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About Us

NPCS is a well-known technical consultancy that focuses on Project Reports Compilation, and we have been following a tight system and procedure to assure only top quality in accordance with our clients' expectations in this rapidly increasing and changing market. We've created the list of the top projects to start your own business startups.

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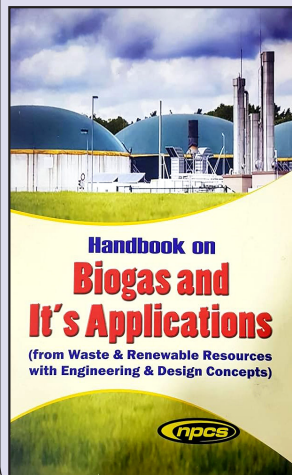
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Handbook on Biogas and Its Applications

(from Waste & Renewable Resources with Engineering & Design Concepts)
(2nd Revised Edition)

₹ 1175/- US\$ 125 -



Bio Gas typically refers to a gas produced by the biological breakdown of organic matter in the absence of oxygen. Organic waste such as dead plant and animal material, animal dung, and kitchen waste can be converted into a gaseous fuel called Bio Gas. Bio Gas is basically a mixture of methane and carbon dioxide; it originates from biogenic material and is a type of bio fuel. It is a low cost form of energy derived from renewable waste resources: animal manures, agricultural residues, industrial wastewater, human waste and other organic materials. Bio Gas has been used widely as a source of energy and waste treatment, and as liquid fertiliser for soil enhancement, since long time. Digestion the underlying biological process of Bio Gas technology leads to a renewable energy service that ensures a distributed energy production, in which the energy is produced at the point of consumption or demand. A Bio Gas digester, which produces the Bio Gas, also provides an excellent agricultural waste management solution, most notably animal manures. Also, capturing methane generated in a Bio Gas digester has an immensely important role to play with respect to rural energisation, poverty alleviation and development, increased industrial and agricultural efficiency and competitiveness, and improved management of our greenhouse gas emissions. The major applications of Bio Gas are as fertilizer, fuel gas, methane production, mechanical and electrical power production, diesel engine operation, etc. Bio Gas technology is one of the fastest growing renewable energy sectors worldwide, with the annual market growth exceeding 30% each year.

This book majorly deals with Bio Gas plants, raw materials for Bio Gas generation, utilization of Bio Gas and slurry, engineering design of Bio Gas units for developing countries, engineering aspects of small scale Bio Gas plants, a village scale Bio Gas pilot plant study using high rate digester technology, structural behaviour and stress conditions of fixed dome, simplified anaerobic digesters for animal waste, mechanical and electrical power from Bio Gas in developing countries, fuel gas production from organic wastes by low capital cost batch digestion, the toxicity effect of pesticides and herbicides on the anaerobic digestion process, Bio Gas manure as a complete fertilizer, feasibility for Egyptian farmers etc.

The book contains technology of Bio Gas generation with its applications. This book will be an invaluable resource for researchers, consultants, entrepreneurs, institutional libraries, students etc.

The Complete Technology Book on Pesticides, Insecticides, Fungicides and Herbicides (Agrochemicals)

with Formulae, Manufacturing Process, Machinery & Equipment Details
4th Revised Edition

Agrochemicals are chemical agents that are applied to fields to boost the nutrient content of the soil or crops. Herbicides, fungicides, and insecticides are among them, as are synthetic fertilizers, hormones, and soil conditioners. They boost agricultural growth by eradicating pests that wreak havoc. They are used in horticulture, dairy farming, poultry farming, crop shifting, commercial planting, and other farming industries.

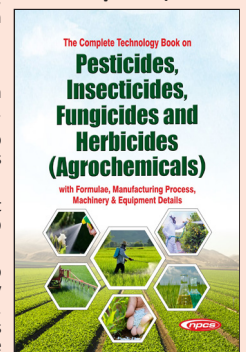
- A pesticide is any substance that is used to kill, repel, or control pests in plants or animals.
- Insecticides are chemicals that are used to keep insects under control by killing them or stopping them from engaging in undesired or damaging behaviour. Their structure and mode of action are used to classify them.
- Fungicides are pesticides that kill or prevent fungus and their spores from growing. They can be used to manage plant-damaging fungi such as rusts, mildews, and blights. They could also be used to keep moulds and mildew at bay in other places.
- Herbicides are chemicals that are used to control or manage unwanted vegetation. Herbicides are most commonly used in row-crop farming, where they are treated before or during planting to increase crop productivity while reducing other vegetation.

The global agrochemicals market estimated size is CAGR of 3.4%. Increasing demand for food supply due to the rapid growth in the human population has triggered agricultural intensification. Agrochemicals are widely employed in agriculture to meet rising food demands, bridging the gap between food supply and consumption. Concurrently imbalanced use of agrochemicals, on the other hand, degrades the environment and poses serious threats to aquatic and terrestrial ecosystems. Chemical agents used in agricultural lands to increase nutrient shortage in the field or crop are known as agrochemicals. They also help to boost crop development by destroying hazardous insects. Agrochemicals increase the quantity and quality of agricultural goods. These are utilized in horticulture, dairy farming, cattle, grain farming, shifting cultivation, commercial plantation, and many other agricultural fields.

The book covers a wide range of topics connected to Pesticides, Insecticides, Fungicides and Herbicides, as well as their manufacturing processes. It also includes contact information for machinery suppliers, as well as images of equipments.

A complete guide on Agrochemical Products manufacture and entrepreneurship. This book serves as a one-stop shop for everything you need to know about the Pesticides, Insecticides, Fungicides and Herbicides manufacturing industry, which is ripe with opportunity for manufacturers, merchants, and entrepreneurs. This is the only book that covers Agrochemical in depth. From concept through equipment procurement, it is a veritable feast of how-to information.

₹ 1975/- US\$ 200 -



Biodegradable and edible tableware made from rice husks offers an innovative and eco-friendly alternative to traditional disposables. These products, crafted from natural, renewable resources like cellulose and lignin, decompose quickly and safely, leaving no harmful residues. Rice husk, usually a byproduct of rice milling, is transformed into a durable, heat-resistant powder molded into various tableware forms. This sustainable solution addresses environmental and waste management concerns effectively.

Manufacturing Process

1. Raw Material Procurement and Preparation:

Key biodegradable materials like rice husk and sugarcane bagasse are sourced and inspected for quality to ensure they meet purity standards.

2. Pre-Processing: These materials are cleaned, milled, and mixed to uniform particle sizes and consistency, with natural binders added to enhance structural integrity.

3. Forming and Shaping: The mixture is molded into tableware items like plates and cups using various methods such as compression molding to ensure uniformity and precision.

4. Drying and Curing: Molded items are dried and sometimes cured in controlled environments to achieve necessary strength and stability.

5. Surface Treatment: Coatings or laminations are applied to enhance the products' functionality and aesthetics, ensuring they remain safe for consumption and environmentally friendly.

6. Quality Control: Each batch undergoes strict testing for strength, durability, and safety. Products that fail to meet standards are reprocessed or discarded.

7. Storage and Distribution: Approved products are packaged in sustainable materials and stored for distribution to retailers or direct consumers,

A Business Plan for Biodegradable and Edible Tableware Products (for Animals) using Rice Husk

maintaining quality until sale.

Advantages

The move towards biodegradable and edible tableware represents a significant advancement in sustainable living, providing numerous benefits over conventional disposable products. Biodegradable and edible tableware offers a sustainable alternative to traditional disposables, greatly reducing environmental impact. These materials decompose quickly, lessening landfill waste and pollution, while also being compostable and promoting plant growth. Health-wise, they are safer than plastic, as they don't contain harmful chemicals like BPA, ensuring they are non-toxic and safe for consumer use.

