Campo Research
Malay Herbs Extract

novel functional ingredients for multi-purpose formulations

CAMPO RESEARCH PTE LTD
Level 30, 6 Battery Road, Singapore 049909
Tel: (65) 63833203 / 202 / 63833631 Direct Fax (65) 63833632 / 63834034
Email: sales@campo-research.com Website: http///www.campo-research.com

CAMPO® Multi-Purpose Cosmetic Base Chemicals & Active Ingredients
CAMPO® Novel Functional Active Cosmetic Ingredient & Raw Materials

INDEX

Malay Herbs extracts

IMPORTANT NOTICE

Specifications may change without prior notice. Information contained in this technical literature is believed to be accurate and is offered in good faith for the benefit of the customer. The company, however, cannot assume any liability or risk involved in the use of its natural products or their derivatives, since the conditions of use are beyond our control. Statements concerning the possible use are not intended as recommendations to use our products in the infringement of any patent. We make no warranty of any kind; expressed or implied, other than that the material conforms to the applicable standard specifications.

Ask about our Herbal Natural Products Chemistry Consultancy Services – Product Registration EEC/UK New Drug Development (NDA-US); Quasi-Drug Topicals (MOHW_Japan); Development of Standards, Analysis & Profiles of Phytochemicals; Literature searches, Cultivation of Medicinal Plants, Clinical-Trials, Development of new uses for Phytochemicals and Extracts; Contract Research and Development Work in Natural Products for Novel Drugs, New Cosmetic Active Ingredients for Active Topica/OTC Cosmetic with functionality and Consumer-perceivable immediate-results, New Food Ingredients for Nutraceuticals & Functional Foods.

CAMPO MALAY HERB EXTRACTS

INTRODUCTION

PLANTS IN MEDICINE

Since the beginning of life, plants have played a major role in influencing man and. his thoughts. Similarly, man has influenced the forms and characteristics of plants in helping them adapt to man's progress. This is evident from the changes in vegetation and environment, as agriculture and technology, central to human civilization, continue to progress.

Let's go back a few thousand years and we will find that plants were widely used as food and medicine. Agriculture is believed to have flourished nearly 10,000 years ago, and there have been records on medicinal plants even in ancient times.

In 490 BC, Hippocrates, the 'Father of Medicine, established Temple of Aesculapius, a college in medicinal studies. Hippocrates learnt about medicinal herbs from the Egyptians and after his death, this knowledge was passed on to Aristotle.

Aristotle was a naturalist and tutor to Alexander the Great. With the army expeditions, he traveled far and wide. He collected various herbs and learned about them from captive doctors. One of his pupils, Theoprastus (372-278 BC) developed his works and produced two books called The History *of Plants* and *Reasons for* Plants. He studied over five hundred plants from the Mediterranean Valley and categorized them scientifically. He also discussed the medicinal value of those plants.

When the Romans power took ever over power from the Greeks, the focu in medicinal study naturally shifted to the West. During this time a doctor named Pedarius Disocorides wrote a book on De Materia Medica. It listed over six hundred medicinal herbs.

Cocsquently, the Arabian scientists began to learn, pre-serve and develop the field of medicine and botany. The Muslims, especeially, were highly intersted agriculture and medicine. Muthammad ibnu Zakariyya al Razi and Abu Ali ibnu sina were two great experts then. Ibnu Singa's famous blook on medicine. The Conon of Medicine is believed to be the most influential work in the history of medicine. It was, for many centruries, the most important reference material both in the East and the West.

Traditional Medicine in Malaysia

Every tribe and race has its own methods or ways of curing the affliction of diseases. It depends very much on the practice, belief and knowledge each one of this tribe or race possesses. Bedsides chants, various resources, especially plants and animals around them, based on their experiences and observations through the generations, they are able to identify the effectiveness of certain practices.

Before the advent of Islam in the Malay States, Malay traditional medicine was largely influenced by the beliefs and practices existing then. These were certainly included chants and the use of supernatural powers.

Traditional medicine has been used since time immemorial and until today, it remains a popular method of treatment. In the earlier centuries, the local community held traditional medicine in very high regard. This is obvious from the respect accorded by the community to the bomoh (medicine-man) revered and were completely entrusted with the task of dispensing medicinal care.

However, times have changed and the attention given to them now, is not the same as before. This is due to, not just progress of science and technology or modern mean treatment, but in part, to the weaknesses of the practitioners then, selves. Their inherited knowledge is undocumented and has, therefore, resulted in a decline of the knowledge, thus making it unrealizable. In Malay traditional medicine, know ledge of treatment methods and materia medica were imparted orally and committed to memory. In the case of specific skills, it was imparted to select pupils only buried with the dead knowledge was ultimately buried with the dead practitioner. There was, therefore, hardly any written material on traditional medicine. It has become a great necessity for such professional knowledge to be documented and passed on wholly to ensure its quality and its preservation.

Malaysia is rich in natural resources basic to traditional medicine. There are over six thousand species of tropical plants all over the country and in Peninsula Malaysia there are 550 genera containing 1,300 species. Most of these are medicinal plants good for the human body. We should not waste these resources by leaving them to grow wild only to be destroyed, without utilizing them on a larger commercial basis.

Traditional medicine is well known for its high nutritional value, as well as, its ability to cure various aliments. Unfortunately, thus far, it has not been presented to the community in a very impressive manner. Probably a more scientific and modern approach, combined with cautious and hygienic measures, may earn traditional medicine a more respectable place in the community, and not just as products to be peddled on the sidewalk. Traditional medicine is part of our national heritage and must be accorded its proper place. This is not an illusion or a dream as it has been realized in countries like Japan, Korea and China.

In Indonesia, traditional medicine has become a lucrative, commercial industry bringing in large profits to farmers and entrepreneurs. Chinese traditional medicine is now a modern and wll-developed field. So also with Indian traditional medicine.

In Japan, traditional medicine is highly recognized. Officially, there are now approximately two hundred and fifty **Kampo** traditional formulas, which have been approved as alternatives for public consumption. They are even registered with the National Health Plan. In Japan, this has been made possible with the cooperation of experts in science and technology. For example, a private enterprise, Tsumura Jutendo, utilizes the expertise of scientists from various fields, to develop traditional medicine using modern techniques. Tsumura Jutendo now has a plant complete with robots and state of the art machinery as well as sophisticated research laboratory. The staff are experienced and highly trained. This enterprise manufactures **Kampo** medicine of high quality in as easy to use extract form. Undeniably, much research and development has been carried out for it to attain such a remarkable stage. Herein lies the contribution from practitioners, educationists and

researchers in various institutions of higher learning and research centers. Traditional medicine in Japan is so systematic and scientific that it is even prescribed by medical doctors.

In Malaysia, the presence of Chinese traditional medicine is evident from the presence of medicinal shops commonly known as "kedai sinseh". In these shops are found various materia medica either imported or produced locally. Sinseh are trained in various aspects of Chinese traditional medicine. The philosophy, theory and practice of Chinese medicine, which originated from Mainland China, has spread to all over the world for many centuries. In Malaysia, there are about one thousand kedai sinseh and almost half are members are themselves graduates of the Chinese Medicine Training Institute located in Kuala Lumpur and Singapore.

Malaysia, as an agricultural-based country surely has the potential for-increasing its produce of medicinal and herbal plants. Even the World Health Organization (WHO) has proposed that by the year 2000, the world population should have learnt to adopt all forms of medicine, be they traditional or modern, to eliminate their health problems.

Link Between The Traditional and Modern Medicine

Traditional and modern medicines share a common resource. They both utilize plants, animals, microorganisms or minerals. These resources may be found either on land or in the sea. Both traditional and modern medicine originates from similar raw materials. These may be dried herbs or parts of animals, the extract of which is used in treatments. In traditional medicine, these ingredients are eaten directly, that is, in the raw form, whereas in modern medicine, the extract is reprocessed to obtain the active chemical compounds in concentrated form.

In 1973, an experiment conducted in the United States of America showed that of all the medicines prescribed, 41 percent contained natural resources. Of this, 25 percent were products of plants, 13 percent of micro-organisms (bacteria and fungus) and 7 percent of animals.

Malaysia, a developing country, is rich in natural resources. A big segment of the local community uses these natural products for medicine. This is also the practice in many other developing nations and this has motivated the World Health Organization (WHO) and United Nations Industrial Development Organization (UNIDO) to publish a few major lists as guides for developing nations to expand their traditional medicine industry. From these lists, we see that a big portion of the plants have long been in use by the Malay community in treating ailments. This demonstrates that there is a common element among various communities, in the use of plants.

THE MANUFACTURING OF NATURAL COMPOUNDS IN PLANTS

Plants manufacture food by the process called photosynthesis using sunlight, water and carbon dioxide. Because plants manufacture their own food, they have become the most important life form on earth.

Complex chemical processes take place unceasingly in plants. These processes are important for the sustenance, growth and multiplication of plants.

In the presence of light, plants absorb carbon dioxide from the air and manufacture foods in the form of carbohydrates. Consequently, other form of food is produced such as protein, fat and vitamins, which are much, needed by animals and human beings. Plants juse the nutrients produced through photosynthesis for growth. They are also stored as reserve food.

Besides that, plants also produce secondary compounds. Animals and human beings in a variety of ways, for example need these compounds, in medicine and food flavours. These compounds are also commonly found in poison form.

Secondary Compounds

Scientists are still puzzled as to why different types of plants produce different types of secondary compounds. Certain compounds are said to protect the plants and others assist in the dissemination of the species.

Secondary compounds are found in all parts of the plant. However, some of these compounds are found in specific plant parts only. For example, mitragyria alkaloids can be found in the leaves by not in the stem and roots. This is why traditional medicine places great emphasis on the different plant parts used in treatment. Secondary compounds are usually accumulated in the tree bark or in the oldest part of the plant. Some of the compounds are important in the manufacture of flavours, drugs, insecticides and herbicides. These compounds can be classified into several major classes such as alkaloids, flavonoids, terpenoids, quinones and coumarins.

Alkaloids

Alkaloids are secondary compounds with the greatest effect on biological activities, that is, they influence the physiological functions in human beings and animals. Alkaloids, found in many plants, are secondary compounds containing nitrogen and many well-known drugs are derived from this class of compounds. Examples of well-known uses of alkaloids are morphine, caffeine, quinine and dioscorin. Quinine and morphine are used as drugs while disocorin is used as fish poison.

Essential Oils

Essential oils are the most useful natural extract in not just medicine but also the perfume industry. It evaporates easily and is used widely in the preparation of embrocating and liniment. They contain hundreds of volatile compounds, some of which may have ant fungal, antibacterial and anti-inflammatory properties. Camphor is an extract commonly used in embrocating. Plants such as *serai, kantan, kesum, limau nipis, cengkih* and *kayu* mains contain significant levels of essential oils.

