天然精油与芳香疗法

Essential Oils & Aromatherapy

尹开云

云南芳香技术研究院

一个民族的文明程度反映在他们使用香料的水平上。

The degree of civilization of a nation is reflected in the level of their use of fragrance.

精油：定义及描述
Essential Oil: Definition and Description

- An essential oil is a concentrated hydrophobic liquid containing volatile aroma compounds from plants.
  精油是取自植物的含有挥发性芳香化合物的不溶于水的浓缩液体。

  Essential oils are generally extracted by distillation. Other processes include expression, or solvent extraction. They are used in perfumes, cosmetics, soaps and other products, for flavoring food and drink, and for adding scents to incense and household cleaning products.
  精油通常是用水蒸气蒸馏法萃取得到。其它的方法包括：压榨法和溶剂萃取法。精油用于制造香水、化妆品、香皂和其它产品，用于食品饮料加香，家居熏香和清洁产品加香。

精油的来源和分类
Essential Oil: Sources and Classification

Berries浆果
- Allspice众香果
- Juniper杜松

Seeds种子
- Almond杏仁
- Anise大茴香
- Buchu合香叶
- Celery芹菜
- Cumin枯名
- Nutmeg oil肉豆蔻

Bark树皮
- Cassia肉桂
- Cinnamon桂皮
- Sassafras黄樟

Wood香木
- Camphor樟脑
- Cedar雪松
- Rosewood花梨木
- Sandalwood檀木
- Agarwood沉香

Rhizome根茎
- Galangal高良姜
- Ginger姜

Leaves叶子
- Basil罗勒
- Bay leaf月桂
- Buchu布枯
- Cinnamon肉桂叶
- Common sage鼠尾草
- Eucalyptus桉树油
- Guava番石榴
- Lemon grass柠檬草
- Melaleuca白千层/茶树
- Oregano牛至/滇香薷
- Patchouli广藿香
- Peppermint椒样薄荷
- Pine松针
- Rosemary迷迭香
- Spearmint留兰香
- Tea tree茶树
- Thyme百里香
- Tsuga铁杉
- Wintergreen冬青

Resin树脂
- Benzoin安息香
- Copaiba苦配巴香脂
- Frankincense乳香
- Myrrh没药

Flowers花卉
- Cannabis麻
- Chamomile洋甘菊
- Clary sage鼠尾草
- Clove丁香
- Scented geranium天竺葵
- Hops酒花
- Hyssop海索草
- Jasmine茉莉
- Lavender薰衣草
- Manuka麦努卡
- Marjoram马郁兰
- Orange橙子
- Rose玫瑰
- Ylang-ylang依兰

Peel果皮
- Bergamot香柠檬
- Grapefruit柚子
- Lemon柠檬
- Lime白柠檬/莱姆
- Orange甜橙
- Tangerine橘子

Root根
- Valerian香根草

精油的生产
Essential Oil: Production

- **蒸馏法Distillation**

  Raw plant material, consisting of the flowers, leaves, wood, bark,twigs, roots, seeds, or peel, is put into an alembic (distillation apparatus) over water. As the water is heated, the steam passes through the plant material, vaporizing the volatile compounds. The vapors flow through a coil, where they condense back to liquid, which is then collected in the receiving vessel.

  把植物原料（包括花、叶、木、树皮、树枝，根茎、种子、或果皮）投入加好水的蒸馏器，水热之后，水蒸气穿过植物材料，汽化并带出挥发性的芳香化合物。混合蒸汽流经盘管式冷凝器时冷凝为液体，收集在接收容器中。

  The recondensed water is referred to as a hydrosol, hydrolat, herbal distillate or plant water essence, which may be sold as another fragrant product. Popular hydrosols include rose water, lavender water, lemon balm, clary sage and orange blossom water. The use of herbal distillates in cosmetics is increasing. Some plant hydrosols have unpleasant smells and are therefore not sold.冷凝下来的混合蒸汽形成油层和水层，水层也叫纯露或花水，可作为芳香产品出售。常用的纯露包括玫瑰纯露、薰衣草纯露、香蜂草纯露、快乐鼠尾草纯露和橙花纯露。花水在化妆品中的用量在不断增加，一些植物的花水因气味不太愉悦而很少使用。

精油的生产
Essential Oil: Production

- **压榨法Expression**

  Most citrus peel oils are expressed mechanically, or cold pressed (similar to olive oil extraction). Due to the relatively large quantities of oil in citrus peel and low cost to grow and harvest the raw materials, citrus-fruit oils are cheaper than most other essential oils. Lemon or sweet orange oils that are obtained as by-products of the citrus industry are even cheaper.

  大多数柑橘类精油是采用机械压榨法得到的，也叫冷榨法（如同橄榄油的冷榨萃取）。由于柑橘皮含油相对较多且原料种植和采收成本较低，柑橘类精油比其它精油都便宜，柠檬油和甜橙油是作为柑橘工业的副产品而得到的，二者的成本更低。

Prior to the discovery of distillation, all essential oils were extracted by pressing.

在蒸馏法发现之前，所有精油的萃取都是用压榨法。

精油的生产
Essential Oil: Production

- **溶剂萃取法Solvent Extraction**

  Most flowers contain too little volatile oil to undergo expression and their chemical components are too delicate and easily denatured by the high heat used in steam distillation. Instead, a solvent such as hexane or supercritica carbon dioxide is used to extract the oils. Extracts from hexane and other hydrophobic solvent are called concretes, which are a mixture of essential oil, waxes, resins, and other lipophilic (oil soluble) plant material.

  大多数鲜花含有的极少量挥发精油很娇嫩，其化合物在水蒸气蒸馏的高温和压力环境下容易发生变性。相反，用溶剂（如己烷或超零界二氧化碳）萃取精油可以避免高温破坏精油分子，这类疏水溶剂（己烷）萃取得到的提取物叫浸膏，它是精油、蜡质、树脂和其它亲脂性（油溶）植物原料的混合物。

  Although highly fragrant, concretes contain large quantities of nonfragrant waxes and resins. Often, another solvent, such as ethyl alcohol, which is more polar in nature, is used to extract the fragrant oil from the concrete. The alcohol is removed by evaporation, leaving behind the absolute. 虽然香气强，浸膏中仍含有大量没有香味的杂质（如蜡质和树脂），通常会使用另一个溶剂（如乙醇，它的天然极性更强）来从浸膏中萃取出芳香精油，通过蒸发去除乙醇，留下来的就是净油。

精油的生产
Essential Oil: Production

- **超零界二氧化碳萃取法Supercritical Carbon Dioxide**

  Supercritical carbon dioxide is used as a solvent in supercritical fluid extraction. This method has many benefits including avoiding petrochemical residues in the product and the loss of some "top notes" when steam distillation is used. It does not yield an absolute directly. The supercritical carbon dioxide will extract both the waxes and the essential oils that make up the concrete. Subsequent processing with liquid carbon dioxide, achieved in the same extractor by merely lowering the extraction temperature, will separate the waxes from the essential oils. This lower temperature process prevents the decomposition and denaturing of compounds. When the extraction is complete, the pressure is reduced to ambient and the carbon dioxide reverts to a gas, leaving no residue.

  超零界二氧化碳用作超零界流体萃取的溶剂。这种方法有许多优点，它可以避免石化溶剂的残留在最终产品中和水蒸气蒸馏法的“头香”损失。它不直接产生净油，超零界二氧化碳将同时萃取蜡质和精油，二者共同构成浸膏。后续的处理只需要在同一个萃取容器中对二氧化碳萃取液降低萃取温度，就可以把蜡质从精油中分离出来。这种低温萃取工艺可以防止化合物的降解和变性。当萃取完成以后，释放压力到常压就可以让二氧化碳转变回气体状态，不会残留在精油中。

精油的萃取得率
Essential Oil: Extraction Yield

植物 Botanic	植物学名 Latin Name of Plants	使用部分 Used Parts	收益率% Yield
多香果、甜胡椒	众香树Pimenta dioica	地面种子	4.5
当归、白芷	当归Angelica archengelica	根	0.3 - 1.0
当归种子	当归Angelica archengelica	种子	0.6 - 1.5
八角、大茴香	八角 Pimpinella anisum	种子	1.5 - 4.0
山金车 根	山金车 Arnica montana	根	1
山金车 花	山金车 Arnica montana	鲜花	1
罗勒、九层塔	罗勒 Ocimum basilicum	叶和上端枝	0.5 - 1.5
月桂叶	月桂 Laurel nobilus	叶	3
白千层	白千层 Melaleuca leucadendron	树叶和嫩枝	1
樟	樟树 Cinnamomum camphora	树叶和嫩枝	2
香芹籽	香芹 Carum carvi	种子	3.2 - 7.4
肉桂	肉桂 Cinnamomum cassia	肉桂皮	1.5
雪松木	松树Juniperus virginiana	木片 刨花	4.5
德国洋甘菊	母菊Matricaria chamomilla	鲜花	0.3 - 1.0
罗马洋甘菊	西洋菊Anthemis nobilis	鲜花	0.3 - 1.0
锡兰肉桂	锡兰肉桂Cinnamomum zeylanicum	肉桂皮	0.1
快乐鼠尾草	丹参Salvia sclarea	叶和上端芽	0.1 - 0.34
丁香芽	丁香Eugenia caryophylatta	芽	14 - 21
丁香叶	丁香Eugenia caryophylatta	叶	1.5 - 2.0
香菜、胡荽	芫荽 Coriandrum officinalis	种子	1
莳萝籽、洋茴香	莳萝Anethum graveolens	种子	2.5 - 4.0
莳萝、洋茴香	莳萝Anethum graveolens	整株	0.3 - 1.5
桉树	桉树 Eucalyptus spp	树叶和嫩枝	1.0 - 7.0