Global Market Outlook

The global biodegradable tableware market size was estimated at USD 15.27 billion in 2023 and is expected to grow at a compound annual growth rate (CAGR) of 6.2% from 2024 to 2030. Growing consumer awareness of the harmful impact of plastic pollution, as well as government laws and bans on single-use plastics, are driving the adoption of

biodegradable dinnerware. With the government's growing support for environmentally friendly items, consumers are turning to more sustainable options like biodegradable tableware. The Asia-Pacific region is rapidly industrializing and urbanizing, with a growing middle-class population, and customers want to buy luxury and sustainable dinnerware.

Furthermore, Asia-Pacific's cultural predilection for natural materials such as bamboo and sugarcane leads to increased adoption of biodegradable dinnerware created from these materials. The region's food and beverage industry, notably takeaway and restaurant businesses, is growing, resulting in a significant need for disposable tableware.

India Market Outlook

The India biodegradable tableware & packaging products market size was estimated at USD 2.06 billion in 2023 and is projected to grow at a compound annual growth rate (CAGR) of 6.0% from 2024 to 2030. The adverse environmental effects of plastic-based materials on the air, water, and land are significant factors driving manufacturers and consumers to seek safer and biodegradable alternatives. This has fueled growth of the market for biodegradable tableware and packaging products. In India, both small and large-scale manufacturers, as well as micro, small, and medium enterprises (MSMEs), are actively engaged in the production of biodegradable tableware, contributing to an environmentally responsible trend.

Conclusion

As more people and businesses seek sustainable alternatives to traditional tableware, the market for biodegradable and edible items is projected to grow. This growth reflects a larger social shift toward sustainability, demonstrating a concerted effort to promote a more environmentally responsible and sustainable future.

PROJECT COST ESTIMATE

CAPACITY

Biodegradable and Edible : 72,000 Pcs Per Day

Tableware Products
(Plate, Bowl & Cups)

Plant & Machinery : ₹ 341 Lakhs

Cost of Project : ₹ 583 Lakhs

Rate of Return : 31%

Break Even Point : 65%

Start N.C. Thinner Manufacturing Plant

Nitrocellulose thinning is a process where nitrocellulose (NC) is used to reduce the viscosity and improve the flow of liquid paints and coatings. Nitrocellulose is a highly flammable material which is made from wood pulp, cotton, or other cellulosic materials. It is used in a variety of industries, from automotive paints to adhesives and from solvents to printing inks.

Applications and Benefit of Nitrocellulose Thinners

Nitrocellulose thinners are also used in automotive and industrial applications, such as engine degreasing and car body refinishing. They

are also often used in arts and crafts to make glues and inks.

Indian Market Estimation

Nitrocellulose has been a major part of the Indian market for many years. It is used in a wide range of industries and applications, including automotive, electronics, textiles, and chemicals. Nitrocellulose

is known for its excellent properties such as flexibility, durability, and good electrical insulation.

Global Market Estimation

The global nitrocellulose market size was valued at

USD 789.7 million in 2022 and is anticipated to grow at a compound annual growth rate (CAGR) of 4.9% from 2023 to 2030. Asia Pacific dominated the industry in 2022 and accounted for the maximum share of more than 45.55% of the overall revenue.

Conclusion

The nitrocellulose thinning industry has grown dramatically in recent years and is expected to

continue growing in the near future. It has become an essential part of the industrial world due to its ability to provide high-quality, efficient, and low-cost solutions. It can be used for a variety of purposes, including coating materials and improving paint quality.

PROJECT COST ESTIMATE

CAPACITY:

Ordinary Thinner : 2,000 Ltrs Per Day

Medium Grade Thinner : 2,000 Ltrs Per Day

High Grade Thinner : 1,000 Ltrs Per Day

Plant & Machinery : ₹ 36 Lakhs

Cost of Project : ₹ 150 Lakhs

Rate of Return : 29%

Break Even Point : 70%

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Start Compressed Bio Gas Plant Using Napier Grass

Compressed Bio Gas (CBG), commonly referred to as bio-CNG, represents a significant advancement in sustainable energy technologies. One innovative feedstock for producing CBG is Napier grass, a perennial grass that grows rapidly in tropical and subtropical regions. This grass is an ideal candidate for bioenergy production due to its high biomass yield and low input requirements. CBG is a greener alternative to standard fossil fuels, resulting in considerable reductions in greenhouse gas emissions when used in automobiles, power generation, and heating systems. CBG is an important step toward harnessing the potential of organic waste for a cleaner future.

Production of Compressed Bio Gas (CBG) Using Napier Grass

- First, pick mature Napier grass from cultivated areas. Ensure that the grass is cut at the appropriate stage to maximize yield and quality.
- After harvesting, preserve Napier grass properly to prevent decay. This usually includes keeping it in a cool, dry place to preserve its moisture content and nutritional value until further processing.
- Pre-treat Napier Grass for Pulp Biomass: Cut the grass into smaller pieces and convert it to pulpy biomass. This could involve mechanical or chemical methods for breaking down the fibrous structure, making it easier to digest.
- Feed biomass to CSTR digester: The pulpy biomass is fed into the Continuous Stirred Tank Reactor. Anaerobic microorganisms in the digester degrade the biomass, producing raw biogas in the process.
- PSA can purify raw biogas, removing pollutants like CO₂ and other gases. The Pressure Swing Adsorption (PSA) process is used to

purify biogas, separating methane from other components and producing high-quality biomethane.

- Compress biomethane to 200-250 bar: Purified biomethane is compressed to high pressures of 200-250 bar. This technique ensures that the biomethane is thick enough for storage and transportation.

- Compressed Biogas (CBG) is stored in pressure cylinders. The compressed biomethane is now referred to as compressed biogas (CBG). The high-pressure gas may be safely held in these cylinders, ready for distribution and use as a renewable energy source.

PROJECT COST ESTIMATE

CAPACITY:

Compressed Bio Gas	: 750 MT Per Annum
By Product Liquid Fertilizer	: 7,800 MT Per Annum
By Product Dry Solid Fertilizer	: 3,000 MT Per Annum
Plant & Machinery	: ₹ 421 Lakhs
Cost of Project	: ₹ 950 Lakhs
Rate of Return	: 28%
Break Even Point	: 56%

Napier grass is turned into a useful renewable energy product that aids in the development of sustainable energy solutions through a systematic process.

Napier Grass: A Top Choice for CBG Production

Napier Grass excels as an energy crop, boasting features that make it ideal for Compressed Bio Gas (CBG) production. Known for its robust growth and hardiness, this grass can flourish across diverse climates and soil types, even those less suited for traditional farming. This versatility allows Napier Grass to be grown in otherwise idle lands, reducing competition with food crops and aiding in land preservation. A key benefit of Napier Grass is its substantial }

biomass output. It can be harvested multiple times per year, ensuring a steady stream of feedstock for CBG production. The grass's high content of cellulose and hemicellulose, crucial for effective anaerobic digestion, results in high biogas yields. This not only boosts the efficiency of CBG facilities but also bolsters the sustainability of this bioenergy option.

The Environmental Benefits of Using Napier Grass for CBG

Using Napier Grass as a feedstock for Compressed Bio Gas (CBG) production promotes a more sustainable and environmentally friendly future while providing a number of ecological benefits. With this innovative method, methane—a greenhouse gas that has a significantly bigger impact on climate change than carbon dioxide—is eliminated from the environment while also producing a useful resource from a potential source of agricultural waste. Turning Napier Grass into CBG reduces our dependency on fossil fuels, which lowers overall carbon emissions and promotes a cleaner environment. Beyond reducing greenhouse gas emissions, using Napier Grass in CBG production promotes regenerative farming techniques. The growth of this energy crop on otherwise unproductive soils reduces competition with food crops, contributing to food security while maintaining energy output.

