大自然的精华

天然精油

The Essential Oil

The Essence of Nature

编译
德馨香水博物馆
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HERB & FLORA
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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

- **溶剂萃取法Solvent Extraction**
- **佛拉索萃取法Florasols Extraction**

Florasol (R134a), a refrigerant, was developed to replace Freon. Florasol is an ozone friendly product and it poses little danger to the environment. One advantage is that the extraction of essential oils occurs at or below room temperature so degradation through high temperature extremes does not occur. The essential oils are mostly pure and contain little to no foreign substances.

佛拉索溶剂（R134a）是一种制冷剂，用于替代弗里昂，它不会破坏臭氧层，是环境友好产品。它的优点是萃取可以在室温或低于室温的条件下进行，因此产品不会发生极端高温恶化的情况，精油基本是纯净的，只含有很少或几乎不会含有外来物质。

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。

精油的生产
Essential Oil: Production

- **油脂萃取法Animal Fat Extraction**
- **冷吸法/脂萃法Enfleurage Method**

Enfleurage is a process that uses odorless fats that are solid at room temperature to capture the fragrant compounds exuded by plants. The process can be "cold" enfleurage or "hot" enfleurage.

脂萃法是使用室温时为固体的无臭油脂来捕获植物分泌的香味化合物，这种方法可分为冷脂萃法和热脂萃法。

- *In cold enfleurage, a large framed plate of glass, called a chassis, is smeared with a layer of animal fat, usually lard or tallow (from pork or beef, respectively), and allowed to set. Botanical matter, usually petals or whole flowers, is then placed on the fat and its scent is allowed to diffuse into the fat over the course of 1-3 days. The process is then repeated by replacing the spent botanicals with fresh ones until the fat has reached a desired degree of fragrance saturation.*

  冷脂萃法是用一个大的玻璃板框（也叫机箱），涂上一层动物油脂，通常是猪油或牛油（分别来自猪肉或牛肉），组装起来。植物材料通常是花瓣或整朵鲜花，放到油脂上以后，花的香味会扩散到油脂中，这个油脂吸香的周期需要1-3天。通过反复更换用过的鲜花，直到脂肪吸收花香到达预期的饱和。

- *This procedure was developed in southern France in the 19th century for the production of high-grade concentrates. In hot enfleurage, solid fats are heated and botanical matter is stirred into the fat. Spent botanicals are repeatedly strained from the fat and replaced with fresh material until the fat is saturated with fragrance. This method is considered the oldest known procedure for preserving plant fragrance substances.*

  这种工艺用于生产高级的香料，出现在19世纪的法国南部。热脂萃法的固体脂肪首先加热，然后拌入花材。用过的植物原料从油脂中取出反复挤压，不断更换鲜花直到油脂吸收香味达到饱和，这种工艺被认为是已知最古老的保存植物香味物质的工艺。

精油的生产
Essential Oil: Production

- **油脂萃取法Animal Fat Extraction**
- **冷吸法/脂萃法Enfleurage Method**

  In both instances, once the fat is saturated with fragrance, it is then called the "enfleurage pomade". The enfleurage pomade was either sold as it was, or it could be further washed or soaked in ethyl alcohol to draw the fragrant molecules into the alcohol. The alcohol is then separated from the fat and allowed to evaporate, leaving behind the absolute of the botanical matter. The spent fat is usually used to make soaps since it is still relatively fragrant.

  在这两种情况下，一旦油脂吸收香味达到饱和，就称这种油脂为“脂萃法香油”或“头油”。这种香油也可出售，或进一步用酒精洗涤，萃取香味分子浸出到酒精中，酒精和油脂分离以后，蒸发浓缩酒精，植物材料的净油就留在了最后。用过的油脂仍旧很香，可用于制皂。

- *The enfleurage fragrance extraction method is by far one of the oldest. It is also highly inefficient and costly but was the sole method of extracting the fragrant compounds in delicate floral botanical such as jasmine and tuberose, which would be destroyed or denatured by the high temperatures required by methods of fragrance extraction such as steam distillation.*

  脂萃法是一种古老的萃取香料的方法，这种方法非常低效和成本高昂，但它是萃取诸如茉莉和晚香玉这类娇嫩鲜花芳香化合物的独门方法。因为高温水蒸气蒸馏的方法会破坏这类植物的香味化合物或使其变性。

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

全球大宗精油的产量和贸易
Essential Oil: Production Quantities & Trade

- Estimates of total production of essential oils are difficult to obtain. One estimate, compiled from data in 1989, 1990 and 1994 from various sources, gives the following total production, in tonnes, of essential oils for which more than 1,000 tonnes were produced.

