
**Traditional Chinese medicine —
Storage requirements for raw
materials and decoction pieces**

*Médecine traditionnelle chinoise — Exigences de conservation pour
les matières premières et les décoctions*

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 22217:2020

<https://standards.iteh.ai/catalog/standards/iso/bcf3f0b7-eea8-4bb7-8ce2-5f576d5c61ff/iso-22217-2020>



iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 22217:2020

<https://standards.iteh.ai/catalog/standards/iso/bcf3f0b7-eea8-4bb7-8ce2-5f576d5c61ff/iso-22217-2020>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

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

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 General	2
4.1 Storage areas	2
4.2 Package materials and containers	2
5 Optimum storage conditions	2
5.1 General	2
5.2 Storage requirements of raw materials and decoction pieces	3
5.2.1 Normal temperature and dry place	3
5.2.2 Cool and dry place	20
5.2.3 Normal temperature and moist place	26
5.2.4 Cool and moist place	26
5.3 Specified storage requirements of raw materials and decoction pieces	27
5.3.1 In a well-closed container	27
5.3.2 In a tightened container	28
5.3.3 Protection from light	28
Annex A (informative) Reference values of national and regional limits of temperature and relative humidity for storage	30
Annex B (informative) Storage attention for raw materials and decoction pieces	31
Annex C (informative) Collaborative storage	46
Annex D (informative) Close monitoring raw materials and decoction pieces	47
Bibliography	50

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

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.

ISO 22217:2020

<https://standards.iteh.ai/catalog/standards/iso/bcf3f0b7-aaa8-4bb7-8ce2-5f576d5c61ff/iso-22217-2020>

Introduction

Raw materials (Chinese materia medica) and decoction pieces have originated from various and complex sources, such as plants, animals and minerals. Also, different raw materials and decoction pieces contain different compositions. Without the proper storage conditions (regarding temperature, humidity, air and sunlight), quality variation could easily occur. There are many possible variations in the quality of raw materials and decoction pieces, including damage by worms or vermin, mould, oil extravasation, discolouring, loss of odour, efflorescence, deliquescence, adhesion, volatilization and decay. In other words, inappropriate storage conditions and methods could lead to quality variation and economic loss, as well as variation in the efficacy and safety of raw materials and decoction pieces in clinical medication use.

Storage requirements for raw materials and decoction pieces give scientific, reasonable, economic and effective storage conditions for different raw materials and decoction pieces. In these conditions, raw materials and decoction pieces can be effectively protected from quality variation and the safety, quality and clinical effectiveness of raw materials and decoction pieces can thus be guaranteed.

This document gives information that can remind the user to give priority to the unstable or expensive raw materials and decoction pieces; to avoid predictable quality variation; and to reduce losses. For example, raw materials and decoction pieces rich in grease, starch and protein could be damaged by worms; raw materials and decoction pieces rich in grease, volatile oil and mucilage could have oil extravasation at high temperatures and relative humidity; or raw materials and decoction pieces rich in volatile oil could lose their odour.

As national implementation may differ, national standards bodies are invited to modify the values given in [5.2.1](#), [5.2.2](#), [5.2.3](#) and [5.2.4](#) in their national standards. Examples of national and regional values are given in [Annex A](#).

Examples of storage attention for raw materials and decoction pieces to avoid quality variations are given in [Annex B](#). Information of a traditional Chinese medicine storage method named "Collaborative storage" is given in [Annex C](#). Examples of toxic and rare raw materials and decoction pieces needing close monitoring are given in [Annex D](#).

ISO 22217:2020

<https://standards.iteh.ai/catalog/standards/iso/bcf3f0b7-eea8-4bb7-8ce2-5f576d5c61ff/iso-22217-2020>

Traditional Chinese medicine — Storage requirements for raw materials and decoction pieces

1 Scope

This document specifies the general storage requirements for raw materials and decoction pieces.

It is applicable to the storage of raw materials and decoction pieces used in traditional Chinese 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

storage

preservation measures for keeping raw materials and decoction pieces under defined conditions, retaining effective ingredients and biological activity of raw materials and decoction pieces, preventing spoilage, quality variation and contamination, and ensuring quality and safety of raw materials and decoction pieces

3.2

raw materials

Chinese materia medica

CMM

medicinal parts of medicinal plants, animals and minerals after preliminary processing, which are used as crude materials to make decoction pieces in Chinese medicine

[SOURCE: ISO 18662-1:2017, 3.1, modified — Note 1 to entry removed.]

3.3

decoction piece

prescription medicinal processed from Chinese materia medica under the guidance of TCM theory and processing methods for Chinese medicines

Note 1 to entry: Decoction pieces are directly used in clinical practice or the production of prepared medicines.

