

# **Materia Medica of Tibetan Medicine: Diversity, Identification and Classification, and the Method of Checking Quality:**

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**Introduction:** Tibetan medicine is one of the oldest traditional medical systems. It has a long history of more than 4, 000 years, and it is a major field of study in Tibet. Tibetan medicine is an integral part of Tibetan life and culture and was invented by great kings, saints, scholars and physicians. Furthermore, Yuthog Yonten Gonpo, father of Tibetan medicine composed *rGyur-bZhi* (Four Tantras) as a synthesis of the best of the medical systems known at that time. Tibetan medicine is an exceptional and unique medical system with a record of efficient treatment of human ailments, as well as preventive measures to maintain optimal health, which means ensuring harmonious mental and body health.

Tibetan medicine is science, art and philosophy all in one. It is a science because its foundation is laid down in a systematic and logical way, based on the understanding of our body and its relationship to the environment. It is an art because it uses various diagnostic techniques to identify health problems and it uses therapeutic measures to maintain proper and optimal health; and it is a philosophy because it holds key Buddhist principles such as altruism, Karma and ethics.

**Hidden features of Tibetan Materia Medica:** The ancient Tibetan physicians using their senses, and by instinct and intuition and accumulated knowledge that has guided them to discover certain remedies from local environment sources for treating common ailments. In the past, Tibetan physicians have gained knowledge of medicinal plants through experiment and observing the behavior of animals. The classical materia medica text explained that, for the treatment of 21 kinds of wounds, finding the method of treatment efficacy came through observing the behavior of animals. This method of efficacy of plants for treating wounds was discovered by ancient physicians of Tibet by observing and noticing that wounded wild animals or birds search for particular plants for recovering from wounds. The approach by ancient physicians was for example using ink to draw crack lines on the bird's eggs, or to smear blood of creatures on the young of wild animals to find out how their parents nursed the wounds. Their parents, believing the wound to be real, brought the healing herbs for treatment, and thus ancient physicians of Tibet were able to identify the efficacy of plants. When they took away the herb the next time and left the eggs really cracked and young creature actually cut, the parents, same as before, patched them up with same plants, which bonded the crack and healed the wound. This kind of medicinal plants knowledge is highly regarded by the ancient Tibetan physicians, which gained insight and secret knowledge of medicinal plants as the supreme medicine.

Another secret knowledge of medicine is that *Dha Ya kan* which means nectar or supreme properties of medicine. According the ancient medical text explained that 25 different types of medicinal plants consider as *Dha Ya Kan* which means properties and efficacy of medicine is supreme like nectar. *Dha Yak Kan*- supreme properties of medicinal plant based on effectiveness to a particular disease, based on particular wound to heal by specific plant and it also based on adaptation of medicinal plant in particular site to boost affectivities to particular disease. This kind of medicinal plant's knowledge was accumulated by ancient physicians observing and experiencing through Mother Nature and its interconnection with human life.

Ancient Tibetan physicians standardized and defined the preparation of medicine based on the potency, taste, post-digestive taste, attributes and qualities of each medicinal ingredient. The potency of medicinal substances depends greatly on the predominance of the five great elements during their growing process. The value and effectiveness of plants not only arises from element power but also from their natural habitat. The power of taste of medicinal plants also depends on the five elements and has an important role in curing disease.

**Diversity of Tibetan Materia Medica:** Generally, the diversity of medicinal plants on earth is so abundant that we cannot believe it will ever be exhausted. We realize and know that nature provides enough remedies for solving various ailments which exist on this plane, but does not tolerate self-indulgence. Similarly, the diversity of Tibetan materia medica is also great, and is spread across Tibet and its neighbors. Classical Tibetan medical texts have recorded more than 3,000 medicinal ingredients used to treat various diseases. The *Shel Gong Shel Phreng* text (AD 1725) (Compact Crystal Rosary) by the great renowned Tibetan scholar and physician *Deumar Geshe Tenzin Phuntsok* comprises more than 1,000 medicinal plants. A Flora of Xizang, the Tibetan Autonomous Region of Tibet, survey and researched by a group of Tibetan physicians and scholars found more than 6,000 plants stretching from the north to Mongolia and beyond, and eastwards to Sichuan and Yunnan, north-west to Ladakh, and north-east towards Nepal and the Trans-Himalayas of India. The ancient physicians of Tibetan medicine had the great fortune to enjoy the use a virtually inexhaustible wealth of plants species for the preparation of their drugs.

