

# Handbook on Unani Medicines with Formulae, Processes, Uses and Analysis (2nd Edition)

**Author:** Dr. Himadri Panda

**Format:** paperback

**Code:** NI334

**Pages:** 464

**Price:** Rs 1795 | US\$ 150

**Publisher:** NIIR PROJECT CONSULTANCY SERVICES

**Shipping:** 5 days

## About the Book

Handbook on Unani Medicines  
with Formulae, Processes, Uses and Analysis

Unani medicines are a form of traditional medicine derived from ancient Greek and Arabic sources, and it is based on the concept of restoring balance to the body. Unani Medicines, also known as Unani Tibb or Greek-Arabic medicine, is a traditional form of medicine that has been practiced for centuries. It originated in ancient Greece and was further developed and refined by Arabic scholars. The term "Unani" is derived from the Arabic word "Yunani," which means "Greek."

The core philosophy behind Unani Medicines is the concept of balance and equilibrium in the body. According to Unani practitioners, good health is achieved when the four humors (blood, phlegm, yellow bile, and black bile) are in harmony. Any imbalance in these humors leads to illness. The goal of Unani medicine is to restore this balance through a combination of lifestyle changes, herbal remedies, dietary modifications, and other natural therapies. Unani Medicines have a wide range of applications and can be used to treat various ailments, including digestive disorders, respiratory problems, skin diseases, arthritis, and mental health issues. They are known for their holistic approach and are effective in promoting overall well-being.

In India, the Unani System of Medicine has a long and illustrious history. The Arabs and Persians introduced it to India probably in the seventh century. In terms of the practice of Unani Medicine, India is currently one of the top countries. The Unani System of Medicine treats disorders that affect all of the human body's systems and organs. Chronic skin, liver, musculoskeletal, and reproductive system diseases, as well as immunological and lifestyle issues, have been proven to be extremely effective and acceptable treatments.

Unani Medicine industry in India is expected to register a CAGR of 8.6% during the forecast period. India is the world's 2nd largest exporter of Unani Medicine in the world and is frequently encouraging its export interests. The export of medicinal plants from India has taken an upward trend. The market for Unani Medicines has seen significant growth, with more people seeking alternative and natural remedies. Many Unani products are now available in the form of herbal supplements, oils, ointments, and powders. These products are easily accessible and can be purchased both online and in local health stores.

As the demand for various Unani products to increase immunity grows, the price of these goods would rise. Due to growing knowledge of the effectiveness and efficacy of traditional systems of medicine, as well as increased government activities to promote these systems and rising R&D, the market for Unani Medicines in India is currently undergoing a spike in demand. People are also using alternative medicine more frequently for chronic illnesses including skin, joint pain, and respiratory problems, which is driving up demand. It is also being emphasised for serious health conditions such as hypertension, heart disease, and even diabetes.

The books' main subjects includes Unani Drug Formulations, Aatrilal, Anjir, Azaraqi, Badam Shireen (*Prunus Amygdalus*), Bazrulbanj (*Hyoscyamus*), Chobchini (*Smilax China*), Dudhi Khurd (*Euphorbia Thymifolia*), Gulnar Farsi (*Punica Granatum*), Halela Siyah (*Terminalia Chebula*), Heel Kalan (*Amomum Subulatum*), Heel Khurd (*Elettaria Cardamomum*), Hina (*Lawsonia Inermis*), Inderjeo Talkh (*Holarrhena Antidysenterica*), Ispand

(Peganum Harmala), Kaiphala (Myrica Esculenta), Karanjwa (Caesalpinia Crista), Kasni (Cichorium Intybus), Khar-E-Khasak (Tribulus Terrestris), Khella (Ammi Visnaga), Khurfa (Portulaca Oleracea), Kishneez Khushk (Coriandrum Sativum), Konch (Mucuna Cochinchinensis), Kulthi (Dolichos Biflorus), Madar (Solanum Nigrum), Mako (Solanum Nigrum), Mawiz (Vitis Vinifera), Methi (Trigonella Foenum-Graecum), Mundi (Sphaeranthus Indicus), Nakhud (Cicer Arietinum), Nilofar (Nymphaea Alba), Panwad (Cassia Tora), Palas (Butea Monosperma), Sambhalu (Vitex Negundo), Saranja (Colchicum Luteum), Turbud (Operculina Turpethum), Adamas, Alumen, Kaolinum, Ammonicum Chloride, Antimony Sulphide, Argentum, Arsenum, Arsenic Disulphidum, Asphaitum, Aurum, Makaradhwaja, Calcium, Calcil Carbonas, Calcii Oxidum, Calcii Sulphas, Carbo Ligni, Ferrum, Ferri Sulphuratum, Hydrargyrum, Plumbum, Plumbi Oxidum, Plumbi Sulphuratum, Potassii Carbonas Impura, Potassii Nitras, Silicum, Silicate Of Magnesia, Silicate Of Magnesia And Iron, Saline Substances, Sodii Carbonas Impure, Sodii Biboras, Sodii Chloridum, Stannic Sulphidum, Stannum, Sulphur, Talcum Purification and Zincum. It also includes contact information of machinery suppliers, as well as images of equipment and plant layout.

