Modern Technology of Milk Processing and Dairy Products-


Modern Technology Of Milk Processing & Dairy Products (4th Edition)-NIIR Board 2013-01-01 The dairy industry plays an important role in our daily life. It is difficult to realize how fast changes are taking place in the dairy industry. Milk is an important human food, it is palatable, easy to digest and highly nutritious. One of the important factors affecting the total amount of milk produced and the way in which this milk is utilized is the demand for the various products. In order to prepare such a diversity of products, many different processes have been developed by the industry. There are numerous types of milk products such as ghee, butter, paneer, cheese, yogurt, ice cream powder, baby cereal food, cream, and so on. Each of these has been designed to take advantage of some particular property of milk. Dairy products are generally defined as food produced from the milk of mammals; they are usually high energy yielding food products. Enzymes play an important role in the production of cheese. Raw milk contains several native enzymes some of which can be used for analytical and quality purposes for example pasteurization can be assessed by determining indigenous alkaline phosphate activity. India is known as the Oyster of the global dairy industry, with opportunities galore to the entrepreneurs globally. Anyone might want to capitalize on the largest and fastest growing milk and milk products market. The dairy industry in India has been witnessing rapid growth. The liberalized economy provides more opportunities for MNCs and foreign investors to release the full potential of this industry. The main aim of the Indian dairy industry is only to better manage the national resources to enhance milk production and upgrade milk processing using innovative technologies. The major contents of the book are cholesterol, coronary heart disease and mil fat, cholesterol and cardio vascular diseases, fatty acids & cholesterol, factors affecting cardio vascular disease, application of enzymes in dairy and food processing, utilisation of milk components: casein, advances in the heat treatment of milk, varieties of sheep’s cheese, whey cheese, potted cheese, filled cheese, testing butter at different stages, presentation of butter at different stages, condensed and evaporated milk, dried milk powder, skimmed powder, malted powder, butter powder, ghee yoghurt, technology processing of dairy and dairy products, dried milk shake, milk powder, dahi from sweet cream butter milk, packaging of dairy.
and milk products, dairy farm, dairy products & milk packaging in pouches, etc. Developments in the dairy industry are enough to justify a revision of a considerable amount of material in this book. This book deals with processes, formulae, project profiles, details of plant, machinery & raw materials with their resources etc. of various dairy products. This book will help all its readers from entrepreneurs to food industries, technocrats and scientists.

**Processing Technologies for Milk and Milk Products** - Ashok Kumar Agrawal 2017-09-07

The demand for quality milk products is increasing throughout the world. Food patterns are changing from eating plant protein to animal protein due to increasing incomes around the world, and the production of milk and milk products is expanding with leaps and bounds. This book presents an array of recent developments and emerging topics in the processing and manufacturing of milk and dairy products. The volume also devotes a special section on alternative energy sources for dairy production along with solutions for energy conservation. With contributions for leading scientists and researchers in the field of dairy science and technology, this valuable compendium covers innovative techniques in dairy engineering processing methods and their applications in dairy industry energy use in dairy engineering: sources, conservation, and requirements. In line with the modern industrial trends, new processes and corresponding new equipment are reviewed. The volume also looks at the development of highly sensitive measuring and control devices have made it possible to incorporate automatic operation with high degree of mechanization to meet the huge demand of quality milk and milk products. Processing Technologies for Milk and Milk Products: Methods, Applications, and Energy Usage will be a valuable resource for those in the research and production of milk and milk products.

**Modern Dairy Technology** - R. K. Robinson 2012-12-06

As with the products and processes described in Volume I of this book, many of the technical changes associated with, for example, the manufacture of cheeses or fermented milks have been subtle rather than dramatic. Nonetheless, the importance for the dairy industry has often been profound. The market demand for dairy products containing 'health-promoting' cultures is a development that was barely discernible 10 years ago, and yet many manufacturers are now generating a whole range of bio-yoghurts and similar retail items. Similarly, the legislation covering food hygiene has been modified to place additional demands upon manufacturers, a move that has in turn encouraged the further development of analytical methods for quality control. These modifications to manufacturing practices are, along with many others, reflected in this second edition, and I acknowledge with gratitude the enthusiastic cooperation of all the authors associated with this project in bringing their disparate contributions up-to-date. R. K. ROBINSON v Preface to the First Edition

Retail sales of most dairy products are still on the increase world-wide, and this expansion is, at least in part, a reflection of the fact that prices have tended to remain at a competitive level.

**Emerging Dairy Processing Technologies** - Nivedita Datta 2015-04-27

Fluid milk processing is energy intensive, with high financial and energy costs found all along the production line and supply chain. Worldwide, the dairy industry...
has set a goal of reducing GHG emissions and other environmental impacts associated with milk processing. Although the major GHG emissions associated with milk production occur on the farm, most energy usage associated with milk processing occurs at the milk processing plant and afterwards, during refrigerated storage (a key requirement for the transportation, retail and consumption of most milk products). Sustainable alternatives and designs for the dairy processing plants of the future are now being actively sought by the global dairy industry, as it seeks to improve efficiency, reduce costs, and comply with its corporate social responsibilities. Emerging Dairy Processing Technologies: Opportunities for the Dairy Industry presents the state of the art research and technologies that have been proposed as sustainable replacements for high temperature-short time (HTST) and ultra-high temperature (UHT) pasteurization, with potentially lower energy usage and greenhouse gas emissions. These technologies include pulsed electric fields, high hydrostatic pressure, high pressure homogenization, ohmic and microwave heating, microfiltration, pulsed light, UV light processing, and carbon dioxide processing. The use of bacteriocins, which have the potential to improve the efficiency of the processing technologies, is discussed, and information on organic and pasture milk, which consumers perceive as sustainable alternatives to conventional milk, is also provided. This book brings together all the available information on alternative milk processing techniques and their impact on the physical and functional properties of milk, written by researchers who have developed a body of work in each of the technologies. This book is aimed at dairy scientists and technologists who may be working in dairy companies or academia. It will also be highly relevant to food processing experts working with dairy ingredients, as well as university departments, research centres and graduate students.


Milk Processing and Quality Management-Adnan Y. Tamime 2009-01-30 The Society of Dairy Technology (SDT) has joined with Wiley-Blackwell to produce a series of technical dairy-related handbooks providing an invaluable resource for all those involved in the dairy industry; from practitioners to technologists working in both traditional and modern large-scale dairy operations. The fifth volume in the series, Milk Processing and Quality Management, provides timely and comprehensive guidance on the processing of liquid milks by bringing together contributions from leading experts around the globe. This important book covers all major aspects of hygienic milk production, storage and processing and other key topics such as: Microbiology of raw and market milks Quality control International legislation Safety HACCP in milk processing All those involved in the dairy industry including food scientists, food technologists, food microbiologists, food safety enforcement personnel, quality control personnel, dairy industry equipment suppliers and food ingredient companies should find much of interest in this commercially important book which will also provide libraries in dairy and food research establishments with a valuable reference for this important area.

Modern Dairy Technology: Advances in milk processing-Richard Kenneth Robinson 1994

Dairy Processing: Advanced Research to Applications-Jagrani Minj 2020-04-10 This book focuses on advanced research and technologies in dairy processing, one of the most important branches of the food industry. It addresses various topics, ranging from the basics of dairy technology to the opportunities and challenges in the industry. Following an introduction to dairy improvement of functionalities and quality systems of dairy products, and the advances in dairy wastewater treatment. The book will be useful for both practicing professionals and researchers in the dairy field. I would like to send my sincere thanks to all the authors for their hard work and contributions.
processing, the book takes readers through various aspects of dairy engineering, such as dairy-based peptides, novel milk products and bio-fortification. It also describes the essential role of microorganisms in the industry and ways to detect them, as well as the use of prebiotics, and food safety. Lastly, the book examines the challenges faced, especially in terms of maintaining quality across the supply chain. Covering all significant areas of dairy science and processing, this interesting and informative book is a valuable resource for post-graduate students, research scholars and industry experts.

