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Traditional Chinese medicine — Vocabulary —

Part 2: Processing of Chinese Materia Medica

Médecine traditionnelle chinoise — Vocabulaire —

Partie 2: Transformation des matières médicales chinoises

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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This document was prepared by Technical Committee ISO/TC 249, *Traditional Chinese medicine*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Chinese Materia Medica has been around for thousands of years and is widely used as a natural method for processing decoction pieces, healthcare products and natural remedies. The first recorded monograph of Chinese Materia Medica, *Shennong's Classic of Materia Medica (Shen Nong Ben Cao Jing)* in the second century, listed 365 Chinese Materia Medica species, including herbs, animals and minerals. In 1596, the *Compendium of Materia Medica (Ben Cao Gang Mu)* was published with 1 892 Chinese Materia Medica species. Chinese Materia Medica spread from China to its neighbouring countries thousands of years ago and has just found its way to other countries worldwide in recent decades. Today, Chinese Materia Medica has gained popularity and widespread use, with the global Chinese Materia Medica trade steadily growing.

However, no International Standards for Chinese Materia Medica terminology have been published up until now, resulting in almost every Chinese Materia Medica term being translated in several different ways. This has hindered international education, academic exchanges and trade. The need for an International Standard for basic vocabulary for Chinese Materia Medica has become imperative.

This Chinese Materia Medica document is provided to facilitate international academic exchange, research and development, management and trade.

Traditional Chinese medicine — Vocabulary —

Part 2: Processing of Chinese Materia Medica

1 Scope

This document defines terms for the theory, technology and methods of Chinese Materia Medica processing. It is not applicable to Kampo medicine.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1 General 总论

3.1.1
discipline of Chinese Materia Medica 中药学
branch of knowledge which incorporates the basic theories, sources, origins, collection, processing, properties, functions and clinical application of Chinese Materia Medica under the guidance of traditional Chinese medicine theories

3.1.2
discipline of Chinese Materia Medica processing 中药炮制学
subject that studies the theories, procedure, specifications, quality standards, history and current state of Chinese Materia Medica processing

3.1.3
Chinese Materia Medica 中药
medicinal parts of medicinal plants, animals, and minerals after preliminary processing, which are used as raw materials in Chinese medicines

Note 1 to entry: This includes the raw materials used to make decoction pieces.

Note 2 to entry: Preliminary processing can include washing and drying. Large and bulky items can also be cut into smaller pieces or shorter lengths.

[SOURCE: ISO 18668-1:2016, 3.2, modified — Note 2 to entry added.]

3.1.3.1
raw material 药材
collected unprocessed material

3.1.3.2
decoction pieces 饮片
prescription medicines processed from Chinese Materia Medica under the direction of traditional Chinese medicine and processing methods for Chinese medicines

Note 1 to entry: They can be directly used in clinical practice or for the production of prepared medicines.

[SOURCE: ISO 18668-1:2016, 3.3, modified.]

3.1.4
Chinese Materia Medica nature 药性
therapeutic properties of a Chinese Materia Medica item

3.1.5
Chinese Materia Medica processing 炮制
炮炙
physical or chemical technique of converting Chinese Materia Medica into decoction pieces based on the theory of pharmacology of traditional Chinese medicine, the nature of Chinese Materia Medica, and the need for dispensing, preparation and clinical application

3.1.6
adjuvants 辅料
additives added during the processing of Chinese Materia Medica

Note 1 to entry: Adjuvants are included, for example, to enhance therapeutic effect, reduce toxicity, relieve side effects, adjust medicine properties and affect physicochemical properties.

3.2 Chinese Materia Medica nature 中药药性类

3.2.1
four properties 四气
four Chinese Materia Medica properties: cold, hot, warm and cool

3.2.1.1
cold property 寒性
cold medicinal property to clear heat

Note 1 to entry: Cold property is applied in “treating hot with cold”.

3.2.1.2
hot property 热性
hot medicinal property to dispel cold

Note 1 to entry: Heat property is applied in "treating cold with heat”.

3.2.1.3
warm property 温性
warm medicinal property to dispel cold

3.2.1.4
cool property 凉性
cool medicinal property to clear heat

3.2.1.5
neutral property 平性
medicinal property without identifiable cold, hot, warm or cool properties

3.2.2
five flavours 五味
five medicinal tastes: pungent, sweet, sour, bitter and salty

Note 1 to entry: Each of the five flavours has different therapeutic effects.

