plana</i> extract can act as a fungistatic agent. (Warella <i>et.al</i> , 2023)
208/F026	Asam jawa	<i>Tamarindus indica</i>	<i>Tamarindus indica</i> could be exploited as an effective biocompatible and eco-friendly antimicrobial biomaterial and wound healing composite. (Goher <i>et.al</i> , 2024)
	Inai	<i>Lawsonia inermis</i>	Typically, <i>Lawsonia inermis</i> is applied to treat leprosy and other skin diseases (Singh, <i>et al.</i> 2001)

208/F027	Keladi hitam	<i>Alocasia longiloba</i>	In traditional medicine, <i>Alocasia longiloba</i> is used to treat wounds and boils [Juruncle] (Abdulhafiz et al. 2020)
208/F028	Kumkuma	<i>Curcuma domestica</i> Loir	Curcuma domestica loir juice acts as an antimicrobe. (Puspitasari & Sofaria (2021)
	Halba	<i>Trigonella foenum-graecum</i>	Remarkable anti-cancer efficacy against skin cancer cell line and also exhibited significant antioxidant efficacy. (Goyal et.al, 2018)
	Pulut hitam	<i>Oryza sativa</i> var. <i>glutinosa</i>	enhances the delivery and stability of bioactive compounds in cosmetic formulations and related fields. (Jiamphun, 2023)
208/F029	Khalambak	<i>Aquilaria malaccensis</i>	<i>Aquilaria malaccensis</i> essential oil could soon be used for antioxidant, anti-diabetic, skin whitening, and anti-inflammatory drug formulations. (Gogoi et.al, 2023)
	Kaduk	<i>Piper stylosum</i>	Piper stylosum is among plants with the broadest spectrum of anti-microb activity. (Wart et.al, 2004)
	Sundal malam	<i>Polianthes tuberosa</i>	Polianthes tuberosa flower extract is effective for treating skin cancer without threatening normal limb tissue (Alghuthaymi et al. 2023)
	Kulit manis	<i>Cinnamomum zeylanicum</i>	The <i>Cinnamomum zeylanicum</i> extract significantly enhanced the wound-breaking strength in the incision wound, the rate of wound contraction and the period of epithelisation in the case of an excision wound. (Kamatah et.al, 2003)
	Sepang	<i>Biancaea sappan</i>	<i>Biancaea sappan</i> is used to treat skin diseases, namely leprosy (Krupanidhi et al. 2022)
	Kederang	<i>Hymenocardia wallichii</i>	Undetected
	Buah pala	<i>Myristica fragrans</i>	Clinical and experimental investigations have confirmed the antioxidant, anti-inflammatory, anti-cancer, antimalarial, anticonvulsant, hepatoprotective, antiparasitic, insecticidal, and nematocidal activities of <i>Myristica fragrans</i> essential oil. (Ashokumar, 2022)
	Cekur kembar	<i>Kaempferia galanga</i>	Various studies demonstrated that the K. galanga and its constituents possess several pharmacological activities like antimicrobial, antioxidant, amebicidal, analgesic, anti-inflammatory, anti-tuberculosis, anti-dengue, anti-nociceptive, anti-angiogenic, anti-cancer, hyperlipidemic, hypo pigmentary, osteolysis, larvicidal, insecticidal and mosquito repellent, nematocidal, sedative, sniffing, vasorelaxant and wound healing. (Kumar, 2020)
213/F030	Jambu air	<i>Syzygium aqueum</i>	The leaves, skin and fruits of <i>Syzygium aqueum</i> are traditionally used to treat skin diseases (Morton 1987)
213/F032	Naga buana	<i>Phyllanthus pulcher</i>	Dichloromethane (DCM) extract of <i>Phyllanthus pulcher</i> aerial parts showed the highest anti-cancer activity against DU-145 cell lines. In contrast, significant activity was exhibited by DCM extract of <i>Phyllanthus pulcher</i> roots on colon cancer cell lines with IC50 value of 8.1 µg/mL. (Ismail et.al, 2012)
213/F033	Beras	<i>Oryza sativa</i>	Rice ceramide supplementation can effectively improve skin barrier function, reduce wrinkle severity, and reduce pigmentation. (Leo et.al, 2022)
213/F034	Pedal ayam	<i>Chicken gizzard</i>	Undetected
213/F035	Rabuk	<i>Arenga pinnata</i>	Undetected