Advanced Dairy Science and Technology- Trevor Britz 2008-04-30
This important and comprehensive book covers, in depth, the most important recent advances in dairy technology. Providing core commercially important information for the dairy industry, the editors, both internationally known for their work in this area, have drawn together an impressive and authoritative list of contributing authors. Topics covered include: heat treatment, membrane processing, hygiene by design, application of HACCP, automation, safety and quality, modern laboratory practices and analysis, and environmental aspects. This book is an essential purchase for all dairy technologists worldwide, whether in academic research and teaching, or within food companies.

Confectionery in a broader sense implies the preservation of sweet meat preparation in the form of candies, caramels, chocolate, processed cocoa products and traditional Indian confections. India is a country with a collection of wide range of different cultures and many festivals and occasions are being celebrated in different parts of the nation and confectioneries play a major role in those special occasions. Therefore, the confectionery industry in this country has got a huge potential and this sector has grown recently in the India with the entry of many foreign companies. Special emphasis has been made on describing the various process parameters and equipments used with the help of process diagrams wherever necessary. This major content of this book are confectionery ingredients, flavour, gelatinizing agents, gums, glazes, waxes, traditional Indian confections, manufacturing processes and formulations of confections, nutritive value of confectionery products. This book also describes about the science and technology of chocolate and confectionery, packaging of confectionery products, quality control, future confectionery industry etc. Apart from these it also contains details of cooking techniques, formulae, processes. The incorporation of flavours and essences, permitted colours used quality control aspects along with sources of plant, machinery and raw material. This book is an invaluable resource for research centers, professionals, entrepreneurs and end users in academic and industry working on the subject.

Advances in Dairy Products-Francesco Conto 2017-11-13
Advances in Dairy Product Science & Technology offers a comprehensive review of the most innovative scientific knowledge in the dairy food sector. Edited and authored by noted experts from academic and industry backgrounds, this book shows how the knowledge from strategic and applied research can be utilized by the commercial innovation of dairy product manufacture and distribution. Topics explored include recent advances in the dairy sector, such as raw materials and milk processing, environmental impact, economic concerns and consumer acceptance. The book includes various emerging technologies applied to milk and starter cultures sources, strategic options for their use, their characterization, requirements, starter growth and delivery and other ingredients used in the dairy industry. The text also outlines a framework on consumer behavior that can help to determine quality perception of food products and decision-making. Consumer insight techniques can help support the identification of market opportunities and represent a useful mean to test product prototypes before final launch. This comprehensive resource: Assesses the most innovative scientific knowledge in the dairy food sector Reviews the latest technological developments relevant for dairy companies Covers new advances across a range of topics including raw material processing, starter cultures for fermented products, processing and packaging Examines consumer research innovations in the dairy industry Written for dairy scientists, other dairy industry professionals, government agencies, educators and students, Advances in Dairy Product Science & Technology includes vital information on the
most up-to-date and scientifically sound research in the field.


**Dairy Engineering**—Murlidhar Meghwal 2017-03-16 Written for and by dairy and food engineers with experience in the field, this new volume provides a wealth of valuable information on dairy technology and its applications. The book covers devices, standardization, packaging, ingredients, laws and regulatory guidelines, food processing methods, and more. The coverage of each topic is comprehensive enough to serve as an overview of the most recent and relevant research and technology.

**The Complete Technology Book on Processing, Dehydration, Canning, Preservation of Fruits & Vegetables (Processed Food Industries) 4th Revised Edition**—NIIR Board of Consultants & Engineers 2019-10-18 Fruits and vegetables are processed into a variety of products such as juices and concentrates, pulp, canned and dehydrated products, jams and jellies, pickles and chutneys etc. The extent of processing of fruits and vegetables varies from one country to another. The technology for preservation also varies with type of products and targeted market. Owing to the perishable nature of the fresh produce, international trade in vegetables is mostly confined to the processed forms. India is the second largest producer of fruits & vegetables in the world with an annual production of million tonnes. It accounts for about 15 per cent of the world’s production of vegetables. Due to the short shelf life of these crops, as much as 30-35% of fruits and vegetables perish during harvest, storage, grading, transport, packaging and distribution. Hence, there is a need for processing technology of fruits and vegetables to cater the domestic demand. The major contents of the book are procedures for fruit and vegetable preservation, chemical preservation of foods, food preservation by fermentation, preservation by drying, canning fruits, syrups and brines for canning, fruit beverages, fermented beverages, jams, jellies and marmalades, tomato products, chutneys, sauces and pickles, vegetables preparation for processing, vegetable juices, sauces and soups, vegetable dehydration, freezing of vegetables etc. The book also contains sample plant layout and photographs of machinery with supplier’s contact details. A total guide to manufacturing and entrepreneurial success in one of today’s most food processing industry. This book is one-stop guide to one of the fastest growing sectors of the food processing industry, where opportunities abound for manufacturers, retailers, and entrepreneurs. This is the only complete handbook on the commercial production of food processing products. It serves up a feast of how-to information, from concept to purchasing equipment.

**Epoxy Resins Technology Handbook (Manufacturing Process, Synthesis, Epoxy Resin Adhesives and Epoxy Coatings) 2nd Revised Edition**—Dr. H. Panda 2019-04-19 Epoxy is a term used to denote both the basic components and the cured end products of epoxy resins, as well as a colloquial name for the epoxide functional group. Epoxy resin are a class of thermoset materials used extensively in structural and specialty composite applications because they offer a unique combination of properties that are unattainable with other thermoset resins. Epoxies are monomers or prepolymers that further reacts with curing agents to yield high performance thermosetting plastics. They have gained wide acceptance in protecting coatings, electrical and structural applications because of their exceptional combination of properties such as toughness, adhesion, chemical resistance and superior electrical properties. Epoxy resins are characterized by the presence of a three membered cycle ether group commonly referred to as an epoxy group 1,2-epoxide, or oxirane. The most widely used epoxy resins are diglycidyl ethers of bisphenol-A derived from bisphenol-A and epichlorohydrin. The market of epoxy resins are growing day by day. Today the total business
of this product is more than 100 crores. Epoxy resins are used for about 75% of wind blades currently produced worldwide, while polyester resins account for the remaining 25%. A standard 1.5-MW (megawatt) wind turbine has approximately 10 tonnes of epoxy in its blades. Traditionally, the markets for epoxy resins have been driven by demand generated primarily in areas of adhesives, building and civil construction, electrical insulation, printed circuit boards, and protective coatings for consumer durables, amongst others. The major contents of the book are synthesis and characteristics of epoxy resin, manufacture of epoxy resins, epoxide curing reactions, the dynamic mechanical properties of epoxy resins, physical and chemical properties of epoxy resins, epoxy resin adhesives, epoxy resin coatings, epoxy coating give into water, electrical and electronic applications, analysis of epoxides and epoxy resins and the toxicology of epoxy resins. It will be a standard reference book for professionals and entrepreneurs. Those who are interested in this field can find the complete information from manufacture to final uses of epoxy resin. This presentation will be very helpful to new entrepreneurs, technocrats, research scholars, libraries and existing units.

