



Tea Tree

For many of us in the flavour and fragrance industry little may be known about Tea Tree Oil as it is not produced for its odour profile or flavour characteristics but it is likely you have seen it contained in many personal care, therapeutic and household products.

It has an interesting story, yet in historical terms it is a fairly modern essential oil with many perceived benefits. In its native Australia almost no household would be without some Pure Australian Tea Tree with today's younger generations being familiar with it around the home.

So what's the story and what are these so called benefits? Let's discover.....

The Story

There are legendary stories available that would suggest the tea tree plant (*Melaleuca alternifolia*) was somehow born from the Gods of the earth by rewarding a young Princess for her bravery but more to the truth the product was discovered by the aboriginals in Australia. Indigenous aboriginals used the tea tree plant as a traditional medicine in a number of ways for treating many skin irritations and cold and flu symptoms. One of the traditional growing areas in Eastern Australia is called Bundjalung, which translates to 'healing ground'. It is thought that Captain James Cook himself named the product 'Tea Tree' after observing the people of Bundjalung using the leaves to prepare a healing tea.

During World War II every Australian soldier's kit included tea tree oil, which could be one of the reasons why others around the world first started to learn of its medicinal benefits. As natural products became more glamourized in the 1960s and 1970s people started to take more notice of tea tree and small-scale production first began. However, it was not until the late 1970s and early 80s when the first commercial plantations began. Over the past two decades many more plantations have been established and today Australia is the largest producer of tea tree, with recent figures calculated to be around 500MT per annum.

Benefits

As mentioned, the aboriginals discovered many home remedies using the leaves by boiling tea or by rubbing the leaves onto skin irritations, but since the distillation of leaves into oil the applications and benefits keep on growing. This is why today every Australian household never runs out of their favourite native essential oil. Here are some of the common and more unusual uses (please do not use neat, ingest and always seek advice and recipes if using at home!):

Treatment of fungal infections

Treatment of dandruff and head lice

Treatment of herpes (cold sores)

Treatment against symptoms of influenza

Treatment against symptoms of gingivitis

Treatment against psoriasis and acne

Household – Freshing laundry, shoes, fights mould, insect repellent, carpet cleaner, all-purpose cleaner

To heal skin infections and reduce the itchiness from skin rashes

Acts as an antiseptic for small cuts

One of the most important recent discoveries has been the research into how tea tree can protect against MRSA (the hospital superbug - methicillin-resistant staphylococcus aureus). Tea tree is not the only essential oil to hold such benefits. Clinical studies using tea tree and manuka oil (sometimes known as New Zealand tea tree - *Leptospermum scoparium*) have also resulted in successful new hospital grade products being introduced in recent years.

So now you are asking yourself why you do not have a small bottle in your home! You can now see that with such properties why it is not only good to have at home, but also why it is found in so many high street and pharmaceutical products.

What makes it so good?

Now the technical bit! Pure tea tree is measured by the ISO standard 4730, where 15 common peaks are identified. The main component is terpinen-4-ol, which is responsible for the antimicrobial and anti-inflammatory properties. However on its own it does not have the same benefit. It is thought that the smaller components in combination contribute to making the oil more antiviral, not the individual components themselves. Also one component to note is the 1,8-cineole. This is a potential irritant and many end users try to buy lower cineole content material – usually less than 4%.

The problem recently is that the ISO standard does not mean pure oil as the specification only looks for components that should be there and not components that should not be there. This has led to some adulteration mainly from so-called 'Chinese Tea Tree' and only a chiral test on the terpinen-4-ol can determine this purity. It is currently being challenged to add this to the ISO standard to ensure consumers are protected from less effective tea tree oil in the market.

Growing Tea Tree

From seed to harvest usually takes around 12-15 months and trees will grow to around 2 metres high. The tree is then cut from just above the ground and the leaves are steam distilled in a process that takes around 1.5-2.0 hours per batch of around 250 kilos. Tea tree will regenerate quickly and over the next 2-3 years will yield higher levels of oil each year and establish a stronger root network ensuring it becomes more resilient to adverse weather conditions. Some more mature trees can yield higher levels of 1,8-cineole, which is undesirable so re-planting can occur every 6-7 years. Having said that, more developed seeds planted over the past 12-15 years do not have this negative side effect.

Australian Quality

Tea tree grows in both New South Wales and Northern Queensland, almost entirely in modern day plantations. Some wild harvesting still occurs but this only contributes a small amount of the 500MT that Australia produces annually.

The industry is well regulated and as the original producer of tea tree, Australia standards are highly regarded as the best quality. The harvest period starts in May and lasts until October.

Sustainable (5★ very sustainable) ★★★★★

Price / Value (5★ good value) ★★★★★

Good time to buy (5★ buy now) ★★★★★

Chinese Quality

China is relatively new to producing tea tree and early entries into the global market were riddled with adulterations. However, more established and better organised plantations are now in effect making it a more viable option than in the past. Having said that, it is widely thought that even today the large percentage of tea tree supplied by China is not 100% pure material, hence the market pushing for changes to the ISO standards to eliminate this uncertainty.

Sustainable (5★ very sustainable) ★★★

Price / Value (5★ good value) ★★

Good time to buy (5★ buy now) ★★★