3.2.2.1
pungent taste 辛味
acrid taste which has the functions of dispersing, moving qi and blood

3.2.2.2
sweet taste 甘味
taste of sugar which has the functions of tonifying and replenishing, harmonizing the middle energizer, adjusting the medical properties, releasing spasms and relieving pain

3.2.2.3
sour taste 酸味
vinegar taste which has the action of astringing and consolidating

3.2.2.4
bitter taste 苦味
heavy salty taste which has the action of clearing heat, downbearing counterflow qi, promoting defecation, eliminating dampness and preserving yin

3.2.2.5
salty taste 咸味
taste of salt which has the action of purging and relaxing bowels to promote defecation, softening hardness and dissipating bindings

3.2.2.6
bland taste 淡味
very light, dull, sour, bitter, sweet, pungent, salty or astringent taste which has the action of discharging dampness and promoting urination

3.2.2.7
astringent taste 涩味
sharp taste which has the same action of medicines sour in taste, such as sweating, diarrhoea, frequent urination, seminal emission, spermatorrhea and haemorrhage

3.2.3
ascending-descending-floating-sinking functional tendencies 升降浮沉
four functional tendencies of medicinal materials in the human body, namely upward, downward, outward and inward, which are used to specify their pharmaceutical nature

3.2.4
meridian entry 归经
theory of medicinal nature which classifies properties and functional locations of medicinal materials, and specifies their therapeutic action on a certain part of the body, under the guidance of the zang-fu viscera, meridians and collaterals theories

3.2.5
seven effects 七情
seven different effects of compatibility of medicinal materials, namely single use, mutual suppression, mutual restraint, mutual assistance, mutual reinforcement, mutual incompatibility caused by toxins or side effects and mutual inhibition

3.2.5.1
single use 单行
use of one medicinal material alone for a disorder

3.2.5.2
mutual incompatibility caused by toxins or side effects 相反
property of two or more medicinal materials which produce toxins and side effects when used in combination

3.2.5.3
mutual inhibition 相恶
property of a medicinal material to reduce the medical effects of another medicinal material when used in combination

3.2.5.4
mutual suppression 相杀
property of a medical material to remove the toxins or side effects of another medicinal material when used in combination

3.2.5.5
mutual restraint 相畏
toxicity or side effects of one medicinal material constrained by another medicinal material when used in combination

3.2.5.6
mutual assistance 相使
two medicinal materials, used together, where one is the primary ingredient and the other is used to enhance the effects of the primary ingredient

3.2.5.7
mutual reinforcement 相须
two medicinal materials used together to enhance medical effects

3.2.6
toxicity 毒性
harmful effects of Chinese Materia Medica on the human body

3.2.7
side effect 副作用
unexpected reaction to a medication

Note 1 to entry: Side effects are often slight or of little harm to the human body. Side effects may occur even with correctly administered dosages and may disappear after the medication ceases.

3.3 Principle of Chinese Materia Medica processing 中药炮制原理类

3.3.1
processing with opposite materials 相反为制
processing method of applying adjuvants or Chinese Materia Medica that have opposite natures to alleviate or change Chinese Materia Medica natures

3.3.2
processing with similar materials 相资为制
processing method of applying two or more Chinese Materia Medica or adjuvants that have the same or similar natures to increase their therapeutic functions

3.3.3
mutual restraint processing 相畏为制
相杀为制
processing method of applying adjuvants that can restrict the toxicity and side effects of certain Chinese Materia Medica

3.3.4
mutual inhibition processing 相恶为制
processing method of applying adjuvants to ease the strong nature of Chinese Materia Medica, thereby achieving a balanced nature and avoiding damaging healthy qi

3.3.5
shape processing 制其形
processing method to change the shapes of Chinese Materia Medica and to separate the medicinal parts

3.3.6
flavour processing 制其味
processing method to adjust the flavour of the medicine

Note 1 to entry: This includes elimination of bad tastes.

