

Bursera graveolens

7. *Bursera graveolens* (Kunth) Triana & Planch.

Ann. Sci. Nat., Bot., ser. 5, 14: 303. 1872.

Basionym: *Elaphrium graveolens* Kunth

Flora of Peru reference, p. 712

Common names: palo santo, crispín, carana, huanco

Identification of the plant

The taxonomical identification of this plant is described in the Certificate of Analysis attached (1)

Description of the plant:

Shrub or tree of 1.5 m, usually short and dense. Its branches contain a large number of leaves. Flowers sprout near the branches and also near the leaves.

The flowers have oblong petals of 4 mm.

Further botanical characteristics are described in the Technical Report attached (3)

Parts Used: stem

Previous use by humans:

Traditional use or uses by the indigenous people of Peru is described in the report and publications attached (3,4,5,6,7,8,9,10,11)

Traditionally the alcoholic extract of the bark is used for rheumatism and the bark infusion as a digestive and for respiratory problems. The water of boiled bark is used as sudorific. The resin called "elemi" is used topically applied in plasters, as

an analgesic, a sedative and for the treatment of inflammations. The resin infusion is used as a cardiac tonic, another reported use is to chew a piece of bark for toothache.

No ill effects from its usage have been recorded.

Origin and ecology:

Native tree of Peru. Grows wild in the Andean region, in forests, and on rocky slopes between 1000-3500 m. In Peru can be found in Tumbes, Cancas, Hacienda la Choza (Piura), Cerro Prieto, Cerro Amotape, Huancavelica (Huanchuy river), near the pampa. This tree is also growing in Mexico, Galapagos islands and Cuba (3,12).

The resin produces a very strong smell similar to lemon, *Bursera*, has approximately 50 species growing in tropical America, only one grows in Peru. Burnt wood expels a very aromatic vapor similar to incense.

Chemical composition:

The chemical composition of *Bursera graveolens* through analysis includes flavonoids, tannin, steroid triterpenoids, resins, and cardenolids. It is the only known plant that produces the chemical compound 2,3-secolean-12-ene-2, 3,28 triolic acid.

Common name	Scientific name	Phytochemical compounds found	Technical report*
Palo Santo	<i>Bursera graveolens</i> (H.B.K.) Triana & Planch.	Flavonoids, tannins, triterpen- steroids, quinnones, cardenolids, resins	685-98

*Reported by Total Quality Laboratories. National Agrarian University (2).

Method: Look de Ugaz Olga. Fitoquímica, 1994

**This plant is component of the Isula Rain's botanical products:
7-Day Purity Cleanse #1. Herbal Supplement**

Level

The level of **Bursera graveolens** in the product "7-Day Purity Cleanse #1" (see below for entire ingredient listing) is:

Common name	Scientific name	Parts of the plant used
Cola de caballo	<i>Equisetum bogotense</i> H.B.K.	Stem, leaves and flowers
Canchalagua	<i>Schukhuria pinnata</i> Lamarck	Stem and leaves
Zarzaparrilla	<i>Smilax febrifuga</i> Kunth	Root
Gramma	<i>Cynodon dactylon</i> L.	Whole plant
Yawar chonca	<i>Oenothera rosea</i> L' Her ex Aiton	Stem, leaves and flowers
Chinchimalí	<i>Quinchamalium elongatum</i> Pilger	Stem, leaves and flowers
Palo Santo	<i>Bursera graveolens</i> (H.B.K.) Triana & Planch.	Stem

Conditions of use:

The normal use recommended on the label of "7-Day Purity Cleanse #1" is:

Directions: For (7) days, approximately 20 min. before meals, take one teaspoon, 3 times per day (morning, noon and evening), mix with a glass of warm or cold water (8 oz). If you'd like to avoid the consumption of alcohol, yet still enjoy the benefits of this product, add one teaspoon to a glass of hot boiled water and let sit for 5 min. Please see our OPTIONAL cleansing menu which can be used as a guide to follow during and after your cleanse. At the end of either the 7-Day or 21-Day Cleanse, take an acidophilus complex for at least 14 days.

DO NOT USE THIS PRODUCT IF YOU ARE PREGNANT OR LACTATING

References:

1. Analysis Certificate, No. 684-98, La Molina Calidad Total Laboratorio, 1998.
 2. Analysis Certificate, No. 685-98, La Molina Calidad Total Laboratorio, 1998.
 3. Technical Report, No. 099-98, La Molina Calidad Total Laboratorio, 1998.
 4. Gumbolimbo. <http://www.rain-tree.com/gumbo.htm>
 5. Zamora-Martinez, Marisela C. and Pola, Cecilia Nieto de Pascual. "Medicinal plants used in some rural populations of Oaxaca, Puebla and Veracruz, Mexico". *Journal of Ethnopharmacology*, 35 (1992).
 6. Duke, James, and Vasquez, Rodolfo. Amazonian Ethnobotanical Dictionary. CRC Press, 1994.
 7. Brack, A. 1999. *Diccionario Enciclopédico de plantas útiles del Perú*. Centro de Estudios Regionales Andinos Bartolomé de las Casas, eds. Lima -Perú.
 8. Soukup, J. 1970. *Vocabulario de los nombres vulgares de la flora peruana (Vocabulary of the common names of peruvian flowering plants)*. Salesiano, eds. Lima Peru.
 9. Ediciones Editors, S.A. *Los secretos de las plantas medicinales. Fichero II*. Ediciones Editors, S.A., eds.
 10. Rutter, R. 1990. *Catálogo de plantas útiles de la Amazonía Peruana*. Ministerio de Educación. Instituto Lingüístico de Verano.
 11. Universidad de Lima, Facultad de Ingeniería Industrial. *Centro de Investigación de la Producción Industrial. CIPI. Industrialización de Plantas Medicinales. Tomo I*. Lima-Peru.
 12. Brako, L y J. Zarucchi. 1993. *Catálogo de las Angiospermas y Gimnospermas del Perú/ Catalogue of the flowering plants and Gymnosperms of Peru*. Missouri Botanical Garden (ed). Missouri, EE.UU. pp 1286.
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ANALYSIS CERTIFICATE

N° 687 - 98

CERTIFICATE OF VEGETABLE KIND

I. DATA OF THE REQUESTING

Name : INTERNATIONAL CORPORATION
HEALTH AND LIFE E.I.R.L.
Address : Alfonso Cobian cooperative Mz
H Lt I - Chaclacayo

II. DATA OF THE SERVICE

Service request : N° 824 - 98
Date of service request : 98-09-08
Requested service : Certificate of vegetable kind

III. NAME OF THE PRODUCT : PALO SANTO (LIGNUM VITAE)

IV. DATA OF THE SAMPLE

Size : 1 bag
Other characteristics : Containing fragment of stem.

V. USED LABORATORY : Professional services.

VI. RESULTS

Of agreement to the Trial report Co- V- 151 - 98, that work in the files and reports the following:

The sample (stem) of "Lignum vitae" has been identified by orthodox method as: *Bursera graveolens*. (H.B.K.) Triana Planchon, which botanical classification according to A. Cronquist (1982) is:

KINGDOM	:	PLANTAE
DIVISION	:	MAGNOLIOPHYTA
CLASS	:	MAGNOLIOPSIDA
SUBCLASS	:	ROSIDAE
ORDER	:	SAPINDALES
FAMILY	:	BURSERACEAE
Genus	:	<i>Bursera</i>
Species	:	<i>B. graveolens</i> .

METHOD USED IN THE LABORATORY

Classic method, orthodox. According to A. Cronquist 1982

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October 9th, 1998 La Molina

ANALYSIS CERTIFICATE
N° 685 - 98

PHYTOCHEMIST TRIAL RUN CERTIFICATE

II. DATA OF THE REQUESTING

Name : INTERNATIONAL CORPORATION
HEALTH AND LIFE E.I.R.L.
Address : Alfonso Cobian cooperative Mz
H Lt I - Chaclacayo

II. DATA OF THE SERVICE

Service request : N° 824 - 98
Date of service request : 98-09-08
Requested service : Phytochemist trial run

III. NAME OF THE PRODUCT : PALO SANTO (LIGNUM VITAE)

IV. DATA OF THE SAMPLE

Size : 210 g approximately
Other characteristics : Packed in polypropylene bag.

V. USED LABORATORY : La Molina Calidad Total Laboratorio.

VI. RESULTS

Of agreement to the Trial report N° 1842- 98, that work in the files and reports the presence of the following components:
Flavonoids, tannin, steroids-triterpenoids, cardenolids and resins.

METHOD USED IN THE LABORATORY
Look de Ugaz Olga PHYTOCHEMIST investigation Method 1994

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TECHNICAL REPORT

No 07 - 98

REQUESTING : INTERNATIONAL CORPORATION HEALTH AND
LIFE E.I.R.L.
ADDRESSES : Cooperativa Alfonso Cobian Manzana H,
Lt I - Chaclacayo
APPLICATION SERVICE : No 824 - 98
REQUESTED SERVICE : Monograph of the vegetable kind component of the
Product.
PRODUCT : PALO SANTO
VEGETABLE KIND :

MONOGRAPH OF THE VEGETABLE KIND: PALO SANTO

1. DESCRIPTION:

KINGDOM : PLANTAE
DIVISION : MAGNOLIOPHYTA
CLASS : MAGNOLIOPSIDA
SUBCLASS : ROSIDAE
ORDER : SAPINDALES
FAMILY : BURSERACEAE
Genus : *Bursera*
Species : *B. graveolens.*

1.1 SCIENTIFIC NAME : *Bursera graveolens.*

1.2 BOTANICAL CHARACTERISTICS:

Branchlets densely leafy at tips; petioles 1-1.5 dm. Long, narrowly winged above the middle; leaflets 2-3 pairs, sessile, oblong, serrate and narrowed to the acute or obtusish tip, entire toward the acute base, the lateral 3-6 cm. Long, 2-3 cm wide, typically glabrous, the midnerve prominent beneath, the lateral nerves and reticulate veins inconspicuous; flowering branches nearly as long as the leaves or about 1 dm. Long, paniculate with linear-lanceolate acute bracts; pedicels 5-8 mm. Long, much longer than the flowers; calyx glabrous or puberulent, the ovate lobes barely 1 mm. Long, the oblong petals 4 mm. Long, one-fourth as wide; ovary contracted into a very short style, the ovoid drupes acute both ends, 6-9 mm. Long, 4 mm. Thick, pyrenes 5 mm. Long, about as wide, 3 mm. Thick.-Specimens in part forma *malacophylla* (Robinson) Macbr., Comb. Nov., *B. Malacophylla* Robinson, Proc. Amer. Acad. 38: 160.1902, leaflets lightly short-pilose. A shrub or tree to 15 meters, usually shorter and with thick trunk; in dry-land with strong old-varnish odor and a suggestion of lemon, the drupes mahogany color (Stork & Horton). The type from Colombia, not Ecuador as often indicated.

1.3

DISTRIBUTION

Tumbez : Rainy-green formation, Cancas, Weberbauer 7753. Hacienda La Chozza, Weberbauer 7724.- Piura: Rock slides near base of Cerro Prieto, Amotape Hills, (Haught & Svenson 11630); Haught 30. Chanro, prov. Piura, Weberbauer 6001.-Huancavelica: Wall of Rio Huanchuy, 2,600 meters, Stork & Horton 10439 (det. Standley). Near Pampas, Weberbauer 6509. To Galapagos, Mexico, Cuba. "Crispin", "Carana", "palo santo", "huancoe". (Weberbauer).

2.

COMMERCIAL SOURCE

The stem is used for stomach ache.

3.

BIBLIOGRAPHY

Flora of Peru
Mc. Bride, Francis J. (1949)
Field Museum of Natural History.- Botany, Vol. XIII
Chicago. USA

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7. Translations of the articles or book reprints about *Bursera graveolens*

Author: Antonio Brack

Footnote: 7

Bursera graveolens (HBK) Tri. & Plan.

1. Family: Burseraceae.
2. Common names: palo santo, caraña, crispín, huancor.
3. Distribution: From Central America to Peru (dry forests of the northern coast and Marañón valley).
4. Situation: wild tree.
5. Uses:
 - Wood: for making cases.
 - Aromatic incense: wood burns slowly and produces an aromatic smoke, as incense.
 - Perfume: wood and resin. They are used to perfume clothes and houses.
 - medicinal:
 - Anti-rheumatic: Maceration of bark in alcohol.
 - Analgesic: resin in patches.
 - Sudorific: bark decoction.
 - Stomachache: bark decoction.
 - Toothache: twigs chewing.
 - For inflammations: resin.