A thorough guide on Unani Medicines manufacture and entrepreneurship. This book is a one-stop shop for everything you need to know about the Unani Medicines, which is ripe with opportunity for producers, merchants, and entrepreneurs. This is the only book that covers the process of making commercial Unani Medicines. From concept through equipment procurement, it is a veritable feast of how-to information.

## Contents

### Table of Contents

#### 1. INTRODUCTION

##### 1.1. Benefits

##### 1.2. Fundamentals

##### 1.3. Principles

##### 1.4. Unani Treatment Work

#### 2. HOW TO START HERBAL MEDICINE MANUFACTURING UNIT

##### 2.1. Step-Wise Procedure to Start Herbal Manufacturing Unit

##### 2.2. Unani Medicine Manufacturing Unit Requirements

##### 2.3. Requirements for Manufacturing License for Ayurvedic Products

##### 2.4. Machinery and Equipment Required for Herbal

##### Manufacturing Unit

##### 2.4.1. Liquid & oil section

##### 2.4.2. Capsule/Tablet section

##### 2.4.3. Miscellaneous Equipment

##### 2.5. Laboratory Equipment Required for Herbal Manufacturing Unit

##### 2.5.1 Competent Person/ Staff Qualification for Manufacturing

##### 2.5.2. Competent Person Staff for Laboratory

##### 2.6. Method Of Preparation

#### 3. UNANI DRUG FORMULATIONS

##### 3.1. Drug Designing

##### 3.2. Scope

##### 3.3. Scope in Doses Forms of Particular Formulation

##### 3.4. Specific Processing of Unani Drugs

##### 3.5. Standardization and Quality Assurance

##### 3.6. Need of Research and Development

##### 3.7. Action and Uses of Particular Drugs

##### 3.8. Modification in Doses of Drugs

#### PART - I

## PLANT KINGDOM

### 4. AATRILAL

- 4.1. Period of Occurrence
- 4.2. Description
- 4.3. Part(S) Used
- 4.4. Procedure and Time of Collection
- 4.5. Preservation and Storage
- 4.6. Morphology
- 4.7. Study of the Powdered Drug
  - 4.7.1. Measurement of Cells (In Microns)
  - 4.7.2. Quantitative Microscopic Characters
  - 4.7.3. Reaction of Chemicals with Crude Powdered Drug
  - 4.7.4. Fluorescence Analysis of the Powdered Drug
- 4.8. Chemical Constituents

### 5. ANJIR

- 5.1. Habitat
- 5.2. Period of Occurrence
- 5.3. Description
- 5.4. Part(s) Used
- 5.5. Procedure and Time of Collection
- 5.6. Preservation and Storage
- 5.7. Morphology
- 5.8. Study of the Powdered Drug
  - 5.8.1. Measurement of Cells (In Microns)
  - 5.8.2. Reaction of Chemicals with Crude Powdered Drug
  - 5.8.3. Fluorescence Analysis of the Powdered Drug
- 5.9. Chemical Constituents

### 6. AZARAQI

- 6.1. Habitat
- 6.2. Period of Occurrence
- 6.3. Description
- 6.4. Part(s) Used
- 6.5. Procedure and Time of Collection
- 6.6. Preservation and Storage
- 6.7. Morphology
- 6.8. Study of the Powdered Drug
  - 6.8.1. Measurement of Cells (In Microns)
  - 6.8.2. Reaction of Chemicals with Crude Powdered Drug
  - 6.8.3. Fluorescence Analysis of the Powdered Drug
- 6.9. Chemical Constituents

