

# FOOD & BIOTECH ENGINEERS (INDIA) PVT. LTD.

An ISO 9001:2008, 18001:2007, 14001:2004 Certified Co.

CONSULTANTS

DESIGNERS

**MANUFACTURERS** 

www.foodbiotech.co.in

ood & Biotech Engineers (I) Pvt. Ltd., has 21 years of experience in fabricating process equipments for multi- purpose natural products processing units involving isolation of alkaloids, active principles, nutraceuticals, vitamins and essential oils etc.

Our business is to design the equipments to obtain maximum extraction efficiency and high purity end products, minimum solvent loss, mechanized material handling system for dust control and less hazardous for operating personnel, adequate safety devices, inbuilt cleaning facilities to enable easy change of product, suitable for GMP & USFDA certification. Our experience also includes Heat exchangers, Storage tanks and Pressure vessels, Evaporators and Spray Dryers. We adopt strict quality control system and adhere prompt dispatch schedule.

We have an experienced team of engineers to design any kind of project and capability to produce quality products.

# **SCOPE OF BUSINESS**

#### **EXTRACTORS**

#### **HORIZONTAL ROTARY EXTRACTORS**

Best Option for large extraction capacities. Through solid-liquid mixing hence high rate of mass- transfer. Recovery of solvent with indirect steam heating. Less manual handling for discharging of exhausted materials. Suitable for GMP.

#### PERCOLATOR EXTRACTORS

Suitable for medium capacities extraction. Cost effective. Provision for counter current operation and low solvent handling.

#### LIQUID-LIQUID EXTRACTOR

Continuous operation brings down the solvent consumption. Maximum extraction efficiency, no emulsion problem.

### STEAM DISTILLATION PLANT

For essential oil isolation.

#### **EVAPORATORS**

#### WIPED FILM EVAPORATORS

Most suitable for heat sensitive materials. Least residence time in heating zone. Avoid over heating of the products. Inter cooler causes immediate condensation of vapor hence no deterioration of distillate.

#### **AGITATED THIN FILM EVAPORATORS**

High heat transfer coefficient. Less residence time.

#### **FALLING FILM EVAPORATORS**

Handles more volume of solvents. Economical for pre concentration.

# RISING FILM EVAPORATORS/FORCED RECIRCULATION EVAPORATORS

High heat transfer co-efficient. Suitable for medium solid concentration.

# VACUUM EVAPORATORS CUM CRYSTALLIZERS

Handles low volume liquids. Suitable for high concentrated liquid. Final concentration for crystallization.

#### **SCRAPED SURFACE EVAPORATOR**

It is usually selected for products which are highly viscous or in paste / syrup forms products having a tendency to scale or salt out during evaporation can also be handled in this evaporator. The rotating blades of this evaporators ensure that no material stays on the heat transfer surface for long duration thus preventing thermal degradation.

#### **DRYERS**

#### **ROTARY VACUUM DRYERS**

High drying rate, Uniform drying Avoids over heating of products.

# **ROTO-CONE DRYER CUM BLENDER**

Uniform drying with high vacuum. Control of residual solvent.

#### **VACUUM SHELF DRYER**

For large volume products. Cost effective.

#### SPRAY DRYER

Specially designed for Herbal extracts, Food Colors, flavor recovery and Product development works.

#### **FILTERS**

### **NUTCH FILTERS**

Closed type GMP Model.

#### **AGITATED NUTCH FILTER CUM DRYER**

High filtration rate. No contamination In final products, Controlling microbial contamination in final products

# MICRON FILTER, SPARKLER FILTER, BAG FILTERS

Zero hold up, GMP model, on line operation, final product clarity.

#### **COLUMNS PURIFICATION**

#### FRACTIONATION COLUMN

Separation of pure reusable solvent from multiple component solvent mixture.

# **MOLECULAR SIEVE COLUMN**

Dehydration of solvent high purity. Suitable for azeotropic solvent compositions.

#### **CHROMATOGRAPHIC COLUMN**

Purification of high value compounds using flash chromatography. Resin application for isolation of active principles.



**ROTARY EXTRACTOR** 



FORCED RECIRCULATION EVAPORATOR



**FALLING FILM EVAPORATOR** 



**PILOT SPRAY DRYER** 



WIPED FILM EVAPORATOR



SCRAPED SURFACE EVAPORATOR



**CRYSTALLIZER** 



**RIBBON BLENDER** 



**ROTARY DRYER** 



VACUUM TRAY DRYER



FRACTIONATION COLUMN



VACUUM BELT DRYER



THIN FILM EVAPORATOR

We have wide range of customer ranging from small scale to leading large scale export oriented companies in natural product processing companies viz:

M/s. Alchem International Ltd., Faridabad, Haryana M/s. Southern Citrus Products (P) Ltd., Gudur, A.P. M/s Envin Foods & Industries Pvt.Ltd., Saharanpur M/s Mahesh Wood Products Pvt.Ltd., Sonipat M/s. Himalaya Drugs, Dehradun, Uttrakhand M/s Raj katha Producers Pvt.Ltd., Sonipat M/s Pliva Pharmaceuticals Zagreb, Croatia M/S Herbex Pharma Private Ltd, Haldwani M/s Parabolic Drugs Ltd., Chandigarh M/s Ambe Phytoextracts Pvt.Ltd., Delhi M/s Indian core oils Pvt. Ltd., Faridabad

M/s S.M.Herbals Pvt.Ltd., New Delhi M/s. Mapro Herbals, Hyderabad, A.P. M/s. Chemical Resources Ltd., Haryana M/s. Nector Life Sciences Ltd., Punjab M/s. Food & Health Care Specialities M/s. Herbal Phytochem, Haryana M/s. Dashmesh Medicare (P) Ltd. M/s. Gwalior Forest (P) Ltd., M.P. M/s. K. Patel Phytochem, Gujarat M/s Shivam Gram Udyog, Kanpur M/s Pran Foods Ltd., Bangladesh

M/s Titan Biotech, Delhi M/s Prabsons, Delhi M/s G.D. Foods M/s Phyto Concentrate M/s. Lycored Ltd., Israel M/s. OAO EMZ, Ukraine M/s. Pliva d.d. Croatia M/s Java Plant, Indonesia M/s. India Glycols Ltd., U.P. M/s. Charms Chem (P) Ltd., We offer process technology as turn key projects specially developed by our team of scientists with rich experience & expertise on the following fields:

- A. Active Principles from Plant materials.(Sennoside, Escin, Polycosanol, Artimisinin, Colchicine)
- B. Herbal Nutraceuticals.(Green tea EGGC, soya isoflovonoids)
- C. Natural Cosmeceuticals.
- D. Natural Food colors and food ingredients.
- E. Fruit powders Spray dried.(Amla, Citrus, Tomato, Mango)
- F. Juice powder Spray dried. (Aloe, sugar cane juice)
- G. Ayur Vedic formulations.



# Office / Works:

Chaprola Road, Prithla, Tehsil & Distt. Palwal, Haryana, India Ph.: +91-1275-262157, 262158, 249400 Mobile: +91 9312069945 Fax: +91-1275-262259

E-mail: info@foodbiotech.co.in