- Cardiac: resin infusion.
 - Respiratory diseases: bark infusion.
 - Sedative: resin in patches.
 - Resin: called elemi.
 - Shamanism: amulets and crosses against witchcraft.
 - Insecticide: resin in smoke.
6. Phytochemistry: contains essential oils and a gin-like aroma. Is the unique known plant which contains 2,3-secoolean-12-ene-2,3,28-trioic acid.
-

Author: Jaroslav Soukup

Footnote: 8

Bursera L. Burceraceae (80-2). Genus dedicated to Joachim Martin Burser, German physician and botanist (1593 – 1649). **B. graveolens (HBK) Tr. & Pl., v. s. caraña, crispín, palo santo, huancor.** Several species produce spontaneously or when damaged, a transparent, white or yellow resin, which solidifies or stays semi-solid. It is used in patches as an analgesic. The decoction of its bark is used as sudorific, and macerated in alcohol against rheumatism. Valdizán states that the pulverized resin boiled is used to cure the “sangre lúbia”. In case of headache, patches are applied on the temple. The bark is chewed to calm thirst and in Piura crosses are made against witchcraft. F.P.III-2.711.

Author: Ediciones, EDITORS, S.A.

Footnote: 9

PALO SANTO

Botanical classification : *Bursera graveolens* TR. PL.

Information sources : 26.

Therapeutic properties :

1) Anti-infectious of genital-urinary apparatus.

1.1. Part used: root.

1.2. Preparation: decoction.

Dose: topical use.

Author: Lima University. CIPI.

Footnote: 10

PALO SANTO

BOTANICAL CLASSIFICATION : *Bursera graveolens* TR. PL.

INFORMATION SOURCES : A.1. (P): 213.

THERAPEUTIC PROPERTIES :

1) Anti-infectious of genital-urinary apparatus.

1.1 Part used: root.

1.2 Preparation: decoction.

1.3. Dose: topical use.

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FOOD AND DRUG ADMINISTRATION
5630 FISHERS LANE, ROOM 1061
ROCKVILLE, MD 20852***

Chiquinaga spinosa

8. *Chuquiraga spinosa* Less.

Common names: wamanpinta, huamanpinta, huancaspita, jari-jari, laulinco, llaulli, paszapamanquin

Identification of the plant

The taxonomical identification of this plant is described in the Certificate of Analysis attached(1)

Description of the plant:

Branched shrub, can reach 40-90 cm height, cylindrical stems with spines. Alternated leaves of entire borders, acuminate. Flowers yellow-reddish.

The botanical characteristics are described in the Technical Report attached. (3)

Parts Used: stem and leaves

Previous use by humans:

It is used traditionally as a diuretic, digestive and depurative, as well as antiseptic and for the inflammation of the urinary system.

Ethnobotanical record is made of the internal use of this herb by South American populations (3,4,5,6).

No ill effects from its usage have been recorded.

Origin and ecology:

Wild shrub from Peru. Grows in the Andes between 3000 and 4500 m (7).

Chemical Composition

The chemical composition of *Chuquiraga spinosa* through analysis includes flavonoids, tannin, steroid triterpenoids, reducing sugar, catequines, bitter and astringent principles and resins.

Common name	Scientific name	Chemical compounds	Report N.*
Wamanpinta	<i>Chuquiraga spinosa</i> Lessing	Tannins, triterpen-steroids, reducing sugars, bitter and astringent principles	673-98

*Reported by Total Quality Laboratories. National Agrarian University (2).

Method: Look de Ugaz Olga. Fitoquímica, 1994

Level

The level of *Chuquiraga spinosa* in the product "7-Day Urinary Cleanse #3" (see below for entire ingredient listing) is

Common name	Scientific name	Parts of the plant used
Cola de caballo	<i>Equisetum bogotense</i> H.B.K.	Stem, leaves and flowers
Karkeja	<i>Baccharis genistelloides</i> (Lam.) Pers.	Stem, leaves and flowers
Estrella Kiska	<i>Acicarpa tribuloides</i> Jussieu	Stem, leaves, flowers and fruit
Runa manayupa	<i>Desmodium molliculum</i> (H.B.K.)DC	Stem and leaves
Chili-chili	<i>Geranium filipes</i> Killip	Stem, leaves and Root
Grama	<i>Cynodon dactylon</i> L	Whole plant
Hierba de cáncer	<i>Stachys pusilla</i> (Wedd.) Briquet	Whole plant
Wamanpinta	<i>Chuquiraga spinosa</i> Lessing	Stem and leaves
Té indio	<i>Satureja revoluta</i> (R.& P.)	Branchlets and leavess
Tomillo	<i>Thymus vulgaris</i> L	Stem and leaves
Chancapiedra	<i>Phyllanthus niruri</i> L	Leaves

Condition of use:

The normal use recommended on the label of "7-Day Urinary Cleanse #3" is:

Directions: For (7) days, approximately 20 min. before meals, take one teaspoon, 3 times per day (morning, noon and evening), mix with a glass of warm or cold water (8 oz). If you'd like to avoid the consumption of alcohol, yet still enjoy the benefits of this product, add one teaspoon to a glass of hot boiled water and let sit for 5 min. Please see our OPTIONAL cleansing menu which can be used as a guide to follow during and after your cleanse. At the end of either the 7-Day or 21-Day Cleanse, take an acidophilus complex for at least 14 days.

DO NOT USE THIS PRODUCT IF YOU ARE PREGNANT OR LACTATING

References

1. Analysis Certificate, No. 672-98, La Molina Calidad Total Laboratorio, 1998.
2. Analysis Certificate, No. 673-98, La Molina Calidad Total Laboratorio, 1998.
3. Technical Information, No. 112-98, La Molina Calidad Total Laboratorio, 1998.
4. de Feo, V. Medicinal and magical plants in the northern Peruvian Andes. *Fitoterapia*, Vol. 63, No. 5, 1992.
5. Brack, A. 1999. *Diccionario Enciclopédico de plantas útiles del Perú*. Centro de Estudios Regionales Andinos Bartolomé de las Casas, eds. Lima -Perú.
6. Soukup, J. 1970. *Vocabulario de los nombres vulgares de la flora peruana (Vocabulary of the common names of peruvian flowering plants)*. Salesiano, eds. Lima Peru.
7. Brako, L y J. Zarucchi. 1993. *Catálogo de las Angiospermas y Gimnospermas del Perú/ Catalogue of the flowering plants and Gymnosperms of Peru*. Missouri Botanical Garden (ed). Missouri, EE.UU. pp 1286.

ANALYSIS CERTIFICATE
N° 672 - 98

CERTIFICATE OF VEGETABLE KIND

II. DATA OF THE REQUESTING

Name : INTERNATIONAL CORPORATION
HEALTH AND LIFE E.I.R.L.
Address : Alfonso Cobian cooperative Mz
H Lt I - Chaclacayo

II. DATA OF THE SERVICE

Service request : N° 835 - 98
Date of service request : 98-09-08
Requested service : Certificate of vegetable kind

III. NAME OF THE PRODUCT : WAMANPINTA

IV. DATA OF THE SAMPLE

Size : 1 bag
Other characteristics : Containing branches with chapters.

V. USED LABORATORY : Professional services.

VI. RESULTS

Of agreement to the Trial report Co- V- 143- 98, that works in the files and reports the following:
The sample (branches) of "Wamanpinta", has been identified by orthodox method as: *Chuquiraga spinosa*, Lessing. which botanical classification according to A. Cronquist (1982) is:

KINGDOM : PLANTAE
DIVISION : MAGNOLIOPHYTA
CLASS : MAGNOLIOPSIDA
SUBCLASS : ASTERIDAE
ORDER : ASTERALES
FAMILY : ASTERACEAE
SUBFAMILY : ASTEROIDEAE
Genus : *Chuquiraga*
Species : *Ch. spinosa*.

METHOD USED IN THE LABORATORY
Classic method, orthodox. According to A. Cronquist 1982

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ANALYSIS CERTIFICATE
N° 673 - 98

PHYTOCHEMIST TRIAL RUN CERTIFICATE

I. DATA OF THE REQUESTING

Name : INTERNATIONAL CORPORATION
HEALTH AND LIFE E.I.R.L.
Address : Alfonso Cobian cooperative Mz
H Lt I - Chaclacayo

II. DATA OF THE SERVICE

Service request : N° 835 - 98
Date of service request : 98-09-08
Requested service : Phytochemist trial run

III. NAME OF THE PRODUCT : WAMANPINTA

IV. DATA OF THE SAMPLE

Size : 310 g approximately
Other characteristics : Packed in polypropylene bag.

V. USED LABORATORY : La Molina Calidad Total Laboratorio.

VI. RESULTS

Of agreement to the Trial report N° 1834- 98, that work in the files and reports the presence of the following components:
Tannin, steroids-triterpenoids, reducing sugar, catequines, resins, bitter and astringent principles.

METHOD USED IN THE LABORATORY
Look de Ugaz Olga PHYTOCHEMIST investigation Method 1994

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TECHNICAL REPORT
No 112-98

REQUESTING : INTERNATIONAL CORPORATION HEALTH AND
LIFE E.I.R.L.
ADDRESSES : Cooperativa Alfonso Cobian Manzana H,
Lt I - Chaclacayo
APPLICATION SERVICE : No 672 - 98
REQUESTED SERVICE : Monograph of the vegetable kind component of the
Product.
PRODUCT : WAMANPINTA
VEGETABLE KIND :

MONOGRAPH OF THE VEGETABLE KIND: WAMANPINTA

1. DESCRIPTION:
KINGDOM : PLANTAE
DIVISION : MAGNOLIOPHYTA
CLASS : MAGNOLIOPSIDA
SUBCLASS : ASTERIDAE
ORDER : ASTERALES
FAMILY : ASTERACEAE
SUBFAMILY : ASTEROIDEAE
Genus : *Chuquiraga*
Species : *Ch. spinosa*

1.1 SCIENTIFIC NAME : *Chuquiraga spinosa*

1.2 BOTANICAL CHARACTERISTICS:
It is a shrub lifted up, ramnoso of 40 - 90 cm high, its stems are
cilindric, glabros at the basal part and pubescent in the apical part. It has
axilar thorns. The alternal leaves, sessiles, coriaceous, of complete edge
and acuminates thorned at the apix.
The sessiles chapters, lonely, axilars. Cilindrical with bracteas red-orange
involucre, the external gradually lanceolates, shining, in the apice, thickly
pubescent at the back, internal bracteas lanceolate-lineal acute, at the
back.
Flowers orange- redish.

1.3 DISTRIBUTION:
Ancash, Ayacucho, Cuzco, Hunin, Junin, Lima, La Libertad,
Huancavelica, Pasco.

2. FUENTE COMERCIAL : Stems

3. CHEMICAL COMPOSITION:

Flavonoids y tannins

4.

PROPERTIES :

4.1 Acción terapéutica

Diuretic, antiseptic, anti-blenorrhage, to throw kindey stone, inflammation of the urinary via.

The dosage which is used according to vernacular use is with preparation of cooking (12 to 15 g per litre) and infusion (10 g per litre).

Its use is internal (washing wounds and vaginal washing under the way of infusion)

5.

BIBLIOGRAPHY

- "The secrets of the medicinal plants"
Issues Editors S.A. 1983

- A. Balbachas y H. Rodriguez " The plants cure"
Issues "The present truth", first edition.

- Paul Schauenberg/Ferdinand Paris "Guide of the medicinal plants"
Issues Omega S.A. fourth edition 1980

- Domingo Azugaray, Caita Azugaray "Encyclopedia of the plants that cure"
Volume II editorial Mundia de tres libros. E. Fasciculos Ltda. 1984

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8. Translations of the articles or book reprints about
Chuquiraga spinoza

Author: Antonio Brack

Footnote: 5

Chuquiraga spinoza (R&P) Don.

1. Family: Asteraceae.
2. Synonyms: *C. huamanpinta* Hieron.
3. Common names: huamanpinta, huancaspita, jari-jaraj, laulinco, llaulli, paszapamaquin.
4. Distribution: Sierra between 3,000 and 4,000 m. a. s. l.
5. Situation: wild shrub.
6. Uses:
 - firewood
 - medicinal:
 - Diuretic: plant infusion.
 - Anti blennorrhic: plant infusion.

Author: Jaroslav Soukup

Footnote: 6

Chuquiraga Juss. Asteraceae (40-8). *A. rotundifolia* Wedd., v. s. jari-sirvij (O. T.). *C. spinoza* (R.&P.) D. Don (synon.: *C. huamanpinta* Hieron) v. s. huamanpinta, huancaspita, jari-jaraj, laulinco, llaulli, paszapamaquin (J. G.),

It is used in infusion as diuretic and antiblepharitis (Valdizán). **C. weberbaueri** Tovar, v. s. amaro, amarro, amargo (Linares).