Petroleum & Petroleum Products Technology Handbook-NPCS Board of Consultants & Engineers 2019-05-04 Petroleum asphalt is a sticky, black and highly viscous liquid or semi-solid that is present in most petroleum crude oils and in some natural deposits. Petroleum crude oil is a complex mixture of a great many different hydrocarbons. Refined petroleum products are derived from crude oils through processes such as catalytic cracking and fractional distillation. Refining is a necessary step before oil can be burned as fuel or used to create end products. Residual fuel oil is a complex mixture of hydrocarbons prepared by blending a residuum component with a flux stock which is a distillate component diluent, to give the desired viscosity of the fuel oil produced. Petroleum refining is the process of separating the many compounds present in crude petroleum. An oil refinery or petroleum refinery is an industrial process plant where crude oil is processed and refined into more useful products. The global Petroleum Asphalt market is valued at USD 48.8 Billion in 2017 and is expected to reach USD 77.67 Billion by the end of 2024, growing at a Growth Rate of 6.87% between 2017 and 2024. The global bunker fuel market was valued at $137,215.5 million in 2017 and is expected to reach $273,050.4 million by 2025, registering a CAGR of 9.4% from 2018 to 2025. Some of the fundamentals of the book are composition of radiation effects on lubricants, thermal cracking of pure saturated hydrocarbons, petroleum asphalts, refinery products, refinery feedstocks, blending and compounding, oil refining, residual fuel oils, distillate heating oils, formulations of petroleum, photographs of machinery with suppliers contact details. A total guide to manufacturing and entrepreneurial success in one of today's most lucrative petroleum industry. This book is one-stop guide to one of the fastest growing sectors of the petroleum industry, where opportunities abound for manufacturers, retailers, and entrepreneurs. This is the only complete handbook on the commercial production of petroleum products. It serves up a feast of how-to information, from concept to purchasing equipment.

Soaps, Detergents and Disinfectants Technology Handbook (3rd Revised Edition)- Ajay Kumar Gupta 2021-01-01 Soaps are cleaning agents that are usually made by reacting alkali (e.g., sodium hydroxide) with naturally occurring fat or fatty acids. A soap is a salt of a compound known as a fatty acid. A soap molecule consists of a long hydrocarbon chain (composed of carbons and hydrogens) with a carboxylic acid group on one end which is ionic bonded to a metalion, usually a sodium or potassium. The hydrocarbon end is nonpolar and is soluble in nonpolar substances (such as fats and oils), and the ionic end (the salt of a carboxylic acid) is soluble in water. Soap is made by combining tallow (or other hard animal fat) or vegetable or fish oil with an alkaline solution. The two most important alkalis in use are caustic soda and caustic potash. A detergent is an effective cleaning product because it contains one or more surfactants. Because of their chemical makeup, the surfactants used in detergents can be engineered to perform well under a variety of conditions. Such surfactants are less sensitive than soap to the hardness minerals in water and most will not form a film. Disinfectants are chemical agents applied to non-living objects in order to destroy bacteria, viruses, fungi, mold or mildews living on the objects. Disinfectants are chemical substances used to destroy viruses and microbes (germs), such as bacteria and fungi, as opposed to an
Spices and condiments play an important role in the national economies of several spice producing, importing and exporting countries. India is one of the major spice producing and exporting countries. Most of the spices and herbs have active principles in them and development of these through pharmacological and preclinical and clinical screening would mean expansion of considerable opportunities for successful commercialization of the product. Spices can be used to create these health promoting products. The active components in the spices phthalides, polyacetylenes, phenolic acids, flavanoids, coumarines, triterpenoids, seorols and monoterpenes are powerful tools for promoting physical and emotional wellness. India has been playing a major role in producing and exporting various perennial spices like cardamoms, pepper, vanilla, clove, nutmeg and cinnamon over a wide range of suitable climatic situations. To produce good quality spice products, attention is required not only during cultivation but also at the time of harvesting, processing and storing. Not as large as in the days when, next to gold, spices were considered most worth the risk of life and money. The trade is still extensive and the oriental demand is as large as ever. Some of the fundamentals of the book are definition of spices and condiments nomenclature or classification of spices and condiments, Indian central spices and cashew nut committee, origin, properties and uses of spices, forms, functions and applications of spices, trends in the world of spices, yield and nutrient uptake by some spice crops grown in sodic soil, tissue culture and in vitro conservation of spices, in vitro responses of piper species on activated charcoal supplemented media, soil agro climatic planning for sustainable spices production, potentials of biotechnology in the improvement of spice crops, medicinal applications of spices and herbs, medicinal properties and uses of seed spices, effect of soil solarization on chillies, spice oil and oleoresin from fresh/dry spices etc. The present book contains cultivation, processing and uses of various spices and condiments, which are well known for their multiple uses in every house all over world. The book is an invaluable resource for new entrepreneurs, agriculturists, agriculture universities and technocrats.

The Complete Book on Spices & Condiments (with Cultivation, Processing & Uses) 2nd Revised Edition-NIIR Board of Consultants & Engineers 2006-04-01 The term spices and condiments applies to such natural plant or vegetable products and mixtures thereof, used in whole or ground form, mainly for imparting flavor, aroma and piquancy to foods and also for seasoning of foods beverages like soups. The great mystery and beauty of spices is their use, blending and ability to change and enhance the character of food. Spices and condiments have a special significance in various ways in human life because of its specific flavours, taste, and aroma. Spices and condiments play an important role in the national economies of several spice producing, importing and exporting countries. India is one of the major spice producing and exporting countries. Most of the spices and herbs have active principles in them and development of these through pharmacological and preclinical and clinical screening would mean expansion of considerable opportunities for successful commercialization of the product. Spices can be used to create these health promoting products. The active components in the spices phthalides, polyacetylenes, phenolic acids, flavanoids, coumarines, triterpenoids, seorols and monoterpenes are powerful tools for promoting physical and emotional wellness. India has been playing a major role in producing and exporting various perennial spices like cardamoms, pepper, vanilla, clove, nutmeg and cinnamon over a wide range of suitable climatic situations. To produce good quality spice products, attention is required not only during cultivation but also at the time of harvesting, processing and storing. Not as large as in the days when, next to gold, spices were considered most worth the risk of life and money. The trade is still extensive and the oriental demand is as large as ever. Some of the fundamentals of the book are definition of spices and condiments nomenclature or classification of spices and condiments, Indian central spices and cashew nut committee, origin, properties and uses of spices, forms, functions and applications of spices, trends in the world of spices, yield and nutrient uptake by some spice crops grown in sodic soil, tissue culture and in vitro conservation of spices, in vitro responses of piper species on activated charcoal supplemented media, soil agro climatic planning for sustainable spices production, potentials of biotechnology in the improvement of spice crops, medicinal applications of spices and herbs, medicinal properties and uses of seed spices, effect of soil solarization on chillies, spice oil and oleoresin from fresh/dry spices etc. The present book contains cultivation, processing and uses of various spices and condiments, which are well known for their multiple uses in every house all over world. The book is an invaluable resource for new entrepreneurs, agriculturists, agriculture universities and technocrats.
Consultants & Engineers 2017-10-09 Cereals, or grains, are members of the grass family cultivated primarily for their starchy seeds (technically, dry fruits). Cereal grains are grown in greater quantities and provide more food energy worldwide than any other type of crop; they are therefore staple crops. Oats, barley, and some food products made from cereal grains. They are used for both human and animal food and as an industrial raw material. India produces cereals like wheat, rice, barley (jau), buckwheat, oats, corn (maize), rye, jowar (sorghum), pearl millet (bajra), millet (ragi), Sorghum, Triticale, etc. India is the world’s second largest producer of Rice, Wheat and other cereals. The huge demand for cereals in the global market is creating an excellent environment for the export of Indian cereal products. India is not only the largest producer of cereal as well as largest exporter of cereal products in the world. India have been offering incredible opportunities as they have an abundant amount of raw materials and a wide availability of cheap labor. The book provides comprehensive coverage of the Drying, Milling and information regarding production method of Cereal Foods. It also covers Plant Layout, Process Flow Sheets and photographs of plant & Machinery with supplier’s contact details. Some of the fundamentals of the book are origin of wheat classification of wheat, endeavors to find industrial uses for wheat, criteria of wheat quality, botanical criteria of quality, milling principles, extraction rate and its effect on flour composition, grain structure as affecting grinding, definition of flour extraction stone milling: yields of products, roller milling: flour extraction rates, rice production and utilization, origin of rice, comparison of rice with other cereal grains, composition of rice and cereal, breeding rice varieties with specific, industrial uses for rice and rice by products, caryopsis and its milling fractions etc. This book is essential for those who are interested in cereal areas can find the complete information from manufacture to final uses of Cereal Foods. The present time is an era of information, one should know about what is happening in the world to be able to compete effectively. It will be very informative and useful to consultants, new entrepreneurs, startups, technocrats, research scholars, libraries and existing units.