Other Classes of Compounds

Flavonids, terpenoids, equinones and coumarins are equally important sources for drugs. For example, most of the steroids presently available in the market are synthesized commercially from terpenoids of plant origin. Quinones are generally known for their antifungal and antibacterial activities. This class of compound is used in the treatment of diarrhea. Besides the coloured quinones, flavonoids is another group of coloured compounds important as a source of colouring pigment with astragal in from coleus blumei have been reported useful for the treatment of hypertension. Coumarins are another group of compounds well known for their phototoxic activity. Psolaren and bergapten are two furanocoumarin widely used as phototoxic compounds in suntan lotions. Hundreds of these pounds occur naturally in plants and many have phototoxic activity and are also useful for the treatment of posriasis. It can be concluded that many compounds of plant origin are important sources of drugs for the treatment of a majority of diseases. Plant is always the best natural source of drugs for the prevention and treatment of modern day ailments.

PLANTS IN TRADITIONAL MEDICINE

There are at least 250,000 species of flowering plants in the world and as many as 150,000 of them are found in the tropics. In South-East Asia alone, there are 35,000 species of which 8,000 are found in Malaysia. Till now, at least 654 species' have been reported as endemic to Malaysia. How're, 343 of these endemic species have been categorized as near-extinct, a results of man's eagerness to clear forests in pursuit of profit from mining industries, as well as in the name of modern development. In the tropics, a total 6,000 floral species have been reported to possess medicinal values. From this a total of 1,230 have been recorded in Malaysia as plants used in traditional medicine.

In Malay traditional medicine, various preparations and methods are used in preparing the medicine. These medicines are usually chanted over to ensure their potency. Roots are most commonly used in medicine. At times, certain taboos must be observed while gathering these ingredients. For example, certain plants must be collected only at night or a some other specific time of day.

Scientific studies have proven that several medicinal plats used in Malay traditional medicine indeed do contain organic compounds which produce therapeutic effects, in other words, possess medicinal values. Even so, there are some totally ineffective ones, too. Their use is merely based on beliefs or the morphological characteristics of the plant, which are usually associated with the ailment or with human nature.

Jamu and tonic are health preparations used in Malay traditional medicine. Akar Tongkat (Eurycoma logifolia) is one of the main ingredients used in preparing these mixtures. Water boiled with Tongkat Ali is believed to increase male virility. Tongkat Ali Kitam (Polyalthia bullata) and akar sedawai (Smilax myositiflora) are believed to produce the same effects as Eurycoma longifolia.

The Malay community's comprehension of aliments such as cancer, hypertension and diabetes has contributed much information about plants, which could be used in treatment of these diseases. Plants reported to be beneficial in treating diabetes are **hempedu bumi** (Adrographis paniculata), a mixture of buds from several types of lime (such **as limau lelang, limau pagarand limau Cina**) and **Kancing baju** (Corcorus capsularis). Medication for hypertension is obtained from **pokok hempedu bumi, misai kucing** (Orthosiphon grandiflorus) and **daun saga laut** (Abrus picatorius). Warning: the red seeds (like biji saga) from this tree are poisonous and could be fatal even if only one is eaten.

In treating cancer several plants are used, such as akar **susun kelapa** (Tabernamontana divaricata), **akar melur** (Jasminum sambac), **bunga raya putih** (Hibicus rosa-sinensis) and **ubi bembac** (Marantha arundinacea). Scientific research has proven that Tabenaemontana divaricata has anti-cancer properties.

Besides the mixtures mentioned, there are many more for during various ailments in Malay traditional medicine were reported by Burkill and Haniff (1930) in Malay Village Medicine, J.D.Gimlette and I.H.Burkill (1930) in the A.Samed Ahmad (1988). From the analysis of the data reported by Birkill (1966), we discover that most of the uses reported about 70-80 years ago have remained unchanged to this day. As mentioned before the biggest problem in recording data about medicinal plants is in the names for the same species, which vary from state to state.

Scientific research has contributed greatly to the truth about plants as a medicinal resource. In fact, 60 percent of the medicine in the market today is derived from plants. Even so, consumers must be cautious when treating ailments with plants because it is dangerous to overuse. In Malay traditional medicine, plants are used in specific measurements or dosages. Dosages used are called 'size of thumb', 'size of the little finger', 'span between the thumb and any finger', 'width of a waist, etc.

If we observe the species used in Malay traditional medicine today, we will find foreign species such as Hibiscus rosa-senensis, Annona muricata and Ruta graveolens. Early immigrants brought these species here from the East and West. This show that some of the plants used in Malay traditional medicine are elements assimilated from Chinese, Indian and even Western medicine.

CAMPO MALAY HERB EXTRACTS

Extracts of plants

The extraordinary properties of certain plants have been known for centuries. These plants are used in many different forms for the cure and alleviation of many diseases. One speaks of so-called <<folk remedies>>.

Up till a few years ago the positive effects of such plants could not be attributed to any clearly defined substances. As a result of the rapid developments in the field of plant research, many active ingredients have been isolated and investigated pharmacologically in the last few years. However, even today clear effects can be attributed to particular active substances in only a few cases. In most instances a whole spectrum of active ingredients is responsible for certain effects. As soon as natural composition of the active substances of a plant is changed through incorrect harvesting, storage or processing, a change in its effects is also to be expected.

Campo Malay herb extracts of plants are natural pharmaceutical, cosmetic and food supplemental raw materials which have been developed especially for use in these areas. The present monograph (as below-stated) covers Malay Medicinal Herbs as extract(s) of plants for the cosmetic products. Through an immaculate raw material supplies regime, complex extraction and decolourization processes extracts have been developed which ensure the highest possible concentration of active substances and consistent composition of the specific active ingredients.

During the manufacturing process unwanted constituents are eliminated; there is therefore no risk of precipitation and discolouration of the end product. Propylene glycol is used as the solvent for all the extracts. This solvent guarantees the dermatological safety and problem-free use of the extracts in practically all-cosmetic products.

Campo Malay herb extracts of plants are quality products and have to conform to high quality standards. Tests for pesticides and heavy metals, microbiological examination, identification by thin-layer chromatography and physical tests are among the standard investigations carried out. Only tested products of faultless quality are released for sale. They are also subject to out general conditions of delivery.

CAMPO MALAY HERB EXTRACTS

Recommendation for use

Invigoration and tightening of slack skin:	Kemangi Extract, Bidara Laut Extract, Pegaga Extract, Semangkuk Extract, Margosa Extract, Sadaturi Extract
Regeneration of tired, reddened skin:	Kemangi Extract, Semangkuk Extract, Margosa Extract, Sadaturi Extract, Pegaga Extract
Revitalization and strengthening of the skin:	Kemangi Extract, Merungai Extract, Mengkudu Extract, Jintan Hitam Extract, Pegaga Extract
Against greasy skin:	Jarak Cina Extract, Merungai Extract, Tebung aga Extract, Sadaturi Extract
Against dry skin:	Kemangi Extract, Bidara Laut Extract, Margosa Extract, Jintan Hitam Extract,Semangkuk Extract,
Against sunburn:	Kemangi Extract, Jarak Cina Extract, Margosa Extract, Sadaturi Extract,
Against dry, brittle hair:	Pokok inai Extract, Margosa Extract, Semangkuk Extract, Mengkudu Extract, Pegaga Extract
Against greasy hair:	Tebung aga Extract, Jarak Cina Extract, Merungai Extract, Semangkuk Extract, Jintan Hitam Extract,
Against dandruff:	Kemangi Extract Pegaga Extract
For normal hair:	Bidara Laut Extract, Kemangi Extract, Pokok inai Extract, Mengkudu Extract, Pegaga Extract
For soothing baths:	Pegaga Extract, Kemangi Extract
For stimulant baths:	Pegaga Extract, Kemangi Extract; Jintan Hitam Extract,

MALAY HERB EXTRACTS

CAMPO RESEARCH **PRODUCT#97.5547.9**

CAMPO MALAY HERB EXTRACTS FOR COSMETICS APPLICATIONS

PRODUCT TECHNICAL DATA SHEET

PRODUCT Name (CampoResearch)	CAMPO BIDARA LAUT HYDROGLYCOL EXTRACT Tongkat Ali, Bedara Pahit, Bedara putih, Lempedu pahit,
Other Trade Names(CampoResearch)	Bidara Laut
CTFA TRADE NAME (Proposed)	CAMPO BIDARA LAUT
Existing CTFA/INCI Name	Eurycoma longifolia Jack
CAMPO PRODUCT #	97.5547.9
CAS# EINECS# EINECS Name:	N/A N/A N/A
English name: Local name:	Tongkat Ali, Bedara Pahit, Bedara putih, Lempedu pahit, Bidara Laut.
Literature:	See Bibliography

Active substances:	Amino acids	Tightening
	Mucins	Hydration
	Minerals	Moisture regulating

Ethno botany:

Malay Medicine / Traditional applications:

The entire plant is boiled and the water used as a tonic. It is said to increase the male sexual drive. To treat headaches, wounds, scurf and syphilitic sores, pound the plant till fine and apply to the affected area.

Applications and dosage recommendations:

Campo Bidara Laut Extract is particularly suitable as a moisturing agent and moisture regulator and is recommended for all moisture creams, lotions and face-packs. Loose, stressed skin is tightened and looks young and fresh.

The recommended dosage is 5 to 15%, for special preparations up to 50%.

Applications code

SPECIES	Eurycoma longifolia Jack Syn: Eurycoma longifolia Jack
PARTS USED	The entire plant
RAW MATERIAL - ORIGIN	MALAYSIA
CONCENTRATION	1 kg extract = 5Kg Bidara Laut

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, Yellowish	Visual
Odour	Aromatic Characteristic	Oil Factory
Specific Gravity(20deg.C)	1.020 - 1.070	USP XXIX / Paar, DMA35
Refractive Index(20deg.C)	1.300 - 1.420	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	4.5 - 6.0	USP XXIX / DGF H III (92)
Carrier Menstrual (Vehicle)		
Water	50 - 80%	-
Propylene Glycol	35 - 45%	
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C , 2hrs)	1 - 15%	Mettler 16J
Preservation	Nil	-
Pesticides	<0.05 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 Cfu/ml - Non - Pathogenic	USP XXIX / Ph.Eur2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur2.6.12 (97)
Heavy Metals(Total)As,Pb,Hg	<1ppm	USP XXIX / Ph.Eur2.6.12 (97)

Comments:

External use only.

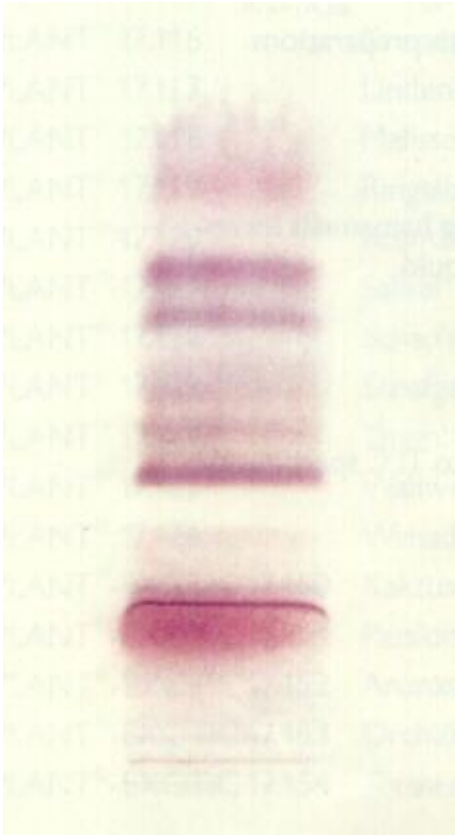
NOT FOR DRUG USE

Identification procedure:

30g **Campo Bidara Laut Extract** are extracted three times, each with 150 ml ethyl acetate pure. The combined organic phases are washed three times, each with 150 ml water, dried over sodium sulphate, filtered and evaporated to dryness under vacuum, on the Rotovapor. The residue is taken up in 4 ml methanol pure and filtered. The filtered solution is used for the TLC identification procedure.