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

3.4

protected from light

kept in a container that can prevent transmittance of light affecting the specified properties and quality of the contents under ordinary conditions of handling, shipment and storage

3.5

well-closed container

container with a closure system that protects the contents from extraneous solids and from loss of the contents under ordinary conditions of storage

3.6

tightened container

container with a closure system that protects the contents from extraneous solids or liquids, from loss of the contents, and from efflorescence, deliquescence or evaporation under ordinary conditions of storage

3.7

cool place

storage location where a substance is kept at an ambient temperature not exceeding 20 °C

3.8

normal temperature place

storage location where a substance is kept at an ambient temperature of 20 °C to 30 °C

3.9

dry place

storage location where a substance is kept at a relative humidity not exceeding 60 %

3.10

moist place

storage location where a substance is kept at a relative humidity of 60 % to 100 %

3.11

collaborative storage

storage method that keeps two or more kinds of raw materials and decoction pieces together, preventing quality variation like damage by worms or vermin, discolouring or mould of raw materials and decoction pieces

4 General

ISO 22217:2020

<https://standards.iteh.ai/catalog/standards/iso/bcf3f0b7-eea8-4bb7-8ce2-5f576d5c61ff/iso-22217-2020>

4.1 Storage areas

Storage areas shall be clean and free from rats, pests, flies, birds or any other animals. Contamination and cross-contamination of raw materials and decoction pieces shall be avoided.

4.2 Package materials and containers

Immediate package materials and containers shall be innocuous and clean, shall not interact with the raw materials and decoction pieces packed, and shall not affect the quality of the raw materials and decoction pieces in the containers.

The external package shall label the product name and plant scientific name, quality features, country and province/state, date of production and expiry date, and storage method and requirements of the raw materials and decoction pieces.

5 Optimum storage conditions

5.1 General

Storage requirements specify the temperature and relative humidity (RH) of storage location. Specified storage requirements specify certain raw materials and decoction pieces that should be protected from air or light, be non-powdered, be uncomminuted or be under nitrogen.

Unless otherwise specified, if the decoction piece has the same name as the corresponding raw materials, it shares the same storage requirements of the corresponding raw materials.

For more detailed information of raw materials, such as source and other names, please see ISO 18662-1. For the codes of raw materials, please see ISO 18668-3. For the codes of decoction pieces, please see ISO 18668-2.

