

Salvia sagittata

12. *Salvia sagittata* Ruiz & Pav.

Fl. Peruv. 1: 23, pl. 35. 1798.

Flora of Peru reference, p. 806

Reference:

Wood, J. R. I. & R. M. Harley, 1989. Kew Bull., p. 223

Common names: *Salvia* real, huarmaca, huarmico, ñucho.

Identification of the plant

The taxonomical identification of this plant is described in the Certificate of Analysis attached (1,3)

Description of the plant:

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

Parts Used:

Stem and leaves

Previous use by humans:

Traditionally it is used as a vermifuge, diuretic and for asthma. It is also used to induce fertility. The leaves infusion is used as a carminative, stimulant, anti-inflammatory, and for the treatment of rheumatism (3).

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

No ill effects from its usage have been recorded.

Origin and ecology:

Native shrub from Peru. Can be found wild and cultivated in Andean disturbed areas, rocky slopes and shrublands between 2500-3500 m. Present in the districts of Cajamarca, Huánuco, Junín, Lima, and La Libertad (6)

Chemical composition

The chemical composition of *Salvia sagittata* through analysis includes alkaloids, steroid triterpenoids, and foam.

Common name	Scientific name	Phytochemical compounds found	Technical report*
Salvia real	<i>Salvia sagittata</i> R.& P.	Alkaloids, triterpen-steroids, foam	697-98

*Reported by Total Quality Laboratories. National Agrarian University.

Method: Look de Ugaz Olga. Fitoquímica, 1994 (2).

Level

The level of *Salvia sagittata* 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
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Conditions of use:

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. 696-98, La Molina Calidad Total Laboratorio, 1998
2. Analysis Certificate, No. 697-98, La Molina Calidad Total Laboratorio, 1998
3. Technical Report, No. 098-98, La Molina Calidad Total Laboratorio, 1998
4. Brack, A. 1999. Diccionario Enciclopédico de plantas útiles del Perú. Centro de Estudios Regionales Andinos Bartolomé de las Casas, eds. Lima -Perú.
5. 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.
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° 696 - 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° 829 - 98
Date of service request : 98-09-08
Requested service : Certificate of vegetable kind

III. NAME OF THE PRODUCT : SALVIA REAL

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- 152- 98, that works in the files and reports the following:

The sample (branches) of "Salvia real", has been identified by orthodox method as: Salvia *sagittata*, R & P., which botanical classification according to A. Cronquist (1982) is:

KINGDOM	:	PLANTAE
DIVISION	:	MAGNOLIOPHYTA
CLASS	:	MAGNOLIOPSIDA
SUBCLASS	:	ASTERIDAE
ORDER	:	LAMIALES
FAMILY	:	LAMIACEAE
Genus	:	<i>Salvia</i>
Species	:	<i>S. Sagittata.</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° 697 - 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° 829 - 98
Date of service request : 98-09-08
Requested service : Phytochemist trial run

III. NAME OF THE PRODUCT : SALVIA REAL

IV. DATA OF THE SAMPLE

Size : 140 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° 1843- 98, that work in the files and reports the presence of the following components:
Alkaloids, steroids-triterpenoids and foam.

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 098 - 98

REQUESTING : INTERNATIONAL CORPORATION HEALTH AND
LIFE E.I.R.L.
ADDRESSES : Cooperativa Alfonso Cobian Manzana H,
Lt I - Chaclacayo
APPLICATION SERVICE : No 829 - 98
REQUESTED SERVICE : Monograph of the vegetable kind component of the
Product.
PRODUCT : SALVIA REAL
VEGETABLE KIND :

MONOGRAPH OF THE VEGETABLE KIND: SALVIA REAL

1. DESCRIPTION:

KINGDOM : PLANTAE
DIVISION : MAGNOLIOPHYTA
CLASS : MAGNOLIOPSIDA
SUBCLASS : ASTERIDAE
ORDER : LAMIALES
FAMILY : LAMIACEAE
Genus : *Salvia*
Species : *S. Sagittata*.

1.1 SCIENTIFIC NAME : *Salvia sagittata*

1.2 BOTANICAL CHARACTERISTICS:

Common Name : Salvia B, Nucho, Salvia real.

Present crisp and small leaves and their/its flowers are white.

2. COMMERCIAL SOURCE :

Flowers and leaves.

3. CHEMISTRY COMPOSITION

Alcaloids, steroids -triterpenes and foam.

4. PROPERTIES

4.1 Therapeutical action

- Carminative and stimulant

Employed part : Leaves
Preparation : Infusion

- Anti - inflammatory, Rheumatism

Employed part : Leaves

Dose : Drink

Preparation : Soaked in Warnaripa, alcanphor, flower of Arrayán , and eucalyptus, to soak in an alcohol bottle exposed to the sun.

Dose : External use, rub of the aching part before sleeping.

5.

BIBLIOGRAPHY

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

- "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.

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December 21st, 1998 La Molina

13. Translations of the articles or book reprints about *Salvia sagittata*

Author: Antonio Brack

Footnote: 4

Salvia sagittata R&P

1. Family: Lamiaceae.
2. Common names: huarmaca, huarmico, salvia real.
3. Distribution: Sierra and Alta Amazonía, over 2,500 m. a. s. l.
4. Situation: wild and cultivated shrub.
5. Uses:
medicinal:
 - Anthelmintic: against ascarides.
 - pectoral and antasthmatic.
 - diuretic.
 - against sterility.
 - ornamental.
 - dye: to dye green (flowers with alum) or yellow (stem and leaves).
6. How to dye with huarmaca: (ZUMBUEHL, 1986)
 - Color: green (flowers with alum) or yellow (stem and leaves)
 - Material: take 2 kg of flowers, leaves and stems and chop them up.
 - Quantity: 2 kg of salvia and 1 kg of wool.
 - Mordant: soak the wool in 150 g (15%) of alum.

- Dyeing: Boil the herb for one hour, filter and let the solution cool off. Place the wool inside the liquid and boil for 30 minutes, agitating vigorously. Rinse the wool until the dripping water is clear.
-

Author: Jaroslav Soukup

Footnote: 5

S. sagittata. s.v. huarmaca, huarmico, salvia real, it is used against ascaris, as an excellent pectoral and anti-asthmatic.

14. *Sanguisorba minor* Scop.

Fl. Carniol. (ed. 2) 1: 110. 1772.

Reference:

Bailey, L. H., 1949. , p. 530

Synonyms: *Poterium sanguisorba*, *Pimpinella saxifraga*, *Poterium dictyocarpum*.

Common names: Pimpinela, sanguisorba, pimpinela de los prados, salad brunet (English), garden brunet (English), Bibernelle, Pimpernelle.

Description of the plant: Biannual or perennial plant, stem stout, leaves of pale green color and toothed borders, green flowers, dry and small fruit.

Parts Used: stem and leaves

Previous use by humans:

Traditionally used as a blood depurative, the water of boiled roots (decoction of the roots) is used for the throat and bronchial inflammation, and the water of boiled leaves (decoction of the leaves) is used as an antidiarrheal.

Ethnobotanical record is made of the internal use of this herb by different populations (1,2,3,4,5, 6,7,8).

No ill effects from its usage have been recorded. No known hazards.

Origin and ecology:

Cultivated herb. Grows in Andean areas between 2500-4000 m. Can be found wild and cultivated in the districts of Ancash, Cajamarca and Cuzco.

Chemical composition

The chemical composition of **Sanguisorba minor** through analysis includes tannin, flavonoids, quinonas, steroid triterpenoids, saponins, reducing sugar, catequinas, bitter and astringent principles, essential oil, Vitamin C derived from cuparin and saponin (3).

Common name	Scientific name	Phytochemical compounds found	Technical report
Pimpinela	<i>Sanguisorba minor</i> Scopoli	Tannins, flavonoids, triterpen-steroids, quinones, saponines, bitter and astringent principles	741-98

**This plant is component of the Isula Rain's botanical products:
Andean Serenity Extract. Herbal Supplement.**

Level

The level of **Sanguisorba minor** 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 coerulea</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. Plants for a Future, *Sanguisorba minor*, <http://www.scs.leeds.ac.uk/>
 2. Dr. Duke's Phytochemical and Ethnobotanical Databases, Agricultural Research Service, <http://www.ars-grin.gov/>
 3. Tuzlaci, E. and Erol, M.K. Turkish fold medicinal plants. *Fitoterapia*, The Journal for the Study of Medicinal Plants. Vol 70, No. 6, 1999.
 4. Brack, A. 1999. *Diccionario Enciclopédico de plantas útiles del Perú*. Centro de Estudios Regionales Andinos Bartolomé de las Casas, eds. Lima -Perú.
 5. 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.
 6. Universidad de Lima, Facultad de Ingeniería Industrial. Centro de Investigación de la Producción Industrial. CIPI. 1994. *Industrialización de Plantas Medicinales. Tomo I*. Lima-Peru.
 7. Universidad de Lima, Facultad de Ingeniería Industrial. Centro de Investigación de la Producción Industrial. CIPI. 1994. *Catálogo de Plantas Medicinales*. Lima-Peru.
 8. Font Quer, P. 1962. *Plantas Medicinales. Diocóridés renovado*. Editorial Labor, eds.
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Plants For A Future: Database Search Results

Back to: [Plant For A Future home page](#), [Main Search Page](#) [Help](#) [Bibliography](#)

Sanguisorba minor

Common name:	Salad burnet	Family:	Rosaceae
Author:	Scop.	Botanical references:	17, 200
Synonyms:	Poterium dictyocarpum. P. sanguisorba.		
Known Hazards:	None known		
Range:	Britain.		
Habitat:	Grassland, usually on calcareous soils[9, 17, 37].		

Other Possible Synonyms:	From various places across the web, may not be correct. See below . Pimpinella sanguisorba, Poterium polygamum, Poterium sanguisorba auct. non, Sanguisorba minor, S. dictyocarpa, S. minor ssp. muricata, S. minor subsp. minor, S. sanguisorba
Other Common Names:	From various places around the Web, may not be correct. See below . Burnet, Garden Burnet, Kucuk Kanotu, Pimpinela Menor, Salad Burnet, Small Burnet,
Epithets:	From a Dictionary of Botanical Epithets minor = smaller; orba = orphan;
Other Range Info:	From the Ethnobotany Database Britain; Guatemala; Spain; Turkey

Physical Characteristics

Habit:	Perennial		Decid/Ever:	E	Rating:	4	
Height (m):	0.6	Width (m):	0.3	Hardyness:	5	Growth rate:	
In leaf:	1 - 12	Flowering time:	5 - 8	Seed ripens:	7 - 9	Scented:	0
Flower Type:	H	Self-fertile:	Y	Pollinators:	Bees		
Soil:	LMH	Well-drained:	1	Heavy clay:	0	Poor Soil:	1
pH:	ANB	Acid:	0	Alkaline:	1	Saline:	0
Shade:	N	Moisture:	M	Wind:	M	Drought:	0
Nitrogen fixer:	0	Wildlife:	0	Pollution:		Frost tender:	N

Habitats and Possible Locations

Meadow	Y	Lawn	Y	Pond	N	Bog Garden	N	Rock Garden	N
Hedge	N	Hedgerow	N	Woodland	N	Canopy	N	Secondary	N
Cultivated Beds	N	Sunny Edge	N	Dappled Shade	N	Shady Edge	N	Deep Shade	N
Walls	N	North Wall	N	South Wall	N	East Wall	N	West Wall	N
Ground Cover	N								

Edible Uses

Leaves; Tea.

Young leaves and shoots - raw or cooked[2, 5, 9, 14, 21]. They are best used before the plant comes into flower[9]. Eaten in salads, used as a garnish or added to soups, cooling drinks and claret cups[183]. Young seedlings are boiled and eaten[183]. A bit fiddly to harvest and the leaves sometimes become bitter in hot dry summers, but they are usually fairly mild tasting in the winter and some people detect a cucumber flavour to them[K]. In the acid soil of our Cornish trial grounds, the leaves have a distinctly bitter flavour, though when the same plants were grown on a chalky soil they had a much milder flavour[K]. The leaves contain about 5.65% protein, 1.2% fat, 11% carbohydrate, 1.7% ash, 74.5% water[179].

A herb tea is made from the dried leaves[21, 183].

Composition

Leaves (Dry weight)

Water: 0 Protein: 11.1 Fat: 2 Carbohydrate: 80.4 Fibre: 18 Ash: 6.5 Source: [218]

Medicinal Uses

Disclaimer

Astringent; Diaphoretic; Skin; Styptic.

Both the root and the leaves are astringent, diaphoretic and styptic, though the root is most active[4]. The plant is an effective wound herb, quickly staunching any bleeding[244]. An infusion is used in the treatment of gout and rheumatism[244]. The leaves can be used fresh, or are harvested in July and dried (the plant should be prevented from flowering)[4]. The root is harvested in the autumn and dried[4]. An infusion of the leaves is used as a soothing treatment for sunburn or skin troubles such as eczema[201].

Other Uses

Soil reclamation; Soil stabilization.

Plants have extensive root systems and are used for erosion control, they are also used to reclaim landfills and mined-out terrain[160].



Dr. Duke's Phytochemical and Ethnobotanical Databases

Ethnobotanical uses

Sanguisorba minor (ROSACEAE)

Apertif Steinmetz; Astringent Steinmetz; Cancer Hartwell; Hemostat Steinmetz

* = Chemical(s) found in plant shown to be effective for the ailment medicated

** = Plant itself shown to be effective for the ailment medicated

Phytochemical Database, USDA - ARS - NGRL, Beltsville Agricultural Research Center, Beltsville, Maryland

Thu May 20 13:12:31 EDT 1999

Please send questions and comments to:

James A. Duke (E-Mail: JimDuke@cpcug.org)

or

Stephen M. Beckstrom-Sternberg (E-Mail: SteveBS@nhgri.nih.gov)

Please send technical questions and comments to:

WebMaster (E-Mail: WebMaster@ars-grin.gov)

The USDA does not recommend self diagnosis or self medication. Please see the [disclaimer](#) for more information.

15. *Satureja revoluta* (Ruiz & Pav.)

Briq.

Nat. Pflanzenfam. 4(3a): 300. 1897.

Basionym: *Garadoquia revoluta* Ruiz & Pav.

Synonym: *Satureja insignis*.

Reference:

Epling, C. & C. Játiva, 1964. Brittonia, p. 401

Common name: Té indio, Flor de arena.