3.3.7
quality processing 制其质
processing method to change the texture of a Chinese Materia Medica or medication

3.3.8
nature processing 制其性
processing method to alter the nature of a Chinese Materia Medica or medication

3.3.9
chemical processing 化学炮制
processing method which applies chemicals or adjuvants to stimulate change of the components of the chemical materials according to the properties of those materials and the rules of change during the processing of Chinese Materia Medica

Note 1 to entry: Change here includes increase, decrease, transformation or detoxication.

Note 2 to entry: Chemical processing is undertaken to enhance therapeutic effects and reduce toxicity.

3.3.10
biological processing 生物炮制
processing method which inactivates or applies an enzyme or microorganism

Note 1 to entry: This is performed to preserve the effective ingredients in the decoction pieces, to stimulate the enzyme and the active ingredient to increase and transform, to decrease the toxicity and even to transform the toxic constituents into atoxic ones.

3.4 Assisting material of Chinese Materia Medica processing 中药炮制辅料类

3.4.1
liquid adjuvants 液体辅料
liquid additives added during processing of Chinese Materia Medica

3.4.1.1
liquor and wine 酒
beverage made from a fermented substance

Note 1 to entry: The substance includes Chinese sorghum, barley, rice, grapes or other fruit. Liquor and wine, with the main constituent of alcohol, has a sweet, pungent flavour and a hot but toxic nature. It can unobstruct the blood vessels, enhance medicinal functions, conduct the therapeutic effect upward, dissipate cold and eliminate unpleasant smells. Liquor and yellow wine are employed in processing and preparation of Chinese Materia Medica.

3.4.1.1.1
yellow wine 黄酒
yellow-brown transparent liquid made from the fermentation of rice, millet, wheat or yeast, with an alcohol content between 10 % and 20 % and relative density of 0,98

Note 1 to entry: This liquid has a unique fragrance. The chemical compositions include sugars, esters, acids, amino acids and minerals.

3.4.1.1.2
liquor 白酒
烧酒
strong, fragrant, transparent, colourless distilled spirit made from the fermentation of rice, grain, millet, Chinese sorghum or yeast, with 50% to 70% alcohol content and relative density of 0,82 to 0,91

Note 1 to entry: The chemical compositions include acids, esters and aldehydes.

3.4.1.2
vinegar 醋
yellow-brown to dark brown, transparent, sour liquid made from rice, wheat, Chinese sorghum or lees, composed of 4 % to 6 % acetic acid

Note 1 to entry: Rice vinegar has a unique fragrance and is an ideal choice during processing, and a mature example is best. It has a warm property, a bitter flavour, and functions of dissipating stasis and relieving pain, regulating qi and moving water, removing toxins, eliminating bad smells and enhancing the medicinal function in liver meridian.

3.4.1.3
honey 蜂蜜
golden-brown, semi-transparent, sweet, sticky fluid produced by bees from the nectar of flowers

Note 1 to entry: Honey is fragrant and mainly made of fructose and glucose. It has a neutral property, a sweet flavour and functions of tonifying the middle energizer, moistening dryness, relieving pain, removing toxins and eliminating unpleasant smells. When Chinese Materia Medica are processed with honey, they coordinate to enhance the effect of tonifying the middle energizer and qi, invigorating the spleen and harmonizing the stomach, moistening the lungs and relieving coughs.

3.4.1.3.1
refined honey 炼蜜
purified product of heated honey

Note 1 to entry: The heating process is aimed at destroying the enzymes, killing the microorganisms, decreasing water content and increasing stickiness. Refined honey can be classified into slightly refined honey, medium-refined honey and fully-refined honey in terms of heating degrees.

3.4.1.4
saline water 食盐水
transparent filtered liquid made from dissolved salts, which contains much sodium chloride and a little magnesium chloride, magnesium sulphate and calcium sulphate

Note 1 to entry: When Chinese Materia Medica are fried with saline water, it can conduct the therapeutic effect downwards to the kidney meridian, tonify the liver and kidneys, downbear deficient fire and promote urination.

3.4.1.5
ginger juice 姜汁
juice made from squeezed fresh ginger rhizomes or boiled dried ginger rhizomes

Note 1 to entry: Ginger has a mild warm property, a pungent flavour, and functions of warming the middle energizer and dissipating cold, unblocking vessels by rescuing yang, drying damp and resolving phlegm, stopping vomiting and removing toxins. When Chinese Materia Medica are processed with ginger juice, their cold properties will be depressed, and the function of fortifying the stomach, stopping vomiting and reducing toxins will be enhanced.