**Dairy Production and Processing**-John R. Campbell 2016-01-29 A productive dairy industry is vital to providing safe, high-quality milk that fulfills the nutritional needs of people of all ages around the world. In order to achieve that goal, Campbell and Marshall present a timely, lucid, and comprehensive look at today’s dairy industry. Dairy Production and Processing offers not only a fundamental understanding of dairy animals, dairy products, and the production aspects of each, but also a wealth of applied information on the scope of the current milk and milk products industry. The application of basic sciences and technologies throughout the text will serve students well not only as they learn the first principles of dairy science, but also as a professional reference in their careers. Study questions can be found at the conclusion of each chapter, along with relevant and informative websites. An extensive glossary is provided to enable readers to expand their knowledge of selected terms. Topics found in this instructive and insightful text include: • an overview of the dairy industry, • dairy herd breeding and records, • the feeding and care of dairy cattle, sheep, goats, and water buffalo, • important principles of milking and milking facilities, • dairy farm management, • milk quality and safety, and • the production of milk and milk products.

**The Complete Book on Jute & Coir Products (with Cultivation & Processing)**-NIIR Board of Consultants & Engineers 2014-10-27 Jute & Coir are one of the important fibre crops in India. India is the largest producer of Jute & Coir, contributing more than 60% of the total world production. Besides being the cheapest and the most important material of all textile fibers, Jute & Coir products are bio-degradable eco-friendly with numerous environmental advantages. The Demand of Jute and Coir Products are increasing rapidly because of their environment friendly nature. Jute is one of the most affordable natural fibers and is second only to cotton in amount produced and variety of uses of vegetable fibers. Jute fibers are composed primarily of the plant materials cellulose and lignin. Jute is the name of the plant or fiber that is used to make burlap, hessian or gunny cloth. Coir is a versatile natural fibre extracted from mesocarp tissue, or husk of the coconut fruit. Generally fibre is of golden color when cleaned after removing from coconut husk; and hence named as “The Golden Fibre”. This Book aims at providing a thorough understanding and analysis of the Jute & Coir sector. The book discusses the overview of the
Jute & Coir along with their Classification, Structure, Properties and Manufacturing Process of different products. Few major contents of the Book are Jute Cultivation, Coconut Cultivation, Jute Yarn, Sutli & Hessian Cloth, Jute Twine (Jute Rope), Gunny Bags, Jute Garments, Jute Shopping Bags, Gunny Bags (Jute Bags) Manufacturing, Handmade Paper from Jute, Environment Pollution and Effluent Treatment of Jute, Coir Fibre, Coir Pith, Biomass Charcoal Briquetting from Jute and Coir Waste, Rubberized Coir Mattresses, Coir Pith for Absorption and Recovery of Oil from Contaminated Sites, Application of Coir in Agricultural Textiles, Manufacture of Coir Corrugated Roofing Sheet, Coir Machinery Manufacturers, Importers of Coir Products. It also contains the Product and Machinery photographs, Name of Indian Buying Agents of Coir Products with their contact details. The purpose of this book is to provide information to new Entrepreneurs, Technocrats, Students and Professionals.

The Complete Technology Book on Soaps (2nd Revised Edition)-NIIR Board of Consultants & Engineers 2016-04-08 Soap is the traditional washing compound made from oil fats and caustic alkali. It is an item of daily necessity as cleaning agent. There are few specialty soaps like the washing soaps, castile soaps, sandal soap, specially flavored soaps, medicated soaps, toilet soaps and baby soaps. Population growth, especially households with children has a proportional impact on the growth of the manufacturing sector of the industry. The soap industry is vivacious, varied, creative and tricky, and has the prospective to provide a gratifying career. With increasing popularity there has been increase in potential competitors but it still has the opportunity of further exploitation. Today with increase in disposable incomes all around the world, demand for these products expected to increase because consumers are moving up towards premium products. With increasing awareness of hygienic standards, the market for the Soap is growing at a rate higher than 8% annually. People have become more creative in trying to find new ways in which they can make soap either for domestic use or commercial purposes. This book will provide all the basic facts and information you need to get started. You will be able to slowly build your way up to completely master the art of soap making. The book contains processes formulae, Photographs of Plant & Machinery with Supplier’s Contact Details, Addresses of Raw Material Suppliers and providing information regarding manufacturing method of different washing and toilet soaps. Some of the fundamentals of the book are raw material oil and fats, fatty acids, manufacture of soap products, technology of soap manufacturing, various formulations of soaps, soap perfumery, management of soap factories, analytical methods. This book will be a mile stone for its readers who are new to this sector, will also find useful for professionals, entrepreneurs, those studying and researching in this important area.

Herbal Cosmetics & Ayurvedic Medicines (EOU) (3rd Revised Edition)-P. K. Chattopadhyay 2013-02-07 Herbal cosmetics have been into usage from time immemorial so has been the use of Ayurvedic medicines. Ayurveda which means the complete knowledge for long life has been very popular these days on account of its minimum or zero side effects with considerable power of curing. Similarly herbal cosmetics have been of great value because of the least harm they cause to the skin and the radiance they add to the skin. These days a number of beauty products that are using the herbal formulae and Ayurveda concepts have got lot of attention and have been witnessing a huge rise in demand not only nationally but on international arena. The charm of understanding herbal product is even you can use it by making certain combination at your home and get the benefits. These are economical and sure to provide alleviate the problems not only for skin but for long term health issues also. Herbal products combine the skills of specialists in chemistry, physics, biology, medicine and herbs. These are less likely to cause any damaging effect to health. Bath and beauty products use herbs for both their scents and therapeutic qualities. Herbal products are replacing the synthetics products because of its harsh nature. Herbal products are in huge demand in the developed world for health care for the reason that they are efficient, safe and have lesser side effects. The formulations based on herbs are safe and effective. To exploit the knowledge that has got the genesis in our country the book aims to provide you a comprehensive information on different types of herbal Cosmetics formulas. The contents of the book are: Analysis of Creams, Infra-Red Spectrophotometer In Cosmetic Analysis, Infra Red Spectrophotometer In
Cosmetic Analysis, Analysis of Creams, Analysis of Shampoos, Lal Tooth Powder, Bath and Massage Oil, Sun Care/Skin Lightening Compound, Herbal Liver Tonic, Vicks Like Compound, hair oil, Eye Drops, Packaging Criteria for Cosmetics and Toiletries, Vicks Like Compound, Cosmetics for Elderly People, Cough Syrup, Colour in Cosmetics, Herbal Liver Tonic, Herbal Formulation, Medicinal Herbs as Cosmetics, Medicinal & Massage Oils, Herbal Cosmetic Cream for Dry Skin, Herbal Deodorant Roll On, Drug Standardization, Guide Lines on GMP, Premises and Equipment Requirements, Aloe Gel, Tablets and Capsule, Sandalwood Oil and Machinery Section. The Third Revised Edition of Herbal cosmetics and Ayurvedic medicines (EOU) also includes photographs of machinery and equipments with addresses of their manufacturers. The book in general will be beneficial for entrepreneurs, industrialists, project consultants, libraries and in general all those looking for detail information.

