

# Pharmaceutical, Drugs, Proteins Technology Handbooks

[Investment Opportunity in Drugs & Pharmaceutical Projects](#)

**Author:** NPCS Board

**Format:** Hardcover

**Book Code:** NI5

**Pages:** 117

**ISBN:** 9789381039212

**Price: Rs. 1,895.00 US\$ 150.00**

\*\*\*\*\*Limited Edition- available in Photostat Version

Only\*\*\*\*\* A pharmaceutical drug (medicine or medication and officially medicinal product) is a drug used in health care. Such drugs aid the diagnosis, cure, treatment, or prevention of disease. Drug therapy (pharmacotherapy) is an important part of the medical field and relies on the science of pharmacology for continual advancement and on pharmacy for appropriate management. Pharmaceutical or drug or medicines are classified in various other groups besides their origin on the basis of pharmacological properties like mode of action and their pharmacological action or activity, such as by chemical properties, mode or route of administration, biological system affected, or therapeutic effects. An elaborate and widely used classification system is the Anatomical Therapeutic Chemical Classification System (ATC system). The Pharmaceutical industry in India is the world's third-largest in terms of volume. The total turnover of India's pharmaceuticals industry between 2008 and September 2009 was US\$21.04 billion. While the domestic market was worth US\$12.26 billion. The industry holds a market share of \$14 billion in the United States. The pharmaceutical industry has been one of the fastest growing segments of the Indian manufacturing sector with an average annual growth rate of about 14%. It is projected to grow at an average annual rate exceeding 15% during 2007-2010 and is likely to reach the level of about USD 23 to 28 bn. This growth would be fuelled mainly by (i) access to low cost and high volume of generic drugs, (ii) mergers and acquisitions, (iv) industry consolidation, and (v) high growth of contract manufacturing. According to the Federation of Indian Chambers of Commerce and Industry (FICCI), another apex industry association, there are some 6,000 firms engaged in the sector. In terms of revenue generation, there are 100 big companies (including subsidiaries of MNCs) each with sales of at least USD 650,000, 200 medium size companies with sales ranging between USD 210,400 and USD 650,000; and 5700 small companies with sales of less than USD 210,400. India is the world's leading producer of generic drugs; its annual per capita consumption of pharmaceuticals has been among the lowest placed approximately at USD 4.50 per person as compared to USD 820 in the United States and USD 13 in China. Indian pharmaceutical companies now supply nearly all the country's demand for formulations and nearly 70% of its

demand for bulk drugs. The Indian firms produce nearly 60,000 generic brands in 60 therapeutic categories and between 350 and 400 bulk drugs. India's drug market consists mainly of second and third generation drugs no longer subject to patent protection in the developed world. The content of the book includes information about drugs and pharmaceuticals. The major contents of this book are project profiles of projects like Drugs and Pharmaceutical Industries in India, L-Ascorbic Acid, Pharmaceutical Unit, Liquid Glucose, Glucose Saline, IV Fluids, Paracetamol, Sorbitol, Aspirin and Ibuprofen. Project profile contains information like properties, market survey, manufacturing, process flow diagram, raw material suppliers, suppliers of plant and machinery, plant economics, land and building, plant and machinery, fixed capital, working capital requirement/month, total working capital/month, total capital investment, turn over/annum, profit sales ratio, rate of return, breakeven point (B.E.P) This book is very useful for new entrepreneurs, technical institutions, existing units and technocrats.