TLC plate:	Merck silica gel 60 F 254 0.2 mm
Solvent:	toulene/ethyl formate/formic acid (50/40/10)
Amount applied:	150 µl/3 cm band
Length of run:	12 cm
Test substances:	none
Detection:	anisaldehyde / sulphuric acid reagent

0.5 ml anisaldehyde are mixed with 10ml acetic acid 100%, 85 ml methanol and 5 ml conc. Sulphuric acid, which are added in that order. After development the TLC plate is prayed with this solution and heated for 2 to 5 minutes at 100°C. The assessment is made in daylight.



MALAY HERB EXTRACTS

CAMPO RESEARCH **PRODUCT #97.5547.10**

CAMPO MALAY HERB EXTRACTS FOR COSMETICS APPLICATIONS

PRODUCT TECHNICAL DATA SHEET

PRODUCT Name (CampoResearch)	CAMPO JARAK CINA HYDROGLYCOL EXTRACT
Other Trade Names(CampoResearch)	Jarak kosta merah, Jarak landi, Jarak Cina
CTFA TRADE NAME (Proposed)	CAMPO JARAK CINA
Existing CTFA/INCI Name	Jatropha gossypifolia Linn
CAMPO PRODUCT #	97.5547.10
CAS#	N/A
EINECS#	N/A
EINECS Name:	N/A
English name:	
Local name:	Jarak kosta merah, Jarak landi, Jarak Cina.
Literature :	See Bibliography

Active substances:	Tanning agents	Astringent
	Flavonoids	Circulation stimulant
	Phytosterols	Relaxant

Ethno botany

Malay Medicine / Traditional applications:

The seeds and leaves are uesed to cleanse the stomach but it causes vomitting. It is no longer in use because of suspicions that it might cause stomach poisoning and gastroenteritis. The leaves are pounded and applied to engorged breatsts, boils and rashes.

Applications and dosage recommendations:

Campo Jarak Cina Extract shows very astringent properties and is recommended for reddened and very tired skin. Very good effects have also been observed in excessive sebaceous secretion and in large-pored skin. The product is recommended mainly for sun-protection and after-sun preparations.

The Dosages are 2 to 10% in creams and up to 20% in bath preparations.

Applications code:

SPECIES	Jatropha gossypifolia Linn Syn: Jatropha gossypifolia Linn
PARTS USED	Seeds and Leaves
RAW MATERIAL - ORIGIN	MALAYSIA
CONCENTRATION	1 kg extract = 25Kg Jarak Cina

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, light brown	Visual
Odour	Slight Characteristic	Oil Factory
Specific Gravity(20deg.C)	1.020-1.060	USP XXIX / Paar, DMA35
Refractive Index(20deg.C)	1.305-1.395	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	4.5 - 5.5	USP XXIX / DGF H III (92)
Carrier Menstrual (Vehicle)		
Water	55 - 90%	-
Propylene Glycol	30 - 40%	
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C , 2hrs)	1 - 15%	Mettler 16J
Preservation	Nil	-
Pesticides	<0.05 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 Cfu/ml – Non-Pathogenic	USP XXIX / Ph.Eur2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur2.6.12 (97)
Heavy Metals(Total)As,Pb,Hg	<1ppm	USP XXIX / Ph.Eur2.6.12 (97)

Comments:

External use only.

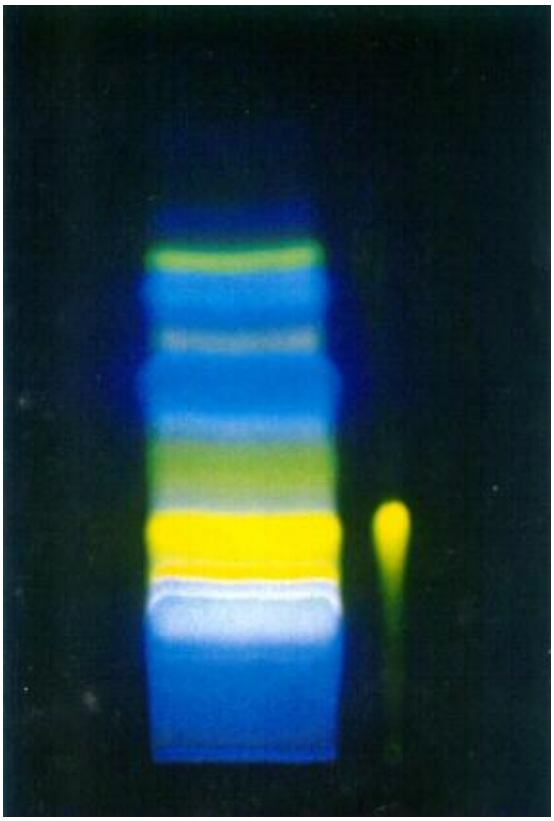
NOT FOR DRUG USE

Identification procedure:

30g **Campo Jarak Cina Extract** are extracted three times, each with 50 ml ethyl acetate pure. The combined organic phases are washed three times, each with 50 ml water, dried over sodium sulphate, filtered and evaporated to dryness under vacuum, on the Rotovapor. The residue is taken up in 4 ml methanol pure and filtered. The filtered solution is used for the TLC identification procedure.

TLC plate:	Merck silica gel 60 F 254 0.2 mm
Solvent:	ethyl formate/toulene/formic acid/methanol (60/20/10/10)
Amount applied:	120 μl/3 cm band
Length of run:	12 cm
Test substances:	quercitrin
Detection:	natural substance/polyethylene glycol reagent

After development is complete the plate is sprayed with a 1% methanolic natural-substance reagent-A solution (diphenyl-boric acid-β-ethylamino-ester) and then with a 5% ethanolic polyethylene glycol-4000 solution. The evaluation is made in UV 365 nm.



MALAY HERB EXTRACTS

CAMPO RESEARCH **PRODUCT# 97.5547.4**

CAMPO MALAY HERB EXTRACTS FOR COSMETICS APPLICATIONS

PRODUCT TECHNICAL DATA SHEET

PRODUCT Name (Campo Research)	CAMPO JINTAN HITAM HYDROGLYCOL EXTRACT
Other Trade Names(Campo Research)	Jintan hitam
CTFA TRADE NAME (Proposed)	CAMPO JINTAN HITAM
Existing CTFA/INCI Name	Nigella sativa Linn.
CAMPO PRODUCT #	97.5547.4
CAS#	N/A
EINECS#	N/A
EINECS Name:	N/A
English name:	
Local name:	Jintan hitam See Bibliography

Literature:

Active substances:	Iridic glycosides	Anti-inflammatory
	Tanning substances	Astringent
	Mineral salts	Moisture regulating

Ethno botany

Malay Medicine / Traditional applications:

Used after childbirth to prevent rheumatism, fever and to improve general well being. To check nausea and headache, drink water boiled with crushed seeds. For treating intestinal wounds, eat the seeds mixed with Alernanthera sessilis. It is also used as a hot compress to treat aching bones, nose injuries, headaches and testicular diseases.

Applications and dosage recommendations:

Campo Jintan Hitam Extract is recommended as a skin-care ingredient in face cosmetics - especially as a revitalizing agent. Theough the action of the astringent tanning substances large pores are contracted in a natural way and the skin restored to its original elasticity.

Dosage, depending on the product: 2 and 10%

Applications code:

SPECIES	Nigella sativa Linn. Syn: Nigella sativa Linn.
PARTS USED	Seeds
RAW MATERIAL - ORIGIN	MALAYSIA
CONCENTRATION	1 kg extract = 5 kg plant parts

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, brown	Visual
Odour	Pleasantly aromatic	Oil Factory
Specific Gravity(20deg.C)	1.020-1.060	USP XXIX / Paar, DMA35
Refractive Index(20deg.C)	1.300-1.395	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	4.5 - 6.0	USP XXIX / DGF H III (92)
Carrier Menstrual (Vehicle)		
Water	50 - 70%	-
Propylene Glycol	35 - 45%	
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C , 2hrs)	1 - 15%	Mettler 16J
Preservation	Nil	-
Pesticides	<0.05 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 Cfu/ml – Non-Pathogenic	USP XXIX / Ph.Eur2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur2.6.12 (97)
Heavy Metals(Total)As,Pb,Hg	<1ppm	USP XXIX / Ph.Eur2.6.12 (97)

Comments:

External use only.

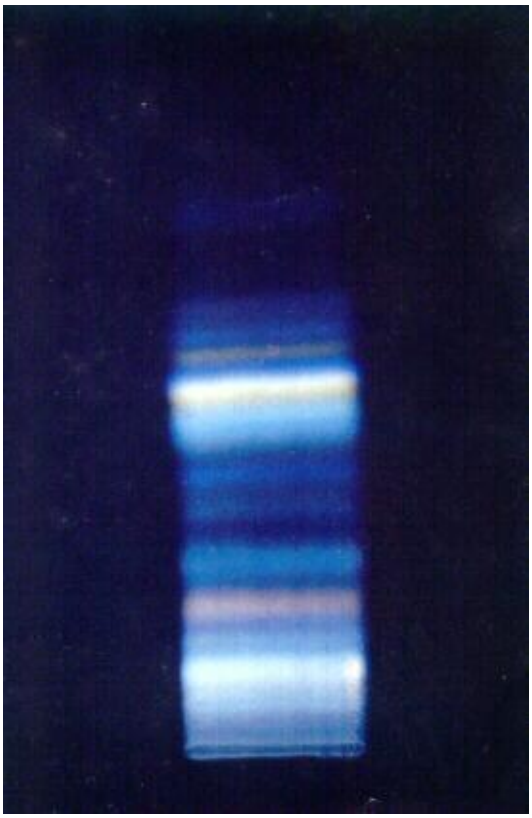
NOT FOR DRUG USE

Identification procedure:

30g **Campo Jintan Hitam Extract** are extracted three times, each with 50 ml ethyl acetate pure. The combined organic phases are washed three times, each with 50 ml water, dried over sodium sulphate, filtered and evaporated to dryness under vacuum, on the Rotovapor. The residue is taken up in 4 ml methanol pure and filtered. The filtered solution is used for the TLC identification procedure.