精油的萃取得率
Essential Oil: Extraction Yield

植物 Botanic	植物学名 Latin Name of Plants	使用部分 Used Parts	收益率% Yield
茴香种子	小茴香Foeniculum vulgare	种子	4.0 - 6.0
乳香（乳香）	乳香 Boswellia carterii	树脂胶	3.5 - 6.0
天竺葵	天竺葵 Pelargonium graveolens	叶	0.3 - 2.0
杜松	杜松Juniperus communis	果实	1.5
薰衣草	薰衣草Lavendula angustifolia	鲜花和上端	0.5 - 1.0
柠檬	柑桔Citrus limonum	果皮	2
香蜂草	香蜂草 Melissa officinalis	叶和上端枝	0.015
马郁兰、墨角兰	马郁兰Origanum majorana	叶	0.9
肉豆蔻	肉豆蔻 Myristica fragrans	种子	15 - 25
橙	柑桔属 Citrus spp	果皮	1.5 - 2.0
橙花（橙花）	柑桔属 Citrus spp	鲜花	0.1
牛至	牛至 Origanum vulgare	叶和上衣	1.2
欧芹种子	荷兰芹Petroselinum crispum	种子	6.0
欧芹	荷兰芹Petroselinum crispum	叶和上衣	0.5
薄荷	薄荷Mentha piperita	叶	1.0 - 2.5
松针	松属 Pinus spp	针	0.5 - 3.0
玫瑰花瓣	罗莎属 Rosa spp	花瓣	0.006
迷迭香	迷迭香Rosmarinus officinalis	叶	2
檀香	檀香Santalum album	木	4.5
冬青	白珠树Gaultheria procumbens	叶	0.66
西洋蓍(shi)草	蓍草属Achillea millefolium	鲜花和上端	0.007 - 0.50

精油的药理学研究和探讨

Essential Oil: The Pharmacological Studies Exploring

- Many essential oils affect the skin and mucous membranes in ways that variously are valuable or harmful. They are used in antiseptics and liniments in particular.
  许多精油对皮肤和粘膜的产生多种方式的影响，这种影响有的是有价值的，有的是有害的。

- Typically, they produce rubefacient irritation at first, and then counterirritant numbness. Turpentine oil and camphor are two typical examples of oils that cause such effects.
  通常情况下，首先产生发红剂刺激，然后出现对抗刺激剂（诱导剂）的麻木。松节油和樟脑是造成这类反应的两个典型例子。

- Menthol and some others produce a feeling of cold followed by a sense of burning. This is caused by its effect on heat-sensing nerve endings. Some essential oils, such as clove oil or eugenol, were popular for many years in dentistry as antiseptics and local anaesthetics. Thymol also is well known for its antiseptic effects.
  薄荷脑和其它一些精油首先是产生冷的感觉，随后是灼热的感觉。这是由热敏感神经末梢所引起的效果。某些精油，如丁香油或丁子香酚，是流行多年的牙科防腐剂和局部麻醉剂。百里酚也具有显著的防腐效果。

精油的毒理性研究

Essential Oil: Toxicology

- The following table lists the LD50 or median lethal dose for common oils; this is the dose required to kill half the members of a tested population.LD50 is intended as a guideline only, and reported values can vary widely due to differences in tested species and testing conditions.

  下表列出一些普通精油的LD50值或叫半数致死剂量，这个剂量是指可以毒死半数测试动物的最低剂量。LD50 只是作为一个参考指标，由于测试物种和测试条件的不同，测试报告的数值会波动较大。

Common Name 通用名称	Oral LD_{50} 口服半致死剂量	Dermal LD_{50} 皮肤半致死剂量	Notes 备注
Neem苦楝树	14 g/kg	>2 g/kg	
Lemon myrtle柠檬香桃木	2.43 g/kg	2.25 g/kg	
Frankincense乳香	>5 g/kg	>5 g/kg	*Boswellia carterii*
Frankincense萨克拉乳香	>2 g/kg	>2 g/kg	*Boswellia sacra*
Indian frankincense印度乳香	>2 g/kg	>2 g/kg	*Boswellia serrata*
Ylang-ylang依兰	>5 g/kg	>5 g/kg	
Cedarwood柏木	>5 g/kg	>5 g/kg	
Roman chamomile罗马洋甘菊	>5 g/kg	>5 g/kg	
White camphor白樟脑	>5 g/kg	>5 g/kg	*Cinnamomum camphora*, extracted from leaves
Yellow camphor黄樟脑	3.73 g/kg	>5 g/kg	*Cinnamomum camphora*, extracted from bark
Ho oil芳油	3.80 g/kg	>5 g/kg	*Cinnamomum camphora*, oil extracted from leaves
Cassia肉桂	2.80 g/kg	0.32 g/kg	

精油的使用:芳香疗法
Essential Oil: Use in Aromatherapy

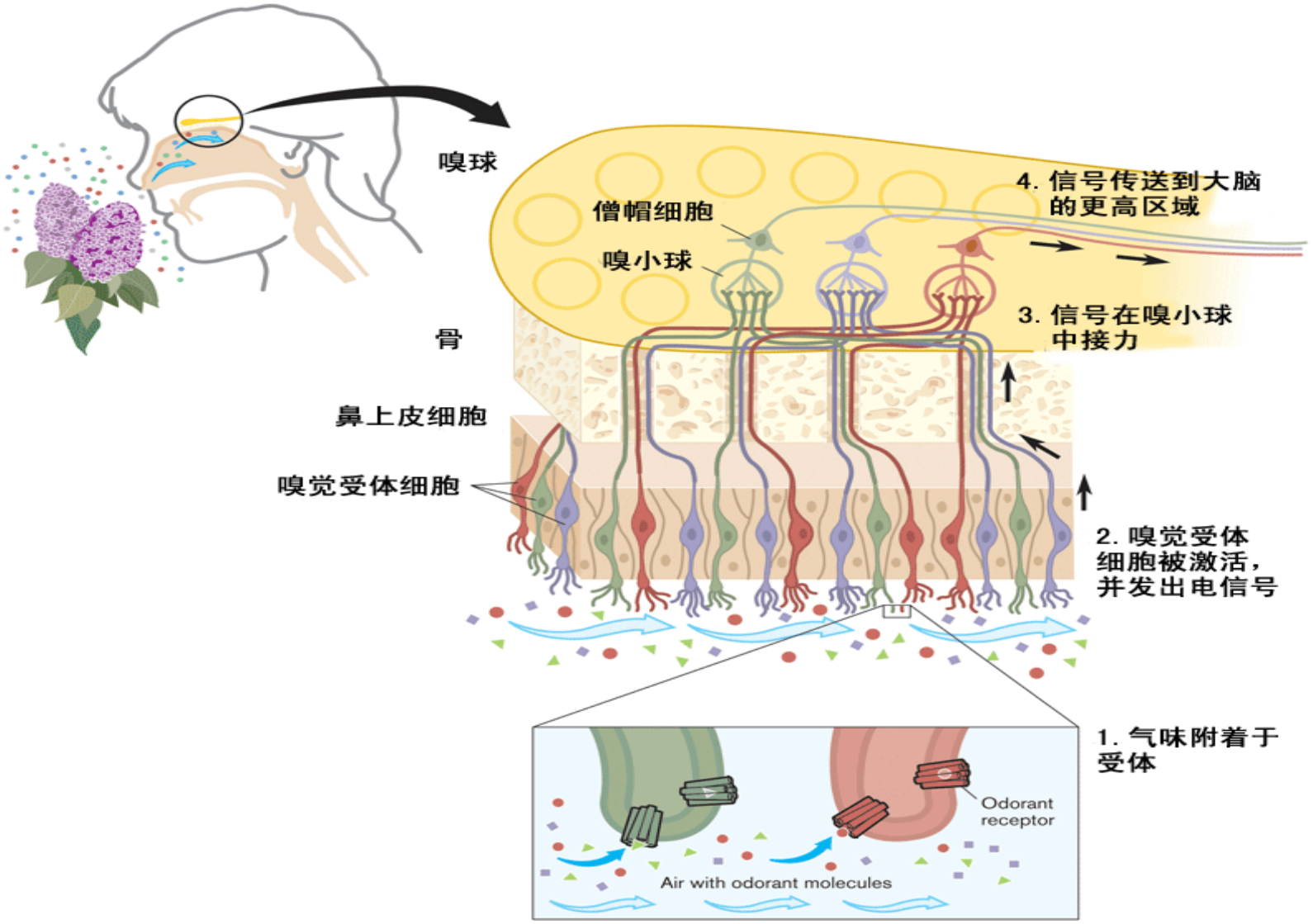
- Aromatherapy is a form of alternative medicine in which healing effects are ascribed to the aromatic compounds in essential oils and other plant extracts. Many common essential oils have medicinal properties that have been applied in folk medicine since ancient times and are still widely used today.

