

Oilily

SPRING EDITION 2009

alluring Aussie outback
surprises with an
irresistible skincare trend

how to plan and
execute trouble-free
product development

deserts & rainforests, home
to a dynamic new industry

sydney *e*ssential oil co.

THIS ISSUE

spring

SPRING EDITION 2009

IN THIS ISSUE, we found ourselves projecting some heart felt patriotism. Not your usual type of patriotism that is often accompanied by reflections of our country's history. Instead, it's a patriotism that is looking ahead to the future. This time we showcase some truly remarkable Australian Native plants that are creating a buzz and have found their way to the forefront of a growing trend within the natural cosmetics industry. Wattleseed, Kakadu Plum, Desert Limes, to name a few, are not only desirable for their delicious aromas, but also their high levels of anti-oxidants and regenerative properties. In many cases, the exciting developments are emerging from Australian-based SMEs (Small to Medium Enterprises). By nature, SMEs are inquisitive and innovative, and have been swift to market with great products that are causing the Australian Native story to be embraced around the country and internationally. If Australian Natives are new to you, we invite to read on, or contact us at any time for more information.

Eliza McGivern, Editor

sydney **e**ssential oil co.



Spring cover:

Eucalyptus. Around 20 of the 700 known species are cultivated for essential oil production. Following are the key constituents of popular varieties.

Eucalyptus citriodora

Lemon scented gum:
Citronellal, citronellol.

Eucalyptus dives

Peppermint gum:
Piperitone,
 α -phellandrene.

Eucalyptus globulus

Blue gum: 1,8-cineole,
 α -pinene, limonene,
p-cymene. ***Eucalyptus***

polybractea

Blue mallee: 1,8-cineole,
limonene, p-cymene.

Eucalyptus radiata

Australiana: 1,8-cineole,
 α -pinene, limonene,
p-cymene. ***Eucalyptus***

smithii

Gully gum:
1,8-cineole, α -pinene,
limonene.

Visit www.seoc.com.au
for more information.

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Featuring Australian Native ingredients.

Bush skincare

The wild and wonderful world of Australian Wattleseed.

BRIGHT YELLOW FLOWERS and waxy green foliage contrast against the vibrant blue sky and rusty red earth of outback Australia. Wattle is a celebrated native plant whose history with the land and its people reaches back thousands of years. There are over 950 different Acacia species on record and it is recognised the world over as the Australian national floral emblem.

Acacia victoriae, also known as Gundabluey or Prickly Wattle, is becoming even more popular due to its increasing recognition as a valuable commodity within the natural cosmetic industry. As trends move towards exciting and unique ingredients, the demand for wattleseed grows both domestically and internationally.

Tough & Durable

Grown throughout the vast desert regions of Australia, the *Acacia victoriae* is a true arid zone plant that has an exceptional capacity to withstand tough conditions. Its unique ability to convert atmospheric nitrogen into its own fertilizer helps it thrive in an environment where many other types of vegetation would fail. Being drought resistant and able to endure varying degrees of salinity means that the government research department, CSIRO, is now recognising the potential contribution the Acacia could make in solving the many dry land soil problems.

Acacias seed prolifically every few seasons and seeds that drop can remain viable for over 150 years, due to their very hard husks. Many only germinate after bushfires. Trees grow to around 7 metres tall and can begin producing seed after just 3 years, increasing to significant harvest volumes of over 1kg after 8-10 years. Their lifespan is between 15-25 years. >



***Acacia victoriae* (Australian Wattleseed):** Fragrant ball-shaped pale yellow flowers bloom in late Spring to Summer, followed by paper thin pods that house half a dozen or more precious seeds. Seed harvesting begins when the seed are fully dry.

HARVEST

Traditional Wild Harvest

Traditional Aboriginal harvesting methods were undertaken by the women. Harvesting involved beating and shaking the tree branches with sticks to dislodge the round seeds from the dry papery oblong shaped pods. Once dislodged, the seeds were collected in bark dishes, known as coolamons. When the coolamons were full, hot coals would be added to dry and roast the seeds. The roasted seeds would then be yandyed (shaken & separated) and winnowed to clean off any debris in preparation for milling. Milling involved crushing the seeds by hand between grinding stones. This would produce wattleseed flour which was subsequently used to make a paste and baked in seed cakes similar to damper... traditional bush tucker!