Global Market Outlook

The global market for compressed biogas has grown significantly in recent years. This expansion is being driven by rising environmental concerns, favorable government legislation, and technological

advances in biogas generation and compression.

- **Market Size:** As of 2023, the global CBG market size was estimated at approximately USD 4.1 billion.
- **Growth Rate:** The market is projected to grow at a compound annual growth rate (CAGR) of around 12% from 2023 to 2030.

The Compressed Biogas (CBG) market prognosis is quite good, owing to the global shift toward renewable energy and environmental practices. As countries work to meet climate targets and cut greenhouse gas emissions, CBG emerges as an important player in the renewable energy market. CBG is in high demand, notably in transportation, industrial uses, and power generation, because of its ability to replace traditional fossil fuels and lower carbon footprints. Europe and Asia-Pacific are leading the way with large investments and government regulations that encourage biogas production and consumption. Technological developments in anaerobic digestion and biogas upgrading are making CBG production more efficient and cost-effective, which is fueling market expansion. Furthermore, the implementation of advantageous regulatory frameworks, financial incentives, and subsidies is promoting market growth.

Final Thought

Setting up a Compressed Bio Gas (CBG) production facility using Napier Grass represents a significant step towards a sustainable and resilient energy landscape. This initiative leverages the untapped potential of a highly productive energy crop and supports global efforts to decrease dependence on fossil fuels. Investing in this type of facility offers stakeholders an opportunity to meet the increasing demand for cleaner, more sustainable fuel sources, with both economic and environmental benefits.

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Setup Coking Coal Washing Unit

Coking coal washing is the process of enhancing coal quality by removing impurities including ash, sulfur, and other undesirable substances. This technique is required for coal that will be utilized in the creation of coke, a critical component in the steelmaking process. The major purpose of washing coking coal is to improve its quality so that it can be efficiently converted into high-quality coke. The washing process removes contaminants that may impair the coke's strength and reactivity, both of which are crucial in blast furnace operation during steel manufacture.

The Importance of Coking Coal in Steel Production

The specific characteristics of coking coal, like ash and sulfur content, as well as its calorific value, are critical in determining the quality of the resulting steel. A lower ash content in coal leads to higher quality coke, which in turn reduces slag volume, boosting both the productivity and efficiency of the blast furnace operations. The sulfur content is also vital, as sulfur in the coke can introduce impurities into the steel, adversely affecting its quality. Therefore, the careful selection and preparation of coking coal are vital steps in the steel production chain, ensuring the steel meets the high standards required for various uses, from construction materials to manufacturing parts.

Coking Coal Washing Process

The process of washing coking coal involves several complex steps to refine it for steel production. It begins with crushing the coal to prepare it for impurity separation. Gravity separation then leverages density differences to separate coal from its impurities, with heavier ash sinking. Tiny coal particles are handled through flotation, using chemicals and air to attach coal to bubbles for easy removal. Magnetic separation removes iron-based impurities, enhancing the coal's purity. The coal is dried to remove moisture, and finally graded to meet specific size and quality standards for coke production. This multi-step process is essential for improving the

coal's quality and performance in steelmaking.

Global Market Prospects

The Metallurgical Coal Market size is forecast to increase by USD 95.27 billion, at a CAGR of 4.77% between 2023 and 2028. Metallurgical coal, also known as coking coal, is a type of coal used in the production of steel. It is produced via the BF-BOF route and EAF route. Both these processes require metallurgical coal for coke production to be used in the steelmaking process. Furthermore, while the BF-BOF process requires large volumes, the EAF process requires lower volumes. However, the BF-BOF process was the dominant steel production method employed in 2020. The market in APAC is expected to grow at a rapid rate than other regions fuelled by the high demand from the steel industry. In addition, factors including rapid industrialization and booming infrastructure growth in developing countries such as China and India have fueled the demand for steel, which needs metallurgical coal as a major raw material for its production. In addition, Asian countries are witnessing rapid urbanization of their cities; therefore, the demand for steel is high for infrastructure growth. Hence, such factors are driving the market growth in APAC during the forecast period.

Conclusion

Setting up this facility can also create local employment opportunities and stimulate economic activity, offering sustained communal and economic benefits. These features position a coking coal washing plant as a crucial strategic investment for stakeholders looking to capitalize on the growing global demand for high-quality coking coal.

PROJECT COST ESTIMATE

CAPACITY:	
Coal Washing (Job Work)	: 5,000 MT Per Day
By Product (Waste Coal)	: 1,000 MT Per Day
Plant & Machinery	: ₹ 16 Cr.
Cost of Project	: ₹ 60 Cr.
Rate of Return	: 34%
Break Even Point	: 49%

Setup Plant of Lithium Ion Battery (Battery Assembly)

A lithium-ion or Li-ion battery is a type of rechargeable battery which uses the reversible reduction of lithium ions to store energy. It is the predominant battery type used in portable consumer electronics and electric vehicles. It also sees significant use for grid-scale energy storage and military and aerospace applications. Compared to other rechargeable battery technologies, Li-ion batteries have higher energy densities, low self-discharge, and no memory effect.

Scope for Startups in the Lithium Ion Battery Industry

Due to increased adoption of renewable energy sources such as solar and wind energy, the lithium ion battery market is expected to grow significantly over the next few years. This expansion provides an opportunity for startups to develop innovative products and services that can capitalise on this expansion. Startups can concentrate on improving battery packs for electric vehicles and consumer electronics, developing more efficient charging solutions, or even launching rental programmes that allow customers to rent lithium ion batteries for short periods of time.

Indian Market Outlook

The India lithium-ion Battery Market was valued at US\$ 1.91 billion in 2021 and is expected to reach US\$ 5.2 billion in 2029. Over the forecast period, the global India lithium-ion battery market is expected to grow at a CAGR of 15.3%. Smartphones, laptop computers, alarm clocks, watches, and remote controls all make extensive use of lithium-ion batteries. The country's population and disposable income have a significant impact on consumer electronics sales.

Global Market Outlook

The global lithium-ion battery market was worth USD 41.97 billion in 2021 and is expected to grow at an 18.1% compound annual growth rate (CAGR) from 2022 to 2030.

Conclusion

Lithium-ion batteries are the future of energy storage due to their numerous advantages such as high energy density, low maintenance costs, and relatively long life spans. Furthermore, lithium-ion battery assembly is a booming business that has great potential for growth and expansion in the near future.

PROJECT COST ESTIMATE

CAPACITY	
Lithium-Ion Battery	: 60,000 Nos Per Annum
Plant & Machinery	: ₹ 172 Lakhs
Cost of Project	: ₹ 812 Lakhs
Rate of Return	: 29 %
Break Even Point	: 61 %

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Sorbitol is a sugar alcohol that is frequently used as a sweetener in foods and beverages. Unlike other sugars, sorbitol is low in calories and does not promote tooth decay, making it a common ingredient in sugar-free and dietetic products. It is derived from glucose and naturally occurs in fruits and vegetables, although it can also be produced. Sorbitol is used in the pharmaceutical and cosmetic industries, as well as in the culinary world. Sorbitol's versatility and beneficial properties make it a desirable component in a wide range of sectors, emphasising its importance beyond its use as a sweetener.

Uses and Application

- **Excipient:** Sorbitol serves as a base in many pharmaceutical formulations where it is used as a filler or to bulk up drugs in tablets and capsules.
- **Skin Conditioner:** It helps in softening the skin and reducing dryness.
- **Tobacco:** Sorbitol is used in the tobacco industry as a humectant to maintain the moisture of tobacco products.
- **Production of Polyols:** Sorbitol is a key feedstock in the production of polyether polyols, which are used in making polyurethane foams.
- **Plasticizers and Softeners:** It is used to enhance the flexibility and pliability of plastics and other materials.

