

# We strive to be the most respected global provider of native Australian ingredients.

Our products are 100% pure, 100% natural, and 100% traceable. Our products are grown, developed, and brought to market in the most environmentally friendly and sustainable manner possible.

We develop and support our team members to be knowledgeable and highly capable, enabling them to take pride in supporting - beyond expectations our customers' requirements.









### TRACEABLE AND SUSTAINABLE. NATIVE AUSTRALIAN BOTANICALS

To produce one kilogram of Pure Australian Tea Tree Oil, we need to grow and nurture 75 tea trees for one year.

To produce one kilogram of pure Australian Sandalwood Oil, we need to grow one Sandalwood tree for over 25 years.

To produce one kilogram of pure Australian Eucalyptus Radiata Oil, we need to grow and nurture 187 Eucalyptus trees for two years to get to our first harvest.

How do we know this? Because we are the farm – we are out there in the 40°C (104°F) heat planting, irrigating, and weeding. We're in the fields rain or shine, worrying whether the next hail storm will destroy next season's oil harvest. We are also out there when it's 5°C, worrying about the frost that can also damage our plants just before the harvest. We are constantly out in the fields pulling weeds, checking for bugs, and analyzing soil and water samples.

We are farmers – we produce native Australian essential oils and supply them directly from our farms - we look after the environment, ensuring our farming practices are as sustainable as possible - but there is so much more we need to do to get our products to you.

We are also warehouse and shipping experts, lab analytic specialists, marketing experts, finance managers, quality specialists, regulatory advisors, and order fulfilment specialists.



**Our combined expertise** delivers the finest native Australian essential oils and botanicals. We hope these efforts give you confidence - confidence in the purity, the traceability, and the sustainability of our ingredients to use in your own formulations.

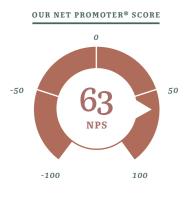
Our Tea Tree Oi from the native Australian plant, Melaleuca alternifolia is produced and certified by the Attia **Code of Practice** quality system.

> Sandalwood Oil (Santalum spicatum) is certified Sustainable by the government's Forest Products Commission. Traceable from harvest to drum

Our pure **Eucalyptus Oils** meet international standards with original distillation No refining or fractionation necessary.

Down Under Enterprises was founded over 18 years ago in a spare bedroom to sell Tea Tree Oil from Dee-Ann's parents' farm. Right from the beginning, Dee-Ann found great joy and satisfaction in working with many of the early innovators in the natural products industry. She found this a striking and refreshing change from her prior career experience in Investment Banking and Management Consulting.

In the years since, the focus of the company and our commitment to our customers has never wavered. We have never been about just making the sale. If our product was not right for a prospective customer, we would rather tell them that we're not the best solution for them rather than trying to make it work. We have never compromised on quality – preferring to not sell a product versus putting out a product which was not top notch.



As our company has grown, so have our customers and our staff to support this customer base. We know that finding the right employee is a critical responsibility. We love that our team has the same mentality as we do; they focus on your needs – they go beyond the minimal requirement and try to exceed your expectations every day. This personal drive is not something that can be easily trained. Our team is involved in regular training, undertake personal development activities, and gain exposure to all areas of our organization. Our highly talented and diverse team is a key reason

Down Under conducts regular assessments of our Customers' satisfaction levels and appreciates feedback on how we can further improve. Our customers have given us an exemplary Net Promoter Score of 63, far exceeding the industry benchmark of 45 by a wide margin.

why customers work with us.

Our ingredients are now used by hundreds of manufacturers in the personal care, home care, pet care, medicinal care and industrial markets every year. We take this responsibility seriously. With this growth comes a formalization of our inherent beliefs and values. We have also always been passionate about the environment and minimizing our impact on it.

Our business and life philosophy, and now our Mission Statement (refer to the inside cover), encompasses these three driving principles. Our ingredients are now used by hundreds of manufacturers in the personal care, home care, pet care, medicinal care and industrial markets every year. We take this responsibility seriously.



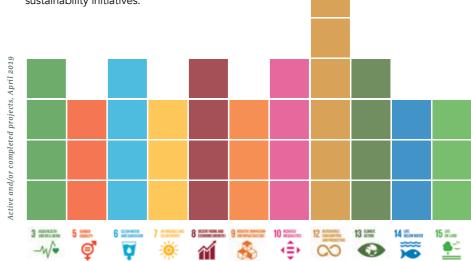
Dee-Ann, our founder, harvesting Tea Tree at Robel farm.





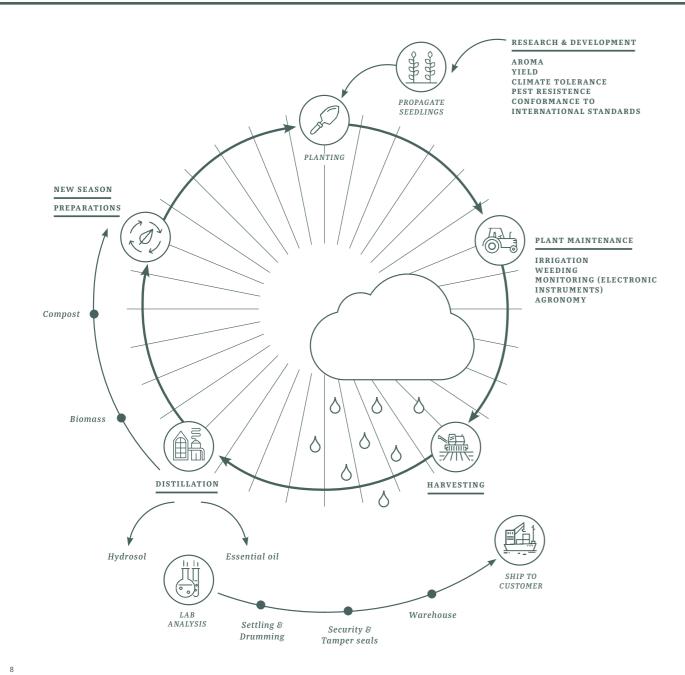
There is only one 'Mother Earth'. We take great responsibility in looking after her across all of our farms and partner farms and global operations. We make sure we are acting in the most responsible and sustainable manner. We review our practices and activities as part of a continuous improvement process we call our Cycle of Sustainability. Our environmental management system has been certified to ISO14001:2015 international standards.

In 2015, the United Nations member states adopted the Sustainable Development Goals as part of the UN 2030 Agenda for Sustainable Development. These 17 topics of focused sustainable development initiatives are designed to 'provide a shared blueprint for peace and prosperity' to member nations for their own sustainability initiatives.



While many of these goals are truly targeted at national programs, especially for emerging countries, the UN Sustainable Development Goals does offer a common framework. Of these seventeen UN Sustainable Growth Goals, Down Under has chosen eleven of these goals which are directly applicable to us and serve as a framework for the management of our Sustainability program.





Sustainability is at the heart of our farming operations. From major initiatives like our R&D optimization programs down to the finest details like packaging seals to preserve our oils and prevent product loss, we continually look for new ways to improve our sustainability profile and deliver a premium product to you. Our 'Cycle of Sustainability' illustrates the seasonal cycle of our farming operations, complimented by the manufacturing processes and controls to achieve highly specified product quality standards to meet your strictest requirements.

**Research & Development** Before the first seedling is planted, considerable time many years - is invested to identify the best

<u>a</u>

native Australian plant varieties, producing unique functional attributes and consistent aromas, with a tolerance for our specific climate and soil conditions. We also work with our analytical lab to confirm the resultant oil will conform to international standards.

Seedlings 995 After optimization of the oil properties and yield potential, parent plants are bred out - a process which can take a couple more years. From these

parents, we can obtain seeds and germinate seedlings -- or propagate clones - and prepare them for planting.

Planting With our essential oil plants, planting is generally done once in a lifetime. Thus, every aspect of the planting process needs to be perfect – we don't have next season to plant again and make it better. We do it once and do it right. Many considerations have to come together at the same time for a successful planting - soil structure, soil moisture, bed forming, and

seedling maturity . Of course the weather has an enormous impact at this stage - we can plan everything meticulously, but if the weather doesn't cooperate to yield the right conditions, then we need to wait. It's also a time where we need a lot of extra hands on board for the operation. This stage will require 3 or 4 tractors, 10 or more staff, and close cooperation with our nursery to deliver the seedlings in their optimal condition. This is where we sweat the details - intensely.

Maintenance For our new seedlings and mature plants alike, we constantly monitor soil moisture, insects, and weed infiltration to make sure we achieve a healthy crop.

Harvest

Winter means harvest time for many of our plants. Daylight grows short, but our days grow long with 24/7 harvesting, biomass handling, and distillation activities. We hope for dry weather at this time of year so our harvesters can get on the fields and get the crop off.

### PLANTING PROCESS



Laser levelling



Power hoeing



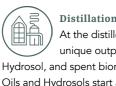
Planting



Watering in seedlings



The spent biomass is returned to our composting operations where, over an 8-12 week process, is turned into a rich humus material. and then returned to our paddocks as organic fertilizer.



### Distillation At the distillery, we get three unique outputs - Essential Oil,

Hydrosol, and spent biomass. The Essential Oils and Hydrosols start a rigorous quality control process of batching and lab analysis .

### Composting and New Season , Ø **Preparations**

The spent biomass is returned to our composting operations and, combined with manure, wood chips and other waste silage over an 8-12 week process. This organic mixture is turned into a nutrient-rich, high humus content product which we apply to the field and work into the growing beds with specialized equipment to facilitate the young, new season growth of our plants.

### Lab Analysis and Documentation Once the Oils have settled,

passed our Quality Control procedures, and released through our custom-designed batch management system, they are ready to be decanted into their final packaging.

### Drumming and Security Seals

Packaging of Essential Oils is an important consideration which can easily be overlooked. Essential Oils are generally a combination of Terpenes, Sesquiterpenes, Oxides, and other organic compounds which can have a deleterious effect on plastic packaging. Inferior packaging will result in the introduction of "undesirables" leaching into

the Essential Oil, such as phthalates and other plasticizers, heavy metals, and even the coatings applied inside many containers. That is why all packaging used by Down Under for our oils have undergone extensive shelf life studies, detailed plastics analysis, and oil quality assessment. Once the Oils are drummed, we apply a layer of Argon gas (sparging) to create an anoxic environment. Why Argon? With an atomic weight of 39.95, Argon will sit on top of the oil and block Oxygen (weight: 15.99) from contacting the oil and causing oxidation and degradation. Why not Nitrogen? Argon is over 21/2 times heavier than Nitrogen (weight: 14.00) and will continue to provide efficacy once opened, whereas Nitrogen will escape from the container once opened and cease to provide efficacy. All containers are then sealed using our own tamper-evident seals. Finally our batch-specific and GHS-compliant labels (able to withstand 3+ months total immersion in water) and DG hazard labels are applied.



### Worldwide shipping Our Essential Oils are now ready to be safely shipped to our customers worldwide, confident our products will reach our customers in the best possible condition, while being 100% traceable back to the sustainable farming practices on each of our farms.





### LEMON SCENTED TEA TREE

Down Under has commissioned Cheryl Hodges, an awardwinning artist from Canberra, Australia's capital, with a focus on botanical watercolors. She is a member of the Florilegium Society of the Royal Botanic Gardens Sydney, where one of her paintings is in the permanent collection of the National Herbarium.

## TRACEABILITY

From our farms to your facility – our traceability pledge. With every kilogram of essential oil produced on our farms, an extensive amount of data is generated to make sure we have documented every aspect of getting this oil from our plants and into a drum and delivered to you. In this process, our custom-designed farm management system has captured all agricultural operations associated with that oil – from the origin of the seeds we planted, the farm activities we undertook to bring the plants to harvest, the lab testing on each and every batch.

While many companies are talking about traceability, Down Under Enterprises is ready. We have adapted and deployed this functionality across our systems and internal processes to ensure complete tracking of every batch of product.

## ESSENTIAL OIL FARMER DISTILLER BROKER BROKER SHIPPING/FREIGHT FORWARDER MANUFACTURER

### Blockchain

We believe blockchain technology for supply chains has reached the critical mass to now make it practical. We are onboarding blockchain capability and will be able to provide you with direct API integration between our system and yours. If this is of interest to you, contact us to discuss your requirements.

Whether you're with us on blockchain or a more manual process, we will continue to track every batch of oil from the farm, to the distillery, into our drums, and directly to you. Traceability is a key tenant in our quality promise and we are focused in our efforts to uphold this commitment to you. With Down Under Enterprises, you can be assured you're getting the very best native Australian ingredients possible - whether it's one of our 100% pure Australian essential oils, our native carrier oils, or our specialty ingredients. Down Under conducts Mass Spectroscopy/ Gas Chromatography analysis on each and every batch, on every oil - 100% compliance. This testing is independently conducted by Southern Cross University Plant Science Labs, world-renowned for their experience with essential oil testing. Batch after batch of testing our oils, these experts have never found any trace of herbicides or pesticides in our oils. That is why every one – 100% – of our oils is COSMOS Natural certified by EcoCert. We are proud of this record of purity, our customers applaud us for it, and we know

We also understand that your company – and your customers – may require different types of product certifications. That is why, where we can, we offer you the choice of Conventionally Farmed or Certified Organic (USDA NOP, ACO, Bio-CE). Please talk to us about your specific certification requirements and we will work to meet those needs.

you will appreciate it too.







Fulfiment

Manager

Start

lequest 50ml sample

Create new Batch

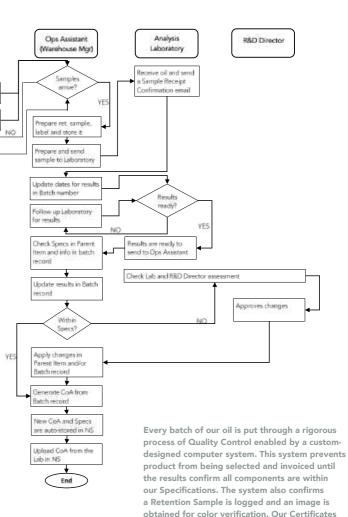
Check sample status

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o vendor

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with vendor













### LOGISTICS AND DISTRIBUTION

In today's business environment of lean inventory management, variable customs fees, port industrial relations delays, and even regulatory authorities (e.g. US FDA) halting shipments without warning, having a locally-based supply of direct-fromplantation Australian essential oils and carrier oils makes a lot of sense. In fact, it can take a lot of risk out of your supply chain. It's the reason we implemented this business model many years ago, and the reason why so many customers trust Down Under Enterprises as their preferred vendor for pure Australian essential oils and carrier oils.

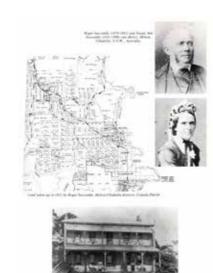
Down Under Enterprises has the experience and scale to manage FCL/LCL and airfreight shipments of our products. Many essential oils are Dangerous Goods rated (DG Class 3, Packing Group III) for transportation purposes (as governed by US DOT, IATA, IMDG, among others), requiring special training, certifications, and handling procedures. Contraventions of these regulations can carry stiff penalties, even imprisonment. Down Under Enterprises has the training, certifications, and procedures in place to handle and ship these oils safely and efficiently. We can also provide optimal shipping guidance – sometimes even saving your organization from these DG shipping rates.

The Global Harmonization System (GHS) of Classifying and Labelling Chemicals has changed shipping and documentation



Down Under Enterprises was founded in 2001 by Dee-Ann Prather as a family owned and operated company to distribute wholesale, bulk Australian Tea Tree Oil from her family's farms, assuring customers of a reliable supply with highly consistent quality and aroma.

Since the 1850's, five generations of our family have been farming in Australia. From our first tea tree plantation in the 1990's, our parents and our brother's family grew to run multiple plantations across the key native growing region for Tea Trees. As the global demand for Pure Australian Tea Tree Oil expanded, the number of our plantations increased and each new plantation provided greater efficiencies and higher yield plants. From this history, Down Under Enterprises has become one of the largest suppliers of 100% Pure Australian Tea Tree Oil to the United States and now around the world. As the popularity of Tea Tree Oil has grown, our business has also grown to include additional oils also sourced from farms owned and operated by our friends. Today, we obtain our Tea Tree Oil from over 452 hectares of conventionally farmed Tea Trees, with another 340 hectares managed with USDA certified organic status.