Identification of the plant

The taxonomical identification of this plant is described in the Technical Report attached(2).

Description of the plant:

The botanical characteristics are described in the Technical Report and the publication attached. (2,3)

Procumbent or low shrub developing innumerable almost filiform branchlets at intervals on apex of the flexuose branches; petioles about 1 mm long. Leaves crowded, entire, strongly revolute, deltoid-ovate, 2-3 mm long and nearly as wide, truncate at base, obtuse, green above, tomentulose beneath; pedicels solitary, 3-4 mm long; calyx puberulent, the tube 3.5-4 mm long, the upper teeth about 1 mm long, subacute; corolla red, about 2 cm long or somewhat longer.

Parts Used: branchlets and leaves

Previous use by humans:

Traditionally used as a carminative and digestive and for urinary diseases.

Ethnobotanical record is made of the internal use of this herb by Peruvian population (4,5,6,7).

No ill effects from its usage have been recorded.

Origin and ecology:

Endemic shrub from Peru. The name Satureja came from the latin word "satura" that means satisfied, due to its proposed digestive properties. Grows in Andean riversides and rocky slopes between 2500-4000 m. Present in the districts of Amazonas, Cajamarca, Lima, La Libertad and Piura (3,8)

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

7-Day Urinary Cleanse #3. Herbal Supplement

Muscle Joint Health Extract. Herbal Supplement.

KDNY Health Extract. Herbal Supplement.

Level

The level of **Satureja revoluta** in the product "**Muscle Joint Health Extract**" (see below for entire ingredient listing) is:

Common name	Scientific name	Parts of the plant used
Uña de gato	<i>Uncaria tomentosa</i> (Willd ex Roem. & Schult.)	Bark
Cola de caballo	<i>Equisetum bogotense</i> H.B.K.	Stem, leaves and flowers
Zarzaparrilla	<i>Smilax febrifuga</i> Kunth	Root
Té indio	<i>Satureja revoluta</i> (R. & P.)	Brnachlets and leaves
Gramma	<i>Cynodon dactylon</i> L	Whole plant

The level of *Satureja revoluta* 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
Gramma	<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 leaves
Tomillo	<i>Thymus vulgaris</i> L	Stem and leaves
Chancapiedra	<i>Phyllanthus niruri</i> L	Leaves

The normal use recommended on the label of "Muscle Joint Health Extract" is:

Directions: For (8) 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). The contents of this bottle should be finished at the end of the 8 days. 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 minutes. For best results, continue treatment for 24 days (3 bottles). After either the 8 or 24-Day treatment, take an acidophilus complex for at least 14 days. Best used in conjunction with the Isula Rain Mobility Spray.

DO NOT USE THIS PRODUCT IF YOU ARE PREGNANT OR LACTATING

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. Certificate of Analysis, No. 043-98, La Molina Calidad Total Laboratorio, 1998
 2. Technical Report, No. 032-98 p 15, La Molina Calidad Total Laboratorio, 1998
 3. Mac Bride, J. 1962. Flora of Peru. Vol XIII Part V N. 2. Chicago Natural History Museum Press (ed).
 4. Contorno. 1996. Medicina Natural Peruana, Remedios caseros. Contorno, eds. Lima-Peru. P 25
 5. Productos Sanatel (SANATEL PRODUCTS). Flor de Arena o Te Indio (label). RUC 28715934.
 6. Productos San Roque (SAN ROQUE PRODUCTS). Flor de Arena o Te Indio (label). Address: Jr. Pisagua 438-J. La Victoria. Lima-Peru. Telephone 51-1-4744178.
 7. Szeliga, E. 1986. Proceedings of the I National Symposium on Medicinal Plants and Health.
 8. 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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Te ind. 3

ANALYSIS CERTIFICATE
N° 043 - 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 I - Chaclacayo

II. DATA OF THE SERVICE

Service request : N° 280 - 98
Date of service request : 98-05-06
Requested service : Vegetable kind

III. NAME OF THE PRODUCT : INDIAN TEA

IV. DATA OF THE SAMPLE

Size : 60 g aprox.
Other characteristics : Packed

V. USED LABORATORY : Professional services

VI. RESULTS

Of agreement to the Trial report No Co-V- 051 - 98 that work in the files the results are:

PHYSICAL DETERMINATION:

ASSAY	RESULTS
1. Specimen identification	<i>Satureja revoluta</i> (R.&P.) Family specie LAMIACEAE

METHOD USED IN THE LABORATORY:

Classic method, orthodox.

VII. CONCLUSIONS:

Of agreement to the result obtained the sample from INDIAN TEA corresponds to *Satureja revoluta*.

- The certified present is referred exclusively to the analyzed sample, the one that is provided by the solicitor.
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June 5th, 1998 La Molina

V. - MONOGRAPH OF THE VEGETABLE KIND : INDIAN TEA

1. DESCRIPTION :

SUPRASPECIFIC CATEGORIES:

- KINGDOM	:	PLANTAE
- DIVISION	:	MAGNOLIOPHYTA
- CLASS	:	MAGNOLIOPSIDA
- SUBCLASS	:	ASTERIDAE
- ORDER	:	LILIALES
- FAMILY	:	SMILACACEAE
- Genus	:	<i>Smilax</i>
- Species	:	<i>S. febrifuga</i>

} wrong

1.1 SCIENTIFIC NAME : *Satureja revoluta*

1.2 BOTANICAL CHARACTERISTIC :

Small or low shrub, it develops countless almost filiform twigs to intervals of the apex of the winding branches, two petiole of approximately 1mm of length, abundant leaves, you deposit, strongly russet, delto - oval-shaped, of 2 to 3 mm of length and approximately equal of broad, truncated in the base, obtuse, green up, tomentose down, solitary peduncle, 3 to 4 mm of length, downs chalice, pipe of 3.5 - 4 mm of length, the teeth superior of approximately 1 mm of length, sub - acute; red corolla of approximately 2 cm of length or a little more long.

2. BIBLIOGRAPHY

→ - Biologa Graciela Vilcapoma Segovia, according to A. Cronquist 1982

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June 24th, 1998 La Molina

TECHNICAL REPORT
N°032-98 (p.15)

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.

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

PRODUCT : TE INDIO (INDIAN TEA)

PLANT SPECIE : TE INDIO
(Common name)

Monograph of the plant specie: TE INDIO

1. DESCRIPTION:

KINGDOM	: PLANTAE
DIVISION	: MAGNOLIOPHYTA
CLASS	: MAGNOLIOPSIDA
SUBCLASS	: ASTERIDAE
ORDER	: LAMIALES
FAMILY	: LAMIACEAE
Genus	: <i>Satureja</i>
Specie	: <i>S. revoluta</i> .

1.1 Scientific name: *Satureja revoluta*.

1.2 Botanical Characteristics:

Procumbent or low shrub developing innumerable almost filiform branchlets at intervals on apex of the flexuose branches; petioles about 1 mm. Long; leaves crowded, entire, strongly revolute, deltoid-ovate, 2-3 mm long and nearly as wide,

truncate at base, obtuse, green above, tomentulose beneath; pedicels solitary, 3-4 mm. Long; calyx puberulent, the tube 3.5-4 mm. Long, the upper teeth about 1 mm. Long, subacute; corolla red, about 2 cm. Long or somewhat longer.

5. BIBLIOGRAPHY:

1. Cronquist, A. 1982
2. Mc Bride, J. F. 1960. Flora of Peru. Botanical Series Field Museum of Natural History. Vol XIII. Part V, Number 2.

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La Molina, June 24th of 1998

Tessaria integrifolia

16. *Tessaria integrifolia* Ruiz & Pav.

Syst. Veg. Fl. Peruv. Chil. 1: 213. 1798.

Flora of Peru reference, p. 65

Common names: Pájaro bobo, Huaparui, tama raho (v. amahuaca).

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 small tree of rapid growth up to 40 feet tall. Straight trunk, rounded, and thin. Its leaves are elliptic or elliptic-lanceolated, acuminate in the apex. Its inflorescence is a terminal colymb of pink or lavender flowers.

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

Parts Used: stem and leaves

Previous use by humans:

Reported uses are to chew a piece of bark for toothache. For asthma and urinary infections, drink the liquid after boiling branches and leaves in water. This liquid is also reported to have antemetic, anti-cough, antipyretic and diuretic effects, and to be effective for the treatment of renal-colic, severe hepatitis and allergic rhinitis.

Further ethnobotanical record is made of the internal use of this herb by South American populations (3,4,5,6,7,8,9,10,11,12,13).

No ill effects from its usage have been recorded.

Origin and ecology:

Native shrub, tree of Peru. Amazonian, Andean and Coastal. Found in forests and riversides. Grows between 0-2500 m. can be found in the districts of Amazonas, Ancash, Apurímac, Arequipa, Cajamarca, Cuzco, Huánuco, Huancavelica, Junín, Lambayeque, Lima, La Libertad, Loreto, Madre de Dios, Pasco, Piura, San Martín, Tacna, Tumbes and Ucayali (14)

Chemical composition:

The chemical composition of **Tessaria integrifolia** through analysis includes tannins, flavonoids, steroid triterpenoids, reducing sugar, bitter and astringent principles, amino acids, coumarins lactones, resins, and catechuines.

Common name	Scientific name	Phytochemical compounds found	Technical report*
Pájaro Bobo	<i>Tessaria integrifolia</i> R.& P.	Alkaloids, Tannins, triterpenoids, reducing sugars, bitter and astringent principles and lactones-cumarines	735-98

*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 Digestive Cleanse #2. Herbal Supplement

GBDR Health Extract. Herbal Supplement.

Level

The level of **Tessaria integrifolia** 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 level of **Tessaria integrifolia** in the product "GBDR Health Extract" (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
Pájaro Bobo	<i>Tessaria integrifolia</i> (R.& P.)	Stem and leaves
Llipin limon	<i>Citrus aurantifolia</i> Christm. Swingle	Fruit
Cáscara de Haba	<i>Vicia faba</i> L.	Fruit rind
Romero	<i>Rosmarinus officinalis</i> L.	Stem, leaves and flowers
Hierba buena	<i>Mentha spicata</i> L.	Stem and leaves
Verónica	<i>Malesherbia scarlatiflora</i> Gilg	Stem and leaves

Conditions of use:

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

The normal use recommended on the label of "GBDR Health Extract" 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. Certificate of Analysis, No. 734-98, La Molina Calidad Total Laboratorio, 1998
2. Certificate of Analysis, No. 735-98, La Molina Calidad Total Laboratorio, 1998
3. Technical Report, No. 084-98, La Molina Calidad Total Laboratorio, 1998.
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5. Fournet, Alain, et al. Leishmanicidal and trypanocidal activities of Bolivian medicinal plants. *Journal of Ethnopharmacology*, vol. 41, 1994.
 6. Klinar, S., et al. Biological activity of medicinal plants of Ica (Perú). *Fitoterapia*, Vol. 66. No. 4, 1995.
 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. 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.
 10. Sagástegui, A. & Gonzales, G. 1993. *Flora Invasora de los cultivos*. Trujillo Perú.
 11. Mejía, K & Renjifo, E. *Plantas Medicinales de Uso Popular en la Amazonía Peruana*.
 12. Ediciones Editors, S.A. *Los secretos de las plantas medicinales. Fichero II*. Ediciones Editors, S.A., eds.
 13. Barriga, R. *Plantas Útiles de la Amazonia Peruana: características, usos y posibilidades*. CONCYTEC, eds , 1st edition, 1994. p 219.
 14. 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° 734 - 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 L11 - Chacabayo

II. DATA OF THE SERVICE

Service request : N° 822 - 98
Date of service request : 98-09-08
Requested service : Certificate of vegetable kind

III. NAME OF THE PRODUCT : PAJARO BOBO

IV. DATA OF THE SAMPLE

Size : 1 branch
Other characteristics : Containing fresh branches.

V. USED LABORATORY : Professional services.

VI. RESULTS

Of agreement to the Trial report Co- V- 149- 98, that works in the files and reports the following:

The sample (branches) of "Pajaro bobo", has been identified by orthodox method as: *Tessaria integrifolia*, R & P., which botanical classification according to A. Cronquist (1982) is:

KINGDOM	:	PLANTAE
DIVISION	:	MAGNOLIOPHYTA
CLASS	:	MAGNOLIOPSIDA
SUBCLASS	:	ASTERIDAE
ORDER	:	ASTERALES
FAMILY	:	ASTERACEAE
SUBFAMILY	:	ASTEROIDEAE
Genus	:	<i>Tessaria</i>
Species	:	<i>T. integrifolia</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° 735 - 98

PHYTOCHEMIST TRIAL RUN CERTIFICATE

II. DATA OF THE REQUESTING

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

II. DATA OF THE SERVICE

Service request : N° 822 - 98
Date of service request : 98-09-08
Requested service : Phytochemist trial run

III. NAME OF THE PRODUCT : PAJARO BOBO

IV. DATA OF THE SAMPLE

Size : 320 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° 1840- 98, that work in the files and reports the presence of the following components:
Tannin, steroids-triterpenoids, cumarins lactones, reducing sugar, resins, astringent and bitter principles.

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

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TECHNICAL REPORT
No 084- 98

REQUESTING : INTERNATIONAL CORPORATION HEALTH AND
LIFE E.I.R.L.
ADDRESSES : Cooperativa Alfonso Cobian Manzana H.
L.I - Chaclacayo
APPLICATION SERVICE : No 822 - 98
REQUESTED SERVICE : Monograph of the vegetable kind component of the
Product.
PRODUCT : PAJARO BOBO
VEGETABLE KIND :

MONOGRAPH OF THE VEGETABLE KIND: PAJARO BOBO

DESCRIPTION.

KINGDOM : PLANTAE
DIVISION : MAGNOLIOPHYTA
CLASS : MAGNOLIOPSIDA
SUBCLASS : ASTERIDAE
ORDER : ASTERALES
FAMILY : ASTERACEAE
SUBFAMILY : ASTEROIDEAE
Genus : *Tessaria*
Species : *T. integrifolia*.

1.1 SCIENTIFIC NAME : *Tessaria integrifolia*

1.2 BOTANICAL CHARACTERISTICS:

- Common name : "Pajaro bobo", y "Tama raho" (v. Amahuaca)

1.3 DISTRIBUTION

Amazonas, Cajamarca, Cuzco, Huanuco, Junin, La Libertad, Loreto, Madre de Dios, Pasco, San Martin, Ucayal. In the departments of Loreto : Bajo Nanay, Pebas and San Martin: Juan Guerra.