Why Should Entrepreneurs Start this Business?

Starting a sorbitol business presents entrepreneurs with a chance to tap into a growing market for healthier, low-calorie substitutes and sustainable products. With its broad applications in industries such as food, medicine, and cosmetics, sorbitol offers diverse revenue streams and reduces the risk of industry

dependence. Supportive legislation for sugar alternatives and sustainable practices creates a conducive environment for sorbitol-based enterprises. This venture not only promises profitability but also aligns with global trends favoring health and sustainability, particularly in emerging markets seeking versatile ingredients.

Entrepreneurs that enter this field have the opportunity to establish a foothold in a dynamic market with opportunities for innovation and expansion.

Indian Market Outlook

In 2023, the sorbitol market in India was valued at 181.1 kilotons. Looking ahead, the market is expected to reach 221.2 Kilo Tons by 2032, with a compound annual growth rate (CAGR) of 2.2% from 2024 to 2032. The increasing adoption of diabetic and dietetic food and beverages, the rising product demand as a substitute for sugar, the growing product utilization in oral care products, and the escalating demand from the food and beverage industry for nutritive sweeteners are some of the major factors propelling the market. India's personal care and cosmetics industry is experiencing significant growth, driven by increasing disposable income, changing consumer lifestyles, and a focus on personal grooming. The expansion of the personal care and cosmetics industry and the introduction of new and innovative sorbitol-based products contribute to the growth of the sorbitol market in India.

PROJECT COST ESTIMATE CAPACITY

Sorbitol	: 6 MT Per Day
Plant & Machinery	: ₹ 431 Lakhs
Cost of Project	: ₹ 790 Lakhs
Rate of Return	: 28%
Break Even Point	: 47%

6.7% from 2023 to 2030. The market is predicted to rise significantly over the forecast period due

to increased consumption of diabetic and dietetic foods and beverages. The product's increasing demand as a sugar substitute in consumer food goods is also predicted to stimulate demand in the coming years. Sorbitol is also increasingly used in oral care products since it is metabolized at a slower pace than other sugar alcohols, which helps to avoid dental problems like cavities and tooth decay. The benefits of this are projected to drive market expansion during the forecast period.

In 2022, the Asia Pacific region dominated the global sorbitol market, accounting for more than 56% of revenues. The region's sorbitol market is being driven by an increase in health-conscious customers, as well as a rapid expansion of consumer markets. Sorbitol is widely utilized in a variety of applications, including chocolates, baked goods, and confectionery.

Benefits of Sorbitol

- Low-Calorie Sweetener
- Diabetic-Friendly
- Dental Health
- Moisture Retention
- Laxative Effect
- Texture Improvement
- Stabilizer and Thickener
- Hypoallergenic

To summarize, sorbitol is a versatile chemical that provides numerous benefits across a variety of industries. Its low calorie count, diabetic friendliness, dental benefits, and functional qualities make it an excellent addition to food, pharmaceutical, and cosmetic products.

Conclusion

Entrepreneurs interested in starting a sorbitol business can employ these numerous applications to create out niche markets or manufacture goods that satisfy changing client and industry demands. Businesses that understand the properties and benefits of sorbitol can create and sell market-leading solutions, capitalizing on the growing demand for healthier, more sustainable products.

Potato Powder, Starch & Flakes are a range of products derived from the tuber of the potato plant. Potato powder is created when potatoes are peeled, dried and then ground into a fine powder. The flakes are made when potato starch is heated and dried, forming thin flakes. The process of making potato starch is not complicated and can be done with minimal equipment.

Uses and Application of Potato Powder, Starch & Flakes

Potato powder, starch and flakes are used in a variety of applications across industries. In food production, potato powder is often used as an ingredient in soups and sauces, or to thicken and stabilize products like yogurt, ice cream and

Start Production of Potato Powder, Starch & Flakes

cheese. It can also be used to enhance the flavor and texture of baked goods, such as cookies and cakes. Flakes made from potatoes are becoming increasingly popular in snack foods like chips and crackers, as well as in batters for fried foods.

Indian Market Outlook

The demand for potato powder, starch and flakes has been rising steadily in India due to the increasing awareness about its health benefits. Potato powder, starch and flakes are rich in dietary fibre, vitamins, minerals and antioxidants which make them a healthy and nutritious choice.

Conclusion

Overall, the versatility of potato powder, starch and flakes makes them useful in a variety of industries, including food production, animal feed production, and even cosmetics. As demand for these products grows, the industry is continuing to boom.

PROJECT COST ESTIMATE

CAPACITY:

Potato Powder	: 500 Kgs Per Day
Potato Starch	: 500 Kgs Per Day
Potato Flakes	: 500 Kgs Per Day
Plant & Machinery	: ₹ 40 Lakhs
Cost of Project	: ₹ 241 Lakhs
Rate of Return	: 27 %
Break Even Point	: 58 %

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Cenosphere processing from fly ash involves extracting lightweight, inert hollow spheres called cenospheres, primarily composed of silica and alumina, from coal combustion byproducts at thermal power plants. The process includes collecting fly ash, separating cenospheres using flotation to leverage their low density, and cleaning them based on size and quality. Highly valued in construction, oil and gas, automotive, and aerospace

projected to be the leading region in the global cenospheres during the forecast period (2023-2029). The region's fast developing construction sector and car production have contributed to its market leadership. Furthermore, the increased preference for computerized and lightweight automobiles is likely to boost demand for cenospheres in the automotive industry. Growth in infrastructure investments and construction projects is likely to drive the cenospheres market. Developing countries in the area, such as China and India, are expected to play an important role in the expansion of the cenospheres market.

Benefits of Starting a Cenosphere Processing Plant?

Starting a Cenosphere Processing plant offers distinct advantages to entrepreneurs looking to enter an innovative and ecologically responsible market. Cenospheres, small, lightweight hollow spheres composed primarily of silica and alumina and filled with air or inert gas, are byproducts of coal combustion in thermal power plants. These spheres have a wide range of applications, including building, where they are used to improve the properties of concrete by reducing density and boosting thermal insulation. Furthermore, cenospheres are employed in the manufacture of ceramics, polymers, and paints, offering benefits such as reduced weight, increased filler loading, and greater dimensional stability. Investing in the cenosphere processing industry allows entrepreneurs to enter a niche market with limited competition and the possibility for high profit margins, putting them at the forefront of a burgeoning and profitable sector.

Conclusion

Investing in a cenosphere processing plant not only meets present industry demands, but also positions a company for future growth as more sectors seek sustainable, lightweight materials. This venture provides not only financial gains but also contributes to a cleaner planet, balancing profit and purpose.

PROJECT COST ESTIMATE

CAPACITY	
Cenosphere	: 5,000 MT Per Annum
Plant & Machinery	: ₹ 179 Lakhs
Cost of Project	: ₹ 629 Lakhs
Rate of Return	: 29%
Break Even Point	: 63%

industries for their low density, thermal insulation, and fire resistance, cenospheres turn waste into valuable, sustainable materials, reducing landfill use.

Uses and Applications

Listed below are some common uses and applications:

- Construction Materials
- Oil Well Cementing
- Coatings and Paints
- Plastics and Polymers
- Automotive Applications
- Refractories
- Aerospace and Defense
- Sports Equipment
- Fillers in Plaster and Mortar
- Environmental Applications

Global Market Outlook

Global Cenospheres Market size is expected to reach US\$ 1.53 Bn. by 2029, growing at a CAGR of 12.2% during the forecast period. Increasing demand for cenospheres in refractory, construction, oil and gas, automotive, and paints and coatings industries, which is expected to be a key market driver during the forecast period. Because of its effective qualities, cenospheres are increasingly being adopted by a wide range of end-user sectors, which is predicted to contribute significantly to the worldwide cenospheres market's growth. Asia-Pacific is

Setup Plant of Premix Tea and Coffee Cappuccino, Vanilla Flavoured Coffee, Mocha Coffee, Masala Chai, Ginger Tea & Green Tea (for Diabetic and Non Diabetic)

Premix Tea and Coffee Cappuccino, Vanilla Flavoured Coffee, Mocha Coffee, Masala Chai, Ginger Tea & Green Tea are all products that have been specially developed for both diabetic and non-diabetic consumers. They are available in a range of flavors, each with its own unique characteristics. Green Tea is an ideal choice for those who are looking to reduce their sugar intake or follow a healthier lifestyle. All of these products provide health benefits, including improved digestive health and weight management.