In 2016, Down Under Enterprises developed a new plantation which yields an additional 50,000kg of high quality tea tree oil and other essential oils. Called Buhlambar, "Home of Tea Tree" in local Aboriginal Bundjalung language, this plantation is available for customer visits to experience first-hand how tea trees are grown. You may even encounter one of our residents - koalas, kangaroos, and other native Australian fauna – while visiting our farm. In 2018, we expanded the farm by 40% with the purchase and development of an adjoining biodynamic farm.

Contact us to discuss your planned visit to Australia and to see us at Buhlambar.

<image><image>



Buhlambar, "Home of Tea Tree" in local Aboriginal Bundjalung language, is available for customer visits to experience first-hand how tea trees are grown and turned into Pure Australian Tea Tree Oil.



Robel Farm – Our first family Tea Tree farm



### OUR FARMING HERITAGE





### The Seccombe family



The Prather family



### PURE AUSTRALIAN TEA TREE OIL

Tea Tree Oil is an essential oil obtained from the steam distillation of the native Australian plant Melaleuca alternifolia. It has been used for thousands of years by Australian Aborigines as an effective treatment of various skin maladies. In the early twentieth century, a Sydney-based chemist, Dr. Arthur Penfold, discovered that tea tree essential oil was thirteen times stronger than carbolic acid – the standard at that time - as an antiseptic. To this day, Melaleuca alternifolia is one of the most heavily researched and cited essential oils in existence; Google Scholar references nearly 5000 citations since 1980. Research topics range from the in vitro validations of its antimicrobial properties to extensive, randomized and prospective in vivo human studies. This ever-expanding body of evidence is likely to further the applications and demand for this natural oil. Recently, researchers in Australia even used Tea Tree Oil to synthesize graphene (single-layer carbon fiber) sheets! Tea Tree Oil's properties as an effective antiseptic, antibacterial, antifungal, antiviral, and antiinflammatory agent are highly valued in personal care formulations.







Seedlings

Planting

Irrigating

medicinal applications, home care, hair care, skin care, and oral care. In 2014, Tea Tree Oil was approved by the European Medicines Agency as a Traditional Herbal Medicine, with four defined indications for use. Notably, three of the four indications involve the use of pure, undiluted Tea Tree Oil.

- For treatment of small superficial wounds and insect bites
- For treatment of small boils (furuncles and mild acne)
- For the relief of itching and irritation in cases of mild athlete's foot
- For symptomatic treatment of minor inflammation of the oral mucosa.

### AMERICAN BOTANICAL COUNCIL

Down Under Enterprises has compiled a series of technical and clinical white papers which summarize the research conducted in different use cases such as,



Founded and managed by the American Botanical Council (ABC), the Adopt-an-HerbTM

program has been in existence since 2008. Each adopting organization helps ensure that the most current information on each herb is available in HerbMedPro, enabling consumers, researchers, educators, media, health practitioners, government agencies, and members of industry (including retailers and other) with easy access to abstracts of the latest scientific and clinical publications on the many aspects, properties, and benefits of the adopted herb. Down Under Enterprises has proudly adopted Tea Tree Oil in the Adopt-an-Herb program and assists the ABC to support and expand the public's knowledge of the essential oil, hydrosol, and other uses of Australian Tea Tree Oil (Melaleuca alternifolia).



Harvesting



Distillation



Shipment

One of the biggest risks

In Australia, the home of premiumquality Tea Tree Oil, the Australian Tea Tree Industry Association (ATTIA) is a not-for-profit organization formed in 1986 as the peak body to promote and represent the interest of the Australian tea tree industry from the grower/producer of Australia Tea Tree Oil, through to the manufacturer of off-the-shelf products. ATTIA aims to develop a stable, cohesive, environmentally friendly, and internationally competitive Tea Tree Oil industry producing quality assured Tea Tree Oil that meets or exceeds international standards.

The Australian Tea Tree industry is environmentally aware and was one of the first industry bodies to adopt a policy that broadly embraces the principles of the ISO14000 environmental standards. ATTIA members must abide by this policy's stringent guidelines for the responsible production of pure Tea Tree Oil and Tea Tree Oil product. The composition of Tea Tree Oil products is determined by ISO 4730 (2017) Standard - Oil of Melaleuca, terpinene-4-ol type.

**Storage Packaging & Transport** When Tea Tree Oil is stored and transported, ATTIA Code of Practice standards ensure that the quality of the oil is not compromised. While stainless steel is the best material for long term storage and shipment of Tea Tree Oil, a select range of packaging has undergone extensive long term and accelerated testing and analysis by ATTIA.

Avoid accepting any Tea Tree Oil in non-approved aluminum flasks, mild steel drums (including EPON-lined), nonfluorinated (Level 5) HDPE or any other plastic whatsoever - it will no longer be pure and/or will likely exhibit accelerated oxidation. Down Under Enterprises can help you determine which container is most suitable for your requirements.

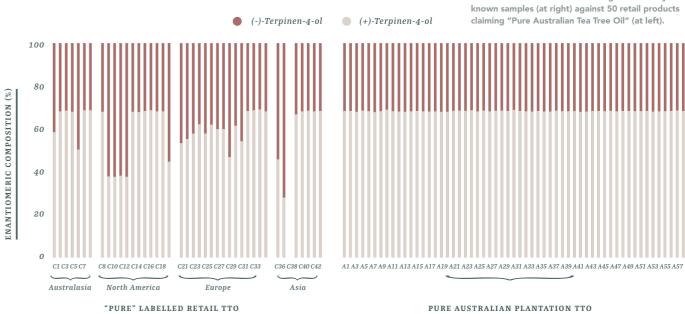
in strategic sourcing of natural products is identifying the source/ provenance and natural purity of your ingredients. Down Under Enterprises makes this easy for you. The Australian Tea Tree Industry Association Code of Practice is a complete Quality Management System specifically written for the Tea Tree Industry. Covering everything from planting and maintenance, to harvesting, distilling, packaging, and even records management, the Code of Practice (COP) and the COP seal on our packaging, is your guarantee that our Tea Tree Oil has been produced to the highest standards of purity and consistency in the world. If your supplier does not offer COP-certified Tea Tree Oil, find out why, then talk to Down Under Enterprises. Your QA and Manufacturing team will thank you for it.



### ADULTERATION AND A NEW ISO STANDARD FOR TEA TREE OIL

As the effectiveness of pure Australian Tea Tree Oil has become widely recognized, a market has developed for low-cost adulterated oil, often consisting of Tea Tree Oil blended with components such as sabinene from pine oil. Some companies are also creating "Nature Identical" Tea Tree Oil, synthetically created from only 15 of the 113+ components as listed in the International Standard (ISO 4730) for Tea Tree Oil.

Manufacturers of these adulterated oils often mix the components to ensure that physical properties (e.g. optical rotation) are adjusted to conform to the standard. Detection of such oils can be difficult. These products masquerading as Tea Tree Oil have no scientific evidence to support their Safety nor their Efficacy, placing consumers at risk. Consumers using this adulterated product may unknowingly suffer detrimental experiences, turning them away from using Tea Tree Oil entirely.



ATTIA PACKAGING STANDARDS



ATTIA has identified Chiral Molecule Analysis as a simple test to quickly and inexpensively differentiate pure, natural Tea Tree Oil from adulterated Tea Tree Oil. This definitive testing methodology has undergone extensive validation as published by Wong, Davies, Chin, et al., in the May 2015 issue of Industrial Crops and Products (see below results). The Chiral Molecule Analysis is incorporated in the revised ISO standard for Tea Tree Oil (2016).

Tea Tree Oil chiral molecule testing validated by 57

We are passionate about native Australian essential oils and botanicals. We live here, we know this country, we understand its plant life. We love the amazing diversity that has evolved across this vast country of ours – the only one in the world to encompass an entire continent!

Australia's geographic isolation has created a unique mix of fauna -Kangaroos, Koalas, Emus, Platypus - found nowhere else in the world. Australia's flora is no different – all of it adapting to the continent's harsh and uncompromising environment. These elements form the basis of our product line – plants which have developed

their own natural defense mechanisms. resisting pest and pathogen attacks, achieving drought and flood tolerance, and exhibiting unique and complex chemical compositions. The essential oils of these plants are now brought to you by the leader in Australian Essential Oils -Down Under Enterprises.

The remainder of this booklet provides extensive product information, applications, and key sourcing details for each of our products. We encourage you to read through this booklet and talk to us about your specific product formulation requirements.

"I love a sunburnt country, a land of sweeping plains, of ragged mountain ranges, of droughts and flooding rains."

MY COUNTRY, BY DOROTHEA MACKELLAR



Product Name:	100% Pure Australian Anise Myrtle Oil
Botanical name:	Syzygium anisatum (syn. Backhousia anisata)
INCI:	Backhousia Anisata Leaf Extract
HS Code:	3301.29
UN Code:	Non-Hazardous
CAS No:	8008-46-6
Part of Plant Used:	Leaves and twigs
Appearance:	Clear, colorless to pale yellow mobile liquid
Aroma:	Anise, fennel or licorice scent
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional
<b>Certifications</b> :	COSMOS



### THERAPEUTIC PROPERTIES

Formerly known as *Backhousia anisata* and *Anetholea anisata*, the anethole chemotype of the botanically reassigned *Syzygium anisatum* can be used as a flavoring agent in foods and beverages. Like many other plants with similar flavor qualities it acts as a digestive aid and carminative. Low amounts will suffice in most formulations as it has a very high odor and flavor intensity. Much like licorice, it is used as an expectorant and it is best added to other oils to complement and potentiate other medicinal activities. It may be used in the fragrance industry as a substitute for anise or fennel aroma.

"Anethole is regarded as an antiseptic, bactericide, cancer-preventative, carminative, dermatogenic, expectorant, fungicide, gastrostimulant and insecticide" (Webb). It lowers the sympathetic nervous system response, allowing for a greater sense of relaxation. The methyl chavicol chemotype is toxic at high doses in mice. It is "an anesthetic, anticonvulsant, myorelaxant, cancerpreventative, fungicide, antispasmodic, a carminative and stabilizes the sympathetic nervous system, hence its antispasmodic qualities" (Webb).

Results from a study done in 2005, show that essential oils from this and other Australian plants may be valuable antimicrobial agents for use alone or incorporated into cosmetics, cleaning agents and pharmaceutical products (Wilkinson).

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Shaving and Post Wax	Hand and Body Wash	Decongestant		Food Preservative
	Massage	Anticarcinogen		Culinary
	Hair Care			Perfume
	Oral Care			Aromatherapy
	Lip Balm			

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MAJOR CHEMICAL CONSTITUENTS

Two chemotypes exist: (a) one rich in (E)-anethole (>80%) and (b) rich in methyl chavicol (60-75%), which is also known as estragole (commonly found in basil and tarragon). Minor amounts of alpha-pinene, cineole, (Z)-anethole, limonene alpha farnesene, and anisaldehyde exist in each chemotype.

#### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Batiaglia, Salvatore. The Complete Guide to Aromatherapy; International Center for Holistic Aromatherapy, 2003; Brisbane, Australia. Schnaubelt, Kurt. Medical Aromatherapy; Frog Ltd, 1999, Berkeley, CA. Webb, Mark. Bush Sense; Griffin Press 2000; Adelaide, Australia.



Product Name:	100% Pure Australian Balm Mint Bush Oil
Botanical name:	Prostanthera melissifolia
INCI:	None issued
HS Code:	3301.29
UN Code:	3082 (Class 9)
CAS No:	None issued
Part of Plant Used:	Leaves
Appearance:	Clear, colorless to pale yellow liquid
Aroma:	Minty with a hint of eucalyptus
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional
<b>Certifications</b> :	COSMOS



### THERAPEUTIC PROPERTIES

Prostanthera is a genus of flowering plants of the mint (*Laminaceae*) family. There are about 90 species within the genus, all of which are endemic to Australia. The genus name is derived from the Greek word for 'appendage'. The species name relates to having foliage similar to *Melissa officinalis* (Lemon Balm); hence the common name. The Mint Bush family has a wide variety of variations that are often used in Australian Bush cooking.

The leaves from which the essential oil is derived are described as antibacterial, antimicrobial, antifungal and carminative. They are used externally in the treatment of colds and headaches. An Australian study conducted in 2009 determined that essential oils from Australian native plants offer limited protection against biting mosquitoes however a blend of essential oils (including Balm Mint) may offer commercial potential as a short-period repellent or under conditions of low mosquito abundance.

Based on the chemistry, anti-inflammatory uses may be established. As a member of the mint family it may also contain menthol and cineole, for which respiratory and analgesic properties may apply.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Shaving and Post Wax Cleanser	Hand and Body Wash Massage	Antimicrobial Natural mucolytic	Surface Disinfectant Cleaner	Perfume Aromatherapy
	Deodorant	Athletes Foot Powder Natural Decongestant	Detergent	Diffuser Mist Insect Repellent

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MAJOR CHEMICAL CONSTITUENTS

Aerial material of three species of *Prostanthera*, including melissifolia, was analyzed in the UK. Results show they contain three sesquiterpenes, two known compounds and a novel sesquiterpene, prostantherol. Two chemotypes exist: (a) one rich in piperitone (25-38%) and (b) rich in 1,8-cineole (15-33%). Minor amounts of alpha-pinene, linalool and limonene exist in each chemotype.

#### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Dellar JE, et al. Phytochemistry. 1994 Jul;36(4):957-60. Antimicrobial sesquiterpenes from Prostanthera aff. melissifolia and P. rotundifolia. Maguranyi SK, et al. J Am Mosq Control Assoc. 2009 Sep;25(3):292-300. Are commercially available essential oils from Australian native plants repellent to mosquitoes?



Product Name:	100% Pure Australian Buddha Wood Oil
Botanical name:	Eremophila mitchellii
INCI:	Eremophila Mitchellii Wood Oil
HS Code:	3301.29
UN Code:	Non-Hazardous
CAS No:	1429902-59-9
Part of Plant Used:	Wood
Appearance:	Thick, red brown to dark brown mobile liquid
Aroma:	Tenacious, unique, smooth, woody oak
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Wild harvested
<b>Certifications</b> :	COSMOS



### THERAPEUTIC PROPERTIES

*Eremophila mitchellii* was named in 1848 by botanist George Bentham, after Sir Thomas Mitchell, who led the discovery expedition into Australia. No less than 17 species of Eremophila have roots in Aboriginal use. The species *mitchellii* is noted as having 'general medicinal purposes'.

*Eremophila mitchellii* occurs in the arid regions of New South Wales, Queensland and South Australia. The tree, very common in Western Queensland, is often confused with *Santalum lanceolatum R. Br.*, both trees being commonly referred to as False Sandalwood. Initial research was done through the School of Pharmacy, Griffith University, Gold Coast campus, QLD, Australia. It is considered somewhat invasive, though native to Australia, with over 215 species. The scented wood is burnt for its pleasant aroma. The oil has also been used for perfumery, bath, massage, diffuser, blending, and a perfume fixative. The rare sesquiterpene compounds lend antiinflammatory properties to this rare and unique oil. This woody scented oil provides deep relaxation to body, mind and spirit. The eremophilanes reportedly inhibit P388D1 cancer cell growth *in vitro*.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Shaving and Post Wax	Hand and Body Wash	Wound Care	Surface Disinfectant	Perfume
Dermatitis	Massage	Diaper Rash	Cleaner	Aromatherapy
Acne	Lip Balm	Muscle Pain Antibacterial (gram +) Feminine Care	Detergent	

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MAJOR CHEMICAL CONSTITUENTS

The wood oil is composed predominantly of eremophilanes, a rare class of biologically active bicyclic sesquiterpenoids. Its thick viscosity belies the main components of three closely related sesquiterpene ketones – eremophilone, 2-hydroxyleremophilone, and 2-hydroxyl-2-dihydroeremophilone. None of these components have been discovered before in nature.