2 COMMERCIAL SOURCE

Bark and branches.

3 CHEMICAL COMPOSITION

Amino acids, cathequines, flavonoids.

4. THERAPEUTICAL PROPERTIES

Toothache : Masticate the bark, it mitigates the toothache.

Branch : Asthma, prepare a cooking of branches and leaves, let it settle. Drink as beverage. Urinary infections, diuretic, the same as last.

Anti-asthmatic

Used part : Branches

Preparation : In cooking, a handfull of branches (20g) by liter of water.

Administration and dosage. Oral. Drink as beverage.

Anti-hemetic:

Used part:

Leaves

Preparation:

In infusion, ½ handful of leaves (10g) by liter of water

Administration and dosage: Drink a cup 15 minutes before principal meals.

Anti-flatulent:

Used part:

Leaves

Preparation:

In cooking ½ handful of leaves (10g) by liter of water.

TOXICITY STUDIES

TOXICITY STUDY OF PLANT EXTRACTS ON PRE-NATAL RATS

REQUESTING PARTY: CISVI

OPERATING UNIT: Physiology Laboratory
Universidad Peruana
Cayetano Heredia

**RESPONSIBLE
RESEARCHER:** Dr. Ricardo Zorrilla

San Martin de Porras – Marzo 2000

The purpose of this study was designed to identify the potential toxic effects of 10 vegetable extracts in alcohol solution when administered to pregnant experimental animals.

The toxicity study is based upon a chronic treatment and its actions over the fetal development variables. Anomalies in the teratological product and reproduction function.

The doses administered on the different groups is a fraction of the estimated LD50 – obtained in a prior study—previous experimental reproduction function studies were considered mainly on fertility regulator plants.

The period of administration was determined based on the proposed purpose, that is, from the day the product is implanted to its almost terminal functional-organ formation, taking as a reference the day in which the closing of the hard palate takes place, one day before birth.

For the development of this study specific WHO and FDA (1,2) guidelines were considered for the detection of adverse effects and reproduction toxicity.

The interpretation and the scientific value of the results for said extracts are of vital importance for its processing, dosage and marketing, inasmuch as it will help for future development studies.

PROCEDURE

ANIMALS

70 female adults and 60 male Holtzman rats of 3 months of age were used, weighing between 165.4 – 202.71 grams.

ANIMAL SELECTION

One week prior to the study the female rats were controlled through observation of their vaginal smears in order to determine their normal estral cycle, those animals with irregular cycles were disregarded from the study.

MATING

The rats were placed in individual cages and mated with a male rat in a 1:1 ratio; during the subsequent days vaginal smears were taken using a plastic dropper for the instillation of physiological serum to prevent cell rupture by hyperosmosis. The droppers were carefully cleaned before the subsequent sample.

TREATMENT AND CONTROL OF GROUPS

The animals were placed in 12 groups for treatment with 6 animals each, 10 of which correspond to the vegetable extracts study and the other two to the control groups one with distilled water and the other one with 50% ethanol.

DETERMINATION OF THE ESTRAL CYCLE AND PREGNANCY

One or two drops of smears were deposited over a lamine, in some cases eosin-hematoxilina coloring was applied and microscopic observation was done before the saline precipitation occurred. In this way, quantization of the different proportions of epithelial cells was reached, and "horn-bearing cells" and leukocytes to determine the cycle phase (Proestro, estro, metaestro and diestro), more so the presence or absence of spermatozoids was observed. The first day of pregnancy (day 1) was determined when spermatozoids on the smears were observed.

PERIOD OF ADMINISTRATION

The animal was weighed on day-1 pregnancy and was placed in an individual cage. The treatment with the pertinent extract was started from day 7 of pregnancy (implantation phase) and ended on day 20 of pregnancy (the closing of the hard palate phase)

DOSAGE

The dosage (ml/Kg) was calculated as the value of the 25% of the estimated LD50 for each extract and the control vehicle. It is acknowledged that in long-term treatments where the administration is greater than 10 days and under normal circumstances, the animals may tolerate 25% of the pharmacological toxic doses of the extract. The administration route used was intra-gastric (oral) with the aid of polyethylene measured cannulas.

SACRIFICE AND AUTOPSY

On day 21 the pregnant rats were anesthetized with chemical-grade ether and autopsied. A longitudinal incision in the mid line was done and the soft tissue was raised to reach the peritoneal region, and show the thoracic-abdominal area, once the fatty tissue was separated, the removal of the membrane and respective products observation was commenced,

OBSERVATION OF THE MATERNAL-FETUS COMPONENTS

- . Weight of the pregnant animal
- . Number of luteous bodies
- . Number of normal fetus on each uterine side
- . Number of abnormal fetus (dead or deteriorated)
- . Number of placentas with products
- . Number of placentas without products
- . Number of implantation
- . Number of resorptions

- External appearance of the fetus (color, exudation, contour, brightness, alterations)
- Weight of the fetus
- Weight of the placenta
- Coarse exam of the organs of the pregnant animal.

INDICATORS

Abnormal Fetus Index	$\frac{\text{No. of abnormal fetus} \times 100}{\text{No. of normal fetus}}$
Implantation Index	$\frac{\text{No of implantation} \times 100}{\text{No of luteous bodies}}$
Resorption Index	$\frac{\text{No. of resorptions} \times 100}{\text{No of implantations}}$

Percentage increment of the weight at the beginning and end of treatment

ANALYSIS OF THE INFORMATION

The information and observation were registered individually for the analysis and to establish the relationship between the different variables and its distribution. Descriptive statistical analysis was applied for the observation of low frequency such as physiological signs, autopsy findings, and anomalies and inferential statistic for the determination of the statistical significance among the treated groups and control.

RESULTS

See the attached tables

DISCUSSION

The extracts under this study show that **none of them produce a relevant teratogenic effect** on the organic fetal development, **no malformation development was reported**, however in the extracts 7-Days Purity Cleanse, 7-Days Urinary Cleanse, Andean Serenity and Premium Amazon Cat's Claw a slight inhibitory effect must be taken into consideration on the development of the embryo, this toxic embryo effect is more significant for the first mentioned product and should be considered for subsequent studies.

A lesser fetal weight on the rats treated with the extracts with relation to the control could indicate an action over the placenta irrigation lessening the availability of nutrients, or an action on the embryo growing factors, the weight of the mother rat could also influence this finding.

The Migraine Lotion product has an effect on stimulating the development of the placenta, this action could be mediated by a luteotropic effect that produce a more efficient action of the progesterone, associated to a more adequate development of the membranes, and trophoblastic effect of the embryo.

The 7-Days Purity Cleanse Extract showed differences relation to the index of the implantation among the rest of products, this is a parameter that reflects the capacity of endometrial nesting of the fertilized ovules. This effect shall not be entirely attributed to the extract itself, due to the fact that this is a process that occurs during the first 6 days of pregnancy, period during which there was no treatment. However, there is a possibility that the product may have been implanted and the effect of the extract may have been later producing a detrimental action, thus not allowing its growth with subsequent resorption of the dead tissue. The resorption index is the parameter that better reflects the reported involved effect. This effect is also observed with some other extracts although it is not significant.

The progesterone produced by the luteous bodies of the ovaries is the hormone responsible for the well development of the embryo on the uterus and its membranes, a flaw in its production due to "luteolitic" effect of the extract, results in abortive effects, dislodging of the product implanted, and resorption.

The different variables tested did not show significant differences between the control treatments of ethanol 50% and distilled water, indicating that the solvent of the extract is innocuous at the doses tested in the present work.

BIBLIOGRAPHY

1. Food and Drug Administration, HHS. Guideline on detection of toxicity of reproduction for medicinal products, availability. Department of Health and Human Services. 1994
2. WHO Task Force on plants for fertility regulation. Bioassays for the evaluation of extracts and fractions from fertility regulating plants. Mandatory Bioassays (MB) 1995.

Test of Prenatal Toxicity

Requesting Company: CISVI

Objective: Observe teratogenic and reproductive effects

Name of the Product: 7-Days Purity Cleanse #1 Extract (HERBAL SUPPLEMENT)

Received Quantity: 1 gallon.

Package: Plastic non-transparent container.

Date of the test: From 11 February to 14 March of the 2000

Animals: Adult and healthy young female rats of race Holtzman.

Age: 12 weeks.

Average weight: 165.4 g

Total Number of animals: 6

Form of administration: Intra-gastric (oral)

Estimated LD 50: 40.3 ml/kg

Dosage: 25% of the Estimated LD 50 according to the weight

Treatment: Daily during 14 days (day 7-20 of pregnancy)

Autopsy: day 21 of pregnancy

Name of the Product: 7-Days Purity Cleanse #1 Extract (HERBAL SUPPLEMENT)

ANIMAL No. TREATED	1	2	3	4	5	6	Average
Dose 25% of LD 50 (ml)	1.58	1.58	1.52	1.88	1.63	1.79	
Weight day 1 of treatment (g)	157.5	157.0	151.0	187.3	162.0	177.7	165.4
Weight day 14 of treatment (g)	253.0	235.5	193.0	282.5	230.5	272.3	244.4
Percentage increase in weight (%)	60.6	50.0	27.8	50.8	42.3	53.2	47.4
No. of luteous bodies	10	9	8	10	7	10	4.0
No. of normal fetuses	10	5	0	10	4	8	7.4 * †
Average weight of normal fetuses (g)	3.2	3.2	0	3.3	3.4	3.7	2.8 *
No. of abnormal fetuses	0	2	5	0	1	0	
No. of placentas with product	10	5	5	10	4	8	7.4
No. of placentas without product	0	2	1	0	2	0	
Weight of placentas with product (g)	1.14	0.63	0.38	0.61	0.62	0.44	0.63
Weight of placentas without product (g)	0	0.2	0.1	0	0.2	0	
No. of implantation sites with presence of the product	10	5	5	10	4	8	7.4
No. of implantation sites with presence of resorption of the product	0	2	1	0	1	0	
No. of fetuses with presence of malformation (terato-genicity)	0	0	0	0	0	0	
Index of implantation (%)	100.0	77.7	75.0	100.0	71.4	80.0	84.0 * †
Index of resorption (%)	0	28.5	16.6	0	20.0	0	10.8 * †
Index of abnormal fetuses (%)	0	40.0	100.0	0	25.0	0	27.5 * †

EXAMINATION OF ORGANS OF PREGNANT RATS

1. Liver discoloration: Animals 1,3,4,6
2. Lungs discoloration: Animals 1,3,5
3. Presence of renal warts: Animals 2,3,4

RESULTS

Teratogenic effect: negative

Effect on reproductive function: moderate inhibiting effect on the implantation

moderate complex effect of the fetus

Effect on fetal development: moderate inhibiting effect

* significant $p < 0.05$ with regard to the distilled water

† significant $p < 0.05$ with regard to the ethanol 50%

Pre-natal Toxicity Test

Requesting Company: CISVI

Objective: Observe teratogenic and reproductive effects

Name of the Product: 7-Days Digestive Cleanse #2 Extract (HERBAL SUPPLEMENT)

Received Quantity: 1 gallon.

Package: Plastic non-transparent container..

Date of the test: From 12 February to 16 March of the 2000

Animals: Adult and healthy young female rats of race Holtzman.

Age: 12 weeks.

Average weight: 182.2 g

Total Number of animals: 6

Form of administration: Intragastric (oral)

Estimated LD 50: 36.04 ml/kg

Dosage: 25% of the Estimated LD 50 according to the weight

Treatment: Daily during 14 days (day 7-20 of pregnancy)

Autopsy: day 21 of pregnancy

Name of the Product: 7-Days Digestive Cleanse #2 Extract (HERBAL SUPPLEMENT)

ANIMAL No. TREATED	1	2	3	4	5	6	Average
Dose 25% of LD 50 (ml)	1.49	1.59	1.54	1.91	1.71	1.59	
Weight day 1 of treatment (g)	165.5	176.5	171.2	213.0	190	177.1	182.2
Weight day 14 of treatment (g)	260.0	262.0	253.5	316.0	288.3	260.6	273.4
Percentage increase in weight (%)	57.0	48.0	48.0	48.3	50.2	47.1	49.7
No. of luteous bodies	11	10	9	13	12	9	10.6
No. of normal fetuses	11	10	6	10	10	8	9.1
Average weight of normal fetuses (g)	2.8	2.5	4.5	2.9	3.3	2.9	3.1
No. of abnormal fetuses	0	0	0	0	0	0	
No. of placentas with product	11	10	6	10	10	8	9.1
No. of placentas without product	0	0	0	1	0	0	
Weight of placentas with product (g)	0.50	0.30	0.83	0.91	0.60	0.59	0.62
Weight of placentas without product (g)	0	0	0	0.03	0	0	
No. of implantation sites with presence of the product	11	10	6	10	10	8	9.1
No. of implantation sites with presence of resorption of the product	0	0	1	2	0	1	
No. of fetuses with presence of malformation (terato-genicity)	0	0	0	0	0	0	
Index of implantation (%)	100.0	100.0	77.7	92.3	8.3	100.0	92.2
Index of resorption (%)	0	0	14.2	16.6	0	11.1	6.9
Index of abnormal fetuses (%)	0	0	0	0	0	0	

EXAMINATION OF ORGANS OF PREGNANT RATS

1. Liver discoloration: Animals 1,2,3,5
2. Lungs discoloration: Animals 4,6
3. Presence of renal warts: Animals 1,2,4

* Two fetuses with cephalic hemorrhage: Animal 2

RESULTS

Teratogenic effect: negative
 Effect on reproductive function: negative
 Effect on fetal development: negative

Prenatal Toxicity Test

Requesting Company: CISVI

Objective: Observe teratogenic and reproductive effects

Name of the Product: 7-Days Urinary Cleanse Extract #3 (HERBAL SUPPLEMENT)

Received Quantity: 1 gallon.

Package: Plastic non-transparent container.

Date of the test: From 09 February to 17 March of the 2000

Animals: Adult and healthy young female rats of race Holtzman.

Age: 12 weeks.