Unless otherwise specified, where normal temperature place or room temperature place is specified, it may be replaced by cool place.

In the case that a requirement on storage in an individual herb standard (e.g. ISO 19824, ISO 20409, ISO 20759) is available, the requirement in that standard takes precedence.

5.2 Storage requirements of raw materials and decoction pieces

5.2.1 Normal temperature and dry place

The raw materials and decoction pieces in [Table 1](#) shall be stored at a normal temperature in a dry place, at an ambient temperature of 20 °C to 30 °C and relative humidity not exceeding 60 %.

Table 1 — Raw materials and decoction pieces stored at a normal temperature in a dry place

Latin name	Origin	Herbal name	Han character name
Abelmoschi corolla	dried corolla of <i>Abelmoschus manihot</i> (L.)	Abelmoschus manihot corolla	黄蜀葵花(黄蜀葵花)
Abri herba	dried herb of <i>Abrus cantoniensis</i> Hance	Abrus cantoniensis herb	鸡骨草(雞骨草)
Acanthopanax cortex	dried root bark of <i>Acanthopanax gracilistylus</i> W.W. Smith	Acanthopanax gracilistylus root bark	五加皮(五加皮)
Acanthopanax senticosi radix et rhizoma seu caulis	dried root and rhizome or stem of <i>Acanthopanax senticosus</i> (Rupr. et Maxim.) Harms	Acanthopanax senticosus root and rhizome or stem	刺五加(刺五加)
Aconiti kusnezoffii folium	dried leaf of <i>Aconitum kusnezoffii</i> Reichb.	Aconitum kusnezoffii leaf	草乌叶(草烏葉)
Aconiti kusnezoffii radix	dried root tuber of <i>Aconitum kusnezoffii</i> Reichb.	Aconitum kusnezoffii root tuber	草乌(草烏)
Aconiti radix	dried parent root tuber of <i>Aconitum carmichaeli</i> Debx.	Aconitum carmichaeli parent root tuber	川乌(川烏)
Acori calami rhizoma	dried rhizome of <i>Acorus calamus</i> L.	Acorus calamus rhizome	藏菖蒲(藏菖蒲)
Acori tatarinowii rhizoma	dried rhizome of <i>Acorus tatarinowii</i> Schott.	Acorus tatarinowii rhizome	石菖蒲(石菖蒲)
Adenophorae radix	dried root of <i>Adenophora tetraphylla</i> (Thunb.) Fisch or <i>Adenophora stricta</i> Miq.	Adenophora tetraphylla root; Adenophora stricta root	南沙参(南沙參)
Aesculi semen	dried ripe seed of <i>Aesculus chinensis</i> Bge., <i>Aesculus chinensis</i> Bge. var. <i>chekiangensis</i> (Hu et Fang) Fang or <i>Aesculus wilsonii</i> Rehd.	Aesculus chinensis seed; Aesculus chekiangensis seed; Aesculus wilsonii seed	娑罗子(娑羅子)
Agkistrodon	dried body of <i>Agkistrodon acutus</i> (Güenther).	Agkistrodon acutus body	蕲蛇(蕲蛇)
Agrimoniae herba	dried aerial part of <i>Agrimonia pilosa</i> Ledeb.	Agrimonia pilosa aerial part	仙鹤草(仙鶴草)
Ailanthi cortex	dried root bark or stem bark of <i>Ailanthus altissima</i> (Mill.) Swingle	Ailanthus altissima root bark or stem bark	椿皮(椿皮)
Akebiae caulis	dried lianoid stem of <i>Akebia quinata</i> (Thunb.) Decne., <i>Akebia trifoliata</i> (Thunb.) Koidz. or <i>Akebia trifoliata</i> (Thunb.) Koidz. var. <i>australis</i> (Diels) Rehd.	Akebia quinata lianoid stem; Akebia trifoliata lianoid stem; Akebia australis lianoid stem	木通(木通)