Besides being bush tucker, various *Acacia* species were also used for their plant gum. This was applied to the skin to relieve a variety of conditions, such as itches and insect bites and due to its strong anti-inflammatory properties the gum was also rubbed into joints to ease aches and pains.

Modern Wild Harvest

Today, modern annual harvesting of *Acacia victoriae* takes place over a two month period starting in December when the temperature is warm and there is adequate rainfall. Even though some is cultivated in commercial plots, most wattleseed is wild harvested within its natural habitat.

Sydney Essential Oil Co's supply partner works with a number of remote Aboriginal communities in Central Northern Territory, on the edge of the Tanami Desert as well as with farmers throughout South Australia.

The Northern Territory harvesters are able to earn an income whilst drawing on generations of ancestral experience and their unique relationship and knowledge of the species. Harvesting is coordinated by a local business owner by way of a blackboard system that indicates what is being harvested and when. Both individuals and family groups will "go bush" for one, two or three days at a time and collect their harvest. >



Clockwise from top: *Acacia victoriae* is a well adapted desert plant with the ability to produce its own fertiliser from nitrogen in the air. This provides the plant with regular nourishment even in the toughest environmental conditions. Traditionally the seeds were cleaned by being yandyed in a coolamon. The gentle rocking motion of the bark dish would separate the seed from any debris ready for it to be milled. Pods are long, thin and papery dry. The seeds fall to the ground when the branches are rattled and shaken. The roasted wattleseeds are used in innovative restaurant menus and in natural cosmetics formulations!

Images reproduced with kind permissions of the Institute for Aboriginal Development.



HARVEST

Large cloths or tarpaulins are spread at the base of the tree in order to catch the fallen plant matter as it is dislodged with the shaking and rattling technique. Experimentation with other harvesting methods, such as a simple vacuum harvesters, have had some success. But as the technology is not purpose-designed, nothing yet surpasses the traditional manual system, and the rattle and shake method is still preferred. All that falls is then accumulated and stored for cleaning. Back at the warehouse, the harvest is spread over large vibrating tables that sieve the seeds clean before they are dried and toasted in modified coffee roasters.

The South Australian harvesters use very similar methods. Some farmers use pneumatic shakers to give the tree a solid hit rather than using the stick method, but overall the ease of the bountiful harvest is the same. The majority of the current wattleseed supply is harvested by Indigenous communities but with demand increasing commercial growers are also utilised in South Australia to increase availability.

More than Bushfood

Wattleseed and other Australian natives have developed a recent trading history as niche products within the food industry. Bushfoods, as they are known, are being embraced in global trends for their ability to impart unique flavours only found in traditional Australian flora. In particular, the coffee-hazelnut-like taste of wattleseed compliments other ingredients in breads and cakes, as well as being a sensational addition to a dessert or even a hot beverage.

Scientific testing and analysis is also ongoing to broaden our understanding of the tannins and other compounds found in the Acacia species, with the hope that they will offer future remedies for some modern day diseases.

Research within the natural cosmetic industry has also seen wattleseed become a sort after ingredient, due to its potent properties and aromatic appeal. Sydney Essential Oil Co. offers two wattleseed products, Ground Wattleseed and Wattleseed Extract.

We invite you to discover the magic and charm of our Australian Native range of exfoliants and extracts. 🌿



Food for the Skin: Ground Wattleseed is a superb exfoliant for both the body and the face. It provides a gentle scrub action whilst naturally colouring and scenting the product. **Wattleseed Extract** cleanses and refines pores, benefiting most skin types. The extract contains compounds that enable greater absorption of anti-oxidants and other bio-actives present in wattleseed and this helps produce anti-ageing properties. The high level of protein amino acids offers nourishment for sensitive or damaged skin. Plus, it also encourages a youthful looking appearance, so it is the perfect addition to a formulation for mature skin.

Stability & challenge testing
Happy, healthy
cosmetic

your way to...

products

Your company's reputation, consumer confidence and the possibility of wasting valuable marketing dollars are just a few good reasons to test your product's shelf-life and stability before launching it to the marketplace.