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Barnes EC, et al. J Nat Prod. 2011 Sep 23;74(9):1888-93. Mitchellenes A-E, cyclic sesquiterpenes from the Australian plant Eremophila mitchellii. A Review of the use of

Eremophila (Myopoiraceae) by Australian Aborigines.



Product Name:	100% Pure Australian Blue Cypress Oil
Botanical name:	Callitris intratropica
INCI:	Callitris Intratropica Wood Oil
HS Code:	3301.29
UN Code:	3082 (Class 9)
CAS No:	187348-13-6
Part of Plant Used:	Wood and Bark
Appearance:	Clear blue liquid
Aroma:	Smoky, liquorice, woody characteristics
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional
Certifications:	COSMOS



### THERAPEUTIC PROPERTIES

Blue Cypress' beautiful color and therapeutic properties are resulting in this oil becoming more frequently used in the personal care and cosmetics industries. This Cypress family member contains quaiazulene, providing anti-inflammatory properties offered in other blue oils such as yarrow, German chamomile and tansy. Blue Cypress Oil offers a middle to base note in fragrance blends, slowing the evaporation of top notes. It blends well with other wood notes and citrus scents.

Blue Cypress was a traditional medicine for thousands of years, lending credence to its current day uses. This native Australian tree was used as a skin wash for cuts and sores, to soothe abdominal cramping and as an analgesic and insect repellent. As a grounding base note, it is also useful for those of a nervous disposition, providing a calming and reassuring effect. An immune tonic, antibacterial and antiseptic, it helps treat and prevent infection.

This tropical conifer produces clear annual growth rings, and has been shown to be potentially useful for understanding past climate variability in northern Australia. Unique among ancient trees, this prehistoric aromatic offers soothing effects on body, mind and spirit.

"Anecdotal data has shown the oil to have good anti-inflammatory and pain-relieving properties against allergic hives, insects (like sand fly, bee, wasp, mosquito), rheumatoid arthritis, general joint pain and swelling. It has also been shown to be an anti-irritant, soothing nappy rash and reducing erythema in a small trial. The oil exhibits antiviral properties, being particularly effective against common warts (verruca), shingles (herpes zoster) and cold sores (herpes simplex). The oil also has been used for burns where it has significantly reduced the healing time and pain associated with the injury" (Webb).

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Shaving and Post Wax	Lip Balm	Wound Care		Perfume
Dermatitis/Eczema	Massage	Diaper Rash		Aromath
		Muscle Pain		
		Cold Sore		
		Skin Warts		
		Foot Spray		

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### MAJOR CHEMICAL CONSTITUENTS

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Major constituents include guaiol (12-26%). Checking last CoAs, the major chemical constituents are: quaiol (last results were 13-14%), bulnesol (last results were 12-13%) and dihydro columellarin (last results were10-12%). Myrtenic acid is only around 2% of the total of constituents.

#### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Bowles, Joy. The Chemistry of Aromatherapeutic Oils 2003, Griffin Press, S Australia. Drew DM, et al. Tree Physiol. 2011 Sep:31(9):953-64. The development of seasonal tree water deficit in Callitris intratropica. Schnaubelt, Kurt. Medical Aromatherapy; Frog Ltd, 1999, Berkeley, CA. Webb, Mark. Bush Sense; Griffin Press 2000: Adelaide, Australia.



Product Name:	100% Pure Australian White Cypress (Leaf) Oil
Botanical name:	Callitris columellaris
INCI:	Callitris Columellaris Leaf/Twig Oil
HS Code:	3301.29
UN Code:	1197
CAS No:	192526-11-7
Part of Plant Used:	Leaves and Twigs
Appearance:	Clear, colorless to pale yellow mobile liquid
Aroma:	Cypress, camphor
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional
Certifications:	COSMOS



### THERAPEUTIC PROPERTIES

White Cypress Oil is obtained via steam distillation from the leaves of *Callitris columellaris.* It blends well with citrus or floral notes, but may compete with other oils of strong odor personality.

The essential oil is relatively new on the commercial market, though its investigation began over a century ago. The timbers are hard and dense and are renowned for their resistance to the Australian termite population (due to the essential oil in the heartwood). It has been mainly used for fragrance and flavor, and aromatherapists prize it for its grounding and stabilizing properties to calm an agitated mind and body. A 2007 research paper notes that 18 species and four subspecies of the leaf essential oils were investigated by the Australian government; all show applications as insecticides, antimicrobial agents and fragrances (Brody, et al.). These authors state that most of the published work on the genus Callitris has been on the extracts of the wood, but note that their research is the first document to investigate all known Australian species focused on the leaf oil. Little is written on the therapeutic properties of the leaf oil, though with the high proportion of limonene we can extrapolate that it could well have bile stimulating properties (Bowles). Its solvent qualities also point to applications for oily or clogged skin.

Use both the leaf and the wood oil sparingly from both a therapeutic and fragrance standpoint.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Cleanser	Hand and Body Wash		Surface Disinfectant Room Freshener Cleaner Detergent	Perfume Aromatherapy

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### MAJOR CHEMICAL CONSTITUENTS

Major constituents include  $\alpha$ -pinene (26-49%), limonene (18-30%), Bornyl acetate (4-12%) and  $\beta$ -caryophyllene (1-14%).

#### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Brody, et al. Chemistry of the Australian Gynmosperms. Part IX. The Leaf Oils of the Australian Members of the Genus Callitris (Cupressaceae). J. Essent. Oil Res., 19, 57-71 (January/February 2007). Bowles, Joy; The Chemistry of Aromatherapeutic Oils, 2003. Allen & Unwin, NSW. Mark Webb; Bush Sense; Griffin Press 2000; Adelaide, Australia.



Product Name:	100% Pure Australian White Cypress (Wood) Oil	
Botanical name:	Callitris columellaris	
INCI:	None issued	
HS Code:	3301.29	
UN Code:	1197	
CAS No:	192526-11-7	
Part of Plant Used:	Wood and Bark	
Appearance:	Colorless to pale yellow-green mobile liquid	
Aroma:	Fresh eucalyptus, pine and mint	
<b>Extraction Method</b> :	Steam distilled (water)	
Farming Method:	Conventional	
Certifications:	COSMOS	



### THERAPEUTIC PROPERTIES

White Cypress Wood Oil is obtained via steam distillation from the wood of Callitris columellaris. It blends well with citrus or floral notes, but may compete with other oils of strong odor personality.

The essential oil is relatively new on the commercial market though its investigation began over a century ago. The timbers are hard and dense and are renowned for their resistance to the Australian termite population (due to the essential oil in the heartwood). It has been mainly used for fragrance and flavor, and aromatherapists prize it for its grounding and stabilizing properties to calm an agitated mind and body.

Use both the leaf and the wood oil sparingly from both a therapeutic and fragrance standpoint.

White Cypress Wood Oil obtained from the wood contains guaiol, a known antiinflammatory agent. The oil of this cypress family member is useful for skin conditions related to inflammation, such as swelling, bruising, rosacea, acne and rash. It is reputed to be antifungal, miticidal and insect repelling, with demonstrated activity against termites. Use the wood oil sparingly from both a therapeutic and fragrance standpoint.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Hous
Shaving and Post Wax	Hand and Body Wash	Muscle Pain	
Dermatitis/Eczema	Massage Lip Balm	Diaper Rash Foot Spray	

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### MAJOR CHEMICAL CONSTITUENTS

Major constituents include guaiol (18-26%), eudesmols (5-14.6%), selinenes (1-5%), citronellic acid (3.5-14.5%) and 6-methyl-5-hepten-2-one (2.5-12.5%). The minor components include methyl geranate, didhydrocolumellarin, callitrisin and columellarin. Checking last batches, the major chemical constituents are: guaiol (18-26%), eudesmols (5-14.6%), selinenes (1-5%), citronellic acid (3.5-14.5%). The minor components include: alpha-pinene, limonene and bulnesol. Recent CCW CoAs don't have 6-methyl-5-hepten-2-one (2.5-12.5%).

> MORE INFORMATION This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Brody, et al. Chemistry of the Australian Gynmosperms. Part IX. The Leaf Oils of the Australian Members of the Genus Callitris (Cupressaceae). J. Essent. Oil Res., 19, 57-71 (January/February 2007). Bowles, Joy; The Chemistry of Aromatherapeutic Oils, 2003. Allen & Unwin, NSW. Mark Webb: Bush Sense: Griffin Press 2000: Adelaide, Australia.

For references on specific topics please contact us.

### isehold

Other

### Termite Retardant Aromatherapy

## Essential Oil **EUCALYPTUS, AUSTRALIANA**



### PRODUCT DETAILS

Product Name:	100% Pure Australian Eucalyptus Australiana Oil
Botanical name:	Eucalyptus radiata
INCI:	Eucalyptus Radiata Leaf Oil
HS Code:	3301.29
UN Code:	1169
CAS No:	92201-64-4
Part of Plant Used:	Leaves and twigs
Appearance:	Clear, colorless to pale yellow mobile liquid
Aroma:	Eucalyptus aroma with slight citrus overtones
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional, Certified Organic
<b>Certifications</b> :	COSMOS, USDA NOP



### THERAPEUTIC PROPERTIES

The "king" of all Eucalyptus species - the aroma of Eucalyptus Australiana (radiata) is deep, round and penetrating. It is sometimes called Narrow Leaf Peppermint Gum or Eucalyptus radiata var. Australiana.

The monoterpene, terpene alcohol and cineole synergy of this essential oil make it a perfect combination for cold and flu. It has effective properties as a mucolytic and expectorant for many respiratory conditions through inhalation or topical use. It is useful in viral conditions as well as bacterial problems such as sinus infection. It is safe in children's cold remedies used sparingly in the bath or as a chest rub. It is also good for treating inflammation of muscle and other tissue. It has many useful qualities as an antimicrobial agent.

The 1.8-cineol content increases the dermal absorption of other constituents in a blend by as much as 95 times. (Webb)

1,8-cineole – anti-bronchitic, anticatarrhal, antiseptic, antitussive, CNS-stimulant, expectorant, and respiratory antiinflammatory.

Alpha-pinene - anti-inflammatory, cancerpreventive, can cause skin irritation to sensitive skin.

Alpha-terpineol - antiallergenic, antiasthmatic, antiseptic, antitussive, bactericide, expectorant. Limonene - anticancer, antiseptic, bactericide, cancer-preventive, expectorant,

fungistatic, sedative, viricide.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Acne	Hand and Body Wash	Muscle Pain	Surface Disinfectant	Perfume
	Massage	Diaper Rash	Room Freshener	Aromatherapy
	Hair Care	Foot Spray	Cleaner	
		Cold Relief	Detergent	
		Decongestant		
		Expectorant		

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MAJOR CHEMICAL CONSTITUENTS

The major constituent is 1,8-cineole (>70%), as per ISO 3065:2011. The minor components include: limonene, alphaterpineol, alpha-pinene.

MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Battaglia, Salvatore. The Complete Guide to Aromatherapy; International **Center for Holistic** Aromatherapy, 2003; Brisbane, Australia. Schnaubelt, Kurt. Medical Aromatherapy; Frog Ltd, 1999, Berkeley, CA. Webb, Mark. Bush Sense; Griffin Press 2000: Adelaide, Australia.



Product Name:	100% Pure Australian Eucalyptus Oil
Botanical name:	Eucalyptus polybractea
INCI:	Eucalyptus Globulus Leaf Oil
HS Code:	3301.29
UN Code:	1169
CAS No:	91771-67-4
Part of Plant Used:	Leaves and twigs
Appearance:	Clear, colorless to pale yellow liquid
Aroma:	Fresh camphor like
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional, Certified Organic
Certifications:	COSMOS, USDA NOP



### THERAPEUTIC PROPERTIES

Eucalyptus (Blue Leaved Mallee) Oil is approved by the Personal Care Products Council (PCPC) as a valid alternative eucalyptus species to the more common 'globulus' eucalyptus. Our Eucalyptus Oil is produced in commercial quantities and offers reliability of quality and quantity. Our Eucalyptus Oil offers the advantage of achieving the 85% minimum 1,8 cineole levels with only one distillation - no redistillation, fractionation, or additional cineole is required to achieve the BP standard. More of the natural aromatic characteristics beyond cineole are retained by this attribute.

This mucolytic essential oil is often employed in respiratory blends and insect repellents, especially when combined with synergistic oils. It can be used externally combined with other therapies for urinary tract disorders. It is antiviral and antibacterial and useful in bath blends for cold and flu.

"1,8-cineole – antibronchitic, anticatarrhal, antiseptic, antitussive, CNS-stimulant, expectorant, and respiratory antiinflammatory; used for the relief of head colds, rheumatism, muscular pain (in the form of liniments), and as expectorant in cases of bronchitis, added to cough syrups." (Webb)

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Hous
Acne	Hand and Body Wash	Muscle Pain	Surfac
	Massage	Foot Spray	Room
		Decongestant	Clean
		Expectorant	Deter

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### MAJOR CHEMICAL CONSTITUENTS

### The major constituent is 1,8-cineole (85%). The minor components include: cuminaldehyde and limonene.

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Battaglia, Salvatore. The Complete Guide to Aromatherapy; International **Center for Holistic** Aromatherapy, 2003; Brisbane, Australia. Boland, D.J. et al., Eucalyptus Leaf Oils - Use, Chemistry, Distillation and Marketing, Inkata Press, Melbourne (1991). Harden, G.J., Flora of New South Wales, Volume 2; New South Wales University Press, 1993. Schnaubelt, Kurt. Medical Aromatherapy; Frog Ltd, 1999, Berkeley, CA. Webb, Mark. Bush Sense; Griffin Press 2000: Adelaide, Australia.

For references on specific topics please contact us.

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Product Name:	100% Pure Australian Lamon Scontad Eucolumtus Oil
Product Name:	100% Pure Australian Lemon Scented Eucalyptus Oil
Botanical name:	Eucalyptus citriodora (syn. Corymbia)
INCI:	Eucalyptus Citriodora Oil
HS Code:	3301.29
UN Code:	3082 (Class 9)
CAS No:	129828-24-6
Part of Plant Used:	Leaves and twigs
Appearance:	Colorless to pale yellow mobile liquid
Aroma:	Fresh, citronella-like
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional
Certifications:	COSMOS



### THERAPEUTIC PROPERTIES

*Eucalyptus citriodora* is used in the perfume industry to manufacture other aroma chemicals, due to its rich citronellal content. Lemon Scented Eucalyptus also acts as a wonderful insect repellent, rivaling DEET in some products.

Carroll, et al. reported on a technique to produce para Menthane-3,8 diol (PMD) in large quantities from the essential oil of *Eucalyptus citriodora*. PMD is endorsed by the US Centers for Disease Control (CDC) as effective non-DEET repellent against mosquito species Aedes, Anopheles, Culex, and Ochlerotatus.

Psychologically it can be very soothing and calming. Physiologically it has antiseptic, analgesic, anti-inflammatory, insect repellent and sedative properties and could be considered useful for colds and infections, athlete's foot, rheumatism and muscular aches and pains. It is generally considered non-toxic, non-irritating and non-sensitizing. It is often used as a fragrance component (instead of *Eucalyptus globulus*) in perfumes, detergents and soaps.

"Antiseptic, antiviral, bactericidal, antifungal, analgesic, hypertensive, deodorant, expectorant, insecticide" (Webb).

The significant amount of citronellal, in the functional family of aldehydes, offers significant sedation and antiinflammatory effects. It has also been noted that *Eucalyptus citriodora* appears to have bacteriostatic activity towards Staphylococcus aureus due to synergism between citronellol and citronellal present in the oil.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Acne	Hand and Body Wash	Cold Relief	Surface Disinfectant	Insect Repellent
Facial Cleanser	Hair Care	Foot Spray	Room Freshener	Perfume
	Deodorant	Decongestant	Cleaner	Aromatherapy
	Massage	Expectorant	Detergent	

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### MAJOR CHEMICAL CONSTITUENTS

The major constituent is citronellal (>75%), As per ISO 3065:2011. The minor components include: citronellol, limonene and linalool.