### 7. BADAM SHIREEN (PRUNUS AMYGDALUS)

- 7.1. Habitat
- 7.2. Period of Occurrence
- 7.3. Description
- 7.4. Part(s) Used
- 7.5. Procedure and Time of Collection
- 7.6. Preservation and Storage
- 7.7. Morphology
- 7.8. Study of the Powdered Drug
  - 7.8.1. Measurement of Cells (In Microns)
  - 7.8.2. Reaction of Chemicals with Crude Powdered Drug

## 7.9. Chemical Constituents

### 8. BAZRULBANJ (HYOSCYAMUS)

#### 8.1. Habitat

#### 8.2. Period of Occurrence

#### 8.3. Description

#### 8.4. Part(s) Used

#### 8.5. Procedure and Time of Collection

#### 8.6. Preservation and Storage

#### 8.7. Morphology

#### 8.8. Study of the Powdered Drug

##### 8.8.1. Histochemical Test

##### 8.8.2. Measurement of Cells (In Microns)

##### 8.8.3. Reaction of Chemicals with Crude Powdered Drug

##### 8.8.4. Fluorescence Analysis of the Powdered Drug

#### 8.9. Chemical Constituents

### 9. CHOBCHINI (SMILAX CHINA)

#### 9.1. Habitat

#### 9.2. Period of Occurrence

#### 9.3. Description

#### 9.4. Part(s) Used

#### 9.5. Procedure and Time of Collection

#### 9.6. Preservation and Storage

#### 9.7. Morphology

#### 9.8. Study of the Powdered Drug

##### 9.8.1. Reaction of Chemicals with Crude Powdered Drug

##### 9.8.2. Fluorescence Analysis of the Powdered Drug

#### 9.9. Chemical Constituents

### 10. DUDHI KHURD (EUPHORBIA THYMIFOLIA)

#### 10.1. Habitat

#### 10.2. Period of Occurrence

#### 10.3. Description

#### 10.4. Part(s) Used

#### 10.5. Procedure and Time of Collection

#### 10.6. Preservation and Storage

#### 10.7. Morphology

#### 10.8. Study of the Powdered Drug

##### 10.8.1. Fluorescence Analysis of the Powdered Drug

#### 10.9. Chemical Constituents

### 11. GULNAR FARSI (PUNICA GRANATUM)

#### 11.1. Habitat

#### 11.2. Period of Occurrence

#### 11.3. Description

#### 11.4. Part(s) Used

#### 11.5. Procedure and Time of Collection

#### 11.6. Preservation and Storage

#### 11.7. Morphology

#### 11.8. Study of the Powdered Drug

##### 11.8.1. Measurement of Cells (In Microns)

##### 11.8.2. Reaction of Chemicals with Crude Powdered Drug

##### 11.8.3. Fluorescence Analysis of the Powdered Drug

#### 11.9. Chemical Constituents

## 12. HALELA SIYAH (TERMINALIA CHEBULA)

- 12.1. Habitat
- 12.2. Period of Occurrence
- 12.3. Description
- 12.4. Part(s) Used
- 12.5. Procedure and Time of Collection
- 12.6. Preservation and Storage
- 12.7. Morphology
- 12.8. Study of the Powdered Drug
  - 12.8.1. Measurement of Cells (In Microns)
  - 12.8.2. Fluorescence Analysis of the Powdered Drug
- 12.9. Chemical Constituents

## 13. HEEL KALAN (AMOMUM SUBULATUM)

- 13.1. Habitat
- 13.2. Period of Occurrence
- 13.3. Description
- 13.4. Part(s) Used
- 13.5. Procedure and Time of Collection
- 13.6. Preservation and Storage
- 13.7. Morphology
- 13.8. Study of the Powdered Drug
  - 13.8.1. Measurement of Cells (In Microns)
  - 13.8.2. Reaction of Chemicals with Crude Powdered Drug
  - 13.8.3. Fluorescence Analysis of the Powdered Drug
- 13.9. Chemical Constituents

## 14. HEEL KHURD (ELETTARIA CARDAMOMUM)

- 14.1. Habitat
- 14.2. Period Of Occurrence
- 14.3. Description
- 14.4. Part(s) Used
- 14.5. Procedure and Time of Collection
- 14.6. Preservation and Storage
- 14.7. Morphology
- 14.8. Study of the Powdered Drug
  - 14.8.1 Measurement of Cells (In Microns)
  - 14.8.2 Reaction of Chemicals with Crude Powdered Drug
  - 14.8.3. Fluorescence Analysis of the Powdered Drug
- 14.9. Chemical Constituents