Simply adding a preservative to your product is not sufficient to determine if it is working effectively in your specific formulation. >

Fully tested: Creams, lotions and body butter bases offer great peace of mind as the foundation of your range. Available in 1L, 5L, 20L and bulk.

The choice and proportion of preservative to the water content and other active ingredients is important to get right. Plus other factors such as pH levels and exposure to heat can render a preservative ineffective if manufacturing methodology is not compatible. The bottom line is, if the preservative is ineffective the product will spoil and run the risk of causing skin irritations or other health problems if used by the consumer.

Further to this, the consumer, your customer, trusts your product label. So if your label claims your product will be good for a shelf life of 2 years, you must be sure the product will remain unchanged when stored under the conditions of the market in which it is sold, for that period.

What can you do to have trouble-free products?

There are a variety of tests that can be performed by laboratories and by the manufacturer to answer this question and to help you to plan and execute trouble-free product launches.

Undertaking *Challenge testing* will assess the efficacy of the *preserving* system and determine microbial stability in your product. Microbial contaminants can originate either during manufacture and filling or from the time the product is first opened and during use by the customer. Microbial contamination can lead to product spoilage or reduce the intended quality of the product. The main areas of concern for potential irritations are the eye zone, damaged skin or in children under 3 years. Challenge testing will contribute to determining the safety of the product for use by the customer.

Stability testing enables you to estimate *shelf-life* of your product by simulating what will happen during its life cycle in order to predict its stability once in the marketplace. Tests on each new

product may be conducted in real time or under accelerated conditions. Elements that are assessed include the physical integrity of the product under various storage conditions, transportation and use, chemical stability, microbiological quality and compatibility between the product and its packaging.

The testing process

To be valid, all tests should be in the intended final packaging and also in glass jars as a control sample. This will enable you to isolate either the product formulation or the packaging as the cause if a batch fails.

Challenge testing involves the controlled contamination of the product with a selection of known potential pathogens and possibly other micro-organisms (bacteria and fungi). The product's reactions to these organisms is monitored at selected intervals and levels of growth measured to ensure they fall below accepted limits. These tests will demonstrate the preservative's ability to protect the product from microbial growth.

Stability testing programs and procedures are typically designed by each manufacturer and adapted to their specific activities and with relevance to the number of products they develop each year. Tests are designed to determine the vulnerability of a product during shipping, storage, display and utilisation by the end-user.

Product characteristics that can be monitored include; pH, viscosity, texture, colour, odour and flow. Assessments of these characteristics can be made after several weeks or months, rather than waiting years, by using accelerated testing methods. This approach is advantageous as it enables shorter lead times to launch a new product to market.

Product samples are subjected to a variety of temperatures. >

Temperatures are elevated as well as lowered to replicate seasonal changes as well as climate zone variations. Some standard temperatures that are used are 45°C, 37°C, 25°C, 4°C and -17°C (freezing). Test evaluations take place at predetermined intervals such as 2 weeks, 4 weeks, 8, 12 and 52 weeks. At the 8 week point most formulations can be regarded as stable or not, however longer testing timeframes will enable extended shelf life claims.

Products and their packaging can also be susceptible to UV damage. This could result in colour changes and/or deterioration of key ingredients. Therefore samples are also subjected to different lighting conditions such as fluorescent and natural light boxes.

And, of course we need to move the product from one location to another. So, to simulate shipping conditions, centrifuge or vibration testing can be carried out. This will determine if an emulsion will hold together and if suspended ingredients will remain suspended.

In conclusion

Well designed formulations, good manufacturing practices and appropriate preserving systems are the first steps. Follow this with thorough, diligent challenge and stability testing systems and you will have peace of mind that your product is safe in the hands of the consumer, your marketing expenses will not be wasted and your brand reputation will go untarnished. ✨

Your Spring skin care regime: Is all about letting the natural beauty of your skin shine through. Winter's thick creams should be replaced with lighter formulas that will allow your skin to glow with natural radiance. Follow the 3 basic steps to healthy, happy skin. **Cleanse** to clean away dirt and grime. **Exfoliate** to brighten and bring out a luminous glow. **Moisturise** to leave your skin feeling soft, hydrated and velvety.