  芳香疗法是一种替代医疗的方式，它的治愈效果归因于精油中的香气化合物和其它植物提取物。许多常见的精油具有医药特性，自古以来就应用于民间医药，并在今天广为使用。

- For example, many essential oils have antiseptic properties. Many are also claimed to have an uplifting effect on the mind. Such claims, if meaningful, are not necessarily false, but are difficult to quantify in the light of the sheer variability of materials used in the practice.

  例如，许多精油具有抗菌（防腐）特性，许多还声称具有提振精神（心灵）的作用。这些声称如果有意义，不一定是假的，但是在实际使用中材料的轻微绝对波动很难定量。

嗅觉系统
Olfactory System

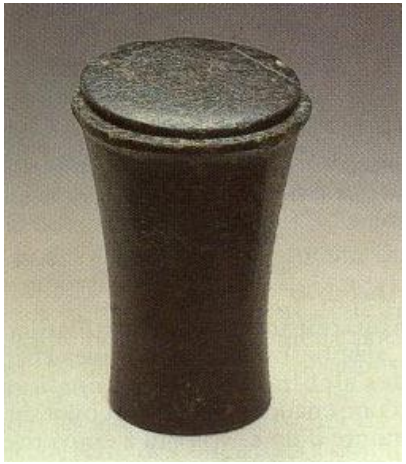


古代的芳香疗法
Aromatherapy: The Old Age



The cones of greases melt and scent the head of the women of ancient Egypt

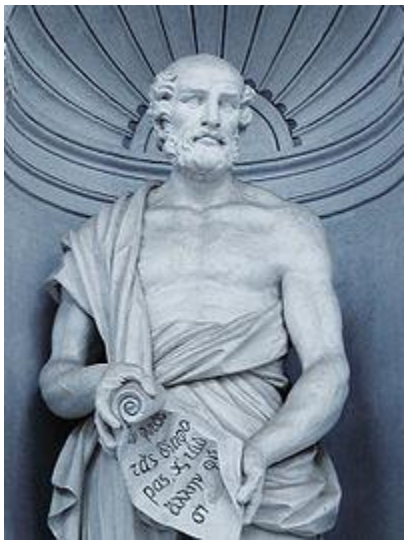
small cup with diorite ointment dating from average empire 2200 - 1600 av.J.C





Ointment cup in albâtre. Egypte, old empire, 3000 av.J.C.

古代的芳香疗法
Aromatherapy: The Old Age



泰奥弗拉斯（Theophrastus）

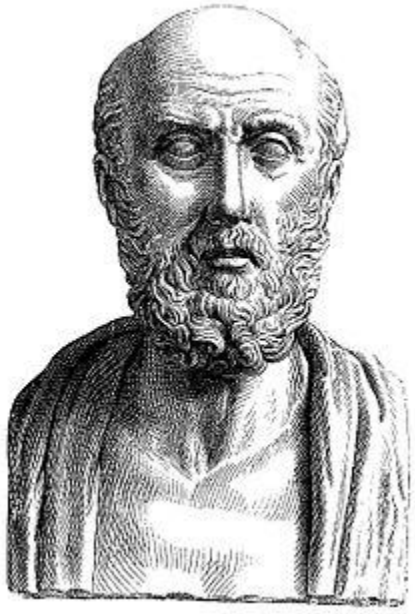
- 苏格拉底的同学，亚里士多德的学生和接班人。
- 在他广泛的出游和旅行中，获得了大量的芳香植物，由此在雅典建立了植物花园。
- 他的论文“On Odors”（论气味）包含了香药的许多基础知识：香料调和、香药的保质期、芳香酒的使用、香味的载体物质以及气味对心灵和身体的影响。
- 两本最重要的植物学书籍

  The Enquiry into Plants（ Historia Plantarum ）《植物志》

  On the Causes of Plants《植物的本源》
- father of botany（ Linnaeus 语）

亚里士多德于公元前335年仿效他的老师柏拉图所办的学园(Plato's school)在雅典创办哲学学校吕克昂(Lykeion)，或称逍遥派学校(Peripatetic School)。

古代的芳香疗法
Aromatherapy: The Old Age



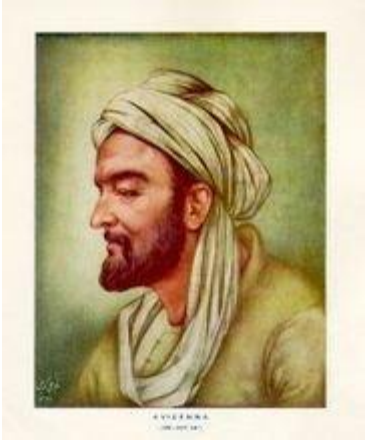
希腊医学之父（Father of Medicine）希波克拉底（Hipporates）是希波克拉底医药学派的创始人,公元前460-337年，在其著作《希波克拉底文集》中将医学分为：药疗、食疗和香疗三大体系。
希波克拉底将医药从其它领域中独立出来，成为专业的学科。

《希波克拉底誓言》(Hippocratic Oath)仍是今天医学生的必修课。

古代的芳香疗法
Aromatherapy: The Old Age

阿维森那（Avicenna，Ibn Sina）

- 阿拉伯著名的物理学家和炼金术士
- 撰写了400本书，涉及：医药、哲学、地质学、数学、天文学、逻辑学。
- 因改进蒸馏设备而广受赞誉，通过为冷凝盘管加装冷水夹套显著提高了蒸馏艺术。



阿维森纳(Avicenna，伊斯兰经名全名为
Abu Ali Husain Ibn Abdullah Ibn Sina)



《医典》(Qanun fi Tibb)

《黄帝内经》与芳香疗法

Aromatherapy & Old Chinese Traditional Medicines

黄帝内经

以《黄帝内经》为理论基础，传统香方的构成充分体现了中国传统养生之法以及"天人合一"的世界观。其和香的方法可以总结为四句话，即：

十二经络择一行，

君臣佐辅辨分明；

各取芳草馨香气，

纳尽五行香自灵。

这四句话充分说明了中国传统香方的组成条件。

1、组成香方的所有香药必须同时归入一条经络。以经络为主线，以达到最好疏通经络的作用；

2、根据制香的目的选择合适的香药；

3、根据个人的品味和喜好不同，选择适合的香味；

4、为了使制成的香品达到天人合一的地步，必须使香方纳尽金木水火土五行的属性，这样才能使所配的香方拥有与自然和谐的灵气。

《本草纲目》与芳香疗法

Aromatherapy & Old Chinese Traditional Medicines

《本草纲目》中专门有“芳香篇”，其中详细记载了各种香料在“芳香治疗”和“芳香养生”方面的应用，如：

治“血滞”：[乳香]——中风口噤，烧酒薰口目口吗斜；

治“卒厥”：[乳香、安息香、樟木]——并烧烟薰之；

治“伤寒热病——温经”：[葱白]——炒热熨脐；

治“瘟疫”：[苍术]——烧烟薰，去鬼邪；

[白茅香、茅香、兰草]——并煎汤浴，辟疫气；

艾纳香、兜纳香、蜘蛛香、沉香、蜜香、檀香、降真香、苏合香、安息香、詹糖香、樟脑、返魂香、兜木香、皂荚、古厕木——并烧之辟疫；《本草纲目》中谈到古代人们用薰香法止瘟疫同中世纪欧洲人的做法是一样的。

《本草纲目拾遗》十卷成书于1765年，书中所收集的药物遍及海内外，补正明代医家李时珍之误，录其未收载的药品716种，多为民间草药，亦记载了如金鸡纳等少许西药。

精油的稀释：基础油介绍
Essential Oil: Carrier oils

- Carrier oils can be used for much more than just diluting your essential oils! The natural skin softening, moisturising and nourishing qualities of Natural Carrier oils can be used to soften wrinkles, increase elasticity and help balance an uneven complexion.
- 基础油的用途不仅仅是用于稀释精油。天然基础油本身就有软化肌肤、保湿和营养肌肤的品质，它可用于软化皱纹，增加肌肤弹性和帮助平衡不均匀的肤色。