Table 1 (continued)

Latin name	Origin	Herbal name	Han character name
Akebiae fructus	dried nearly ripe fruit of <i>Akebia quinata</i> (Thunb.) Decne, <i>Akebia trifoliata</i> (Thunb.) Koidz. or <i>Akebia trifoliata</i> (Thunb.) Koidz. var. <i>australis</i> (Diels) Rehd.	Akebia quinata fruit; Akebia trifoliata fruit; Akebia australis fruit	预知子 (預知子)
Albiziae cortex	dried stem bark of <i>Albizia julibrissin</i> Durazz.	Albizia julibrissin stem bark	合欢皮 (合歡皮)
Albiziae flos	dried inflorescence or flower bud of <i>Albizia julibrissin</i> Durazz.	Albizia julibrissin inflorescence or flower bud	合欢花 (合歡花)
Alismatis rhizoma	dried tuber of <i>Alisma orientale</i> (Sam.) Juzep.	Alismas orientale tuber	泽泻 (澤瀉)
Allii macrostemi bulbus	dried bulb of <i>Allium macrostemon</i> Bge. or <i>Allium chinensis</i> G. Don.	Allium macrostemon bulb; Allium chinensis bulb	薤白 (薤白)
Allii tuberosi semen	dried ripe seed of <i>Allium tuberosum</i> Rottl. ex Spreng.	Allium tuberosum seed	韭菜子 (韭菜子)
Alumen	processed mineral of sulfates of alumstone, containing mainly potassium aluminium sulfate $[KAl(SO_4)_2 \cdot 12H_2O]$	Alum	白矾 (白礬)
Ampelopsis radix	dried root tuber of <i>Ampelopsis japonica</i> (Thunb.) Makino	Ampelopsis japonica root tuber	白藜 (白藜)
Andrographis herba	dried aerial part of <i>Andrographis paniculata</i> (Burm. f.) Nees	Andrographis paniculata aerial part	穿心莲 (穿心蓮)
Anemarrhenae rhizoma	dried rhizome of <i>Anemarrhena asphodeloides</i> Bge.	Anemarrhena asphodeloides rhizome	知母 (知母)
Angelicae pubescentis radix	dried root of <i>Angelica pubescens</i> Maxim. f. <i>biserrata</i> Shan et Yuan	Angelica pubescens root	独活 (獨活)
Arcae concha	shell of <i>Arca subcrenata</i> Lischke, <i>Arca granosa</i> Linnaeus or <i>Arca inflata</i> Reeve	Arca subcrenata shell; Arca granosa shell; Arca inflata shell	瓦楞子 (瓦楞子)
Arctii fructus	dried ripe fruit of <i>Arctium lappa</i> L.	Arctium lappa fruit	牛蒡子 (牛蒡子)
Ardisiae crenatae radix	dried root of <i>Ardisia crenata</i> Sims	Ardisia crenata root	朱砂根 (朱砂根)
Arecae pericarpium	dried pericarp of <i>Areca catechu</i> L.	Areca catechu pericarp	大腹皮 (大腹皮)
Arecae semen	dried ripe seed of <i>Areca catechu</i> L.	Areca catechu seed	槟榔 (檳榔)
Arisaema cum bile	dried Bile prepared tuber of <i>Arisaema erubescens</i> (Wall.) Schott., <i>Arisaema heterophyllum</i> Bl., <i>Arisaema amurense</i> Maxim.	Bile Arisaema erubescens tuber; Bile Arisaema amurense tuber	胆南星 (膽南星)
Arisaematis rhizoma	dried tuber of <i>Arisaema erubescens</i> (Wall.) Schott., <i>Arisaema heterophyllum</i> Bl. or <i>Arisaema amurense</i> Maxim.	Arisaema erubescens tuber; Arisaema heterophyllum tuber; Arisaema amurense tuber	天南星 (天南星)
Aristolochiae fructus	dried ripe fruit of <i>Aristolochia contorta</i> Bge. or <i>Aristolochia debilis</i> Sieb. et Zucc.	Aristolochia contorta fruit; Aristolochia debilis fruit	马兜铃 (馬兜鈴)
Aristolochiae herba	dried aerial part of <i>Aristolochia debilis</i> Sieb. et Zucc. or <i>Aristolochia contorta</i> Bge.	Aristolochia debilis aerial part; Aristolochia contorta aerial part	天仙藤 (天仙藤)
Arnebiae radix	dried root of <i>Arnebia euchroma</i> (Royle) Johnst. or <i>Arnebia guttata</i> Bunge	Arnebia euchroma root; Arnebia guttata root	紫草 (紫草)
Asini corii colla	solid glue prepared from the dried or fresh skin of <i>Equus asinus</i> Linnaeus (Fam. Equidae) by decoction and concentration	Equus asinus skin solid glue	阿胶 (阿膠)
Asparagi radix	dried root tuber of <i>Asparagus cochinchinensis</i> (Lour.) Merr	Asparagus cochinchinensis root tuber	天冬 (天冬)
Aspongopus	dried body of <i>Aspongopus chinensis</i> Dallas	Aspongopus chinensis body	九香虫 (九香蟲)
Astragali complanati semen	dried ripe seed of <i>Astragalus complanatus</i> R. Br.	Astragalus complanatus seed	沙苑子 (沙苑子)