The dynamic rural sector of Australian Native Plants

Government support is helping build the profile of these native floras.

THE RURAL INDUSTRIES Research and Development Corporation (RIRDC) is part way into a 5 year plan to invest substantial R&D into building new profitable and sustainable plant industries within Australia. With a strong focus on native flora, the plan consists of wild harvest and cultivation projects throughout many regions of the country. Wattleseed and Bush tomato in the central arid regions, Kakadu plum in the north, Mountain pepper in Tasmania and fruits such as Davidson plum and Lemon aspen cultivated in north eastern Australian rainforests, are key wild harvest crops.

The objectives of the RIRDC plans are to:

- Develop consumer awareness of these unique ingredients and boost domestic and international demand for new plant products from Australia.
- Attain a worldwide reputation for consistency of quality and supply.
- Draw on growers' collective experience to find solutions for any problems that impede production reliability.
- Acknowledge and appreciate the contributions of Indigenous culture and its significant association with the industry. >

Quandong (*Santalum acuminatum*): Is also known as wild peach, desert peach, bidjigal or gudi gudi. This small evergreen Australian Native shrub produces small round fruits (approx. 15mm) with large pitted kernels. In the Springtime, the fruits turn from green to shades of vibrant red, yellow and pink.



UP CLOSE

Many species are clearly recognised as high opportunity. Noted are Davidson plum with a high anti-oxidant content, the versatility of Riberry (Lilli Pilli), the positive name recognition of Kakadu plum, Desert lime's extended shelf life and the great saleability of Quandong, to name a few.

The RIRDC's objectives align well with the Federal Government's National Research Priorities which are to build an environmentally sustainable Australia, promote and maintain good health, obtain new technologies for developing and transforming Australian industries and finally safeguarding Australia. By supporting the native plant industry, the RIRDC will make significant contributions to each of these priorities.

Diversity of species and geographical regions within the industry offers excellent opportunities for many commercial uses, whilst also encouraging the protection and expansion of native flora. It is also recognised that Australian native plants offer alternatives for agricultural land use in a time when climate change is a major environmental issue.

Wild harvesting is the leading production technique and is carried out by a significant number of members within the Aboriginal community. The environmentally friendly techniques used in wild harvest have allowed it to maintain preference over modern conventional methods. But there is some need for production by the mainstream agricultural community and cultivation will continue to expand to relieve the pressure applied by supply demands.

An analysis of strengths, weaknesses, opportunities and threats was undertaken by the RIRDC and many species are clearly recognised as high opportunity. Noted are Davidson plum with a high anti-oxidant content, the versatility of Riberry (Lilli Pilli), the

positive name recognition of Kakadu plum, Desert lime's extended shelf life and the great saleability of Quandong, to name a few.

Some of the main strengths of the wild harvest native plant industry are:

- Pesticide free practices offering green solutions.
- Strong recognition of products as natural and healthy.
- Industry members keenly engaged with research & development.
- Extensive range of products across multiple industries can be produced from Australian natives.

Projects undertaken by the RIRDC involve registering Australian natives on international reference lists such as CODEX. It is anticipated that this will lead to greater global recognition of products and assist in developing market awareness.

To improve production efficiencies there is encouragement for growers to share best management practices for individual crops. Collective knowledge can offer solutions to common problems that an individual grower might not have the ability to overcome alone.

New and unique species are continually being investigated for their potential appeal and profitability. Whilst the focus is on consolidating the existing crops, additional varieties are enthusiastically ready to be identified. ❀

Sources:

Rural Industries Research and Development Corporation <http://www.ridc.gov.au>
RIRDC Native Foods R&D Plan 2007-2012
<https://ridc.infoservices.com.au/downloads/08-022.pdf>
Australian Native Food Industry Limited <http://anfil.org.au>

EVENTS

NOVEMBER 11-13, 2009

COSMOPROF ASIA HONG KONG

HONG KONG CONVENTION & EXHIBITION CENTRE

Cosmoprof-Asia is regarded as the leading trade event in Asia for suppliers and buyers within the beauty, spa and health industries.

