



CLARIFYING THE CLASSIFICATION AND NUMBER OF HERBAL MEDICINAL RAW MATERIALS IN THE “FUNDAMENTAL PRINCIPLES OF FOOD AND DRINK” AND THEIR LATIN, ENGLISH, CHINESE NAMES

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ABSTRACT

“Fundamental Principles of Food and Drink” is based on the theory of the five elements, focusing more on disease prevention, nourishing and strengthening, focusing on the principles of long-living use, and covering the diseases that can be caused by food and drinks, and is a unique work written in the field of treatment, which includes food and drinks of many ethnicities. We aim to list the number of herbal medicinal raw materials mentioned in the book, classify them, and clarify the

Latin, English and Chinese names. We used following study methods; manuscripts, primary source method, hermeneutic method, analysis-synthesis method. A total of 289 medicinal plants are mentioned in the book. We classified the raw materials of plant origin in the “Fundamental Principles of Food and Drink” as the *raw materials* of medicinal plants are classified as nutrients medicine, wooden medicines, tan medicines, and herbal medicines.

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INTRODUCTION

“Fundamental Principles of Food and Drink” is based on the theory of the five elements, focusing more on disease prevention, nourishing and strengthening, focusing on the principles of long-living use, and covering the diseases that can be caused by food and drinks, and is a unique work written in the field of treatment, which includes food and drinks of many ethnicities¹. From the introduction of the novel, in general, it is very important for Mongolian kings to keep their bodies healthy, to live longer, to give their children blessings, to sit on the throne for many years, to take care of their bodies inherited from their ancestors, to properly adjust the taste of food and drinks, and to keep the whole people healthy. It is emphasized that it is necessary². One of the foundations for the development of any science is the correct establishment of official scientific nomenclature. During the process of correct identification of medicinal raw materials, history and research, production of traditional medicine, and the cultivation of rare and endangered medicinal plants, there are many deficiencies such as pronouncing the name of the plant in different ways, missing or misspelling, and omitting the name of the author³. Therefore, there is a great need to identify, categorize and organize the names of medicinal raw materials into a unified system. Also, traditional medical food research will be expanded from a practical point of view, not only for absorption, strengthening, and disease prevention, but also in the food therapy guidelines that are implemented in all health institutions, and the need to add therapeutic foods in the direction of traditional medicine will be given importance to development.

MATERIALS AND METHODS

In the research, the Mongolian translation of the book “Fundamental Principles of Food and Drink”⁴ by Sh.Bold, Kh.Ulaan-Od was used, as well as “A soup for the Qan”⁵ Chinese Dietary Medicine of the Mongol era as Seen in Hu Sihui’s Yinshan Zhengyao (Second revised and expanded edition, Paul D.Buell and Eugene N.Anderson. Leiden, Boston 2010), and sources and

explanations in Chinese “飲膳正要”⁶ in Tianya zhishi ku (天涯知识库) website. We used the following study methods: manuscripts, primary source method, hermeneutic method, and analysis-synthesis method. It is necessary to find and collect all the literature related to one’s needs and interests or the problem chosen for research, to classify them, to acquire a large amount of information and knowledge by reading and researching them, and to make notes. Therefore, we used the method of manuscripts, primary source method. Hermeneutic method uses the terms of the studied problem to determine the etymology, hidden meaning, double meaning, and content of the word. In this way, it is to analyze and study the meaning of difficult words and nouns found in original texts and sources. The analysis-synthesis method will be used by summarizing the results of the analysis.

RESULTS

We have identified 289 herbal medicinal raw materials mentioned in the “Fundamental Principles of Food and Drink” and classified them as described in Toyin Jambaldorj’s “mdzes mtshar mig rgyan”. In the “mdzes mtshar mig rgyan”, the raw materials of medicinal plants are classified as nutrients medicines, wooden medicines, tan medicines, and herbal medicines. In the book, nutrients medicines 9(3.1%), seeds and fruits of wooden medicines 31(10.7%), flowers of wooden medicines 5(1.7%), stems of wooden medicines 8(2.8%), shoots of wooden medicines 1(0.3%), roots of wooden medicines 2(0.7%), barks of wooden medicines 1(0.3%), resins of wooden medicines 4(1.4%), tan medicines 28(9.7%), roots of herbal medicines 7(2.5%), leaves of herbal medicines 3(1%), flowers of herbal medicines 5(1.7%), seeds and fruits of herbal medicines 15(5.2%), leaves, flowers, stems and seeds are used together 2(0.7%), the whole root, stem, leaves, flowers, and seeds are used together 3(1%), shell medicines 11(3.8%), sack medicines 17(5.9%), vegetables 8(2.8%) (Table 1)