精油的稀释：基础油介绍
Essential Oil: Carrier oils

Almond Sweet Oil 甜杏仁油	***Cold Pressed.***	**Sweet Almond is a very popular carrier oil for use in massage because it is light and quickly absorbed into the skin. Rich in proteins and vitamin D, Sweet Almond oil is both protective and nourishing to the skin when used regularly.**
Apricot Kernel Oil 杏子核油	***Cold Pressed.***	**Expressed Apricot oil contains vitamin A and is an excellent body of facial oil due to its light consistency. Apricot oil is especially good for an overnight skin care treatment and leaves the face feeling beautifully soft and supple.**
Argan Oil 阿甘油		**Argan oil is a deeply nourishing vegetable oil rich in vitamin E, flavonoids, polyphenols, carotenoids, ferulic acid and antioxidants, making it ideal for use in aromatherapy. It's rich, complex and unique chemical composition deeply nourishes the skin helping to soften wrinkles and protect against the damaging effects of premature aging. No wonder it's known as 'liquid gold' and 'Moroccan gold' in the beauty industry!**
Arnica Oil –Infused 山金车油	***Infused.***	**Arnica has been a significantly important plant throughout Europe since the 15th century, and it is still highly popular in herbal medicine today. Due to its amazing therapeutic properties, arnica oil has now become popular with aromatherapists as well. Natural Arnica Oil is produced by macerating the flowers of Arnica montana in organic sunflower oil which is rich in vitamin E. This versatile infused oil can be used either on its own or blended with another carrier oil for massage, and of course suitable essential oils can be added to arnica to produce a really powerful treatment.**
Avocado Oil (Unrefined) 鳄梨油（未精制）	***Cold Pressed.***	**A deep penetrating oil which feeds the skin and helps delay the signs of ageing skin because it is rich in essential fatty acids. This rich, nourishing oil should be added at 15% or 20% to other carriers for treating dry and mature skin. Expressed from the avocado pear, cold pressed unrefined avocado oil has a slight odour and is a deep green, slightly brownish colour due to its chlorophyll content. See also Avocado Refined.**
Avocado Oil (Refined) 鳄梨油（精制油）	***Refined.***	**Also available from Natural is Avocado oil that has been processed to remove the dark colouring and odour from the cold pressed oil. Some people prefer refined Avocado oil because it has no odour when applied to the face as an intensive facial treatment for mature skin.**
Black Seed Oil 黑种草籽油	***Cold Pressed.***	**Black seed oil is particularly rich in unsaturated and essential fatty acids which makes it perfect as a skin food - it nourishes, softens and conditions skin. Despite its deep moisturising qualities, it does not leave skin feeling greasy. When used as a carrier in massage, it delivers an energising boost and excels with everyday muscle and joint aches. The holy prophet Mohammad stated in his Hadith (teachings) "Hold on to the use of the black seed, for it has a remedy for every illness except death..."**
Borage Oil 琉璃苣油	***Cold Pressed.***	**Borage oil is the richest source of gamma linolenic acid (GLA) containing up to 25%, which is more than twice as much as occurs in Evening Primrose oil. Clinical trials have shown that GLA helps to encourage healthy, mobile joints, and used regularly on the skin it helps to soften fine lines and wrinkles. Add 10% - 15% to other carriers to give blends a boost, or use it undiluted as an intensive night-time treatment.**
Calendula Oil – Infused 金盏花浸泡油	***Infused.***	**This oil is an infusion of Marigold flowers and has been used for centuries due to its renowned calming and soothing properties on the skin. Calendula helps to balance excessively oily skin. It can be used alone for skin conditions, or added to Almond or Grapeseed oil at 15% or more for massaging.**

精油的稀释：基础油介绍

Essential Oil: Carrier oils

Coconut Oil (Fractionated) 分馏椰子油	***Fractionated.***	**Perfect for moisurising both the body and hair, Coconut oil is light and very easily absorbed into the skin leaving it satin smooth. It is especially effective as an intesive treatment to nourish and condition brittle, dull or dry hair, and leaves hair soft with a glossy shine.**
Evening Primrose Oil 月见草油	***Cold Pressed.***	**Evening Primrose oil is a perfect skincare oil; moisturising, softening and soothing to dry and irritated skin. This is because it contains high levels of linoleic acid and gamma linolenic acid (GLA), which are essential fatty acids. These vitamin-like substances can not be manufactured by the body and are essential for healthy cell function and also appear to have a beneficial effect on the immune system and the brain.**
Grapeseed Oil 葡萄籽油	***Pressed.***	**A popular oil, Grapeseed is light and readily absorbed into the skin leaving it feeling smooth, making it an ideal carrier for massaging. Grapeseed oil can not be produced by cold pressing.**
Hazelnut Oil 榛子油	***Cold Pressed.***	**Rapidly absorbed, this nourishing oil contains vitamins A, B and E which makes it ideal for facial treatments. Hazelnut protects against moisture loss and has a stimulating action on the capillary system. Great for body massage too.**
Jojoba Oil 霍霍巴油	***Cold Pressed.***	**Due to its molecular structure, Jojoba oil mimics the action of sebum, which is the skins own natural lubricant. This versatile oil deep cleanses blocked pores, moisturises and promotes a healthy, glowing complexion.**
Macadamia Oil 澳洲坚果油	***Cold Pressed.***	**This highly nourishing oil is rich in palmitoleic acid which promotes young looking, soft and supple skin. As we get older our bodies produce less palmitoleic acid, so regular use of Macadamia oil may help in the fight to prevent premature aging skin.**
Moringa Oil 辣木油	***Cold Pressed.***	**Moringa oil is a very stable carrier which is highly nutritious to the skin and similar in composition to olive oil but much lighter. It is a powerful natural antioxidant with excellent skin smoothing properties.**
Peach Kernel Oil 桃仁油	***Cold Pressed.***	**Very similar to Apricot oil, containing essential fatty acids and vitamins A and E. Both Peach Kernel and Apricot Kernel oils encourage skin suppleness and elasticity and make excellent facial massage oils.**
Rosehip Oil 玫瑰果油	***Cold Pressed.***	**Recent studies have shown Rosehip oil to be a powerful skin cell regenerator that also helps prevent premature skin ageing and softens wrinkles. Produced from the seeds of Rose hips, this oil is excellent for use with stretch marks, scar tissue or problem skin types.**
St Johns Wort Oil – Infused 圣约翰草浸泡油	***Infused.***	**This infusion of blossoms from the Hypericum bush is excellent for use with all types of sensitive, red and sore skin. It can be used undiluted for intensive treatments or added at around 15% to a lighter carrier for body massage.**
Sunflower Oil 向日葵籽油	***Cold Pressed.***	**Both softening and moisturising, Sunflower oil can be used for facial treatments and body massage. This is the ideal oil to use if you have any concerns about nut-allergy reactions since it is extracted from the seeds of the flower.**
Wheatgerm Oil (Unrefined)小麦胚芽油	***Cold Pressed.***	**A highly nourishing oil containing vitamin E. This makes it the perfect oil for dry, mature and lifeless skin. Wheatgerm oil is too heavy to use as a massage base, so add at 15% to your massage blends to nourish the skin.**

沉香Agarwood

- 沉香是自然界极为稀少、珍贵的香料物质，同时也是一味名贵的中药，还是佛教礼佛供佛的一种圣物，更是香道文化的重要组成部分，享有“众香之首”、“香中之王”等美称。沉香在中国有2000多年的历史，隋唐史料中就有丰富的记载，到晚唐及五代则又有更高度的发展。宋代时，精品沉香是“一两沉一两金”。到了明代，就已变为“一寸沉一寸金”，而当代人香道用香时也首推沉香。

Ten Virtues of Incense

1. 感格鬼神 : Sharpens the senses like a demon or god
2. 清淨心身 : Cleanses the body and spirit
3. 能払汚穢 : Eliminates impurity
4. 能覚睡眠 : Awakens the spirit
5. 静中成友 : Becomes a friend and repels loneliness
6. 塵裏愉閑 : Soothes when in haste
7. 多而不厭 : Always willing even in abundance
8. 募而為足: A small amount creates sufficient fragrance
9. 久蔵不朽 : Keeps well for a long period
10. 常用無障 : No harm with regular use



Chamomile German

- Matricaria chamomilla (synonym: Matricaria recutita), commonly known as chamomile (also spelled camomile), Italian camomilla, German chamomile,[3] Hungarian chamomile (kamilla), wild chamomile or scented mayweed, is an annual plant of the composite family Asteraceae. M. chamomilla is the most popular source of the herbal product chamomile, although other species are also used as chamomile.
- Soothing and relaxing.
- German Chamomile essential oil is distilled from the flowering heads of the plant and produces a dark blue oil with a strong herb-like aroma.
- This highly versatile essential oil can be inhaled during a high pollen count, used during the menopause and is highly effective in massage to ease aching muscles after a strenuous day.
- German Chamomile essential oil contains a constituent called chamazulene which is responsible for the dark blue colour and the pronounced soothing effect.
- Egypt
- Matricaria chamomilla
- Flowering tops
- Steam distillation
- Farnesene, a-Bisabolol, a-Bisabolene, Chamazulene

Matricaria chamomilla



Scientific classification

Kingdom:	**Plantae**
Clade:	**Angiosperms**
Clade:	**Eudicots**
Clade:	**Asterids**
Order:	**Asterales**
Family:	**Asteraceae**
Genus:	***Matricaria***
Species:	***M. chamomilla***

Binomial name

Matricaria chamomilla
L.