## 15. HINA (LAWSONIA INERMIS)

- 15.1. Habitat
- 15.2. Period of Occurrence
- 15.3. Description
- 15.4. Part(s) Used
- 15.5. Procedure and Time of Collection
- 15.6. Preservation and Storage
- 15.7. Morphology
- 15.8. Study of the Powdered Drug
  - 15.8.1. Measurement of Cells (In Microns)
  - 15.8.2. Determination of Palisade Ratio
  - 15.8.3. Determination of Stomatal Indices
  - 15.8.4. Determination of Veinislet Number



- 15.8.5. Fluorescence Analysis of the Powdered Drug
- 15.9. Chemical Constituents
- 16. INDERJEO TALKH (HOLARRHENA ANTIDYSENTERICA)
  - 16.1. Habitat
  - 16.2. Period of Occurrence
  - 16.3. Description
  - 16.4. Part(s) Used
  - 16.5. Procedure and Time of Collection
  - 16.6. Preservation and Storage
  - 16.7. Morphology
  - 16.8. Study of the Powdered Drug
    - 16.8.1. Measurement of Cells (In Microns)
    - 16.8.2. Reaction of Chemicals with Crude Powdered Drug
    - 16.8.3. Fluorescence Analysis of the Powdered Drug
  - 16.9. Chemical Constituents
- 17. ISPAND (PEGANUM HARMALA)
  - 17.1. Habitat
  - 17.2. Period of Occurrence
  - 17.3. Description
  - 17.4. Part(s) Used
  - 17.5. Procedure and Time of Collection
  - 17.6. Preservation and Storage
  - 17.7. Morphology
  - 17.8. Study of the Powdered Drug
    - 17.8.1. Measurement of Cells (In Microns)
    - 17.8.2. Reaction of Chemicals with Crude Powdered Drug
    - 17.8.3. Fluorescence Analysis of the Powdered Drug
  - 17.9. Chemical Constituents
- 18. KAIPHAL (MYRICA ESCULENTA)
  - 18.1. Habitat
  - 18.2. Period of Occurrence
  - 18.3. Description
  - 18.4. Part(s) Used
  - 18.5. Procedure and Time of Collection
  - 18.6. Preservation and Storage
  - 18.7. Morphology
  - 18.8. Study of the Powdered Drug
    - 18.8.1. Reaction of Chemicals with Crude Powdered Drug
    - 18.8.2. Fluorescence Analysis of The Powdered Drug
  - 18.9. Chemical Constituents
- 19. KARANJWA (CAESALPINIA CRISTA)
  - 19.1. Habitat
  - 19.2. Period of Occurrence
  - 19.3. Description
  - 19.4. Part(s) Used
  - 19.5. Procedure and Time of Collection
  - 19.6. Preservation and Storage
  - 19.7. Morphology
  - 19.8. Study of the Powdered Drug
    - 19.8.1. Histochemical Analysis
    - 19.8.2. Measurement of Cells (In Microns)

- 19.8.3. Reaction of Chemicals with Crude Powdered Drug
- 19.8.4. Fluorescence Analysis of the Powdered Drug
- 19.9. Chemical Constituents
- 20. KASNI (CICHORIUM INTYBUS)
- 20.1. Habitat
- 20.2. Period of Occurrence
- 20.3. Description
- 20.4. Part(s) Used
- 20.5. Procedure and Time of Collection
- 20.6. Preservation and Storage
- 20.7. Morphology
- 20.8. Study of the Powdered Drug
- 20.8.1. Measurement of Cells (In Microns)
- 20.8.2. Reaction of Chemicals with Crude Powdered Drug
- 20.8.3. Fluorescence Analysis of the Powdered Drug
- 20.9. Chemical Constituents
- 21. KHAR-E-KHASAK (TRIBULUS TERRESTRIS)
- 21.1. Habitat
- 21.2. Period of Occurrence
- 21.3. Description
- 21.4. Part(s) Used
- 21.5. Procedure and Time of Collection
- 21.6. Preservation and Storage
- 21.7. Morphology
- 21.8. Study of the Powdered Drug
- 21.8.1. Measurement of Cells (In Microns)
- 21.8.2. Reaction of Chemicals with Crude Powdered Drug
- 21.8.3. Fluorescence Analysis of the Powdered Drug
- 21.9. Chemical Constituents
- 22. KHELLA (AMMI VISNAGA)
- 22.1. Habitat
- 22.2. Period of Occurrence
- 22.3. Description
- 22.4. Part(s) Used
- 22.5. Procedure and Time of Collection
- 22.6. Preservation and Storage
- 22.7. Morphology
- 22.8. Study of the Powdered Drug
- 22.8.1. Measurement of Cells (In Microns)
- 22.8.2. Quantitative Microscopic Characters
- 22.8.3. Fluorescence Analysis of the Powdered Drug
- 22.9. Chemical Constituents
- 23. KHURFA (PORTULACA OLERACEA)
- 23.1. Habitat
- 23.2. Period Of Occurrence
- 23.3. Description
- 23.4. Part(s) Used
- 23.5. Procedure and Time of Collection
- 23.6. Preservation and Storage
- 23.7. Morphology
- 23.8. Study of the Powdered Drug