Table 5 shows that most of the 35 traditional skin disease treatments in the Book of Tib MSS2515 align with modern scientific literature. For example, Jintan hitam (207/F021), Inai (208/F026) and Sepang (208/F029) in the Malay medical manuscript are used in the treatment. Modern scientific findings align with this statement that the ingredients effectively treat Vitiligo and Leprosy disease, the modern medical term for leprosy. In the meantime, the scientific findings show the relevance of the plants and herbs mentioned in the Book of Tib MSS2515 for treating skin diseases. For example, research indicates that Mata kunyit [*Curcuma longa*] effectively

treat many skin diseases, namely *Psoriasis*, *eczema* [*Atopic dermatitis*], *Scleroderma* and skin cancer. It is unsurprising that Mata kunyit is the highest repetition of their use in treating skin diseases based on the Book of Tib MSS2515.

In addition, the Keremak betina [*Eclipta alba*] (205/F001) is repeated only once in the manuscript of this part of the skin disease treatment, which is shingles treatment. The scientific literature highlights the effectiveness of this plant, which is not only effective in treating shingles but also an elixir for skin diseases such as *eczema* [*Atopic dermatitis*], skin diseases associated with the immune system and *Vitiligo*. This shows that the Malay medical manuscript sometimes limits the function of a plant and herb for treating skin diseases when the plant is presented with various roles in the holistic treatment of skin diseases.

The same goes for the Pulai [*Alstonia angustiloba*] (206/F010) in the Book of Tib MSS2515, which is said to be relevant for treating shingles. The results of scientific research show that leaves are effective in treating skin diseases and stems and latex are also effective in treating the disease. One thing is sure: although the Malay medical manuscript only focuses on treating skin diseases such as shingles, leprosy, and boils, the traditional ingredients are scientifically effective in treating other skin diseases. For example, treatment of warts disease (205/F003, 207/F021, 207/F022), blind sores (206/F014, 206/F016) and skin cancer (208/F029). This demonstrates the effectiveness of various traditional Malay plants and herbs in treating skin diseases.

If observed, a plant is mentioned in the Book of Tib MSS2515 to treat skin diseases, but it is not detailed which part should be used. Nevertheless, the scientific literature proves the effectiveness of the plant in addition to recommending relevant parts in the treatment of skin diseases. For example, Hempedu landak [*Barleria prionitis*] (205/F002) is only generally mentioned in the manuscript, but scientific research has shown that its leaves can treat leprosy and other skin diseases. The night bitch [*Polianthes tuberosa*] (208/F029) is also generally stated in the Book of Tib MSS2515. Still, the results of scientific research show the effectiveness of its flower extract for treating skin cancer.

CONCLUSION

Research on the Malay medical manuscript of Kitab Tib MSS2515 shows that modern scientific findings support most traditional ingredients in treating skin diseases, highlighting the effectiveness of the plants and herbs. The hujung melukut [*Oryza sativa*] and mata kunyit [*Curcuma longa*] are the ingredients most commonly used to treat skin diseases, where these two elements are used jointly. The combination of plants is paired with other ingredients, namely fruits, oils, or extracts, that cause variations in traditional ingredient elements in treating skin diseases. The swab approach predominates treating skin diseases, such as growing, massaging, rubbing, and wrapping traditional mixed ingredients on the skin. Two combinations of ingredients are at least applied in treating skin diseases, thus highlighting variations in the functioning of traditional Malay plants in treating diseases.

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