Synonyms

Chamomilla chamomilla (L.) Rydb.
Chamomilla recutita (L.) Rauschert
Matricaria recutita L.
Matricaria suaveolens L.

Sources: NRCS,[1] ITIS[2]

Cinnamon

- Cinnamon is a spice obtained from the inner bark of several tree species from the genus Cinnamomum. Cinnamon is used in both sweet and savoury foods. The term "cinnamon" also refers to its mid-brown colour.



Cinnamon sticks, powder, and dried flowers of the Cinnamomum verum plant



Cinnamomum verum, from Koehler's Medicinal-Plants (1887)

Frankincense

- Frankincense (also known as olibanum, Hebrew: לבונה [levona], Arabic: al-lubān) is an aromatic resin used in incense and perfumes, obtained from trees of the genus Boswellia in the family Burseraceae, particularly Boswellia sacra (syn: B. bhaw-dajiana), B. carterii33, B. frereana, B. serrata (B. thurifera, Indian frankincense), and B. papyrifera. The English word is derived from Old French "franc encens" (i.e., high quality incense).
- There are four main species of Boswellia that produce true frankincense. Resin from each of the four is available in various grades. The grades depend on the time of harvesting; the resin is hand-sorted for quality.





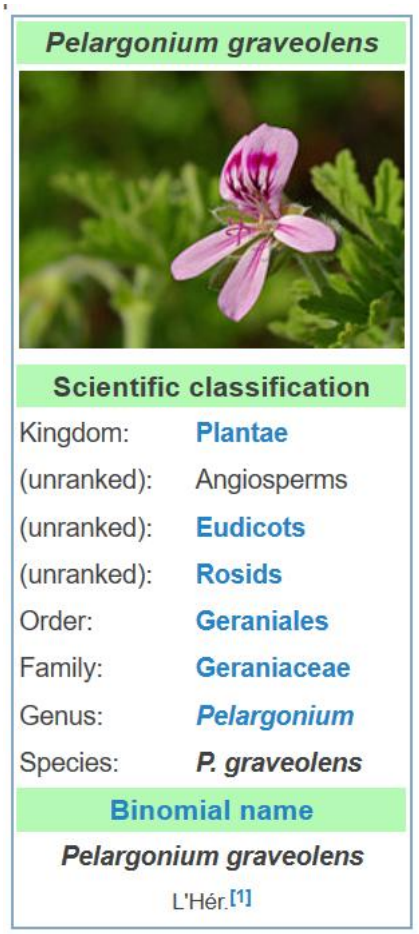
Geranium

Pelargonium graveolens

- Pelargonium graveolens is an uncommon Pelargonium species native to the Cape Provinces and the Northern Provinces of South Africa, Zimbabwe and Mozambique.[1] It is in the subgenus Pelargonium along with Pelargonium crispum and Pelargonium tomentosum.

Etymology

- Pelargonium comes from the Greek pelargos which means stork. Another name for pelargoniums is stork's-bills due to the shape of their fruit. The specific epithet graveolens refers to the strong-smelling leaves.
- Description
- Pelargonium graveolens is an erect, multi-branched shrub, that grows up to 1.5 m and has a spread of 1 m. The leaves are deeply incised, velvety and soft to the touch (due to glandular hairs). The flowers vary from pale pink to almost white and the plant flowers from August to January. The leaves may be strongly rose-scented, although the leaf shape and scent vary. Some plants are very strongly scented and others have little or no scent. Some leaves are deeply incised and others less so, being slightly lobed like P. capitatum.



Jasmine

- Jasmine (taxonomic name Jasminum /ˈjæsmɪnəm/)[5] is a genus of shrubs and vines in the olive family (Oleaceae). It contains around 200 species native to tropical and warm temperate regions of Eurasia, Australasia and Oceania. Jasmines are widely cultivated for the characteristic fragrance of their flowers. A number of unrelated plants contain the word "Jasmine" in their common names (see Other plants called "Jasmine").

Description

- Jasmine can be either deciduous (leaves falling in autumn) or evergreen (green all year round), and can be erect, spreading, or climbing shrubs and vines. Their leaves are born, opposite or alternate. They can be simple, trifoliate, or pinnate. The flowers are typically around 2.5 cm (0.98 in) in diameter. They are white or yellow in color, although in rare instances they can be slightly reddish. The flowers are borne in cymose clusters with a minimum of three flowers, though they can also be solitary on the ends of branchlets. Each flower has about four to nine petals, two locules, and one to four ovules. They have two stamens with very short filaments. The bracts are linear or ovate. The calyx is bell-shaped. They are usually very fragrant. The fruits of jasmines are berries that turn black when ripe.
- The basic chromosome number of the genus is 13, and most species are diploid (2n=26). However, natural polyploidy exists, particularly in Jasminum sambac (2n=39), Jasminum flexile (2n=52), Jasminum mesnyi (2n=39), and Jasminum angustifolium (2n=52).

Jasmine



Jasminum officinale—Common Jasmine

Scientific classification

Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Eudicots
(unranked):	Asterids
Order:	Lamiales
Family:	Oleaceae
Tribe:	Jasmineae
Genus:	***Jasminum*** L.

Type species

Jasminum officinale L.

Jasminum sambac

- Jasminum sambac (Arabian jasmine) is a species of jasmine native to a small region in the eastern Himalayas in Bhutan and neighbouring India and Pakistan. It is cultivated in many places, especially across much of South and Southeast Asia. It is naturalised in many scattered locales: Mauritius（毛里求斯）, Madagascar, the Maldives（马尔代夫）, Cambodia, Java, Christmas Island, Chiapas, Central America, southern Florida, the Bahamas（巴哈马群岛）, Cuba, Hispaniola, Jamaica, Puerto Rico（波多黎各）， and the Lesser Antilles（小安地斯岛）.
- Jasminum sambac is a small shrub or vine growing up to 0.5 to 3 m (1.6 to 9.8 ft) in height. It is widely cultivated for its attractive and sweetly fragrant flowers. The flowers may be used as a fragrant ingredient in perfumes and jasmine tea. It is known as the Arabian jasmine in English. It is the national flower of the Philippines, where it is known as *sampaguita*, as well as being one of the three national flowers of Indonesia, where it is known as *melati putih*.

Arabian jasmine



A 'Maid of Orleans' cultivar from Tunisia.



various Flower stages

Scientific classification

Kingdom:	Plantae
Clade:	Angiosperms
Clade:	Eudicots
Clade:	Asterids
Order:	Lamiales
Family:	Oleaceae
Genus:	*Jasminum*
Species:	*J. sambac*

Binomial name

Jasminum sambac

(L.) Aiton

Jasminum sambac

- Jasminum sambac (Arabian jasmine) is a species of jasmine native to a small region in the eastern Himalayas in Bhutan and neighbouring India and Pakistan. It is cultivated in many places, especially across much of South and Southeast Asia. It is naturalised in many scattered locales: Mauritius（毛里求斯）, Madagascar, the Maldives（马尔代夫）, Cambodia, Java, Christmas Island, Chiapas, Central America, southern Florida, the Bahamas（巴哈马群岛）, Cuba, Hispaniola, Jamaica, Puerto Rico（波多黎各）， and the Lesser Antilles（小安地斯岛）.
- Jasminum sambac is a small shrub or vine growing up to 0.5 to 3 m (1.6 to 9.8 ft) in height. It is widely cultivated for its attractive and sweetly fragrant flowers. The flowers may be used as a fragrant ingredient in perfumes and jasmine tea. It is known as the Arabian jasmine in English. It is the national flower of the Philippines, where it is known as *sampaguita*, as well as being one of the three national flowers of Indonesia, where it is known as *melati putih*.