Table 1 (continued)

Latin name	Origin	Herbal name	Han character name
Astragali radix	dried root of <i>Astragalus membranaceus</i> (Fisch.) Bge. var. <i>mongholicus</i> (Bge.) Hsiao or <i>Astragalus membranaceus</i> (Fisch.) Bge.	<i>Astragalus mongholicus</i> root; <i>Astragalus membranaceus</i> root	黄芪 (黄芪)
Aucklandiae radix	dried root of <i>Aucklandia lappa</i> Decne.	<i>Aucklandia lappa</i> root	木香 (木香)
Bambusae caulis in taenia	dried middle shavings of the stem of <i>Bambusa tuldoidea</i> Munro, <i>Sinocalamus beecheyanus</i> (Munro) McClure var. <i>pubescens</i> P.F.Li or <i>Phyllostachys nigra</i> (Lodd.) Munro var. <i>henonis</i> (Mitf.) Stapf ex Rendle	<i>Bambusa tuldoidea</i> middle shavings; <i>Sinocalamus pubescens</i> middle shavings; <i>Phyllostachys henonis</i> middle shavings	竹茹 (竹茹)
Bambusae concretio silicea	dried masses of secretion in the stem of <i>Bambusa textilis</i> McClure or the <i>Schizostachyum chinense</i> Rendle	<i>Bambusa textilis</i> stem secretion masses; <i>Schizostachyum chinense</i> stem secretion masses	天竺黄 (天竺黄)
Baphicacanthis cusiae rhizoma et radix	dried rhizome and root of <i>Baphicacanthus cusia</i> (Nees) Bremek	<i>Baphicacanthus cusia</i> rhizome and root	南板蓝根 (南板藍根)
Belamcandae rhizoma	dried rhizome of <i>Belamcanda chinensis</i> (L.) DC	<i>Belamcanda chinensis</i> rhizome	射干 (射干)
Belladonnae herba	dried herb of <i>Atropa belladonna</i> L.	<i>Atropa belladonna</i> herb	颠茄草 (颠茄草)
Benincasae exocarpium	dried exocarp of <i>Benincasa hispida</i> (Thunb.) Cogn.	<i>Benincasa hispida</i> exocarp	冬瓜皮 (冬瓜皮)
Berberidis radix	dried root of <i>Berberis soulieana</i> Schneid., <i>Berberis wilsonae</i> Hemsl., <i>Berberis poiretii</i> Schneid., <i>Berberis verna</i> Schneid. and similar species	<i>Berberis soulieana</i> root; <i>Berberis wilsonae</i> root; <i>Berberis poiretii</i> root; <i>Berberis verna</i> root	三颗针 (三顆針)
Bistortae rhizoma	dried rhizome of <i>Polygonum bistorta</i> L.	<i>Polygonum bistorta</i> rhizome	拳参 (拳參)
Bletillae rhizoma	dried tuber of <i>Bletilla striata</i> (Thunb.) Reichb. f.	<i>Bletilla striata</i> tuber	白及 (白及)
Bolbostematis rhizoma	dried tuber of <i>Bolbostemma paniculatum</i> (Maxim.) Franquet	<i>Bolbostemma paniculatum</i> tuber	土贝母 (土貝母)
Bombyx batryticatus	dried body of the fourth- to fifth-stage larva of <i>Bombyx mori</i> Linnaeus	<i>Bombyx mori</i> body	僵蚕 (僵蠶)
Bovis calculus sativus	cow-bezoar cultured in vitro	Cow-bezoar cultured in vitro	体外培育牛黄 (體外培育牛黃)
Broussonetiae fructus	dried ripe fruit of <i>Broussonetia papyrifera</i> (L.) Vent.	<i>Broussonetia papyrifera</i> fruit	楮实子 (楮實子)
Bruceae fructus	dried ripe fruit of <i>Brucea javanica</i> (L.) Merr.	<i>Brucea javanica</i> fruit	鸦胆子 (鴉膽子)
Bubali cornu	horn of <i>Bubalus bubalis</i> Linnaeus	<i>Bubalus bubalis</i> horn	水牛角 (水牛角)
Buddlejae flos	dried flower bud and its inflorescence of <i>Buddleja officinalis</i> Maxim.	<i>Buddleja officinalis</i> flower and inflorescence	密蒙花 (密蒙花)
Bufois venenum	dried secretion of <i>Bufo bufo gargarizans</i> Cantor or <i>Bufo melanostictus</i> Schneider	<i>Bufo bufo gargarizans</i> secretion; <i>Bufo melanostictus</i> secretion	蟾酥 (蟾酥)
Bungarus	dried body of <i>Bungarus multicinctus</i> Blyth	<i>Bungarus multicinctus</i> body	金钱白花蛇 (金錢白花蛇)
Bupleuri radix	dried root of <i>Bupleurum chinense</i> DC. or <i>Bupleurum scorzonrifolium</i> Willd.	<i>Bupleurum chinense</i> root; <i>Bupleurum scorzonrifolium</i> root	柴胡 (柴胡)
Calamina	mineral of carbonates of smithsonite of calcite group, containing mainly zinc carbonate	Calamine	炉甘石 (爐甘石)
Callicarpae caulis et folium	dried stem, branch and leaf of <i>Callicarpa kwangtungensis</i> Chun	<i>Callicarpa kwangtungensis</i> stem, branch and leaf	广东紫珠 (廣東紫珠)
Callicarpae formosanae folium	dried leaf of <i>Callicarpa formosana</i> Rolfe	<i>Callicarpa formosana</i> leaf	紫珠叶 (紫珠葉)
Callicarpae macrophyllae folium	dried leaf and foliferous branch of <i>Callicarpa macrophylla</i> Vahl	<i>Callicarpa macrophylla</i> leaf and foliferous branch	大叶紫珠 (大葉紫珠)

Table 1 (continued)