3.4.1.6
liquorice juice 甘草汁
dark-brown, filtered liquid made from decocted liquorice

Note 1 to entry: Liquorice has a neutral property and a sweet flavour, and functions of fortifying the spleen, replenishing qi, clearing heat, removing toxins, dispelling phlegm and relieving tension and pain. When processed with liquorice juice, the property of Chinese Materia Medica will be moderated and the toxins will be reduced.

3.4.1.7
black bean juice 黑豆汁
opaque, dark filtered liquid made from black bean seeds

Note 1 to entry: Black bean has a neutral property and a sweet flavour, and functions of activating the blood, draining water, nourishing liver yin and kidney yin, nourishing blood, dispelling wind and removing toxins. When Chinese Materia Medica are processed with black bean juice, they can enhance the functions of nourishing liver yin and kidney yin and reducing toxins and side effects.

3.4.1.8
fresh animal bile 胆汁
yellowish-green, semi-transparent sticky fluid with an unpleasant smell, usually from pigs and goats

Note 1 to entry: Bile has a bitter flavour, a cold property, and the functions of clearing the liver and improving vision, draining the gallbladder, reducing swelling, removing toxins and moistening dryness. When processed with bile, the dry-heat property, toxicity and side effects of Chinese Materia Medica will be moderated, and the functions of dispelling phlegm and stopping coughs will be enhanced.

3.4.1.9
rice-washing water 米泔水
greyish-white, opaque fluid from rice washing

Note 1 to entry: Rice-washing water is often deployed to remove oiliness, reduce the pungent-dry property of Chinese Materia Medica, reinforce the function of tonifying spleen and harmonize the middle energizer by immersing the oily Chinese Materia Medica into it.

3.4.1.10
sesame oil 麻油
oil squeezed from ripe sesame seeds in cold or heat pressing

Note 1 to entry: Sesame oil has a mild cold property, a sweet flavour, and functions of moistening dryness, promoting defecation, clearing heat, removing toxins, and regenerating flesh, which is often deployed in the processing of hard or toxic Chinese Materia Medica to make it crispy and less toxic.

3.4.1.11
mutton tallow 羊脂油
refined lipid oil from a goat or sheep

Note 1 to entry: Mutton tallow maintains a white solid form at room temperature and turns to transparent liquid when heated. It has a heat property, a sweet flavour, and functions of warming and dissipating cold, tonifying kidney yang, tonifying deficiency and moistening dryness. When Chinese Materia Medica are processed with mutton tallow, their functions of warming and tonifying the kidney yang will be enhanced.

3.4.2
solid adjuvants 固体辅料
solid additives added during processing of Chinese Materia Medica

3.4.2.1
rice 稻米
mature seeds or grains of a type of aquatic cereal plant

Note 1 to entry: It has a neutral property, a sweet flavour, and functions of tonifying the middle energizer and qi, invigorating the spleen and harmonizing the stomach. When Chinese Materia Medica are processed with rice, the toxins and side effects will be reduced, the irritation will be reduced, and their effect of tonifying the middle energizer and qi will be enhanced.

3.4.2.2
wheat bran 麦麸
brownish-yellow seed coat of wheat

Note 1 to entry: Wheat bran has a neutral property and a sweet, bland flavour.

Note 2 to entry: When stir-fried with Chinese Materia Medica, wheat bran can moderate dryness, eliminate unpleasant smells and enhance the effects of the Chinese Materia Medica, and also dye the Chinese Materia Medica with its smoke.

3.4.2.3
alum 白矾
明矾
irregular, colourless, transparent or semi-transparent massive crystal refined from alum ore

Note 1 to entry: Alum is hard but crispy, soluble to water, with the main chemical constituent of KAl(SO4)2•12H2O. It has a cold property, a sour but astringent flavour, and functions of removing toxins, resolving phlegm, killing parasites, astringing, drying damp and preventing decay. When Chinese Materia Medica are processed with alum the impact of toxins is lessened, and their functions of resolving phlegm will be enhanced.

