106-E, Kamla Nagar, New Delhi-110007, India. Tel: 91-11-23843955, 23845654, 23845886, +918800733955 Mobile: +91-9811043595

Email: npcs.ei@gmail.com, info@entrepreneurindia.co Website: www.entrepreneurIndia.co

Aloe Vera Handbook Cultivation, Research Finding, Products, Formulations, Extraction & Processing

Code: NI122	Format: paperback
Indian Price: ₹1275	US Price: \$125
Pages: 496	ISBN: 8178330245
Publisher: Asia Pacific Business Press Inc.	

Description

Aloe Vera is a semi tropical plant. It is one of the oldest known medicinal plants gifted by nature, Aloe Vera often called Miracle plant known by many names. It contains more than two hundred tonic ingredients including essential amino acids, enzymes, glucose and more. Also contains the most essential components required by the human body. It is grown wild in hedge rows in dry soil conditions and almost all parts of India. It can be grown even under constant drought conditions. Commercial cultivation and utilization of this plant with the application of technology can be of great value. There are various benefits of this plant; it is used to support the natural healing of skin that has been damaged. A common usage is to sooth sunburned skin. Aloe Vera can also be made into juices, gels, powders and is often added to products. For example it can be found in cosmetics, shampoos, lotions and many other common household Aloe Vera products. The many benefits of Aloe Vera are not fully researched as of yet. Processing of Aloe Vera gel derived from the leaf pulp of the plant, has become a big industry worldwide due to the application in the food industry. It has been utilized as a resource of functional food, especially for the preparation of health drinks which contain Aloe Vera gel and which have no laxative effects. Given the exponentially growing demand for it in the international market, it presents the finest commercial opportunity among the various medicinal plants. Also, India is among the few countries gifted with the unique geographical features essential for cultivation of Aloe Vera and other high potential medicinal plants.

Some fundamentals of this book are chemical investigations of different parts of the leaf, agro technique: Aloe Vera, economics of cultivation per hector, aloe (Aloe Vera) investment opportunity, specialty raw material market for cosmetics/toiletries,

strategy for capacity creation and marketing, influence of Aloe Vera on the glycol amino glycans in the matrix of healing dermal wounds in rats, effects of low molecular constituents from Aloe Vera gel on oxidative metabolism and bactericidal activities of human neutrophils, Aloe Vera & aids research, anti diabetic activity of aloes: preliminary, aloe reduction in ulcers, erosions & hemorrhages, extraction process, processing steps, extraction process of aloe gel and powder etc. This book highlights such technical details to guide and encourage new entrepreneurs. It is very useful book for consultants, farmers, students of Agricultural universities, libraries etc.

Content

CULTIVATION, RESEARCH FINDINGS, PRODUCTS, FORMULATIONS, EXTRACTION & PROCESSING

1. Historical Developments

Antibacterial findings

Anti-inflammatory findings

Anaesthetic findings

Analgesic findings

Thermal burns

Anti-fungal findings

Immuno-stimulatory findings

Dysmenorrhea

Superoxide dismutases

2. Geographical Distributions

Distribution

Nomenclature:

Geographical origin

Morphology

3. Anatomy of Aloe Vera Leaves

Anatomy of leaf

Chemical investigations of different parts of the leaf

Aloe vera-var. barbadensis

Other Aloe species

4. Agro-Technique: Aloe Vera

Preparation of Land

Propagation

Sowing

Irrigation

Diseases & their Control

Harvesting & Storage

Production & Yield

Market Price

Economics of Cultivation per Hector

Aloe India: Aleo Barbadensis

Aloe Littoralis

Aloe Perryi

5. Aloe (Aloe Vera) Investment Opportunity

Family Liliaceae

Common Names

Botanical Trait

Uniqueness

Cultivation

Type & Extent

Propagation

Harvest

Yield

Applications

Variety of Products

Process for Aloe Gel

Process Conditions:

Strategy for Process Control

Advantages of wholeleaf cold process

Price

Global Scenario

International Aleo Science Council

Estimated global market for Aloe Vera Gel:

Speciality, cosmetics and toiletery market

Speciality raw material market for cosmetics/toileteries

Japanese Scenario

Scenario

Important Overseas Players

Forever living

Santrel international

Selected Indian Players

Emami

Siri Agritech

Driving Factor For Demand

Indian Skin Cream Market

Driving Factor for Capacity Creation:

Strategy for Capacity Creation and Marketing

6. Research Findings

Aloe vera and the inflamed synovial pouch model Isolation of a stimulatory system in an Aloe extract Aloe vera as a biologically active vehicle for hydrocortisone acetate.

The stimulation of postdermabrasion wound healing with stabilized aloe vera gel-polyethylene oxide dressing Aloe-emodin effects on arylamine N-acetyltransferase activity in the bacterium Helicobacter pylori. Influence of aloe vera on the healing of dermal wounds in diabetic rats.

Influence of Aloe vera on the glycosaminoglycans in the matrix of healing dermal wounds in rats.

Immunochemical distinction of Aloe vera,

A. arborescens, and A. chinensis gels.

Aloe barbadensis extracts reduce the production of

interleukin-10 after exposure to ultraviolet radiation.

Influence of Aloe vera on collagen characteristics in healing dermal wounds in rats.

Influence of Aloe vera on collagen turnover in healing of dermal wounds in rats.

Studies of aloe. VI. Cathartic effect of isobarbaloin.

[The action of an aqueous extract of Aloe barbadensis Miller in an in-vitro culture of Trichomonas

vaginalis].

Biotherapy with the pineal inimunomodulating hormone melatonin versus melatonin plus aloe vera in untreatable advanced solid neoplasms.

Nitro chemopreventive effects of plant polysaccharides (Aloe barbadensis Miller, Lentinus edodes, Ganoderma lucidum and Coriolus versicolor).

The therapeutic potential of Aloe Vera in tumor-bearing rats.

In vitro angiogenic activity of Aloe vera gel on calf pulmonary artery endothelial (CPAE) cells Isolation of cDNA for an NADP-malic enzyme from Aloe arborescens Prevention of ultraviolet radiation-induced suppression of accessory cell function of Langerhans cells by Aloe vera gel components Beneficial effect of Aloe on wound healing in an excisional wound model.

Acceleration of the alcohol oxidation rate in rats with aloin, a quinone derivative of Aloe.

Activation of a mouse macrophage cell line by acemannan: the major carbohydrate fraction from Aloe vera gel.

Isolation of a cDNA for a phosphoenolpyruvate carboxylase from a monocot CAM-plant, Aloe arborescens: structure and its gene expression.

A purgative action of barbaloin is induced by

Eubacterium sp. strain BAR, a human intestinal anaerobe, capable of transforming barbaloin to

aloe-emodin anthrone.

Studies of aloe. V. Mechanism of cathartic effect.

Studies of aloe. IV. Mechanism of cathartic effect.

Prevention of ultraviolet radiation-induced suppression of contact and delayed hypersensitivity by Aloe barbadensis gel extract.

Rhein and aloeâ€"emodin kinetics from senna laxatives in man.

Pharmacokineticâ€"metabolic studies with 14C-aloe emodin after oral administration to male and female rats.

Some pharmacological actions of aloe extracts and Cassia abbreviata on rats and mice.

Effects of low molecular constitutents from Aloe vera gel on oxidative metabolism and cytotoxic and bactericidal activities of human neutrophils Studies of aloe. III. Mechanism of cathartic effect.

An anti-complementary polysaccharide with immunological adjuvant activity from the leaf parenchyma gel of Aloe vera.

[Effects of aloe extracts, aloctin A, on gastric secretion and on experimental gastric lesions in rats].

Effect of water extracts of aloe and some herbs

in decreasing blood ethanol concentration in rats.

Aloe vera

Comparative evaluation of aloe vera in the management of burn wounds in guinea pigs.