This year's expo will present around 1,350 exhibitors from 40 countries and regions, and will attract 40,000 visitors from over 100 countries.

Running concurrently to the exhibition, there is a tailored program of high-end educational opportunities presented by industry experts.

Products and services on show include;

- Perfumery, Cosmetics and Toiletries marketed through the Retail Distribution: Specialty Stores, Chain Stores, Department Stores, Gift Stores and Pharmacies
- Natural Health Products, Health Food & Beverages, Dietary Supplements, Asian Traditional Medicine and Therapies
- Packaging, Contract Manufacturing & Private Labels (OEM / ODM), Machinery and Raw Materials
- Beauty Salon Products and Equipment, Spa & Wellness Products and Nail Products
- Hair Products, Equipment and Salon Furnishings

Cosmoprof is a trade-only event.

To enjoy FREE & quick admission, please pre-register on-line by 2 October 2009.

www.cosmoprof-asia.com



Visit Sydney Essential Oil Co. in Hall 5, Booth 5E-C1A

The appeal of Australia's "Clean & Green": In 2008, Hong Kong's total imports of cosmetics and toiletries were valued at A\$1.76 billion, and this figure is expected to reach A\$1.9b in 2013. Certified organic products are in strong demand, as are those with unique selling points, eg. the use of Australian native plants.
Source: www.austrade.gov.au



PRODUCT SPECIFICATION

Product

Botanical Name:

Type:

Appearance:

Plant part used:

Odour:

Wattleseed Extract

Acacia victoriae

Australian Native

Medium density, amber to brown liquid

Seed

Slight, characteristic

Physio-chemical Properties

Specific Gravity at 20°C: 1.10 – 1.30

Refractive Index at 20°C: 1.35 – 1.55

Solubility in water (5g/100 ml): Soluble

pH @20°C (at time of testing): 4.5 – 6.5

Microbiological Data

Total Plate Count: > 100 UFC/g

Total Fungi Count: > 10 UFC/g

Pathogenous Micro-organisms: Absent

Ingredients

Glycerine (glycerol), Water (Aqua), Wattleseed (Acacia victoriae),
Propylene Glycol (and) Diazolidinyl Urea (and) Iodopropynyl Butylcarbamate

Other Information

Packaging: as required

For more information, contact Sydney Essential Oil Co. +61 2 9565 2828.

Wattleseed Body Scrub

Performance: exfoliating scrub designed to remove dead skin cells and enliven the skin.

Appearance: coffee colour cream, with evenly distributed dark brown granules.

Aroma: rich vanilla hazelnut scent with sweet lemony overtones

Stability: expected shelf life 12 months subject to manufacturing practice

Recommended uses: weekly exfoliating scrub for body, arms, legs, hands or feet.

Phase	Raw Material	% w/w
A	Purified or Distilled Water	73.65
	Potassium Sorbate	0.05
B	Emulsifying Wax	6
	Almond Sweet oil	5
	Macadamia oil	3
	Sunflower oil	2
C	Vitamin E – natural	1
	Vanilla oleoresin	0.8
	Lemon myrtle essential oil	0.5
	Orange sweet essential oil	0.5
	May chang essential oil	0.2
D	Wattleseed extract	2
	Liquid Germall® Plus (registered trademark of ISP)	0.8
E	Wattleseed ground	4.5
		100% w/w

Method of Manufacture

1. Combine ingredients in Phase A and heat to 70°C maximum.
2. Combine ingredients in Phase B and heat to 70°C maximum.
3. Add Phase A to Phase B and emulsify for 5 minutes.
4. When emulsion has cooled to 35°C, add Phase C and emulsify for 1-3 minutes.
5. Add all ingredients from Phase D while stirring constantly. Emulsify for 1-3 minutes.
6. Add Phase E and mix well until evenly dispersed.

For ingredients, contact Sydney Essential Oil Co. +61 2 9565 2828.

Disclaimer Product formulations are included as illustrative examples only. Whilst all care has been taken in presenting example formulations, Sydney Essential Oil Co. accepts no responsibility concerning any product manufactured using such formulations. The responsibility for the performance for marketing claim and adequate testing for stability of any product prior to sale lies with the manufacturer thereof.

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