Desmodium mollitulum

9. *Desmodium molliculum* (Kunth)

DC.

Prodr. 2: 331. 1825.

Basionym: Hedysarum molliculum Kunth

Flora of Peru reference, p. 429

Common name: Runa manayupa, Manayupa, allcopachaqui, pata de perro, pie de perro.

Identification of the plant

The taxonomical identification of this plant is described in the Certificate of Analysis attached(1)

Parts Used: stem and leaves

Previous use by humans:

Ethnobotanical record is made of the internal use of this herb by South American populations (3,4,5).

Drinking the liquid after boiling the leaves in water has been reported successful for cleansing the blood from pharmacological origin toxins, as well as diuretic and anti-inflammatory effects (3):

No ill effects from its usage have been recorded.

Origin and ecology:

Native herb, vine of Perú. Grows in the Andean region, in disturbed areas, and rocky slopes between 1500-3500 m. Can be found in the districts of Ayacucho, Cajamarca, Cuzco, Huánuco, Junín, Lima and La Libertad (6)

Chemical composition:

The chemical composition of **Desmodium molliculum** through analysis includes flavonoids, tannin, steroid triterpenoids, reducing sugar, leucoanthocianidines, and coumarines.

Common name	Scientific name	Phytochemical compounds found	Technical report*
Runa manayupa	<i>Desmodium molliculum</i> (H.B.K.)DC	Tannins, flavonoids, triterpen-steroids, reducing sugars, leucoanthocianines, bitter principles, coumarines	687-98

*Reported by Total Quality Laboratories. National Agrarian University (2).

Method: Look de Ugaz Olga. Fitoquímica, 1994

This plant is component of the Isula Rain's botanical products:

7-Day Urinary Cleanse #3. Herbal Supplement

Level

The level of **Desmodium molliculum** in the product "7-Day Urinary Cleanse #3" (see below for entire ingredient listing) is

Common name	Scientific name	Parts of the plant used
Cola de caballo	<i>Equisetum bogotense</i> H.B.K.	Stem, leaves and flowers
Karkeja	<i>Baccharis genistelloides</i> (Lam.) Pers.	Stem, leaves and flowers
Estrella Kiska	<i>Acicarpa tribuloides</i> Jussieu	Stem, leaves, flowers and fruit
Runa manayupa	<i>Desmodium molliculum</i> (H.B.K.)DC	Stem and leaves
Chili-chili	<i>Geranium filipes</i> Killip	Stem, leaves and Root
Grama	<i>Cynodon dactylon</i> L.	Whole plant
Hierba de cáncer	<i>Stachys pusilla</i> (Wedd.) Briquet	Whole plant
Wamanpinta	<i>Chuquiraga spinosa</i> Lessing	Stem and leaves

Té indio	<i>Satureja revoluta</i> (R.& P.)	Branchlets and leavess
Tomillo	<i>Thymus vulgaris</i> L	Stem and leaves
Chancapiedra	<i>Phyllanthus niruri</i> L	Leaves

Conditions of use:

The normal use recommended on the label of "7-Day Urinary Cleanse #3" is:

Directions: For (7) days, approximately 20 min. before meals, take one teaspoon, 3 times per day (morning, noon and evening), mix with a glass of warm or cold water (8 oz). If you'd like to avoid the consumption of alcohol, yet still enjoy the benefits of this product, add one teaspoon to a glass of hot boiled water and let sit for 5 min. Please see our OPTIONAL cleansing menu which can be used as a guide to follow during and after your cleanse. At the end of either the 7-Day or 21-Day Cleanse, take an acidophilus complex for at least 14 days.

DO NOT USE THIS PRODUCT IF YOU ARE PREGNANT OR LACTATING

References:

1. Analysis Certificate, No. 686-98, La Molina Calidad Total Laboratorio, 1998.
2. Analysis Certificate, No. 687-98, La Molina Calidad Total Laboratorio, 1998.
3. Technical report, No. 092-98, La Molina Calidad Total Laboratorio, 1998.
4. Mendoza, T.E. and Reateui, H. *Guia de plantas de uso medicinal*. Publicacion del area de Educacion y Promocion. Lima, Peru. 1997
5. Brack, A. 1999. Diccionario Enciclopédico de plantas útiles del Perú. Centro de Estudios Regionales Andinos Bartolomé de las Casas, eds. Lima -Perú.
6. Brako, L y J. Zarucchi. 1993. Catálogo de las Angiospermas y Gimnospermas del Perú/ Catalogue of the flowering plants and Gymnosperms of Peru. Missouri Botanical Garden (ed). Missouri, EE.UU.

ANALYSIS CERTIFICATE
N° 686 - 98

CERTIFICATE OF VEGETABLE KIND

II. DATA OF THE REQUESTING

Name : INTERNATIONAL CORPORATION
HEALTH AND LIFE E.I.R.L.
Address : Alfonso Cobian cooperative Ma
H Lt I - Chaclacayo

II. DATA OF THE SERVICE

Service request : N° 828 - 98
Date of service request : 98-09-08
Requested service : Certificate of vegetable kind

III. NAME OF THE PRODUCT : RUNA MANAYUPA

IV. DATA OF THE SAMPLE

Size : 1 bag
Other characteristics : Containing branches and fruits.

V. USED LABORATORY : Professional services.

VI. RESULTS

Of agreement to the Trial report Co- V- 141- 98, that works in the files and reports the following:

The sample (branches and fruits) of "Runa manayupa", has been identified by orthodox method as: *Desmodium mollliculum*, (H.B.K.) DC. which botanical classification according to A. Cronquist (1982) is:

KINGDOM	:	PLANTAE
DIVISION	:	MAGNOLIOPHYTA
CLASS	:	MAGNOLIOPSIDA
SUBCLASS	:	ROSIDAE
ORDER	:	FABALES
FAMILY	:	FABACEAE
SUBFAMILY	:	FABOIDEAE
Genus	:	<i>Desmodium</i>
Species	:	<i>D. mollliculum</i> .

METHOD USED IN THE LABORATORY
Classic method, orthodox According to A. Cronquist 1982

-
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 - The force of the present expires to 90 given calendar of its emission.
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October 9th, 1998 La Molina

ANALYSIS CERTIFICATE
N° 687 - 98

PHYTOCHEMIST TRIAL RUN CERTIFICATE

I. DATA OF THE REQUESTING

Name : INTERNATIONAL CORPORATION
HEALTH AND LIFE E.I.R.L.
Address : Alfonso Cobian cooperative Mr
H Lt I - Chacacayo

II. DATA OF THE SERVICE

- Service request : N° 828 - 98
Date of service request : 98-09-08
Requested service : Phytochemist trial run

III. NAME OF THE PRODUCT : RUINA MANAYUPA

IV. DATA OF THE SAMPLE

Size : 90 g approximately
Other characteristics : Packed in polypropylene bag.

V. USED LABORATORY : La Molina Calidad Total Laboratorio.

VI. RESULTS

Of agreement to the Trial report N° 1832- 98, that work in the files and reports the presence of the following components:
Flavonoids, tannin, steroids-triterpenoids, reducing sugar, leucoantocianidines, and cumarines.

METHOD USED IN THE LABORATORY

Look de Ugas Olga PHYTOCHEMIST investigation Method 1994

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October 9th, 1998 La Molina

**TECHNICAL REPORT
N°092-98**

REQUESTED BY : Corporación Internacional Salud y Vida E.I.R.L.
(International Corporation Health and Life)

ADDRESS : Cooperativa Alfonso Cobián Mz. H Lt1 Chaclacayo.
Lima-Perú.

SERVICE REQUEST : N° 828-98

TYPE OF SERVICE : Monograph of the plant specie component of the
product.

PRODUCT : RUNA MANAYUPA

PLANT SPECIE : RUNA MANAYUPA
(Common name)

Monograph of the plant specie: RUNA MANAYUPA

1. DESCRIPTION:

KINGDOM	: PLANTAE
DIVISION	: MAGNOLIOPHYTA
CLASS	: MAGNOLIOPSIDA
SUBCLASS	: ROSIDAE
ORDER	: FABALES
FAMILY	: FABACEAE
SUBFAMILY	: FABOIDEAE
Genus	: <i>Desmodium</i>
Specie	: <i>D. molliculum</i> .

1.1 Scientific name: *Desmodium molliculum*.

1.2 Botanical Characteristics:

Common name: Manayupa, runa manayupa

5. BIBLIOGRAPHY:

Balbachas, A and Rogriguez, H. Las palntas curan (The plants cure). La Verdad Presente eds. 1st edition.

Palacios, J. 1993. Plantas medicinales del Peru I (Medicinal Plants of Peru I). CONCYTEC.

Schauenberg, P & Ferdinand, P. 1980. Guía de plantas medicinales (Medicinal Plant Guide). Omega S.A. eds. 4th edition.

Los secretos de las plantas medicinales (The secrets of the medicinal plants). 1983. Editors S.A. eds.

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La Molina, November 30th of 1998

Translated text excerpt from the pamphlet, Guia de Plantas de uso Medicinal

Plant Guide for Medicinal Use

by Dr. Hugo Reátegui

Publisher: Service of Medicines Pro-life. Lima, Peru, 1997

Scientific name: Desmodium mollicum

Other names: Runa manayupana, pie de perro, pega pega, shoshi,
allcopachaque, haca betonco

Properties: diuretic, weak anti-inflammatory

Uses: in inflammations of the urinary and mucous channels

Part used: stem, leaves, flowers

Observations: Also it can be used in cases of gastritis and if there were diarrhea, to suspend it. This plant like others (sand Flower, agracejo, hercampuri) that acts on defensive organs and of elimination (Liver, kidney, internal) it agrees to take them one after another one, by cycles of two weeks each one.

**9. Translations of the articles or book reprints about
*Desmodium molliculum***

Desmodium molliculum (HBK) DC.

Footnote: 5

1. Family: Fabaceae.
 2. Common names: allcopachaqui, pata de perro, pie de perro.
 3. Distribution: Sierra, between 1,500 and 3,000 m. a. s. l.
 4. Situation: wild.
 5. Uses:
 - * Medicinal:
 - To heal injuries: washing with infusion.
-

10. *Oenothera rosea* L'Hér. ex Aiton

Hort. Kew. 2: 3. 1789.

Common names: Yawar chonca, chupa sangre, sanjuan, yawar chchungu, sanguinaria, yahuar sua, circormer, anta□ahui.

Identification of the plant

The taxonomical identification of this plant is described in the Certificate of Analysis attached(1)

Description of the plant:

Perennial herb, can reach more than 1 m height. Erect stems, thin, red to purple color, with whitish trichomes. Leaves oblong, lanceolated, thin petiole. Inflorescences type racemes. Hermaphrodite flowers. Fruit, ovoid capsule.

Parts used

Stem, leaves and flowers

Previous use by humans:

Ethnobotanical record is made of the internal use of this herb by South American populations (2,3,4,5,6,7,8,9).

Traditional uses of this plant are: the water of boiled leaves is used for pneumonia and as vermifuge, the water of boiled roots as cough suppressant and the alcoholic extract of leaves and flowers is applied in the affected zones for weals and rheumatism. The leaf infusion is applied as vulnerary for traumatism.

No ill effects from its usage have been recorded.

Origin and ecology:

Wild herb from Peru. Grows in the Andes and the Amazon between 1500-4000 m (10).

Chemical composition

The chemical composition of *Oenothera rosea* through analysis includes tannins, steroid triterpenoids, resins, mucilage, anthocyanins, flavonoids, elagic acid, galic acid, neoclorogenic acid, cafeic acid, p cumaric acid, o cumaric acid, myricetin, quarecetina, kaenferol, definidina, cianidina, isoquecetrin, hiperoside, rutine, galotánicos.

Common name	Scientific name	Phytochemical compounds found	Technical report*
Yawar chonca	<i>Oenothera rosea</i> L' Her ex Aiton	Mucilage, resins, antocianines, flavonoids, triterpen-steroids, and phenolic compounds	033-98 p 5

*Reported by Total Quality Laboratories. National Agrarian University (2).

Method: Look de Ugaz Olga. Fitoquímica, 1994.