The glucomannan system from Aloe vahombe (liliaceae).

The Aloe vera phenomenon: a review of the properties and modern uses of the leaf parenchyma gel

7. Clinical Trails

Heart Disease

Prevention of Atheromatous Heart Disease

Lowered Blood Pressure

Immunological Benefits: Cancer, Tumours, HIV & AIDS

A Study of 29 AIDS Patients

Cancer Research

Aloe Vera & AIDS Research

Aloe vera may mimic azt without toxicity

Antimetastatic Properties of Aloe Juice

Aloemannan, Significant Antitumor Efficacy

Antimutagen of Aloe plants

Diabetes

Aloe vera & gibberellin, anti-inflammatory activity in diabetes

Normalized Blood Glucose Level

Antidiabetic activity of Aloes: preliminary

clinical & experimental observations

Aloe vera-anti-edemic & analgesic activity in diabetes

Gastrointestinal Disorders

Colitis & Crohn's Disease

Research - Gastric Ulcers

Research - Ulcers, Stress Related

A double-blind trial of a celandin, Aloe Vera & psyllium laxative preparation in adult patients with constipation

Studies of Aloe III. Mechanism of Cathartic Effect

Aloe Vera to treat gastrointesinal Problems

Research - Doudenal Ulcers

Aloe Reduction In Ulcers, Erosions & Hemorrhanges

in the Stomach

Radiation, Burns & Frostbite

Aloe vera gel hindered wound healing of experimental second-degree burns: a quantitative controlled study.

Experimental & clinical observations on frostbite

Alvagel as a therapeutic agent in the treating of radiation burns

Beneficial effects of aloe in wound healing

The external use of Aloes

Treatment of experimental frostbite with

pentoxifylline & Aloe vera cream

Psoriasis

Management of psoriasis with Aloe vera extract in a hydrophilic cream: a placebocontrolled, double-

blind study.

Skin Disorders/Inflammation

Anti-inflammatory activity of Aloe vera against a spectrum of irritants

Wound healing. Oral and topical activity of Aloe vera.

Processed Aloe vera administered and topically

inhibits inflammation

Uses of Aloe in treating leg ulcers & dermatosis

Anti-inflammatory and wound healing activity of

a growth substance in Aloe vera.

Anti-inflammatory & wound healing properties

of Aloe vera

Effects of topical medications on the healing of open

pad wounds in dogs

Antiinflammatory activity of extracts from Aloe

vera gel.

Skin Disorders Virus: Bacteria, Fungi & Parasites

Dental Disorders

Aloe Vera Gel Toothpaste

Aloe in Dentistry

Why Aloe may work

Use of Whole-Leaf Aloe

8. Patent

U.S. Patent 6, 027, 728 (2000)

Herbal Skin regeneration and method

A method for skin regeneration comprising

Description

Background of the Invention

Summary of the Invention

Detailed Description of the Invention

U.S. Pat. 6, 030, 622

Herbal Extract composition and method

(2000) with immune boosting capability

Background of the Invention

Field of the Invention

Description of the Background Art

Summary of the Invention

Detailed Description of the Preferred Embodiments

Extract Preparation

Preparation of Extract of ARUM ALOE

Preparation of Extract of POMEGRANATE.

Preparation of Extract of TEA.

Preparation of Extract of HIBISCUS.

Preparation of Combined Extracts of ARUM and POMEGRANATE

Preparation of Combined Extracts of ARUM, POMEGRANATE, TEA and HIBISCUS

In Vitro Blast Transformation of Lymphocytes

From Normal Patients

In Vitro Blastogenesis of Peripheral Blood Lymphocytes from Patients With Renal

Failure

Stimulation of Cytokine Production in

Normal Persons

In Vitro Inhibition ofgp 120 Binding to MT-4 Cells Measured with OKT4A Monoclonal Antibody.

In Vitro Inhibition of gp 120 Binding to MT-4 Cells Measured with Anti-gp 120 Monoclonal Antibody.