Latin name	Origin	Herbal name	Han character name
Calomelas	calomel	Calomel	轻粉(輕粉)
Campsis flos	dried flower of <i>Campsis grandiflora</i> (Thunb.) K. Schum. or <i>Campsis radicans</i> (L.) Seem.	Campsis grandiflora flower; Campsis radicans flower	凌霄花(凌霄花)
Canarii fructus	dried ripe fruit of <i>Canarium album</i> Raeusch.	Canarium album fruit	青果(青果)
Canavaliae semen	dried ripe seed of <i>Canavalia gladiata</i> (Jacq.) DC.	Canavalia gladiata seed	刀豆(刀豆)
Capsici fructus	dried ripe fruit of <i>Capsicum annuum</i> L. and its cultivated varieties	Capsicum annuum fruit	辣椒(辣椒)
Carotae fructus	dried fruit of <i>Daucus carota</i> L.	Daucus carota fruit	南鹤虱(南鶴虱)
Cassiae semen	dried ripe seed of <i>Cassia obtusifolia</i> L. or <i>Cassia tora</i> L.	Cassia obtusifolia seed; Cassia tora seed	决明子(決明子)
Catechu	dried concentrated decoction prepared from the peeled branch and stem of <i>Acacia catechu</i> (L. f.) Willd.	Acacia catechu concentrated decoction	儿茶(兒茶)
Celosiae cristatae flos	dried capitulum of <i>Celosia cristata</i> L.	Celosia cristata capitulum	鸡冠花(雞冠花)
Celosiae semen	dried ripe seed of <i>Celosia argentea</i> L.	Celosia argentea seed	青箱子(青箱子)
Centellae herba	dried herb of <i>Centella asiatica</i> (L.) Urb.	Centella asiatica herb	积雪草(積雪草)
Centipidae herba	dried herb of <i>Centipeda minima</i> (L.) A. Br. et Aschers.	Centipeda minima herb	鹅不食草(鵝不食草)
Cervi cornu	ossified antler or antler base of <i>Cervus elaphus</i> Linnaeus or <i>Cervus nippon</i> Temminck	Cervus elaphus ossified antler or antler base; Cervus nippon ossified antler or antler base	鹿角(鹿角)
Cervi cornus colla	dried solid glue of <i>Cervus elaphus</i> Linnaeus, <i>Cervus nippon</i> Temminck	Cervus elaphus solid glue; Cervus nippon solid glue	鹿角胶(鹿角膠)
Changii radix	dried root of <i>Changium smyrnioides</i> Wolff.	Changium smyrnioides root	明党参(明黨參)
Chebulae fructus	dried ripe fruit of <i>Terminalia chebula</i> Retz. or <i>Terminalia chebula</i> Retz. var. <i>tomentella</i> Kurt.	Terminalia chebula fruit; Terminalia tomentella fruit	诃子(訶子)
Chelidonii herba	dried herb of <i>Chelidonium majus</i> L.	Chelidonium majus herb	白屈菜(白屈菜)
Chloriti lapis	black mica schist or a carbonate schist of chlorite mica of metamorphic group	Chlorite	青礞石(青礞石)
Cibotii rhizoma	dried rhizome of <i>Cibotium barometz</i> (L.) J. Sm.	Cibotium barometz rhizome	狗脊(狗脊)
Cicadae periostracum	slough of the nymph of <i>Cryptotympana pustulata</i> Fabricius during emergence	Cryptotympana pustulata nymph slough	蝉蜕(蟬蛻)
Cimicifugae rhizoma	dried rhizome of <i>Cimicifuga heracleifolia</i> Kom., <i>Cimicifuga dahurica</i> (Turcz.) Maxim. or <i>Cimicifuga foetida</i> L.	Cimicifuga heracleifolia rhizome; Cimicifuga dahurica rhizome; Cimicifuga foetida rhizome	升麻(升麻)
Cinnabaris	cinnabar powder	Cinnabar powder	朱砂(朱砂)
Cirsii herba	dried aerial part of <i>Cirsium setosum</i> (Wild.) MB.	Cirsium setosum aerial part	小蓟(小薊)
Cirsii japonici herba	dried aerial part of <i>Cirsium japonicum</i> DC.	Cirsium japonicum aerial part	大蓟(大薊)
Cissampelotis herba	dried whole plant of <i>Cissampelos pareira</i> L. var. <i>hirsuta</i> (Buch. ex DC.) Forman.	Cissampelos hirsuta whole plant	亚乎奴(亞乎奴)
Cistanches herba	dried fleshy stem with scales of <i>Cistanche deserticola</i> Y.C. Ma. or the <i>Cistanche tubulosa</i> (Schrenk) Wight	Cistanche deserticola stem with scales; Cistanche tubulosa stem with scales	肉苁蓉(肉蓯蓉)

Table 1 (continued)