This plant is component of the Isula Rain's botanical products:

7-Day Purity Cleanse #1. Herbal Supplement

Level

The level of *Oenothera rosea* in the product "7-Day Purity Cleanse #1" (see below for entire ingredient listing) is:

Common name	Scientific name	Parts of the plant used
Cola de caballo	<i>Equisetum bogotense</i> H.B.K.	Stem, leaves and flowers
Canchalagua	<i>Schukhuria pinnata</i> Lamarck	Stem and leaves
Zarzaparrilla	<i>Smilax febrifuga</i> Kunth	Root
Gramma	<i>Cynodon dactylon</i> L.	Whole plant

Yawar chonca	<i>Oenothera rosea</i> L' Her ex Aiton	Stem, leaves and flowers
Chinchimalí	<i>Quinchamalium elongatum</i> Pilger	Stem, leaves and flowers
Palo Santo	<i>Bursera graveolens</i> (H.B.K.) Triana & Planch.	Stem

Condition of use:

The normal use recommended on the label of "7-Day Purity Cleanse #1" is:

Directions: For (7) days, approximately 20 min. before meals, take one teaspoon, 3 times per day (morning, noon and evening), mix with a glass of warm or cold water (8 oz). If you'd like to avoid the consumption of alcohol, yet still enjoy the benefits of this product, add one teaspoon to a glass of hot boiled water and let sit for 5 min. Please see our OPTIONAL cleansing menu which can be used as a guide to follow during and after your cleanse. At the end of either the 7-Day or 21-Day Cleanse, take an acidophilus complex for at least 14 days.

DO NOT USE THIS PRODUCT IF YOU ARE PREGNANT OR LACTATING

References

1. Analysis Certificate, No. 051-98, La Molina Calidad Total Laboratorios, 1998
2. Velasco-Negueruela, A., et al. Medicinal plants from Pampallakta: an Andean community in Cusco (Peru). *Fitoterapia*, Vol. 66/5, 1995.
3. de Feo, V. Medicinal and magical plants in the northern Peruvian Andes. *Fitoterapia*, Vol. 63, 1992.
4. Zamora-Martinez, Marisela C. and Pola, Cecilia Nieto de Pascual. "Medicinal plants used in some rural populations of Oaxaca, Puebla and Veracruz, Mexico". *Journal of Ethnopharmacology*, 35 (1992).
5. Duke, J.A. and Vasquez, Rudolfo. *Amazonian Ethnobotanical Dictionary*. 1994.p 125..

6. Brack, A. 1999. Diccionario Enciclopédico de plantas útiles del Perú. Centro de Estudios Regionales Andinos Bartolomé de las Casas, eds. Lima -Perú.
 7. Roersch, C. y L. Van der Hoogte. 1988. Plantas Medicinales del Surandino del Perú. Centro de Medicina Andina, eds. Cusco-Peru. p 274-283.
 8. Palacios, J. 1997. Plantas Medicinales del Perú II. (Medicinal Plants of Peru). National Science and Technology Council (CONCYTEC). p 235-238.
 9. Sagástegui, A. & Gonzales, G. 1993. Flora Invasora de los cultivos. Trujillo Perú. P 200-201
 10. Brako, L y J. Zarucchi. 1993. Catálogo de las Angiospermas y Gimnospermas del Perú/ Catalogue of the flowering plants and Gymnosperms of Peru. Missouri Botanical Garden (ed). Missouri, EE.UU. pp 1286.
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ANALYSIS CERTIFICATE
N° 051 - 98

CERTIFICATE OF VEGETABLE KIND

I DATA OF THE REQUESTING

Name : INTERNATIONAL CORPORATION
HEALTH AND LIFE E.I.R.L.
Address : Alfonso Cobian cooperative Mz
H Lt I - Chaclacayo

II DATA OF THE SERVICE

Service request : Not 285 - 98
Date of service request : 98-05-06
Requested service : Vegetable kind

III NAME OF THE PRODUCT

BLOOD SUCKER (YAWAR CHONKA)

IV DATA OF THE SAMPLE

Size : 60 g aprox.
Other characteristics : Packed to bulk

V USED LABORATORY

Professional services

VI RESULTS

Of agreement to the Trial report No Co-V- 059 - 98 that work in the files the results are:

PHYSICAL DETERMINATION:

ASSAY
1. Specimen identification

RESULTS
Oenothera rosea Aiton
Family specie ONAGRACEAE

METHOD USED IN THE LABORATORY:

Classic method, orthodox.

VII CONCLUSIONS :

Of agreement to the result obtained the sample from BLOOD SUCKER (YAWAR CHONKA) corresponds to *Oenothera rosea*.

-
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June 5th, 1998 La Molina

II. - MONOGRAPH OF THE VEGETABLE KIND: YAHUAR - CHUNCA

1. DESCRIPTION:

SUPRASPECIFIC CATEGORIES:

- KINGDOM	:	PLANTAE
- DIVISION	:	MAGNOLIOPHYTA
- CLASS	:	MAGNOLIOPSIDA
- SUBCLASS	:	ROSIDAE
- ORDER	:	MYRTALES
- FAMILY	:	ONAGRACEAE
- Genus	:	Oenothera
- Species	:	O. rosea

1.1 SCIENTIFIC NAME : *Oenothera rosea* aff. *Oenothera multicaulis* R.

1.2 Synonymy : Chupa sangre, Yahuar - chunca, Yahuar
Chchunca, sanguinaria, poligón yahuar
Shojo, Yahuar sua, Antañahui, Circorner.

1.3 BOTANICAL CHARACTERISTICS:

Perennial herbaceous plant, flourishing at the beginning of the year. There are shrubs 1 meter high up and more.

Roots	:	Tuberous
Stem	:	Herbaceous from 5 dm. Length, ascendant and uniformly decumbent, lean, simple or ramified violaceous red colored (intensified at the base) with whitish <u>univelular</u> hair.
Leaves	:	Oblong - subentire lanceolate or roughly sinuous toothed irregularly with thin petiole 1 - 2 cm length, the leaves of the top reduced to greenish bractlet in whose axilla is going to grow up flowers.
Inflorescence	:	Racemose
Flowers:	:	Hermaphrodite, heterochlamydeous, pedunculate and perigyny, it presents <u>hipanto</u> that enclosure the lower ovary 4 - 8 mm. length, which external part presents 8 strias (4 more prominent). Calyx tetramero, gamosepals. The 4 sepals are 5 - 8 mm of length, reflexes during the stretch, pubescent with large lobes and decumbent. Corolla <u>tetramera, diapetala</u> constituted for 4 egg-shaped petals 5 - 10 mm length, pink or violet red. Androecium <u>diplostemo</u> constituted for 8 stamens with anther <u>dorsifijas</u> , lengthening 2.5 - 4 mm length <u>ditesicas</u> , with longitudinal dehiscence. White filament. The pollen grain has tetrahedral size. Complete gynoecium lower ovary, tetracarpelar, tetraocular, multiovular, anatropo ovule, <u>epitropo</u> , and

central and axial placentation pendulum. Development style

Fruit : It is a ovoid pharm 8 - 10 mm length and 3 - 4 mm thickness, extracted with 8 longitudinal ribs, each one 1 mm wide and wrinkled faces; it owns as a base a hollow peduncle 5 - 20 mm length. Seeds are oblong, egg-shaped and asymmetric, colored 0.6 mm lengths approximately.

References :

Also known as huaila - cajetilla, saya - saya, yahuar chchunca, it is used for beats, in poultice to absorb blood in ecchymosis or black- and- blue mark, in infusion or plaster, or shrouded plant (*).

2. COMMERCIAL SOURCE:

Stem and leaves.

3. CHEMICAL COMPOSITION

The principal chemistry components that stems and leaves present are Mucilage, anthocyanins, tannins, flavonoids, resins, and triterpenic steroids.

Among the principal phenolics components founded in hydrolyzed extract of *Oenothera rosea* leaves we have:

Elagic acid, galic acid, -m-galoi galic acid, neoclorogenic acid, cafeic acid, (small quantity), -p-cumaric acid, -o-cumaric acid, myricetin (scarce quantity), quarcelina, kaenferol, definidina, cianidina.

Flavonoids (aglucon and glycosidilated flavonics) belong to flavonol.

In addition to quercelina, as free aglucon have the following glycosidilated flavonics: isoquecetrin, hiperoside, rutine.

It has hydrolizable tannin, (pirogalic), galotánicos (galoilicos esters) (**).

4. THERAPEUTIC PROPERTIES:

At folkloric medicine:

Vulnerary to ecchymosis and traumatism:

Used part	:	Stem and leaves
Preparation	:	Infusion
Forms of use	:	Plaster

5. BIBLIOGRAPHY:

Lima University. School of Industry engineering. "Pharmaceutical Industries. Catalogue of Medicinal Plants". Investigation Center of the Industrial Production CIPI.

(*) Jeroslav Soukup SDB. "Vocabulary of the vulgar names from the Peruvian Flora and catalogue of the genus". Publishing by Ed. Salesiana Lima - Peru.

(**) Raúl Máximo Soria López Thesis: "Pharmacobotanic studies of *Ocbothera rosea* L' Her, ex, alt. " 1984. UNMSM Lima - Peru.

- Biologist Graciela Vilcapoma Segovia, according to A. Cronquist 1982.

10. Translations of the articles or book reprints about
Oenothera rosea

Author: Antonio Brack

Footnote: 6

***Oenothera rosea* Aiton.**

1. Family: Onagraceae.
2. Common names: chupa sangre, sanjuan, yawar chchunga, yawar chonca, sanguinaria.
3. Distribution: Amazonian Elevations and Sierra between 1,500 and 4,000 m. a. s. l.
4. Situation: wild herb.
5. Uses:
medicinal:
 - hematose contusions: in cataplasm.
 - pneumonia: drink the leaf cooking.
 - vermifuge: leaf decoction as beverage.
 - against cough: drink the root decoction.
 - rheumatism: Rub in with the alcoholic maceration of flowers and leaves.

***Oenothera* sp**

1. Family: Onagraceae.

2. Common names: yawar chonqa, chupa sangre, yawar ch'onqa.

3. Distribution: Altiplano plateau.

4. Situation: wild.

5. Uses:

* ethno-veterinary: to cure contusions and fractures in animals (cataplasma).

Author: Carlos Roersh, Liesbeth van der Hoogte

Footnote: 7

Yawar ch'onqa

Family: Onagraceae

Latin name: *Oenothera rosea* Ait.

nr. 487, herb. CMA, Andahuaylillas. Cusco, 1983

nr. 1902, herb. CMA. Grau. Apurímac. 1985

Common name: chupa sangre (Cusco).

Yawar ch'onqa (Cusco, Puno, Apurímac).

Habitat: Plant of approximately 30 cm height, with purple, rose-colored flowers. Found in road sides and near irrigation ditches. It grows in the Sierra Zone up to 3,600 m. a. s. l. In altitudes more than 4,000 m. a. s. l., the most abundant species are *Oenothera scabra* Krause (nr. 1903, herb. CMA). and *Oenothera multicaulis* R. et P. (nr. 1901, herb. CMA). Both species have the same characteristics of altitude

herbs, growing at surface level and have well developed root.

Quality: Moderate (temperate)

Uses

Disease	Way of application
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To avoid	- Drink the tea.
----------	------------------

infections after an
accident

Injuries	- Put the leaves over the injury.
----------	-----------------------------------

	- Drink in infusion.
--	----------------------

	- Ground leaf plaster.
--	------------------------

Cough	- Drink a punch made with the ground roots.
-------	---

After giving birth	- Drink in infusion.
--------------------	----------------------

	- Walthasqa: mass consisting of: chamanway, ch'iri-ch'iri, alqo cebolla, yawar ch'onqa, muthuy, ruku-ruku or yanaruku, rosemary, qata, turpay, kalawala, sutuma, figs, jora prepared with barley or mill flour.
--	---

	- wiksa hampi: cooking of: chikchimpa, yawar ch'onqa, wakatay, pachataya salvia, coriander, rosemary, myrtle, yanaruku and nettle root (kisa saphi).
--	--

post-giving birth

- patch* with ground wichhullo and yawar ch'onqa.
- Rub the body with a mix prepared with the grinding of: ch'iri-ch'iri, alqo cebolla, beaten white of egg, chancaca (raw brown sugar), alfeñique (sugar past in bar cooked in almond oil), vinegar, yawar ch'onqa, muthuy, arnica balsam, figs, raisins (dry), fresh urine, flour, wheat.
- 'walthasqa': swaddling made of: wichhullo, incienso del campo, matico or moqo-moqo, eucalyptus, saúco leaves (elder tree), capulí leaves, molle leaves, waka qallu, sultaki-sulta.
- sangre-sangre, yawar ch'onqa, rue, markhu, yana waqta, kiswar, pispita, qhaswis, nuqhaw.