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES Battaglia, Salvatore. The Complete Guide to Aromatherapy; International **Center for Holistic** Aromatherapy, 2003; Brisbane, Australia. Carroll SP, Loye J, J Am Mosquito Control Assoc, 2006; PMD, A Registered Botanical Mosquito Repellent with DEETlike Efficacy, 22(3):507-514. Mulyaningsih S, et al. Pharm Biol. 2011 Sep:49(9):893-9. Antibacterial activity of essential oils from Eucalyptus and of selected components against multidrug-resistant bacterial pathogens. Schnaubelt, Kurt. Medical Aromatherapy; Frog Ltd, 1999. Berkeley, CA. Webb, Mark. Bush Sense; Griffin Press 2000: Adelaide, Australia. For references on specific topics please contact us.



Product Name:	100% Pure Australian Lemon Scented Iron Bark Eucalyptus Oil	
Botanical name:	Eucalyputus staigeriana	
INCI:	Eucalyptus Staigeriana Leaf Oil	
HS Code:	3301.29	
UN Code:	2319	
CAS No:	91771-69-6	
Part of Plant Used:	Leaves and twigs	
Appearance:	Clear, colorless to pale yellow liquid	
Aroma:	Subtle, well rounded lemon aroma	
<b>Extraction Method</b> :	Steam distilled (water)	
Farming Method:	Conventional	
<b>Certifications</b> :	COSMOS	



### THERAPEUTIC PROPERTIES

Also known as Australian Lemon Balm, Eucalyptus staigeriana was the traditional flavor ingredient for lemon cordial, an Australian drink similar to lemonade. It has been used in perfumery, toilet preparations, and some flavorings. Lemon Scented Iron Bark is also effective in masking odors. Its lemony scented profile provides a more pleasant aroma than other more 'medicinal smelling' Eucalyptus oils.

"The major components methyl geranate, geranyl acetate, and beta-phellandrene are all non-toxic, non-irritating. This essential oil has established uses in perfumery. The citral components are said to be antiinfectious, antiviral, antiseptic, expectorant, anti-inflammatory and a digestive stimulant" (Webb).

Published results from Wilkinson and Cavanagh (2005) demonstrate an exceedingly high in vitro zone of isolation result (>90mm) for Lemon Scented Iron Bark against Salmonella typhimurium.

Manufacturers looking for a unique eucalyptus product which does not exhibit the intense, medicinal notes of Eucalyptus globulus will find this oil appealing.

POTENTIAL PRODUCT APPLICATIONS				
Skincare	Personal Care	Medicinal	Household	Other
Acne	Hand and Body Wash	Wound Care	Surface Disinfectant Room Freshener Cleaner	Perfume Aromatherapy Strong anti-Sal. typhimurium
			Detergent Bathroom	Preservative

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### MAJOR CHEMICAL CONSTITUENTS

Major constituents include linalool (30-50%) and citral (20-42%). Major constituents include linalool (minimum 1%) and citral (20-45%).

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Webb, Mark. Bush Sense; Griffin Press 2000; Adelaide, Australia. Wilkinson, JM, Cavanaugh HMA. 2005. Antibacterial Activity of Essential Oils from Australian Native Plants, Phyto Res. 19:643-6.



Product Name:	100% Pure Australian Eucalyptus Peppermint Gum Oil	
Botanical name:	Eucalyptus dives	
INCI:	Eucalyptus Dives Leaf/ Twig Oil	
HS Code:	3301.29	ç
UN Code:	1169	
CAS No:	90028-48-1	
Part of Plant Used:	Leaves and twigs	
Appearance:	Clear, colorless to pale yellow mobile liquid	
Aroma:	Typical eucalyptus aroma with minty undertones	
<b>Extraction Method</b> :	Steam distilled (water)	
Farming Method:	Conventional	
Certifications:	COSMOS	



### THERAPEUTIC PROPERTIES

Peppermint Gum is recommended primarily for respiratory infections. It is used with equal parts Tea Tree and Lavender Tea Tree (Rosalina) for an aromatic profusion blend for direct application to the chest and back of sufferers of chronic bronchitis or acute bronchial infection. Helps to slow breathing, useful in anti-asthma applications, and is a bronchial dilator. It is also useful for unproductive coughs.

Synthetic menthol is derived from the piperitone of this chemotype. Combines well with other Australian oils such as Kunzea, Lemon Myrtle, and Rosalina for an effective respiratory blend.

piperitone - a ketone known to be antiasthmatic and herbicidal 1,8-cineole – anti-bronchitic, antiseptic, antitussive, CNS-stimulant, expectorant, and respiratory anti-inflammatory alpha-pinene - anti-inflammatory, cancerpreventive, can cause skin irritation to sensitive skin

alpha-phellandrene - said to be hyperthermic and can irritate skin, readily absorbed via skin, ingestion may cause vomiting and diarrhea, also a known insectiphile

para-cymene - is known to be antifungal, antiviral, anti-flu, analgesic, anti-rheumatic, fungicidal, insectifugal" (Webb).

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Hous
Acne		Decongestant	
		Expectorant	

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### MAJOR CHEMICAL CONSTITUENTS

Major constituents include piperitone (30-60%) and  $\alpha$ -phellandrene (19-35%).

#### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Battaglia, Salvatore. The Complete Guide to Aromatherapy; International **Center for Holistic** Aromatherapy, 2003; Brisbane, Australia. Schnaubelt, Kurt. Medical Aromatherapy; Frog Ltd, 1999, Berkeley, CA. Webb, Mark. Bush Sense; Griffin Press 2000: Adelaide, Australia.

For references on specific topics please contact us.

#### sehold Other

Perfume Aromatherapy Insecticidal Potential



Product Name:	100% Pure Australian Eucalyptus White Iron Bark Oil
Botanical name:	Eucalyptus smithii
INCI:	Eucalyptus Smithii Leaf Oil
HS Code:	3301.29
UN Code:	1169
CAS No:	91771-68-5
Part of Plant Used:	Leaves
Appearance:	Colorless to pale yellow mobile liquid
Aroma:	Characteristic eucalyptus aroma, slightly milder
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional
Certifications:	COSMOS



### THERAPEUTIC PROPERTIES

Gully Gum (Eucalyptus smithii) typically contains 65-70% of 1,8 cineole, accentuating its expectorant and antimicrobial properties. It has a warming effect on the muscles and can be used to increase circulation for pain or lethargy. Used for the relief of head colds, rheumatism, muscular pain and as an expectorant in cases of bronchitis or other lung congestion. "1,8-cineole – anti-bronchitic, anticatarrh, antiseptic, antitussive, CNS-stimulant, expectorant, and respiratory antiinflammatory" (Webb).

### This species is considered best for children (over 3), the elderly, or for longer term use due to its lower cineole content. It has been studied with positive results for inhalation treatment of chronic and/or recurrent upper respiratory tract infections.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Hous
Fungal Acne	Hand and Body Wash	Cold Relief	
Jock Itch	Massage	Muscle Pain	
		Decongestant	
		Athletes Foot	
		Ringworm	

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MAJOR CHEMICAL CONSTITUENTS

The major constituent is 1,8-cineole (minimum 70%). The minor components include: alpha-pinene, limonene and alphaterpineol.

#### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Battaglia, Salvatore. The Complete Guide to Aromatherapy; International **Center for Holistic** Aromatherapy, 2003; Brisbane, Australia. Bowles Joy. The Chemistry of Aromatherapeutic Oils; Allen & Unwin 2003; NSW Australia. Camporese, A., In vitro activity of Eucalyptus smithii and Juniperus communis essential oils against bacterial biofilms and efficacy perspectives of complementary inhalation therapy in chronic and recurrent upper respiratory tract infections. Infec. Med. 2013 Jun 1:21(2):117-124. Webb, Mark. Bush Sense; Griffin Press 2000: Adelaide, Australia.

For references on specific topics please contact us.

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Other

Perfume Aromatherapy

# Essential Oil EUCALYPTUS, STRAWBERRY GUM



### **PRODUCT DETAILS**

Product Name:	100% Pure Australian Strawberry Gum Oil	
<b>Botanical name:</b>	Eucalyptus olida	
INCI:	None issued	
HS Code:	3301.29	
UN Code:	3082 (Class 9)	
CAS No:	None issued	
Part of Plant Used:	Leaves and twigs	
Appearance:	White to translucent crystalline	
Aroma:	Sweet, balsamic with fruity undertones, reminiscent	
	of cinnamon and strawberry	
<b>Extraction Method</b> :	Steam distilled (water)	
Farming Method:	Conventional	
<b>Certifications</b> :	COSMOS	



### THERAPEUTIC PROPERTIES

*Eucalyptus olida*, commonly known as Strawberry gum is a fairly unusual essential oil, not commonly found on the commercial market. *Eucalyptus olida* was initially wild harvested, but plantations now supply the current industry demand. Technically a resin at room temperature rather than an oil, it contains over 98% methyl cinnamate.

Methyl cinnamate, an aromatic ether, is found in a variety of fruits and herbs such as tarragon, Sichuan pepper, galangal and some species or varieties of basil. Methyl cinnamate is the methyl ester of cinnamic acid. Research shows it has high antioxidant activity. This essential oil, derived from the leaf of *Eucalyptus olida* is used in flavoring and perfumery. The whole leaf is used as a dried spice product in bush food cooking, especially with fruit and in herbal teas. In the Australian native foods industry several trade names are used, including 'olida' and 'forestberry herb'. It may be employed as a digestive aid with therapeutic properties offering a balancing, anti-spasmodic, sedative activity for the nervous system, and for conditions of anxiety and depression.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Hous
	Lip Balm		

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MAJOR CHEMICAL CONSTITUENTS

The major constituent is methyl cinnamate (>95%).

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Boland, D.J., Brophy, J.J., and A.P.N. House, Eucalyptus Leaf Oils, 1991. PlantNET, NSW Flora Online, Eucalyptus olida profile. Coppen, John; Eucalyptus: The Genus Eucalyptus. CRC Press 2004. Webb, Mark. Bush Sense; Griffin Press 2000; Adelaide, Australia. Zhao, J., Agboola, S., Functional Properties of Australian Bushfoods - A Report for the Rural Industries Research and Development Corporation, 2007,

For references	on	specific	topics
please contact	us.		

**RIRDC** Publication No 07/030.

sehold	Other
	Perfume
	Aromatherapy
	Flavouring
	Food Preserving
	Anti-aflatoxin
	Potential



Product Name:	100% Pure Australian Fragonia® Oil
Botanical name:	Agonis fragrans
INCI:	Agonis Fragrans Branch/Leaf Oil
HS Code:	3301.29
UN Code:	1169 (Class 3)
CAS No:	934621-96-2
Part of Plant Used:	Terminal branches
Appearance:	Colorless to pale yellow liquid
Aroma:	Fresh, cineolic odor with slight spicy cinnamon
	tonality and sweet balsamic undertones
<b>Extraction Method:</b>	Steam distilled (water)
Farming Method:	Conventional
Certifications:	COSMOS



### THERAPEUTIC PROPERTIES

Fragonia is a 100% pure essential oil originating in Western Australia and now grown at our farm, Buhlambar.

Of particular interest, the constituents of the oil comprise 3 main functional groups – monoterpenes, an oxide, and monoterpenols - which are in near perfect balance. It is this balance that caught the attention of Dr. Penoel, one of the world's foremost experts on aromatherapy and essential oils.

When first experiencing this oil in 2008, Dr Penoel referred to Fragonia's structure as having the "Golden Triangle" – the symbol of balance and harmonization.

Fragonia is the result of years of efforts by Western Australian essential oil pioneers John and Peta Day, who identified the plant Agonis fragrans as having excellent potential as the basis for a new essential oil. Following much painstaking research and field studies of this native Australian plant, the Day's identified the variety with the most attractive aromatic properties. It is this variety that they named Fragonia and established its trademark.

They initiated propagation activities, produced the essential oil from the terminal branches, and began sharing the benefits of this plant with the world. The pleasing aroma makes it an effective substitute for those wanting to avoid Tea Tree Oil. Anecdotally, Fragonia may relieve jet lag.

Traditional Chinese Medicine characterizes this oil as being balancing to both overly yin and yang conditions.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Acne	Hair Care	Muscle Pain	Room Freshener	Perfume
Cleanser	Oral Care	Foot Spray	Detergent	
	Feminine Care	Diaper Rash		
	Lip Balm	Wound Healing		
	Massage	Respiratory		
	Deodorant	Antiseptic		
		Decongestant		

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MAJOR CHEMICAL CONSTITUENTS

Major constituents include 1,8-cineole (25-35%), α-pinene (20-30%), linalool (8-15%) and  $\alpha$ -terpineol (5-8%).

### MORE INFORMATION

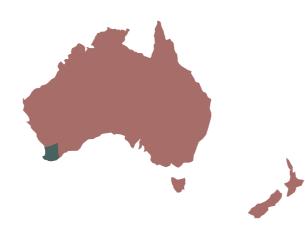
This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Penoel, Daniel, MD. Interview for ABP (Australian Botanical Products) Newsletter , Oct. 22, 2011. Webb, Mark: Bush Sense: Griffin Press 2000: Adelaide, Australia.



Product Name:	100% Pure Australian Honey Myrtle Oil			
Botanical name:	Melaleuca teretifolia			
INCI:	Melaleuca Teretifolia Branch/Leaf Oil			
HS Code:	3301.29			
UN Code:	3082 (Class 9)			
CAS No:	1030313-70-2			
Part of Plant Used:	Terminal branches			
Appearance:	Colorless to pale yellow liquid			
Aroma:	Sweet, fresh & sparkling citrus character with slight herbaceous twist			
<b>Extraction Method</b> :	Steam distilled (water)			
Farming Method:	Conventional			
Certifications:	COSMOS			



### THERAPEUTIC PROPERTIES

Sometimes called 'Banbar' or "Marsh Honey Myrtle" this relative of Tea Tree is native to Southwestern Australia. The genus name derivation is quite interesting: Melaleuca from the Greek "melas", meaning black and "leukos", meaning white; referring to black marks on the white trunks of some species due to fire. The species name, teretifolia, is from Latin "teres", meaning rounded; and "folius" meaning leaf, referring to the leaves of this species which are round in cross section.

In perfumery it is considered a top to middle note scent and blends well with citrus and herbaceous aromas.

An aged oil can contribute to irritancy. This essential oil is best stored in cold conditions for extending the shelf life to about three years. Its attributes include being useful against microbes, bacteria, fungus, and viruses. Unlike its relatives, Tea Tree, Niaouli and Lavender Tea Tree (Rosalina), this unique oil has the highest citral content of all the Melaleucas, contributing to its antimicrobial and antifungal activity. Like other oils prevalent with the constituent 1,8 cineole, Honey Myrtle is also an effective antimicrobial, especially for respiratory problems. As with many other Australian oils this is a good insecticide ingredient. It can also be used for skin problems, without fear of photosensitizing compounds found in citrus oils, especially cold pressed lemon oil. As a citrus note, its aroma is uplifting to body, mind and spirit. It can help invigorate and overcome lethargy while lightening the mood.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Cleanser Face Mask	Deodorant Scalp Treatment	After Bite Creams Antifungal Preparatio Antiseptic Wound Care	ns	Preservative Perfume Aromatherapy

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MAJOR CHEMICAL CONSTITUENTS

The major constituent is citral (>50%).

### MORE INFORMATION

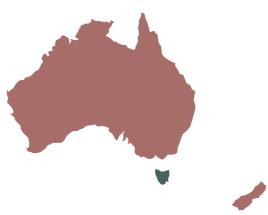
This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Bowles, Joy. The Chemistry of Aromatherapeutic Oils, 2003; Griffin Press, S Australia. Hendry ER, et al. J Antimicrob Chemother. 2009 Dec; 64(6):1219-25. Antimicrobial efficacy of eucalyptus oil and 1,8-cineole alone and in combination with chlorhexidine digluconate against microorganisms grown in planktonic and biofilm cultures. Southwell, Ian A, et al. Journal of Essential Oil Research Sep2003, Vol. 15 Issue 5, p339. Melaleuca teretifolia Chemovars: New Australian Sources of Citral and 1,8-Cineole.