TLC plate:	Merck silic gel 60 F 254 0.2 mm
Solvent:	ethyl formate/toulene/formic acid/methanol (55/30/10/5)
Amount applied:	100 µl/3 cm band
Length of run:	12 cm
Test substances:	none
Detection:	natural substance/polyethylene glycol reagent

After development is complete the plate is sprayed with a 1% methanolic natural-substance reagent-Asolution (diphenyl-boric acid-β-ethylamino-ester) and then with a 5% ethanolic polyethylene glycol-4000 solution. The evaluation is made in UV 365 nm



Front

Start

MALAY HERB EXTRACTS

CAMPO RESEARCH **PRODUCT #97.5547.2**

CAMPO MALAY HERB EXTRACTS FOR COSMETICS APPLICATIONS

PRODUCT TECHNICAL DATA SHEET

PRODUCT Name (Campo Research)	CAMPO KEMANGI HYDROGLYCOL EXTRACT
Other Trade Names(CampoResearch)	Saelasih, selasih hitam, Selasih putih, Ruku-ruku hitam, Basil, Basilicum, Thulasi herb
CTFA TRADE NAME (Proposed)	CAMPO KEMANGI
Existing CTFA/INCI Name	Ocimum basilicum Linn.
CAMPO PRODUCT #	97.5547.2
CAS#	N/A
EINECS#	N/A
EINECS Name:	N/A
English name:	Basil, Basilicum, Thulasi herb
Local name:	Saelasih, selasih hitam, Selasih putih, Ruku-ruku hitam
Literature:	See Bibliography

Active substances:		
	Ocimuin and other anthraglycosides	Sun protection
	Mucins	Hydration
	Cinnamic acid derivatives	Solar UV A&B absorption

Ethno botany:

Malay Medicine / Traditional applications:

To treat a cough and to eliminate flatulence, drink water boils with the plant. The extract from the leaves it applied to ringworm infections and insect bites. It is also used for relieving tooth-aches. The drink is taken by women after childbirth and by those with irregular menstrual cycles. It is said to possess narcotic effects which help to ease itchiness in the throat. To help soothe the stomach and to stimulate bowel movement, soak the seeds in water till double in size and mix with a drink. The seeds which taken one a day is reported to relieve headaches.

Applications and dosage recommendations:

Campo Kemangi extract is used mainly in sun preparations such as creams, lotions and sun-tan milk, for application before or after sun-bathing. In these preparations the product acts as a UV-absorber and moisture regulator. Drying of the skin is prevented or at least slowed down.

Depending on the productive effect required, dosages of 2 and 10% are indicated.

Applications code

SPECIES	Ocimum basilicum Linn. Syn: Ocimum basilicum var.sanctum
PARTS USED	The seeds or the entire plant.
RAW MATERIAL - ORIGIN	MALAYSIA
CONCENTRATION	1 kg extract = 10 kg juice

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, Brown	Visual
Odour	Sweet characteristic	Oil Factory
Specific Gravity(20deg.C)	1.020-1.380	USP XXIX / Paar, DMA35
Refractive Index(20deg.C)	1.350-1.530	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	5.0 - 6.0	USP XXIX / DGF H III (92)
Carrier Menstrual (Vehicle)		
Water	40 - 80%	-
Propylene Glycol	40 - 80%	
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C , 2hrs)	1 - 15%	Mettler 16J
Preservation	Nil	-
Pesticides	<0.05 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 Cfu/ml – Non-Pathogenic	USP XXIX / Ph.Eur2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur2.6.12 (97)
Heavy Metals(Total)As,Pb,Hg	<1ppm	USP XXIX / Ph.Eur2.6.12 (97)

Comments:

External use only.

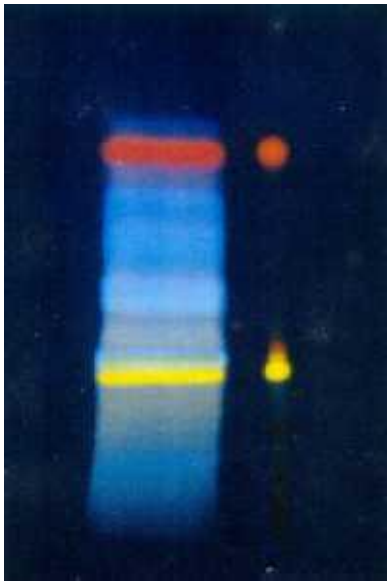
NOT FOR DRUG USE

Identification procedure:

30g **Campo Kemangi extract** are mixed with 30 ml water and extracted three times, each with 100 ml ethyl acetate pure. The combined organic phases are washed three times, each with 100 ml water, dried over sodium sulphate, filtered and evaporated to dryness under vacuum, on the Rotovapor. The residue is taken up in 10 ml methanol pure and filtered. The filtered solution is used for the TLC identification procedure.

TLC plate:	Merck silica gel 60 F 254 0.2 mm
Solvent:	ethyl acetate/methanol/ water (100 13.5/10)
Amount applied:	20 µl/3 cm band
Length of run:	12 cm
Test substances:	Ocimuin, basil-emodin
Detection:	potassium hydroside reagent

After development is complete the plate is sprayed with a 5% potassium hydroxide solution in ethanol and evaluated in UV 365 nm.



MALAY HERB EXTRACTS

CAMPO RESEARCH **PRODUCT# 97.5547.7**

CAMPO MALAY HERB EXTRACTS FOR COSMETICS APPLICATIONS

PRODUCT TECHNICAL DATA SHEET

PRODUCT Name (Campo Research)	CAMPO MARGOSA HYDROGLYCOL EXTRACT
Other Trade Names(CampoResearch)	Minid kecil, Margosa , Neem
CTFA TRADE NAME (Proposed)	CAMPO MARGOSA
Existing CTFA/INCI Name	Melia azedarach Linn.
CAMPO PRODUCT #	97.5547.7
CAS#	N/A
EINECS#	N/A
EINECS Name:	N/A
English name:	Neem
Local name:	Minid kecil, Margosa
Literature:	See Bibliography

Active substances		
	Mucins	Hydration
	Mineral salts	Moisture regulating
	Tanning agents	Astringent
	Phytosterols	Protective, care

Ethno botany

Malay Medicine / Traditional applications:

The oil from the fruit is used externally as an ointment. It is fatal when taken orally.

Applications and dosage recommendations:

Campo Margosa Extract is very suitable for the regeneration and relaxation of reddened and stressed skin. The water-uptake and -retention capacity of the skin is promoted and further supported by the slightly astringent effect of the tanning agents. The product is especially recommended for all sun preparations and moisture creams.

The Dosages (depending on the product) may very between 2 and 10%

Applications code

SPECIES	Melia azedarach Linn. Syn: Melia azedarach Linn.
PARTS USED	Leaves, Fruit, bark or Root
RAW MATERIAL - ORIGIN	MALAYSIA
CONCENTRATION	1 kg extract = 15Kg Margosa

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, light brown	Visual
Odour	Almost odourless	Oil Factory
Specific Gravity(20deg.C)	1.020-1.070	USP XXIX / Paar, DMA35
Refractive Index(20deg.C)	1.300-1.395	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	3.5 - 5.5	USP XXIX / DGF H III (92)
Carrier Menstrual (Vehicle)		
Water	50 - 80%	-
Propylene Glycol	35 - 45%	
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C , 2hrs)	1 - 15%	Mettler 16J
Preservation	Nil	-
Pesticides	<0.05 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 Cfu/ml – Non-Pathogenic	USP XXIX / Ph.Eur2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur2.6.12 (97)
Heavy Metals(Total)As,Pb,Hg	<1ppm	USP XXIX / Ph.Eur2.6.12 (97)

Comments:

External use only.

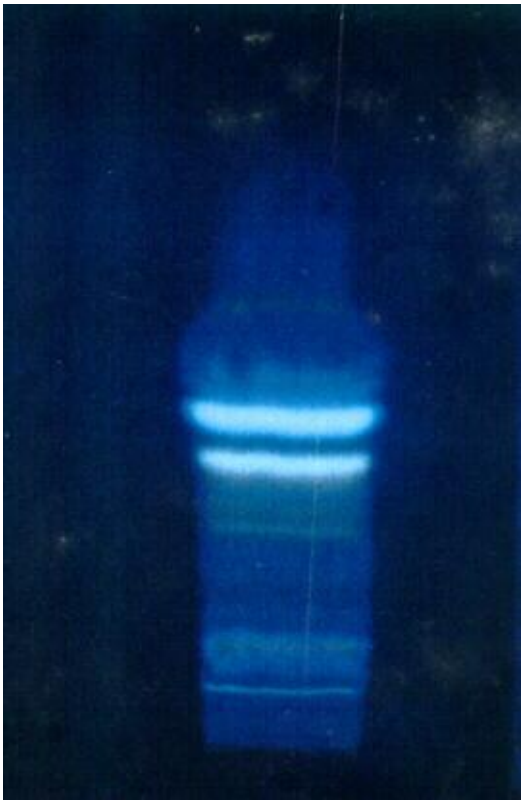
NOT FOR DRUG USE

Identification procedure:

30g **Campo Margosa Extract** are extracted three times, each with 60 ml ethyl acetate pure. The combined organic phases are washed three times, each with 60 ml water, dried over sodium sulphate, filtered and evaporated to dryness under vacuum, on the Rotovapor. The residue is taken up in 4 ml methanol pure and filtered. The filtered solution is used for the TLC identification procedure.

TLC plate:	Merck silica gel 60 F 254 0.2 mm
Solvent:	ethyl formate/toulene/formic acid/methanol (55/30/10/5)
Amount applied:	250 µl/3 cm band
Length of run:	12 cm
Test substances:	none
Detection:	natural substance/polyethylene glycol reagent

After development is complete the plate is sprayed with a 1% methanolic natural-substance reagent-Asolution (diphenyl-boric acid-β-ethylamino-ester) and then with a 5% ethanolic polyethylene glycol-4000 solution. The evaluation is made in UV 365 nm.



Front

Start

MALAY HERB EXTRACTS

CAMPO RESEARCH **PRODUCT #97.5547.6**

CAMPO MALAY HERB EXTRACTS FOR COSMETICS APPLICATIONS

PRODUCT TECHNICAL DATA SHEET

PRODUCT Name (Campo Research)	CAMPO MENGKUDU HYDROGLYCOL EXTRACT
Other Trade Names(CampoResearch)	Mengkudu akar, Mengkudu hutan
CTFA TRADE NAME (Proposed)	CAMPO MENGKUDU
Existing CTFA/INCI Name	Morinda umberllata Linn.
CAMPO PRODUCT #	97.5547.6
CAS#	N/A
EINECS#	N/A
EINECS Name:	N/A
English name:	
Local name:	Meugkudu akar, Mengkudu hutan
Literature :	See Bibliography

Active substance:	Amino acids	Tightening
	Histamine, acetylcholine	Vasodilatory
	Crotinoids	Granulation- ptomoting
	Deodorant	Chlorophyll

Ethno botany

Malay Medicine / Traditional applications:

Water boiled with the roots is applied to rashes and sweaty skin. Water boiled with the leaves has a deworming effect when taken orally.