Arabian jasmine



A 'Maid of Orleans' cultivar from Tunisia.



various Flower stages

Scientific classification

Kingdom:	Plantae
Clade:	Angiosperms
Clade:	Eudicots
Clade:	Asterids
Order:	Lamiales
Family:	Oleaceae
Genus:	*Jasminum*
Species:	*J. sambac*

Binomial name

Jasminum sambac

(L.) Aiton

玉溪元江茉莉花



雨滴向茉莉低语：“愿吾永驻君怀！”

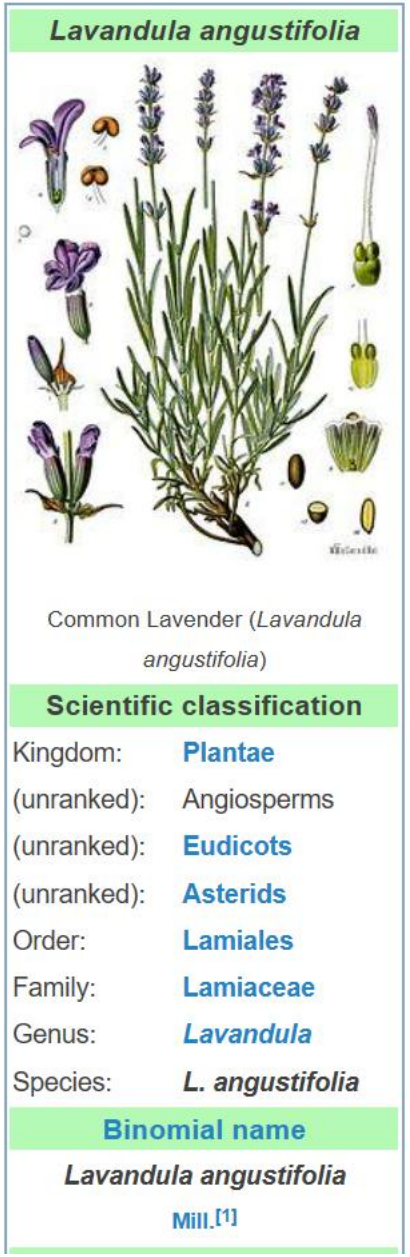
茉莉滴头叹息，纷纷落在尘土里。

——泰戈尔《飞鸟集》第237首



Lavandula angustifolia

- Lavandula angustifolia (lavender most commonly true lavender or English lavender,[2] though not native to England; also garden lavender,[3] common lavender, narrow-leaved lavender), formerly L. officinalis, is a flowering plant in the family Lamiaceae, native to the Mediterranean (Spain, France, Italy, Croatia etc.).
- Antiseptic, relaxing, soothing and rejuvenating.
- Cultivated throughout Europe, the essential oil produced in France is by far the most popular and it offers an almost endless list of therapeutic uses. This highly versatile oil eases tired muscles, balances head tension and soothes sensitive skin.
- France
- Lavandula angustifolia
- Flowering tops
- Steam distillation
- Linalyl acetate, Linalool, b-Caryophyllene



在忧伤和虚无之间，
我选择了百里香和薰衣草。

——夏宇《逆风混声合唱》

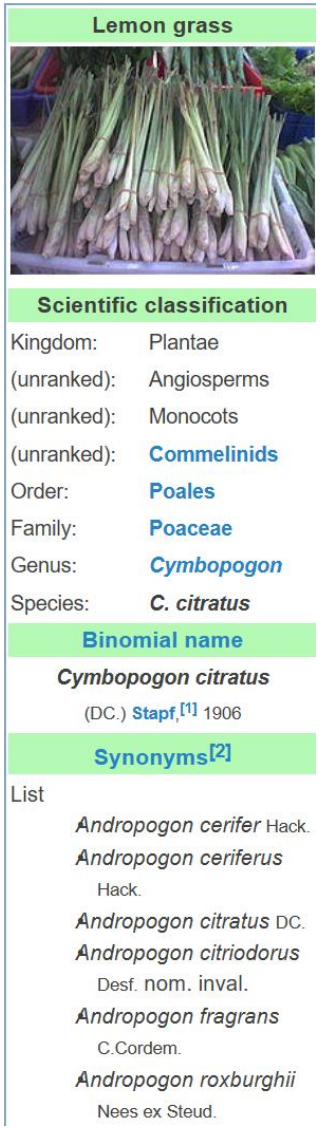






Lemongrass Essential Oil

- A tropical Asian grass (Cymbopogon citratus) having aromatic stalks used as a flavoring in cooking and yielding an aromatic oil used in perfumery and medicine.
- Toning（调理）, stimulating（提神，振奋）, and refreshing.
- Tones and energises tired muscles. Lemongrass essential oil is often used by athletes as a pre-sports rub（擦，磨，搓，揉） to enhance performance and help alleviate（减轻，缓解） aches and pains（身体疼痛） caused by over-training. Lemongrass also makes an excellent insect repellent.
- Guatemala（[ˌgwɑːtəˈmɑːlə]，危地马拉，危地马拉人）
- Cymbopogon citratus
- Grass
- Steam distillation
- Geranial, Neral, Geranyl acetate, Myrcene（月桂烯，香叶烯）



白兰花/含笑 Machelia/Michelia

- Michelia is a genus（属） of flowering plants belonging to the Magnolia family (Magnoliaceae，木兰科). The genus includes about 50 species of evergreen trees and shrubs（常绿乔木和灌木）, native to tropical and subtropical south and southeast Asia (Indomalaya), including southern China.

- 云南白兰花种植面积4000-5000亩，每年可产花油0.5吨、叶油3-5吨。



Michelia



Michelia × alba

Scientific classification	
Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Magnoliids
Order:	Magnoliales
Family:	Magnoliaceae
Subfamily:	Magnolioideae
Genus:	***Michelia*** L.

Species

about 50; see text

Mentha唇形科薄荷属

- Mentha (also known as mint, from Greek míntha,[2] Linear B mi-ta)[3] is a genus of plants in the family Lamiaceae (mint family).[4] It is estimated that 13 to 18 species exist, and the exact distinction between species is still unclear.[5] Hybridization between some of the species occur naturally. Many other hybrids, as well as numerous cultivars, are known.
- The genus has a subcosmopolitan distribution across Europe, Africa, Asia, Australia, and North America.
- Mints are aromatic, almost exclusively perennial, rarely annual herbs. They have wide-spreading underground and overground stolons[7] and erect, square,[8] branched stems. The leaves are arranged in opposite pairs, from oblong to lanceolate, often downy, and with a serrated margin. Leaf colors range from dark green and gray-green to purple, blue, and sometimes pale yellow.[6] The flowers are white to purple and produced in false whorls called verticillasters. The corolla is two-lipped with four subequal lobes, the upper lobe usually the largest. The fruit is a nutlet, containing one to four seeds.
- While the species that make up the Mentha genus are widely distributed and can be found in many environments, most grow best in wet environments and moist soils. Mints will grow 10–120 cm tall and can spread over an indeterminate area. Due to their tendency to spread unchecked, some mints are considered invasive.

Mentha longifolia

Scientific classification

Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	**Eudicots**
(unranked):	**Asterids**
Order:	**Lamiales**
Family:	**Lamiaceae**
Subfamily:	Nepetoideae
Tribe:	Mentheae
Genus:	***Mentha*** L.

Type species

Mentha spicata L.

Synonyms[1]

- *Pulegium* Mill.
- *Preslia* Opiz
- *Audibertia* Benth.
- *Menthella* Pérard
- *Minthe* St.-Lag.

Spearmint

- Spearmint, or spear mint (binomial Mentha spicata, synonym Mentha viridis), also known as garden mint, common mint, lamb mint and mackerel mint,[2][3] is a species of mint native to much of Europe and Asia (Middle East, Himalayas, China etc.), and naturalized in parts of northern and western Africa, North America, and South America, as well as various oceanic islands.
- Cooling, clearing and reviving.
- From the mint family, Spearmint is similar in action to Peppermint, but has other properties too. Like Peppermint, Spearmint oil is very clearing and makes a good inhalant oil, but it is particularly good at reviving mental fatigue and strengthening negative emotions. Some people prefer the slightly more gentle odour of Spearmint to Peppermint oil.
- USA
- Mentha spicata
- Flowering tops
- Steam distillation
- Carvone, Limonene, 1,8 Cineole

Spearmint



Mentha spicata

Scientific classification

Kingdom:	**Plantae**
(unranked):	Angiosperms
(unranked):	**Eudicots**
(unranked):	**Asterids**
Order:	**Lamiales**
Family:	**Lamiaceae**
Subfamily:	Nepetoideae
Tribe:	Mentheae
Genus:	***Mentha***
Species:	***M. spicata***

Binomial name

Mentha spicata

L.[1]

Synonyms

Mentha viridis

Orange Sweet

- Citrus × sinensis, also known as the Citrus sinensis Sweet Orange Group, includes the commonly cultivated sweet orange, blood oranges, and navel oranges.
- Uplifting, reviving and stimulating. This popular essential oil has a lovely cheering and refreshing property, ideally suited for room fragrancing. Blended with spice oils it makes an excellent Yule-tide blend.
- Brazil
- Citrus sinensis
- Zest of the fruit
- Expressed
- d-Limonene, Myrcene, a-Pinene

Citrus* × *sinensis	
	
Scientific classification	
Kingdom:	**Plantae**
(unranked):	Angiosperms
(unranked):	**Eudicots**
(unranked):	**Rosids**
Order:	**Sapindales**
Family:	**Rutaceae**
Genus:	***Citrus***
Species:	***C.* × *sinensis***
Binomial name	
Citrus* × *sinensis	
(L.) Osbeck[1]	

Iris germanica

- Iris x germanica is the accepted name for a species of flowering plants in the family Iridaceae commonly known as the bearded iris or the German iris. It is one of a group of hybrid origin.