- 23.8.1. Histochemical Analysis (Leaf)
- 23.8.2. Measurement of Cells (In Microns)
- 23.8.3. Quantitative Microscopic Characters
- 23.8.4. Fluorescence Analysis of the Powdered Drug
- 23.9. Chemical Constituents
- 24. KISHNEEZ KHUSHK (CORIANDRUM SATIVUM)
  - 24.1. Habitat
  - 24.2. Period of Occurrence
  - 24.3. Description
  - 24.4. Part(s) Used
  - 24.5. Procedure and Time of Collection
  - 24.6. Preservation and Storage
  - 24.7. Morphology
  - 24.8. Study of the Powdered Drug
    - 24.8.1. Reaction of Chemicals with Crude Powdered Drug
    - 24.8.2. Fluorescence Analysis of the Powdered Drug
  - 24.9. Chemical Constituents
- 25. KONCH (MUCUNA COCHINCHINENSIS)
  - 25.1. Habitat
  - 25.2. Period of Occurrence
  - 25.3. Description
  - 25.4. Part(s) Used
  - 25.5. Procedure and Time of Collection
  - 25.6. Preservation and Storage
  - 25.7. Morphology
  - 25.8. Study of the Powdered Drug
    - 25.8.1. Histochemical Analysis (Seeds)
    - 25.8.2. Measurement of Cells (In Microns)
    - 25.8.3. Fluorescence Analysis of the Powdered Drug
  - 25.9. Chemical Constituents
- 26. KULTHI (DOLICHOS BIFLORUS)
  - 26.1. Habitat
  - 26.2. Period of Occurrence
  - 26.3. Description
  - 26.4. Part(s) Used
  - 26.5. Procedure and Time of Collection
  - 26.6. Preservation and Storage
  - 26.7. Morphology
  - 26.8. Study of the Powdered Drug
    - 26.8.1. Measurement of Cells (In Microns)
    - 26.8.2. Reaction of Chemicals with Crude Powdered Drug
    - 26.8.3. Fluorescence Analysis of the Powdered Drug
  - 26.9. Chemical Constituents
- 27. MADAR (SOLANUM NIGRUM)
  - 27.1. Habitat
  - 27.2. Period Of Occurrence
  - 27.3. Description
  - 27.4. Part(s) Used
  - 27.5. Procedure and Time of Collection
  - 27.6. Preservation and Storage
  - 27.7. Morphology