Applications and dosage recommendations:

Campo Mengkudu Extract is used in hair-care preparations for regeneration of damaged hair and for stimulation of the scalp. Its many different active ingredients justify the use of this product in almost all cosmetic preparations.

The recommended dosage is: 2 and 10%

Applications code

SPECIES	Morinda umberllata Linn. Syn: Morinda citrifolia
PARTS USED	Leaves and Fruit
RAW MATERIAL - ORIGIN	MALAYSIA
CONCENTRATION	1 kg extract = 50kg Mengkudu

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, light brown	Visual
Odour	Herbal	Oil Factory
Specific Gravity(20deg.C)	1.020-1.060	USP XXIX / Paar, DMA35
Refractive Index(20deg.C)	1.310-1.400	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	4.0 - 5.0	USP XXIX / DGF H III (92)
Carrier Menstrual (Vehicle)		
Water	45 - 80%	-
Propylene Glycol	15 - 30%	
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C , 2hrs)	1 - 15%	Mettler 16J
Preservation	Nil	-
Pesticide Content	<0.05 ppm	Pflanzaniaschuttal1989
Total Germs	<100 Cfu/ml – Non-Pathogenic	USP XXIX / Ph.Eur2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur2.6.12 (97)
Heavy Metals(Total)As,Pb,Hg	<1ppm	USP XXIX / Ph.Eur2.6.12 (97)

Comments:

External use only.

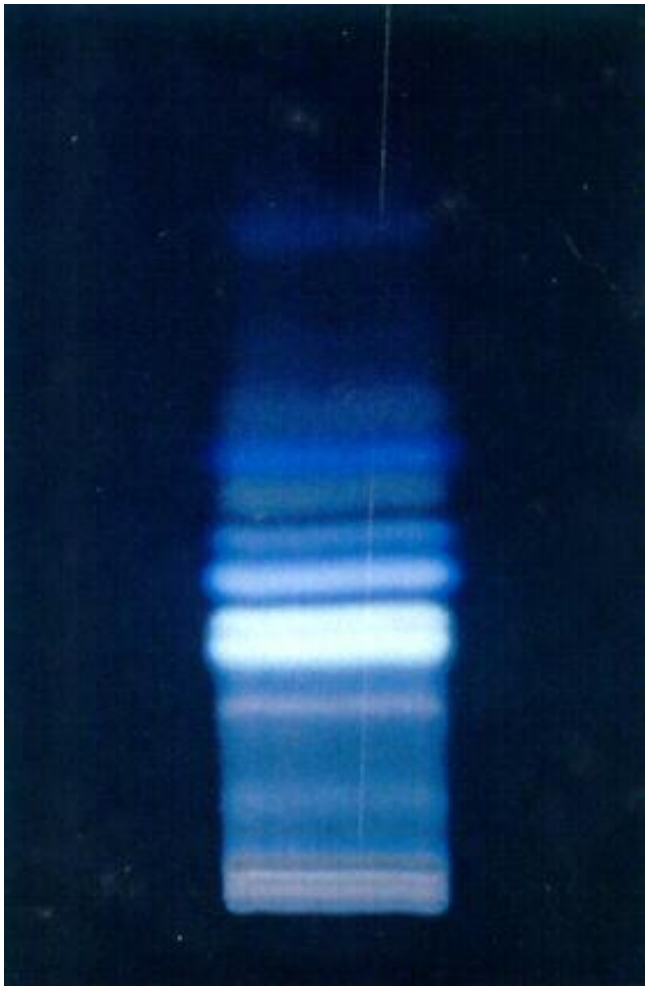
NOT FOR DRUG USE

Identification procedure:

30g **Campo Mengkudu Extract** are extracted three times, each with 50 ml ethyl acetate pure. The combined organic phases are washed three times, each with 50 ml water, dried over sodium sulphate, filtered and evaporated to dryness under vacuum, on the Rotovapor. The residue is taken up in 4 ml methanol pure and filtered. The filtered solution is used for the TLC identification procedure.

TLC plate:	Merck silica gel 60 F 254 0.2 mm
Solvent:	toluene/ethyl formate/formic acid (50/40/10)
Amount applied:	100 µl/3 cm band
Length of run:	12 cm
Test substances:	none
Detection:	natural substance/polyethylene glycol reagent

After development is complete the plate is sprayed with a 1% methanolic natural-substance reagent-Asolution (diphenyl-boric acid-β-ethylamino-ester) and then with a 5% ethanolic polyethylene glycol-4000 solution. The evaluation is made in UV 365 nm.



Front

Start

MALAY HERB EXTRACTS

CAMPO RESEARCH **PRODUCT #97.5547.5**

CAMPO MALAY HERB EXTRACTS FOR COSMETICS APPLICATIONS

PRODUCT TECHNICAL DATA SHEET

PRODUCT Name (Campo Research)	CAMPO MERUNGAI HYDROGLYCOL EXTRACT
Other Trade Names(CampoResearch)	Merungai Kacang Kelo
CTFA TRADE NAME (Proposed)	CAMPO MERUNGAI
Existing CTFA/INCI Name	Moringa oleifera Lam
CAMPO PRODUCT #	97.5547.5
CAS#	N/A
EINECS#	N/A
EINECS Name:	N/A
English name:	
Local name:	Merungai Kacang kelo
Literature:	See Bibliography

Active substances:	Flavonoids	Circulation stimulant
	Tanning agents	Astringent
	Saponins	Softenning
	Phytosterols	Protective, care

Ethno botany

Malay Medicine / Traditional applications:

The leaves are eaten as a vegetable to stimulate lactation in mothers. For treating engorged breasts and to stimulate milk flow, pound the leaves finely and apply to the breasts. The fruit and leaves also act as laxatives. Oil from the seeds is applied to the joints to treat rheumatism.

Pound the dry roots till powdery and apply as a talcum powder to the stomach of mothers after childbirth to relieve itchiness. Mix the crimson coloured sap with water and use as a medication for flu by applying the mixture to the neck.

Applications and dosage recommendations:

Campo Merungai Extract is a conditioner and hair-care ingredient used especially in shampoos and rinses. With greasy hair, relatively rapid normalization is achieved through the circulation stimulant action. Large pores are closed through the gentle action of the tanning substances. The product is recommended for all creams against greasy skin.

Dosage: in shampoos and foam-bath preparation, 5 to 10%; in creams, 1to 5%

Applications code

SPECIES	Moringa oleifera Lam Syn: Moringa oleifera Lam
PARTS USED	Leaves, sap and roots
RAW MATERIAL - ORIGIN	MALAYSIA
CONCENTRATION	1 kg extract = 5kg Merungai

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, Light Brown	Visual
Odour	Almost Aromatic	Oil Factory
Specific Gravity(20deg.C)	1.020 - 1.080	USP XXIX / Paar, DMA35
Refractive Index(20deg.C)	1.350 - 1.450	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	4.0 - 6.0	USP XXIX / DGF H III (92)
Carrier Menstrual (Vehicle)		
Water	10 - 25%	-
Propylene Glycol	50 - 90%	
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C , 2hrs)	1 - 15%	Mettler 16J
Preservation	Nil	-
Pesticides	<0.05 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 Cfu/ml – Non-Pathogenic	USP XXIX / Ph.Eur2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur2.6.12 (97)
Heavy Metals(Total)As,Pb,Hg	<1ppm	USP XXIX / Ph.Eur2.6.12 (97)

Comments:

External use only.

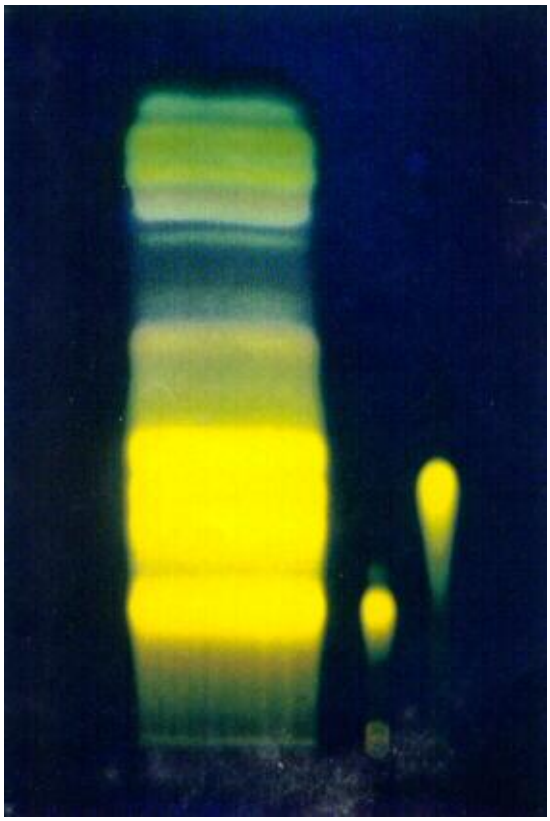
NOT FOR DRUG USE

Identification procedure:

30g **Campo Merungai Extract** are extracted three times, each with 50 ml ethyl acetate pure. The combined organic phases are washed three times, each with 50 ml water, dried over sodium sulphate, filtered and evaporated to dryness under vacuum, on the Rotovapor. The residue is taken up in 10 ml methanol pure and filtered. The filtered solution is used for the TLC identification procedure.

TLC plate:	Merck silica gel 60 F 254 0.2 mm
Solvent:	ethyl formate/toulene/formic acid/methanol (60/20/10/10)
Amount applied:	25 µl/3 cm band
Length of run:	12 cm
Test substances:	Hypersoide, quercitrin
Detection:	natural substance/polyethylene glycol reagent

After development is complete the plate is sprayed with a 1% methanolic natural-substance reagent-Asolution (diphenyl-boric acid-β-ethylamino-ester) and then with a 5% ethanolic polyethylene glycol-4000 solution. The evaluation is made in UV 365 nm.



MALAY HERB EXTRACTS

CAMPO RESEARCH **PRODUCT# 97.5547.12**

CAMPO MALAY HERB EXTRACTS FOR COSMETICS APPLICATIONS

PRODUCT TECHNICAL DATA SHEET

PRODUCT Name (Campo Research)	CAMPO PEGAGA HYDROGLYCOL EXTRACT
Other Trade Names(CampoResearch)	Pegaga
CTFA TRADE NAME (Proposed)	CAMPO PEGAGA
Existing CTFA/INCI Name	Centella asiatica (L.) urba
CAMPO PRODUCT #	97.5547.12
CAS#	N/A
EINECS#	N/A
EINECS Name:	N/A
English name:	
Local name:	Pegaga
Literature :	See Bibliography

Active substances	Essential oil	Soothing
	Amino acids	Tightening
	Carotinoids	Granulation-promoting
	Tanning agents	Astringent

Ethno botany

Malay Medicine / Traditional applications:

The Chinese use it to improve the appetite, as an adi to digestion and to treat sores and ulcers. It is used in India to treat diseases of the skin, nervous system and blood. In Malaysia, an infusion of the leaves is drunk as a cooling agent.