Average weight: 185.0 g

Total Number of animals: 6

Form of administration: Intragastric (oral)

Estimated LD 50: 36.9 ml/kg

Dosage: 25% of the Estimated LD 50 according to the weight

Treatment: Daily during 14 days (day 7-20 of pregnancy)

Autopsy: day 21 of pregnancy

Name of the Product: 7-Days Urinary Cleanse Extract #3 (HERBAL SUPPLEMENT)

ANIMAL No. TREATED	1	2	3	4	5	6	Average
Dose 25% of LD 50 (ml)	1.64	1.68	1.70	1.70	1.66	1.83	
Weight day 1 of treatment (g)	178.0	183.0	185.0	185.0	180.0	199.3	185.0
Weight day 14 of treatment (g)	256.5	254.5	237.5	258.0	256.3	242.0	250.8
Percentage increase in weight (%)	44.1	39.0	28.3	39.5	42.4	21.4	36.7
No. of luteous bodies	11	11	9	10	8	9	9.6
No. of normal fetuses	10	4	9	9	7	8	7.8
Average weight of normal fetuses (g)	3.0	2.8	3.2	3.3	2.9	3.1	3.0*
No. of abnormal fetuses	0	0	0	0	0	0	
No. of placentas with product	10	4	9	9	7	8	7.8
No. of placentas without product	0	0	0	0	0	0	
Weight of placentas with product (g)	0.62	0.67	0.62	0.63	0.60	0.62	0.62
Weight of placentas without product (g)	0	0	0	0	0	0	
No. of implantation sites with presence of the product	10	4	9	9	7	8	7.8
No. of implantation sites with presence of resorption of the product	1	0	0	0	1	0	
No. of fetuses with presence of malformation (terato-genicity)	0	0	0	0	0	0	
Index of implantation (%)	100.0	36.3	100.0	90.0	100.0	88.8	85.8
Index of resorption (%)	9.0	0	0	0	12.5	0	3.5
Index of abnormal fetuses (%)	0	0	0	0	0	0	

EXAMINATION OF ORGANS OF PREGNANT RATS

1. Liver discoloration: Animal 3
2. 'Lung' discoloration: Animals 2,3

RESULTS

Teratogenic effect: negative
 Effect on reproductive function: negative
 Effect on fetal development: mild inhibiting effect

* significant $p < 0.05$ with regard to the distilled water

Prenatal Toxicity Test

Requesting Company: CISVI

Objective: Observe teratogenic and reproductive effects

Name of the Product: Andean Serenity Extract (HERBAL SUPPLEMENT)

Received Quantity: 1 gallon.

Package: Plastic non-transparent container.

Date of the test: From 18 February to 24 March of the 2000

Animals: Adult and healthy young female rats of race Holtzman.

Age: 12 weeks.

Average weight: 202.7 g

Total Number of animals: 6

Form of administration: Intragastric (oral)

Estimated LD 50: 42.84 ml/kg

Dosage: 25% of the Estimated LD 50 according to the weight

Treatment: Daily during 14 days (day 7-20 of pregnancy)

Autopsy: day 21 of pregnancy

Name of the Product: Andean Serenity Extract (Herbal Supplement)

ANIMAL No. TREATED	1	2	3	4	5	6	Average
Dose 25% of LD 50 (ml)	1.68	2.11	2.15	1.93	2.19	2.27	
Weight day 1 of treatment (g)	157.5	197.5	201.0	180.3	205.4	212.5	202.7
Weight day 14 of treatment (g)	239.5	266.0	263.5	255.0	269.6	274.5	261.3
Percentage increase in weight (%)	52.0	34.7	31.0	41.4	31.3	29.1	37.8
No. of luteous bodies	10	9	11	8	11	10	10
No. of normal fetuses	8	7	9	7	4	10	9.0
Average weight of normal fetuses (g)	2.9	2.8	2.7	2.6	3.0	2.8	2.6 *
No. of abnormal fetuses	0	0	0	0	0	0	
No. of placentas with product	8	7	9	7	9	10	9.0
No. of placentas without product	0	0	0	1	0	0	
Weight of placentas with product (g)	0.46	0.40	0.31	0.38	0.44	0.49	0.40
Weight of placentas without product (g)	0	0	0	0.2	0	0	
No. of implantation sites with presence of the product	8	7	9	7	9	10	9.0
No. of implantation sites with presence of resorption of the product	1	0	2	1	2	0	
No. of fetuses with presence of malformation (terato-genicity)	0	0	0	0	0	0	
Index of implantation (%)	90.0	77.7	100.0	100.0	100.0	100.0	98.4
Index of resorption (%)	11.1	0	18.1	12.5	18.1	0	6.5
Index of abnormal fetuses (%)	0	0	0	0	0	0	

EXAMINATION OF ORGANS OF PREGNANT RATS

1. Liver discoloration: Animals 1,3,6
2. Lungs discoloration: Animals 1,3,5

RESULTS

Teratogenic effect: negative

Effect on reproductive function: negative

Effect on fetal development: moderate inhibiting effect

* significant $p < 0.05$ with regard to the distilled water

Pre-natal Toxicity Test

Requesting Company: CISVI

Objective: Observe teratogenic and reproductive effects

Name of the Product: Muscle and Joint Health Extract (HERBAL SUPPLEMENT)

Received Quantity: 1 gallon.

Package: Plastic non-transparent container.

Date of the test: From 10 February to 25 March of the 2000

Animals: Adult and healthy young female rats of race Holtzman.

Age: 12 weeks.

Average weight: 187.5 g

Total Number of animals: 6

Form of administration: Intragastric (oral)

Estimated LD 50: 30.46 ml/kg

Dosage: 25% of the Estimated LD 50 according to the weight

Treatment: Daily during 14 days (day 7-20 of pregnancy)

Autopsy: day 21 of pregnancy

**Name of the Product: Extract of Muscle and Joint Health Extract
(HERBAL SUPPLEMENT)**

ANIMAL No. TREATED	1	2	3	4	5	6	Average
Dose 25% of LD 50 (ml)	1.34	1.07	1.51	1.27	1.35	1.46	
Weight day 1 of treatment (g)	176.5	141.7	199.0	167.4	177.4	192.7	187.5
Weight day 14 of treatment (g)	271.5	254.0	268.5	272.8	278.8	263.5	268.1
Percentage increase in weight (%)	53.8	79.2	34.9	62.9	57.1	36.7	54.1
No. of luteous bodies	7	10	11	9	10	11	9.6
No. of normal fetuses	7	9	7	8	9	9	8.1
Average weight of normal fetuses (g)	3.3	3.1	3.2	3.0	3.4	3.2	3.2
No. of abnormal fetuses	0	0	0	0	0	0	
No. of placentas with product	7	9	7	8	9	9	8.1
No. of placentas without product	0	0	1	1	0	0	
Weight of placentas with product (g)	0.60	0.62	0.72	0.70	0.65	0.51	0.63
Weight of placentas without product (g)	0	0	0.1	0.2	0	0	
No. of implantation sites with presence of the product	7	9	7	8	9	9	8.1
No. of implantation sites with presence of resorption of the product	0	1	2	1	0	1	
No. of fetuses with presence of malformation (terato-genicity)	0	0	0	0	0	0	
Index of implantation (%)	100.0	100.0	81.8	100.0	90.0	90.9	93.7
Index of resorption (%)	0	10.0	22.2	11.1	0	10	8.8
Index of abnormal fetuses (%)	0	0	0	0	0	0	

EXAMINATION OF ORGANS OF PREGNANT RATS

1. Liver discoloration: Animals 2,4
2. Lungs discoloration: Animals 2,4

RESULTS

Teratogenic effect: negative
 Effect on reproductive function: negative
 Effect on fetal development: negative

Pre-natal Toxicity Test

Requesting Company: CISVI

Objective: Observe teratogenic and reproductive effects

Name of the Product: GBDR Health Extract (HERBAL SUPPLEMENT)

Received Quantity: 1 gallon.

Package: Plastic non-transparent container..

Date of the test: From 12 February to 20 March of the 2000

Animals: Adult and healthy young female rats of race Holtzman.

Age: 12 weeks.

Average weight: 163.4 g

Total Number of animals: 6

Form of administration: Intragastric (oral)

Estimated LD 50: 38.98 ml/kg

Dosage: 25% of the Estimated LD 50 according to the weight

Treatment: Daily during 14 days (day 7-20 of pregnancy)

Autopsy: day 21 of pregnancy

Name of the Product: GBDR Health Extract (HERBAL SUPPLEMENT)

ANIMAL No. TREATED	1	2	3	4	5	6	Average
Dose 25% of LD 50 (ml)	1.38	1.60	1.74	1.56	1.59	1.65	
Weight day 1 of treatment (g)	142.0	164.5	178.9	160.8	163.9	170.3	163.4
Weight day 14 of treatment (g)	229.5	274.7	272.0	204.5	271.0	264.2	252.6
Percentage increase in weight (%)	61.6	66.9	52.0	27.1	65.3	55.1	54.6
No. of luteous bodies	11	11	12	7	10	12	10.5
No. of normal fetuses	9	11	12	4	8	11	8.8
Average weight of normal fetuses (g)	3.1	4.4	2.7	3.5	4.0	3.2	3.4
No. of abnormal fetuses	0	0	0	0	0	0	
No. of placentas with product	9	11	12	4	8	11	9.16
No. of placentas without product	0	0	0	1	0	1	
Weight of placentas with product (g)	0.45	0.48	0.84	0.77	0.55	0.60	0.61
Weight of placentas without product (g)	0	0	0	0.05	0	0.1	
No. of implantation sites with presence of the product	10	11	12	4	8	11	9.3
No. of implantation sites with presence of resorption of the product	1	0	0	1	0	1	
No of fetuses with presence of malformation (teratogenicity)	0	0	0	0	0	0	
Index of implantation (%)	100	100	100	71.4	80.0	100	91.9
Index of resorption (%)	9.0	0	0	20.0	0	0	4.8
Index of abnormal fetuses (%)	0	0	0	0	0	0	

EXAMINATION OF ORGANS OF PREGNANT RATS

1. Liver discoloration: Animals 1,2,3,5
2. Lungs discoloration: Animals 3,6

RESULTS

Teratogenic effect: negative
 Effect on reproductive function: negative
 Effect on fetal development: negative

Pre-natal Toxicity Test

Requesting Company: CISVI

Objective: Observe teratogenic and reproductive effects

Name of the Product: Premium Amazon Cat's Claw

Received Quantity: 1 gallon.

Package: Plastic non-transparent container..

Date of the test: From 18 February to 16 March of the 2000

Animals: Adult and healthy young female rats of race Holtzman.

Age: 12 weeks.

Average weight: 187.4 g

Total Number of animals: 6

Form of administration: Intragastric (oral)

Estimated LD 50: 39.70 ml/kg

Dosage: 25% of the Estimated LD 50 according to the weight

Treatment: Daily during 14 days (day 7-20 of pregnancy)

Autopsy: day 21 of pregnancy

Name of the Product: Premium Amazon Cat's Claw Extract

ANIMAL No. TREATED	1	2	3	4	5	6	Average
Dose 25% of LD 50 (ml)	1.75	1.86	2.04	1.71	1.90	1.88	
Weight day 1 of treatment (g)	177.0	187.5	205.8	172.3	192.4	189.6	18.4
Weight day 14 of treatment (g)	282.0	280.0	309.5	280.1	285.3	285.3	287.0
Percentage increase in weight (%)	59.3	49.3	50.3	62.6	48.3	50.4	53.3
No. of luteous bodies	10	8	12	8	9	10	9.5
No. of normal fetuses	9	7	11	7	8	10	8.6
Average weight of normal fetuses (g)	3.0	2.8	3.3	2.9	3.1	3.0	3.0 *
No. of abnormal fetuses	0	0	0	0	0	0	
No. of placentas with product	9	7	11	7	8	10	8.6
No. of placentas without product	0	1	1	0	0	1	
Weight of placentas with product (g)	0.52	0.41	0.82	0.40	0.51	0.50	0.52
Weight of placentas without product (g)	0	0.3	0.1	0	0.2	0.1	
No. of implantation sites with presence of the product	9	7	11	7	8	10	8.6
No. of implantation sites with presence of resorption of the product	1	1	1	1	0	0	
No. of fetuses with presence of malformation (terato-genicity)	0	0	0	0	0	0	
Index of implantation (%)	100.0	100.0	100.0	100.0	88.8	100.0	98.2
Index of resorption (%)	10.0	12.5	8.3	12.5	0	0	7.2
Index of abnormal fetuses (%)	0	0	0	0	0	0	

EXAMINATION OF ORGANS OF PREGNANT RATS

1. Liver discoloration: Animals 1,3,6
2. Lungs discoloration: Animals 1.5

RESULTS

Teratogenic effect: negative
 Effect on reproductive function: negative
 Effect on fetal development: mild inhibiting effect of the fetal development

* significant $p < 0.05$ with regard to the distilled water

Pre-natal Toxicity Test

Requesting Company: CISVI

Objective: Observe teratogenic and reproductive effects

Name of the Product: Isula Sports Spray

Received Quantity: 1 gallon.

Package: Plastic non-transparent container..

Date of the test: From 15 February to 24 March of the 2000

Animals: Adult and healthy young female rats of race Holtzman.

Age: 12 weeks.

Average weight: 177.3 g

Total Number of animals: 6

Form of administration: Intragastric (oral)

Estimated LD 50: 27.05 ml/kg

Dosage: 25% of the Estimated LD 50 according to the weight

Treatment: Daily during 14 days (day 7-20 of pregnancy)

Autopsy: day 21 of pregnancy

Name of the Product: Isula Sports Spray

ANIMAL No. TREATED	1	2	3	4	5	6	Average
Dose 25% of LD 50 (ml)	1.03	1.33	1.25	1.21	1.10	1.24	
Weight day 1 of treatment (g)	153.0	197.5	186.0	180.1	163.2	184.5	177.3
Weight day 14 of treatment (g)	227.0	259.0	234.5	260.3	215.0	269.0	244.1
Percentage increase in weight (%)	48.3	31.1	26.0	44.5	31.7	45.7	37.8
No. of luteous bodies	11	10	9	10	11	9	8.3
No. of normal fetuses	9	8	9	10	9	9	9.0
Average weight of normal fetuses (g)	1.6	2.9	2.3	3.1	2.7	3.0	2.6
No. of abnormal fetuses	0	0	0	0	0	0	
No. of placentas with product	9	8	9	10	10	9	9.0
No. of placentas without product	1	0	0	0	1	0	
Weight of placentas with product (g)	0.47	0.41	0.36	0.33	0.38	0.50	0.33
Weight of placentas without product (g)	0.1	0	0	0	0.2	0	
No. of implantation sites with presence of the product	9	8	9	10	10	9	9.0
No. of implantation sites with presence of resorption of the product	1	2	0	0	1	0	
No. of fetuses with presence of malformation (terato-genicity)	0	0	0	0	0	0	
Index of implantation (%)	90.9	100.0	100.0	100.0	100.0	100.0	98.4
Index of resorption (%)	10.0	20.0	0	0	9.0	0	6.5
Index of abnormal fetuses (%)	0	0	0	0	0	0	

EXAMINATION OF ORGANS OF PREGNANT RATS

Do not present any alterations.