Latin name	Origin	Herbal name	Han character name
Citri reticulatae semen	dried ripe seed of <i>Citrus reticulata</i> Blanco and its other cultivates	Citrus reticulata seed	橘核 (橘核)
Clematidis armandii caulis	dried lianoid stem of <i>Clematis armandii</i> Franch. or <i>Clematis montana</i> Buch.-Ham.	Clematis armandii lianoid stem; Clematis montana lianoid stem	川木通 (川木通)
Clematidis radix et rhizoma	dried root and rhizome of <i>Clematis chinensis</i> Osbeck, <i>Clematis hexapetala</i> Pall. or <i>Clematis manshurica</i> Rupr.	Clematis chinensis root and rhizome; Clematis hexapetala root and rhizome; Clematis manshurica root and rhizome	威灵仙 (威靈仙)
Clinopodii herba	dried aerial part of <i>Clinopodium polycephalum</i> (Vaniot) C. Y. Wu et Hsuan, <i>Clinopodium chinensis</i> (Benth) Q.Kuntze	Clinopodium polycephalum aerial part; Clinopodium chinensis aerial part	断血流 (斷血流)
Cnidii fructus	dried ripe fruit of <i>Cnidium monnieri</i> (L.) Cuss.	Cnidium monnieri fruit	蛇床子 (蛇床子)
Codonopsis radix	dried root of <i>Codonopsis pilosula</i> (Franch.) Nannf., <i>Codonopsis pilosula</i> Nannf. var. <i>modesta</i> (Nannf.) L.T. Shen or <i>Codonopsis tangshen</i> Oliv.	Codonopsis pilosula root; Codonopsis modesta root; Codonopsis tangshen root	党参 (黨參)
Coicis semen	dried ripe kernel of <i>Coix lacrymajobi</i> L. var. <i>mayuen</i> (Roman.) Stapf.	Coix mayuen kernel	薏苡仁 (薏苡仁)
Commelinae herba	dried aerial part of <i>Commelina communis</i> L.	Commelina communis aerial part	鸭跖草 (鴨跖草)
Conyzae herba	dried aerial part of <i>Conyza blinii</i> Levl.	Conyza blinii aerial part	金胆草 (金龍膽草)
Coptidis rhizoma	dried rhizome of <i>Coptis chinensis</i> Franch., <i>Coptis deltoidea</i> C.Y. Cheng et Hsiao or <i>Coptis teeta</i> Wall.	Coptis chinensis rhizome; Coptis deltoidea rhizome; Coptis teeta rhizome	黄连 (黃連)
Coriolus	dried sporophore of <i>Coriolus versicolor</i> (L.ex Fr.) Quel.	Coriolus versicolor sporophore	云芝 (雲芝)
Corni fructus	dried ripe sarcocarp of <i>Cornus officinalis</i> Sieb. et Zucc.	Cornus officinalis sarcocarp	山茱萸 (山茱萸)
Corydalis bungeanae herba	dried herb of <i>Corydalis bungeana</i> Turcz.	Corydalis bungeana herb	苦地丁 (苦地丁)
Corydalis decumbentis rhizoma	dried tuber of <i>Corydalis decumbens</i> (Thunb.) Pers.	Corydalis decumbens tuber	夏天无 (夏天無)
Corydalis rhizoma	dried tuber of <i>Corydalis yanhusuo</i> W.T. Wang.	Corydalis yanhusuo tuber	延胡索 (延胡索)
Crataegi folium	dried leaf of <i>Crataegus pinnatifida</i> Bge. var. <i>major</i> N.E. Br. or <i>Crataegus pinnatifida</i> Bge.	Crataegus major leaf; Crataegus pinnatifida leaf	山楂叶 (山楂葉)
Crataegi fructus	dried ripe fruit of <i>Crataegus pinnatifida</i> Bge. var. <i>major</i> N.E. Br., or <i>Crataegus pinnatifida</i> Bge.	Crataegus major fruit; Crataegus pinnatifida fruit	山楂 (山楂)
Cremastrae/Pleiones pseudobulbus	dried pseudobulb of <i>Cremastra appendiculata</i> (D. Don) Makino, <i>Pleione bulbocodioides</i> (Franch.) Rolfe or <i>Pleione yunnanensis</i> Rolfe	Cremastra appendiculata pseudobulb; Pleione bulbocodioides pseudobulb; Pleione yunnanensis pseudobulb	山慈菇 (山慈菇)
Crinis carbonisatus	carbonized human hair	Carbonized Homo sapiens hair	血余炭 (血餘炭)
Curculiginis rhizoma	dried rhizome of <i>Curculigo orchoides</i> Gaertn.	Curculigo orchoides rhizome	仙茅 (仙茅)
Curcumae radix	dried root tuber of <i>Curcuma wenyujin</i> Y.H. Chen et C. Ling, <i>Curcuma longa</i> L., <i>Curcuma kwangsiensis</i> S.G. Lee et C.F. Liang, or <i>Curcuma phaeocaulis</i> Val.	Curcuma wenyujin root tuber; Curcuma longa root tuber; Curcuma kwangsiensis root tuber; Curcuma phaeocaulis root tuber	郁金 (郁金)

Table 1 (continued)