Applications and dosage recommendations:

Campo Pegaga Extract is a product which tanks to its soothing and relaxing properties has proved of great value in all bath preparations. The many properties of hay flowers are particularly useful in foam-baths. It has a soothing effect on the whole organism. At the same time the peripheral circulation in the skin is stimulated, leading to tightening of the skin.

Depending on the product, the recommended dosage is 5 to 10%.

Applications code

SPECIES	Centella asiatica (L.) urba Syn: Hydrocotyle asiatica Linn.
PARTS USED	Leaves and Roots
RAW MATERIAL - ORIGIN	MALAYSIA
CONCENTRATION	1 kg extract = 0.5Kg Pegaga

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, light Green to Brown	Visual
Odour	Characteristic	Oil Factory
Specific Gravity(20deg.C)	1.020-1.060	USP XXIX / Paar, DMA35
Refractive Index(20deg.C)	1.265-1.485	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	3.5 - 5.5	USP XXIX / DGF H III (92)
Carrier Menstrual (Vehicle)		
Water	50 - 75%	-
Propylene Glycol	30 - 40%	
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C , 2hrs)	1 - 15%	Mettler 16J
Preservation	Nil	-
Pesticides	<0.05 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 Cfu/ml – Non-Pathogenic	USP XXIX / Ph.Eur2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur2.6.12 (97)
Heavy Metals(Total)As,Pb,Hg	<1ppm	USP XXIX / Ph.Eur2.6.12 (97)

Comments:

External use only.

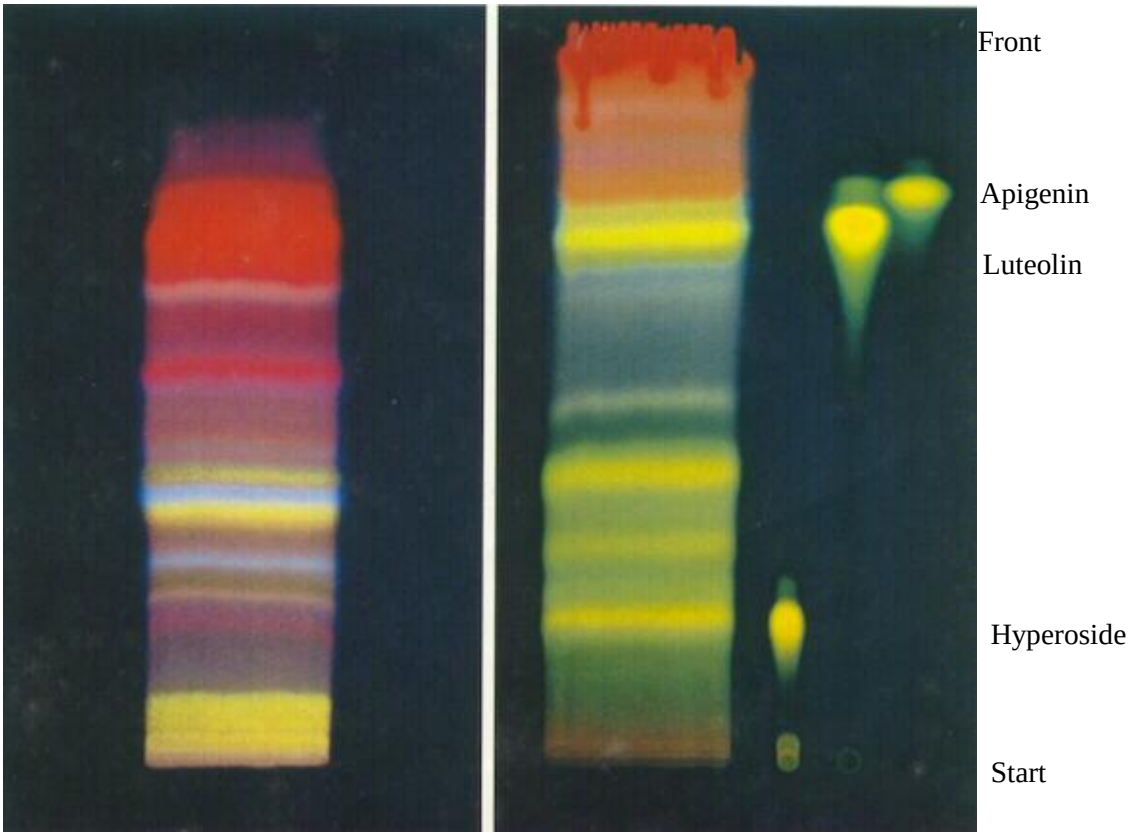
NOT FOR DRUG USE

Identification procedure:

30g **Campo Pegaga Extract** are extracted three times, each with 60 ml ethyl acetate pure. The combined organic phases are washed three times, each with 60ml water, dried over sodium sulphate, filtered and evaporated to dryness under vacuum, on the Rotovapor. The residue is taken up in 4 ml methanol pure and filtered. The filtered solution is used for the TLC identification procedure.

TLC plate:	Merck silica gel 60 F 254 0.2 mm
Solvent:	ethyl formate/toulene/formic acid/methanol (60/20/10/10)
Amount applied:	80 µl/3 cm band
Length of run:	12 cm
Test substances:	Brahminoside, Asiaticoside, Hydrocotylin
Detection:	natural substance/polyethylene glycol reagent

After development is complete the plate is sprayed with a 1% methanolic natural-substance reagent-A solution (diphenyl-boric acid-β-ethylamino-ester) and then with a 5% ethanolic polyethylene glycol-4000 solution. The evaluation is made in UV 365 nm**.**



MALAY HERB EXTRACTS

CAMPO RESEARCH **PRODUCT #97.5547.11**

CAMPO MALAY HERB EXTRACTS FOR COSMETICS APPLICATIONS

PRODUCT TECHNICAL DATA SHEET

PRODUCT Name (Campo Research)	CAMPO POKOK INAI HYDROGLYCOL EXTRACT
Other Trade Names(CampoResearch)	Pokok inai
CTFA TRADE NAME (Proposed)	CAMPO POKOK INAI
Existing CTFA/INCI Name	Lawsonia inermis Linn
CAMPO PRODUCT #	97.5547.11
CAS#	N/A
EINECS#	N/A
EINECS Name:	N/A
Eglish name:	
Local name:	Pokok inai
Literature:	See Bibliography

Active substances:	Mucins	Hydration
	Phytosterols	Protective
	Naphtoquinones	Structure-improving, colourant

Ethno botany

Malay Medicine / Traditional applications:

The leaves are pounded and applied to finger nails of brides for cosmetic purposes. Also used as medication for scurf and superficial wounds. For relief of sore throat, gargle with water in which the leaves have been boiled.

Applications and dosage recommendations:

Campo Pokok inai Extract is a natural hair-care substance for brittle, dull hair. The activity of the roots and the hair is stimulated and a natural protective mechanism against environmental influences is created. Particularly in shampoos for dry hair, the sheen and the manageability of the hair are improved by **Campo Pokok inai Extract.**

In shampoos the dosage varies between 2 to 10%

Applications Code

SPECIES	Lawsonia inermis Linn. Syn: Lawsonia inermis Linn
PARTS USED	Leaves and Fruit (The entire plant has multiple uses.)
RAW MATERIAL - ORIGIN	MALAYSIA
CONCENTRATION	1 kg extract = 500kg Pokok inai

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, Yellowish Brown	Visual
Odour	Almost Odourless	Oil Factory
Specific Gravity(20deg.C)	1.020 - 1.080	USP XXIX / Paar, DMA35
Refractive Index(20deg.C)	1.300 - 1.450	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	4.5 - 6.0	USP XXIX / DGF H III (92)
Carrier Menstrual (Vehicle)		
Water	50 - 90%	-
Propylene Glycol	30 - 50%	
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C , 2hrs)	1 - 15%	Mettler 16J
Preservation	Nil	-
Pesticide Content	<0.05 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 Cfu/ml – Non-Pathogenic	USP XXIX / Ph.Eur2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur2.6.12 (97)
Heavy Metals(Total)As,Pb,Hg	<1ppm	USP XXIX / Ph.Eur2.6.12 (97)

Comments:

External use only.

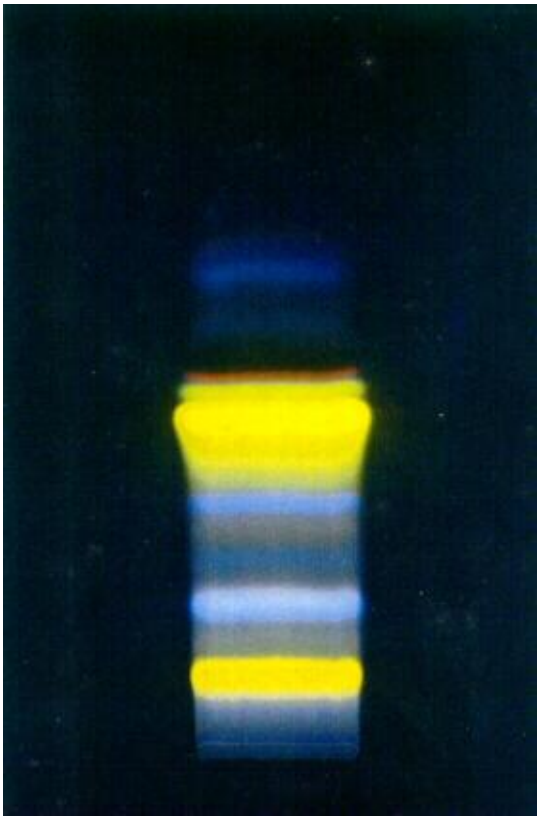
NOT FOR DRUG USE

Identification procedure:

30g **Campo Pokok inai Extract** are extracted three times, each with 100 ml ethyl acetate pure. The combined organic phases are washed three times, each with 100 ml water, dried over sodium sulphate, filtered and evaporated to dryness under vacuum, on the Rot vapor. The residue is taken up in 4 ml methanol pure and filtered. The filtered solution is used for the TLC identification procedure.

TLC plate:	Merck silica gel 60 F 254 0.2 mm
Solvent:	ethyl formate/toulene/formic acid/methanol (55/30/10/5)
Amount applied:	150 µl/3 cm band
Length of run:	12 cm
Test substances:	none
Detection:	natural substance/polyethylene glycol reagent

After development is complete the plate is sprayed with a 1% methanolic natural-substance reagent-A solution (diphenyl-boric acid-β-ethylamino-ester) and then with a 5% ethanolic polyethylene glycol-4000 solution. The evaluation is made in UV 365 nm.



Front

Start

MALAY HERB EXTRACTS

CAMPO RESEARCH **PRODUCT# 97.5547.1**

CAMPO MALAY HERB EXTRACTS FOR COSMETICS APPLICATIONS

PRODUCT TECHNICAL DATA SHEET

PRODUCT Name (Campo Research)	CAMPO SADATURI HYDROGLYCOL EXTRACT
Other Trade Names(CampoResearch)	Pokok kelulut putih, Sadaturi
CTFA TRADE NAME (Proposed)	CAMPO SADATURI
Existing CTFA/INCI Name	Sida acuta Burn
CAMPO PRODUCT #	97.5547.1
CAS#	N/A
EINECS#	N/A
EINECS Name:	N/A
English name:	
Local name:	Pokok kelulut putih, Sadaturi
Literature:	See Bibliography

Active substances		
	Mucins	Hydration
	Lodine salts	Antiinflammatory
	Amoino salts	Tightening
	Vitamins	Activating, regenerating

Ethno botany

Malay Medicine / Traditional applications:

The leaves and roots are boiled and pounded, then applied to the chest to treat a cough. The pounded root is also used to treat boils by applying it to the affected area.