3.4.2.4
talc powder 滑石粉
powder refined, smashed and dried from silicate mineral talc, with the main chemical constituent of hydrous magnesium silicate

Note 1 to entry: Talc is a white or whitish powder with a cold property, a sweet, bland flavour, and functions of relieving strangury by promoting urination, clearing heat and removing toxins. When Chinese Materia Medica are stir-fried with talc, they can be heated evenly. This method is especially applicable to pliable and tough Chinese Materia Medica.

3.4.2.5
bean curd 豆腐
milky, white solid made from smashed soybean seeds via processing

Note 1 to entry: It has a cold property, a sweet flavour, and functions of tonifying qi and harmonizing the middle energizer, generating thin bodily liquid to moisten dryness, clearing heat and removing toxins. When processed with Chinese Materia Medica, it can reduce toxins and eliminate dirt.

3.4.2.6
soil 土
smoky, black and brown scorched earth, with the main chemical constituents of silicate, calcium salt and other basic oxides

Note 1 to entry: Humus flava usta are most commonly used, while sienna and red halloysite can also be used. It has a warm property, a pungent flavour, and functions of warming the middle energizer and harmonizing the stomach, while arresting hemorrhage, stopping vomiting and astringing intestines to relieve diarrhea. When Chinese Materia Medica are processed with earth, the irritation will be reduced and the effect will be enhanced.

3.4.2.7
clam shell powder 蛤粉
greyish-white powder made from calcined, smashed, dry clam shell

Note 1 to entry: It has a cold property, a bitter, salty flavour, with the functions of clearing heat and draining damp, resolving phlegm and softening hardness. When Chinese Materia Medica are stir-fried with clam shell powder, it will bubble up and become crispy.

3.4.2.8
river sand 河砂
hard, medium-sized sand

Note 1 to entry: When Chinese Materia Medica are stir-fried with river sand, the favourable heat conductivity of the sand and enlarged contact area will result in evenly heated Chinese Materia Medica. This method is especially applicable to hard Chinese Materia Medica to make them crispy and easy to smash, thus facilitating extraction of the effective component.

3.4.2.9
cinnabar powder 朱砂
ground or water-ground clean, fine powder with the main chemical constituent of mercuric sulphide

Note 1 to entry: Cinnabar powder has a mild, cold property, a sweet flavour and functions of calming fright, tranquilizing spirit and removing toxins.

3.5 Procedure of Chinese Materia Medica processing 中药炮制方法类

3.5.1
cleaning 净制
operating procedure of removing impurities and non-medicinal parts and the separation of medicinal parts

Note 1 to entry: Chinese Materia Medica that cannot be directly used clinically after cleaning are called "cleaned Chinese Materia Medica" and those that can be directly used clinically are called "decoction pieces".

3.5.2
cutting 切制
operating procedure of softening Chinese Materia Medica after cleaning and then chopping them into pieces, shreds, cubes and segments

Note 1 to entry: Chinese Materia Medica after cutting are called "decoction pieces".

3.5.3
stir-frying 炒制
procedure where cleaned and cut decoction pieces are put into a pre-heated container and heated continuously at the appropriate temperature while stirring or rotating

Note 1 to entry: This process is classified into plain-frying and frying with solid adjuvants.

Note 2 to entry: Stir-frying may be with or without adjuvants.

3.5.3.1
plain-frying 清炒
单炒
stir-frying without any adjuvants

Note 1 to entry: Plain-frying can be classified into yellowish-frying, burnt frying and carbonized frying according to the different frying degrees.

3.5.3.1.1
yellowish frying 炒黄
procedure of stir-frying with mild or moderate fire until the surface of the decoction pieces turns yellow or darker, bubbles up, or cracks and releases a unique smell

3.5.3.1.2
burnt frying 炒焦
procedure of stir-frying with moderate or strong fire until the surface of the decoction pieces is burnt yellow or burnt brown outside, turns darker inside and releases a sweet burnt smell

3.5.3.1.3
carbonized frying 炒炭
operating procedure of putting the cleaned and cut decoction pieces into a pre-heated container, heating it continuously with moderate or strong fire, and keeping stirring or rotating it until it is burnt black or burnt brown outside and brown or yellow inside