Product Name:	100% Pure Australian Kunzea Oil	
Botanical name:	Kunzea ambigua	
INCI:	Kunzea Ambigua Branch/Leaf/Twig Oil	
HS Code:	3301.29	ł
UN Code:	1169 (Class 3)	
CAS No:	97553-36-1	
Part of Plant Used:	Leaves and twigs	
Appearance:	Pale yellow mobile liquid	
Aroma:	Pleasant scent with clean, fresh invigorating undertones	
Extraction Method:	Steam distilled (water)	
Farming Method:	Wildcrafted and Conventional	
Certifications:	COSMOS	



### THERAPEUTIC PROPERTIES

Native to Northern Tasmania, traditional uses of Kunzea include treatment of ticks and other mites, insects, etc., hence the common name of Tick Bush.

The chemical composition allows for deep and effective dermal penetration. Spot application of undiluted oil is generally well tolerated and useful for insect bites, cuts, and minor burns, producing immediate relief from pain, itching and irritation. It is useful in conditions of inflammation or respiratory problems. This relaxing essential oil reduces stress and mild anxiety or depression. It can provide relief from flu symptoms and is used to treat eczema and other skin conditions.

Microbial testing showed effective activity against *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *E. coli*, *and Candida albicans*. A research paper from the UK showed insecticidal activity comparable to natural pyrethrum extract. "Anecdotal feedback from users of the oil has shown it to be helpful in the treatment of the following conditions: eczema, dermatitis, rash, under nail infections and leg ulcers, and most helpful for the treatment of chilblains. The oil has also been found to ease the pain from insect bites, minor burns, recurring shingles and migraine, headache. (Webb).

The Australian Therapeutic Goods Administration (TGA) has listed Kunzea (ID 99794) on its Register of Approved Ingredients as an active ingredient for topical and inhalation use in: Listed Medicines, Over the Counter, and Prescription Medicines.

Various sponsors have obtained approval of products containing Kunzea Ambigua as a Listed Medicine on the Australian Register of Therapeutic Goods (ARTG) for indications including: temporary relief of joint inflammation, pain, swelling and

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Dermatitis/Eczema	Feminine Care	Wound Care	Room Freshener	Tick Repellent
Shaving & Post Wax	Massage	Muscle Pain		Perfume
		Diaper Rash		Aromatherapy
		Decongestant		
		Joint Pain		

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aches associated with mild arthritis, relief of influenza symptoms; relief of muscular aches and pains; assistance with joint mobility in mild arthritis and osteoarthritis, stress and mild anxiety, assistance with nervous tension, nerve pain and mild neuralgia, toenail fungal infections, management of eczema and dry skin and temporary relief of rheumatism pain.

MATOR	CHEMICAL	CONSTITUENTS
MAJUK	CHEMICAL	CONSTITUENTS

Major constituents include  $\alpha$ -pinene (35-65%), 1,8-cineole (10-25%), globulol (1-15%) and viridifloral (5-20%).

> MORE INFORMATION This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES Khambay BP, et al. Chemistry. 2002 Jan;59(1):69-71. An insecticidal mixture of tetramethylcyclohexenedione isomers from Kunzea ambigua and Kunzea baxterii. Penoel, Daniel, MD. Dr. Daniel Penoel's Newsletter, August 15th 2007. Webb, Mark. Bush Sense; Griffin Press 2000; Adelaide, Australia.



Product Name:	100% Pure Australian Lavender Oil
Botanical name:	Lavandula angustifolia
INCI:	Lavandula Angustifolia (Lavender) Oil
HS Code:	3301.29
UN Code:	3082 (Class 9)
CAS No:	8000-28-0
Part of Plant Used:	Fresh flowering tops
Appearance:	Clear, colorless to pale yellow mobile liquid
Aroma:	Sweet floral herbaceous note with balsamic
	woody undertones
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional
Our Certifications:	COSMOS



### THERAPEUTIC PROPERTIES

Lavender has a well-deserved reputation as being the most versatile and popular essential oil. It is often considered the 'mother' of all essential oils and its use dates back to the beginning of recorded history.

While the Lavender from Down Under Enterprises is our only non-native Australian species – it is a true French Lavender (*Lavandula angustifolia*) – we absolutely love this Lavender and have adopted it as our own because it's been grown in Australia for so long.

Established in Tasmania in 1923, the Lavender farm was created using seeds from France which were specifically selected as the "best of the best" of French varietals. Since then, no hybridization has occurred, due to the isolation of this farm in Tasmania, Experts have applauded this 'true French lavender' as being of the highest quality in the world.This Australian Lavender is characterized by its little to no cineole or camphor content, giving it a dominant floral scent, and making it extra gentle on the skin.

PubMed lists nearly 1,800 research papers on this essential oil; clearly well studied for its therapeutic potential. Its antidepressant and antianxiety research is well known. Cosmetically, there is no skin condition for which it is not useful, from acne and rash to diaper irritation and sun damage. Insect itching and swelling stops almost immediately upon application.

A French study compared Lavender with four other essential oils and found that Lavender was the only oil to consistently elicit a feeling of 'happiness'. When these factors are combined with the benefits of touch, as with massage, it is especially effective in reducing stress, a major trigger for many health problems. Lavender oil is active against many species of bacteria and fungi,

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Shaving and Post Wax	Hand and Body Wash	Wound Care	Surface Disinfectant	Perfume
Dermatitis/Eczema	Hair Care	Diaper Rash	Room Freshener	Aromatherapy
Moisturizer	Feminine Care	Muscle Pain	Cleaner	
Acne	Deodorant	Foot Spray	Detergent	
Cleanser	Massage			

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due to the geraniol and linalool, aromatic constituents of the oil. The calming effects are attributed to the abundant esters.

### MAJOR CHEMICAL CONSTITUENTS

Major constituents include linalool (25-38%) and linalyl acetate (25-45%), as per ISO 3515:2002. The minor components include 1,8-cineole, lavandulol and lavandulyl acetate.

#### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Battaglia, Salvatore. The Complete Guide to Aromatherapy; International Center for Holistic Aromatherapy, 2003; Brisbane, Australia. de Rapper, S, et al. The In vitro Antimicrobial Activity of Lavandula angustifolia Essential Oil in Combination with Other Aroma-therapeutic Oils. Evid Based Complement Alternat Med. 2013;2013:852049. Schnaubelt, Kurt. Medical Aromatherapy; Frog Ltd, 1999. Berkeley, CA. Webb, Mark. Bush Sense; Griffin Press 2000: Adelaide, Australia.



Product Name:	100% Pure Australian Lemon Myrtle Oil
Botanical name:	Backhousia citriodora
INCI:	Backhousia Citriodora Leaf Oil
HS Code:	3301.29
CAS No:	84775-80-4
UN Code:	3082 (Class 9)
Part of Plant Used:	Leaves and twigs
Appearance:	Clear light yellow, mobile liquid
Aroma:	Lemon, fresh, zesty and uplifting
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional
Certifications:	USDA, COSMOS, Halal



### THERAPEUTIC PROPERTIES

Research published in 2003 showed that Lemon Myrtle (Backhousia citriodora) offers significant antibacterial and antifungal activity against seven bacteria and MRSA. Also cited is its potential as an antiseptic or surface disinfectant or for inclusion in foods as a natural antimicrobial agent, even noting its superiority to Tea Tree Oil. A 2002 research paper investigated the antimicrobial and toxicological properties of Lemon Myrtle. It was shown to possess significant antimicrobial activity against the organisms Staphylococcus aureus, Esche richia coli, Pseudomonas aeruginosa, Candida albicans, methicillin-resistant S. aureus (MRSA), Aspergillus niger, Klebsiella pneumoniae and Propionibacterium acnes comparable to its major component-citral. This paper also noted that a product containing 1% Lemon Myrtle Oil was found to be low in toxicity and could potentially be used in the formulation of topical antimicrobial products. Follow up research by the same authors was done in 2003, wherein they studied the *in vitro* percutaneous absorption of the essential oil of Lemon Myrtle. Though further research is needed, the combination of the methodologies used enabled the generation of data that could be applied for a comprehensive evaluation of the toxicity effects of Lemon Myrtle Oil for topical application.

"Therapeutically, citral has been shown to exhibit sedative, antibacterial, antiseptic, antiviral, and antifungal properties. Aldehydes and particularly citral have long been considered to have anti-tumour properties, though the few studies carried out have proven to be inconclusive." (Webb).

This oil is a very effective anti-microbial, possessing excellent bactericidal (gram positive and negative) properties which

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Acne	Hand and Body Wash	Foot Spray	Surface Disinfectant	Preservative
Cleanser	Hair Care		Room Freshener	Perfume
	Oral Care		Cleaner	Aromatherapy
	Lip Balm		Detergent	
	Deodorant			

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support its potential use as a 100% natural cosmetic preservative. Extensive studies are underway to determine its suitability for this application.

### MAJOR CHEMICAL CONSTITUENTS

The major constituent is citral (>85%).

MORE INFORMATION This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Hayes AJ, Markovic B. Food Chem Toxicol. 2002 Apr;40(4):535-43. Toxicity of Australian essential oil Backhousia citriodora (Lemon Myrtle). Part 1. Antimicrobial activity and in vitro cytotoxicity. Hayes AJ, Markovic B. Food Chem Toxicol. 2003 Oct;41(10):1409-16. Toxicity of Australian essential oil Backhousia citriodora (Lemon Myrtle). Part 2. Absorption and histopathology following application to human skin. Webb, Mark; Bush Sense; Griffin Press 2000; Adelaide, Australia. Wilkinson, JM, et al. J Agric Food Chem 2003 Jan 1;51(1):76-81. Bioactivity of Backhousia citriodora: antibacterial and antifungal activity.



Product Name:	100% Pure Manuka Oil (Standard & Premium Grades)
Botanical name:	Leptospermum scoparium
INCI:	Leptospermum Scoparium Branch/Leaf Oil
HS Code:	3301.29
UN Code:	Non-Hazardous
CAS No:	2198-28-87-2
Part of Plant Used:	Leaves and terminal branches
Appearance:	Clear yellow, slightly viscous oil
Aroma:	Spicy, herbaceous and fresh
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Wildcrafted (Premium Grade); Conventional (Standard Grade)
Certifications:	COSMOS



### THERAPEUTIC PROPERTIES

Manuka oil is considered the 'Tea Tree' of New Zealand where its antimicrobial properties are well established. It has a history of use by the indigenous population; the Maori tribe used it for wounds, cuts, sores and skin diseases. Manuka honey has legendary therapeutic properties; especially researched for immunity, wound healing and resistant ulcerations.

Manuka oil is useful for its analgesic, antibacterial (especially and exceedingly so for gram negative bacteria), antifungal, anti-inflammatory, deodorant, expectorant, immune tonic, insecticidal and sedative properties. Though the gram positive antibacterial properties are slightly lower for this oil than for Tea Tree, it more than compensates with a more pleasing fragrance profile while maintaining many similar uses. It treats most skin disorders including

ringworm, athlete's foot, acne, ulcers, wounds, cuts and abrasions. It is good for bites and stings and has the ability to reduce irritation and promote wound healing.

Manuka oil is recommended for muscle aches, arthritic discomfort and pain. It benefits all disorders of the respiratory system including cough, and cold and flu mediation. It is especially suited to sensitive individuals who present with digestive disorders or sensitive skin conditions. It is said to balance the sympathetic and parasympathetic nervous systems. There are over 30 studies in PubMed on this botanical species, much focused on the immune-stimulant and antibacterial properties of the honey, including its efficacy against Staphylococcus aureus. The use of the essential oil has also been studied in vitro against herpes simplex I and II with effective results.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Shaving & Post Wax	Hand and Body Wash	Wound Care	Surface Disinfectant	Insecticide
Acne	Hair Care	Muscle Pain	Detergent	Aromatherapy
Cleanser	Oral Care	Foot Spray		Strong Antibacterial (gram +)
	Deodorant	Diaper Rash		
	Massage	Cold Sore		
		Decongestant		

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### MAJOR CHEMICAL CONSTITUENTS

Down Under offers two grades of this essential oil: Standard and Premium. Standard grade is characterized by triketone levels <25%, while the prized but limited supply of Premium grade offers triketone levels >25%. This oil is decidedly antiinflammatory with a broad range of other compounds, none of which individually dominate.

### MORE INFORMATION

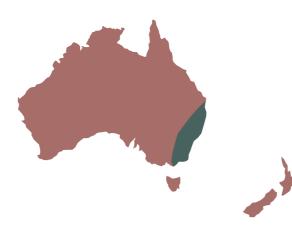
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### REFERENCES

Battaglia, Salvatore. The Complete Guide to Aromatherapy; International **Center for Holistic** Aromatherapy, 2003; Brisbane, Australia. Costa R, et al. Nat Prod Commun. 2010 Nov;5(11):1803-8. Volatiles from steam-distilled leaves of some plant species from Madagascar and New Zealand and evaluation of their biological activity.



Product Name:	100% Pure Australian Nerolina Oil
Botanical name:	Melaleuca quinquenervia (LN chemotype)
INCI:	Melaleuca Quinquenervia Leaf Oil
HS Code:	3301.29
UN Code:	3082 (Class 9)
CAS No:	8014-68-4
Part of Plant Used:	Leaves and terminal branches
Appearance:	Clear, colorless to pale yellow liquid
Aroma:	Floral, fragrant Eucalyptus
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Wildcrafted
<b>Certifications</b> :	COSMOS



### THERAPEUTIC PROPERTIES

The essential oil from Australian Nerolina (*Melaleuca quinquenervia*) is a fresh and floral variant of the same species as the more common Niaouli is derived. This Australian native chemotype produces an aroma with a soft, floral, lavender-like yet herbaceous freshness.

A member of the Melaleuca (Tea Tree) family, this tree is commonly known as a broadleafed paperbark. The leaves are much wider than that of the better known Tea Tree (*Melaleuca alternifolia*), while the peeling paper-like bark was traditionally used by local Aboriginal communities for many purposes, including cooking.

Therapeutically, this plant offers anti-microbial properties, although not as potent as *Melaleuca alternifolia*. However, individuals may find the floral, less medicinal aroma preferable to the more common Tea Tree.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Hou
Cleanser	Hand and Body Wash	Feminine Care Jock Itch Ringworm Athletes Foot	

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### MAJOR CHEMICAL CONSTITUENTS

Amer et al. reported on the potential use of *M. quinquenervia* as an effective natural insect repellent. The authors investigated 41 plant extracts and oil combinations. They identified the oil of *Melaleuca quinquenervia* as one of the five most effective from the panel. They cited efficacy of up to 8 hours against the mosquito species *Aedes*, *Anopheles*, and *Culex*. However, they did note that a special formulation is required to

fix the oil to the skin effectively.

Major constituents include trans-nerolidol (42-60%), limonene (0.5-8%), linalool (25-45%), and1-8 cineole (2-6%).

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Amer A, Mehlhorn H; Repellency effect of forty-one essential oils against Aedes, Anopheles, and Culex mosquitoes; Parasitol Res; 478-90; 2006.

Cock IE, Winnett V, Sirdaarta J, Matthews B; The potential of selected Australian medicinal plants with anti-Proteus activity for the treatment and prevention of rheumatoid arthritis; Pharmacogn Mag; S190-208; May, 2015.

For references on specific topics please contact us.

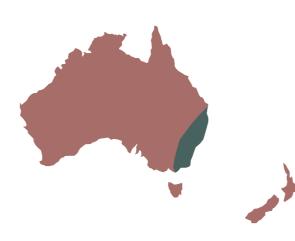
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Antifungal Properties Perfume Aromatherapy

Other



Product Name:	100% Pure Australian Niaouli Oil
Botanical name:	Melaleuca quinquenervia (CT chemotype)
INCI:	Melaleuca Quinquenervia Leaf Oil
HS Code:	3301.29
UN Code:	1169
CAS No:	8014-68-4
Part of Plant Used:	Leaves and terminal branches
Appearance:	Clear, colorless to pale yellow liquid
Aroma:	Cineole, Eucalyptus
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional
Our Certifications:	COSMOS



### THERAPEUTIC PROPERTIES

The essential oil from Australian Niaouli (*Melaleuca quinquenervia*, CT chemotype) is quite different from that of the New Caledonian, Indonesian, or other regions where this tree has been commercialized. The Australian chemotype produces an aroma with a rich, minty, eucalyptus-like freshness.