# The Complete Technology Book on Starch and Its Derivatives

**Author:** H. Panda

**Format:** Paperback

**Book Code:** NI81

**Pages:** 540

**ISBN:** 8178330733

**Price:** Rs. 1,100.00 US\$ 125.00

Starch is a group of poly saccharides, composed of glucopyranose units joined together by glucosidric linkages. Starch is also metabolized for energy in plants and animals, and is used to produce a large number of industrial products. Starch is processed to produce many of the sugars in processed foods. The biggest industrial non food use of starch is as adhesive in the paper making process. Other important fields of starch application are textiles, cosmetic and pharmaceutical uses. Starch can be obtained from maize, sorghum, roots and tubers such as tapioca, arrow root, potatoes etc. Starch truly serves as a multifunctional ingredient in the food industry. Starch is one of the most present biomaterials has witnessed significant developments over the years. By products are obtained in the manufacture of different types of starch such as maize gluten has a number of interesting possible uses in industry, zein (by product of corn processing) is used in the preparation of stable glass like plastics, modification of zien is used as adhesives and in the preparation of coating compositions for paper, the most important by product from wheat starch manufacture is gluten which is used in preparing diabetic foods, for feeding cattle, thickening agent in textile printing and so on. The Global starch market is likely to get respite from deceleration in its market growth, with growth poised to receive a new lease of life in the next few years. This book basically illustrates about the properties, structures, manufacturing process explained with flowcharts and diagrams, applications of starch and its derivatives etc. The major contents of the book are structure and chemical properties of starch, chemical composition, molecular structure, starch granule properties, water sorption and granule swelling as a function of relative humidity, factors affecting starch paste properties, the oxidation of starch etc. This is a unique book, concise, up to date resource offering a valuable presentation of the subject. This book contains processes of starch and its derivatives. This book is an invaluable resource for new entrepreneurs, industrialists, consultants, libraries.

# Drugs & Pharmaceutical Technology Handbook

**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI130

**Pages:** 636

**ISBN:** 8178330547

**Price: Rs. 1,075.00 US\$ 125.00**

Drugs and pharmaceutical industry plays a vital role in the economic development of a nation. It is one of the largest and most advanced sectors in the world, acting as a source for various drugs, medicines and their intermediates as well as other pharmaceutical formulations. India has come a long way in this field, from a country importing more than 95% of its requirement of drugs and pharmaceuticals; India now is exporting it even to developed countries. Being the intense knowledge driven industry, it offers innumerable business opportunities for the investors/ corporate the world over. The existence of well defined and strong pharmaceutical industry is important for promoting and sustaining research and developmental efforts and initiatives in an economy as well as making available the quality medicines to all at affordable prices. That is, it is essential to improve the health status of the individuals as well as the society as a whole, so that positive contributions could be made to the economic growth and regional development of a country. On the global platform, India holds fourth position in terms of volume and thirteenth position in terms of value of production in pharmaceuticals. The pharmaceutical industry has been producing bulk drugs belonging to all major therapeutic groups requiring complicated manufacturing processes as well as a wide range of pharmaceutical machinery and equipments. The modern Indian Pharmaceutical Industry is recent and its foundation was laid in the beginning of the current century. The pharmaceutical industry can be broadly categorised as bulk drugs, formulations, IV fluids and pharmaceutical aids (such as medical equipment, hospital disposables, capsules, etc.). Special feature of the pharmaceutical industry is a large number of manufacturers in the small scale sector. The government is also encouraging the SSI sector providing some incentives. The recent developments in the technology and R & D work in this field have led to the increased growth rate of industries and have established Indian Pharmaceutical industries in the international market. The content of the book includes information about properties, general methods of analysis, methods of manufacture, of different types of drugs and pharmaceuticals. Some of the fundamentals of the book are polymeric materials used in drug delivery systems , theoretical aspects of friction and lubrication , a convenient method for

conversion of quinine to quinidine, formulation and evaluation of bio-available enteric-coated erythromycin and metronidazole tablets, extraction of virginiamycin, antipyretics and analgesics, column chromatographic assay of aspirin tablets, differentiating titration of phenacetin and caffeine, infrared spectra of some compounds of pharmaceutical interest etc. This book covers an intensive study on manufacturing, production, formulation and quality control of drugs and pharmaceuticals with technology involved in it. This book is an invaluable resource for technologists, professionals and those who want to venture in this field.