The Complete Technology Book on Textile Spinning, Weaving, Finishing and Printing (3rd Revised Edition)-NIIR Board of Consultants & Engineers 2017-09-09 Textile industry is one of the few basic industries, which is characterised as a necessary component of human life. One may classify it as a more glamorous industry, but whatever it is, it provides with the basic requirement called clothes. Spinning is the process of converting cotton or manmade fibre into yarn to be used for weaving and knitting. Weaving is a method of textile production in which two distinct sets of yarns or threads are interlaced at right angles to form a fabric or cloth. Finishing refers to the processes that convert the woven or knitted cloth into a usable material. Printing is the process of applying colour to fabric in definite patterns or designs. The textile industry occupies an important position in the total volume of merchandise trade across countries. Developing countries account for little over two-third of world exports in textiles and clothing. It is the second largest employer after agriculture, providing employment to over 45 million people directly and 60 million people indirectly. The future for the textile industry looks promising, buoyed by both strong domestic consumption as well as export demand. This book is based on the latest technology involved in textile industry, which describes the processes available at the spinning and fabric forming stages coupled with the complexities of the finishing and colouration processes to the production of wide ranges of products. The major contents of the book are dyeing of textile materials, principles of spinning, process preparatory to spinning, principles of weaving, textile chemicals, yarn preparation, weaving and woven fabrics, knitting and knit fabrics, nonconventional fabrics, cellulosics, mixed fibers, printing compositions, printing processes, transfer dyes, transfer inks etc. It describes the manufacturing processes and photographs of plant & machinery with supplier’s contact details. It will be a standard reference book for professionals, entrepreneurs, textile mill owners, those studying and researching in this important area and others interested in the field of textile industry.

The Complete Technology Book on Asbestos, Cement, Ceramics and Limestone-Dr. H. Panda 2016-04-01 Asbestos is the generic term for a group of naturally occurring fibrous minerals with high tensile strength, flexibility, and resistance to thermal, chemical and electrical conditions. Asbestos fibers are of high-tensile strength, flexible, heat and chemical resistance, and good frictional properties. Cement is the most essential raw material in any kind of construction activity. Ceramics also known as fire clay is an inorganic, non-metallic solid article, which is produced by the art or technique of heat and subsequent cooling. Limestone is a sedimentary rock, mainly composed of calcium carbonate (CaCO3). It is the principal source of crushed stone for construction, transportation, agriculture, and industrial uses. Emerging applications in commercial sectors such as asbestos, cement and ceramic are poised to fuel demand in the coming years. Growing demand for limestone in the production of cement as well as in several other chemicals that are used in the production of high-value every-day products offers significant opportunities for growth. Global Limestone consumption is projected to reach 5.7 billion tons and expected to grow at an average annual rate of 4-5% in coming years. Presently, cement production is 330 million tonnes and expected to double to reach almost 550 million tonnes in future. The major contents of the book are asbestos, monitoring and identification of airborne asbestos, asbestos in industrial applications, asbestos - cement products, non - occupational asbestos emissions and exposures, cements, mortars and concrete, raw materials,
additives and fuels for cement, processes of manufacturing of cement, cement based on natural and artificial pozzolanas, fast-setting cements, special portland cements, packing of cement, storages of cement, ceramics, lime & limestone, glass & glass ceramics etc. It describes the manufacturing processes and photographs of plant & machinery with supplier’s contact details. It will be a standard reference book for professionals, entrepreneurs, those studying and researching in this important area and others interested in the field of these industries.

The Complete Book on Waste Treatment Technologies (Industrial, Biomedical, Water, Electronic, Municipal, Household/ Kitchen, Farm Animal, Dairy, Poultry, Meat, Fish & Sea Food Industry Waste)-Prof. Dr. Mahendra Pal 2015-01-11 Waste management is a global problem that continues to increase with rapid industrialization, population growth, and economic development. As the world hurtles towards the urban future, the amount of Municipal Solid Waste (MSW) is growing very fast. Wastes are generally classified into solid, liquid, & gaseous and are broadly classified as household waste; municipal waste; commercial and non-hazardous industrial wastes; hazardous (toxic) industrial wastes; construction and demolition waste; health care wastes – waste generated in health care facilities (e.g. hospitals, medical research facilities); human and animal wastes; and incinerator wastes. The fast industrialization, urbanization, modern technology, and rapidly growing population in India have posed a serious challenge to the waste management. In India, per capita generation rate of municipal solid waste ranges from 0.2 to 0.5 kg/day. At present, the daily generation rate in South Asia, East Asia and the Pacific combined is approximately 1.0 million tons per day. Hazard management is essentially a problem solving process aimed at defining problems (identifying hazards), gathering information about them (assessing the risks) and solving them (controlling the risks). Integrated solid waste management is a comprehensive waste prevention, recycling, composting, and disposal programme. Disposing the waste in an environmentally friendly manner is highly crucial to all the nations of the world including India. The goal of urban solid waste management is to collect, treat and dispose of solid waste generated by all the city dwellers in an environmentally, and socially satisfactory manner by using the most economical methods available. The major contents of the book are types of waste, human pathogens in animal agriculture production systems, pathogen reductions during waste treatment, aerosolization of pathogens etc. It will be a standard reference book for professionals, entrepreneurs, students, teachers, researchers, administrators, and planners of various disciplines who are directly or indirectly involved in the waste management. TAGS Best small and cottage scale industries, Better waste management, Biological Waste treatment techniques, Bio-medical Waste Management, Biomedical Waste treatment, Anaerobic lagoon techniques, Book about Waste Management, Book on Waste Management, Business guidance for Waste treatment, Chemical industry wastewater treatment, Dairy Waste treatment, Electronic Waste treatment, E-waste Management, E-Waste Management & Clean Technologies Treatment of E-waste for Safe Disposal, E-Waste Recycling Technologies, Farm Animal Waste treatment, Guidelines for Livestock Waste Management, Household Waste treatment, How to compost kitchen waste, How to make money from waste management, How to Start a Recycling Business - Opportunities & Ideas, How to start a successful Waste treatment business, How to start a waste disposal business, How to Start a Waste treatment Business, How to start waste management business in India, How to Start Waste treatment Industry in India, Industrial & Municipal Wastewater Treatment Processes, Industrial Waste Treatment book, Industrial Waste treatment, Industrial wastewater treatment, Is it a good idea to start up a waste management?, Kitchen waste management, Kitchen Waste treatment, Latest waste management technologies, Livestock Farm Waste treatment, Livestock waste disposal and management, Livestock waste treatment systems, Meat, Fish & Sea Food Industry Waste treatment, Modern waste management technologies, Most Profitable Waste treatment Business Ideas, Municipal Waste treatment, New small scale ideas in Waste treatment industry, Opening a Waste Management Business, Physical Waste treatment techniques, Poultry Waste treatment, Recycling and Treatment of E-waste, Setting up and opening your Waste treatment Business, Small Scale Waste treatment Projects, Solid waste treatment, Solid waste treatment methods, Solid waste treatment technologies, Starting a Waste Management Business, Starting a Waste treatment Business, Start-up Business

Herbal Cosmetics Handbook (3rd Revised Edition)-H Panda 2015-04-09 Cosmetics have been in utilization for more than thousands years. More commonly known as make-up, it includes a host of skin products like foundation, lip colors etc. The international market for skincare and color cosmetics surpassed a sale of 53 billion dollars in 2002. The quantity and number of latest products brought to market both nationally and internationally continues to develop at a fast pace. Cosmetic chemists all the time are looking for attractive and striking material that enhances skin's appearance and healthiness. A huge collection of compounds is required to supply these products. The newest edition of the Cosmetics Toiletries and Fragrance Association (CTFA) Dictionary displays more than 10,000 raw materials and the list continues to increase with every year hundreds of new ingredients being added. The cosmetic chemistry has encompasses a vast area of study and one such is Herbal Cosmetics. Herbal cosmetics are the product of cosmetic chemistry, a science that combines the skills of specialists in chemistry, physics, biology, medicine and herbs. Since cosmetics are applied mostly to the skin, hair and nails, a brief description of the anatomy of these is desirable. Herbal cosmetic major users are girls and women who are very much peculiar about their skin type and requirement. Synthetic cosmetic being harsh and prone to more side-effects, herbal cosmetic is quickly replacing it and gaining a lot of popularity. As a result it has created an enormous market for itself both domestic as well as export market. Herbal Cosmetics Handbook has been featured as best seller. The book contains formulae, manufacturing processes of different herbal cosmetics like cosmetics for skin, nails, hair etc. It also covers analysis method of cosmetics, toxicity and test method. Some of the chapters of the book are: Classification of cosmetics Economic aspects, Cosmetic Emulsions, Cosmetics for the skin, Cosmetic Creams, Lubricating or Emollient Creams-Night Creams, Skin Protective and Hand Creams, Vanishing Creams-Foundation Creams, Liquid Creams, Cosmetic Lotions, Hand Lotions, Skin Toning Lotions-Skin Fresheners, Astringent Lotions, Hair Tonics and many more. The book will render useful purpose for new entrepreneurs, technologists, professionals, researchers and for those who want to extend their knowledge in the said field.