A member of the Melaleuca (Tea Tree) family, this tree is commonly known as a broadleafed paperbark. The leaves are much wider than that of the better known Tea Tree (*Melaleuca alternifolia*), while the peeling paper-like bark was traditionally used by local Aboriginal communities for many purposes, including cooking.

Therapeutically, this plant offers anti-microbial properties, although not as potent as *Melaleuca alternifolia*. However, individuals may find the less medicinal aroma preferable to the more common Tea Tree. Interestingly, this species is considered a noxious weed in the Florida Everglades. It has adapted exceedingly well in that climate, developing seed germination rates 3-4 times greater than what occurs in Australia. Extensive research is underway to limit the spread of this unwelcome arrival in Florida. No such status exists for this plant in Australia, where natural predators limit the growth and new germination rates.

Amer et al. reported on the potential use of Niaouli as an effective natural insect repellent. The authors investigated 41 plant extracts and oil combinations. They identified the oil of *Melaleuca quinquenervia* (CT chemotype) as one of the five most effective from the panel. They cited efficacy of up to 8 hours against the mosquito species *Aedes, Anopheles,* and *Culex*. However, they did note that a special formulation is required to fix the oil to the skin effectively.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Acne	Shampoo	Decongestant	Surface Disinfectant	Aromatherapy
	Massage	Expectorant	Room Freshener	Perfume
		Muscle Pain	Detergent	Insecticidal
				Antiprotozoal

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MAJOR CHEMICAL CONSTITUENTS

Major constituents include is 1,8-cineole (50-60%). The minor components include: limonene and terpinen-4-ol and (gamma as symbol)-terpinene.

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Amer A, Mehlhorn H; Repellency effect of forty-one essential oils against Aedes, Anopheles, and Culex mosquitoes; Parasitol Res; 478-90; 2006.

Cock IE, Winnett V, Sirdaarta J, Matthews B; The potential of selected Australian medicinal plants with anti-Proteus activity for the treatment and prevention of rheumatoid arthritis; Pharmacogn Mag; S190-208; May, 2015.

# Essential Oil AUSTRALIAN SANDALWOOD



### **PRODUCT DETAILS**

Product Name:	100% Pure Australian Sandalwood Oil Standard and Premium Grades)
Botanical name:	Santalum spicatum (syn. Fusanus spicatus)
INCI:	Santalum Spicatum Wood Oil (syn. Fusanus Spicatus Wood Oil)
HS Code:	3301.29
UN Code:	Non-Hazardous
CAS No:	92875-02-0
Part of Plant Used:	Wood
Appearance:	Pale yellow to golden brown
Aroma:	Sweet, soft woody
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional, Wild Harvested
<b>Certifications</b> :	COSMOS, USDA NOP, Halal



### THERAPEUTIC PROPERTIES

Australian Sandalwood now accounts for over 80% of the world's sandalwood supplies. These reserves are carefully and sustainably managed by the Western Australian government through annual harvest quotas and extensive regeneration efforts.

The essential oil comes from the heartwood of the tree. The Australian Sandalwood Tree must be more than 20 years old to develop the heartwood necessary for good quality oil. This contrasts to the Indian Mysore Sandalwood which requires at least 30 years to achieve the same quality.

Research by Sydney University has shown that WA Sandalwood has anti-inflammatory properties in-line with the traditionally used East Indian Sandalwood. Anti-inflammatory properties have been attributed to alphabisabolol and the WA Sandalwood contains higher amounts of alpha-bisabolol (5-10%) than East Indian Sandalwood Oil. Santalum spicatum also contains betasantalene (generally less than 1%), another component that has demonstrated antiinflammatory properties. It is especially suited to the treatment of hot, red skin conditions such as eczema, psoriasis, rash or other inflammation. It has a long historic association with the treatment of urinary tract infections. It is astringent and helps resolve respiratory congestion, and is especially useful when soothing, demulcent effects are required, such as in chronic bronchitis involving dry cough. It is also a lymphatic decongestant, specific for stasis such as varicose veins and swollen.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Dry and Inflamed Skin	Feminine Care	Diaper Rash		Insect Repellent
Shaving & Post Wax	Hair Care	Muscle Pain		Stress Reduction
Acne	Bath Salts	Foot Spray		Air Diffusion
Moisturizer	Deodorant	Cold Sores		Perfume
Eczema	Massage	Respiratory		Aromatherapy
		Antiviral		

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MAJOR CHEMICAL CONSTITUENTS

"If a comparison of the chemical constituents of West Australian (WA) Sandalwood Oil (S. spicatum) with East Indian Sandalwood (S. album) is made, both are extracted from the heartwood and rootball of the species and it can be seen that they are similar chemically, they both contain alpha and beta santalol. WA Sandalwood Oil contains higher levels of farnesol and alpha-bisabolol than East Indian oil. Both these compounds have been demonstrated to have antimicrobial and anti-inflammatory properties." (Webb).

#### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Battaglia, Salvatore. The Complete Guide to Aromatherapy; International Center for Holistic Aromatherapy, 2003; Brisbane, Australia. Schnaubelt, Kurt. Medical Aromatherapy; Frog Ltd, 1999. Berkeley, CA. Webb, Mark; Bush Sense; Griffin Press 2000; Adelaide, Australia.



Product Name:	100% Pure Australian Sandalwood (Indian) Oil
<b>Botanical Name:</b>	Santalum album
INCI:	Santalum Album Wood Oil
HS Code:	3301.29
UN Code:	Non-Hazardous
CAS No:	8006-87-9 / 84787-70-2
Part of Plant Used:	Wood
Appearance:	Pale yellow to golden brown
Aroma:	Sweet, soft
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional
Certifications:	COSMOS, USDA NOP



### THERAPEUTIC PROPERTIES

Commonly referred to as 'Old Mountain' Sandalwood, Indian Sandalwood (Santalum album) is perhaps the most revered medicine of ancient times. It was first recorded as a medicine in the Charaka Samhita, the first documented Ayurveda materia medica. Modern science has recognized Sandalwood for its antimicrobial, antiviral, and antiinflammatory properties.

Misra and Dey (2012) reported the MIC against S. aureus as 0.087, and E. coli at a very respectable 0.156, while Hire and Dhale (2012) characterized Sandalwood Oil's Zone of Inhibition against E. coli at 22mm. From an anti-viral perspective, Treatment of cold sores and genital warts induced by the infection of HSV-1 or HSV-2 was effectively achieved by delivery of therapeutically active doses of Sandalwood oil (Singh and Nulu, 2010).

Sandalwood provides formulators with anti-inflammatory opportunities. Purified

α-santalol and β-santalol were found to suppress lipopolysaccharide-induced production of eicosanoids, prostaglandin E2 and thromboxane B2, mimicking nonsteroidal anti-inflammatory drugs (Sharma et al., 2014).

Establishment of large scale Sandalwood (Album) plantations in Australia commenced in the early 2000s. These plantations are providing the world with a sustainable and traceable supply of Indian Sandalwood. This new production, combined with Australia's production of native Santalum spicatum oil, undisputably establishes Australia as largest producer of Sandalwood Oils in the world.

Down Under offers customers a traceable and sustainable source of Indian Sandalwood Oil, complying with ISO 3518:2002, with the comfort of knowing your Sandalwood Oil is produced with 100% compliance with global benchmarks for workplace labor practices.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Dry and Inflamed Skin	Feminine Care	Diaper Rash		Insect Repellent
Shaving & Post Wax	Hair Care	Muscle Pain		Stress Reduction
Acne	Bath Salts	Foot Spray		Air Diffusion
Moisturizer	Deodorant	Cold Sores		Perfume
Eczema	Massage	Respiratory		Aromatherapy
		Antiviral		

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### MAJOR CHEMICAL CONSTITUENTS

Indian Sandalwood is characterized by a high level of Santalols. The ISO standard (3518:2002) requires an  $\alpha$ -Santalol content within a range of 41 and 55%, while the  $\beta$ -Santalol content must be between 16 and 24%.

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Hire, K. K., Dhale, D. 2012. ANTIMICROBIAL EFFECT AND INSILCO ADMET PREDICTION OF SANTALUM ALBUM L. International Journal of Pharma and Bio Sciences, 3, 727-734. Misra, B., Dey, S. 2012. Comparative phytochemical analysis and antibacterial efficacy of in vitro and in vivo extracts from East Indian Sandalwood tree (Santalum album L.). Letters in applied microbiology, 55, 476-486.

Sharma, M., Levenson, C., Bell, R., Anderson, S., Hudson, J., Collins, C., Cox, M. 2014. Suppression of Lipopolysaccharide-stimulated Cytokine/Chemokine Production in Skin Cells by Sandalwood Oils and Purified  $\alpha$ -santalol and  $\beta$ -santalol. Phytotherapy research, 28, 925-932.



Due du et Newser	100% Pure Australian Lavender Tea Tree	
Product Name:	(Rosalina) Oil	
		المعطي المعالي
Botanical name:	Melaleuca ericifolia	
INCI:	Melaleuca Ericifolia Leaf Oil	
HS Code:	3301.29	
UN Code:	Non-Hazardous	
CAS No:	8022-72-8	
Part of Plant Used:	Leaves	
Appearance:	Colorless to pale yellow mobile liquid	
Aroma:	Soft floral, slightly camphoraceous, rosy aroma	
<b>Extraction Method:</b>	Steam distilled (water)	
Farming Method:	Conventional	
<b>Certifications</b> :	COSMOS	

### Research indicates its effectiveness against transient skin bacteria, making the oil a

THERAPEUTIC PROPERTIES

wonderful addition in personal skin care products (The Utilization of Australian Native Oils for the Control of Transient Bacteria in Skin Care Products). The "rosy" aroma also lends itself to being a replacement for other more expensive "rose" scented oils. It blends well with other oils, being compatible for formulation of various types. From the standpoint of Traditional Chinese Medicine, it is considered a "yin" oil, calming many conditions of heat (excess "yang") such as inflammation, swelling, tenderness, as well as mental overstimulation that may lead to insomnia or anxiety.

The main constituent, linalool, is a good antiseptic, spasmolytic and anticonvulsant. Researchers at the ethnopharmacology laboratory at the University in Porto Alegre, Brazil, have shown that linalool has effective sedative effects and is rapidly absorbed through the skin and nasal mucosa. It is an effective antibacterial for upper respiratory tract congestion and infections, particularly in small children. The oil is a gentle expectorant with good anti-infectious properties. Topical use on acne, insect bites, boils, athlete's foot and herpes; it is antimicrobial and antifungal with a wide range of applications.

Linalool delivers relaxation properties great for calming and relaxing, and ideal for sleep and stress disorders. This tertiary monoterpenol offers sedative properties (even through inhalation) that may work through the central nervous system to modify the response to excitatory neurotransmitters associated with convulsions. The antispasmodic effects work through the modulation of a cell signaling molecule which affects the ability of smooth muscle to contract (Bowles).

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Dermatitis/Eczema	Hand and Body Wash	Wound Care		Mosquito Repellent
Shaving & Post Wax	Feminine Care	Muscle Pain		Aromatherapy
Acne	Hair Care	Diaper Rash		Perfume
Cleanser	Oral Care	Foot Spray		
	Lip Balm	Decongestant		
	Deodorant			
	Massage			

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### MAJOR CHEMICAL CONSTITUENTS

Major constituents include linalool (35-55%) and 1,8 cineole (12-26). The minor components include: alpha-pinene, limonene and terpinen-4-ol.

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Webb, Mark. Bush Sense; Griffin Press 2000; Adelaide, Australia. Bowles, Joy. The Chemistry of Aromatherapeutic Oils; Allen & Unwin 2003; NSW Australia.



Product Name:	100% Pure Australian Lemon Scented Tea Tree Oil
Botanical name:	Leptospermum petersonii
INCI:	Leptospermum Petersonii Oil
HS Code:	3301.29
UN Code:	Non-Hazardous
CAS No:	85085-43-4
Part of Plant Used:	Leaves and twigs
Appearance:	Clear colorless to yellow mobile liquid
Aroma:	Pleasant, vibrant, uplifting lemon aroma
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional
Certifications:	COSMOS



# THERAPEUTIC PROPERTIES

Lemon Scented Tea Tree Oil (Leptospermum petersonii) contains high levels of citral (neral and geranial) which is a known microbial cell membrane disruptor. It's synergistic benefits with other essential oils are well documented, the MIC of Tea Tree Oil alone for S. aureus improves from 1% to just 0.25% when a combination of Lemon Scented and Tea Tree Oil is employed in a 1:5 ratio, respectively. Lemon Scented Tea Tree Oil has also been found to be an excellent antifungal agent. Park et al. published their findings on the beneficial properties of Leptospermum petersonii against five common dermatophytes. The authors reported that a Leptospermum petersonii concentration of 0.2mg/ml (0.02%) completely inhibited growth in three of five common organisms, with a growth of the remaining two being reduced by up to 92% versus control. Further work into its antifungal benefits was conducted by Hood et al. The authors evaluated the use

of *Leptospermum petersonii* as an antifungal fumigant. Both *in vitro* and *in vivo* results demonstrated a significant fungal burden reduction greater that that found with a course of conventional antifungal drugs.

Perhaps the most intriguing use of Lemon Scented Tea Tree Oil is its ability to effectively mask the odor of Tea Tree Oil. At a 1:7 concentration, the typical Tea Tree Oil smell is virtually indistinguishable, leaving only the fresh, uplifting lemony aroma.

Research demonstrates it offers more powerful disinfectant properties than the more well-known Tea Tree Oil.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Acne	Hand and Body Wash	Wound Care	Surface Disinfectant	Insecticide
Cleanser	Hair Care	Foot Spray	Room Freshener	Perfume
		Decongestant	Cleaner	Aromatherapy
		Head Lice/Nits Antifungal	Detergent	

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### MAJOR CHEMICAL CONSTITUENTS

# Major constituents include neral (25-35%), geranial (30-41.5%) and citronellal (<12%).

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Hood JR, et al. "Antifungal activity of Leptospermum petersonii oil volatiles against Aspergillus spp. in vitro and in vivo." J Antimicrob Chemother. 2010 Feb:65(2):285-8. Park MJ, et al. Antifungal activities of the essential oils in Syzygium aromaticum (L.) Merr. Et Perry and Leptospermum petersonii Bailey and their constituents against various dermatophytes. J Microbiol. 2007 Oct;45(5):460-5. Therapeutic Goods Administration (Australia) -**Complementary Medicines Evaluation Committee.** Evaluation of New Substances – Leptospermum petersonii (up to 5%) oil. Meeting 45 Ratified Minutes. 23 April 2004. Webb, Mark, Bush Sense, Griffin Press 2000; Adelaide, Australia.



Product Name:	100% Pure Australian Tea Tree Oil
Botanical name:	Melaleuca alternifolia
INCI:	Melaleuca Alternifolia (Tea Tree) Leaf Oil
HS Code:	3301.29.60
UN Code:	2319
CAS No:	85085-48-9 and 68647-73-4
Part of Plant Used:	Foliage and terminal branchlets
Appearance:	Clear, colorless to yellow mobile liquid
Aroma:	Warm, spicy, earthy, characteristic
<b>Extraction Method</b> :	Steam distilled (water)
Farming Method:	Conventional, Certified Organic
Certifications:	USDA NOP, Bio-CE, ACO, COSMOS, Halal, ATTIA COP



# THERAPEUTIC PROPERTIES

The most widely Many research studies have shown Tea Tree Oil's efficacy against a wide range of bacteria, typically in concentrations of 1% or less. (Hammer et al., 2006)

Of particular note is Tea Tree Oil's effectiveness in the treatment of acne. In 1990 researchers published the results of a prospective, controlled trial comparing Tea Tree Oil (*M. alternifolia*) to conventional acne treatments containing benzoyl peroxide. They concluded that although the *Melaleuca alternifolia* was initially slower to act, it was just as effective and yielded fewer side effects when compared to the benzoyl peroxide lotion.