3.5.4
roasting in ashes 煨制
removal of excess congealed oil by heating the Chinese Materia Medica, covered with wet powder or wrapped in a wet sheet of paper, then placing the preparation into hot talcum powder; heating the Chinese Materia Medica directly in hot bran; or placing the Chinese Materia Medica on oil-absorbent paper and placing layers of these on the fire

3.5.4.1
roasting in wheat bran 麦麸煨
heating the cleaned and cut decoction pieces with wheat bran

3.5.4.2
roasting in paper 纸裹煨
laying cleaned and cut decoction pieces on oil-absorbent paper while wet, then placing these at intervals and oven-drying beside the stove or in a drying room

Note 1 to entry: Heating continues until the oil fuses and permeates the paper, then the dried decoction is taken out and the sheets of paper removed.

3.5.5
calcining 煅制
heating of cleaned Chinese Materia Medica in containers at high temperature

3.5.5.1
open calcining 明煅
heating of cleaned Chinese Materia Medica in fire-resistant containers at high temperature to a molten degree

Note 1 to entry: This technique is commonly adopted for mineral, shell and fossil materials.

3.5.5.2
sealed calcining 闷煅
heating of cleaned or cut Chinese Materia Medica until they are carbonized in an airtight container at high temperature and in an oxygen-deficient atmosphere

Note 1 to entry: This process is commonly adopted for medicines with loose texture, or medicines that are easily turned to ashes or hard to carbonize.

3.5.5.3
quenching 淬
dipping of mineral Chinese Materia Medica into cold liquid adjuvants after they are calcined till red at high temperature in aerobic conditions

3.5.6
steaming 蒸制
exposure of cleaned or cut decoction pieces to steam, while in a container

Note 1 to entry: The decoction pieces may be steamed with or without adjuvents.

3.5.6.1
stewing 炖制
间接蒸法
heating of Chinese Materia Medica in a sealed container by boiling water or steam

3.5.7
boiling 煮制
heating of cleaned or cut decoction pieces in a container with water at 100°C

Note 1 to entry: Boiling may be with or without adjuvants.

3.5.8
scalding with boiling water 燀制
heating cleaned or cut decoction pieces in boiling water for a short period of time

Note 1 to entry: This process will separate peel from organic products without significant heating of the interior of the item.

3.5.9
multiple processing 复制
repeated processing of cleaned or cut Chinese Materia Medica, with one or more adjuvants

3.5.10
making frostlike powder 制霜
process in which Chinese Materia Medica are made into powder or crystals

Note 1 to entry: Frostlike powder can be classified as deoiling, dialysis, sublimation and decoction.

3.5.10.1
deoiling 去油制霜
heating of Chinese Materia Medica to remove oil and transform them into frostlike powder

3.5.10.2
dialysis 渗析制霜
processing of Chinese Materia Medica and other materials to produce crystals

3.5.10.3
sublimation 升华制霜
heating of Chinese Materia Medica to a high temperature to transform the item into powder or crystals

3.5.10.4
decocting for sediment 煎煮制霜
repeated boiling of Chinese Materia Medica in water to make them into deposits

3.5.11
water-grinding 水飞
processing method in which the insoluble processed Chinese Materia Medica are ground with an appropriate amount of water, then the suspension with fine powder poured out for later use and repeated until the powder is fine enough

Note 1 to entry: The residual is processed with the procedure mentioned above several times. All the suspension with fine power is cured of drying and then ground into even finer powder as needed.

Note 2 to entry: The process is commonly adopted for insoluble minerals and shell materials.

3.6 Craft of Chinese Materia Medica processing 中药炮制工艺类

3.6.1
sorting by hand 挑选
manually grouping Chinese Materia Medica or decoction pieces according to their sizes and diameters in order to clean them and facilitate further processing

3.6.2
sorting by sifter 筛选
removing impurities and grouping Chinese Materia Medica or decoction pieces by using sieves and dustpans according to their various sizes

3.6.3
sorting by wind 风选
removing impurities from Chinese Materia Medica by means of wind

Note 1 to entry: This process is affected by the different specific gravity of the material and the impurities.

Note 2 to entry: The commonly adopted crafts of separating the impurities from Chinese Materia Medica are winnowing and fanning.