Chemical Analysis of Combined Extracts

Aloe vera gel toothpaste

United States Patent 5, 294, 434 March 15, 1994

Summary of Invention

Detailed Description

United States Patent 5,989,560

November 23, 1999

Herbal intestinal tract cleanser

Field of the Invention

Background of the Invention

Summary of the Invention

Detailed Description of the Preferred Embodiments

Aloe vera ointment

United States Patent 4,725,438 February 16, 1988

Field of the Invention

Background of the Invention

Summary of the Invention

Objects of the Invention

Description of the Preferred Embodiment

Summary of the Achievements of the Objects

of the Invention

United States Patent 5,288,492 February 22, 1994

Decongestant composition containing aloe vera

Background of the Invention

Field of the Invention

Description of the Prior Art

Summary of the Invention

Detailed Description of the Invention

United States Patent: 6,004,558

Technical Field

Background of the Invention

Summary of the Invention

Detailed Description of the Invention

Separation of primary isoflavones using

chromatographic techniques

Method for extraction and removal of genistein,

daidzein, formononetin and biochanin

Anti-cancer activity or isoflavone free cell extracts

Treatment of a sixty two year old male diagnosed

with prostate cancer

Herbal Remedies

Summary of the Invention

Brief Description of the Drawings

Detailed Description of a Preferred Embodiment

Herbs and Preparation of Formulations

Patient Selection

Herbal Preparation and Dosage

Results of the Study

Effect of Discontinuing Usage of the Present Invention

Conclusion

United States Patent 5,904,924 May 18, 1999

Green nutritional powder composition

Summary of the Invention

Detailed Description of the Present Invention

U.. Pat. 5,876,728 (1999)

National Composition extracted from Plants

used in the treatment of Cancer

Background of the Invention

Objectives of the Invention

Summary of the Invention

Detailed Description of the Invention

Test Substances

Cell Culture

Cytotoxicity Assay

Fresh Tumor Specimens

Turmeric & Aloe Vera for treating health ailments

Summary of the Invention

U.S. Pat. 4591, 387 (1986)

Aloe Vera Leaf Processor

Brief Description of the Invention

Detailed Description of the Invention

U.S. Pat. 5, 215, 760 (1993)

Detailed Description of the Preferred Embodiments

U.S. Pal 4,309,180 (1983)

Cosmetic facial preparation contraining aloe vera

Detailed Description of the Preferred Embodiment

U.S. Pat. 6,013, 259 (2000)

Aloe Vera Ophthalmic Solution

Background of the Invention

Brief Summary of the Invention

Detailed Description of the Invention

Allantoin

Extract of Lavender

Topical Compositions

Pharmaceutical/Cosmetic Compositions

Cleaning Compositions

Weighing

Washing

Filleting

Grinding

Homogenization

pH Adjustment

Selective Precipitation

Centrifugation

Weighing/Storage

Tray loading

Drying

Milling

Blending

Storage and Exportation

Moderate or Medium Filtration

(Filtration Using A Medium Filter)

Fine Filtration (Filtration Using A Fine Filter)

Ultrafiltration/Concentration

Ultracentrifugation

Low Speed Centrifugation

Dialysis

Anion Exchange Chromatography

Size Exclusion Chromatography

Step-Wise Filtration

Preparation of Bulk Pharmaceutical

Mannan ("BPMâ€∏)

Pilot Scale Sizing of Bulk Pharmaceutical

Mannans by Ultra-filtration

Purification and Depyrogenation of FBA using

Chromatography with subsequent Molecular

Sizing (DFBA)

Anti Viral Effects of Different Factors Obtained by

Chromatographic Separation of FBA

Cells and Culture media:

Reagents and Preparation:

Protocol of Mouse Pulmonary Inflammation

Model

Myeloperoxidase ("Mpoâ€□) Assessment of Lavage

Fluid and Tissues

Lavage Fluid

Tissue MPO Assessment

MPO Reaction

Mouse Croton Oil Ear Inflammation Model

Protocol for Cytokine Analysis from Macrophages

Mouse TNF-.alpha. Assay In Biological Fluids

Centrifugation of Suspension of Results Obtained

from Bioassays used to Evaluate Different Factors

Results from Factors using Methods as Described

IL-6 Production:

IL- 1 .alpha. Productions:

Microparticulate Factor From FBA and No Production

Macrophage Activation and Anti-inflammatory

Activities

Epitheleal Cells ("ECâ€□) Proliferation

IL-6 Assay

RAW Cells Secreted Interleukin-6 in Response

to FBA

"MF† Stimulated IL-6 Production

Anti-Inflammatory Activities of "Soluble Factorsâ€∏

Filtration with 0.1 .mu.m Filters of "Microparticle

Factorsâ€∏

Factors of FBA Sized Filtration through Syringe

Filters of Various Pore Sizes

Carbohydrate Content in the Filtrate

Factors Sized and Isolated by 5 .mu.m Filtration

and No Assay

Topical Anti-Inflammatory Activity of Freeze-

Dried Aloe Vera Extract and FBA

Other Related Applications

Summary of the Present Invention

9. Herbal Formulations

Basligun Kabir

Preparation

Administration

Uses and indications

Sufuf Dama

Hab Hiltit

Hab Soranjan

Hab Shabyar

Halwa-i-ghaikwar

Qurs Tankar

Kuhl-ul-jawahar

Kuhl Roshania

Kushta Abrak Safaid

Kushta Busud

Kushta Khubs-ul-hadid

Kushta Khar Mohra

Kushta Tila Kalan

Kushta Faulad

Kushta Gaodanti

Kushta Nugra

Majun Talkh

10. Cultivation Practices

General details

Origin and distribution

Propagation

Harvest

Yield

Cultivation Practices

Soil

Climate

Land Preparation

Propagation

Planting

Manuring

Irrigation

Weeding

Diseases and Management

Harvesting the Yield

11. Extraction Process

Organ used for manufacture

Timing of Leaf Harvest

Leaf Harvesting and Handling

General process outline for Herbal extract

Cleaning and size reduction:

Solvent extraction:Â

Solvent recovery

Spray dried extract

Soft extract

Phytochemicals:

Effluent treatment:

Aloe Vera Gel Process

Highlights

Guidelines for production

Process outline

Process conditions:Â

Advantages of wholeleaf cold process

Strategy for process control

Patent details

Extraction Process
Processing Steps
Extraction process of Aloe Gel and Powder
12. Patents and Know-how
Descriptioin
Background of the Invention
Brief Summary of the Invention
Detailed Description of the Invention
Preparation of the Aloe Vera gel eye drops:
Summary of the Invention
Objects of the Invention

About NIIR Project Consultancy Services (NPCS)

NIIR Project Consultancy Services (NPCS) is a reliable name in the industrial world for offering integrated technical consultancy services. Its various services are: Prefeasibility study, New Project Identification, Project Feasibility and Market Study, Identification of Profitable Industrial Project Opportunities, Preparation of Project Profiles and Pre-Investment and Pre-Feasibility Studies, Market Surveys and Studies, Preparation of Techno-Economic Feasibility Reports, Identification and Selection of Plant and Machinery, Manufacturing Process and/or Equipment required, General Guidance, Technical and Commercial Counseling for setting up new industrial projects and industry. NPCS also publishes various technology books, directories, databases, detailed project reports, market survey reports on various industries and profit making business. Besides being used by manufacturers, industrialists, and entrepreneurs, our publications are also used by Indian and overseas professionals including project engineers, information services bureaus, consultants and consultancy firms as one of the inputs in their research.

NIIR PROJECT CONSULTANCY SERVICES 106-E, Kamla Nagar, New Delhi-110007, India. Tel: 91-11-23843955, 23845654, 23845886, +918800733955 Mobile: +91-9811043595

Email: npcs.ei@gmail.com, info@entrepreneurindia.co Website: www.entrepreneurIndia.co