Contusions

- Ground leaf plaster.
- Drink the tea.
- Plaster with ch'iri-ch'iri and qata.
- Put the plaster.
- Mix with tarra, turpay, layo, ch'iri-ch'iri and egg.
- In patch*. It is mixed with yawar ch'onqa root, asnaq verbena, ch'ikmu, nettle root, thoqo pilli, altea, hank'u chuta, barley and quinoa grains, grind them all

* Patch: plaster, poultice

together and boil with jayaqen urines (cow bile). Add when available: balsam and arnica.

- Drink ground root tea.
- plaster with: yawar ch'onqa, ch'iri-ch'iri, salt, lemon (drops), refined sugar.
- Tea of yawar ch'onqa (twigs).
- patch* of: yawar ch'onqa, vela-vela arnica, cabbage, culebra or lagarto, chancaca negra (raw brown sugar), husk'a, yareta, chaqueras (they are taken from pineapple) and wichhullo (from the Forest and the Sierra).

stomachache
and/or back pains
during pregnancy

- patch* made of: ch'iri-ch'iri, muthuy, yawar ch'onqa, ruku-ruku, sankolayo, (rosemary and myrtle, when available), chancaca (raw brown sugar) and alfeñique (sugar past in bar cooked in almond oil).
- patch* made of: yawar ch'onqa, rosemary, yanaruku, myrtle and red salt (wayra kachi); covering with black wool.

sprains

- patch* of: yawar ch'onqa, tarra, turpay, layo, ch'iri-ch'iri and egg.
- plaster with ch'iri-ch'iri and qata.
- patch* of a mix of the following herbs, ground and

* Patch: plaster, poultice.

then boiled in fresh urine: yawar ch'onqa, alqo kiska, bitter pilli, wormwood, ch'ikmu, hank'o chuta, vipergrass, waña chuño, yanatruku, qata, plantain, asnaq verbena, molle, markhu, cocoliza, mula kisa, ch'awa-ch'awa, wheat, barley, corn, porcenala, t'ola, ch'aqo, alhucema (lavender), hen, fish, viscacha, skunk, goat and snake tallow.

biliary calculus - drink the juice of the following plants with chicha de jora*: yawar ch'onqa, maich'a, apiña-kisa, ch'iri-ch'iri, ch'illka, hierba de cáncer, plantain.

cough or 'chiri pulmón' - drink a preparation from white of egg with powder of the ground dry flowers of: aleluya, panti-panti, puro-puro, turpa, yawar ch'onqa, pilli, plantain, anise, plus starch (one half raw and the other cooked).

- plaster made of: salqa sallma, yawar ch'onqa, ch'iri-ch'iri, sultaki-sulta and chancaca negra (raw brown sugar).

to avoid - drink the tea.

infections after giving birth - drink the cooking of: layo, totora root, clover (leaves and seeds), turnip flowers, goma blanca, thurpay, yawar ch'onqa.

uterus - drink a maceration of: rosemary, wamanripa, salvia,

* Chicha de jora: the most popular drink of Peruvian Sierra elaborated with corn.

inflammation

yawar ch'onqa, chachacoma, t'ola, jorjolla, kisa hembra and kisa macho roots, asnaq muña, jarilla, wiksa hampi, hierba de cáncer, grama root, sallika, ruku-ruku, pampa anís, lluphan, qata; al of them toasted and ground, then mixed with boiled water, cañazo (brandy of sugar cane) and arnica tincture.

- Drink tea of the following herbs toasted and ground altogether: qharisirviy, sutuma, ch'ikmu, lambrakaña, khunuka, qata, yawar ch'onqa, grama and salt.

rheumatism

- Rub the body with the maceration of: markhu, santa maría, wormwood, yawar ch'onqa, ortiga roja (red nettle), ñuñumia, sasawi, camomile, rue, eucalyptus, ch'iri-ch'iri, retama (Spanish broom), muthuy, alqo kiska, k'ita tarwi, nettle and salvia.
- Rub with a mix of ground leaves and flowers of: markhu, santa maría, yawar ch'onqa, wormwood, red nettle, ñuñumia, sasawi, camomile, rue, eucalyptus, ch'iri-ch'iri, retama (Spanish broom), muthuy, alqo kiska, k'ita tarwi, nettle, salvia. Add balsam.
- Rub with the dry powder of the grinding of: salvia, yawar ch'onqa, akana with rock salt.
- Rub a maceration of: matico hembra and matico macho, markhu, rue, rosemary, sumbayllo, balsam

- (macho), incienso (buds), cascarilla, kamalampi, chuchuwasa (tender leaves or root), virgen ch'illka, maych'a, yawar ch'onqa, molle (leaves and flowers).
- Rub with the grinding of: salvia, yawar ch'onnqa, akhana. Add rock salt to it.
- apai chikchi**
- Wash with the decoction of: yawar ch'onqa, q'eto-q'eto, plantain and hierba de cáncer.
- urinary tracts**
- Plaster made of ground yawar ch'onqa, rosemary, muthuy leaves, ch'iri-ch'iri. Add cow tallow.
 - Plaster of: ch'iri-ch'iri, snake flesh, yawar ch'onqa, plantain, black chancaca (raw brown sugar), egg.
- uterus pain**
- Drink the cooking of: wichhullo, qata, sutuma, tullma, mula pilli, jaya kisa, yawar ch'onqa, santa maria, ch'api.
- bladder disease**
- Plaster made of: yana ruku, yawar ch'onqa, llantay, hierba de cáncer, white of egg, potato juice.
- Kidney**
- Drink the decoction of: cola de caballo (hembra and macho), pinco-pinco (hembra and macho), corn silk (black, yellow, red), white grama, ch'iri-ch'illka (macho), ch'iri-ch'iri (hembra of yellow flowers), yawar ch'onqa (root and leaves), pilli-pilli (bitter and swwet), all the flowers of espinoes; estrella kiska, zapatilla, pirk'a, retama (Spanish broom), nettle (black stem),

toasted barley, q'eto-q'eto (root and leaves), corn (yellow, red and black) partially toasted, plantain and saqarara, then add white chancaca and black chancaca (raw brown sugar), alfeñique (sugar past) and candies of several colors.

- plaster of: ch'iri-ch'iri, snake flesh, yawar ch'onqa and ñuñu-ñuñu (everything ground plus white of egg).

- plaster of: parsley, sultaki-sulta, yawar-ch'onqa (all of them ground) plus white of egg.

Fractures

- drink tea of the ground root.

- plaster with: yawar ch'onqa, ch'iri-ch'iri, salt, lemon (drops), refined sugar.

- tea of yawar ch'onqa (twigs).

- patch* of: yawar ch'onqa, vela-vela, arnica, cabbage, culebra or lagarto, black chancaca (raw brown sugar), h'uska, yareta, chaqueras (taken from pineapple) and wichhullo (from the Forest and the Sierra)

to cut off

- tea of: matico, wild marjoram, yawar ch'onqa, turpay,

hemorrhage

chunta-chunta, turnip flowers, mint, q'eto-q'eto,

during giving birth

runamanayupa, chicory.

* Patch: plaster, poultice.

Principal uses

*** Apai chikchi; Pimples; Hamp'atu wayra; Qullu**

Washings

Recipe Boil together 1 handful of yawar ch'onqa, 1 handful of hierba de cáncer, 1 handful of plantain and 1 handful of q'eto-q'eto in 4 cups of water.

Application Wash the pimples trice a day with this preparation, until cure.

Precautions none.

*** Infected injuries, Konq'enijewa, Llaga Pukayasqa**

Plaster

Recipe Boil some yawar ch'onqa leaves in some water.

Application Place the leaves over the injury as a plaster.

Repeat the treatment every day until cure.

Precautions None

Pharmacology/Toxicology

International bibliography as for information about *Oenothera rosea* is very scarce. In Mexico this plant is known under the name of "hierba de golpe" (Martinez, 1979, pg. 425. 1134).

SANGUINARIA

Scientific name : *Oenothera rosea* Ait.

Family Onagraceae.

Synonymy

Sanguinaria, chupasangre, san juan, yahuar chchungá, yahuar chonca, yahuar chchuncka, gahuar chchuncka, yahuar shojo, yaguar sua, antañahui, circoner, poligón, hierba del golpe.

Botanical characteristics

Herbaceous plant, perennial, approximately 30-cm height, although there are shrubs of over a meter or more, tuberous root.

STEM: Herbaceous, erected or ascendant and uniformly decumbent, thin, simple or ramified, red-violet-colored, more intensely on the base, with whitish pubescence.

LEAVES: Oblong-lanceolate, sub-entire or roughly sinuate, irregularly dented, two to 5 centimeter length with thin petiole. The upper leaves are reduced to greenish bracts where flowers grow in the axillas. Dark-green-colored face and slightly lighter in the back.

FLOWERS: Grouped in clustery inflorescences. Hermaphrodite, heterochlamyd, peduncled and perigynium; the hipanto involves the infero

ovary, which external part presents eight striae (four more prominent). Tetrameric, gamosepalous calyx reflex sepals during anthesis, pubescent, with long and decumbent lobules. Tetrameric corolla, dialipetal, constituted by four ovoid petals, rose-colored or red-violet. Androceum diplostemonon constituted by eight stamens with dorsifixed anthers, lengthened, two teaks with longitudinal dehiscence, white-colored filament, tetrahedral pollen grains. Complete gynoecium, infero ovary, tetracarpelar, tetralocular, multiovular, anatropic ovules, epitropic, pendulant, of central and axial placentation, developed style, stigma constituted by four rose-colored stigmatic branches.

FRUIT: Ovoid capsule 8 to 10 mm length, extracted with eight longitudinal ribs and corrugate faces, with an empty peduncle as base. Oblong, ovoid and asymmetric seeds, colored of brown.

Distribution

Grows uncultivated at the edges of channels and around cultivated lands in low and medium levels of temperate or subtropical climates. It is found in high Andean zones with an altitude between 3,600 m. a. s. l. and 4,000 m. a. s. l., but more frequently in intermediate valleys to both sides of the Andes: Cuzco, Puno, Apurimac, Cajamarca, Amazonas, Junin, and Huánuco. It extends from southwest United States, Mexico, Costa Rica, to Bolivia.

Historic References

It is a native plant of South America⁽¹¹¹⁾. The use of this plant in medicine by ancient Peruvians dates back from pre-Columbian time⁽¹¹⁶⁾, applied in the treatment of lesions and traumatism as infusion and cataplasm; also as infusion in case of respiratory affections (tuberculosis, pleurisy, pneumonia), in rheumatism, sciatica and pains in general⁽¹²²⁾.

At the request of Felipe IV, clergyman Vasco de Contreras wrote, in 1650, the book "Relación del Cuzco" where the medicinal properties of this plant are mentioned⁽¹¹¹⁾.

It is commonly used, for contusions applied as cataplasms on tumefactions to absorb the blood of bruises due to strokes, this treatment is supplemented by drinking the infusion⁽⁴⁴⁾.

Drug

Leaves.

Active principles

Phenolic substances: acids: elagic, galic, caffeic, O-cumarinic, mandelic, neochlorogenic, kaemferol, quercetin, cyanidin, delphinidin; glycosides rutin, quercetin, isoquercetin, hyperoside; pyrogalic tannins; mucilage; anthocyanines; resins; saponins; steroids and/or triterpenoids.

Therapeutic Properties, Preparations and Doses

Vulnerary, cure of bruises (injuries, strokes, contusions)

Part used Leaves.

Preparation Infusion to 5%: five grams of fresh or dry leaves in 100 ml of boiled water, let it settle for 5 minutes and then filter.

Cataplasm: crush fresh leaves until soft paste then sprinkle some salt.

Ways of use Cataplasm and infusion are applied together. Infusion: drink a glass twice a day.

Cataplasm: apply over the affected part covering completely, wrap with white and clean fabric; repeat every 24 to 48 hours.

Anti-cough

Part used Root.

Preparation Decoction to 20%: boil 20 grams of pulverized root in 100 milliliters of water for ten minutes, then mix with beaten egg.

Way of use Drink a glass three times per day.

Anti-rheumatic

Part used Flowers and leaves.

Preparation Maceration in alcohol of 40° during five to ten days using 10 grams of flowers and leaves for each 100 ml of alcohol and letting it sit in a closed recipient.

Way of use Massage the affected zone with liquid of the macerated and with the dry powder of flowers and leaves.

Author: Abundio Sagástegui, Segundo Leiva

Footnote: 9

Oenothera rosea L'Her. ex Ait., Hort. Kew. ed. 1: 213, 1759.- *Xylopleurum roseum* (Ait.) Raim., in Engler u. Prantl, Natur. Pflanzenfam., 3 (7): 214, 1893.