Applications and dosage recommendations:

Campo Sadaturi extract is used for the prevention and regeneration of damaged or tired skin. Thanks to its hydration -promoting and anti-inflammatory properties, we can recommend the product especially for sun preparations, day-creams, night-creams, lotions and face-packs.

Depending on the product, the dosages vary between 2 and 10%.

Applications code:

SPECIES	Sida acuta Burn Syn: Sida acuta Burn
PARTS USED	Leaves and Roots
RAW MATERIAL - ORIGIN	MALAYSIA
CONCENTRATION	1 kg extract = 23.5 kg plant parts

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, light Brown	Visual
Odour	Aromatic, Sea-like Smell	Oil Factory
Specific Gravity(20deg.C)	1.010-1.080	USP XXIX / Paar, DMA35
Refractive Index(20deg.C)	1.400-1.530	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	4.0 - 6.0	USP XXIX / DGF H III (92)
Carrier Menstrual (Vehicle)		
Water	40 - 80%	-
Propylene Glycol	40 - 80%	
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C , 2hrs)	1 - 15%	Mettler 16J
Preservation	Nil	-
Pesticides	<0.005 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 Cfu/ml – Non-Pathogenic	USP XXIX / Ph.Eur2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur2.6.12 (97)
Heavy Metals(Total)As,Pb,Hg	<1ppm	USP XXIX / Ph.Eur2.6.12 (97)

Comments:

External use only.

NOT FOR DRUG USE

Identification procedure:

60g **Campo Sadaturi extract** are mixed with 50 ml water and extracted three times, each with 60ml ethyl acetate pure. The combined organic phases are washed three times each with 60ml water, dried over sodium sulphate, filtered and evaporated to dryness under vacuum, on the Rot vapor. The residue is taken up in 5ml methanol pure and filtered. The filtered solution is used for the TLC identification procedure.

TLC plate:	Merch silica gel 60 F 254 0.2 mm
Solvent:	toluene/ethyl formate/ formic acid (50/40/10)
Amount applied:	150 µL/ 3 cm band
Length of run:	12 cm
Test substances:	none
Detection:	vanillin-suphuric acid regent

0.3 vanillin are mixed with 85 ml ethanol and 3 ml sulphuric acid, in that order. After development, the plate is sprayed with the regent and heated to 100°C for 2 to 5 minutes. The evaluation is made in daylight.

MALAY HERB EXTRACTS

CAMPO RESEARCH **PRODUCT#97.5547.3**

CAMPO MALAY HERB EXTRACTS FOR COSMETICS APPLICATIONS

PRODUCT TECHNICAL DATA SHEET

PRODUCT Name (Campo Research)	CAMPO SEMANGKUK HYDROGLYCOL EXTRACT
Other Trade Names(CampoResearch)	Semangkuk, Puding
CTFA TRADE NAME (Proposed)	CAMPO SEMANGKUK
Existing CTFA/INCI Name	Northopanax scutellarium Merr.
CAMPO PRODUCT #	97.5547.3
CAS#	N/A
EINECS#	N/A
EINECS Name:	N/A
English name:	
Local name:	Semangkuk, pudding
Literature:	See Bibliography

Active substances:		
	Carotiniodes	Granulation-pronmoting, wound-healing
	Flavonoids	Circulation stimulant
	Sesquiterpenes	Antiinflammatory
	Polyacetylenes	Bacteriostatic, fungicidal

Ethno botany

Malay Medicine / Traditional applications:

Helps with urinary problems and prevents hair loss.

Applications and dosage recommendations:

Campo Semangkuk Extract is used as a natural remedy for centuries and is now used in the cosmetics industry mainly in products against damaged, reddened or very tried skin. In shampoos, the extract is used to stimulate and improve the circulation in the scalp. It is also used against greasy hair.

The dosages used are 5 to 10% in shampoos and 2 to 5% in skin creams.

Applications code

SPECIES	Northopanax scutellarium Merr. Syn: Northopanax scutellarium Merr.
PARTS USED	The shoots are eaten either raw or blanched
RAW MATERIAL - ORIGIN	MALAYSIA
CONCENTRATION	1 kg extract = 10kg Plant parts

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, light brown/yellow	Visual
Odour	Aromatic, characteristic	Oil Factory
Specific Gravity(20deg.C)	1.010 - 1.060	USP XXIX / Paar, DMA35
Refractive Index(20deg.C)	1.305 - 1.395	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	4.5 - 5.5	USP XXIX / DGF H III (92)
Carrier Menstrual (Vehicle)		
Water	50 - 80%	-
Propylene Glycol	25 - 50%	
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C , 2hrs)	1 - 15%	Mettler 16J
Preservation	Nil	-
Pesticides	<0.05 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 Cfu/ml – Non-Pathogenic	USP XXIX / Ph.Eur2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur2.6.12 (97)
Heavy Metals(Total)As,Pb,Hg	<1ppm	USP XXIX / Ph.Eur2.6.12 (97)

Comments:

External use only.

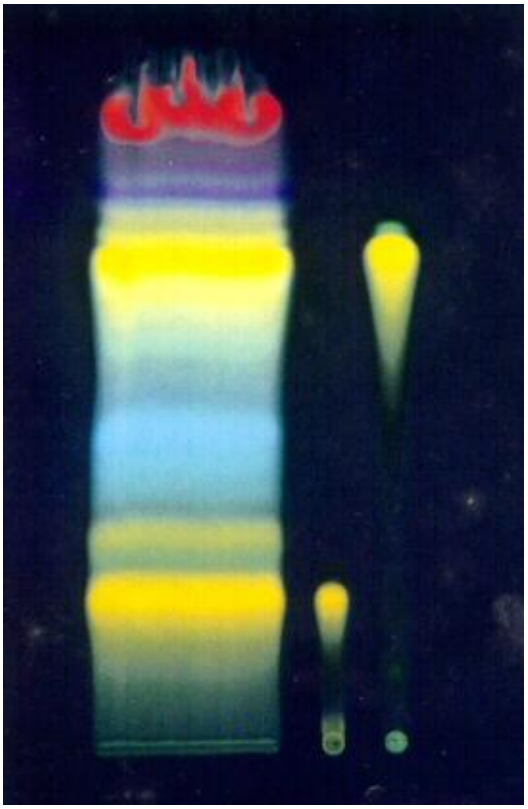
NOT FOR DRUG USE

Identification procedure:

30g **Campo Semangkuk Extract** are extracted three time, each with 50 ml ethyl acetate pure. The combined organic phases are washed three times, each with 50 ml water, dried over sodium sulphate, filtered and evaporated to dryness under vacuum, on the Rotovapor. The residue is taken up in 4 ml methanol pure and filtered. The filtered solution is used for the TLC identification procedure.

TLC plate:	Merck silica gel 60 F 254 0.2 mm
Solvent:	ethyl formate/toluene/ formaic acid/ methanol (20/20/10/10)
Amount applied:	75 μl/3 cm band
Length of run:	12 cm
Test substances:	hyperoside, quercetin
Detection:	natural substance/ polyethylene glycol reagent

After development is complete the plate is sprayed with a 1% methanolic natural-substance reagent. A solution (diphenyl-boric acid-β-ethylamino-ester) and then with a 5% ethanolic polyethylene glycol-4000 solution. The evaluation is made in UV 365 nm.



MALAY HERB EXTRACTS

CAMPO RESEARCH **PRODUCT #97.5547.8**

CAMPO MALAY HERB EXTRACTS FOR COSMETICS APPLICATIONS

PRODUCT TECHNICAL DATA SHEET

PRODUCT Name (Campo Research)	CAMPO TEBUNG AGA HYDROGLYCOL EXTRACT
Other Trade Names(CampoResearch)	Seanting, Padang derman, Tebung aga , Mothenmount
CTFA TRADE NAME (Proposed)	CAMPO TEBUNG AGA
Existing CTFA/INCI Name	Leonorus sibiricus Linn.
CAMPO PRODUCT #	97.5547.8
CAS#	N/A
EINECS#	N/A
EINECS Name:	N/A
English name:	Mothenmount
Local name:	Seanting, Padang derman, Tebung aga
Literature:	See Bibliography

Active substances:		
	Saponins	Softening
	Flavonoids	Circulation-stimulant
	Tanning agents	Astringent
	Hederagenin	Fungistatic

Ethno botany

Malay Medicine /Traditional applications:

Used as an ingredient in tonic. It is boiled and the water taken to relieve paints and dizziness.

Applications and dosage recommendations:

Campo Tebung aga Extract has a pronounced vasoconstrictive effect and is therefore a valuable substance for large-pored skin. The circulation is stimulated and this supports the normal cutaneous respiration. In bath preparations ivy normalizes excessive sebaceous secretion. Greasy hair again becomes soft and lustrous.

The Dosages are 2 to 5% for creams and 5 to 10% for shampoos and other bath products.

Applications code

SPECIES	Leonorus sibiricus Linn. Syn: Leonorus sibiricus Linn.
PARTS USED	Leaves
RAW MATERIAL - ORIGIN	MALAYSIA
CONCENTRATION	1 kg extract = 50kg Tebung aga

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, light greenish yellow	Visual
Odour	Almost odourless	Oil Factory
Specific Gravity(20deg.C)	1.020 - 1.090	USP XXIX / Paar, DMA35
Refractive Index(20deg.C)	1.305 - 1.450	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	3.5 - 5.0	USP XXIX / DGF H III (92)
Carrier Menstrual (Vehicle)		
Water	55 - 86%	-
Propylene Glycol	25 - 40%	
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C , 2hrs)	1 - 15%	Mettler 16J
Preservation	Nil	-
Pesticides	<0.05 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 Cfu/ml - **Non - Pathogenic**	USP XXIX / Ph.Eur2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur2.6.12 (97)
Heavy Metals(Total)As,Pb,Hg	<1ppm	USP XXIX / Ph.Eur2.6.12 (97)

Comments:

External use only.