  很难估算出全球精油的总产量，从1989、1990和1994年编制的各方面来源的资料来看，给出以下产量超过1000吨（公吨）的精油统计数据。

Essential Oil 精油名称	Tonnes 吨
Sweet orange *甜橙油*	*12,000*
Mentha arvensis *薄荷油*	*4,800*
Peppermint *椒样薄荷油*	*3,200*
Cedarwood *柏木油*	*2,600*
Lemon *柠檬油*	*2,300*
Eucalyptus globulus *桉叶油*	*2,070(?)*
Litsea cubeba *山仓子油*	*2,000*
Clove(leaf) *丁香油（含叶油）*	*2,000*
Spearmint *留兰香油*	*1,300*

精油的药理学研究和探讨

Essential Oil: The Pharmacological Studies Exploring

- Although there is currently something of a dismissive attitude concerning essential oils in pharmacology, various essential oils retain considerable popular use, partly in fringe medicine and partly in popular remedies. Therefore it is difficult to obtain reliable references concerning their pharmacological merits.

  尽管当前一些药理学方面的研究对精油采取的是不肖一顾的态度，但各种精油仍保持相当普遍的使用，部分处于边缘医药学科，部分处于流行医药学科，因此，关于精油的药理学优点很难找到可靠的参考。

精油的药理学研究和探讨

Essential Oil: The Pharmacological Studies Exploring

Taken by mouth, many essential oils can be dangerous in high concentrations. Typical effects begin with a burning feeling, followed by salivation. In the stomach, the effect is carminative, relaxing the gastric sphincter and encouraging eructation (belching). Further down the gut, the effect typically is antispasmodic.

许多精油在高浓度下口服是有危险的。典型的反应的是首先出现灼热的感觉，然后出现流涎。进入胃部的效果是驱风，胃括约肌会放松并伴随打嗝。下到肠道，典型的效果是解痉。

- Typical ingredients for such applications include eucalyptus oils, menthol, capsaicin, anise and camphor. This illustrates the fact that different essential oils may have drastically different pharmacology.Some essential oils, such as those of juniper and agathosma are valued for their diuretic effects.

  这类应用的典型成分包括桉叶油、辣椒素、薄荷脑、大茴香油和樟脑。这也说明不同的精油会表现出不同的药理学功效。一些精油，如杜松和布枯就被认为具有很好的利尿效果。

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	

精油的毒理性研究
Essential Oil: Toxicology

- It is important to understand that the foregoing figures are far less relevant in everyday life than far smaller, often localized levels of exposure. For example, a dose of many an essential oil that would do no harm if swallowed in diluted solution or emulsion, could do serious damage to eyes or lungs in a higher concentration.

  重要的是要了解到，在日常生活中，前述的数字（LD50）比起很小的数值来说相关性更小，曝光经常处在局部的层级。例如，许多精油在稀释或乳化以后吞食将没有危害，在高浓度的情况下就会对眼睛和肺部造成严重的损伤。

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。

精油的使用:如何稀释
Essential Oil: Dilution

- Essential oils are usually lipophilic (literally: "oil-loving") compounds that usually are not miscible with water.

  精油是亲脂性（字面意思：亲油）的化合物，通常与水不互溶。

  They must be diluted with passive carrier oils before ingestion or topical application. Water cannot be used in this case as all essential oils are not miscible with water.

  在摄入或局部应用之前，精油必须要用基础油稀释，这种情况下不能使用水，因为精油与水不混溶。

  Essential oils should be blended with a vegetable-based carrier oil (as a base, or "fixed" oil) before being applied. Common carrier oils include olive, almond, hazelnut and grapeseed. Only neutral oils should be used. A common ratio of essential oil disbursed in a carrier oil is 0.5–3% (most under 10%), depending on its purpose.

  精油在使用之前应该与植物基础油（作为基础或“定香”油）混合，常见的基础油包括橄榄油、杏仁油、榛子油和葡萄籽油。只有中性的油才能用，精油在基础油中通常的稀释比例是0.5-3%（最多不超过10%），这取决于使用的目的。

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.

精油的摄入
Essential Oil: Ingestion

- Essential oils are used extensively as GRAS flavoring agents in foods, beverages and confectioneries according to strict Good Manufacturing Practice (GMP) and flavorist standards, and while some advocate the ingestion of essential oils for therapeutic purposes in extremely small amounts, this should never be done except under the supervision of someone licensed to prescribe such treatment and/or who is well versed and experienced in "clinical" aromatherapy. Some common essential oils such as eucalyptus are toxic internally. Pharmacopoeia standards for medicinal oils should be heeded. Some oils can be toxic to some domestic animals, cats in particular. The internal use of essential oils can pose hazards to pregnant women, as some can be abortifacients in dose 0.5–10 ml, and thus should not be used during pregnancy.

  依照GRAS(美国FDA，一般认为是安全的)法规，按照严格的GMP（良好生产管理规范）香精标准，精油被广泛应用于食品、饮料和糖果香精的添加剂。与此同时，一些人主张以极少量摄入精油用于治疗目的，不可以随便这样做，除非是在有执照的专业人员监管下按照规定来做这样的处理，或者是精通和有丰富“临床”芳香疗法经验的专业人员。一些普通精油（如桉叶油）内服是有毒性的，根据药典标准，药用精油需要谨慎对待，一些精油对家养的小动物（特别是猫）是有毒性的。精油的内服会对孕妇构成危害，0.5-10毫升的剂量就有可能成为堕胎药，因此怀孕期间不应该使用精油。

精油:孕妇慎用
Essential Oil: Pregnancy

- The use of essential oils in pregnancy is not recommended due to inadequate published evidence to demonstrate evidence of safety. Pregnant women often report an abnormal sensitivity to smells and taste, essential oils can cause irritation and nausea.