Tea Tree Oil is also a known and proven antiviral, including against HSV. It is confirmed (*in vitro* and *in vivo* studies) to also offer strong efficacy against a wide range of yeast and fungus.

It is considered nontoxic and non-irritant, sensitizing to less than 0.2% of the general population. Caution is suggested in the interpretation of skin sensitivity studies using a Scandinavian patch test containing Tea Tree Oil as this test uses a highly oxidized form of Tea Tree Oil. Other studies have demonstrated a 0% incidence of irritation in formulations of less than 10% Tea Tree Oil.

Research has also shown Tea Tree Oil's effectiveness against Methicillin-resistant *Staphylococcus aureus* (MRSA). This is a very exciting potential for Tea Tree Oil given the issues of MRSA contagion in public buildings such as hospitals and prisons.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Shaving & Post Wax	Hand and Body Wash	Herpes (oral and genital)	Surface Disinfectant	Graphene synthesis
Acne	Hair Care	Diaper Rash	General Cleaning	Aromatherapy
Cleanser	Oral Care	Foot Spray	Laundry Detergent	
	Feminine Care	Cold Sores	Air Freshener	
	Lip Balm	Wound Care		
	Deodorant	Head Lice/Nits		
		Insect Bites		
		Anti-mite		

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### MAJOR CHEMICAL CONSTITUENTS

ISO 4730:2017 stipulates the 15 most common components and relative proportions in pure Tea Tree Oil.

Major constituents include terpenin-4-ol, alpha-pinene, sabinene, alpha-terpinolene, limonene, para-cymene, 1,8-cineole, gamma-terpinene, alpha-terpineol, aromadendrene, delta-cadinene, globulol, and viridiflorol.

#### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Bowles Joy. The Chemistry of Aromatherapeutic Oils; Allen & Unwin 2003; NSW Australia. Hammer, ... 2006 reference



Product Name:	100% Pure Australian Macadamia Oil – Refined Cosmetic Grade
Botanical name:	Macadamia integrifolia
INCI:	Macadamia Integrifolia Seed Oil
HS Code:	1515.90
UN Code:	Non-Hazardous
CAS No:	159518-86-2
Part of Plant Used:	Seed kernel
Appearance:	Clear/bright
Aroma:	Neutral to slight nutty essence
<b>Extraction Method</b> :	Mechanical press
Farming Method:	Conventional
Certifications:	COSMOS



### THERAPEUTIC PROPERTIES

Macadamia Oil is ideal for cosmetics due to its silky texture. It is a natural and sustainable replacement for mink and whale oil.

Traditional uses of the Aborigines of New South Wales and Queensland where macadamia is endemic include the treatment of sunburn and scarring.

The standout component of Macadamia Oil is its relatively high concentration of Palmitoleic Acid. A natural component of young skin, the presence of this fatty acid declines with age. Formulating with Macadamia Oil (refined Cosmetic Grade) may help to restore vital skin nutrients and help the skin feel and look younger.

# The highest concentration fatty acid, Oleic acid is an anti-inflammatory and makes a good addition to moisturizing formulations in all body care products.

Macadamia Oil's rich feel and viscosity, and high oxidative stability make it especially suitable for heavy creams and sun care preparations.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Hous
Dermatitis/Eczema	Hand and Body Wash	Wound Care	
Shaving & Post Wax	Feminine Care	Muscle Pain	
Facial Serum	Hair Care	Diaper Rash	
Moisturizer	Lip Balm		
	Deodorant		
	Massage		

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# MAJOR CHEMICAL CONSTITUENTS

Major constituents include Oleic Acid (55-67%) and Palmitoleic Acid (13-25%). The minor components include Lauric Acid, Myristic Acid, Palmitic Acid, Stearic Acid, Linoleic Acid, Linolenic Acid, Arachidic Acid, Eicosenoic Acid and Behenic Acid.

# MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Maguire LS, O'Sullivan SM, Galvin K, O'Connor TP, O'Brien NM. Fatty acid profile, tocopherol, squalene and phytosterol content of walnuts, almonds, peanuts, hazelnuts and the macadamia nut. Int J Food Sci Nutr. 2004 May;55(3):171-8.

For references on specific topics please contact us.

# isehold

Other

#### Aromatherapy



Product Name:	100% Pure Australian Sandalwood Seed Oil
Botanical name:	Santalum spicatum (syn. Fusanus spicatus)
INCI:	Santalum Spicatum Seed Oil
HS Code:	1515.90
UN Code:	Non-Hazardous
CAS No:	1542150-96-8
Part of Plant Used:	Seed kernel
Appearance:	Clear, yellow to golden-yellow, viscous liquid
Aroma:	Neutral to very mild nutty aroma, reminiscent of Sandalwood essential oil
<b>Extraction Method</b> :	Super critical fluid extraction (CO2)
Farming Method:	Conventional
Certifications:	COSMOS



### THERAPEUTIC PROPERTIES

Sandalwood Seed Oil is the fatty oil obtained by a novel Green Chemistry™ supercritical (CO<sub>2</sub>) fluid extraction process. Sandalwood Seed Oil is a rich source of a natural and highly stable, acetylenic fatty acid - Ximenynic Acid - which offers well documented pharmacologic benefits:

# MAJOR CHEMICAL CONSTITUENTS

Major constituents include Oleic Acid (48-56%) and Ximenynic Acid (28-36.5%). The minor components include palmitic acid, palmitoleic acid, stearic acid, linoleic acid, α-linoleic acid and stearolic acid.

- Aging process
- Varicose veins and cellulitis
- Hair loss
- Fat deposition
- Skin oiliness
- Inflammation

Sandalwood Seed Oil is non-toxic and non-irritating (dermal and ocular). The oil is produced in a sustainable manner, in cooperation with traditional Aboriginal Communities.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Hous
Dermatitis/Eczema	Body Moisturizer	Diaper Rash	
Shaving & Post Wax	Intense Scalp Treatme	ent Varicose Vein ream	
Facial Moisturizer	Cellulite Cream		
Facial Scrub	Lip Balm		
Night Cream	Shampoo		
Acne			

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

sehold	Other

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Bombardelli, Ezio, Aldo Cristoni, and Paolo Morazzoni. "Combinations of vasoactive substances with fatty acids to prevent hair loss." U.S. Patent No. 5,665,335. 9 Sep. 1997. Bombardelli, Ezio, and Sergio B. Curri. "Polyunsaturated acids having vasokinetic action and pharmaceutical and cosmetic formulations containing them." U.S. Patent No. 5,104,655. 14Apr. 1992.

Bombardelli E, Guglielmini G, Morazzoni P, Curri SB, Polinelli W. Microvasculokinetic activity of ximenynic acid ethyl ester. Fitoterapia [Pharmacology of Ximenynic acid] 1994; 65(3): 195. Croft KD, Beilin LJ, Ford GL. Differential inhibition of thromboxane B2 and leukotriene 84 biosynthesis by two naturally occurring acetylenic fatty acids. Biochimica et Biophysica Acta(BBA) - Lipids and Lipid Metabolism. 1987; 921(3):621-624.

Hettiarachchi, D.S, Liu, Y., Fox, J., & Sunderland, B. (2010). Western Australian Sandalwood Seed Oil: new opportunities. Lipid Technology, 22(2), 27-29.



Product Name: Botanical name:	100% Pure Australian Tea Tree Hydrosol Melaleuca alternifolia
INCI: HS Code:	Melaleuca Alternifolia (Tea Tree) Leaf Water 3303.00
UN Code:	Non-Hazardous
CAS No:	None issued
Part of Plant Used:	Foliage and terminal branchlets
Appearance:	Clear mobile liquid
Aroma:	Slightly medicinal
<b>Extraction Method</b> :	Steam distilled
Farming Method:	Conventional, Certified Organic
<b>Our Certifications:</b>	COSMOS, USDA NOP, Bio-CE, ACO



# THERAPEUTIC PROPERTIES

Like its ubiquitous essential oil counterpart, Tea Tree Hydrosol possesses wide spectrum anti-microbial, antibacterial, antiviral and antifungal properties. It has been validated in independent research lab testing as an effective preservative for oral personal care products, achieving a bacterial colony count reduction of  $\geq 103$  at 14 days post-challenge, and  $\geq 101$  reduction for yeast and mold.

Tea tree hydrosol can be used topically as a facial mist or toner to fight acne, to clean cuts, scrapes, wounds of all kinds and as a fungal nail treatment. Tea Tree hydrosol is also used internally in various ways such as a gargle or mouthwash for sore throat, coughs, and gingivitis. Microbiology culture testing was also performed using *Staphylococcus aureus*, *Pseudomonas spp., E. coli*, and *Salmonella spp.*, as well as bile tolerant gram negative bacteria. Results of these studies indicated no detectable cell counts at 5 days post incubation (20-25°C).

Tea Tree Hydrosol has been approved by the Australian Therapeutic Goods Administration (TGA, the Australian medical regulatory authority) to assist the healing of pimples, minor wounds and skin irritations. Furthermore, it is approved to help clean the skin and reduce the potential for minor skin infections.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Shaving & Post Wax	Bath Balm	Skin Cuts and Abrasions	Surface Disinfectant	Water Replacement in Personal Care Formulations
Facial Toner and Mist	Douche Solution Oral Care	Flushing Solution for Wounds and Abscesse Nail Fungal Infections	-	

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

# MAJOR CHEMICAL CONSTITUENTS

Major constituents include Tea Tree Oil volatiles (890-1500.0ppm), consisting of Terpinen-4-ol (80-980), 1,8-cineole (01-32) and  $\alpha$ -terpineol (8-180).

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

BioTest Laboratories Pty Ltd, Underwood, Qld, Australia. Hydrosol of Melaleuca alternifolia privately commissioned lab testing (2012). Results on file. Catty, S; Hydrosols: The Next Aromatherapy. Healing Arts Press. Rochester, Vermont. 2001. Webb, Mark. Bush Sense; Griffiin Press 2000; Adelaide, Australia.



Product Name:	100% Pure Australian Sandalwood Hydrosol
Botanical name:	Santalum spicatum (syn. Fusanus spicatus)
INCI:	Sandalwood (Santalum spicatum) wood water
HS Code:	3303.00
UN Code:	Non-Hazardous
CAS No:	84787-70-2
Part of Plant Used:	Wood
Appearance:	Near colorless liquid
Aroma:	Sweet, soft and woody
<b>Extraction Method</b> :	Steam distilled
Farming Method:	Conventional
<b>Certifications</b> :	COSMOS



### THERAPEUTIC PROPERTIES

The hydrosol from the steam distillation of Sandalwood is a very stable (unpreserved shelf life >18 months) solution which may be used for its mild astringent, antibacterial, and anti-inflammatory capabilities.

The Sandalwood Hydrosol has an aroma quite similar, yet softer, to the essential oil. This characteristic odor, used so extensively in perfumery as a base note, may be further employed in aqueous-based formulations for fragrance and functional advantages.

Sandalwood hydrosol is an amazing addition to skin care products, it can be used in many ways, including as a compress on delicate and mature skins, in the eye area for crepey lids, and variable results for acne, rosacea, couperose skin, eczema, and psoriasis. Due to its anti-inflammatory properties, it is also a great aftershave.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Shaving & Post Wax	Bath Fragrance	Wound Care	Linen Spray	Water Replacement in Personal Care Formulations
Facial Toner and Mist Facial Mask	Hair Care Cooling Agent Feminine Care	Diaper Rash		
These statements have no	ot been evaluated by the FD	A. This product is not inten	ded to diagnose, treat, cur	re, or prevent any disease.

To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

For many years Sandalwood Oil and Hydrosol were extracted as an absolute. One of Down Under's long-standing Sandalwood distillers pioneered the steam distillation technique for Sandalwood Oil and hydrosol - eliminating extraction with hazardous substances such as hexane.

## MAJOR CHEMICAL CONSTITUENTS

Major constituents include cis-α-santalol, epi- $\alpha$ -santalol, epi- $\beta$ -santalol, cis- $\beta$ -santalol, cis-nuciferol, cis-β-curcumene-12-ol, cislanceol, and trans, trans-farnesol.

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Bowles, Joy. The Chemistry of Aromatherapeutic Oils; Allen & Unwin 2003; NSW Australia. Catty, S; Hydrosols: The Next Aromatherapy. Healing Arts Press. Rochester, Vermont. 2001. Webb, Mark; Bush Sense; Griffin Press 2000; Adelaide, Australia. Wilkinson, J.M., Cavanagh, H.M.A., "Antibacterial activity of essential oils from Australian native plants", Phytotherapy Research, Volume 19, Issue 7, pp.643 - 646. July 2005.



# THERAPEUTIC PROPERTIES

The wonderfully refreshing fragrance of Lavender Hydrosol may be applied in a wide range of personal care, medicinal, and household applications. Lavender Hydrosol offers calming and anti-inflammatory properties. Ideally suited to formulations for the elderly or small children due to its mild, non-toxic character. Use Lavender Hydrosol as an excellent water (aqua) replacement in formulations. A French study compared Lavender with four other essential oils and found that Lavender was the only oil to consistently elicit a feeling of 'happiness'. When these factors are combined with the benefits of touch, as with massage, it is especially effective in reducing stress, a major trigger for many health problems. Lavender oil is active against many species of bacteria and fungi, due to the geraniol and linalool, aromatic constituents of the oil. The calming effects are attributed to the abundant esters.

# **PRODUCT DETAILS**

Product Name:	100% Pure Australian Lavender Hydrosol
Botanical name:	Lavandula angustifolia
INCI:	Lavandula Angustifolia (Lavender) Flower Water
HS Code:	3303.00
UN Code:	Non-Hazardous
CAS No:	90063-37-9
Part of Plant Used:	Fresh flowering tops
Appearance:	Clear
Aroma:	Sweet, floral
<b>Extraction Method:</b>	Steam distilled
Farming Method:	Conventional
Certifications:	COSMOS



### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Facial Toner and Mist	Bath Fragrance	Calm Sunburn	Linen Spray	Water Replacement in Personal Care Formulations
Make Up Remover Facial Mask	Baby Products	Diaper Rash Wound Care Heat Rash	Air Freshener	

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

## MAJOR CHEMICAL CONSTITUENTS

Major constituents include Lavender Oil volatiles (950-1500ppm), linalool (200-400), cis linalool oxide (furanoid) (75-100), trans linalool oxide (furanoid) (50-90)

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Catty, S; Hydrosols: The Next Aromatherapy. Healing Arts Press. Rochester, Vermont. 2001. Webb, Mark. Bush Sense; Griffiin Press 2000; Adelaide, Australia.



Product Name:	100% Pure Australian Fragonia® Hydrosol
Botanical name:	Agonis fragrans
INCI:	None issued
HS Code:	3303.00
UN Code:	Non-Hazardous
CAS No:	None issued
Part of Plant Used:	Terminal branches
Appearance:	Near colorless liquid
Aroma:	Fresh cineolic character
<b>Extraction Method</b> :	Steam distilled
Farming Method:	Conventional
Certifications:	COSMOS



### THERAPEUTIC PROPERTIES

The hydrosol from the steam distillation of Agonis fragrans (Fragonia®) exhibits the same olfactory character as the essential oil, yet in a milder format. As a waterbased solution, Fragonia hydrosol offers excellent calming and relaxing properties. More scientific work on this new and exciting essential oil and hydrosol are underway.

### MAJOR CHEMICAL CONSTITUENTS

Major constituents include Fragonia Oil volatiles (1300-1500ppm), 1,8-cineole (10-18), alpha-terpineol (20-40)

# POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Facial Toner and Mist	Bath Fragrance		Linen Spray	Water Replacement in Personal Care
Facial Mask				Formulations

-acial Mask

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Catty, S; Hydrosols: The Next Aromatherapy. Healing Arts Press. Rochester, Vermont. 2001. Webb, Mark. Bush Sense; Griffiin Press 2000; Adelaide, Australia.