The health benefits of Premix Tea and Coffee

The health benefits of premix tea and coffee are numerous. For instance, the antioxidant properties of green tea can help protect the body from free radicals, while ginger tea may help reduce inflammation. The caffeine content of premix tea and coffee can also boost alertness and mental clarity. Furthermore, it can help with digestion, as well as provide a boost to the immune system.

Scope for Startups in the Premix Tea and Coffee Industry

Premix Tea and Coffee is rapidly gaining popularity, particularly with the rise of health-conscious consumers. As the demand for this product increases, the scope for startups in the premix tea and coffee industry is also on the rise. With the right kind of product and marketing strat-

egies, startups can capitalize on this trend and create a successful business.

Global Market Outlook

The global premix tea and coffee market is estimated to reach USD 2.26 billion by 2027 and is projected to grow at a CAGR of 4.8% over the forecast period. Factors such as increased consumption of organic beverages, rising disposable income, and rapid urbanization in developing countries are driving the growth of the global market.

Conclusion

Premix Tea and Coffee is a booming industry with great potential for startups. It is an easy and convenient way to enjoy a cup of tea or coffee anytime, anywhere. Not only is it cost effective but it also offers a variety of flavors that cater to both diabetics and non-diabetics. With the right business strategies, Premix Tea and Coffee can be very profitable. All in all, it is an exciting industry to enter and explore.

PROJECT COST ESTIMATE

CAPACITY:	
Premix Tea (Masala Chai) 100 g Pack	: 400 Packs Per Day
Premix Tea (Masala Tea) 100 g Pack	: 400 Packs Per Day
Premix Coffee (With Sugar) 22g Pack	: 1,818 Packs Per Day
Premix Coffee (Without Sugar) 16g Pack	: 2,500 Packs Per Day
Premix Coffee (With Vanilla for Diabetic) 22g Pack	: 1,818 Packs Per Day
Plant & Machinery	: ₹ 13 Lakhs
Cost of Project	: ₹ 119 Lakhs
Rate of Return	: 35 %
Break Even Point	: 49 %

Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :

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Bio-Degradable Plastic Polymer from Corn

Corn is a popular source for materials that can be recycled into bio-degradable plastic polymers. Most people know that corn is a major crop in America, but they may not have known the amount of corn crops are actually used to make plastic products. Corn has the potential to be one of the most sustainable crops in America because it produces biodegradable plastics, which are made from renewable resources, and these plastics are also recyclable.

Benefits of Bio-Degradable Plastic Polymer

Biodegradable plastics are a type of plastic that break down in the environment instead of remaining there as a contaminant. Currently biodegradable plastics are used for packaging food products or other materials that need protection from degradation during shipping. Bioplastics will soon replace most petroleum-based products which is an excellent way to reduce greenhouse gas emissions and global warming.

PROJECT COST ESTIMATE

CAPACITY

Bio-Degradable Plastic Polymer	: 10,000 MT Per Annum
Plant & Machinery	: ₹ 6058 Lakhs
Cost of Project	: ₹ 8100 Lakhs
Rate of Return	: 28%
Break Even Point	: 38%

Indian Market Outlook

India Bio plastics Market was valued at US\$ 320.13 Mn. in 2021 and expected to reach US\$ 1060.77 Mn. by 2027 at a CAGR of 22.1% during 2022-2027. As the country's population continues to grow, there is an increasing demand for sustainable and eco-friendly products.

Global Market Outlook

In 2021, it was predicted that the global market for biodegradable plastic would be worth USD 4.1 billion. During 2022-2030, it is anticipated to increase at a compound annual growth rate (CAGR) of 9.7%. One of the main trends driving market expansion is governments banning the use of single-use plastic together with increased public awareness of the negative consequences of plastic waste.

Recycling of Lithium Ion Battery Business

Because of the popularity of smart phones and tablets, the demand for lithium ion batteries has surged substantially in recent years. Because these devices include hazardous materials that must be properly disposed of to avoid contamination of the environment, recycling these batteries is now more crucial than ever.

PROJECT COST ESTIMATE

CAPACITY:

Copper	: 1.4 MT Per Day
Aluminium	: 0.8 MT Per Day
Graphite	: 1.8 MT Per Day
Carbon Black	: 0.3 MT Per Day
Lithium Cobalt Oxide	: 2.5 MT Per Day
Plastic	: 0.2 MT Per Day
Plant & Machinery	: ₹ 200 Lakhs
Cost of Project	: ₹ 422 Lakhs
Rate of Return	: 27%
Break Even Point	: 55%

Lithium-ion batteries are becoming more prevalent. They're already used in cell phones, laptops, consumer electronics, and some industrial applications. Telecom towers, solar storage systems, and electric vehicles are all using them. Battery specialists and environmentalists agree that lithium-ion batteries should be recycled for a variety of reasons.

According to estimates, India's yearly lithium-ion battery industry would expand at a 37.5 percent compound annual growth rate (CAGR) from now until 2030, when it will reach 132 GWh. The global lithium-ion battery market will have risen from 2.9 gigawatt-hours in 2018 to around 800 gigawatt-hours by 2030.

A Business Plan for Packaged Drinking Water from Deep Sea Water

Packaged drinking water means water derived from surface water or underground water or sea water. Water is generally defined as a liquid which is shaped by the container that it is filled in and is able to have many variants of colors. It is the crucial component for all living things.

Uses and Applications

Packaged drinking water is a safe and convenient way to ensure you're getting clean water. It's a great way to stay hydrated without having to lug around a water bottle. The most common use of packaged drinking water is as an alternative to the standard bottled water at places such as restaurants, schools, offices, and other work environments.

Indian Market

The Indian packaged drinking water market is expected to grow at a CAGR of around 15% during the forecast period of 2020-2025. The market is driven by the growing health consciousness among consumers, rising disposable incomes, and changing lifestyles.

PROJECT COST ESTIMATE

CAPACITY

Packaged Drinking Water	: 80,000 Bottles Per Day
Plant & Machinery	: ₹ 179 Lakhs
Cost of Project	: ₹ 1204 Lakhs
Rate of Return	: 29%
Break Even Point	: 47%

Set Up Automated Vehicle Scrapping Unit

Vehicle scrapping units, also called scrapyards, are now playing an important role in the waste management industry as people get more aware of pollution and the need to reduce carbon emissions by limiting vehicle use and preventing old, unused vehicles from being parked for long periods of time and becoming environmental hazards.

Uses and Applications

This eliminates waste and cuts down on the need for mining or drilling raw

PROJECT COST ESTIMATE

CAPACITY:

Steel Scrap	: 6,000 Units Per Annum
Aluminum Scrap	: 900 Units Per Annum
Copper Scrap	: 150 Units Per Annum
Plastics	: 1000 Units Per Annum
Old Lube Oil	: 60 KI Per Annum
Battery	: 12000 Nos Per Annum
Rubber Scrap	: 200 Units Per Annum
Glass Scrap	: 200 Units Per Annum
Plant & Machinery	: ₹ 325 Lakhs
Cost of Project	: ₹ 1455 Lakhs
Rate of Return	: 26%
Break Even Point	: 44%

materials out of Earth's crust.