- 27.8. Study of the Powdered Drug
  - 27.8.1. Histochemical Analysis (Root Bark)
  - 27.8.2. Measurement of Cells (In Microns)
  - 27.8.3. Fluorescence Analysis of the Powdered Drug
- 27.9. Chemical Constituents
- 28. MAKO (SOLANUM NIGRUM)
  - 28.1. Habitat
  - 28.2. Period of Occurrence
  - 28.3. Description
  - 28.4. Part(s) Used
  - 28.5. Procedure and Time of Collection
  - 28.6. Preservation and Storage
  - 28.7. Morphology
  - 28.8. Study of the Powdered Drug
    - 28.8.1. Measurement of Cells (In Microns)
    - 28.8.2. Reaction of Chemicals with Crude Powdered Drug
    - 28.8.3. Fluorescence Analysis of the Powdered Drug
  - 28.9. Chemical Constituents
- 29. MAWIZ (VITIS VINIFERA)
  - 29.1. Habitat
  - 29.2. Period of Occurrence
  - 29.3. Description
  - 29.4. Part(s) Used
  - 29.5. Procedure and Time of Collection
  - 29.6. Preservation and Storage
  - 29.7. Morphology
  - 29.8. Study of the Powdered Drug
    - 29.8.1. Measurement of Cells (In Microns)
    - 29.8.2. Quantitative Microscopic Characters
    - 29.8.3. Fluorescence Analysis of the Powdered Drug
  - 29.9. Chemical Constituents
- 30. METHI (TRIGONELLA FOENUM-GRAECUM)
  - 30.1. Habitat
  - 30.2. Period of Occurrence
  - 30.3. Description
  - 30.4. Part(s) Used
  - 30.5. Procedure and Time of Collection
  - 30.6. Preservation and Storage
  - 30.7. Morphology
  - 30.8. Study of the Powdered Drug
    - 30.8.1. Measurement of Cells (In Microns)
    - 30.8.2. Reaction of Chemicals with Crude Powdered Drug
    - 30.8.3. Fluorescence Analysis of the Powdered Drug
  - 30.9. Chemical Constituents
- 31. MUNDI (SPHAERANTHUS INDICUS)
  - 31.1. Habitat
  - 31.2. Period of Occurrence
  - 31.3. Description
  - 31.4. Part(s) Used
  - 31.5. Procedure and Time of Collection
  - 31.6. Preservation and Storage

- 31.7. Morphology
- 31.8. Study of the Powdered Drug
  - 31.8.1. Measurement of Cells (In Microns)
  - 31.8.2. Reaction of Chemicals with Crude Powdered Drug
  - 31.8.3. Fluorescence Analysis of the Powdered Drug
- 31.9. Chemical Constituents
- 32. NAKHUD (CICER ARIETINUM)
  - 32.1. Habitat
  - 32.2. Period of Occurrence
  - 32.3. Description
  - 32.4. Part(s) Used
  - 32.5. Procedure and Time of Collection
  - 32.6. Preservation and Storage
  - 32.7. Morphology
  - 32.8. Study of the Powdered Drug
    - 32.8.1. Measurement of Cells (In Microns)
    - 32.8.2. Reaction of Chemicals with Crude Powdered Drug
    - 32.8.3. Fluorescence Analysis of the Powdered Drug
  - 32.9. Chemical Constituents
- 33. NILOFAR (NYMPHAEA ALBA)
  - 33.1. Habitat
  - 33.2. Period of Occurrence
  - 33.3. Description
  - 33.4. Part(s) Used
  - 33.5. Procedure and Time of Collection
  - 33.6. Preservation and Storage
  - 33.7. Morphology
  - 33.8. Study of the Powdered Drug
    - 33.8.1. Measurement of Cells
    - 33.8.2. Reaction of Chemicals with Crude Powdered Drug
    - 33.8.3. Fluorescence Analysis of the Powdered Drug
  - 33.9. Chemical Constituents
- 34. PANWAD (CASSIA TORA)
  - 34.1. Habitat
  - 34.2. Period of Occurrence
  - 34.3. Description
  - 34.4. Part(s) Used
  - 34.5. Procedure and Time of Collection
  - 34.6. Preservation and Storage
  - 34.7. Morphology
  - 34.8. Study of the Powdered Drug
    - 34.8.1. Measurement of Cells (In Microns)
    - 34.8.2. Reaction of Chemicals with Crude Powdered Drug
    - 34.8.3. Fluorescence Analysis of the Powdered Drug
  - 34.9. Chemical Constituents
- 35. PALAS (BUTEA MONOSPERMA)
  - 35.1. Habitat
  - 35.2. Period of Occurrence
  - 35.3. Description
  - 35.4. Part(s) Used
  - 35.5. Procedure and Time of Collection