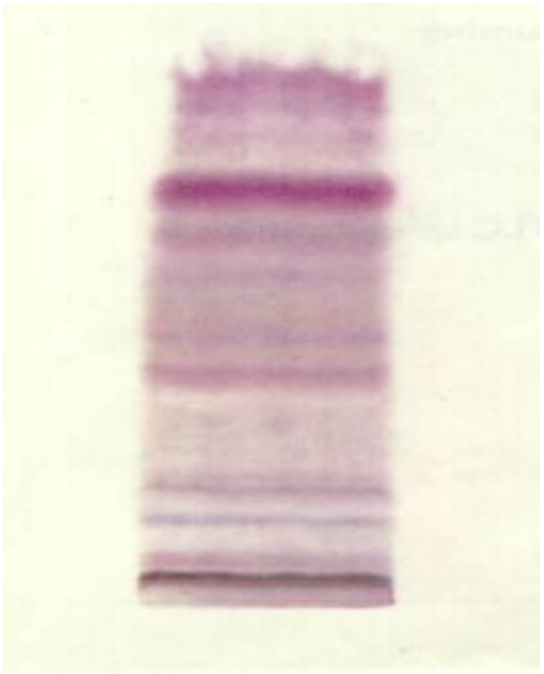
NOT FOR DRUG USE

Identification procedure:

30g **Campo Tebung aga Extract** are extracted three times, each with 100 ml ethyl acetate pure. The combined organic phases are washed three times, each with 100 ml water, dried over sodium sulphate, filtered and evaporated to dryness under vacuum, on the Rotovapor. The residue is taken up in 4 ml methanol pure and filtered. The filtered solution is used for the TLC identification procedure.

TLC plate:	Merck silica gel 60 F 254 0.2 mm
Solvent:	toluene/ethyl format/formic acid (50/40/10)
Amount applied:	50 µl/3 cm band
Length of run:	12 cm
Test substances:	none
Detection:	anisaledhyde/ sulphuric acid reagent

0.5 ml anisaldehyde are mixed with 10 ml acetic acid 100%, 85 ml methanol and 5 ml conc. Sulphuric acid, which are added in that order. After development the TLC plate is sprayed with this solution and heated for 2 to 5 minutes at 100°C.
The assessment is made in daylight.



Front

Start

Campo Malay Herbs Extracts
Purity Data Sheet of Pesticide Residues

Substance	Limit of tolerance In mg/kg (1)	Group (2)
Aldrin	0.1	ALD
Bromophos-ethyl	2.0	
Bromophos-methyl	0.01	
Captan	3.0	CAP
Carbophenothion	2.0	
Chlordan	0.05	
Chlorfenvinphos	1.0	
Chlorpyriphos-ethyl	0.01	
Chlorpyriphos-methyl	0.1	
Chlorthion	0.5	
DDD, op	1.0	DDT
DDD, pp-	1.0	DDT
DDE, op-	1.0	DDT
DDE, pp	1.0	DDT
DDT, op	1.0	DDT
DDT, pp	1.0	DDT
Dazomet	0.05	
Diazinon	0.5	
Dichlofenthion	0.1	
Dichlofluanid	0.1	
Dieldrin	0.]	ALD
Dimethoate	1.0	
Disulfoton	10.0	
Endosulfan	30.0	
Endrin	0.1	
Ethion	2.0	
Fenitrothion	2.0	
Fenthion	0.05	
Folpet	3.0	CAP
HCH, alpha	0.2	HCH
HCH, beta	0.2	HCH
HCH, delta	0.2	HCH
Heptachlor	0.1	HC
Heptachlorepoxid	0.1	HC
Hexachlorbenzene	0.1	
Iprodion	10.0	
Lindane	0.5	
Malathion	8.0	
Methidafion	2.0	
Parathion-methyl	1.0	
Pirimiphos-methyl	4.0	
Quintozene	1.0	
Sulfotepp	0.5	
Trichlophon	2.0	
Vinclozolin	40.0	

(1) These limits of tolerance are based on the “Pflanzenschutzmitlel Hochstmengen-Verordnung PHmV (1989)", for tea and similar products.

(2) For substances of the same group is valid: The total of all substances must be within the limit of tolerance. (For example ALD: Aldrin + Dieldrin = max. 0.1 mg/kg)

Campo Malay Herbs Extracts
Purity Data Sheet of Pesticide Residues

Substance[1]	Limit of tolerance mg/kg	Group[2]	Substance [1]	Limit of tolerance mg/kg	Group[2]
Aldrin	0.1	ALD	Disulfoton	10.0	
Bromophos-ethyl	2.0		Endosulfan $\alpha + \beta$	30.0	
Bromophos (-methyl)	2.0		Endrin	0.1	
Captafol	0.05		Ethion	2.0	
Captan	3.0	CAP	Fenitrothion	2.0	
Carbophenothion	2.0		Fenthion	0.05	
Chlordan cis/trans	0.05		Folpet	3.0	CAP
Chlorfenvinphos	1.0		HCH, alpha-	0.2	HCH
Chlorpyriphos (-ethyl)	2.0		HCH, beta-	0.2	HCH
Chlorpyriphos-mehyl	0.1		HCH, delta-	0.2	HCH
Chlorthion	0.01		Heptachlorepoxid	0.1	
DDD; o, p'-	1.0	DDT	Hexachlorbenzol	0.1	
DDD; p, p'-	1.0	DDT	Iprodion	10.0	
DDE; o, p'-	1.0	DDT	Lindane	0.5	
DDE; p, p'-	1.0	DDT	Malathion	8.0	
DDT; o, p'-	1.0	DDT	Methidathion	2.0	
DDT; p, p'-	1.0	DDT	Parathion (-ethyl)	0.5	
Diazinon	0.5		Parathion-methyl	1.0	
Dichlofenthion	0.01		Pirimiphos-methyl	5.0	
Dichlofluanid	0.1		Quintozene	1.0	
Dicofol	0.05		Sulfotepp	0.5	
Dieldrin	0.1	ALD	Vinclozolin	40.0	
Dimethoat	1.0				

[1] These limits of tolerance are based on the German "Ruckstands-Hochstmengenverordnung - RHmV", for tea and similar products. **Edition: 01.09.1992.**

[2] For substances of the same group is valid: the total of all substances must be within the limit of tolerance. (For example ALD: Aldrin + Dieldrin = max 0.1 mg/kg)

BIBLIOGRAPHY

Ahamd A.S., Warisan Perubatan Melayu,
Dewan Bahasa dan Pustaka, Ministry of Education, Malaysia, 1982.

Burkill I.H.A Dicitionary of the Economic Products of the Malay Peninsula,
Crown Agent, London, 1966.

Burkill I.H. and Haniff M., Malay Village Medicine,
Garden's Bulletin, pp 167-331,1930.

Dom H.M. bin H.Md., Bomoh and Hantu, Siri Kebudayaan Kita,
Federal Publications, Kuala Lumpur, 1977.

Gimlette J.D. and Burkill I.H. (1930) Malay Poisons and Charm Cures,
(Third Printing, 1981), Oxford University Press, Kuala Lumpur, Malaysia.

Gimlette J.D. and Burkill I.H. The Medical Book of Malayan Medicine,
Garden's Bulletin, pp 333-497, 1930.

Gimlette J.D. and Thomson H.W., A Dictionary of Malayan Medicine,
Oxford University Press, Kuala Lumpur, Malaysia, 1983.

Soepadmo, E., Ethnobotany of Malaysian Medicinal Plants,
9th Scientific Meeting of Malaysian Society of Pharmacology and Physiology, 1991.

Ram P. Rastogi and B.N. Mehrotra, Compendium of Indian Medicinal Plants,
Vol 1 and 2 Central Drug Research Institute, Lucknow and Publications and Information Directorate, New Delhi, 1991.

MALAY HERBS GALLERY

Jarak Cina

Jintan Hitam

Margosa

Pegaga

Bidara Laut

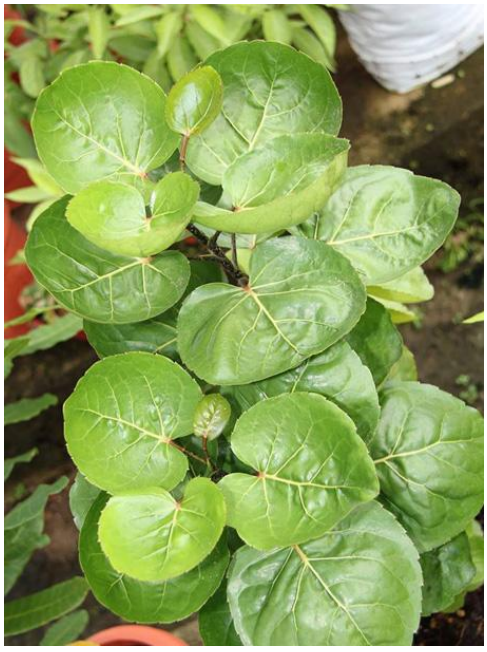
Kemangi

Mengkudu

Merungai

Pokok Inai

Sadaturi



Semangkuk

Tebumg Aga

DISCLAIMER:

The information contained herein is accurate to the best knowledge and belief of Campo Research Pte Ltd, and specification quoted may change without prior notice. Information contained in this technical literature is believed to be accurate and is offered in good faith for the benefit of the customer. The company, Campo Research Pte Ltd, however, cannot assume any liabilities or risks involved in the use of its natural products or their derivatives or raw materials or ingredients, since the conditions of use are beyond Campo Research Pte Ltd' s control. Statements concerning the possible use are not intended as recommendations to use our materials in the infringement of any patents or infringements of mandatory regulatory requirements or without any safety evaluations conducted when used in combination with materials of other suppliers. We make no warranty of any kind, expressed or implied, other than that the material conforms to the applicable standard specifications. Campo Research Pte Ltd accepts no liabilities of whatsoever either expressed or as otherwise arising out of the information supplied, the application, adaptation or processing of the products described herein, or the use of other materials in lieu of the Campo materials or the use of Campo raw materials or ingredients in conjunction with any other products and raw materials. The use of Campo Research Pte Ltd's raw materials or ingredients in any formulations are to be compulsory tested and to be assayed for safety and toxicology profiles evaluations and according the mandatory regulations as required by the laws and regulations of the countries where the evaluation and use of Campo Research Pte Ltd's raw materials or ingredients has been formulated as single components in any carrier systems or as in multi-components formularies. The end-users, marketers; manufacturers, formulation laboratories or importers of Campo Research Pte Ltd' raw materials and ingredients which are incorporated into any formularies as formulated or re-sold or re-exported or assayed in accordance with any mandatory regulatory requirements of any country or infringement of any patents assume all liabilities as that may arise out of the use of Campo Research Pte Ltd's raw materials and ingredients in any formularies in combination with raw materials and ingredients of other suppliers or as single components in any carriers. The definition of users as mentioned in these instances are manufacturers, marketers, formulation laboratories, consultants, and importers assumed all liabilities arising as either personal injuries suits, infringements of patents suits, infringements of or failures to meet regulatory requirements suits of a formulary either as single components in any carrier systems or in as multi-components formularies in which are may consist of a Campo Research Pte Ltd's raw material or ingredients.

IMPORTANT NOTICE

Specifications may change without prior notice. Information contained in this technical literature is believed to be accurate and is offered in good faith for the benefit of the customer. The company, however, cannot assume any liability or risk involved in the use of its natural products or their derivatives, since the conditions of use are beyond our control. Statements concerning the possible use are not intended as recommendations to use our products in the infringement of any patent. We make no warranty of any kind; expressed or implied, other than that the material conforms to the applicable standard specifications.