Latin name	Origin	Herbal name	Han character name
Curcumae rhizoma	dried rhizome of <i>Curcuma phaeocaulis</i> Valetton, <i>Curcuma kwangsiensis</i> S.G. Lee et C.F. Liang or <i>Curcuma wenyujin</i> Y.H. Chen et C. Ling	Curcuma phaeocaulis rhizome; Curcuma kwangsiensis rhizome; Curcuma wenyujin rhizome	莪术 (莪朮)
Cuscutae semen	dried ripe seed of <i>Cuscuta australis</i> R. Br. or <i>Cuscuta chinensis</i> Lam.	Cuscuta australis seed; Cuscuta chinensis seed	菟丝子 (菟絲子)
Cynanchi atrati radix et rhizoma	dried root and rhizome of <i>Cynanchum atratum</i> Bge. or <i>Cynanchum versicolour</i> Bge.	Cynanchum atratum root and rhizome; Cynanchum versicolour root and rhizome	白薇 (白薇)
Cynanchi stauntonii rhizoma et radix	dried rhizome and root of <i>Cynanchum stauntonii</i> (Decne.) Schltr. ex Lévl. or <i>Cynanchum glaucescens</i> (Decne.) Hand.-Mazz.	Cynanchum stauntonii rhizome and root; Cynanchum glaucescens rhizome and root	白前 (白前)
Cynomorii herba	dried fleshy stem of <i>Cynomorium songaricum</i> Rupr.	Cynomorium songaricum stem	锁阳 (鎖陽)
Daturae flos	dried flower of <i>Datura metel</i> L.	Datura metel flower	洋金花 (洋金花)
Dendrobii caulis	dried stem of cultivated species of <i>Dendrobium nobile</i> Lindl., <i>Dendrobium chrysotoxum</i> Lindl. or <i>Dendrobium fimbriatum</i> Hook and similar species from the same genus	Dendrobium nobile stem; Dendrobium chrysotoxum stem; Dendrobium fimbriatum stem	干石斛 (乾石斛)
Dendrobii officinalis caulis	dried stem of <i>Dendrobium officinale</i> Kimura et Migo	Dendrobium officinale stem	铁皮石斛 (鐵皮石斛)
Descurainiae semen/ Lepidii semen	dried ripe seed of <i>Descurainia sophia</i> (L.) Webb ex Prantl or <i>Lepidium apetalum</i> Willd.; the former is commonly known as "Nan ting li zi" and the latter is known as "Bei ting li zi"	Descurainia sophia seed; Lepidium apetalum seed	葶苈子 (葶藶子)
Desmodii styracifolii herba	dried aerial part of <i>Desmodium styracifolium</i> (Osbeck) Merr.	Desmodium styracifolium aerial part	广金钱草 (廣金錢草)
Dianthi herba	dried aerial part of <i>Dianthus superbus</i> L. or <i>Dianthus chinensis</i> L.	Dianthus superbus aerial part; Dianthus chinensis aerial part	瞿麦 (瞿麥)
Dichroae radix	dried root of <i>Dichroa febrifuga</i> Lour.	Dichroa febrifuga root	常山 (常山)
Dictamni cortex	dried root bark of <i>Dictamnus dasycarpus</i> Turcz.	Dictamnus dasycarpus root bark	白鲜皮 (白鮮皮)
Dioscoreae hypoglaucae rhizoma	dried rhizome of <i>Dioscorea hypoglauca</i> Palibin.	Dioscorea hypoglauca rhizome	粉草薹 (粉草薹)
Dioscoreae nipponicae rhizoma	dried rhizome of <i>Dioscorea nipponica</i> Makino.	Dioscorea nipponica rhizome	穿山龙 (穿山龍)
Dioscoreae panthaicae rhizoma	dried rhizome of <i>Dioscorea panthaica</i> Prain et Burk.	Dioscorea panthaica rhizome	黄山药 (黃山藥)
Dioscoreae rhizoma	dried rhizome of <i>Dioscorea opposita</i> Thunb.	Dioscorea opposita rhizome	山药 (山藥)
Dioscoreae spongiosae rhizoma	dried rhizome of <i>Dioscorea spongiosa</i> J.Q. Xi, M. Mizuno et W.L. Zhao or <i>Dioscorea futschauensis</i> Uline ex R. Kunth	Dioscorea spongiosa rhizome; Dioscorea futschauensis rhizome	绵草薹 (綿草薹)
Dipsaci radix	dried root of <i>Dipsacus asper</i> Wall. ex Henry	Dipsacus asper root	续断 (續斷)
Drynariae rhizoma	dried rhizome of <i>Drynaria fortunei</i> (Kunze) J. Sm.	Drynaria fortunei rhizome	骨碎补 (骨碎補)
Dryopteridis crassirhizomatis rhizoma	dried rhizome and frond bases of <i>Dryopteris crassirhizoma</i> Nakai.	Dryopteris crassirhizoma rhizome and frond bases	绵马贯众 (綿馬貫眾)
Echinopsis radix	dried root of <i>Echinops latifolius</i> Tausch, <i>Echinops grijisii</i> Hance	Echinops latifolius root; Echinops grijisii root	禹州漏芦 (禹州漏蘆)
Eckloniae thallus	dried thalline of <i>Laminaria japonica</i> Aresch. or <i>Ecklonia kurome</i> Okam.	Laminaria japonica thalline; Ecklonia kurome thalline	昆布 (昆布)