Description

- Iris x germanica grows up to 120 cm high and 30 cm wide. It is a European hybrid, rather than a true wild species. The roots can go up to 10 cm deep and it is a rhizomatous perennial that blooms mid to late spring. It is known to produce the isoflavone irilone.[6] Hundreds of hybrids exist representing nearly every colour from jet black to sparkling whites, except bright scarlet. Varieties include I. g. var. florentina and I. g. var. germanica.

Growing

- Lifting, dividing and replanting the rhizomes is best done once flowering has finished as this is when the plant grows the new shoots that will flower the following year. The rhizomes are placed on the surface of the soil facing towards the sun and with at least 45 cm of open ground in front of them - this allows two years growth and flowering. The plant is held in place by removing half the leaf mass to reduce wind rock and by using the old roots as anchors in the soil. The rhizome is placed on well dug ground and the roots placed either side into 10 cm deep grooves. The soil is then gently firmed around the roots, so holding the plant steady. New roots and leaves are created rapidly as the rhizome moves forwards.

Iris germanica





Scientific classification	
Kingdom:	**Plantae**
(unranked):	Angiosperms
(unranked):	Monocots
Order:	**Asparagales**
Family:	**Iridaceae**
Subfamily:	Iridoideae
Tribe:	Irideae
Genus:	***Iris***
Subgenus:	*Iris*
Section:	*Iris*
Species:	***I. germanica***

Binomial name

Iris germanica

L.

桂花Osmanthus

- Osmanthus /ɒzˈmænθəs/ is a genus of about 30 species of flowering plants in the family Oleaceae. Most of the species are native to eastern Asia (China, Japan, Indochina, the Himalayas, etc.) with a few species from the Caucasus, New Caledonia, Sumatra, and North America (Mexico, Central America, southeastern United States).
- Osmanthus range in size from shrubs to small trees, 2–12 m (7–39 ft) tall. The leaves are opposite, evergreen, and simple, with an entire, serrated or coarsely toothed margin. The flowers are produced in spring, summer or autumn, each flower being about 1 cm long, white, with a four-lobed tubular-based corolla ('petals'). The flowers grow in small panicles, and in several species have a strong fragrance. The fruit is a small (10–15 mm), hard-skinned dark blue to purple drupe containing a single seed.



Osmanthus



Osmanthus heterophyllus in flower

Scientific classification

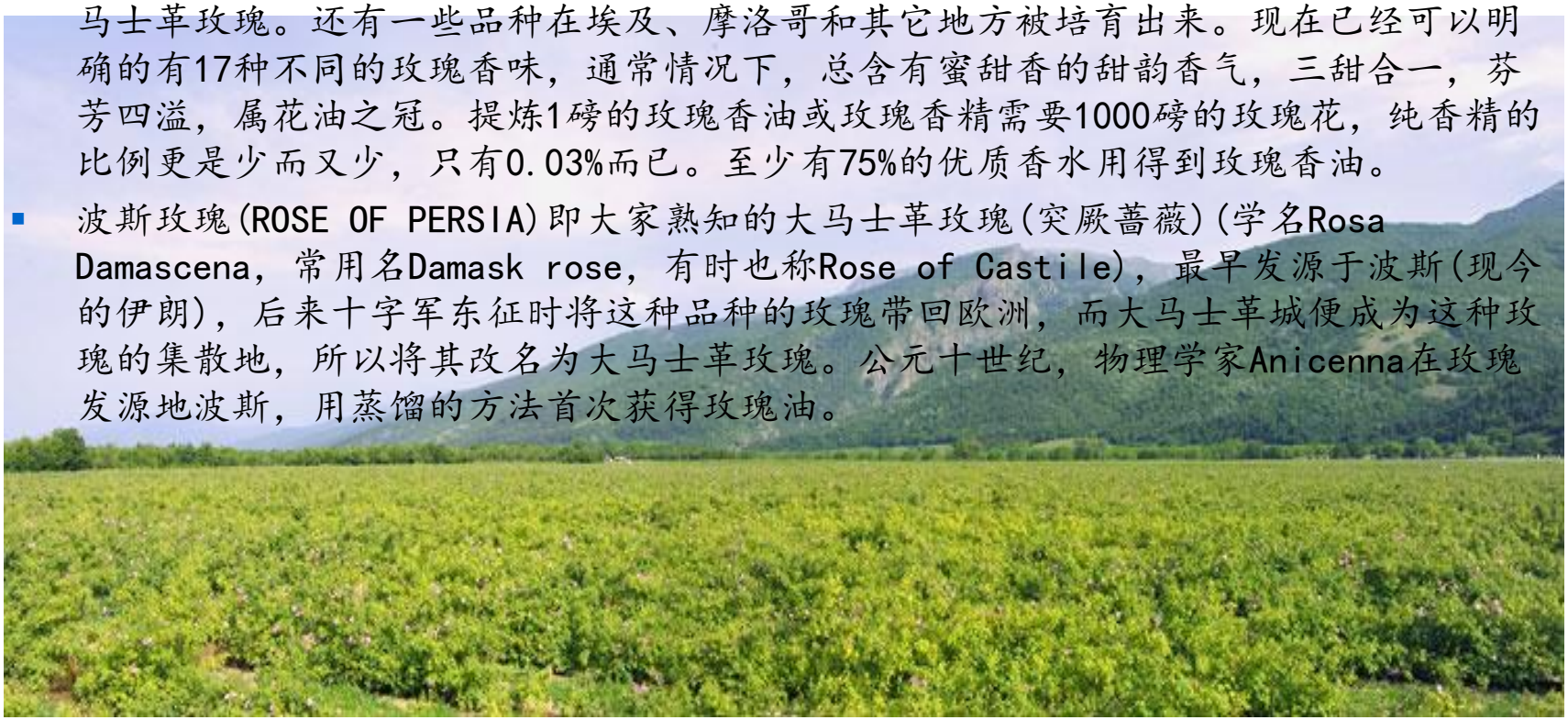
Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Eudicots
(unranked):	Asterids
Order:	Lamiales
Family:	Oleaceae
Tribe:	Oleeae
Genus:	*Osmanthus* Lour.

Synonyms[1]

- *Cartrema* Raf.
- *Pausia* Raf.
- *Siphonosmanthus* Stapf
- *Amarolea* Small

Rose

- 是一种宝贵的香料，属于香水业中最重要的植物。被希腊女诗人莎孚(Sappho)称为"花后"。其品种很多，最早的品种是洋蔷薇，或者叫画师玫瑰，也就是通常所说的五月玫瑰，原来是法国香水的专用玫瑰。保加利亚的喀山拉克(Kazanlak)地区出产大量的大马士革玫瑰。还有一些品种在埃及、摩洛哥和其它地方被培育出来。现在已经可以明确的有17种不同的玫瑰香味，通常情况下，总含有蜜甜香的甜韵香气，三甜合一，芬芳四溢，属花油之冠。提炼1磅的玫瑰香油或玫瑰香精需要1000磅的玫瑰花，纯香精的比例更是少而又少，只有0.03%而已。至少有75%的优质香水用得到玫瑰香油。
- 波斯玫瑰(ROSE OF PERSIA)即大家熟知的大马士革玫瑰(突厥蔷薇)(学名Rosa Damascena，常用名Damask rose，有时也称Rose of Castile)，最早发源于波斯(现今的伊朗)，后来十字军东征时将这种品种的玫瑰带回欧洲，而大马士革城便成为这种玫瑰的集散地，所以将其改名为大马士革玫瑰。公元十世纪，物理学家Anicenna在玫瑰发源地波斯，用蒸馏的方法首次获得玫瑰油。





我沉醉于玫瑰

我沉醉于爱玫瑰的少女

我沉醉于四月的沉醉

——纪弦《四月的沉醉》

Rosemary

- Rosmarinus officinalis, commonly known as rosemary, is a woody, perennial herb with fragrant, evergreen, needle-like leaves and white, pink, purple, or blue flowers, native to the Mediterranean region.
- It is a member of the mint family Lamiaceae, which includes many other herbs. The name "rosemary" derives from the Latin for "dew" (ros) and "sea" (marinus), or "dew of the sea".The plant is also sometimes called anthos, from the ancient Greek word ἄνθος, meaning "flower". Rosemary has a fibrous root system.
- Stimulating, reviving and clearing.
- A very invigorating oil which re-energises tired muscles and weary feet. Rosemary essential oil promotes clear thinking, aids concentration and is said to improve the memory. It also gives a healthy shine to hair.
- Tunisia
- Rosmarinus officinalis
- Flowering tops
- Steam distillation
- 1,8 Cineole, a & b Pinenes, b-Caryophyllene

Rosmarinus officinalis
Rosemary



Flowering rosemary

Scientific classification

Kingdom:	**Plantae**
(unranked):	Angiosperms
(unranked):	**Eudicots**
(unranked):	**Asterids**
Order:	**Lamiales**
Family:	**Lamiaceae**
Genus:	***Rosmarinus***
Species:	***R. officinalis***

Binomial name

Rosmarinus officinalis
L.[1]

Sandalwood India

Santalum album

- Santalum album or Indian sandalwood is a small tropical tree, and is the most commonly known source of sandalwood. This species has historically been cultivated, processed and traded since ancient times. Certain cultures place great significance on its fragrant and medicinal qualities. The high value of the species has caused its past exploitation, to the point where the wild population is vulnerable to extinction. Indian sandalwood still commands high prices for its essential oil, but due to lack of sizable trees it is no longer used for fine woodworking as before. The plant is widely cultivated and long lived, although harvest is viable after 40 years. Etymologically it is derived from Sanskrit Chandanam > Sandanam > Sandalum > Sandal.[2]

Distribution

- It is a hemiparasitic tree, native to semi-arid areas of the Indian subcontinent. It is now planted in India, China, Sri Lanka, Indonesia, Malaysia, the Philippines and Northern Australia.