**Classification of Tibetan Materia Medica:** According to Tibetan medicine, there are different ways of classifying Tibetan materia medica, based on different schools of thought, regions and scholars. However, *rGyud-bZhi* the fundamental Tibetan medical text, classifies Tibetan medicinal plants group based on their nature, potency, properties and qualities. They are classified in three broad groups.

1. Minerals in the form precious metals are classified into melt able and non-melt able, rock medicine and soil medicine.
2. Woody and herbaceous plants develop from its various growth factors and by the power and predominance of five elements.
3. The benefits of wild animals, birds big and small, aquatic animals, and domesticated animals-based materia medica.

**Classification of Tibetan Materia Medica according to Shel Gong Shel phreng:** *Shel Gong Shel phreng* was authored by the renowned Tibetan materia medica scholar *Deuma Geshi Tenzin Phuntsok*, who traveled several times to India, Nepal and all over Tibet, and researched and thoroughly examined the medicinal ingredients. His classification is as follows:

1. Gem or precious medicines, such as gold, silver, copper and iron are the minerals formed that can be melted. Whereas coral, turquoise and agate stone are also formed of minerals, but are precious stones that cannot be melted.
2. Rock medicine, such as gold ore, silver ore, brass ore which can be melted and formed.
3. Soil medicine, such as golden sand which comes from the soils.
4. Tree medicine, such as three fruits; *Terminalia chebula*, *T. bellerica* and *Phyllanthus emblica*, and sandalwood, which are considered Tree medicines.
5. Aromatic medicines are based on the aroma or fragrances from plants such as saffron, and mineral exudates.
6. *Dumbu Thang sman*: Plants which have a strong root belong to biennial and perennial such as ma-nu *Inula racemosa*, ru-ta *saussurea lapp*.
7. Herbal medicine, which belong to annual plants such as rekon –*Corydalis sp*, yak y ma – *chrysosplenium spp*, Tig ta *Swertia spp*.
8. Salt medicines which come from rocks and water bodies such as sal-amoniac rock salt, sea salt (*Gya Tsa* and black salt derived from brackish salt (*Kha ru Tsa*)
9. Animal medicines: Medicine which are derived from animals such as wild animals, aquatic and land-based as well as domesticated animals.
10. Crop medicines: Medicines which come from cultivated fields such as wheat, barley and other grains, small lentils, round peas, and other crops with pods.
11. Aquatic medicines: The medicines which originate from various sources such as drinking water, medicine water and spring water.
12. Fire medicines: The medicine which have heat generating properties ( *Taen pa jha mean gyi mea*) and those used for moxibustion (*Rea jha ched mae*)
13. Extracted medicine: The medicines derived from mineral ores such as essence of mineral or metals extracted in ash form (*Tsha wa mae dhus pa*) and decoction (*Sil wa chu dhus pa*)

However, in the recent scenario and due to contemporary changes, mineral based medicine ingredients have become progressively less used due to restriction imposed under environmental protection regulations.

**The current status of Tibetan Materia Medica:** The current scenario, because of many causal factors and reasons, is such that Tibetan physicians of outside and inside Tibet have now reached a stage whereby the use of medicinal ingredients based on gems and has been decreasing progressively, with a corresponding increase in the use of ingredients that are based on plants. It is not only because of the increasing popularity of Tibetan medicine but also suits the growing needs of societies and individuals. In many cases, Tibetan medical preparations and herbal products such as tonics, cosmetics and herbal teas are based on plants/herbs which were

thoroughly investigated and researched through both modern scientific and traditional approaches, to obtain safe and healthy products.

**Method of Checking Quality:** Regarding quality of process of medicine, the most important is correct identification of medicinal ingredients and to avoiding any mistake in identification of medicinal ingredients. It is vitally important that compounding of medicine is done strictly according to medical texts, transforming the nature of substances for easier digestion, using detoxification processes, the purification of raw material and good hygiene, and uniform dosage of medicine without fungi and bacteria and free from damaged by insects or worm. The medicine should be good qualities assurance that would be significantly affect the healing potency of medicine.

In this modern scientific time the quality of the products of traditional medical systems are subject to a set of stringent scientific measures, irrespective of their relevance and suitability. In this cases where the products are subjective to quality control measure under the international Good Manufacturing Practices (GMP) criteria, a multitude of obstacles and problems are encountered. Whereas the traditional ways of ensuring ingredients quality standard by the experienced physician is based on method of assessment as prescribed in the relevant medical texts, including key factors such as shape, colour, essential oil nature, taste and smell, further examination through processes such as cutting, grinding, burning, soaking and weighing. If we are able to combine traditional method and modern quality control, then we might establish a standard criterion to carry out quality control tests. Thus we can integrate traditional and modern science, which brings more precise and standardized medicine.

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