Encyclopedia of Dairy Sciences- 2011-03-25 Dairy Science includes the study of milk and milk-derived food products, examining the biological, chemical, physical, and microbiological aspects of milk itself as well as the technological (processing) aspects of the transformation of milk into its various consumer products, including beverages, fermented products, concentrated and dried products, butter and ice cream. This new edition includes information on the possible impact of genetic modification of dairy animals, safety concerns of raw milk and raw milk products, peptides in milk, dairy-based allergies, packaging and shelf-life and other topics of importance and interest to those in dairy research and industry. Fully reviewed, revised and updated with the latest developments in Dairy Science Full color inserts in each volume illustrate key concepts Extended index for easily locating information

The Complete Book on Onion & Garlic Cultivation with Processing (Production of Onion Paste, Flakes, Powder & Garlic Paste, Powder, Flakes, Oil)-NPCS Board of Consultants & Engineers 2015-08-10 Onion and garlic are the spice commodities used for flavouring the dishes. These are considered as valuable medicinal plants offer variety of
medicinal properties. Onion & garlic are important commercial crops with versatile applications. The demand for the processed products is increasing day by day due to its convenience to handle and use. Onion & garlic can be processed into a wide variety of products. As per the estimate, approximately 6.75% of the onion produced is being processed. Besides fulfilling the constant demand of domestic population, India exports 13 to 18 lakh tons of onion annually worth around Rs. 2200 crores of foreign exchange revenue. Similarly in case of garlic, the production increased from 4.03 lakh tons to 12.26 lakh tons. Proper placement of onion & garlic products (like; onion pickle, onion chutney, onion paste, garlic oil, garlic paste, garlic powder, garlic flakes, onion flakes, onion powder) in the departmental stores, super markets, shopping malls backed-up by publicity is the key to success. It is also possible to have tie-up with exclusive restaurants, star hotels, renowned caterers for their regular requirements. This handbook is designed for use by everyone engaged in the onion & garlic products manufacturing. The book explains manufacturing process with flow diagrams of various onion & garlic products and addresses of plant & machinery suppliers with their photographs. Major contents of the book are varieties of onion, onion production, onion dehydration, types of garlic, garlic growing, garlic dehydration, onion pickle, onion chutney, onion paste, garlic oil, garlic paste, garlic powder, garlic flakes, onion flakes, onion powder, pest species and pest control of garlic and onion, integrated weed management, packaging, product advertising and sales promotion, marketing etc. It will be a standard reference book for professionals, entrepreneurs, food technologists, those studying and researching in this important area and others interested in the field of onion & garlic products manufacturing. TAGS Best small and cottage scale industries, Business consultancy, Business consultant, Business guidance for garlic production, Business guidance for onion production, Business guidance to clients, Business Plan for a Startup Business, Business start-up, Cultivation of garlic, Cultivation of Onion, Dehydrated Garlic & Garlic Powder, Dehydrated Garlic, Dehydrated Onion & Onion Powder, Dehydrated Onion, Garlic and Onion production, Garlic and Onion production Business, Garlic and Onion Small Business Manufacturing, Garlic dehydration, Garlic Oil manufacturing process, Garlic paste manufacturing process, Garlic powder manufacturing plant, Garlic powder processing plant, Garlic processing plant, Garlic Production, Growing Garlic, Harvesting Garlic, How to Cultivate Onions, How to Grow Garlic, How to Grow Onions, How to make onion powder, How to start a successful Garlic and Onion production business, How to Start Garlic and Onion production business, How to Start Onion and Garlic Processing Industry in India, How to Start Onion and Garlic Production Business, Manufacturing Process of Garlic Flakes, Manufacturing Process of Garlic Paste, Manufacturing Process of Onion Flakes, Manufacturing Process of Onion Paste, Manufacturing Process of Onion Powder, Modern small and cottage scale industries, Most Profitable Onion and Garlic Processing Business Ideas, New small scale ideas in Garlic and Onion processing industry, Onion & Garlic Cultivation with Processing, Onion and Garlic Based Profitable Projects, Onion and Garlic Based Small Scale Industries Projects, Onion and Garlic Processing Industry in India, Onion and Garlic Processing Projects, Onion cultivation, Onion cultivation in India, Onion dehydration plant in India, Onion dehydration process, Onion farming business plan, Onion Farming in India, Onion farming techniques, Onion Pickle Manufacturing Process, Onion powder making plant, Onion Powder, Onion Processing and Onion Products, Onion processing industry, Onion processing plant, Onion processing unit, Onion production, Onion Storage, Onions powder making, Pest species and pest control of garlic and onion, Preparation of Project Profiles, Process technology books, Processing of garlic, Profitable small and cottage scale industries, Profitable Small Scale Garlic and Onion Manufacturing, Project for startups, Project identification and selection, Setting up and opening your Garlic and Onion Business, Small scale Commercial Garlic and Onion by products making, Small scale Garlic and Onion production line, Small Scale Onion and Garlic Processing Projects, Small Start-up Business Project, Start up India, Stand up India, Starting an Onion and Garlic Processing Business, Startup, Start-up Business Plan for Garlic and Onion by products, Startup ideas, Startup Project, Startup Project for Onion and Garlic by products, Startup project plan, Technology Book of Garlic Cultivation and processing, Technology Book of Onion Cultivation and processing, Technology Package of Garlic Processing for Value Addition, Varieties
Lubricating Oils, Greases and Petroleum Products Manufacturing Handbook-NPCS
Board of Consultants & Engineers 2018-01-12
Lubricating oils are specially formulated oils that reduce friction between moving parts and help maintain mechanical parts. Lubricating oil is a thick fatty oil used to make the parts of a machine move smoothly. The lubricants market is growing due to the growing automotive industry, increased consumer awareness and government regulations regarding lubricants. Lubricants are used in vehicles to reduce friction, which leads to a longer lifespan and reduced wear and tear on the vehicles. The growth of lubricants usage in the automotive industry is mainly due to an increasing demand for heavy duty vehicles and light passenger vehicles, and an increase in the average lifespan of the vehicles. As saving conventional resources and cutting emissions and energy have become central environmental matters, the lubricants are progressively attracting more consumer awareness. Greases are made by using oil (typically mineral oil) and mixing it with thickeners (such as lithium-based soaps). They may also contain additional lubricating particles, such as graphite, molybdenum disulfide, or polytetrafluoroethylene (PTFE, aka Teflon). White grease is made from inedible hog fat and has a low content of free fatty acids. Yellow grease is made from darker parts of the hog and may include parts used to make white grease. Brown grease contains beef and mutton fats as well as hog fats. Synthetic grease may consist of synthetic oils containing standard soaps or may be a mixture of synthetic thickeners, or bases, in petroleum oils. Silicones are greases in which both the base and the oil are synthetic. Asia-Pacific represents the largest and the fastest growing market, with volume sales projected to grow at a CAGR of 5% over the analysis period. Automotive lubricants represents the largest product market, with engine oils generating a major chunk of the revenues. The market for industrial lubricants is supported by the huge demand for industrial engine oils and growing consumption of process oils. The major content of the book are Food and Technical Grade White Oils and Highly Refined Paraffins, Base Oils from Petroleum, Formulation of Automotive Lubricants, Lubricating Grease, Aviation Lubricants, Formulation and Structure of Lubricating Greases, Marine Lubricants, Industrial Lubricants, Refining of Petroleum, Lubricating Oils, Greases and Solid Lubricants, Refining Products, Crude Distillation and Photographs of Machinery with Suppliers Contact Details. This book will be a milestone for its readers who are new to this sector, will also find useful for professionals, entrepreneurs, those studying and researching in this important area.