Table 1. Herbal medicinal raw materials numerical representation of each group

№	Medicinal plants		Quantity	Percent	
1.	Nutrients medicines		9	3.1%	
2.	Wooden medicines	Seeds, fruits	31	10.7%	
		Flowers	5	1.7%	
		Leaves	0	0	
		Branchesw	0	0	
		Stems	8	2.8%	
		Shoots	1	0.3%	
		Roots	2	0.7%w	
		Grafts	0	0	
		Barks	1	0.3%	
		Resins	4	1.4%	
3.	Tan medicines		28	9.7%	
4.	Herbal medicines	Roots	7	2.5%w	
		Leaves	3	1%	
		Flowers	5	1.7%	
		Seeds, fruits	15	5.2%	
		Leaves, flowers, stems and seeds are used together	2	0.7%	
		The whole root, stem, leaves, flowers, and seeds are used together	3	1%	
		Cultivated	Shell medicines	11	3.8%
		medicines	Sack medicines	17	5.9%
			Vegetables	8	2.8%
5.	Uncategorized medicines		129	44.7%	
Total			289	100%	

We also clarified the Latin, English and Chinese names of a total of 289 medicinal plants. 389 Mongolian names, 299 Latin names, 68 synonymous names, 409 English names, and 325 Chinese names of a total of 289 herbal medicinal raw materials were identified and listed. Here we are presenting nutrients medicines's varied names for example. (Table 2)

Table 2. Nutrients medicines’s varied names

№	Mongolian names	Latin names	English names	Chinese names
1.	Гагол	<i>Amomum tsao-ko</i> Crevost & Lemarié. Synonym of <i>Lanxangia tsao-ko</i> (Crevost & Lemarié) M.F.Newman & Škorničk.	Tsaoko cardamom	草果
2.	Голт бор	<i>Eugenia caryophyllata</i> Thunb. Synonym of <i>Syzygium aromaticum</i> (L.) Merr. & L.M.Perry	Clove	丁香
3.	Гүргэм	<i>Carthamus tinctorius</i> L.	Safflower	红花
4.	Дагшил гавар	<i>Bluemia balsamifera</i> (L.) DC.	Sambong, Ngai camphor, Baroos camphor	龙脑香, 艾纳香
5.	Мангавар	<i>Cinnamomum camphora</i> (L) Presl.	Camphor tree	哈夫儿, 龙脑
6.	Улаан сүгмэл (Жэбрай)	<i>Amomum villosum</i> Lour. - Өргөст улаан сүгмэл	Malabar cardamom	缩砂
		<i>Amomum villosum</i> Lour. var. <i>xanthioides</i> T. - улаан сүгмэл	Grain of paradise	
		<i>Aframomum melegueta</i> K.Schum.	Melegueta pepper	
		<i>Alpinia oxyphylla</i> Miq. - Бор сүгмэл ⁹	Sharp-leaf galangal	
7.	Хотон орны хач гүргэм	<i>Crocus sativus</i> L.	Saffron, crocus	咱夫兰
8.	Цагаан сүгмэл	<i>Elettaria cardamomum</i> (L.) Maton - энэтхэг сүгмэл <i>Amomum kravanh</i> Pierre ex Cagner - цагаан сүгмэл <i>Amomum compactum</i> Sol. ex Maton - жава цагаан сүгмэл Synonym of <i>Wurfbainia compacta</i> (Sol. ex Maton) Škorničk. & A.D.Poulsen 9	Cardamom kernel	白豆蔻
9.	Шил гавар	<i>Dryobalanops aromatica</i> C.F.Gaertn. ⁷	Sumatra camphor, Malaya camphor, Camphor tree	哈夫儿

When clarifying the nomenclature of the raw materials of herbal medicine, we checked the Chinese original and English translation of the book “Fundamental Principles of Food and Drink”. There were cases where the Chinese original, Mongolian translation, and English translation differed in terms of the names of some plants. Explanations were made each time, and the plants with differences in translation were included in the total number of plants. It was explained that there were 21 names of plants that differed in translation. (Table 3) Reaction equations and chemical formulas are written using programs such as Chem draw.

