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

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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.

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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.

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Rhein and aloe-emodin kinetics from senna laxatives in man.

Pharmacokinetic 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 constituents 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 Trials

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

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Aloe vera may mimic azt without toxicity
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The external use of Aloes
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Anti-inflammatory & wound healing properties of Aloe vera
Effects of topical medications on the healing of open pad wounds in dogs
Anti-inflammatory 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
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 of gp 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
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.S. 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 containing 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 (â€œBPMâ€Â•)
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 (â€œMpoâ€Â•) 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-α 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 α. Productions:
  - Microparticulate Factor From FBA and No Production
  - Macrophage Activation and Anti-inflammatory Activities
  - Epithelial Cells (EC) Proliferation
  - IL-6 Assay

RAW Cells Secreted Interleukin-6 in Response to FBA

α-βα Stimulated IL-6 Production

Anti-Inflammatory Activities of α-βαSoluble Factorsα-βα Filtration with 0.1 μm Filters of α-βαMicroparticle Factorsα-βα

Factors of FBA Sized Filtration through Syringe Filters of Various Pore Sizes

Carbohydrate Content in the Filtrate

Factors Sized and Isolated by 5 μm Filtration and No Assay

Topical Anti-Inflammatory Activity of Freeze-Dried Aloe Vera Extract and FBA

Other Related Applications

Summary of the Present Invention

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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
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Kushta Faulad
Kushta Gaodanti
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Solvent recovery
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Effluent treatment:
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Process conditions:
Advantages of wholeleaf cold process
Strategy for process control
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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

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