RESULTS

Teratogenic effect: negative
Effect on reproductive function: negative
Effect on fetal development: negative

* significant $p < 0.05$ with regard to the distilled water

Pre-natal Toxicity Test

Requesting Company: CISVI

Objective: Observe teratogenic and reproductive effects

Name of the Product: Migraine Lotion

Received Quantity: 1 gallon.

Package: Plastic non-transparent container.

Date of the test: From 12 February to 20 March of the 2000

Animals: Adult and healthy young female rats of race Holtzman.

Age: 12 weeks.

Average weight: 173.5 g

Total Number of animals: 6

Form of administration: Intragastric (oral)

Estimated LD 50: 39.1 ml/kg

Dosage: 25% of the Estimated LD 50 according to the weight

Treatment: Daily during 14 days (day 7-20 of pregnancy)

Autopsy: day 21 of pregnancy

Name of the Product: Migraine Lotion

ANIMAL No. TREATED	1	2	3	4	5	6	Average
Dose 25% of LD 50 (ml)	1.52	1.54	1.70	1.92	1.75	1.72	
Weight day 1 of treatment (g)	155.5	158.5	174.4	196.6	180.0	176.3	173.5
Weight day 14 of treatment (g)	243.0	214.0	321.0	283.0	272.1	269.0	267.0
Percentage increase in weight (%)	56.2	35.0	84.0	43.9	51.1	52.6	53.8
No. of luteous bodies	10	1	11	11	10	10	8.8
No. of normal fetuses	10	1	9	10	9	10	8.1
Average weight of normal fetuses (g)	3.7	4.2	3.3	3.3	4.0	3.4	3.6
No. of abnormal fetuses	0	0	0	0	0	0	
No. of placentas with product	10	1	9	10	9	10	8.1
No. of placentas without product	0	0	0	0	0	0	
Weight of placentas with product (g)	1.1	1.8	0.8	0.67	0.8	0.9	1.0* †
Weight of placentas without product (g)	0	0	0	0	0	0	
No. of implantation sites with presence of the product	10	1	11	10	9	10	8.1
No. of implantation sites with presence of resorption of the product	0	0	0	0	0	0	
No. of fetuses with presence of malformation (terato-genicity)	0	0	0	0	0	0	
Index of implantation (%)	100.0	100.0	100.0	90.9	90.0	100.0	96.7
Index of resorption (%)	0	0	0	0	0	0	
Index of abnormal fetuses (%)	0	0	0	0	0	0	

EXAMINATION OF ORGANS OF PREGNANT RATS

1. Liver discoloration: Animals 1,4,5
2. Lungs discoloration: Animals 3,4
3. Mild renal and cardiac inflammation: Animals 2, 3

RESULTS

Teratogenic effect: negative
 Effect on reproductive function: positive effect on placental development
 Effect on fetal development: negative

* significant $p < 0.05$ with regard to the distilled water
 † significant $p < 0.05$ with regard to the ethanol 50%

Prenatal Toxicity Test

Requesting Company: CISVI

Objective: Observe teratogenic and reproductive effects

Name of the Product: Kidney Health Extract (HERBAL SUPPLEMENT)

Received Quantity: 1 gallon.

Package: Plastic non-transparent container.

Date of the test: From 19 February to 15 March of the 2000

Animals: Adult and healthy young female rats of race Holtzman.

Age: 12 weeks.

Average weight: 189.4 g

Total Number of animals: 6

Form of administration: Intra-gastric (oral)

Estimated LD 50: 30.0 ml/kg

Dosage: 25% of the Estimated LD 50 according to the weight

Treatment: Daily during 14 days (day 7-20 of pregnancy)

Autopsy: day 21 of pregnancy

Name of the Product: Kidney Health Extract (Herbal Supplement)

ANIMAL No. TREATED	1	2	3	4	5	6	Average
Dose 25% of LD 50 (ml)	1.50	1.28	1.43	1.34	1.44	1.51	
Weight day 1 of treatment (g)	220.0	171.5	191.5	178.7	193.0	202.0	189.4
Weight day 14 of treatment (g)	280.0	253.5	259.0	260.9	262.1	286.6	267.0
Percentage increase in weight (%)	40.0	47.9	35.2	45.9	35.8	41.8	41.1
No. of luteous bodies	10	9	9	9	9	11	9.5
No. of normal fetuses	10	9	9	7	8	11	9.0
Average weight of normal fetuses (g)	3.3	3.1	2.9	3.9	4.1	2.7	3.3
No. of abnormal fetuses	0	0	0	0	0	0	
No. of placentas with product	10	9	9	7	8	11	9.0
No. of placentas without product	0	0	0	0	0	0	
Weight of placentas with product (g)	0.70	0.83	0.73	0.63	0.70	0.84	0.73
Weight of placentas without product (g)	0	0	0	0	0	0	
No. of implantation sites with presence of the product	10	9	9	7	8	11	9.0
No. of implantation sites with presence of resorption of the product	0	0	0	1	0	0	
No. of fetuses with presence of malformation (terato-genicity)	0	0	0	0	0	0	
Index of implantation (%)	100.0	100.0	100.0	88.8	88.8	100.0	96.2
Index of resorption (%)	0	0	0	12.5	0	0	2.0
Index of abnormal fetuses (%)	0	0	0	0	0	0	

EXAMINATION OF ORGANS OF PREGNANT RATS

1. Liver discoloration: Animals 2.5
2. Lungs discoloration: Animals 2.5

RESULTS

Teratogenic effect: negative
Effect on reproductive function: negative
Effect on fetal development: negative

Pre-natal Toxicity Test

Requesting Company: CISVI

Objective: Observe teratogenic and reproductive effects

Name of the Product: Ethanol to 50% (control)

Received Quantity: 1 gallon.

Package: Plastic non-transparent container..

Date of the test: From 12 February to 18 March of the 2000

Animals: Adult and healthy young female rats of race Holtzman.

Age: 12 weeks.

Average weight: 193.6 g

Total Number of animals: 6

Form of administration: Intragastric (oral)

Estimated LD 50: 20.4 ml/kg

Dosage: 25% of the Estimated LD 50 according to the weight

Treatment: Daily during 14 days (day 7-20 of pregnancy)

Autopsy: day 21 of pregnancy

Name of the Product: Ethanol 50% (control)

ANIMAL No. TREATED	1	2	3	4	5	6	Average
Dose 25% of LD 50 (ml)	1.04	1.01	0.91	1.03	0.98	0.93	
Weight day 1 of treatment (g)	205.5	199.0	178.6	203.0	193.0	182.8	193.6
Weight day 14 of treatment (g)	320.0	258.7	267.9	310.0	260.0	255.5	278.6
Percentage increase in weight (%)	55.7	30	50	52.7	34.7	39.8	43.8
No. of luteous bodies	11	10	10	10	9	11	10.1
No. of normal fetuses	11	10	9	10	7	11	9.6
Average weight of normal fetuses (g)	3.3	3.5	3.6	2.7	2.8	3.2	3.1
No. of abnormal fetuses	0	0	0	0	0	0	
No. of placentas with product	11	10	9	10	7	11	9.6
No. of placentas without product	0	0	0	0	1	0	
Weight of placentas with product (g)	0.73	0.60	0.50	0.66	0.60	0.72	0.63
Weight of placentas without product (g)	0	0	0	0	0.2	0	
No. of implantation sites with presence of the product	11	10	9	10	7	11	9.6
No. of implantation sites with presence of resorption of the product	0	0	0	0	1	0	
No. of fetuses with presence of malformation (terato-genicity)	0	0	0	0	0	0	
Index of implantation (%)	100.0	100.0	90.0	100.0	88.8	100.0	96.4
Index of resorption (%)	0	0	0	0	12.5	0	2.0
Index of abnormal fetuses (%)	0	0	0	0	0	0	

EXAMINATION OF ORGANS OF PREGNANT RATS

1. Liver discoloration: Animals 1,3,4,6
2. Lungs discoloration: Animals 1,4,5

RESULTS

Teratogenic effect: negative
Effect on reproductive function: negative
Effect on fetal development: negative

Prenatal Toxicity Test

Requesting Company: CISVI

Objective: Observe teratogenic and reproductive effects

Name of the Product: Distilled water (control)

Received Quantity: 1 gallon.

Package: Plastic non-transparent container.

Date of the test: From 10 February to 18 March of the 2000

Animals: Adult and healthy young female rats of race Holtzman.

Age: 12 weeks.

Average weight: 188.8 g

Total Number of animals: 6

Form of administration: Intragastric (oral)

Estimated LD 50: innocuous

Dosage: 25% of the Estimated LD 50 according to the weight

Treatment: Daily during 14 days (day 7-20 of pregnancy)

Autopsy: day 21 of pregnancy

Name of the Product: Distilled water (control)

ANIMAL No. TREATED	1	2	3	4	5	6	Average
Average volume (ml)	1.5	1.5	1.5	1.5	1.5	1.5	
Weight day 1 of treatment (g)	232.0	180.0	203.0	156.9	178.2	182.7	188.8
Weight day 14 of treatment (g)	305.0	269.1	280.0	244.2	262.0	279.3	273.2
Percentage increase in weight (%)	31.4	49.5	37.9	55.6	47.0	52.9	45.7
No. of luteous bodies	11	10	10	12	10	10	10.5
No. of normal fetuses	10	10	9	12	8	10	9.8
Average weight of normal fetuses (g)	4.6	4.0	3.9	4.3	3.8	4.0	4.1
No. of abnormal fetuses	0	0	0	0	0	0	
No. of placentas with product	10	10	9	12	8	10	9.8
No. of placentas without product	0	0	1	0	0	0	
Weight of placentas with product (g)	0.61	0.60	0.48	0.63	0.59	0.62	0.58
Weight of placentas without product (g)	0	0	0.2	0	0	0	
No. of implantation sites with presence of the product	10	10	9	12	8	10	9.8
No. of implantation sites with presence of resorption of the product	0	0	1	0	1	0	
No. of fetuses with presence of malformation (terato-genicity)	0	0	0	0	0	0	
Index of implantation (%)	90.9	100.0	100.0	100.0	90.0	100.0	96.7
Index of resorption (%)	0	0	10.0	0	11.1	0	3.5
Index of abnormal fetuses (%)	0	0	0	0	0	0	

EXAMINATION OF ORGANS OF PREGNANT RATS

Do not present alterations

RESULTS

Teratogenic effect: negative

Effect on reproductive function: negative

Effect on fetal development: negative

Lima, March 30th 2000

Corporación Internacional Salud y Vida (CISVI).
Coop. Alfonso Cobian, Mz H, Lt 1
Chaclacayo

Gentlemen:

Please find enclosed the Final Report regarding the research results about **Acute and Pre-natal Toxicity Studies** performed on ten commercial plant extracts as per your request.

Very truly yours,

Ricardo Zorrilla Ortega, Ph D.
Researcher
Cayetano Heredia University
Lima - Peru

***STUDY OF ACUTE TOXICITY ON COMMERCIAL PLANT
EXTRACTS IN RATS***

REQUESTING COMPANY: CISVI

**OPERATIONAL UNIT: PHYSIOLOGY LABORATORY.
PERUVIAN UNIVERSITY CAYETANO HEREDIA**

RESPONSIBLE RESEARCHER: DR. RICARDO ZORRILLA

SAN MARTIN DE PORRAS-MARCH 2000

STUDIES OF ACUTE TOXICITY ON TEN COMMERCIAL PLANT EXTRACTS IN RATS

INTRODUCTION

The constant progress of the industrial technology, has had a strong impact on the quality and safety, that commercial products should have for their use by humans. For this reason, their evaluation and control is a factor of high importance.

The main objective of the present study is to observe the effects produced by acute toxicity testing on ten commercial plant extracts (to be used by humans), evaluated by means of the administration of increasing doses of the extracts, to experimentation animals. Allowing these results, to obtain information about the doses of selection for studies about physiological bioassays; to determine a estimated **Median Lethal dose** or **Lethal Dose-fifty (LD50)**, and to identify target or sensitive organs for the reported products.

For the present study specific literature was consulted, making it possible for us to design the more appropriate plan of treatments, for the 'determination of the Lethal Dose-fifty (1.2).

METHODOLOGY

ANIMALS

A total number of 240 Holtzman albino rats were used. These animals were healthy, of male and female sex, two and a half months old, and their weight range was 130–250 g.

TREATMENT AND CONTROL GROUPS

Animals were distributed in ten treatment groups, one for each plant extract. Each treatment group was divided in four subgroups, one for each level of calculated dose. An additional control group was used for the treatment with 50% ethanol.

Male or female rats, with homogeneous weight conformed each treatment group. The day prior to the experiment, the animals did not take any food, and the drinking water was left *ad libitum*. On the morning of the experiment's day, animals were weighed and distributed among treatments.

ADMINISTRATION PERIOD

Before starting the oral administration of a group, it was necessary to calculate for each subgroup (treatment) the corresponding dose, and the number of fractions per dose.

Experimentation animals for each product, were grouped according to their sex and weight, and randomly distributed in four subgroups. The members of each subgroup were again randomly distributed in individual numbered cages. For each animal, the number of its cage determine the corresponding sequence number for its oral administration.

The administration in repeated doses, was performed in a 2 to 3 hours period. For this process intra-gastric cannulas and syringes were used. The interval between subsequent doses was calculated according to the kinetics of absorption and purification of the alcohol in the blood (3).

DOSAGE

Since the samples were alcoholic extracts in different concentrations, the dose for each treatment (ml/kg) was estimated using the LD50 data obtained for the control group with ethanol 50% V/V (LD50: 20.4 ml/kg).

Four treatments (levels) were established with values above and below the expected LD50.

AUTOPSY OF THE ANIMALS DEAD FROM THE TREATMENT

Upon dosage termination, the animals were returned to their cages and deprived of water and food during the following 24 hours. During this period animals were closely and carefully observed for their vital signs and conditions. Observations were made on dead and surviving animals.