# Handbook on Fine Chemicals, Vitamins, Amino Acids and Proteins

**Author:** NIIR Board of Consultants & Engineers

**Format:** Paperback

**Book Code:** NI159

**Pages:** 608

**ISBN:** 8186623965

**Price:** Rs. 1,450.00 US\$ 150.00

Fine chemicals are the chemicals which are produced in comparatively small quantities and in relatively pure state. In chemical technology, a distinction is made between bulk chemicals, which are produced in massive quantities by standardized reactions, and fine chemicals, which are custom produced in smaller quantities for special uses. Amino acid is any organic acid which has one or more substituent amino groups. In many instances the amino acid is more readily isolated from proteins than by resolution of the synthetic product. For the purpose of obtaining the best yields, it is always desirable to use protein material which is especially rich in the amino acid which is to be isolated. Some of the examples of amino acid are glycine, d glutamic acid, l tyrosine, l tryptophane, l hydroxyproline, thyroxine, serine, d lysine etc. Large quantities of potential protein rich foods of vegetable origin, e.g., oil seed meals and pulses, are available in the country and by suitable processing and fortification with vitamins and minerals, it should be possible to prepare, on a large scale, low cost processed protein foods which can be used as supplements to the diets of low income groups of the population. There are two forms of vitamin A; vitamins A and A2. All mammals, birds and fish which have been investigated, utilize vitamin A. Vitamin A requirements of animals other than mammals are less well known. Birds apparently need vitamin A in an amount of magnitude as mammals. It vitamin B1 is present in many plants. Vegetable, fruits and nuts contain small amounts; ripe peas and beans are rich sources; but vitamin B1 is found outside bran coats of grains (rice) and in yeast. Vitamin B2 (Riboflavin) is very widely distributed over the entire animal and plant kingdom. It seems that each and every animal and plant cell contains small amounts. Regular dietary intake of riboflavin is necessary for all members of the animal kingdom and for some microorganisms. Vitamin B6 as a free base is colourless crystalline powder, has a slightly bitter taste and melts at 160 degree Celsius. Of the entire living world only man, the other primates, the guinea pig a few microorganisms are known to require an external supply of vitamin C. Some of the fundamentals of the book are the constitution and synthesis of the amino acids, methods of analysis and reactions of the amino acids and proteins , production of protein isolate from groundnut, production of protein isolate

from groundnut, chemical constitution of vitamin b2: degradation reactions, vitamin b6 (pyridoxine) , effect of different treatments on vitamin c and microbial sterility of canned drumstick (moringa oleifera), conversion of provitamins d to vitamins d, compound and species specificity of known vitamins d, the group of vitamins e, vitamin p , physiology of plants and microorganisms etc. The aim of this book is to present in a single volume an up to date account of the manufacture of Fine Chemicals, Vitamins, Amino Acids and Proteins. The book includes several new information which comprise important threads in the industrial total fabric. This book contains the constitution and synthesis of the Amino Acids, the Isolation of the Amino Acids from Proteins, the preparation of Amino Acids and Proteins, Vitamins and Fine Chemicals with Method of analysis and reactions etc. The book is very helpful for new entrepreneurs, technocrats, researchers, institutional libraries etc.

## [Directory/ Database/ List of Pharmaceutical & Drugs Companies in India \(4th Edition\)](#)

**Format:** CD-Rom

**Book Code:** NID68

**Price:** Rs. 5,135.00 **US\$** 150.00

Offline Business directory is the best thing in today's business world. If you are searching for Buyers, then this Directory/Database is the perfect tool for you. By having the right business leads, you would be able to have immediate communication with prospective businesses, partners and customers through this boundless list of Pharmaceutical & Drugs Companies in csv excel format. We offer an extensive suite of Directories/ database to assist you in reaching the right businesses and people quickly and easily. Business Directories are used for sales planning, finding Buyers and marketing research to perform business analysis. With our company database/Directory, you will have access to company list. You will find a business list consisting of company contact details. We compiled list of companies in excel format to give you access to over hundred thousands of major & minor businesses and companies. From small business to Corporate Houses, our data is complete with business contact information to help you connect with the right companies or buyers. This database collection is a great resource for those suppliers who offer their goods and services to Pharmaceutical & Drugs Companies like, Packaging Material Suppliers, Drug Suppliers, Pharma Chemical Suppliers, Plant & Machinery Suppliers, Office Equipment Suppliers, Office Furniture Suppliers, Mobile Companies, Raw Material Suppliers, Advertisement Agencies, Office Stationery Suppliers, Transporters, Courier Companies, IT, Software Companies, Labour Contractors, Hospitals, Clinics & Medical Stores etc. Information in this database Contains over 20,000 records of Pharmaceutical & Drugs Companies. Details Includes: Company Name (20,000), Postal Address (20,250), City, Postal Code, Contact Person (6,000), Phone (13,300), E-mail (7,200), Website (2,300), Fax (5,700) and Description. Note: All Records does not contain all fields of information. However, maximum information has been incorporated. Format: MS Excel

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## [Delhi & NCR Doctors Directory/ Database/ List \[.xlsx, excel format\] 8th Edition](#)