Product Name:	100% Pure Australian Lemon Myrtle Hydrosol
Botanical name:	Backhousia citriodora
INCI:	None issued
HS Code:	3303.00
UN Code:	Non-Hazardous
CAS No:	None issued
Part of Plant Used:	Terminal branches and leaves
Appearance:	Near colorless liquid
	ricul coloness inquia
Aroma:	Fresh citral character
Aroma: Extraction Method:	
	Fresh citral character
Extraction Method:	Fresh citral character Steam distilled



### THERAPEUTIC PROPERTIES

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neral (50-365)

The hydrosol from the steam distillation of Backhousia citriodora (Lemon Myrtle) exhibits the same olfactory character as the essential oil, yet in a milder format. As a water-based solution, Lemon Myrtle hydrosol offers excellent freshening and uplifting sensorial properties.

More scientific work on this new and exciting essential oil and hydrosol are underway.

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
Facial Toner and Mist	Bath Fragrance	Calm Sunburn	Linen Spray	Water Replacement in Personal Care Formulations
Make Up Remover Facial Mask	Baby Products	Diaper Rash Wound Care Heat Rash	Air Freshener	

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MAJOR CHEMICAL CONSTITUENTS

Major constituents include Lemon Myrtle Oil volatiles (140-1800ppm), geranial (60-465),

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Catty, S; Hydrosols: The Next Aromatherapy. Healing Arts Press. Rochester, Vermont. 2001. Webb, Mark. Bush Sense; Griffin Press 2000; Adelaide, Australia.



Product Name:	100% Pure Australian Tea Tree Milled Leaf (Dried)
Botanical name:	Melaleuca alternifolia
INCI:	Melaleuca Alternifolia (Tea Tree) Leaf
HS Code:	1211.90.93
UN Code:	Non-Hazardous
CAS No:	None Issued
Part of Plant Used:	Leaves
Appearance:	Light green to khaki
Aroma:	Warm, spicy, earthy
<b>Extraction Method</b> :	Manual stripping and drying of leaves
Farming Method:	Conventional
Contificantina a	
Certifications:	COSMOS, Halal



# THERAPEUTIC PROPERTIES

The leaves from the Melaleuca alternifolia plant are selected at their prime oil content state, carefully air dried, and ground to either a coarse or a fine grade to be used in a range of applications similar to the pure Tea Tree essential oil.

### MICROBIOLOGICAL EVALUATION

Possessing the antibacterial, antimicrobial, antiviral, antifungal properties of the essential oil, the leaf product also retains the tea tree's natural water-based properties. Dried tea tree leaves offer the broadest essence of the natural plant in a readily assessable format for personal care applications.

# Each batch of Tea Tree Leaf (Dried) undergoes extensive microbiological evaluation conforming to BP1988

# POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other	MORE INFORMATION
Facial Mask	Hand Cleanser				This is an overview. Our website contains more supporting
Facial Scrub	Body Scrub				documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.
	ave not been evaluated by the our Applications Guide for Pur		<b>U</b>		For references on specific topics please contact us.

# GRADING

Standards (App XVI B2 and Opt A + B).

Coarse leaf passes a 3000 µm screen (100%).



Product Name:	100% Pure Australian Kakadu Plum Powder
Botanical name:	Terminalia ferdinandiana
INCI:	Terminalia Ferdinandiana Fruit Powder
HS Code:	1211.90
UN Code:	Non-Hazardous
CAS No:	1176234-54-0
Part of Plant Used:	Fruit flesh and skin without seed
Appearance:	Dry pale green-yellow powder
Aroma:	Non-odorous
<b>Extraction Method:</b>	Mechanically pressed then freeze dried
Farming Method:	Wildcrafted,
Certifications:	COSMOS, USDA NOP, ACO



### THERAPEUTIC PROPERTIES

A part of the traditional diet of Aboriginal communities in the key growing region of Australia's north coast, Kakadu Plum is an exciting new ingredient for the global personal care and supplement industry. Kakadu Plum Powder (water based) has been identified as containing one of the highest sources of Vitamin C (Ascorbic Acid) on the planet – gram-to-gram over 50 times greater than an orange!

The dried Kakadu Plum Powder contains ascorbic acid, fiber (>47.5%), gallic acid, and ellagic acid. Gallic acid is known for its antifungal and antiviral properties, while ellagic acid's anti-oxidative properties complement the ascorbic acid functionality. The Oxygen Radical Absorbance Capacity (ORAC) value of Kakadu Plum is 600% greater than goji berries. Use Kakadu Plum Powder in new personal care products or in current formulations replacing other anti-oxidative ingredients such as cranberry, goji berry, blueberry, green tea, or even acerola.

# POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Hous
Facial Mask	Hand Cleanser	Antioxidant	
Facial Scrub	Body Scrub		

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease. To receive a copy of our Applications Guide for Pure Australian Essential Oils and Carrier Oils, please contact us.

### MAJOR CHEMICAL CONSTITUENTS

Ascorbic acid (vitamin C) >50%; dietary fiber

isehold

Other

### Preservative

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.



Product Name:	100% Pure Australian Mountain Pepper Oil
Botanical name:	Tasmannia lanceolata
INCI:	Tasmannia Lanceolata Fruit/Leaf Extract
HS Code:	3301.29
UN Code:	Non-Hazardous
CAS No:	183815-52-3
Part of Plant Used:	Leaves
Appearance:	Dark citron green viscous liquid
Aroma:	Reminiscent of the Australian bush, dry paper bark and herbs
<b>Extraction Method</b> :	Hexane extraction followed by CO2 refining
Farming Method:	Wildcrafted
Certifications: C	OSMOS



### THERAPEUTIC PROPERTIES

Mountain Pepper Concrete is produced from an abundant wild resource where the bush grows copiously in moist, sheltered environments from sea level to sub alpine areas within Tasmania, Australia's southern island state.

The leaves are harvested using sustainable methods before drying, milling, extraction, and refining.

Mountain Pepper Concrete has a distinctive and exotic aroma, possessing fresh and spicy top notes overlying a peppery background. This oil presents as a dark citron green, viscous liquid. The concrete is partially soluble in ethanol.

Produced from the leaves of the native Tasmanian Mountain Pepper bush (*Tasmannia lanceolate*) and traditionally used as a spice, Tasmanian Native Pepper has been a favorite within the local market for decades. Lipophilic extracts of Tasmanian Native Pepper are very high in the unique pungent compound polygodial.

Very few plant species in the world contain polygodial, which research has shown is responsible for many interesting properties with potential applications in food, flavor, oral care, cosmetics, fragrance, therapeutic goods, and cleaning products. Of note, while this is highly pungent (180,000 Scoville units), it is considered as a (dermal) nonirritant (RIPT) in a 2% concentration.

Cock, et al. (2015) reported on the study of native Australian flora to inhibit the microbial onset of rheumatoid arthritis (RA) by *Proteus mirabilis*. The authors noted Mountain Pepper Oil (*Tasmannia lanceolate*) elicited the most favorable inhibition of *Proteus mirabilis*, with MIC significantly less than 1000ug/ml (0.01%). The authors also noted the extract was non-toxic using the Artemia

### POTENTIAL PRODUCT APPLICATIONS

Skincare	Personal Care	Medicinal	Household	Other
	Toothpaste			Culinary
	Mouthwash			Fragrance
				Preservative

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*napulii* bio-assay. The authors concluded that the bioactivity of *Tasmannia* lanceolate provides good potential as a blocker of microbial-induced rheumatoid arthritis.

# MAJOR CHEMICAL CONSTITUENTS

Major components include polygodial (12-16%), guaiol (4-6%), calamenene, and linalool.

### MORE INFORMATION

This is an overview. Our website contains more supporting documentation (e.g. Sample COA, Specification, SDS). Additional documentation (e.g. Allergen Statement, IFRA Certificate, Prop 65, non-GMO, etc.) is available on request.

### REFERENCES

Bowles, Joy. The Chemistry of Aromatherapeutic Oils; Allen & Unwin 2003; NSW Australia. Cock IE, Winnett V, Sirdaarta J, Matthews B; The potential of selected Australian medicinal plants with anti-Proteus activity for the treatment and prevention of rheumatoid arthritis; Pharmacogn Mag; S190-208; May, 2015. Webb, Mark; Bush Sense; Griffin

Press 2000; Adelaide, Australia. Wilkinson, J.M., Cavanagh, H.M.A., "Antibacterial activity of essential oils from Australian native plants", Phytotherapy Research, Volume 19, Issue 7, pp.643 - 646. July 2005. For references on specific topics please contact us.

COMMON NAME	BOTANICAL NAME		FARMING METHOD		ORDER QUANTITI	ES AVAILABLE BY SKU	
		CONVENTIONAL	CERTIFIED ORGANIC	COSMOS	1 KG (2.2LB)	5 KG (11LB)	10 KG (22LB)
ESSENTIAL OILS							
Anise Myrtle	Syzygium anisatum	1		$\checkmark$	SA1	SA5	SA10
Balm Mint Bush	Prostanthera melissifolia	$\checkmark$		$\checkmark$	PM1	PM5	PM10
Buddha Wood	Eremophila mitchellii			$\checkmark$	EM1	EM5	EM10
Cypress, Blue	Callitris intratropica	$\checkmark$		$\checkmark$	CI1	CI5	CI10
Cypress, White (Leaf)	Callitris columellaris	$\checkmark$		$\checkmark$	CC1	CC5	CC10
Cypress, White (Wood)	Callitris columellaris	$\checkmark$		$\checkmark$	CCW1	CCW5	CCW10
Eucalyptus Australiana	Eucalyptus radiata	$\checkmark$		$\checkmark$	EuR1	EuR5	EuR10
Eucalyptus Australiana – USDA Organic	Eucalyptus radiata		1	$\checkmark$	EuR(USDAOrg)1	EuR(USDAOrg)5	EuR(USDAOrg)10
Eucalyptus	Eucalyptus polybractea	$\checkmark$		$\checkmark$	EuP1	EuP5	EuP10
Eucalyptus – USDA Organic	Eucalyptus polybractea		1	$\checkmark$	EuP(USDAOrg)1	EuP(USDAOrg)5	EuP(USDAOrg)10
Eucalyptus, Lemon Scented	Eucalyptus citriodora	$\checkmark$		$\checkmark$	EuC1	EuC5	EuC10
Eucalyptus, Lemon Scented Iron Bark	Eucalyptus staigeriana	$\checkmark$		$\checkmark$	EuSt1	EuSt5	EuSt10
Eucalyptus, White Iron Bark (Gully Gum/smithii)	Eucalyptus smithii	$\checkmark$		$\checkmark$	EuSm1	EuSm5	EuSm10
Eucalyptus, Peppermint Gum	Eucalyptus dives	$\checkmark$		$\checkmark$	EuD1	EuD5	EuD10
Eucalyptus, Strawberry Gum	Eucalyptus olida	$\checkmark$		$\checkmark$	EuO1	EuO5	EuO10
Fragonia®	Agonis fragrans	$\checkmark$		$\checkmark$	AF1	AF5	AF10
Honey Myrtle	Melaleuca teretifolia			$\checkmark$	MT1	MT5	MT10
Kunzea	Kunzea ambigua			$\checkmark$	KA1	KA5	KA10
Lavender, Australian	Lavandula angustifolia	$\checkmark$		$\checkmark$	LA1	LA5	LA10
Lemon Myrtle	Backhousia citriodora	$\checkmark$	1	$\checkmark$	BC1	BC5	BC10
Manuka	Leptospermum scoparium			$\checkmark$	LS1	LS5	LS10
Niaouli	Melaleuca quinquenervia			$\checkmark$	MQC1	MQC5	MQC10
Nerolina	Melaleuca quinquenervia			$\checkmark$	MQ1	MQ5	MQ10
Sandalwood, Australian – Regular Grade	Santalum spicatum	$\checkmark$		$\checkmark$	SS1	SS5	SS10
Sandalwood, Australian – USDA Organic	Santalum spicatum	$\checkmark$	1	$\checkmark$	SS(USDAOrg)1	SS(USDAOrg)5	SS(USDAOrg)10
Sandalwood, Australian – Premium Grade	Santalum spicatum		1	$\checkmark$	SSPG1	SSPG5	SSPG10
Indian Sandalwood	Santalum album			$\checkmark$	SALP1	SALP5	SALP10
Lavender Tea Tree (Rosalina)	Melaleuca ericifolia	$\checkmark$		$\checkmark$	ME1	ME5	ME10
Lemon Scented Tea Tree (Citratum)	Leptospermum petersonii	$\checkmark$		$\checkmark$	LP1	LP5	LP10
Manuka – Standard Grade	Leptospermum scoparium	$\checkmark$		$\checkmark$	LSSG1	LSSG5	LSSG10
Manuka – Premium Grade	Leptospermum scoparium	$\checkmark$		$\checkmark$	LSPG1	LSPG5	LSPG10
Tea Tree	Melaleuca alternifolia	$\checkmark$		$\checkmark$			MA10
Tea Tree - USDA Organic	Melaleuca alternifolia		1	$\checkmark$			MA(USDAOrg)10
CARRIER OILS							
Macadamia Oil	Macadamia integrifolia	$\checkmark$		$\checkmark$			
Sandalwood Seed Oil (Bio-Active)	Santalum spicatum		1	$\checkmark$	SSC1		
HYDROSOLS (FLOWER WATERS)							
Tea Tree	Melaleuca alternifolia	<u> </u>		1			MAHYD10
Tea Tree - USDA Organic	Melaleuca alternifolia	, ,	1	1			MAHYD(USDOrg)10
Lemon Scented Tea Tree (Citratum)	Leptospermum petersonii	5	·	1			LPHYD10
Lavender, Australian	Lavandula angustifolia	1		1			LAHYD10
Lemon Myrtle	Backhousia citriodora	1		1			BCHYD10
Fragonia®	Agonis fragrans	$\checkmark$		1			AFHYD10
Sandalwood, Australian	Santalum spicatum	-		1			SSHYD10
OTHER NATIVE INGREDIENTS							
Sandalwood Seed Grit	Santalum spicatum	1		$\checkmark$	SSFG1	SSFG5	SSFG10
Kakadu Plum (Powder)	Terminalia ferdinandiana	$\checkmark$	1	1	TF1		TF10
Tea Tree Leaf (Coarse)	Melaleuca alternifolia	$\checkmark$		$\checkmark$		MALC2.5 (2.5 kg)	MALC10
Mountain Pepper Oil (Concrete)	Tasmannia lanceolate	$\checkmark$		$\checkmark$	TL1	. 57	TL10
							-

20 KG (44LB)	180 - 200 KG	BULK (TON+)
SA20	SA180	
PM20	PM180	
EM20	EM180	
CI20	CI180	
CC20	CC180	
CCW20	CCW180	
EuR20	EuR180	
EuR(USDAOrg)20	EuR(USDAOrg)180	
EuP20	EuP180	
EuP(USDAOrg)20	EuP(USDAOrg)180	
EuC20	EuC180	
EuSt20	EuSt180	
EuSm20	EuSm180	
EuD20	EuD180	
EuO20	EuO180	
AF20	AF180	
MT20	MT180	
KA20	KA180	
LA20	LA180	
BC20	BC180	
LS20	LS180	
MQC20	MQC180	
MQ20	MQ180	
SS20	SS180	
SS(USDAOrg)20	SS(USDAOrg)180	
SSPG20	SSPG180	
SALP20	SALP180	
ME20	ME180	
LP20	LP180	
LSSG20	LSSG180	
LSPG20	LSPG180	144000
MA20	MA185	MA900
MA(USDAOrg)20	MA(USDAOrg)185	MA(USDAOrg)900
	1.11.0000	
CC C 2 2	MIC200	MIC1000
SSC20	SSC200	SSC1000
MAHYD20	MAHYD200	MAHYD1000
MAHYD(USDOrg)20	MAHYD(USDOrg)200	MAHYD(USDAOrg)1000
LPHYD20	LPHYD200	LPHYD1000
LAHYD20	LAHYD200	LAHYD1000
BCHYD20	BCHYD200	BCHYD1000
AFHYD20	AFHYD200	AFHYD1000
SSHYD20	SSHYD200	SSHYD1000
CCEC 00	6656000	
SSFG20	SSFG200	
TF20		
MALC20		
TL20		

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