3.6.4
sorting by water 水选
removing impurities and non-medicinal parts from the Chinese Materia Medica or decoction pieces by means of washing or rinsing

3.6.5
fluff removal by brushing 刷去毛
brushing away small quantities of fuzz from the Chinese Materia Medica during washing

Note 1 to entry: Removal of fuzz may be by hand or using a dehairer for larger quantities.

Note 2 to entry: Removal of fuzz by brushing controls the scattering of fuzz.

3.6.6
fluff removal by singeing 燎去毛
removing fuzz from the Chinese Materia Medica by short burning so as to scorch only the burrs and fuzz prior to scraping them

Note 1 to entry: This process preserves the inner structure of the material.

3.6.7
fluff removal by scalding 烫去毛
removing fuzz from the Chinese Materia Medica by employing stir-heating with hot sand to scorch the fuzz before taking them out of the heating device and striking them

3.6.8
fluff removal by grubbing 挖去毛
taking the fuzz and core out of the Chinese Materia Medica by splitting, and then cleaning and drying where they are harvested

3.6.9
fluff removal by rubbing 撞去毛
removing the non-medicinal parts and glutinous materials mixed with the fluff from the Chinese Materia Medica by single or multiple rubbing

3.6.10
softening 软化
inteneration of Chinese Materia Medica to a certain degree by using water

Note 1 to entry: The commonly adopted techniques are moistening by spraying, by washing, by soaking, by rinsing, with dew or with sand.

3.6.10.1
moistening by spraying 淋润
moistening the herbal Chinese Materia Medica by spraying water to the upright dispersed clean raw materials two to four times in order to achieve an acquired moisture and proper softness

Note 1 to entry: This process usually occurs while getting the item ready for the slicing phase.

3.6.10.2
moistening by washing 洗润
placing the Chinese Materia Medica into water, washing them quickly and then taking them out

Note 1 to entry: This process is commonly adopted for fragrant and water-absorbent Chinese Materia Medica with loose texture or Chinese Materia Medica with soluble content of effective components.

3.6.10.3
moistening by soaking 泡润
inteneration cleaning of Chinese Materia Medica by immersion in water until they are softened by absorbing water

Note 1 to entry: This technique is commonly adopted for Chinese Materia Medica with relatively solid texture and poor water absorption quality.

3.6.10.4
moistening by rinsing 漂润
soaking Chinese Materia Medica in water

Note 1 to entry: This process removes impurities, salinity, rotten material and toxic components by changing water, and is commonly adopted for toxic Chinese Materia Medica or those with salinity.

3.6.10.5
moistening by dew 露润
吸湿回润
placing cleaned Chinese Materia Medica in the open air during the night to moisten them with dew and then stuffing in stacks during the day

Note 1 to entry: The repetition of this action will soften the Chinese Materia Medica to an acquired softness while getting them ready for the slicing phase.

3.6.10.6
moistening by sand 砂润
mixing dry Chinese Materia Medica with moist sand to soften the Chinese Materia Medica by allowing the water to slowly penetrate into the Chinese Materia Medica textures by the principle of osmotic pressure

3.6.11
drying of decoction pieces 饮片干燥
removing surplus water from decoction pieces

3.6.11.1
natural drying 自然干燥
drying sliced decoction pieces in sunshine or shade

Note 1 to entry: Sunshine drying is adopted for most decoction pieces while shade drying is used for Chinese Materia Medica with fragrant smells, volatile components or bright colours.

3.6.11.2
artificial drying 人工干燥
drying decoction pieces with drying devices

Note 1 to entry: The temperature for drying the pieces should be ≤ 80 °C (≤ 60 °C for pieces with volatile components).

Note 2 to entry: Commonly used devices are drying cases and drying rooms.

3.6.12
slicing of decoction pieces 饮片切制
cutting raw materials or moistened and softened decoction pieces into pieces or cubes with cutting devices

3.6.12.1
cutting of bundles 把活
cutting groups of herbal Chinese Materia Medica

Note 1 to entry: Herbal Chinese Materia Medica include slender roots, rhizomes, rattan, bark and leafy herbs.

3.6.12.2
filing 锉
rasping hard solid Chinese Materia Medica into powder or strips with a grater

3.6.12.3
chopping 劈
splitting the large Chinese Materia Medica with a sharp knife and hacking them into smaller pieces

Note 1 to entry: Smaller pieces can be lumps or strips.