Santalum album



Santalum album

Conservation status

Extinct | Threatened | Lower Risk

EX EW CR EN VU cd nt lc

Vulnerable (IUCN 2.3)[1]

Scientific classification

Kingdom:	**Plantae**
(unranked):	Angiosperms
(unranked):	**Eudicots**
(unranked):	Core eudicots
Order:	**Santalales**
Family:	**Santalaceae**
Genus:	***Santalum***
Species:	***S. album***

Binomial name

Santalum album

L.

Tea Tree Essential Oil

- Antiseptic and cleansing.
- A very powerful natural antiseptic and anti-fungal oil, which forms part of every qualified aromatherapists first aid and travel kit. During the cold season, a few drops used in the bath induces sweating. You can also use a few drops to make a gargle or mouthwash.
- Australia
- Melaleuca alternifolia
- Leaves and twigs
- Steam distillation
- Terpenen-4-ol, g-Terpinene, a-Terpinene

Melaleuca alternifolia 茶树;茶樹精油;白千层属;白千层;互叶白千层



M. alternifolia (cultivated) growing in Menton, France.

Scientific classification	
Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Eudicots
(unranked):	Rosids
Order:	Myrtales
Family:	Myrtaceae
Genus:	*Melaleuca*
Species:	*M. alternifolia*

Binomial name

Melaleuca alternifolia

(Maiden & Betche) Cheel[1]

树苔Treemoss/Usnea

- Usnea is a genus of mostly pale grayish-green fruticose lichens that grow like leafless mini-shrubs or tassels anchored on bark or twigs.The genus is in the family Parmeliaceae. It grows all over the world.
- Members of the genus are commonly called old man's beard, or beard lichen. It resembles Evernia, which is also called tree moss.
- Like other lichens it is a symbiosis of a fungus and an alga. In Usnea, the fungus belongs to the division Ascomycota, while the alga is a member of the division Chlorophyta.
- Members of the genus are similar to those of the genus Alectoria. A distinguishing test is that the branches of Usnea are somewhat elastic, but the branches of Alectoria snap cleanly off.

- Usnea /a：sin/ 松萝属;松萝;例如松萝属;菘萝属;石萝

Usnea



Usnea australis

Scientific classification

Kingdom:	**Fungi**
Division:	**Ascomycota**
Class:	**Lecanoromycetes**
Order:	Lecanorales
Family:	**Parmeliaceae**
Genus:	***Usnea*** **(Dill.) Adans.** (1763)

Type species

Usnea florida

(L.) Weber ex F.H.Wigg. (1780)

Species

See **text**.

Ylang Ylang

- Cananga odorata, known as the cananga tree (Indonesian: kenanga, Balinese: sandat, Acehnese: seulanga, Filipino: ilang-ilang, Ilocano: allangigan), is a tropical tree that originates in Indonesia, which in early 19th century spread to Malaysia and the Philippines.[1] It is valued for the perfume extracted from its flowers, called ylang-ylang /ˈiːlæŋ ˈiːlæŋ/ EE-lang-EE-lang[2] (a name also sometimes used for the tree itself), which is an essential oil used in aromatherapy. The tree is also called the fragrant cananga, Macassar-oil plant, or perfume tree.[3][4] Traditional Polynesian names include Mataʻoi (Cook Islands), Mohokoi (Tonga), Mosoʻoi (Samoa), Motoʻoi (Hawai), Mokosoi/Mokasoi/Mokohoi (Fiji).[5]
- The ylang-ylang vine (Artabotrys odoratissimus)[6] and climbing ylang-ylang (Artabotrys hexapetalus)[7] are woody, evergreen climbing plants in the same family. Artabotrys odoratissimus is also a source of perfume.[6]

Ylang-ylang tree



Flowers of *Cananga odorata*

Scientific classification

Kingdom:	**Plantae**
Clade:	**Angiosperms**
Clade:	**Magnoliids**
Order:	**Magnoliales**
Family:	**Annonaceae**
Genus:	*Cananga*
Species:	***C. odorata***

Binomial name

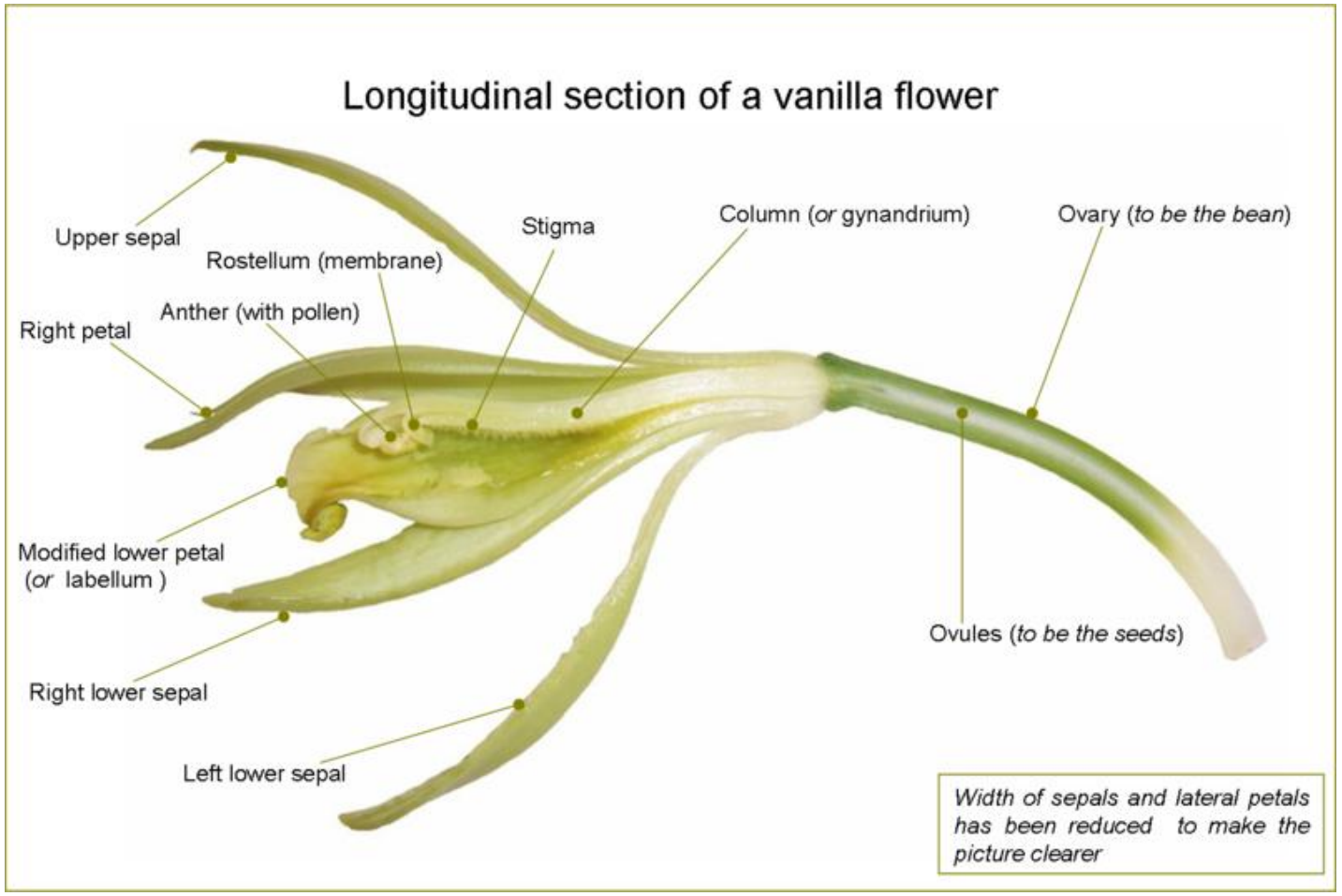
Cananga odorata

(**Lam.**) **Hook.f.** & **Thomson**

Vanilla



V. planifolia – flower



谢谢！

Merci