- 35.6. Preservation and Storage
- 35.7. Morphology
- 35.8. Study of the Powdered Drug
  - 35.8.1. Histochemical Analysis (Seed)
  - 35.8.2. Measurement of Cells (In Microns)
  - 35.8.3. Reaction of Chemicals with Crude Powdered Drug
  - 35.8.4. Fluorescence Analysis of the Powdered Drug
- 35.9. Chemical Constituents
- 36. SAMBHALU (VITEX NEGUNDO)
  - 36.1. Habitat
  - 36.2. Period of Occurrence
  - 36.3. Description
  - 36.4. Part(s) Used
  - 36.5. Procedure and Time of Collection
  - 36.6. Preservation and Storage
  - 36.7. Morphology
  - 36.8. Study of the Powdered Drug
    - 36.8.1. Measurement of Cells (In Microns)
    - 36.8.2. Reaction of Chemicals with Crude Powdered Drug
    - 36.8.3. Fluorescence Analysis of the Powdered Drug
  - 36.9. Chemical Constituents
- 37. SARANJAN (COLCHICUM LUTEUM)
  - 37.1. Habitat
  - 37.2. Period of Occurrence
  - 37.3. Description
  - 37.4. Part(s) Used
  - 37.5. Procedure and Time of Collection
  - 37.6. Preservation and Storage
  - 37.7. Morphology
  - 37.8. Study of the Powdered Drug
    - 37.8.1. Measurement of Cells (In Microns)
    - 37.8.2. Reaction of Chemicals with Crude Powdered Drug
    - 37.8.3. Fluorescence Analysis of the Powdered Drug
  - 37.9. Chemical Constituents
- 38. TURBUD (OPERCULINA TURPETHUM)
  - 38.1. Habitat
  - 38.2. Period of Occurrence
  - 38.3. Description
  - 38.4. Part(s) Used
  - 38.5. Procedure and Time of Collection
  - 38.6. Preservation and Storage
  - 38.7. Morphology
  - 38.8. Study of the Powdered Drug
    - 38.8.1. Reaction of Chemicals with Crude Powdered Drug
    - 38.8.2. Fluorescence Analysis of the Powdered Drug
  - 38.9. Chemical Constituents

## PART - II

### MINERAL KINGDOM

#### 39. ADAMAS

- 39.1. Source
- 39.2. Characters

- 39.3. Classification
- 39.4. Purification & Preparation
- 39.5. Action
- 39.6. Uses
- 40. ALUMEN
  - 40.1. Source
  - 40.2. Characters
  - 40.3. Action
  - 40.4. Uses
- 41. KAOLINUM
- 42. AMMONIUM CHLORIDE
- 43. ANTIMONY SULPHIDE
- 44. ARGENTUM
  - 44.1. Source
  - 44.2. Characters
  - 44.3. Preparations
  - 44.4. Action
  - 44.5. Uses
- 45. ARSENUM
  - 45.1. Source
  - 45.2. Characters
  - 45.3. Classification
  - 45.4. Purification
  - 45.5. Uses
- 46. ARSENIC DISULPHIDUM
- 47. ASPHALTUM
  - 47.1. Source
  - 47.2. Remarks
  - 47.3. Varieties and their Characters
  - 47.4. Constituents
  - 47.5. Action
  - 47.6. Uses
- 48. AURUM
  - 48.1. Source
  - 48.2. Characters
  - 48.3. Preparation
  - 48.4. Action
  - 48.5. Uses
- 49. MAKARADHWAJA
  - 49.1. Source
  - 49.2. Characters
  - 49.3. Mode of Preparation
  - 49.4. Composition
  - 49.5. Constituents
  - 49.6. Purification
  - 49.7. Action
  - 49.8. Administration & Uses
- 50. CALCIUM
- 51. CALCIL CARBONAS
- 52. CALCII OXIDUM
- 53. CALCII SULPHAS

- 53.1. Action
- 54. CARBO LIGNI
- 55. FERRUM
  - 55.1. Source
  - 55.2. Classification
  - 55.3. Purification
  - 55.4. Tests for Killed Iron
  - 55.5. Characters of Prepared Iron (Oxides of Iron)
  - 55.6. Preparation of Lauha Bhasma
  - 55.7. Action
  - 55.8. Uses
- 56. FERRI SULPHURATUM
- 57. HYDRARGYRUM
  - 57.1. Source
  - 57.2. Characters
  - 57.3. Impurities
  - 57.4. Purification
  - 57.5. Fixation of Mercury
  - 57.6. Various Methods of Incineration of Mercury
  - 57.7. Preparations
    - 57.7.1. 1st Method
    - 57.7.2. 1st Method in other Words
    - 57.7.3. 2nd Method
  - 57.8. Action
  - 57.9. Uses
- 58. PLUMBUM
  - 58.1. Source
  - 58.2. Purification
  - 58.3. Characters
  - 58.4. Methods of Preparation
  - 58.5. Action
  - 58.6. Uses
- 59. PLUMBI OXIDUM
- 60. PLUMBI SULPHURATUM
- 61. POTASSII CARBONAS IMPURA
  - 61.1. Action & Uses in Ayurveda & Siddha
  - 61.2. Action & Uses in Unani
  - 61.3. Uses
- 62. POTASSII NITRAS
- 63. SILICUM
  - 63.1. Source
  - 63.2. Manufacturer
  - 63.3. Characters
  - 63.4. Uses
- 64. SILICATE OF MAGNESIA
- 65. SILICATE OF MAGNESIA AND IRON
  - 65.1. Silico-Fluoride of Sodium
- 66. SALINE SUBSTANCES
  - 66.1. Source
- 67. SODII CARBONAS IMPURE
  - 67.1. Source & Varieties