Dead animals were necropsied, a longitudinal incision in the mid line was done, and the soft tissue was raised to reach the peritoneal region and show the thoracic-abdominal area. Once the fatty tissue was separated, the macroscopic observation of the organs started. Observations were registered for the following organs: heart, lungs, suprarenals, kidneys, gastrointestinal system, liver, pancreas and reproductive organs.

Surviving animals were observed during the following 14 days with the purpose of noticing any sign of delayed toxicity and partial or total recovery.

ANALYSIS OF THE DATA

The data and observations were registered individually for the analysis of each group. The analysis method of Reed Muench, Litchfield, and Finney was applied for the calculation of the Estimated LD50. (4, 5,6).

The LOGISTIC method was also used to estimate the Lethal Dose-fifty (LD50) and the reliability intervals for each product. The quantal responses (dead or alive) of every experimental animal were introduced in SAS (Statistical Analyses System) program developed for the respective LOGISTIC analysis.

The LOGISTIC method is a statistical procedure that analyzes the quantal responses with strategies of categorical analyses and with 95% confidence intervals.

The LOGISTIC analysis of every product is shown in ANNEX 1.

The summary of the results for LD50 and the Confidence Limits resulting from the analyses with the LOGISTIC method on every product are shown in the following table:

Table 1: LD50 for each product estimated by the LOGISTIC analysis.

Name of the product	LD50 estimated (ml/kg)	Confidence limits 95%	
		lower	higher
Isula Sports Spray	27.41	19.09	39.34
Kidney Health Torch	28.24	23.52	33.92
Muscle Joint Health	30.43	26.94	34.36
Digestive Cleanse	36.58	31.61	42.35
Cat's claw	38.99	33.22	45.77
Urinary Cleanse	39.06	23.44	65.09
GBDR Cleanse	39.22	36.07	42.64
Migraine Lotion	39.53	32.43	48.20
Purity Cleanse	40.16	36.07	44.70
Andean Serenity	43.06	38.52	48.15

The descriptive statistics support the observations of low frequency as physiological signs and findings of necropsy. LOGISTIC results are similar to the ones determined based on the Reed, Litchfield, and Finney's methods.

Since the products analyzed are liquid, the results are expressed as doses in milliliters (ml) of product per kilogram (kg) of weight of the animal:

For conversion purposes of the data from ml/kg to mg/kg the following formulas were used. This conversion was done in order to be able to compare the results obtained with published toxicity ranges:

$$\text{d.p. (20°C)} = \text{g.e.} \times \text{d.a. (20°C)}$$

d.p. (20°C) = Product density at 20°C

d.a. (20°C) = Water density at 20°C = 0.9982^a

g.e. = Specific gravity

$$\text{LD50 (mg/Kg)} = \text{DL50 (ml/Kg)} \times \text{d.p. (20°C)} \times 1000 \text{ mg/g}$$

Table 2. LD50 results estimated in mg/kg .

Producto	Specific gravity (g.e.)	Product density (d.p.) (20°C)	LD50 (ml/Kg)	LD50 (mg/Kg)
Purity Cleanse	0.9410	0.93930620	40.30	37854.04
Digestive Cleanse	0.9517	0.94998694	36.04	34237.53
Urinary Cleanse	0.9553	0.95358046	36.90	35187.12
Andean Serenity	0.9626	0.96086732	42.84	41163.56
Muscle Joint Health	0.9518	0.95008676	30.46	28939.64
GBDR Health	0.9434	0.94170188	38.98	36707.54
Cat's Claw	0.9508	0.94908856	39.70	37678.82
Isula Sports Spray	0.9071	0.90546722	27.05	24492.89
Migraine Lotion	0.9475	0.94579450	39.10	36980.56
Kidney Health Tea	N/D	N/D	30.00	N/D
Ethanol 50% (control)		0.9139 ^b	20.40	18643.56

to, b dates reported by METTLER TOLEDO (7)

N/D: Not available

EXPERIMENTAL RESULTS

See attached tables for each product.

DISCUSSION

Toxicity of a compound should be expressed through a numerical datum, which makes it possible to make comparisons with other compounds. Toxicity evaluation results are always expressed per Kg. of animal weight, in order to diminish the variability due to the volume of administration of the product.

In the present study, previously defined doses were injected through intra-gastric cannulas, to a group (4 subgroups) of animals per each product. , The number of dead or surviving animals in a defined time period of 24 hours was used to calculate and estimate the LD-fifty value.

The LOGISTIC method was used to validate the results previously obtained. This method is normally used to find the tolerance that produces a drug. This tolerance follows a normal distribution, which makes it possible to calculate the death probability at a given level (9).

The results of the present study showed different degrees of acute lethal toxicity. The value of the estimated LD50 is inversely proportional to the toxic effect that the product could develop. It means that higher values must be interpreted as lower toxicity and vice versa.

The product Isula Sport Spray (for external use) shows the lower estimated value for LD50 (27.05 ml/kg), being the extract with higher potential for lethal toxicity among all the analyzed. In some way this result correlate with the anatomical findings of the necropsy that showed increased volume of the liver, gastrointestinal congestion, and hemorrhage at the higher doses.

Estimated toxicity values for the products Muscle Joint Health Extract and Kidney Health Extract were relatively close to the reported for Isula Sport Spray (30.46 and 30.0 ml/kg respectively). These results can be considered potentially more toxic than the rest of the extracts analyzed. However, no important organic abnormalities were observed.

In a different level can be considered the Digestive Cleanse Extract and The Urinary Cleanse Extract, which present medium LD 50 values (34.04 and 36.90 ml/kg, respectively.), when compared with the rest of groups. These products did not present any great systemic effect with the exception of digestive congestion. This effect was possibly due to the delay on gastric emptying, after the intake of repeated doses of the extract.

The "Cat's Claw", "Migraine Lotion", "GBDR Health", "Andean Serenity" and "Purity Cleanse" extracts showed the lower LD50 values (range between 38.98 and 42.84 ml/kg). Although, the "Purity Cleanse" and "Cat's Claw" extracts seem to produce liver inflammation at the highest doses reported for each of them. The other two products present mild alterations in some organs. This effect could be a result of the pharmacological interaction with the ethanol, at the highest doses too.

It should be emphasized that the findings of the necropsies did not reveal any severe toxic damages in general. But, only some mild action, and additionally should considered the toxicity effects of the alcohol in synergism with the plant chemicals. This could explain the effect observed in some of the extracts.

During the treatment, with the increment of the doses, it was common to observe how the animals assumed a state of muscular slackening, expansion of the sphincters, mydriasis, and other characteristics or physiological signs of alcohol poisoning.

Additionally, according to the values obtained for LD50 the levels of lethal toxicity (oral) of a substance are determined. It is considered that, a chemical or substance

with a small value of LD50 (<50 mg/kg) is highly toxic, with a value ranging from 51 to 200 mg/kg moderately toxic, from 500 - 1000 slightly toxic, and higher than 1000 mg/kg practically non-toxic.

Doing the conversions of the results found from ml/kg to mg/kg can be observed that the values are much greater than 1000 mg/kg, which means this products could be considered in accordance with what is explained previously as **practically non-toxic substances**.

It should be emphasized in this case, that for all the products of internal use (all except of Isula Sports Spray) that the directions of use recommended by the manufacturer state "dilute a teaspoonful (5 ml) in a glass of water (250 ml)". This procedure allows a dilution 1/50 of the product. When taking the product in this way the content of alcohol and herbal extract of it is strongly diluted, which means that it **should not be expected any lethal toxic effects by oral consumption of the products on the normal conditions of use.**

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Test of Oral Acute Toxicity

Requesting Company: CISVI

Objective: Estimate the Lethal Dose-fifty (LD50) of the product.

Name of the Product: 7-Days Purity Cleanse #1 Extract (Supplement herbal)

Received Quantity: 1 gallon.

Package: White 1-gallon non-transparent plastic container.

Date of the test: 28 January of the 2000

Animals: Healthy, young adults, male Holtzman rats.

Age: 10 weeks.

Average weight: 131.2 g

Total Number of animals: 24

Number of treatments: 4 (6 animals/treatment)

Form of administration: Intra-gastric (oral)

Dosage: Total dosage was administered fractionally in equal volumes, in accordance with the weight of the animal, in aprox. 2.5 hours.

Treatment	Dose (ml/k)	Number of Fractions
1	53.3	7
2	45.7	6
3	38.1	5
4	30.4	4

Estimated Lethal Dose-fifty LD50 of the product: 40.3 ml/kg

AUTOPSY OF ANIMALS DEAD FROM EFFECTS OF THE TREATMENT

Product: 7-Days Purity Cleanse #1 Extract (Herbal Supplement)

It includes microscopic observation of the following organs: heart, lungs, stomach, small and thick intestine, kidneys, suprarenals and reproductive organs

TREATMENT	NUMBER OF DEAD ANIMALS	REPORT OF AUTOPSY
T-1	6	NORMAL
T-2	4	NORMAL
T-3	3	NORMAL
T-4	0	

Test of Oral Acute Toxicity

Requesting Company: CISVI

Objective: Estimate the Lethal Dose-fifty (LD50) of the product.

Name of the Product: 7-Days Digestive Cleanse #2 Extract (Supplement herbal)

Received Quantity: 1 gallon.

Package: White 1-gallon non-transparent plastic container

Date of the test: 29 January of the 2000

Animals: Healthy, young adults, female Holtzman rats.

Age: 10 weeks.

Average weight: 122.5 g

Total Number of animals: 24

Number of treatments: 4 (6 animals/treatment)

Form of administration: Intra-gastric (oral)

Dosage: Total dosage was administered fractionally in equal volumes, in accordance with the weight of the animal, in approx. 2.5 hours.

Treatment	Dose (ml/kg)	Number of Fractions
1	40.8	5
2	36.7	4.5
3	32.6	5
4	28.5	3.5

Estimated Lethal Dose-fifty LD50 of the product 36.04 ml/kg

AUTOPSY OF ANIMALS DEAD FROM EFFECTS OF THE TREATMENT

Product: 7-Days Digestive Cleanse # 2 Extract (Herbal Supplement)

It includes microscopic observation of the following organs: heart, lungs, stomach, small and thick intestine, kidneys, suprarenals and reproductive organs

TREATMENT	NUMBER OF DEAD ANIMALS	REPORT OF AUTOPSY
T-1	4	Gastrointestinal congestion, discolored kidneys
T-2	3	Gastrointestinal congestion
T-3	2	NORMAL
T-4	1	NORMAL

Test of Oral Acute Toxicity

Requesting Company: CISVI
Objective: Estimate the Lethal Dose-fifty (LD50) of the product.
Name of the Product: 7-Days Urinary Cleanse #3 Extract (Supplement herbal)
Received Quantity: 1 gallon.
Package: White 1-gallon non-transparent plastic container.
Date of the test: 31 January of the 2000
Animals: Healthy, young adults, female Holtzman rats
Age: 10 weeks.
Average weight: 112.0 g
Total Number of animals: 24
Number of treatments: 4 (6 animals/treatment)
Form of administration: Intra-gastric (oral)
Dosage: Total dosage was administered fractionally in equal volumes, in accordance with the weight of the animal, in aprox. 2.5 hours.

Treatment	Dose (ml/k)	Number of Fractions
1	40.0	4.5
2	32.7	4
3	31.2	3.5
4	26.7	3

Estimated Lethal Dose-fifty LD50 of the product: 36.9 ml/kg

AUTOPSY OF ANIMALS DEAD FROM EFFECTS OF THE TREATMENT

Product: Urinary Cleanse Extract # 3 (Herbal Supplement)

It includes microscopic observation of the following organs: heart, lungs, stomach, small and thick intestine, kidneys, suprarenal and reproductive organs

TREATMENT	NUMBER OF DEAD ANIMALS	REPORT OF AUTOPSY
T-1	5	Liver with white spots, low gastric congestion
T-2	0	
T-3	0	
T-4	0	

Test of Oral Acute Toxicity

Requesting Company: CISVI
Objective: Estimate the Lethal Dose-fifty (LD50) of the product.
Name of the Product: Andean Serenity Extract (Supplement herbal)
Received Quantity: 1 gallon.
Package: White 1-gallon non-transparent plastic container.
Date of the test: 27 January of the 2000
Animals: Healthy, young adults, female Holtzman rats
Age: 10 weeks.
Average weight: 133.8 g
Total Number of animals: 24
Number of treatments: 4 (6 animals/treatment)
Form of administration: Intra-gastric (oral)
Dosage: Total dosage was administered fractionally in equal volumes, in accordance with the weight of the animal, in aprox. 2.5 hours.

Treatment	Dose (ml/k)	Number of Fractions
1	52.2	7
2	44.8	6
3	37.3	5
4	29.8	4

Estimated Lethal Dose-fifty LD50 of the product: 42.84 ml/kg

AUTOPSY OF ANIMALS DEAD FROM EFFECTS OF THE TREATMENT

Product: Andean Serenity Extract (Herbal Supplement)

It includes microscopic observation of the following organs: heart, lungs, stomach, small and thick intestine, kidneys, suprarenal and reproductive organs

TREATMENT	NUMBER OF DEAD ANIMALS	REPORT OF AUTOPSY
T-1	5	Lungs with mild hemorrhage, mild gastric congestion
T-2	4	Liver with white spots, mild gastric congestion
T-3	1	NORMAL
T-4	0	NORMAL

Test of Oral Acute Toxicity

Requesting Company: CISVI

Objective: Estimate the Lethal Dose-fifty (LD50) of the product.

Name of the Product: Muscle Joint Health Extract (Supplement herbal)

Received Quantity: 1 gallon.

Package: White 1-gallon non-transparent plastic container.

Date of the test: 25 January of the 2000

Animals: Healthy, young adults, male Holtzman rats

Age: 10 weeks.

Average weight: 156.0 g

Total Number of animals: 21

Number of treatments: 3 (7 animals/treatment)

Form of administration: Intra-gastric (oral)

Dosage: Total dosage was administered fractionally in equal volumes, in accordance with the weight of the animal, in aprox. 2.5 hours.

