

# TECHNOLOGY OFFERS

## CHINA

### Manufacture of Pentaerythritol

A Chinese firm is interested in offering a technology to produce Pentaerythritol and the byproduct Dipentaerythritol (Di-PE) and Calcium Formate. Using the new technology, the manufacturing cost of PE and Calcium Formate has been reduced greatly, and at the same time the quality has improved significantly. The content of PE has been increased from 90% to 95% compared with the traditional method. Accordingly the hydroxy content has been increased from less than 47% to more than 48%, and the appearance, ash and colour also improved. Especially with regards to Calcium Formate, the new technology has not only reduced the energy and materials consumption, it has also reduced the cost and improved the quality. It holds the notable characteristics of high purity, free-flowing, and white appearance. The firm invites opportunities to establish long-term business relationships with the customers around the world.

#### **Area of Application**

Chemicals sector

#### **Environmental aspects**

Cleaner production

#### **Transfer Terms**

Technology licensing

#### **Contact**

Henan Lianxing Group  
Wangji Road, Dengfeng, China  
Tel: +86-371-62065271; Fax: +86-371-67301322  
E-mail: slsgdchem@yahoo.com.cn

## GERMANY

### Cryo Grinding Technology for Herbs

A German company offers technology and plant for processing spices having full flavor/aroma, better shelf life, and sterile product with no microbes. The company is a leading manufacturer of plant and machinery used in cryo/cold grinding process and is well-known in size reduction equipments with this technology. About fifteen plants have already been supplied in Europe, United States and South Africa. The technology is based on use and injection of liquid CO<sub>2</sub> or liquid nitrogen in the grinding chamber. The ground spices are then packaged into consumer pouches as per clients' requirements. Complete project is offered on a turnkey basis.

#### **Area of Application**

Food industry

#### **Transfer Terms**

Turnkey

#### **Contact**

Bauermeister Zerkleinerungstechnik GmbH Oststrasse 40  
22844 Norderstedt, Germany  
Tel: +49 (0)40 52608-0; Fax: +49 (0)40 52608-199  
E-mail: info@bauermeister.de

## HUNGARY

### Sorbent for Removal of Arsenic from Drinking Water

The technology offering client is a Hungarian SME which specializes in research and development in the fields of industrial waste management, environmental protection, electrochemistry, chemistry. The technology offer of our client is able to reduce arsenic content in water with higher efficiency as compared to any of the other known processes. The research and development work resulted in a sorbent material that has an enormous specific area and hence is able to remove the arsenic content of waters more efficiently. Due to its unique structure and composition the new sorbent material can remove the organic arsenic content of the waters as well. Arsenic containing adsorbent particles do not re-enter the water. The technology can be implemented easily in both industrial and domestic scales.

#### **Area of Application**

Water treatment plants

#### **Environmental aspects**

Waste utilization

#### **Transfer Terms**

Technology licensing

#### **Contact**

Laser Consult Ltd  
H-6701 PO Box 1191, Szeged, Hungary  
Tel: +36-62/562-782; Fax: +36-62/562-783  
E-mail: laserconsult@t-online.hu

## HUNGARY

### Starmap-Building Method of Collective Intelligence

A Hungarian firm has developed a symbolic interface working on the basis of knowledge-sociometrics. The system is practically offering the operating possibilities of a 'COM-MON-BRAIN'. From the many kind of possible application areas such case is emphasized when fore-pointing summaries should be created from the "living matrix" of human thoughts, opinions and ideas (live discussions, brainstorming, work discussions, political debate, interest harmonization, etc.). The system is tailor made to automatically filter out the most efficient essence from a data- or thought-mass or to provide the most relevant elements to a given question.