Handbook on Electroplating with Manufacture of Electrochemicals-Dr. H. Panda 2017-02-20
Electroplating is an electro deposition process for producing a dense, uniform, and adherent coating, usually of metal or alloys, upon a surface by the act of electric current. The term is also used for electrical oxidation of anions onto a solid substrate, as in the formation silver chloride on silver wire to make silver/silver-chloride electrodes. Electroplating is primarily used to change the surface properties of an object (e.g. abrasion and wear resistance, corrosion protection, lubricity, aesthetic qualities, etc.), but may also be used to build up thickness on undersized parts or to form objects by electroforming. Electrochemical deposition is generally used for the growth of metals and conducting metal oxides because of the following advantages: (i) the thickness and morphology of the nanostructure can be precisely controlled by adjusting the electrochemical parameters, (ii) relatively uniform and compact deposits can be synthesized in template-based structures, (iii) higher deposition rates are obtained, and (iv) the equipment is inexpensive due to the non-requirements of either a high vacuum or a high reaction temperature. An electrochemical process where metal ions are transferred from a solution and are deposited as a thin layer onto surface of a cathode. In the recent years, developments in electronic and chemical engineering have extended the process of electroplating to a wide range of materials such as platinum, Alloy, Silver, Palladium, Rhodium, etc. The electroplating market is an application driven market, which depends largely on the net output of the manufacturing industry. The electroplating technology allows electro-deposition of multiple layers as thin as one-millionth of a centimeter which makes it an indispensable part of the semiconductor industry. Rising demand for computing devices is expected to create significant market opportunities for electroplating service providers. Growing net output of manufacturing industry, rising demand
for consumer goods which mandates more surface finishing services, growth of the electronics industry are some of the key factors driving the growth of the global electroplating market. The book gives comprehensive coverage of Electroplating Uses, Application Manufacturing, Formulation and Photographs of Plant & Machinery with Supplier’s Contact Details. The major contents of the book are Metal Surface Treatments, Electrolytic Machinery Methods, Electroplating Plant, Electropolishing Electroplating Plant, Electroplating of Aluminium, Cadmium, Chromium, Cobalt, Copper, Gold, Iron, Lead, Nickel, Bright Nickel, Silver, Alloy, Platinum, Palladium, Rhodium, Bright Zinc, Tin and Plastics Barrel, Zinc Electroplating Brightener, Colouring of Metals, Metal Treatments, Electrode position of Precious Metals and Stainless Steel, Case Hardening, Electroless Coating of Gold, Silver, Manufacture of phosphorus. It is a very useful book that covers all important topics of Electroplating. It will be also a standard reference book for professionals, entrepreneurs, those who are interested in this field can find the complete of Electroplating. It will be very helpful to consultants, new entrepreneurs, technocrats, research scholars, libraries and existing units.

**Detailed Project Profiles on Selected Hi-Tech Projects (Project Reports)**-NIIR Board 1998-06-09 NIIR had identified some Hi-Tech Projects for the entrepreneurs and published a book on that projects which titled "Detailed Projects Profile on Selected Hi-Tech Projects". These Hi-tech projects are Aluminium Beverages cans, Beer industry, Compact Disc, Lap Top computers, Optical fibre cables, plastic I. V. Bottles, Solar Power Plant, Telephone Cables and XLPE cables. All the above projects are based on latest technologies. Each project present with uses and application, market position, manufacturing process, flow diagram. Suppliers of machineries and raw material along with cost estimation. These hi-tech projects have bright market potential and demand would be increased. This book is very informative and useful for relevant entrepreneurs.

**The Complete Book on Ginger Cultivation and Manufacture of Value Added Ginger Products (Ginger Storage, Ginger Oil, Ginger Powder, Ginger Paste, Ginger Beer, Instant Ginger Powder Drink and Dry Ginger from Green Ginger)**-NPCS Board of Consultants & Engineers Ginger is the common name for Zingiber officinale, which was originally cultivated in China and now equally spread around the world. Ginger is a herb but is often known as a spice, with a strong distinct flavor that can increase the production of saliva. The part that is used as spice on the plant itself is the rhizomes or ginger root. This ginger root is traditionally used with sweet foods in Western cuisine being included in popular recipes such as ginger ale, gingerbread, ginger biscuits and ginger cake. It is also used in many countries as a medicinal ingredient which many believe in. Historically, ginger has a long tradition of being very effective in alleviating symptoms of gastrointestinal distress. In herbal medicine, ginger is regarded as an excellent carminative and intestinal spasmylolytic. Modern scientific research has revealed that ginger possesses numerous therapeutic properties including antioxidant effects, an ability to inhibit the formation of inflammatory compounds, and direct anti-inflammatory effects. India is the leading producer of ginger oil and dominates the ginger oil market with almost half shares out of total market. China is also known for ginger production and trade of ginger oil. Asia Pacific mainly exports ginger oil to North America and European markets. Increasing number of health conscious consumers, and their demands for natural oils and extracts based products is the major factor driving growth for essential oils and in turn ginger oil market. Ginger is majorly used in spices and thus ginger oils and oleoresins are preferred to prepared dried spices as flavoring in food industry, because they are more stable, contamination free, cleaner and can be easily standardized by blending. Thus the growth of food industry and spices demand are another factors driving growth of ginger oil market. The growth of natural personal care products industry is another growth driver for ginger oil market. The major content of the book are Ginger Cultivation, Farm and Forestry Production for Ginger, Diseases & Pest Management in Ginger, Medicinal Values of Ginger, Active Ingredients of Ginger, Pharmacological Activity of Ginger, Ginger Storage, Ginger Processing, Ginger Oleoresin, Ginger Oil, Ginger Beer, Ginger Powder, Ginger Paste, Instant Ginger Powder Drink, Ginger Candy, Dry Ginger from Green Ginger, Extraction of Ginger Oleoresin from Ginger-Root Using Co2,Production of Ginger Rhizome by Shoot-Tip Culture, Extraction of Essential Oils from Ginger Rhizome Using Steam Distillation Method,
Packaging and Labelling BIS Specifications, Good Manufacturing Practices, Sample Plant Layouts, Photographs of Machinery with Suppliers Contact Details. This book will be a milestone for its readers who are new to this sector, will also find useful for professionals, entrepreneurs, those studying and researching in this important area.