- 67.2. Constituents
- 67.3. Characters
- 67.4. Action
- 67.5. Uses
- 68. SODII BIBORAS
  - 68.1. Source
  - 68.2. Characters
  - 68.3. Preparations
  - 68.4. Action
  - 68.5. Uses
- 69. SODII CHLORIDUM
  - 69.1. Source
  - 69.2. Characters
  - 69.3. Action
  - 69.4. Uses
- 70. STANNIC SULPHIDUM
- 71. STANNUM
  - 71.1. Source
  - 71.2. Purification
  - 71.3. Action
  - 71.4. Uses
- 72. SULPHUR
  - 72.1. Source
  - 72.2. Characters
  - 72.3. Action
  - 72.4. Uses
- 73. TALCUM PURIFICATION
  - 73.1. Source
  - 73.2. Characters
  - 73.3. Constituents
  - 73.4. Purification & Preparation
  - 73.5. Action
  - 73.6. Uses
- 74. ZINCUM
  - 74.1. Source
  - 74.2. Characters
  - 74.3. Purification
  - 74.4. Action & Uses
- 75. PHOTOGRAPHS OF MACHINERY WITH SUPPLIERS CONTACT DETAILS
  - 75.1. Automatic Ayurvedic Medicine Making Machine
  - 75.2. Capsule Conveying System
  - 75.3. Pill Machine
  - 75.4. Kharal Machine
  - 75.5. Disintegrating Milling Machine
  - 75.6. Pulverizer Machine
  - 75.7. Mini Micro Pulverizer Machine
  - 75.8. Vibro Sifter Machine
  - 75.9. Mass Mixer Machine
  - 75.10. Filter Press
  - 75.11. Conventional Coating Machine
  - 75.12. Steam Distillation Unit

- 75.13. Tray Dryer
- 75.14. Octagonal Power Mixture
- 75.15. Multi Mill
- 75.16. Tablet Compression Machine
- 75.17. Liquid Filling Machine
- 75.18. Capsule Powder Filling Machine
- 75.19. Hydraulic Trolley
- 76. PLANT LAYOUT & PROCESS FLOW CHART

---

**NIIR PROJECT CONSULTANCY SERVICES (NPCS)** is a reliable name in the industrial world for offering integrated technical consultancy services. NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.

Our various services are: Detailed Project Report, Business Plan for Manufacturing Plant, Start-up Ideas, Business Ideas for Entrepreneurs, Start up Business Opportunities, entrepreneurship projects, Successful Business Plan, Industry Trends, Market Research, Manufacturing Process, Machinery, Raw Materials, project report, Cost and Revenue, Pre-feasibility study for Profitable Manufacturing Business, Project Identification, Project Feasibility and Market Study, Identification of Profitable Industrial Project Opportunities, Business Opportunities, Investment Opportunities for Most Profitable Business in India, Manufacturing Business Ideas, Preparation of Project Profile, Pre-Investment and Pre-Feasibility Study, Market Research Study, Preparation of Techno-Economic Feasibility Report, Identification and Section of Plant, Process, Equipment, General Guidance, Startup Help, Technical and Commercial Counseling for setting up new industrial project and Most Profitable Small Scale Business.

NPCS also publishes various process technology, technical, reference, self employment and startup books, directory, business and industry database, bankable detailed project report, market research report on various industries, small scale industry and profit making business. Besides being used by manufacturers, industrialists and entrepreneurs, our publications are also used by professionals including project engineers, information services bureau, consultants and project consultancy firms as one of the input in their research.

Our Detailed Project report aims at providing all the critical data required by any entrepreneur vying to venture into Project. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line.

---

**NIIR PROJECT CONSULTANCY SERVICES**, 106-E, Kamla Nagar, New Delhi-110007, India. **Email:** [npcs.india@gmail.com](mailto:npcs.india@gmail.com) **Website:** [NIIR.org](http://NIIR.org)