#### **Areas of Application**

Multiple areas including concept mapping, database enhancement, expert system, decision support system, recommendation system, essay-compilation, pre- and post-consultations of scientific conferences or workshops, corporate decision making, advanced forum, brainstorming, discussion management methods, panel of judges, clearing up immeasurable topics, team building, automatic moderation of heated debates or even a mass meeting,

### **Transfer Terms**

Consultancy, Technical services, Technology Licensing, Research Partnerships

### **Contact**

Laser Consult Ltd  
H-6701 PO Box 1191, Szeged, Hungary  
Tel: +36-62/562-782, Fax: +36-62/562-783  
E-mail: laserconsult@t-online.hu

## **INDIA**

### **Manufacture of Potassium Humate (Humic Acid) Liquid**

An Indian organization has developed an efficient method for extraction of humic acid (Indian Patent No: 201577) in the form of potassium humate from lignite as raw material. It is well-established that the humus in soil serves to stimulate the plant growth. Humic substances are arising from chemical and biological degradation of plant and animal residues. This product alone is not a nutrient. It absorbs nutrients and water and releases slowly. Depending on the crop, dosage is fixed as soil application or as foliar application after suitable dilution. Humic acid or salts of humic acid have been shown to increase the availability and uptake of nitrogen, phosphorus, calcium, iron, and magnesium; increase the osmotic process; provide release of auxins and amino acids; and serves as quality substrate for microorganisms. Humic acid is found naturally in soils, but does not exist in all soils in quantities that will support optimal crop and tree growth. Adding potassium humate rich in humic acid to the soil is a positive, natural practice and promotes long term health of the soil. Potassium humate can be mixed with organic manures and fertilizers, applied as seed soaking treatment, root application, foliar application or used directly during fertigation

### **Area of Application**

Agriculture

### **Environmental Aspects**

Environmental friendly, Cleaner production

### **Transfer Terms**

Technology licensing

### **Contact**

National Research Development Corporation  
Regional Office, #107, 8th Main, 19th cross Malleswaram, Bengaluru, India 560055. Tel: +91-80-23341255  
Fax: +91-80-23347555; E-mail: paniswa\_24@yahoo.com

## **INDIA**

### **Crop Specific (Banana) Micronutrient Formula (Foliar Application)**

This special formula for Banana can be adopted in situation of drought, water logging, bad soil condition salinity, alkalinity, cold climate, and root infection by nematode, fungus, bacteria. Ratoons give equal to plant crop

### **Area of Application**

Horticulture fruits

### **Advantages**

Advantages of Foliar Nutrition in Banana Foliar nutrients applied take 24-48 hours only to be used by the plant Micronutrients also reach by 24-48 hours. Use efficiency of applied nutrients: NPK – 60-80% of applied is used Micronutrients – 30-40% of applied is used. Cost – 30-50% of the cost of soil applied fertilizers. Yield 30-40 kg Compared to 15-18 kg of other method of Nutrition

### **Environmental Aspects**

Cleaner production

### **Development Status**

Fully commercialized

### **Legal Protection**

Patent

### **Technical specifications**

The technical know how for complete process is available

### **Transfer Terms**

Technology licensing

### **Contact**

National Research Development Corporation  
# 107, 8TH Main, Malleswaram, Bengaluru-560 055  
Bengaluru, India 560055. Tel: 09032576942;  
Fax: 08023347555; E-mail: suresh.nrdc@gmail.com

## **INDIA**

### **Formulation for Controlling Storage Pests of Food Grains**

We have developed a herbal formulation, which is very effective in controlling the storage pest in the food grains.

### **Area of Application**

Agriculture Food Processing Industry

### **Advantages**

No harmful effect on the users. Easy availability of the raw materials. Longer shelf life of the product and can be prepared in the liquid and solid forms.

### **Environmental Aspects**

Waste utilization, Not applicable

### **Development Status**

Laboratory model, Pilot Plant

### **Legal Protection**

Filed

### **Technical specifications**

Herbal formulation completely stops the storage pest in the grains. No harmful effect on the users. Easy availability of the raw materials. Longer shelf life of the product and can be prepared

### **Transfer Terms**

Consultancy, Joint Venture, Technical services, Technology Licensing, Research Partnerships

### **Contact**

Hiran Biotech, Research and Development Division,  
66 Turner Road Cantt., Kanpur 208004, U.P., India.  
Tel: + 91 9415426387; Fax: +91 512 2381062;  
E-mail: pawan\_24singh@yahoo.co.in