The Complete Book on Coconut & Coconut Products (Cultivation and Processing) - NIIR Board of Consultants and Engineers 2006-10-01
Coconut is one of the oldest crops grown in India and presently covers 1.5 million hectares in this country. Found across much of the tropic and subtropical area, the coconut is known for its great versatility as seen in the many domestic, commercial, and industrial uses of its different parts. Coconuts are part of the daily diet of many people. Its endosperm is initially in its nuclear phase suspended within the coconut water. As development continues, cellular layers of endosperm deposit along the walls of the coconut, becoming the edible coconut flesh. When dried, the coconut flesh is called copra. The oil and milk derived from it are commonly used in cooking and frying; coconut oil is also widely used in soaps and cosmetics. The clear liquid coconut water within is a refreshing drink and can be processed to create alcohol. The husks and leaves can be used as material to make a variety of products for furnishing and decorating. It also has cultural and religious significance in many societies that use it. India stands third in the production of coconut in the world. There are only two distinguishable varieties of coconut: the tall and the dwarf. As a result of cross pollination in the tails, a wide range of variations occur within the same variety. Coconut based cropping/farming systems promote on farm diversity and strengthens ecological base of coconut farming. Coconut husk is the raw material for the coir industry. It is also used as a domestic fuel and as a fuel in copra kilns. Coconut oil comes under edible/industrial group, is used as cooking oil, hair oil, massage oil and industrial oil. It is dominated by saturated fats and high percentage of lauric acid. India accounts for the 18% of total coconut production in the world and it is the third largest coconut producing country in the world. Coconut processing adds value, and a number of products like coconut oil, desiccated coconut, coir fibre, pith, mattresses, desiccated coconut (DC), coconut cream, coconut milk, spray dried coconut milk powder, coconut shell products, shell charcoal, shell powder, virgin coconut oil are obtained. The demand for coconut oil increases 15 to 20% during the festival season. Coconut oil for edible purposes is now being claimed to be the second best edible oil in the world, after Olive oil. Coconut shell charcoal is most widely used as domestic and industrial fuel. Some of the fundamentals of the book are product diversification in coconut, future of coconut oil, scope for product diversification, varieties of coconut, farming systems in coconut, organic farming of coconut, spices and herbs, establishment and maintenance of organic coconut plantations, production of organic spices, medicinal and aromatic plants along with coconut, crop improvement, green manuring in coconut garden organic recycling in coconut, soil moisture conservation in coconut garden, harvest and post harvest technology, integrated farming in coconut holdings for productivity improvement, machinery and processing of desiccated coconut, coconut processing sector in India, etc. Coconut plays an important role in the economic, social and cultural activities of millions of people in our country. India is a major producer of coconut in the world. Coconut provides food, edible oil, industrial oil and health drink to humanity. All parts of coconut tree is useful in one way or other and the crop profoundly influences the socio economic security of millions of farm families. The present book contains the methods of cultivation and processing of coconut. This book is very beneficial for agriculturist, researchers, professionals, entrepreneurs, agriculture universities etc.

The Complete Book on Adhesives, Glues & Resins Technology (with Process & Formulations) 2nd Revised Edition - NPCS Board of Consultants & Engineers 2017-02-24
An adhesive is a material used for holding two surfaces together. In the service condition that way adhesives can be called as “Social” as they unite individual parts creating a whole. A useful way to classify adhesives is by the way they react chemically after they have been applied to the surfaces to be joined. There is a huge range of adhesives, and one appropriate for the materials being joined must be chosen. Gums and resins are polymeric compounds and manufactured by synthetic routes. Gums and resins largely used in water or other solvent soluble form for providing special properties to some formulations.
than 95% of total adhesive used worldwide are based on synthetic resins. Gums and resins have wide industrial applications. They are used in manufacture of lacquers, printing inks, varnishes, paints, textiles, cosmetics, food and other industries. Increase in disposable income levels, rising GDP and booming retail markets are propelling growth in packaging and flexible packaging industry. Growth of disposable products is expected to increase, which leads to increase in consumption of adhesives in packaging industry. The global value of adhesive resins market is estimated to be $11,339.66 million and is projected to grow at a CAGR of about 4.88% in coming years. Rapid urbanization coupled with growing infrastructure and real estate construction projects is projected to further fuel demand for adhesives in India. This handbook covers photographs of plant & machinery with supplier’s contact details and manufacturing aspects of various adhesives, glues & resins. The major contents of the book are glues of animal origin, fish glues, animal glues, casein glues & adhesives, blood albumen glues, amino resin adhesives, cyanoacrylate adhesives, epoxy resin adhesives, phenolic resin adhesives, polychloroprene resin adhesives, polysulfide sealants & adhesives, resorcinolic adhesives, furan resin adhesives, lignin adhesives, polyamide adhesives, rosin adhesive, tannin adhesives, terpene based adhesives, starch adhesives, acrylic adhesives and sealants, pressure sensitive adhesives, hot melt adhesives, alkyd resins, acrylic modified alkyd resins, alkyd -amino combinations based on neem oil, amino resins, carbohydrate modified phenol-formaldehyde resins, epoxy resins etc. It will be a standard reference book for professionals, entrepreneurs, those studying and researching in this important area and others interested in the field of adhesives, glues & resins technology.

Dairy Fat Products and Functionality-Tuyen Truong 2020-05-29 This work highlights a new research area driven by a material science approach to dairy fats and dairy fat-rich products where innovative dairy products and ingredients can be tailor-made. Cutting edge topics such as tribology of dairy fats and dairy products, manipulation of differentiated-sized milk fat globules, milk fat interesterification for infant formula, structuring of lipids in dairy products and production of human milk fat substitutes by including dairy fats are featured in dedicated chapters authored by international scientific experts from across the globe. The text also presents in-depth research on proteomic characterization, digestion and the nutritional functionality of milk fat globule membrane. The biosynthesis, chemistry, digestion and nutritional roles of milk lipids, physics of dairy fats, structure and functionality of the milk fat globule membrane, analytical methods, materials science, technology and manufacturing of dairy fat-rich products such as butter, dairy fat spreads, dairy creams, cream powders and ghee are also covered in-depth. Dairy Fat Products and Functionality: Fundamental Science and Technology is a useful reference text for technologists and scientists interested in advancing their fundamental knowledge of dairy fat and dairy products as well as using a materials science and technology approach to guide efforts or widen research opportunities in optimizing the functionality of these products. From their physics and chemistry to their nutritional values and methodologies, this comprehensive and innovative text covers all the necessary information needed to understand the new methods and technologies driving the modern production of milk fat products.

Handbook on Food Biotechnology (Extraction, Processing of Fruits, Vegetables and Food Products) 2nd Revised Edition-NIIR Board of Consultants & Engineers 2017-11-08 Modern biotechnology refers to various scientific techniques used to produce specific desired traits in plants, animals or microorganisms through the use of genetic knowledge. Since its introduction to agriculture and food production in the early-1990s, biotechnology has been utilized to develop new tools for improving productivity. Biotechnology is a broad term that applies to the use of living organisms and covers techniques that range from simple to sophisticated. In contrast, modern agricultural biotechnology techniques, such as genetic engineering, allow for more precise development of crop and livestock varieties. The potential benefits of biotechnology are enormous. Food producers can use new biotechnology to produce new products with desirable characteristics. These include characteristics such as disease and drought-resistant plants, leaner meat and enhanced flavor and nutritional quality of foods. This technology has also been used to develop life-saving vaccines, insulin, cancer treatment and other pharmaceuticals to improve quality of life. It is estimated that in the next 20-30 years...
demand for food will increase by 70%. Biotechnology will be key to meeting this demand. This handbook is designed for use by everyone engaged in the food technologies such as fermentation, developing and testing of food and students who are pursuing their career in food biotechnology. It provide all information on modern cooking, food processing and preservation methods, juice preparation methods, etc. The major content of the book are Fermenter and Bio-Reactor Design, Development and Testing of a Milled Shea Nut Mixer, Production of Pure Apple Juice in Natural Colour, Drying of Ginger using Solar Cabinet Dryer, Roasting of Coffee Beans, Processing of Guava into Pulp Guava Leather, Processing and Preservation of Jack Fruit, Quality Changes in Banana, Processing and Quality Evaluation of Banana Natural Colour, Large Scale Separation and Isolation of Proteins, Preparation and Storage Studies on Onion-Ginger-Garlic Paste, Bitterness Development in Kinnow Juice, Effect of Incorporation of Defatted Soyflour, Gum from Ber Fruits, Juice Extraction of Aonla (EmblicaOfficinalisGaertn.) Cv. ‘Chakaiya’, Defatted Mucuna Flour in Biscuits, Detoxifying Enzymes, Processing Methods and Photographs of Machinery with Suppliers Contact Details. This book will be a milestone for its readers who are new to this sector, will also find useful for professionals, entrepreneurs, those studying and researching in this important area.