- Environmental Benefits
- Wildlife Protection
- Reuse of Vehicle Parts
- Conservation of Energy and Resources
- Make Space

Indian Market

The Indian market for automated vehicle scrapping units is expected to grow significantly in the next few years. This is due to the increasing number of vehicles that are being scrapped each year.

Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :

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Bagasse is the fibrous residue that remains after sugarcane or other vegetation is harvested for its juice or sap. It's usually dried, baled, and used as a renewable source of fuel or biomass energy. It is also gaining traction in the green movement as a material for sustainable, biodegradable products such as disposable plates, cups and cutlery.

Advantages of Using Bagasse

Bagasse is completely biodegradable, which means it won't contribute to landfills or other environmental problems associated with plastic waste. In addition, the production of bagasse-based products emits less carbon dioxide than their plastic counterparts, making them more eco-friendly and sustainable.

Global Market Signal

The biodegradable tableware market is expected to be growing at a growth rate of 6.0% for the forecast period of 2022 to 2029. The global market for biodegradable disposable cups and plates made from

Start Production of Biodegradable Disposable Cups and Plates (Tableware) Using Sugarcane Bagasse

sugarcane bagasse has seen significant growth. This is due to increased awareness of environmental sustainability and waste reduction among consumers and the availability of various types of sugarcane bagasse tableware products in the market.

Conclusion

Entrepreneurs should consider entering the biodegradable disposable cups and plates (tableware) business using sugarcane bagasse due to its numerous benefits. Not only is it environmentally friendly, but there is a growing demand for this type of product and the cost of producing it is relatively low. The use of sugarcane bagasse is becoming increasingly popular among consumers as they seek more sustainable options. This means that there is a growing demand for this type of product, making it a great opportunity for entrepreneurs looking to get into the market.

PROJECT COST ESTIMATE

CAPACITY:	
<i>Biodegradable Disposable Cups each 9gm wt.</i>	: 333 Thousand Pcs Per Day
<i>Biodegradable Disposable Plates each 16gm wt.</i>	: 187 Thousand Pcs Per Day
Plant & Machinery	: ₹ 1924 Lakhs
Cost of Project	: ₹ 2687 Lakhs
Rate of Return	: 24 %
Break Even Point	: 38 %

Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :

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SELECTED BUSINESS IDEAS FOR RIGHT INVESTMENT

EACH DETAILED PROJECT REPORT (BUSINESS PLAN) CONTAINS



BEGINNING : Project Introduction, Brief History of the Product, Properties, BIS (Bureau of Indian Standard) Specifications & Requirements, Uses & Applications.

MARKET SURVEY : Present Market Position, Expected Future Demand, Statistics of Imports & Exports, Export Prospect, Names and Addresses of Existing Units (Present Manufactures).

PLANT & MACHINERY : List of Plant & Machineries, Miscellaneous Items and Accessories, Instruments, Laboratory Equipments and Accessories, Plant Location, Electrification, Electric Load and Water, Maintenance, Suppliers/Manufacturers of Plant and Machineries.

RAW MATERIAL : List of Raw Materials, Properties of Raw Materials, Availability of Raw Materials, Required Quality of Raw Materials, Cost/Rates of Raw Materials.

MANUFACTURING TECHNIQUES : Formulae Detailed Process of Manufacture, Flow Sheet Diagram.

PERSONNEL REQUIREMENTS : Requirement of Staff & Labour, Personnel Management, Skilled & Unskilled Labour.

LAND & BUILDING : Requirement of Land Area, Rates of the Land, Built up Area, Construction Schedule, Plant Layout.

FINANCIAL ASPECTS : Cost of Raw Materials, Cost of Land & Building, Cost of Plant & Machineries, Fixed Capital Investment, Working Capital, Project Cost, Capital Formation, Cost of Production, Profitability Analysis, Break Even Point, Cash Flow Statement for 5 to 10 Years, Depreciation Chart, Conclusion, Projected Balance Sheet, Land Man Ratio.

- Prepared by highly qualified and experienced consultants and Market Research and Analyst Supported by a panel of experts and computerised data bank.
- Data provided are reliable and upto date collected from suppliers/ manufacturers, plants already commissioned in India.
- NPCS Reports are very economical and immediately available on demand where as commissioned Feasibility Studies are time consuming and costly.

FOR ASSESSING MARKET
POTENTIAL, INVESTMENT
DECISION MAKING
CORPORATE
DIVERSIFICATION
PLANNING ETC.

NPCS Engineers and Consultants have prepared Market Survey Cum Detailed Techno Economic Feasibility Report on the following products which are most viable and profitable.



Electroplating, Metal Polishing, Anodizing, Phosphating, Metal Finishing and Powder Coating

- » Aluminium Anodizing Plant
- » Brass and Aluminium Hinges
- » C P Bath Room Fitting (Chrome Plated)
- » Chrome Plating
- » Corrugated Galvanized Sheet
- » Electroplating of Gold & their Chemical Treatment in Golden Colour on Silver Thread



- » Galvanising of Zinc (By Electrical Process)
- » Hard Chromium Plating
- » Hot Dip Galvanizing Plant
- » Led Street Light Assembling
- » Metal Polish Soap
- » Plating on Plastics, Electroplating on Plastics, Silver & Gold Plating on PVC and Nylon-6



- » Transmission Towers & Tele Communication Towers with Galvanizing Plant
- » Vacuum Metalising Process
- » Workshop for Motors of Low Voltage (Up-To 1000v) and Distribution Transformers (Maintenance, Overhauls and Repairs)
- » Zinc Brightener

Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :

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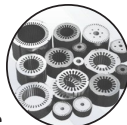
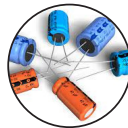
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Electrical, Electronic Industries and Power Projects



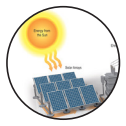
- » Air Conditioner (Window Type)
- » Air Cooler
- » Alternator
- » Aluminium Bare Conductors
- » Aluminium Cables and Conductors
- » Aluminium Conductors (AAAC and ACSR)
- » Aluminium Electrolytic Capacitor
- » Auto Bulb, Lamp
- » Bakelite Electrical Accessories (WS-5)
- » Battery for Auto Vehicles
- » Battery Operated Ride on Car for Kids
- » Brushless DC Motor (BLDC) Fan Production
- » Capacitors
- » Captive Power Plant
- » Carbon Brushes
- » Ceiling Fans, Wall Switches and Sockets
- » Ceramic Heater Plate
- » Compact Copper Tube Light Choke
- » Compact Fluorescent Lamps (CFL)
- » Control Panel Manufacturing
- » Copper Wire Drawing, Annealing & Enamelling
- » Digital Cinema Projector Equipment and Software Development
- » Dish Antenna & Satellite Network Equipment
- » Distribution Transformers and Repairs
- » Dosing Pump
- » Dry Cell
- » Electric Arc Furnace
- » Electric Energy Meter
- » Electric Fan
- » Electric Geyser
- » Electric Motor
- » Electric Motor Rewinding Business
- » Electric Motors
- » Electric Switches, Plugs, Sockets and other Accessories
- » Electrical Control Panel
- » Electrical Extension Cord
- » Electrical Insulating Tape Using Bopp Film
- » Electrical Lamp
- » Electrical Power Transformers (Repair & Refurbishment)
- » Electrical Stamping
- » Electronic Ballast (Choke)
- » Electronic Cut Out for Automobile
- » Electronic Digital Weighing Machine
- » Electronic Energy Meter