Treatment	Dose (ml/k)	Number of Fractions
1	35.2	6
2	26.3	4
3	15.0	3

Estimated Lethal Dose-fifty LD50 of the product: 30.46 ml/kg

AUTOPSY OF ANIMALS DEAD FROM EFFECTS OF THE TREATMENT

Product: Muscle Joint Extract Health (Herbal Supplement)

It includes microscopic observation of the following organs: heart, lungs, stomach, small and thick intestine, kidneys, suprarenal, and reproductive organs

TREATMENT	NUMBER OF DEAD ANIMALS	REPORT OF AUTOPSY
T-1	6	NORMAL
T-2	1	NORMAL
T-3	0	

Test of Oral Acute Toxicity

Requesting Company: CISVI

Objective: Estimate the Lethal Dose-fifty (LD50) of the product.

Name of the Product: GBDR Health Extract (Herbal Supplement)

Received Quantity: 1 gallon.

Package: White 1-gallon non-transparent plastic container.

Date of the test: 27 January of the 2000

Animals: Healthy, young adults, male Holtzman rats

Age: 10 weeks.

Average weight: 152.9 g

Total Number of animals: 24

Number of treatments: 4 (6 animals/treatment)

Form of administration: Intra-gastric (oral)

Dosage: Total dosage was administered fractionally in equal volumes, in accordance with the weight of the animal, in aprox. 2.5 hours.

Treatment	Dose (ml/k)	Number of Fractions
1	41.2	7
2	37.7	6
3	33.7	5
4	29.6	4

Estimated Lethal Dose-fifty LD50 of the product: 38.98 ml/kg

AUTOPSY OF ANIMALS DEAD FROM EFFECTS OF THE TREATMENT

Product: GBDR Health Extract (Herbal Supplement)

It includes microscopic observation of the following organs: heart, lungs, stomach, small and thick intestine, kidneys, suprarenal, and reproductive organs

TREATMENT	NUMBER OF DEAD ANIMALS	REPORT OF AUTOPSY
T-1	4	Mild increment of the liver volume, mild pulmonary hemorrhage, mild gastric congestion
T-2	2	Mild increment of the liver volume, mild pulmonary hemorrhage, mild gastric congestion
T-3	1	NORMAL
T-4	0	

Test of Oral Acute Toxicity

Requesting Company: CISVI

Objective: Estimate the Lethal Dose-fifty (LD50) of the product.

Name of the Product: Premium Amazon Cat's Claw Extract

Received Quantity: 1 gallon.

Package: White 1-gallon non-transparent plastic container.

Date of the test: 29 January of the 2000

Animals: Healthy, young adults, male Holtzman rats

Age: 10 weeks.

Average weight: 115.0 g

Total Number of animals: 24

Number of treatments: 4 (6 animals/treatment)

Form of administration: Intra-gastric (oral)

Dosage: Total dosage was administered fractionally in equal volumes, in accordance with the weight of the animal, in aprox. 2.5 hours.

Treatment	Dose (ml/k)	Number of Fractions
1	52.1	6
2	43.4	5
3	39.1	4.5
4	34.7	4

Estimated Lethal Dose-fifty LD50 of the product: 39.70 ml/kg

AUTOPSY OF ANIMALS DEAD FROM EFFECTS OF THE TREATMENT

Product: Premium Amazon Cat's Claw Extract

It includes microscopic observation of the following organs: heart, lungs, stomach, small and thick intestine, kidneys, suprarenal, and reproductive organs

TREATMENT	NUMBER OF DEAD ANIMALS	REPORT OF AUTOPSY
T-1	5	Mild increment of the volume of the liver, mild pulmonary hemorrhage
T-2	4	Mild increment of the volume of the liver, mild pulmonary hemorrhage
T-3	3	Mild increment of the volume of the liver, mild pulmonary hemorrhage
T-4	2	Mild increment of the volume of the liver, mild pulmonary hemorrhage

Test of Oral Acute Toxicity

Requesting Company: CISVI

Objective: Estimate the Lethal Dose-fifty (LD50) of the product.

Name of the Product: Isula Sports Spray

Received Quantity: 1 gallon.

Package: White 1-gallon non-transparent plastic container.

Date of the test: 3 December 1999

Animals: Healthy, young adults, male Holtzman rats

Age: 10 weeks.

Average weight: 268.0 g

Total Number of animals: 27

Number of treatments: 3 (9 animals/treatment)

Form of administration: Intra-gastric (oral)

Dosage: Total dosage was administered fractionally in equal volumes, in accordance with the weight of the animal, in aprox. 2.5 hours.

Treatment	Dose (ml/k)	Number of Fractions
1	33.5	6
2	23.2	4
3	11.1	2

Estimated Lethal Dose-fifty LD50 of the product: 27.05 ml/kg

AUTOPSY OF ANIMALS DEAD FROM EFFECTS OF THE TREATMENT

Product: Isula Sport Spray

It includes microscopic observation of the following organs: heart, lungs, stomach, small and thick intestine, kidneys, suprarenal, and reproductive organs

TREATMENT	NUMBER OF DEAD ANIMALS	REPORT OF AUTOPSY
T-1	6	mild pulmonary hemorrhage, severe gastric congestion
T-2	3	Mild increment of the volume of the liver, mild pulmonary hemorrhage, severe gastric congestion
T-3	1	Severe gastric congestion

Test of Oral Acute Toxicity

Requesting Company: CISVI
Objective: Estimate the Lethal Dose-fifty (LD50) of the product.
Name of the Product: Migraine Lotion
Received Quantity: 1 gallon.
Package: White 1-gallon non-transparent plastic container.
Date of the test: 27 March of the 2000
Animals: Healthy, young adults, male Holtzman rats
Age: 12 weeks.
Average weight: 185.0 g
Total Number of animals: 24
Number of treatments: 4 (6 animals/treatment)
Form of administration: Intra-gastric (oral)
Dosage: Total dosage was administered fractionally in equal volumes, in accordance with the weight of the animal, in aprox. 2.5 hours.

Treatment	Dose (ml/kg)	Number of Fractions
1	43.2	8
2	37.8	7
3	32.4	6
4	29.7	5.5

Estimated Lethal Dose-fifty LD50 of the product: 39.10 ml/kg

AUTOPSY OF ANIMALS DEAD FROM EFFECTS OF THE TREATMENT

Product: Migraine Lotion

It includes microscopic observation of the following organs: heart, lungs, stomach, small and thick intestine, kidneys, suprarenal and reproductive organs

TREATMENT	NUMBER OF DEAD ANIMALS	REPORT OF AUTOPSY
T-1	4	NORMAL
T-2	2	NORMAL
T-3	2	NORMAL
T-4	1	NORMAL

Test of Oral Acute Toxicity

Requesting Company: CISVI

Objective: Estimate the Lethal Dose-fifty (LD50) of the product.

Name of the Product: Kidney Health Extract (Herbal Supplement)

Received Quantity: 1 gallon.

Package: White 1-gallon non-transparent plastic container.

Date of the test: 18 February of the 2000

Animals: Healthy, young adults, male Holtzman rats

Age: 12 weeks.

Average weight: 167.2 g

Total Number of animals: 24

Number of treatments: 4 (6 animals/treatment)

Form of administration: Intra-gastric (oral)

Dosage: Total dosage was administered fractionally in equal volumes, in accordance with the weight of the animal, in aprox. 2.5 hours.

Treatment	Dose (ml/kg)	Number of Fractions
1	35.8	6
2	42.8	5.5
3	29.9	5
4	23.9	4

Estimated Lethal Dose-fifty LD50 of the product: 30.0 ml/kg

AUTOPSY OF ANIMALS DEAD FROM EFFECTS OF THE TREATMENT

Product: Kidney Health Extract

It includes microscopic observation of the following organs: heart, lungs, stomach, small and thick intestine, kidneys, suprarenal and reproductive organs

TREATMENT	NUMBER OF DEAD ANIMALS	REPORT OF AUTOPSY
T-1	5	Mild pulmonary hemorrhage, severe gastric congestion
T-2	4	severe gastric congestion
T-3	3	Severe gastric congestion
T-4	2	Normal

PRODUCT ANALYSIS

Additional information about the dietary supplements:

I. Product Identification:

1. Product name:

**7-Day Purity Cleanse #1 Extract
Herbal Supplement**

2. Manufactured by: Corporación Internacional Salud y Vida E.I.R.L.

Coop. de Vivienda Alfonso Cobián Mz H, Lt 1. Chaclacayo, Lima 8 - Perú.

Telefax: 51-1-3581496

II. Technical specifications:

1. Chemical Formula: 59.1% active/ 40.9% ethanol.

Test N. 2063/99 International Analytical Services S.A. (INASSA)

Method: USP XXIII <611> P. 1767, 1995. Alcohol determination. Method I.
Distillation Method.

2. Composition/Information on Ingredients:

Ingredient	CAS N.	Percent (%)
Ethyl Alcohol	64-17-5	40.9
Herbal Extract in distilled water*	--	59.1

* Distilled water produced by: Victor Marinotti S.R.L.

pH 6.8.

Ammoniac negative

Sulfates negative

Chlorates negative

Phosphates negative

Magnesium	negative	Nitrates	negative
Calcium	negative	Residues	negative
Heavy metals	negative		
Nitrites	negative		

Herbal extract plant species components are:

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

3. Chemical composition:

Common name	Scientific name	Phytochemical compounds found	Technical Report N*
Cola de caballo	<i>Equisetum bogotense</i> H.B.K.	Salicylic acid, saponines, flavonoids, galic acid, nicotine, palustrine, resins	032-98 p 8
Canchalagua	<i>Schukhuria pinnata</i> Lamarck	Alkaloids, flavonoids, tannins, triterpensteroids, reducing sugars, catechines, leucoanthocianines, foam, bitter principles, cumarines	677-98
Zarzaparrilla	<i>Smilax febrifuga</i> Kunth	Saponnines, starch, Calcium oxalate, resins, glycosides.	032-98 pp 13-14

Grama	<i>Cynodon dactylon</i> L	Polysaccharides, agropiren, mucilage, salicylic acid, potassium salts, inositol, mannitol, glucose	032-98 p 12
Yawar chonca	<i>Oenothera rosea</i> L' Her ex Aiton	Mucilage, resins, antocianines, flavonoids, triterpen-steroids, and phenolic compounds	033-98 p 5
Chinchimall	<i>Quinchamalium elongatum</i> Pilger	Flavonoids, tannins, triterpen-steroids, reducing sugars, quinones catechines, resins, bitter and astringent principles	907-98
Palo Santo	<i>Bursera graveolens</i> (H.B.K.) Triana & Planch.	Flavonoids, tannins, triterpen-steroids, quinones, cardenolids, resins	685-98

*Reported by Total Quality Laboratories. National Agrarian University.

Method: Look de Ugaz Olga. Fitoquímica, 1994.

4. Microbial Limit:

Irradiation Dosage: 2KGY

Total counting of aerobic microorganisms (ufc/cm ³):	<10
Total counting of fungi (ufc/cm ³):	<10
Total counting of yeast (ufc/cm ³):	<10
Detection of <i>Staphylococcus aureus</i> / 10 cm ³	Negative
Detection of <i>Pseudomonas aeruginosa</i> / 10 cm ³	Negative
Detection of <i>Escherichia coli</i> / 10 cm ³	Negative
Detection of <i>Salmonella spp</i> / 10 cm ³	Negative

Test N. 4501/99 International Analytical Services S.A. (INASSA)

Method: USP XXIII <61> pp 1681-1686, 1995. Microbial Limit Test.

1. Product name:

**7-Day Digestive Cleanse #2 Extract
Herbal supplement**

2. Manufactured by: Corporación Internacional Salud y Vida E.I.R.L.

Coop. de Vivienda Alfonso Cobián Mz H, Lt 1. Chaclacayo, Lima 8 - Perú.

Telefax: 51-1-3581496

II. Technical specifications:

1. Chemical Formula: 60.07% active/ 39.93% ethanol.

Test N. 2062/99 International Analytical Services S.A. (INASSA)

Method: USP XXIII <611> P. 1767, 1995. Alcohol determination. Method I.

Distillation Method.

2. Composition/Information on Ingredients:

Ingredient	CAS N.	Percent (%)
Ethyl Alcohol	64-17-5	39.93
Herbal Extract in distilled water*	--	60.07

* Distilled water produced by: Victor Marinotti S.R.L.

pH 6.8.

Ammoniac	negative	Chlorates	negative
Magnesium	negative	Phosphates	negative
Calcium	negative	Residues	negative
Heavy metals	negative	Sulfates	negative
Nitrites	negative	Nitrates	negative

Herbal extract plant species components are:

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

3. Chemical composition:

Common name	Scientific name	Phytochemical compounds found	Technical Report N*
Chinchircoma	<i>Mutisia acuminata</i> R.& P.	Alkaloids, tannins, triterpen-steroids, reducing sugars, catechines, leucoanthocianines, bitter principles	705-98
Karkeja	<i>Baccharis genistelloides</i> (Lam.) Pers.	Alkaloids, Flavonoids, tannins, triterpen-steroids, reducing sugars, catechines, leucoanthocianines, bitter principles	719-98

Canchalagua	<i>Schukhuria pinnata</i> Lamarck	Alkaloids, tannins, triterpen-steroids, reducing sugars, catechines, leucoanthocianin es, foam, bitter principles and cumarines	677-98
Pájaro Bobo	<i>Tessaria integrifolia</i> R.& P.	Alkaloids, Tannins , triterpen- steroids, reducing sugars, , bitter and astringent principles and lactones- cumarines	735-98
Boldo	<i>Peumus boldus</i> Molina	Alkaloids, Tannins , triterpen- steroids, reducing sugars, catechines, bitter principles and cumarines	701-98
Cáscara de papa	<i>Solanum tuberosum</i> L	Alkaloids, aminoacids, tannins, reducing sugars, catechines.	723-98
Salvia real	<i>Salvia sagittata</i> R.& P.	Alkaloids, triterpen-steroids, foam	098-98
Romero	<i>Rosmarinus officinalis</i> L	Tannins, flavonoids, quinones, triterpen-steroids, saponines, reducing sugars, catechines, resins, bitter and astringent principles.	743-98

Cola de caballo	<i>Equisetum bogotense</i> H.B.K.	Salicylic acid, saponines, flavonoids, galic acid, nicotine, palustrine, resins	032-98 p 8
Matico	<i>Piper alveolatum</i> Opiz	Tannins, aminoacids, quinones, triterpen-steroids, reducing sugars, bitter and astringent principles.	683-98
Uña de gato	<i>Uncaria tomentosa</i> (Willd ex Roem. & Schult.)	Glycosides, alkaloids, poly-oxygenated triptens.	032-98 p 3

*Reported by La Molina Total Quality Laboratories. National Agrarian University.