  不建议孕妇使用精油，原因是没有充足的公开证据证明其对孕妇的安全性。孕妇通常对气味异常敏感，精油会带来刺激和引起恶心。

精油:关于男性乳房发育症
Essential Oil: Gynecomastia

- Estrogenic and antiandrogenic activity have been reported by in vitro study of tea tree oil and lavender essential oils. Case reports suggest the oils may be implicated in some cases of gynecomastia, an abnormal breast tissue growth, in prepubescent boys.

  对茶树油和薰衣草精油的体外研究表明，雌激素和抗雄激素的活性已有报道。病例报告显示，精油可能涉及某些情况的男性乳房发育，导致青春期以前的孩子出现不正常的乳腺组织生长。

精油:关于农药残留
Essential Oil: Pesticide residues

- There is some concern about pesticide residues in essential oils, particularly those used therapeutically. For this reason, many practitioners of aromatherapy buy organically produced oils. Not only are pesticides present in trace quantities, but also the oils themselves are used in tiny quantities and usually in high dilutions. Where there is a concern about pesticide residues in food essential oils, such as mint or orange oils, the proper criterion is not whether the material is alleged to be organically produced, but whether it meets the government standards based on actual analysis of its pesticide content.

  关于精油中农药的残留是个令人担忧的问题，特别是那些用于治疗的精油。由于这个原因，许多芳疗从业者选择购买有机生产的精油。不仅仅是农药在精油中是微量存在的，而且精油本身在使用过程中的量也非常微小，通常是高度稀释的。关于食用精油的农药残留问题也令人担忧，就像薄荷油和甜橙油，正确的标准不是原料是否按照所谓有机的方式生产，而是它是否符合政府制定的基于实际分析的农药残留标准。

精油的燃烧性
Essential Oil: Flammability

- The flash point of each essential oil is different. Many of the common essential oils, such as tea tree, lavender, and citrus oils, are classed as a Class 3 Flammable Liquid, as they have a flash point of 50–60 ° C.

  每个精油的闪点都不同，许多常见的精油，诸如茶树、薰衣草和柑橘精油，被归为第三类易燃液体，它们的闪点都在50-60℃。

精油:危险和禁忌
Essential Oil: Dangers & Prohibitions

- Because of their concentrated nature, essential oils generally should not be applied directly to the skin in their undiluted or "neat" form. Some can cause severe irritation, provoke an allergic reaction and, over time, prove hepatotoxic.
- 由于高度浓缩的特性，通常未稀释或“纯”的精油不能直接施用于皮肤，一些精油会导致严重的刺激，引起过敏反应，甚至随着时间的推移被证明有肝毒性。
- Essential oils should not be used with animals, as they possess extreme hepatotoxicity and dermal toxicity for animals, especially for cats.
- 精油不能用于动物身上，它对动物，尤其是猫具有极端的肝脏毒性和皮肤毒性。
- Some essential oils, including many of the citrus peel oils, are photosensitizers, increasing the skin's vulnerability to sunlight. Industrial users of essential oils should consult the material safety data sheets (MSDS) to determine the hazards and handling requirements of particular oils.

  一些精油，包括许多柑橘类精油，都是光敏剂，它会增加皮肤在光线下的脆弱性，精油的工业使用者应该查阅特定精油的MSDS(材料测试与安全)数据来确定其危害和处置要求。

精油的处置方法
Essential Oil: Handling

- Essential oils can be aggressive toward rubbers and plastics, so care must be taken in choosing the correct handling equipment. Glass syringes are often used, but have coarse volumetric graduations. Chemistry syringes are ideal, as they resist essential oils, are long enough to enter deep vessels, and have fine graduations, facilitating quality control. Unlike traditional pipettes, which have difficulty handling viscous fluids, the chemistry syringe has a seal and piston arrangement which slides inside the pipette, wiping the essential oil off the pipette wall. This improves accuracy, and the inside of the pipette is easy to clean and reuse immediately. Chemistry pipetting syringes are equal in accuracy to the best laboratory equipment and are available in sizes from 1 mL through 25 mL.

  精油会侵蚀橡胶和塑料，因此必须注意选择正确的处置设备。玻璃注射器会经常用到，但是需要有粗略的容量刻度，化学注射器（移液管）比较理想，它能抵抗精油的腐蚀，长度足够伸到容器深处，有精确的刻度，便于质量控制，不像传统的吸管，很难处理粘性的液体，化学注射器有一个密封件和活塞装置，在管壁内部滑动，可以擦除管壁上的精油。这样可以提高精确度，移液管内部也容易清洗和马上重新使用，化学移液注射管在精确性上与最好的实验设备是相当的，规格从1毫升到25毫升都有。

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