Perennial, erected or ascendant herb, 10-15 cm height, ramified on the base, more or less owl-shaped. Elliptic or oblong-ovoid leaves, attenuated on the base over the petiole, entire or sinuous-denticulate, frequently with one pair of teeth pointing to the base, 2-5 (-8) cm length. Flowers placed on leaf axillas forming clustery groups. Owl-shaped hipanto, 4-8 mm length. 5-8 mm length sepals. Rose-colored or lilac colored petals, widely obovoids, 5-10 mm length. Stigma with lineal lobules, 2 mm length. Capsule with pedicel, obovoid, 4-angular, winged angles, owl-shaped, 8-10 mm length by 3-4 mm diameter. Numerous seeds, oblong-ovoid, asymmetric, brownish, 0.6 mm length.

From warm America, distributed from Southwest United States to Peru and Bolivia. Cultivated as ornamental and adventitious in modified soils.

It propagates by seeds. Blossoms in the summer.

10. *Perezia coerulescens* Wedd.

Chlor. Andina 1: 39, t. 10 A. 1855.

Reference:

Harling, G., 1991. Fl. Ecuador, p. 103

Common names: valeriana, contrahierba, intipa sapran, contrayerba, sotoma, sutuma.

Identification of the plant

The taxonomical identification of this plant is described in the Certificate of Analysis attached (1).

Description of the plant

The botanical characteristics are described in the publication attached (3).

Parts Used: stem leaves

Previous use by humans:

Leaf infusion is traditionally used for asthma by drinking it with water or milk. Also used as diuretic and sudorific, for stomach pains, nervous disorders, cardiac problems. The powder made of dried roots is used as antidote against poisoning. Ethnobotanical record is made of the internal use of this herb by South American populations (3,4,5).

No ill effects from its usage have been recorded.

Origin and ecology:

Native wild herb of Peru. Grows between 3500-4500 m. Can be found in the districts of Ancash, Arequipa, Cuzco, Huánuco, Huancavelica, Junín, Lima and Puno (6)

Chemical composition

The chemical composition of *Perezia coerulescens* through analysis includes:

Common name	Scientific name	Phytochemical compounds found	Technical report*
Valeriana	<i>Perezia coerulescens</i> Wedd.	Alkaloids, tannins, triterpen-steroids, reducing sugars, catechines and bitter principles	693-98

*Reported by Total Quality Laboratories. National Agrarian University (2).

Method: Look de Ugaz Olga. Fitoquímica, 1994.

This plant is component of the Isula Rain's botanical products:

Andean Serenity Extract. Herbal Supplement.

Level

The level of *Perezia coerulescens* in the product "Andean Serenity" (see below for entire ingredient listing) is:

Common name	Scientific name	Parts of the plant used
Hierba Luisa	<i>Cymbopogon citratus</i> (DC.) Stapf	Leaves
Toronjil	<i>Melissa officinalis</i> L	Stem, leaves and flowers
Pimpinela	<i>Sanguisorba minor</i> Scopoli	Stem and leaves
Manzanilla	<i>Matricaria recutita</i> L	Flowers
Valeriana	<i>Perezia coerulescens</i> Wedd.	Stem and leaves

The normal use recommended on the label of "Andean Serenity" is:

Directions: Take a teaspoon as needed, mixed with a glass of warm or cold water. Add honey if a sweetener is desired. If you'd like to avoid the consumption of alcohol, yet still enjoy the benefits of our product, add one teaspoon to a glass of hot, boiled water and let sit for 5 minutes.

Do not exceed 4 teaspoons per day.

DO NOT USE THIS PRODUCT IF YOU ARE PREGNANT OR LACTATING

References

1. Analysis Certificate, No. 692-98, La Molina Calidad Total Laboratorio, 1998
 2. Analysis Certificate, No. 693-98, La Molina Calidad Total Laboratorio, 1998
 3. Technical Report, No. 102-98, La Molina Calidad Total Laboratorio, 1998
 4. Roersch, C. y L. Van der Hoogte. 1988. Plantas Medicinales del Surandino del Perú. Centro de Medicina Andina, eds. Cusco-Peru. p 266-269.
 5. Brack, A. 1999. Diccionario Enciclopédico de plantas útiles del Perú. Centro de Estudios Regionales Andinos Bartolomé de las Casas, eds. Lima -Perú.
 6. Brako, L y J. Zarucchi. 1993. Catálogo de las Angiospermas y Gimnospermas del Perú/ Catalogue of the flowering plants and Gymnosperms of Peru. Missouri Botanical Garden (ed). Missouri, EE.UU. pp 1286.
-

ANALYSIS CERTIFICATE
N° 692 - 98

CERTIFICATE OF VEGETABLE KIND

II. DATA OF THE REQUESTING

Name : INTERNATIONAL CORPORATION
HEALTH AND LIFE E.I.R.L.
Address : Alfonso Cobian cooperative Mz
H Lt. 1 - Chaclacayo

II. DATA OF THE SERVICE

Service request : N° 832 - 98
Date of service request : 98-09-08
Requested service : Certificate of vegetable kind

III. NAME OF THE PRODUCT : VALERIANA (VALERIAN)

IV. DATA OF THE SAMPLE

Size : 1 bag
Other characteristics : Containing root and leaves.

V. USED LABORATORY : Professional services.

VI. RESULTS

Of agreement to the Trial report Co- V- 148- 98, that works in the files and reports the following:

The sample (root and leaves) of "Valerian", has been identified by orthodox method as: *Perezia coerulescens*, Wed., which botanical classification according to A. Cronquist (1982) is:

KINGDOM : PLANTAE
DIVISION : MAGNOLIOPHYTA
CLASS : MAGNOLIOPSIDA
SUBCLASS : ASTERIDAE
ORDER : ASTERALES
FAMILY : ASTERCEAE
SUBFAMILY : ASTEROIDEAE
Genus : *Perezia*
Species : *P. coerulescens*

METHOD USED IN THE LABORATORY

Classic method, orthodox. According to A. Cronquist 1982

-
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October 9th. 1998 La Molina

ANALYSIS CERTIFICATE
N° 693 - 98

PHYTOCHEMIST TRIAL RUN CERTIFICATE

I. DATA OF THE REQUESTING

Name : INTERNATIONAL CORPORATION
HEALTH AND LIFE E.I.R.L.
Address : Alfonso Cobian cooperative Mz
H Lt. I - Chaclacayo

II. DATA OF THE SERVICE

Service request : N° 832 - 98
Date of service request : 98-09-08
Requested service : Phytochemist trial run

III. NAME OF THE PRODUCT : VALERIANA (VALERIAN)

IV. DATA OF THE SAMPLE

Size : 400 g approximately
Other characteristics : Packed in polypropylene bag.

V. USED LABORATORY : La Molina Calidad Total Laboratorio.

VI. RESULTS

Of agreement to the Trial report N° 1839- 98, that work in the files and reports the presence of the following components:
Alkaloids, tannin, steroids-triterpenoids, reducing sugar, bitter principles and catequines.

METHOD USED IN THE LABORATORY
Look de Ugaz Olga PHYTOCHEMIST investigation Method 1994

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October 9th, 1998 La Molina

TECHNICAL REPORT
No 102 - 98

REQUESTING : INTERNATIONAL CORPORATION HEALTH AND
LIFE E.I.R.L.
ADDRESSES : Cooperativa Alfonso Cobian Manzana II.
L11 - Chacabayo
APPLICATION SERVICE : No 832 - 98
REQUESTED SERVICE : Monograph of the vegetable kind component of the
Product.
PRODUCT : VALERIANA
VEGETABLE KIND :

MONOGRAPH OF THE VEGETABLE KIND: VALERIANA

1. DESCRIPTION:

KINGDOM : PLANTAE
DIVISION : MAGNOLIOPHYTA
CLASS : MAGNOLIOPSIDA
ORDER : ASTERALES
FAMILY : ASTERCEAL
SUBFAMILY: ASTEROIDEAE
Genus : *Perezia*
Species : *P. coerulescens.*

1.1 SCIENTIFIC NAME : *Perezia coerulescens.*

1.2 BOTANICAL CHARACTERISTICS:

Plant which stem is lifted up, robust and deep with opposite leaves and open-handed in leaflet sharp-pointed and dented. Abundant flowers in terminal Corimbo with corolla of one piece.

It grows in forest and wet places.

This plant is fresh and with not odor, when it is dry emanate a disgusted odor.

The root is radical a little truncated it seems to be a rhizome.

The fruit is aquenio, egg-shaped, and large.

2. COMMERCIAL SOURCE

The root is thick. It is recommended to use it fresh or a little bit after its compilation because it lost its effectiveness as long as it get dry.

3. CHEMICAL COMPOSITION

Essence, valericinic acids, formic, malic, or acetic, mineral salts, fat, methyl-cetone, several alkaloids, triterpenes, cumarines, (pereflomine b. 3,4,8-trimetoxy-5-fomil-2H-1-benzopirari-2-ona.8-hidroxi pereflomina).

1 PROPERTIES

Diuretic, Anti-viral, anti-grippe.

5 BIBLIOGRAPHY

- LOOK DE UGAZ, Olga, Phytochemist investigation. " Metodos en el Estudio de Productos Naturales". Pontificia Universidad Catolica del Peru. Editorial Font 1994

- Medicinal Plants Catalogue . Lima University. Industrial Engineering. Lima 1994.

- Medicinal plants at the south Andean of Peru
C.Roesch.

-
- The certified present is referred exclusively to the analyzed sample, the one that is provided by the solicitor
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November 30th, 1998 La Molina

11. Translations of the articles or book reprints *about*
Perezia coerulescens

Author: Roersch, Carlos

Footnote: 4

Family: Compositae

Latin name *Perezia coerulescens* Wedd.

nr. 2723, herb. CMA. Chuquibambilla, Apurímac. 1985.

nr. 226, herb. CMA, San Jerónimo. Cusco. 1981.

Common name Sutuma macho (Tocroyoc/Cusco)

Sutuma (Cusco, Puno, Apurímac)

Valeriana (Cusco)

China sotuma (Pacchanta/Cusco)

Habitat Herb that grows at surface level. Its flowers are white with blue or rose-colored spickles. Its roots are very peculiar as can be seen from the drawing. It is found on the elevated mountains (above 3,700-4,700 m.), between canes and in hillocks.

Quality Warm.

Parts used twigs, roots.

Uses

disease **Way of application**

- Drink the cooking of chuku-chuku and sutuma.

- strengthening - Drink the cooking of chuku-chuku and sutuma.
of uterus after
giving birth
- phlegmy cough - Drink the cooking of the whole plant.
whooping - Drink the cooking of the whole plant.
cough
- bronchitis - Drink the decoction.
kidney disease - Tea.
rheumatism - Rubbing.
headache - Rub with: sutuma, orqo-kisa condor pilli.
- Permanent - Broth prepared with pelt, feet and head of pig plus
sterilization sutuma leaves.
- mirka - Tea of: yupatinku (root), sutuma (leaves), zapatilla
(leaves), white k'awri (leaves and root).
- uterus - Tea of: qharisirviy, sutuma, ch'ikmu, lambrakaña, sal,
inflammation khunuka, qata, yawar ch'onqa, grama and salt (all of
them toasted and ground).
- Drink the cooking of sutuma and phufia-phufia.
- after giving - **Walthasqa:** mass that contains: chamanway, ch'iri-
birth ch'iri, alqo cebolla, yawar ch'onqa, muthuy, ruku-ruku or
yana ruku, rosemary, q'ata (root), turpay, qalawala,
sutuma, figs, jora of barley, mill flour. All of them ground
and with white of egg.

liver

urinary tract - Drink the decoction of: sultaki-sulta, alqo kiska, ch'iri-ch'iri, pampa muña, pachatayanka, sutuma, tikllay warmi.

lung - Tea of: wamanripa, ñukch'u, sutuma.

cough - Tea of: wamanripa, ñukch'u, sutuma.

'susto' - Tea of: wamanripa, ñukch'u, sutuma.

uterus pain - Drink the cooking of: wichhullo, q'ata, sutuma, tullma, mula, pilli, jaya kisa, yawar ch'onqa, santa maria, chapi.

ccoiro (?) - Juice to the eye.

Main use:

*** Ch'oho; Cough; Uhu**

Tea

Recipe Let one sutuma twig repose in 1 cup of boiled water.

Dosage Drink one cup, three times a day.

Contraindications Not recommended for children.

Pharmacology/Toxicology

There are no pharmacological data known about Sutuma. In different places of Peru and Bolivia the main use in vernacular medicine is as diuretic and for colds (Oblitas, P. E., 1969, pg. 335-336; Herrera, F., 1941, pg. 431).

Author: Antonio Brack

Footnote: 5

Perezia virens (Don) Hook. & Arn.