- » E-Waste Recycling Plant (Electronic Waste, E-Waste, E-Scrap, or Waste Electrical and Electronic Equipment (WEEE))
- » F.H.P Motors
- » Fiber Optical Cables
- » Fluorescent Tube
- » Gas Detectors of L.P.G.
- » Graphite Electrode for Arc Furnace
- » Halogen Lamps
- » Heat Exchanger (Fin Type)
- » House Wire
- » How to Start Kids Electronic Toys Factory
- » Immersion Heater
- » Inner Grooved Copper Tube
- » Instrument Cable
- » Insulator (HT & LT)
- » Insulator (Made by Fiber Glass & Reinforced Plastics by Hand Moulding Press)
- » Inverters 50 Hz 100 to 1000 KVA
- » Jelly Filled Cables
- » Lamp Shades and Chandeliers
- » Lead Acid Battery
- » Lead Acid Maintenance Free Battery
- » Lead Battery Recycling
- » LED Street Light Assembling
- » Light Emitting Diode (LED)
- » Lithium Ion Battery (Battery Assembly)
- » Lithium-Ion Battery (LIB) Manufacturing
- » Low Tension Cables, LT Power Cables Manufacturing
- » LT Cable
- » LV Control & Power Cables, MV Cables
- » Maintenance Free Rechargeable Battery
- » Manufacturing of Catenary Wires and Conductors used in Railway Electrification
- » Microwave Oven
- » Miniature Circuit Breaker (MCB)
- » Modular Electrical Switches
- » Motors Industry
- » Multilayer Printed Circuit Boards
- » Neon Bulb
- » Nuts and Bolts (MS Fasteners)
- » Nylon Coating on Zinc Wire (Wire "O" Wire)
- » Optical Fiber Cable
- » PCB (Printed Circuit Board) (Multilayer)
- » Plastic Battery Containers
- » Plastic Cards for Telephone
- » Plastic Seals for Electricity Meters
- » Porcelain Insulator



- » Porcelain Insulator (LT & HT)
- » Power Cable
- » Power Transformer
- » Power Transformer Upto 40 MVA
- » Pre-Compressed Pressboard
- » Printed Circuit Board
- » Production of BLDC (Brushless DC Motor) Fan
- » PVC & XLPE Cables
- » PVC Battery Separator
- » PVC Electric Wires & Cables
- » PVC Insulated Winding Wires for Submersible Motors
- » PVC Wire & Cables
- » Repair & Refurbishment of Power Transformers
- » Resin Cored Soldering Wire
- » Rewinding of Burnt Electric
- » Rewinding of Burnt Electric Motors
- » R-F Coaxial Cable
- » Rosin Cored Soft Soldering Wire
- » Selenium Coated Aluminium Drum used in Plain Paper Copier
- » Set Top Box
- » Single Core Flexible Cable (FR LSF PVC Insulated)
- » Soft & Hard Ferrites
- » Solar Panel & Electronic Toys
- » Solar Photovoltaic System
- » Solar Power Plant
- » Solder Wire & Flux
- » Spark Plug
- » Submersible Pump & Motor
- » Switch Mode Power Supply (SMPS)
- » Thermal Power Plant (5 MW)
- » Thermocouple
- » Transformer Oil
- » Transistor and Semiconductor
- » Transmission Tower & Tele Communication Tower with Galvanizing Plant
- » Tungsten Carbide Rod
- » Uninterrupted Power Supply (UPS)
- » Voltage Stabilizer Using IC Timer
- » Washing Machine & Geyser
- » Waste Electrical and Electronic Equipment (WEEE)
- » Wind Mill
- » Workshop for Motors of Low Voltage (Up-To 1000v) and Distribution Transformers (Maintenance, Overhauls and Repairs)



Electroplating, Metal Polishing, Anodizing, Phosphating, Metal Finishing and Powder Coating

- » Aluminium Anodizing Plant
- » Brass and Aluminium Hinges
- » C P Bath Room Fitting (Chrome Plated)
- » Chrome Plating
- » Corrugated Galvanized Sheet
- » Electroplating of Gold & their Chemical Treatment in Golden Colour on Silver Thread



- » Galvanising of Zinc (By Electrical Process)
- » Hard Chromium Plating
- » Hot Dip Galvanizing Plant
- » Led Street Light Assembling
- » Metal Polish Soap
- » Plating on Plastics, Electroplating on Plastics, Silver & Gold Plating on PVC and Nylon-6



- » Transmission Towers & Tele Communication Towers with Galvanizing Plant
- » Vacuum Metalising Process
- » Workshop for Motors of Low Voltage (Up-To 1000v) and Distribution Transformers (Maintenance, Overhauls and Repairs)
- » Zinc Brightener

A Business Plan for MS Barrels (Metal Barrels)

Used in Oil Packaging

MS Barrels, also known as Metal Barrels, are specially designed containers used for packaging and transporting various types of oil. These barrels are generally made of mild steel, which is strong and lightweight, making them easy to transport and store. They come in a variety of sizes and shapes, allowing for efficient and secure oil packaging.

Benefit of MS Barrels

MS Barrels are highly durable and can withstand extremely high temperatures and pressure. This means that they are well suited for transporting oil and other liquids, as they will be able to safely store the contents during long-distance transportation. MS Barrels are also eco-friendly and offer a great way to reduce plastic waste. Since they are made of metal, they can be recycled or reused over again. This makes them a much more sustainable option compared to plastic barrels which need to be disposed of after one use.

Global Market Outlook

The Global Industrial drum Market was valued at USD 10.88 billion in 2021 and is expected to reach USD 20.67 billion by 2029, registering a CAGR of 7.70% during the forecast period of 2022-2029. Industrial drums allow higher operational efficiency and effectiveness in shipping bulk quantities of commodities, especially in liquid form. Industrial drums also offer cost-effective transport packaging solutions for the shipment of both hazardous and non-hazardous materials, like chemicals, wines, fruit juices, etc.

PROJECT COST ESTIMATE

CAPACITY:

MS Barrels (Metal Barrels)	: 210,000 Units Per Annum
MS Scrap	: 300 Units Per Annum
Plant & Machinery	: ₹ 148 Lakhs
Cost of Project	: ₹ 484 Lakhs
Rate of Return	: 28 %
Break Even Point	: 61 %

Conclusion

MS Barrels are quickly becoming the go-to choice for oil packaging due to their superior benefits and convenience. MS Barrels offer a wide range of advantages including ease of transportation, environmental friendliness, and cost savings. They are also highly durable and safe for storing oil, making them the perfect choice for oil packaging. Ultimately, MS Barrels offer a great solution to oil packaging, making them an ideal choice for any business involved in the oil industry.

A Business Plan for Soda Ash By Solvay Process

Soda ash, or sodium carbonate, is a white, powdery chemical commonly used in the production of glass, paper, soaps and detergents, and other industrial products. It can be produced in several ways, but the Solvay process is the most widely used method. The Solvay process begins with brine—salt water saturated with sodium chloride—which is heated until it evaporates, leaving behind concentrated sodium chloride. This concentrated brine is then mixed with ammonia and carbon dioxide, forming sodium bicarbonate.

Benefits of Starting Soda Ash Industry

The production of soda ash has numerous benefits for industry. It is an essential ingredient in the manufacture of glass, soaps and detergents, and many other products. Soda ash also plays an important role in the production of aluminium, steel, and paper.

Indian Market Outlook

The Indian market for soda ash is growing rapidly, with the industry expected to expand by 10 % each year. India has already established itself as the third-largest producer of soda ash in the world. This is due in part to the country's vast supply of raw materials, such as limestone and salt, as well as the availability of relatively low-cost labour. Indian government policies have encouraged the development of large-scale soda ash producers, which in turn has resulted in lower prices for consumers. This, combined with rising demand from China, has contributed to the overall growth of the Indian soda ash industry.

Global Market Outlook

The global soda ash market size was valued at USD 11000.00 million in 2021 and is anticipated to witness a compound annual growth rate (CAGR) of 6.2% from 2022 to 2030. Soda ash is utilized as a raw material in many different industries, including agriculture, the production of paper and pulp, soap and detergent, and glass.