3.6.12.4
hay cutting 镑
scraping the softened Chinese Materia Medica of animal horns into sheets, crumbs or strips by using a table hay cutter

3.6.12.5
grinding 碾捣
placing the cleaned Chinese Materia Medica in a copper pounder for repetitive hitting until it is a fine powder

Note 1 to entry: Grinding is often adopted for mineral, animal or plant Chinese Materia Medica that are difficult to cut into decoction pieces due to their special texture or shape.

3.6.12.6
making herbal wool 制绒
making fibrous Chinese Materia Medica into floccule by hitting and grinding

Note 1 to entry: This process is done in order to moderate the property for the next phase of preparation.

3.6.12.7
kneading 揉搓
rubbing loose texture or strips of Chinese Materia Medica into small balls or fragments

Note 1 to entry: This process prepares material for subsequent dosing, decocting or preparation.

3.7 Quality of processed Chinese Materia Medica 中药炮制品质量类

3.7.1
shape of decoction pieces 片型
representation of decoction pieces according to their length and thickness

3.7.2
degree of fragmentation 破碎度
size of the smaller parts when Chinese Materia Medica decoction pieces are difficult to cut and thus fragmented with hands or machines

3.7.3
calcined residue content 灰分
weight of Chinese Materia Medica residue after being calcined

3.7.3.1
total calcined residue content 总灰分
生理灰分
residue of purified processed Chinese Materia Medica after being calcined

3.7.3.2
calcined residue content insoluble in acid 酸不溶性灰分
filtered mixture of the total calcined residue content processed with diluted hydrochloric acid

3.7.4
extract 浸出物
dry solid material after extracting the processed Chinese Materia Medica

3.7.5
harmful material 有害物质
item or agent (biological, chemical, radiological, and/or physical) which has the potential to cause harm to humans, animals or the environment, either by itself or through interaction with other factors

Note 1 to entry: In Chinese Materia Medica this includes heavy metal, arsenic and pesticide residue.

3.8 Preservation of processed Chinese Materia Medica 中药炮制品保管类

3.8.1
mildewing 霉变
moist processed Chinese Materia Medica propagating parasitic mould on its surface as well as inner parts at appropriate temperature

3.8.2
oil exfiltration 泛油
走油
occurrence of volatile oil, lipids or saccharides when decoction pieces become soft, sticky and deep in colour and smell like rancid oil

Note 1 to entry: Oil exfiltration is often caused by a damp environment.

3.8.3
burn-blasting 冲烧
internally generated smoking or ignition of material when the temperature of that material reaches 67 °C

Note 1 to entry: The heat generated from bacterium metabolism cannot escape and bursts out from the core, creating smoke, when the temperature reaches 67 °C.

3.9 Storage of processed Chinese Materia Medica 中药炮制品贮藏类

3.9.1
antagonistic storage 对抗同贮法
method of storing two or more processed Chinese Materia Medica together or with material which has a special odour to prevent them from moulding or being damaged by worms

3.9.2
sealed storage 密封贮藏法
isolation of processed Chinese Materia Medica from air and moisture to prevent external air and microorganism contact

Note 1 to entry: Sealed storage can prevent the Chinese Materia Medica from moisture, efflorescence and mould.

3.9.3
storage with a lid 密闭贮藏法
protection of processed Chinese Materia Medica from dust and foreign bodies by using containers with lids

Note 1 to entry: Airtight storage with a lid, which is applicable to processed Chinese Materia Medica.

3.9.4
sterilization by gas 气体灭菌
conservation of processed Chinese Materia Medica with ethylene oxide

Note 1 to entry: Sterilization by gas kills bacterium, fungus and pests by means of its diffusivity and penetrability.

3.9.5
conservation by gas adjustment 气调养护
conserving material in an insect-free and mould-proof microclimate of low oxygen and high nitrogen, or high carbon dioxide

Note 1 to entry: Conservation by gas adjustment is achieved by reducing the oxygen content and inflating nitrogen and carbon dioxide.

3.9.6
dampproof by air curtain 气幕防潮
气帘防潮
method of preservation by discharging dry cold air without delay via the opening of the auto-door synchronized with the cold wind emitting device

Note 1 to entry: This process shuts out the hot, moist air, the storeroom is dampproof and the temperature will be relatively constant.

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