1. Family: Asteraceae.
2. Synonyms: *P. coerulescens* Wedd.
3. Common names: intipa sapran, contrayerba, sotoma, sutuma, valeriana.
4. Distribution: Sierra between 3,500 and 4,000 m. a. s. l.
5. Situation: wild herb.
6. Uses:

* Medicinal:

- As diuretic.
 - Stomachaches.
 - Nervous diseases.
 - Cardiac diseases.
 - Antidote against poisons: ground root.
-

Piper alveolatum

12. *Piper alveolatum* Opiz (Piper sp.)

Reliq. Haenk. 1(3): 155. 1828.

Flora of Peru reference, p. 133

Common names: Matico, hierba de soldado

Identification of the plant

The taxonomical identification of this plant is described in the Certificates of Analysis attached (1,2)

Description of the plant

The botanical characteristics are described in the Certificate of Analysis and Technical Report attached. (1,4)

Parts used: Stem and leaves

Previous use by humans:

The leaf infusion of herbs, from the Piperaceae family commonly known as Matico, is traditionally used as mouthwash to reduce inflammation, and as beverage to give relief for urinary affections and asthma. The water of boiled leaves (decoction of the leaves) is used to wash injuries and wounds in order to stop hemorrhages. For skin problems the application of warmed leaves is used. Ethnobotanical record is made of the internal use of this herb by South American populations (1,4,5,6,7,8,9,10).

No ill effects from its usage have been recorded.

Origin and ecology:

Originally from Andean Peruvian valleys. Grown between 2000-2500 m. Can be found in the districts of Huánuco and Cuzco.

Chemical composition

The chemical composition of *Piper alveolatum* through analysis includes tannin, steroid triterpenoids, reducing sugar, bitter and astringent principles, tartaric acid, resins, alkaloids, saponins, flavonoids, ethereal oils, amides, spiquant, phenyl propanoids, pirones, polyphenols, lignanes, esters, phenolic alkaloids pyrrolidines, and quinones.

Its active principles have been identified as flavonoids and glycosides.

Common name	Scientific name	Phytochemical compounds found	Technical report*
Matico	<i>Piper alveolatum</i> Opiz	Tannins, aminoacids, quinones, triterpen-steroids, reducing sugars, bitter and astringent principles.	683-98

*Reported by Total Quality Laboratories. National Agrarian University (3).

Method: Look de Ugaz Olga. Fitoquímica, 1994.

This plant is component of the Isula Rain's botanical products:

7-Day Digestive Cleanse #2. Herbal Supplement

Level

The level of *Piper alveolatum* in the product "7-Day Digestive Cleanse #2" (see below for entire ingredient listing) is:

Common name	Scientific name	Parts of the plant used
Chinchircoma	<i>Mutisia acuminata</i> R.& P.	Stem, leaves and flowers
Karkeja	<i>Baccharis genistelloides</i> (Lam.) Pers.	Stem, leaves and flowers
Canchalagua	<i>Schukhuria pinnata</i> Lamarck	Stem, leaves and flowers
Pájaro Bobo	<i>Tessaria integrifolia</i> R.& P.	Stem and leaves
Boldo	<i>Peumus boldus</i> Molina	Leaves
Cáscara de papa	<i>Solanum tuberosum</i> L.	Tuber rind
Salvia real	<i>Salvia sagittata</i> R.& P.	Stem and leaves
Romero	<i>Rosmarinus officinalis</i> L.	Stem, leaves and flowers
Cola de caballo	<i>Equisetum bogotense</i> H.B.K.	Stem, leaves and flowers
Matico	<i>Piper alveolatum</i> Opiz	Stem and leaves
Uña de gato	<i>Uncaria tomentosa</i> (Willd ex Roem. & Schult.)	Bark

The normal use recommended on the label of "7-Day Digestive Cleanse #2" is:

Directions: For (7) days, approximately 20 min. before meals, take one teaspoon, 3 times per day (morning, noon and evening), mix with a glass of warm or cold water (8 oz). If you'd like to avoid the consumption of alcohol, yet still enjoy the benefits of this product, add one teaspoon to a glass of hot boiled water and let sit for 5 min. Please see our OPTIONAL cleansing menu which can be used as a guide to follow during and after your cleanse. At the end of either the 7-Day or 21-Day Cleanse, take an acidophilus complex for at least 14 days.

DO NOT USE THIS PRODUCT IF YOU ARE PREGNANT OR LACTATING

References

1. Analysis Certificate, No. 052-98, La Molina Calidad Total Laboratorio, 1998.
2. Analysis Certificate, No. 682-98, La Molina Calidad Total Laboratorio, 1998.

3. Analysis Certificate, No. 683-98, La Molina Calidad Total Laboratorio, 1998.
 4. Technical report, No. 081-98, La Molina Calidad Total Laboratorio, 1998.
 5. Lacaze, D.& Alexiades, M. 1995. Salud para todos. Plantas Medicinales y Salud Indígena, en la cuenca del río Madre de Dios, Perú. Centro de Estudios Regionales andinos, Bartolome de las casas, eds.
 6. Rutter,R. 1990. Catalogo de plantas útiles de la Amazonía Peruana. Ministerio de Educación. Instituto Lingüístico de Verano. P 246-247.
 7. Roersch,C. y L.Van der Hoogte. 1988. Plantas Medicinales del Surandino del Perú. Centro de Medicina Andina,eds. Cusco-Peru. p 157-160
 8. Contorno. 1996. Medicina Natural Peruana, Remedios caseros. Contorno, eds. Lima-Peru. p 31.
 9. Palacios, J. 1993. Plantas Medicinales del Perú I. (Medicinal Plants of Peru). National Science and Technology Council (CONCYTEC). p 167-169.
 10. Barriga, R. Plantas Utiles de la Amazonia Peruana: características, usos y posibilidades. CONCYTEC,eds , 1st edition, 1994. p 223.
-

ANALYSIS CERTIFICATE
N° 052 - 98

CERTIFICATE OF VEGETABLE KIND

I DATA OF THE REQUESTING

Name : INTERNATIONAL CORPORATION
HEALTH AND LIFE E.I.R.L.
Address : Alfonso Cobian cooperative Mz
H L I - Chaclacayo

II DATA OF THE SERVICE

Service request : Not 285 - 98
Date of service request : 98-05-06
Requested service : Vegetable kind

III NAME OF THE PRODUCT

MATICO

IV DATA OF THE SAMPLE

Size : 50 g aprox.
Other characteristics : Packed to bulk

V USED LABORATORY

Professional services

VI RESULTS

Of agreement to the Trial report No Co-V- 060 - 98 that work in the files the results are:

PHYSICAL DETERMINATION:

ASSAY	RESULTS
1. Specimen identification	Piper Cf. Alveolatum Opiz Family specie PIPERACEAE

METHOD USED IN THE LABORATORY:

Classic method, orthodox.

VII. CONCLUSIONS :

Of agreement to the result obtained the sample from MATICO corresponds to *Piper Cf.*

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June 5th, 1998 La Molina

IV. - MONOGRAPH OF THE VEGETABLE KIND: MATICO

1. DESCRIPTION:

SUPRASPECIFIC CATEGORIES:

- KINGDOM	:	PLANTAE
- DIVISION	:	MAGNOLIOPHYTA
- CLASS	:	MAGNOLIOPSIDA
- SUBCLASS	:	MAGNOLIIDAE
- ORDER	:	PIPERALES
- FAMILY	:	PIPERACEAE
- Genus	:	<i>Pipers</i>
- Species	:	<i>P. cf. alveolatum</i>

1.1 - SCIENTIFIC NAME : *P. cf. alveolatum*

1.2 Synonymy : Matico, soldier herb, ridge, snof snof.

1.3 BOTANICAL CHARACTERISTICS:

Perennial Shrub 2 - 2.5 m height

Stem	:	Herbaceous, dichotomic, with numerous salients thin branches and downiness striated longitudinally.
Leaves	:	Simples, big with short petiole, complete limb egg-shaped - lanceolate, coriaceous, with rough surface, very reticulate, green intense color, aromatic odor, acute apex, attenuated at the base in the opposite disposition.
Flowers	:	Small, numerous, hermaphrodite, persistent calyx, white corolla, gamopetalous. Extended limb. androecium formed by 2 - 4 stamens. Gynoecium superovary, sessile, <u>tricarpelar</u> , <u>unilocular</u> , <u>uniovular</u> , surrounded by a greenish involucre.
Inflorescence:		Terminals or axillars, cymose, the first branches dichotomic, the last one scorpions grass.
Fruit	:	Drupe <u>obovate</u> small ovoid shape.

1.4 DISTRIBUTION:

Live in lower jagged mountain range warm, inter-Andean valleys between 2600 to 2700 meters on sea level: Cajamarca, Cuzco, Junin, Lima. Spreading to Bolivia and Chile.

2. COMMERCIAL SOURCED:
Leaves and young branches.

3. CHEMICAL COMPOSITION:

Essential oils, tartaric acid, resins, bitter substances, (masticin), tannin, alkaloids, saponins, flavonoids, triterpenoids.

4.

THERAPEUTIC PROPERTIES:

At folkloric medicine.

Hemostatic:

Used part : Young branches
Preparation : Cooking (10 g/L)
Forms of use : Local use: Washing.

Anti-inflammatory

Used part : Young branches
Preparation : Cooking (10 g/L)
Forms of use : Washing, gargling

Dermatological:

Used part : Leaves
Preparation : One cooking (10 g/L)
Forms of use : Local use: put the roasted leaves in the affected part.

Urinary affections:

Used part : Leaves
Preparation : Infusion (10 g/L)
Forms of use : Drink: drink as a refreshment.

5.

BIBLIOGRAPHY:

- QF. Palacios Vaccaro: "Medicinal Plants Native from Peru",
CONCYTEC. Lima-Peru, 1993 Pg.64 - 66.
Biologist Graciela Vilcapoma Segovia, according to A. Cronquist 1982.

ANALYSIS CERTIFICATE
N° 682 - 98

CERTIFICATE OF VEGETABLE KIND

II DATA OF THE REQUESTING

Name : INTERNATIONAL CORPORATION
HEALTH AND LIFE E.I.R.L.
Address : Alfonso Cobian cooperative Mz
H L I - Chaclacayo

II DATA OF THE SERVICE

Service request : N° 818 - 98
Date of service request : 98-09-08
Requested service : Certificate of vegetable kind

III NAME OF THE PRODUCT : MATICO

IV DATA OF THE SAMPLE

Size : 1 bag
Other characteristics : Containing branches.

V USED LABORATORY : Professional services.

VI RESULTS

Of agreement to the Trial report Co- V- 125- 98, that works in the files and reports the following:

The sample (branches without flowers) of "Matico", has been identified by orthodox method as *Piper sp.*, which botanical classification according to A. Cronquist (1982) is:

KINGDOM	PLANTAE
DIVISION	MAGNOLIOPHYTA
CLASS	MAGNOLIOPSIDA
SUBCLASS	MAGNOLIDAE
ORDER	PIPERALES
FAMILY	PIPERACEAE
Genus	<i>Piper</i>
Species	<i>Piper sp.</i>

METHOD USED IN THE LABORATORY

Classic method, orthodox According to A. Cronquist 1982

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October 9th, 1998 La Molina

ANALYSIS CERTIFICATE

ANALYSIS CERTIFICATE

N° 683 - 98

PHYTOCHEMIST TRIAL RUN CERTIFICATE

I. DATA OF THE REQUESTING

Name : INTERNATIONAL CORPORATION
HEALTH AND LIFE E.I.R.L.
Address : Alfonso Cobian cooperative Mz
H L I - Chaclacayo

II. DATA OF THE SERVICE

Service request : N° 818 - 98
Date of service request : 98-09-08
Requested service : Phytochemist trial run

III. NAME OF THE PRODUCT : MATICO

IV. DATA OF THE SAMPLE

Size : 240 g approximately
Other characteristics : Packed in polypropylene bag.

V. USED LABORATORY : La Molina Calidad Total Laboratorio.

VI. RESULTS

Of agreement to the Trial report N° 1816- 98. that work in the files and reports the presence of the following components:

Tannin, aminoacid, quinones, steroids-triterpenoids, reducing sugar, bitter and astringent principles.