Method: Look de Ugaz Olga. Fitoquímica, 1994.

4. Microbial Limit:

Irradiation Dosage: 2KGY

Total counting of aerobic microorganisms (ufc/cm ³):	<10
Total counting of fungi (ufc/cm ³):	Negative
Total counting of yeast (ufc/cm ³):	Negative
Detection of <i>Staphylococcus aureus</i> / 10 cm ³	Negative
Detection of <i>Pseudomonas aeruginosa</i> / 10 cm ³	Negative
Detection of <i>Escherichia coli</i> / 10 cm ³	Negative
Detection of <i>Salmonella spp</i> / 10 cm ³	Negative

Test N. 4502/99 International Analytical Services S.A. (INASSA)

Method: USP XXIII <61> pp 1681-1686, 1995. Microbial Limit Test.

I. Product Identification:

1. Product name:

**7-Day Urinary Cleanse #3 Extract
Herbal supplement**

2. Manufactured by: Corporación Internacional Salud y Vida E.I.R.L.

Coop. de Vivienda Alfonso Cobián Mz H, Lt 1. Chaclacayo, Lima 8 - Perú.

Telefax: 51-1-3581496

II. Technical specifications:

1. Chemical Formula: 60.71 % active/ 39.29 % ethanol.

Test N. 2061/99 International Analytical Services S.A. (INASSA)

Method: USP XXIII <611> P. 1767, 1995. Alcohol determination. Method I.
Distillation Method.

2. Composition/Information on Ingredients:

Ingredient	CAS N.	Percent
Ethyl Alcohol	64-17-5	39.29
Herbal Extract in distilled water*	--	60.71

* Distilled water produced by: Victor Marinotti S.R.L.

pH 6.8.

Ammoniac	negative	Chlorates	negative
Magnesium	negative	Phosphates	negative
Calcium	negative	Residues	negative
Heavy metals	negative	Sulfates	negative
Nitrites	negative	Nitrates	negative

Herbal extract plant species components are:

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>Acicarpha 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
Gramma	<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 leaves
Tomillo	<i>Thymus vulgaris</i> L	Stem and leaves
Chancapiedra	<i>Phyllanthus niruri</i> L	Leaves

3. Chemical composition:

Common name	Scientific name	Phytochemical compounds found	Technical report
Cola de caballo	<i>Equisetum bogotense</i> H.B.K.	Salicylic acid, saponines, flavonoids, galic acid, nicotine, palustrine, resins	032-98 p 8
Karkeja	<i>Baccharis genistelloides</i> (Lam.) Pers.	Alkaloids, flavonoids, tannins, triterpen-steroids, reducing sugars, catechines, leucoanthocianines, bitter principles	719-98

Estrella Kiska	<i>Acicarpha tribuloides</i> Jussieu	Alkaloids, tannins, triterpen-steroids, reducing sugars, catechines, leucoanthocianines, foam, bitter principles	707-98
Runa manayupa	<i>Desmodium molliculum</i> (H.B.K.)DC	Tannins, flavonoids, triterpen-steroids, reducing sugars, leucoanthocianines, bitter principles, cumarines	687-98
Chili-chili	<i>Geranium filipes</i> Killip	Tannins, quinones, triterpen-steroids, reducing sugars, leucoanthocianines, bitter and astringent principles.	744-98
Gramma	<i>Cynodon dactylon</i> L	Polysaccharides, agropiren, mucilage, salicylic acid, potassium salts, inositol, mannitol, and glucose.	032-98 p 12
Hierba de cáncer	<i>Stachys pusilla</i> (Wedd.) Briquet	Tannins, aminoacids, flavonoids, triterpen-steroids, alkaloids, reducing sugars, bitter and astringent principles, cumarines	715-98

Wamanpinta	<i>Chuquiraga spinosa</i> Lessing	Tannins, triterpen-steroids, reducing sugars, bitter and astringent principles	673-98
Té indio	<i>Satureja revoluta</i> (R.& P.)	-	-
Tomillo	<i>Thymus vulgaris</i> L.	Tannins, flavonoids, triterpen-steroids, quinones, reducing sugars, cumarines	689-98
Chancapiedra	<i>Phyllanthus niruri</i> L.	Tannins, triterpen-steroids, quinones, reducing sugars, leucoanthocianines, cumarines, bitter principles	679-98

4. Microbial Limit:

Irradiation Dosage: 2KGY

Total counting of aerobic microorganisms (ufc/cm ³):	<10
Total counting of fungi (ufc/cm ³):	<10
Total counting of yeast (ufc/cm ³):	<10
Detection of <i>Staphylococcus aureus</i> / 10 cm ³	Negative
Detection of <i>Escherichia coli</i> / 10 cm ³	Negative
Detection of <i>Pseudomonas aeruginosa</i> / 10 cm ³	Negative
Detection of <i>Salmonella spp</i> / 10 cm ³	Negative

Test N. 4503/99 International Analytical Services S.A. (INASSA)

Method: USP XXIII <61> pp 1681-1686, 1995. Microbial Limit Test.

I. Product Identification:

1. Product name:

**GBDR Health Extract
Herbal Supplement**

2. Manufactured by: Corporación Internacional Salud y Vida E.I.R.L.

Coop. de Vivienda Alfonso Cobián Mz H, Lt 1. Chaclacayo, Lima 8 - Perú.

Telefax: 51-1-3581496

II. Technical specifications:

1. Chemical Formula: 51.88 % active/ 48.12 % ethanol.

Test N. 3003/99 International Analytical Services S.A. (INASSA)

Method: USP XXIII <611> P. 1767, 1995. Alcohol determination. Method I.
Distillation Method.

2. Composition/Information on Ingredients:

Ingredient	CAS N.	Percent
Ethyl Alcohol	64-17-5	48.12
Herbal Extract in distilled water*	--	51.88

* Distilled water produced by: Victor Marinotti S.R.L.

pH 6.8.

Ammoniac negative

Chlorates negative

Magnesium negative

Phosphates negative

Calcium negative

Residues negative

Heavy metals negative

Sulfates negative

Nitrites negative

Nitrates negative

Herbal extract plant species components are:

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
Pájaro Bobo	<i>Tessaria integrifolia</i> (R. & P.)	Stem and leaves
Llipin limon	<i>Citrus aurantifolia</i> Christm. Swingle	Fruit
Cáscara de Haba	<i>Vicia faba</i> L	Fruit rind
Romero	<i>Rosmarinus officinalis</i> L	Stem, leaves and flowers
Hierba buena	<i>Mentha spicata</i> L	Stem and leaves
Verónica	<i>Malesherbia scarlatiflora</i> Gilg	Stem and leaves

3. Chemical composition:

Common name	Scientific name	Phytochemical compounds found	Technical report N*
Cola de caballo	<i>Equisetum bogotense</i> H.B.K.	Salicylic acid, saponines, flavonoids, galic acid, nicotine, palustrine, resins	032-98 p 8
Karkeja	<i>Baccharis genistelloides</i> (Lam.) Pers.	Alkaloids, flavonoids, tannins, triterpen-steroids, reducing sugars, catechines, leucoanthocianin es, bitter principles	719-98
Pájaro Bobo	<i>Tessaria integrifolia</i> (R. & P.)	Alkaloids, tannins, triterpen-steroids, reducing sugars, bitter and astringent principles and lactones-cumarines	735-98

Lipin limon	<i>Citrus aurantifolia</i> Christm. Swingle	Alkaloids, triterpen-steroids, reducing sugars, and resins	681-98
Cáscara de Haba	<i>Vicia faba</i> L.	flavonoids, tannins, triterpen-steroids, reducing sugars, leucoanthocianines, and foam	665-98
Romero	<i>Rosmarinus officinalis</i> L.	Flavonoids, tannins, quinones triterpen-steroids, saponines, reducing sugars, catechines, resins, bitter and astringent principles	743-98
Hierba buena	<i>Mentha spicata</i> L.	Flavonoids, tannins, quinones triterpen-steroids, quinones, reducing sugars.	711-98
Verónica	<i>Malesherbia scarlatiflora</i> Gilg	Tannins, riterpen-steroids, reducing sugars, catechines, and foam	695-98

*Reported by Total Quality Laboratories. National Agrarian University.

Method: Look de Ugaz Olga. Fitoquímica, 1994.

4. Microbial Limit:

Irradiation Dosage: 2KGY

Total counting of aerobic microorganisms (ufc/cm ³):	<10
Total counting of fungi (ufc/cm ³):	<10
Total counting of yeast (ufc/cm ³):	<10
Detection of <i>Staphylococcus aureus</i> / 10 cm ³	Negative
Detection of <i>Escherichia colif</i> 10 cm ³	Negative
Detection of <i>Pseudomonas aeruginosa</i> / 10 cm ³	Negative
Detection of <i>Salmonella spp</i> / 10 cm ³	Negative

Test N. 4404/99 International Analytical Services S.A. (INASSA)

Method: USP XXIII <61> pp 1681-1686, 1995. Microbial Limit Test.

I. Product Identification:

1. Product name:

Muscle Joint Health Extract
Herbal supplement

2. Manufactured by: Corporación Internacional Salud y Vida E.I.R.L.

Coop. de Vivienda Alfonso Cobián Mz H, Lt 1. Chaclacayo, Lima 8 - Perú.

Telefax: 51-1-3581496

II. Technical specifications:

1. Chemical Formula: 54.75 % active/ 45.25 % ethanol.

Test N. 2176/99 International Analytical Services S.A. (INASSA)

Method: USP XXIII <611> P. 1767, 1995. Alcohol determination. Method I.

Distillation Method.

2. Composition/Information on Ingredients:

Ingredient	CAS N.	Percent
Ethyl Alcohol	64-17-5	45.25
Herbal Extract in distilled water*	--	54.75

* Distilled water produced by: Victor Marinotti S.R.L.

pH 6.8.

Ammoniac negative

Chlorates negative

Magnesium negative

Phosphates negative

Calcium negative

Residues negative

Heavy metals negative

Sulfates negative

Nitrites negative

Nitrates negative

Herbal extract plant species components are:

Common name	Scientific name	Parts of the plant used
Uña de gato	<i>Uncaria tomentosa</i> (Willd ex Roem. & Schult.)	Bark
Cola de caballo	<i>Equisetum bogotense</i> H.B.K.	Stem, leaves and flowers
Zarzaparrilla	<i>Smilax febrifuga</i> Kunth	Root
Té indio	<i>Satureja revoluta</i> (R.& P.)	Branchlets and leaves
Gramma	<i>Cynodon dactylon</i> L	Whole plant

3. Chemical composition:

Common name	Scientific name	Phytochemical compounds found	Technical report N*
Uña de gato	<i>Uncaria tomentosa</i> (Willd ex Roem. & Schult.)	Glycosides, alkaloids, poly-oxygenated-triterpens.	032-98 p 3
Cola de caballo	<i>Equisetum bogotense</i> H.B.K.	Salicylic acid, saponines, flavonoids, galic acid, nicotine, palustrine, resins.	032-98 p 3
Zarzaparrilla	<i>Smilax febrifuga</i> Kunth	Saponines, starch, calcium oxalate, resins, glycosides.	677-98
Té indio	<i>Satureja revoluta</i> (R.& P.)	-	-
Gramma	<i>Cynodon dactylon</i> L	Polisaccharides, agropiren, mucilage, salicylic acid, Potassium salts, inositol, mannitol, glucose.	032-98 p 12

*Reported by Total Quality Laboratories. National Agrarian University.

Method: Look de Ugaz Olga. Fitoquímica, 1994.

4. Microbial Limit:

Irradiation Dosage: 2KGY

Total counting of aerobic microorganisms (ufc/cm ³):	<10
Total counting of fungi (ufc/cm ³):	<10
Total counting of yeast (ufc/cm ³)	<10
Detection of <i>Staphylococcus aureus</i> / 10 cm ³	Negative
Detection of <i>Escherichia coli</i> / 10 cm ³	Negative
Detection of <i>Pseudomonas aeruginosa</i> / 10 cm ³	Negative
Detection of <i>Salmonella spp</i> / 10 cm ³	Negative

Test N. 4504/99 International Analytical Services S.A. (INASSA)

Method: USP XXIII <61> pp 1681-1686, 1995. Microbial Limit Test.

I. Product Identification:

1. Product name:

**Andean Serenity Extract
Herbal Supplement**

2. Manufactured by: Corporación Internacional Salud y Vida E.I.R.L.

Coop. de Vivienda Alfonso Cobián Mz H, Lt 1. Chaclacayo, Lima 8 - Perú.

Telefax: 51-1-3581496

II. Technical specifications:

1. Chemical Formula: 54.46% active/ 45.54% ethanol.

Test N. 3004/99 International Analytical Services S.A. (INASSA)

Method: USP XXIII <611> P. 1767, 1995. Alcohol determination. Method I.
Distillation Method.

2. Composition/Information on Ingredients:

Ingredient	CAS N.	Percent
Ethyl Alcohol	64-17-5	45.54
Herbal Extract in distilled water *	--	54.46

* Distilled water produced by: Victor Marinotti S.R.L.

pH 6.8.

Ammoniac negative

Chlorates negative

Magnesium negative

Phosphates negative

Calcium negative

Residues negative

Heavy metals negative

Sulfates negative

Nitrites negative

Nitrates negative

Herbal extract plant species components are:

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

3. Chemical composition:

Common name	Scientific name	Phytochemical compounds found	Technical report N*
Hierba Luisa	<i>Cymbopogon citratus</i> (DC.) Stapf	alkaloids, triterpen-steroids, catechines, reducing sugars, leucoanthocianin es,	717-98
Toronjil	<i>Melissa officinalis</i> L	Flavonoids, tannins, triterpen- steroids, quinones, reducing sugars, leucoanthocianin es.	691-98
Pimpinela	<i>Sanguisorba minor</i> Scopoli	Tannins, flavonoids, triterpen-steroids, quinones, saponines, bitter and astringent principles	741-98
Manzanilla	<i>Matricaria recutita</i> L	Essential oils with bisabol oil, cumarines, glycosides, fatty acids and sugar	033-98 p 2

Valeriana	<i>Perezia coerulescens</i> Wedd.	Alkaloids, tannins, triterpen- steroids, reducing sugars, catechines and bitter principles	693-98
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*Reported by Total Quality Laboratories. National Agrarian University.
Method: Look de Ugaz Olga. Fitoquímica, 1994.