Conclusion

The Solvay process is a cost-effective and efficient method for producing soda ash from brine. This process has been used for decades in the chemical industry and continues to be a reliable source for soda ash production.

PROJECT COST ESTIMATE

CAPACITY:

Soda Ash (Na₂CO₃)	: 200,000 MT Per Annum
Ammonium Chloride (NH₄Cl)	: 200,000 MT Per Annum
Plant & Machinery	: ₹ 1050 Cr.
Cost of Project	: ₹ 1265 Cr.
Rate of Return	: 14 %
Break Even Point	: 43 %

Start Cardanol

from Cashew Nut Shell Oil Manufacturing Plant

Cardanol is an industrially-important phenol derived from cashew nut shell oil (CNSO). Cardanol is a natural phenolic resin that is obtained from the by-product of cashew nut shell oil production. The cashew nut shells are subjected to high temperature and pressure, which produces CNSO. This oil is then processed to obtain cardanol.

Its Uses and Applications

It is commonly used in coatings, adhesives, sealants, moulded parts, and composite materials. It can also be used as a component of oil-based paints and varnishes. Additionally, cardanol is an important component in the manufacture of electrical components such as transformers and cable glands.

In the medical field, cardanol has been studied for its potential uses in the formulation of drug delivery systems, biodegradable implants, and wound dressings. Additionally, cardanol has shown promise in applications related to energy storage devices such as batteries.

Global Market Outlook

The global Cardanol market was valued at US\$ 29 million in 2022 and is anticipated to reach US\$ 58 million by 2029, witnessing a CAGR of 10.3% during the forecast period 2023-2029. Cardanol is a naturally occurring phenolic compound derived from cashew nutshell liquid (CNSL), also known as Cashew Nut Shell Oil (CNSO). It is a renewable, biodegradable, and non-toxic raw material. Cardanol is used in making phenalkamines.

Summary

It is an ideal business venture for entrepreneurs looking to invest in a growing industry. It's also an opportunity to make a positive environmental impact. As Cardanol becomes increasingly popular, more entrepreneurs should consider entering this exciting and potentially lucrative business.

PROJECT COST ESTIMATE

CAPACITY

Cardanol	: 24 MT Per Day
Plant & Machinery	: ₹ 152 Lakhs
Cost of Project	: ₹ 658 Lakhs
Rate of Return	: 28 %
Break Even Point	: 60 %

Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :

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Profitable Business Industry of Electric Motors

An electric motor is a machine that turns electricity into mechanical energy. The bearing journals and rotor diameter are finish-machined as a rotor assembly by some motor manufacturers, notably those producing sizes of 5 hp and more. This technique ensures that the bearing journals and rotor diameter are perfectly aligned.

The interaction between the motor's magnetic field and electric current in a wire winding generates force in the form of torque imparted to the motor's shaft in most electric motors.

The following are some of the uses for electric motors.

- Blowers, fans, machine tools, pumps, turbines, power tools, alternators, compressors, rolling mills, ships, movers, and paper mills are all

PROJECT COST ESTIMATE	
CAPACITY:	
5 KW Three Phase Induction Motors	: 120 Nos Per Day
10 KW Three Phase Induction Motors	: 120 Nos Per Day
10 KW Brushed DC Motors	: 120 Nos Per Day
Automated Water Pump 5 KW Three Phase Induction Motors	: 120 Nos Per Day
Plant & Machinery	: ₹ 467 Lakhs
Cost of Project	: ₹ 3949 Lakhs
Rate of Return	: 26%
Break Even Point	: 41%

examples of electrical motor applications.

- The electric motor is used in a variety of applications, including HVAC (heating, ventilation, and air conditioning), home appliances, and motor vehicles.

Due to the presence of a large number of participants, including huge corporations and small and medium-sized businesses, the Indian market for electric motors is highly fragmented. During the period 2020-2026, the India Electric Motors Market is expected to develop at a CAGR of 5.9%. The growing popularity of electric vehicles is propelling the global and Indian electric motor markets to new heights. Due to growing fuel prices and rigorous laws aimed at reducing air pollution levels across the country, demand for automobile electric motors is likely to increase in the coming years. Furthermore, the FAME II programme for 100 percent vehicle electrification, the Make in India programme, and other programmes aimed at helping India realise its goal of becoming a global manufacturing hub will continue to drive demand for electric motors in the country.

Production of Crumb Rubber Powder from Waste Tyres

Crub rubber is a term usually applied to recycled rubber from automotive and truck scrap tires. There are two major technologies for producing crumb rubber – ambient mechanical grinding and cryogenic grinding. Of the two processes, cryogenic process is more expensive but it produces smoother and smaller crumbs.

Waste tyre recycling technology is very cost effective and performs 100% wastage tyre recycling (No churn left after the process). In this process no chemical ingredients are used, therefore it is environment friendly. Raw material (scrap tyre) is cheap and easily available. Generate economically valuable products out of waste tyres and products have good market value and demand. Also each recycled ton of tyres preserves 10 tons of carbon dioxide (CO₂) that is a major greenhouse gas.

Features of Tyre Recycling Plant:

1. Compact structure, small floor area, easy maintenance.
2. Low energy consumption, low operating cost.
3. Easy operation, stable performance.
4. Large capacity, high working efficiency.
5. High automatic control, reducing labor cost.
6. Long service life, low rate of breakdown.
7. Eco-friendly. No sewage and waste gas discharge.

There is a rapid market increase of rubber powder in India. Demand of rubber powder in India is increased by 5%-8%. There is fair scope of this product. Every year over 1.6 billion new tires are generated and around 1 billion of waste tires are generated. However, the recycling industry processed only 100 million tires every year. The tire is extensively designed with several complex processes which makes it indestructible in nature and creates difficulty in the recycling of tires.

Furthermore, the growing implementation of crumb rubber generated from scrap tires is supporting the growth of the tire recycling market. In 2016, over 30% of crumb rubber used on sports fields and 25% of crumb rubber used as playground surfacing which is expected to create a significant disruption of the tire recycling market. Application of rubberized asphalt for the construction of pavements is also generating a pool of opportunities for tire recyclers and is expected to fuel the growth of the tire recycling market in the near future.

PROJECT COST ESTIMATE	
CAPACITY:	
Crumb Rubber Powder	: 24 MT Per Day
By Product Steel Wire	: 4.8 MT Per Day
Plant & Machinery	: ₹ 115 Lakhs
Cost of Project	: ₹ 426 Lakhs
Rate of Return	: 28%
Break Even Point	: 66%

Lead Production (Litharge, Refined Lead, Red Lead & Grey Lead)

Lead is a relatively soft metal with bluish-white lustre but on exposure to air, it becomes covered by a dull, gray layer of basic carbonate that adheres closely and protects it from further oxidation or corrosion. It is an important component of batteries, and about 75% of the world's lead production is consumed by the battery industry. Lead is also commonly used in glass and enamel.

India Lead Acid Battery Market is projected to grow at a CAGR of over 9% during 2018-24. India lead acid battery market is projected to reach \$ 7.6 billion by 2023. Anticipated growth in the market can be attributed to booming demand for automobiles, in addition to increasing focus of the government towards boosting the penetration of electric vehicles in the country. Entrepreneurs who invest in this project will be successful.

PROJECT COST ESTIMATE	
CAPACITY:	
Litharge	: 960 MT/Annum
Refined Lead	: 1800 MT/Annum
Red Lead	: 440 MT/Annum
Grey Lead	: 525 MT/Annum
Plant & Machinery	: ₹ 82 Lakhs
Cost of Project	: ₹ 361 Lakhs
Rate of Return	: 31%
Break Even Point	: 54%

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