Table 3. Plant names with differences in translation

№	"Fundamental Principles of Food and Drink" Mongolian translation	“饮膳正要” Chinese source	“A soup for the Qan” - English translation	Latin name followed by an English translation
1.	Лидэр	荊芥 - Jīng jiè	Chingchieh, Japanese Catnip	<i>Schizonepeta tenuifolia</i> (Benth.) Briq.

Note: The English translation and the original Chinese plant names match and refer to the same plant. But the nomenclature of the Mongolian translation indicates a different plant

“Лидэр” aka “догол өвс” is a medicine used to treat heat in Mongolian medicine, and it has a bitter taste and is smooth, oily and soft. It has the ability to process heat, cool sweat, dry “yellow water”, and remove rashes.⁸ The root is used as medicine. Its scientific name is *Sophora flavescens* Aiton. Shrubby sophora in English and 苦参 - kǔshēn in Chinese. Shrubs of the leguminous family.

Chingchieh, Japanese Catnip: *Schizonepeta tenuifolia* (Benth.) Briq. – Chinese name is 荆芥- jīng jiè. An annual herb of the Lamiaceae family is *black jirugba* (хар жирүгба), or shriveled sedge (хэрчлээст библэнцэр). It has a spicy, bitter and sweet taste, and it is warm, harsh, dry and light. It can kill worms, stop their spread, and heal wounds. The part above the soil is used as medicine.

DISCUSSION

In recent years, the pharmacology of traditional medicine has been extensively studied in terms of classification and terminology. Traditional medicine pharmacology books such as “The Ocean of medicine names” and “Mdzes mtshar mig rgyan” have been researched on animal and mineral medicinal raw materials and explained terms. Researcher G. Sumiyakhорол studied the number, taste, power, usage and names of medicinal raw materials of plant, animal and mineral origin in the novel “Mdzes mtshar mig rgyan” and Researcher T. Tsetsegdari researched the raw materials of animal origin medicinals in the novel “The Ocean of medicine names”. In 2017, researcher O. Urnaa studied the structure and content of the book “Fundamental Principles of Food and Drink” and published her research work as a book. In 2022, Suriliga, a researcher from Inner Mongolia, obtained a master’s degree in medicine by analyzing the origin of the author and the preface of the book. Domestic and foreign researchers have studied and widely publicized the book “Fundamental Principles of Food and Drink”, but there is a lack of research on the names of plants and animals contained in the book, so it is necessary to study and sample those names, and to recognize them at the level of internationally recognized standards

and equate them to Mongolian, Latin, and English. The issue is important. Following the classification and nomenclature of medicinal plants by previous researchers, we aimed to clarify all the plants included in the “Fundamental Principles of food and Drink” and expand their use. From the perspective of Mongolia, it is believed that this book is a very reasonable research done in the field of awareness.

CONCLUSION

1. A total of 289 plant-based medicinal raw materials are mentioned in Husekhu’s “Fundamental Principles of Food and Drink”, including 9 nutrients medicines, 62 wooden medicines, 28 tan medicines, 25 herbal medicines, 36 cultivated medicines, and 129 uncategorized medicines. In the future, we are faced with the need to continue classifying drugs that are not included in this category, and by determining all the plants mentioned in the book “Fundamental Principles of food and Drink”, we will create the opportunity to introduce new ones in many fields such as food production, medical food production, and business.
2. It is quite difficult to translate the names of medicinal plants, and there are cases where some medicinal plants have many names or are used interchangeably depending on the local characteristics and usage. We need to solve the problem of 21 plants with translation differences in terms of names with the help of linguists, translators, botanists and nutritionists. This will be of great practical benefit to us.

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