METHOD USED IN THE LABORATORY

Look de Ugas Olga PHYTOCHEMIST investigation Method 1994

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October 8th, 1998 La Molina

TECHNICAL REPORT
No 081-58

REQUESTING	INTERNATIONAL CORPORATION HEALTH AND LIFE E.I.R.L
ADDRESSES	Cooperativa Alfonso Cobian Manzana H. L11 - Chacabuco
APPLICATION SERVICE REQUESTED SERVICE	No 797 - 58 Monograph of the vegetable kind component of the Product.
PRODUCT VEGETABLE KIND	MATICO

MONOGRAPH OF THE VEGETABLE KIND - MATICO

1. DESCRIPTION

2. KINGDOM	PLANTAE
DIVISION	MAGNOLIOPHYTA
CLASS	MAGNOLIOPSIDA
SUBCLASS	MAGNOLIDAE
ORDER	PIPERALES
FAMILY	PIPERACEAE
Genus	<i>Piper</i>
Species	<i>Piper sp.</i>

1.1 SCIENTIFIC NAME *Piper sp.*

1.2 BOTANICAL CHARACTERISTICS:

Common name . Yerba del soldado, cordoncillo

Plant tree erect of 4 m of high. Green stems, glabrous, the puffy knots.

Leaves with short petiole, the rugged surface, oval, of 15 x 9 cm obliquely rounded in the base, largely attenuated in the apex, glabra; nerves secondary greater, it lifted from inferior half of the main vein; right inflorescence, until 4 mm of bulk, until 12 cm of long, bumpy, white.

Stem	Grassy, dicotomic, with numerous thin branches with projecting knots and hairiness lengthwise rifling.
Leaves	Simple large, with petiole short, entire limbo, egg-shaped - lanceolate, concave, of rough surface, very reticulated of intensive green color, smell aromatic characteristic, apice acute, attenuated in the base, of opposite arrangement.
Flowers	Small numerous, hermaphroditic, persistent calice, white corolla, back petalous, of extended limbo. Androceo formed by two to two to four stamens gineceo super ovarial, sessile tricarpelar, uniloculate, uniovular, surrounded of an involucre greenish.
Fruit	Small Droga, in a way ovoid.
Terminal inflorescences:	Axillars cymes, the first branches, dichotomic, the last escorpioides

1.3 DISTRIBUTION

Inhabit in sheltered low saw, valleys interandean between 2,600 - 2,700 msnm. Cuzco, Arequipa, Junin, Lima, it is extended to Bolivia and Chile.

2. **COMMERCIAL SOURCE**
Leaves

3. **CHEMICAL COMPOSITION**

Contain glucosid and flavonoid unidentified.

The family PIPERACEAE contains: ethereal oils, amides, spiquant, cute and sesquiterpenoid, phenyl propanoids, pirones, poliphenols, and lignanes, alkaloids, esters, ethers, phenolic alkaloids pirrolidinics and essences.

4. **PROPERTIES**

- Anti - cough - expectorating

Used part : Leaves
Preparation : Infusion
Dose : Drink

- Antiseptic - hemostatic - searing

Used part : Leaves
Preparation : Powder
Dose : Local application

- Anti - diarrheicos

Used part : Leaves
Preparation : In cooking, 6 leaves (10 g) by water liter.
Administration and dose : By external. To apply in the form of corporal baths in the mornings.

Other not medical uses.

The leaves are used in baths in the magic rites.

5. **BIBLIOGRAPHY**

- University of Lima. Industrial Engineering, "Pharmaceutical Industries"
Investigation Center of the Industrial Production CIPI 1994

- "The secrets of the medicinal plants"
Issues Editors S.A. 1983

- A. Balbachas y H. Rodriguez "The plants cure"
Issues "The present truth", first edition.

- Q. F. Julio W. Palacios Vaccaro "Medicinal plants of Peru I"
CONCYTEC 1993

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November 26th . 1998 La Molina

12. Translations of the articles or book reprints about *Piper alveolatum*

Author: Didier Lacaze, Miguel Alexiades

Footnote: 5

MATICO

NATIVE NAMES: Amahuaca: tokondé. Amarakaeri: ugnpoingpoing. Ese eja: akui, 'iña-síe, Jawawa. Quichua: moco-moco. Shipibo-Conibo: shiatani.

SCIENTIFIC NAME: *Piper hispidum* and others (PIPERACEAE).

DESCRIPTION: Shrub that grows in paths and small isolated farms. There are several types, including the white and the red ones.

USES: Leaves have disinfectant and hemostat properties (see page 95). Decoction is good for washing injuries, in cases of conjunctivitis (see page 125), and for gargling when colds cause a sore throat (see page 71). In addition, chewing of leaves can calm a sore throat swallowing the juice. For injuries, powder of dry leaves can be used. Leaf infusion is drunk when hemorrhages are produced after giving birth, and against kidney pain (see page 79). A refined honey-like is made from leaves, to apply over uta injuries (see page 111).

Author: Richard Rutter

Footnote: 6

MATICO OR ZOLOJA — YERBA DEL SOLDADO — AMBAIBILLA REAL — MOQO MOQO — (*Artanta elongata* Miq. *Piper angustifolium* R. y Pav.)

CORDONCILLO — In Quichua moqomoqo, in Aymara matico. It is depurative and stimulant.

Matico leaves when crushed are used in cataplasms applied over bleeding wounds, in order to stop hemorrhages and speed healing. The Callawayas people use it particularly to cure blennorrhoea, leucorrhoea, difficulties urinating, metritis, etc. They use sap mixed with plantain juice to cure gum and nose ulcers, stomach ulcers and cancer. Ground leaves are used to spread on injuries. Muleteers usually have Matico powder and burned sole in order to cure ulcers or sores of their beasts of burden. The decoction is disinfectant and healing. Matico charcoal when ground is used to clear films from the eyes, blowing with a blowtorch. The tea is good for flatulent colic; and for internal disorders. It is said that baths with Matico are fertility enhancers. The steam is used for bone pain. Its patches have many applications. The leaves taken as teas with milk are used for cough and lung pains. Women, who currently drink the leaf tea, do not suffer alterations of their menstrual flux. It preserves uterus healthy and clean. The leaves macerated in alcohol are used as rubbings to cure contusions and rheumatic pains. The ground leaves mixed with sulfur constitute a powerful ulcer drying. It is recommended against scald head, it is emetic, it is good for washing uterus after giving birth, "purges melancholia", to promote urine, and remove kidney and bladder calculus.

- internal and - Tea.
- external - Use washings.
- hemorrhages
- for the urinary tract - Drink the decoction.
- uterus tumors - Tea.
- injuries - Tea.
- bites - Tea.
- bronchopneumonia - Tea of wormwood, turnip, matico.
- whooping cough or - Plaster of: matico, ch'iri-ch'iri, eucalyptus, pupusa,
k'aja-k'aja. sasawi, turnip; all of them ground and mixed with
white of egg beaten, chancaca (raw brown sugar)
and plantain tea. It is used on the sole of the foot.
- to stop - Tea of: matico, wild marjoram, yawar ch'onqa,
hemorrhage (with turpa, chunta-chunta, turnip flowers, mint, q'eto-
giving birth) q'eto, runa manayupa, chicory.
- to help child birth - Rub the abdomen of the pregnant woman with a
mass of: cow tallow, dry plantain, rosemary, matico,
wild turnip, linseed.
- foot swelling during - Rub feet and backbone with: matico, lampazo de
pregnancy huerta, llaqwa-llaqwa or jinchu-jinchu; all of them
ground.
- post-giving birth - Walthasqa: swaddling made of: wichhullo, incienso
del campo, matico or moqo-moqo, eucalyptus,

saúco leaves (elder tree), capulí leaves, molle leaves, waka qallu, suelda que suelda, sangre-sangre, yawar ch'onqa, rue, markhu, yana waqta, kiswar, pispita, qhaswis, nuqhaw.

arthritis

- Plaster made of: ground china kisa, rosemary, matico, qañiwa, kisa. Add lime.

rheumatism

- Bath of the patient with the decoction of Matico, rosemary, chuchuwasa, mango (leaves).
- Vapor bath with: matico, rosemary, chuchuwasa, mango (leaves).
- Rubbing with macerated of: matico hembra and matico macho, markhu, rua, rosemary, sumbaylla, balsam (macho) incienso (buds), cascarilla, kamalampi, chuchuwasa (tender leaves and root), virgen ch'illka, maich'a, yawar ch'onqa, molle.
- Rub the affected parts with macerated of: akhana, markhu, matico, salvia, rua, muthuy, salqa, pachatayanka, lavender, lime, ñuñu-ñuñu.

Scabies

- Place warm leaves over the affected zone.
- Wash with the cooking of plantain, then rub with lemon and cover with matico leaves.
- Wash with matico cooking.

Main use

*** Scabies**

Plaster

Recipe

Warm some matico leaves in a toaster.

Application

Put the warm leaves over the affected zone.

Precautions

Personal hygiene is very important as well as of clothes and surroundings; otherwise, scabies will not be eliminated.

*** Scabies**

Plaster

Recipe

Warm some matico leaves in a toaster.

Separately, boil some plantain leaves in some water.

lemon juice and some ground salt is also required.

Application

First, wash the affected zone with plantain water, then rub with lemon juice and sprinkle with salt. Finally, cover it with the warmed matico leaves.

Precautions

It is very important personal hygiene as well as of clothes and house; otherwise, Scabies will not be eliminated.

*** Scabies**

Washings

Recipe Boil 1 bunch of matico in 4 cups of water (1 liter). Filter and let it cool.

Application With this liquid wash the affected area. Repeat the treatment until cure.

Precautions It is very important personal hygiene as well as of clothes and house; otherwise, Scabies will not be eliminated.

Pharmacology/Toxicology:

In bibliography *P. elongatum* is practically not found. Hoppe (1975, pg. 839) describes *P. angustifolium* and points out the fact that leaves of *P. elongatum* are also used to prepare the drug known under the name of 'folia matico'. Its uses are against bacterial inflammations of urinary tracts, diuretic (all of internal and external use).

Author: EDITORIAL CONTORNO

Footnote: 8

MATICO

Native from our Interandean valleys, it is also known by the curious name of «hierba de soldado» («soldier's herb»). The cooking of its tender twigs is use to wash wounds and to stop hemorrhages. Its leaves, prepared in infusion, are employed in washings and gargles to combat inflammations of

the buccal mucous. In case of skin illnesses, partially boiled leaves are placed on the affected areas. As if all this were not enough, leaf infusion could be taken along day as a drink against urinary tract diseases, without forgetting its beneficial effects for those who suffer asthma.

Author: Julio Palacios Vaccaro

Footnote: 9

MATICO

Scientific name: *Piper angustifolium* R. y P.

Family: Piperaceae

Synonymy:

Yerba del soldado, cordoncillo.

Botanical Characteristics:

Perennial shrub between 2 and 2.5 meters height.

STEM: Herbaceous, dichotomous, with numerous thin branches with salient nodes and downiness, longitudinally striated.

LEAVES: Simple, big, with small petiole, short ovoid-lanceolate entire limb, coriaceous, rough surface, very reticulate, intense-green-colored, characteristic aromatic odor, acute apex, attenuated on the base, opposite arrangement.

FLOWERS: small, numerous, hermaphrodite; persistent calyx, white corolla, gamopetalous, extended limb. Androceum formed by 2 to 4 stamens. Gynoceum superovary, sessile, tricarpeal, unilocular, uniovular, surrounded by a greenish involucre.

Inflorescences: terminal or axillary, cymes, the first branches dichotomous, the last ones scorpioid.

FRUIT: Drupe, small, egg-shaped.

Distribution

Inhabits low sheltered Sierra, Interandean valleys between 2,600 and 2,700 m. a. s. l.: Cajamarca, Cuzco, Junín, Lima. It extends to Bolivia and Chile.

Historic References

It has been known since pre-Inca times and applied medicinally as hemostat and anti-inflammatory⁽⁶²⁾. It was described as a plant "of big leaves, regular size and aromatic odor"⁽¹⁰³⁾.

Drug

Leaves and young twigs.

Active Principles

Essential oils, tartaric acid, resins, bitter substances (maticin), tannins, alkaloids, saponins, flavonoids triterpenoids⁽⁶⁹⁾.

Therapeutic Properties, Preparations and Doses

Hemostat

Part used : Tender twigs.

Preparation: Decoction (10 g/l).

Way of use::Topical use: washings.

Anti-inflammatory

Part used : Leaves.

Preparation: Infusion (10 g/l).

Way of use : Washings, gargles.

Dermatological

Part used Leaves.

Preparation: Decoction (10 g/l).

Way of use : Topical use: apply boiled leaves over the affected part.

Urinary Diseases

Part used leaves.

Preparation: Infusion (10 g/l).

Way of use : Beverage: take along day as a drink.

Author: Rodolfo Barriga

Footnote: 10

145. MATICO

Scientific name: *Piper angustifolium*

Common name :Matico, Cordoncillo

Family : Piperaceae

Class: :Dicot

It is a plant which its leaves are taken for colic and relief for diseases of the kidneys and the liver.