**Format:** CD-Rom

**Book Code:** NID75

**Price:** Rs. 3,776.00 **US\$** 150.00

Offline Business directory is the best thing in today's business world. If you are searching for Buyers, then this Directory/Database is the perfect tool for you. By having the right business leads, you would be able to have immediate communication with prospective businesses, partners and customers through this boundless list of Delhi & NCR Doctors in csv excel format. We offer an extensive suite of Directories/database to assist you in reaching the right businesses and people quickly and easily. Business Directories are used for sales planning, finding Buyers and marketing research to perform business analysis. With our company database/Directory, you will have access to company list. You will find a business list consisting of company contact details. We compiled list of companies in excel format to give you access to over hundred thousands of major & minor businesses and companies. From small business to Corporate Houses, our data is complete with business contact information to help you connect with the right companies or buyers. This database collection is a great resource for those suppliers who offers their goods and services to Doctors like Drugs & Pharmaceuticals Companies, Pharma & Medical equipments, Hospitals, Software Companies, Pathology Test Laboratories etc. (Delhi, Faridabad, Ghaziabad, Greater Noida, Gurgaon, Noida, etc.) Contains more than 8,700 Records. Details Include: Name (8,700) Centre Name (3,800) Address (9,450) Phone (8,100) E-mail (1,200) Website (1,300) Specialization (6,300) like ENT, Eye, Dental, Surgeon, General Practitioner, Physician, Gynaecologist, Skin Dermatologists, Physiotherapists, Neurologists ..... Note: All Records does not contain all fields of information. However, maximum Information has been incorporated. Format: MS Excel, .xlsx

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[\*\*Directory/ Database/ List of Hospitals in India \[.xlsx, excel format\]\*\*](#)  
[\*\*7th Edition\*\*](#)

**Format:** CD-Rom

**Book Code:** NID78

**Price:** Rs. 6,136.00 **US\$** 200.00

Offline Business directory is the best thing in today's business world. If you are searching for Buyers, then this Directory/Database is the perfect tool for you. By having the right business leads, you would be able to have immediate communication with prospective businesses, partners and customers through this boundless list of Hospitals in csv excel format. We offer an extensive suite of Directories/ database to assist you in reaching the right businesses and people quickly and easily. Business Directories are used for sales planning, finding Buyers and marketing research to perform business analysis. With our company database/Directory, you will have access to company list. You will find a business list consisting of company contact details. We compiled list of companies in excel format to give you access to over hundred thousands of major & minor businesses and companies. From small business to Corporate Houses, our data is complete with business contact information to help you connect with the right companies or buyers. This database collection is a great resource for those suppliers who offers their goods and services to Hospitals, Nursing Home like, Medical Disposables Material, X-ray Film, Medical Equipments, Manpower, Lab, Testing equipment, Pharmaceutical Companies, Hospital Furniture, suppliers, Nursing Bureau, IT, Software Companies, Labour Contractors, etc. Information in this database contains contacts of 33,200 Hospitals all over India. Details include Hospital Name, Postal Address (33,000), Contact Person (2,100), Phone (13,700 Mobile / Landline), Fax (7,300), Email (10,500), Website (2,800). Note: All Records does not contain all fields of information. However, maximum information has been incorporated. Format: MS Excel, xlsx

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## [The Complete Book on Medical Plastics](#)

**Author:** NIIR Board of Consultants & Engineers

**Format:** Paperback

**Book Code:** NI172

**Pages:** 368

**ISBN:** 8178330008

**Price:** Rs. 975.00 **US\$** 100.00

Plastics currently form one of the most important components of the medical industry. Medical device designers and engineers increasingly prefer plastics to conventional packaging materials such as metals owing to superior flexibility offered by plastics in fabrication process.

Advancements in sterilization techniques shift towards disposable devices, development of enhanced plastic materials, and technological innovations are factors driving the overall market growth and expansion. The development of novel materials such as biocompatible polymers for use in medical implants will furthermore provide the required impetus for the global medical plastics market. Every day, plastics are involved in critical surgeries, life saving efforts, and routine medical procedures. Plastic materials can be sterilized hundreds of times without degradation. Lightweight plastics are used to form replacement joints, non surgical supports, and therapy equipment. Clear plastics provide visibility for transfusions, surgeries, and diagnostic equipment of all kinds and plastics can be machined, molded, or formed into almost any shape imaginable. The use of plastics in health care field encompasses several distinct markets. Plastic is used on a large scale as medical devices like disposable syringes, optical and dental products, heart valves, contact lenses and many more medical products. This way plastic has very importance in making medical devices. The medical plastics industry is set to expand rapidly over the next decade taking up increasing proportions of GDP, as countries provide healthcare to an ageing population, access to medicine expands in developing regions and new technology is developed. This book basically deals with significance of packaging for pharmaceuticals & medical industry, tablets & capsules liquids, creams and ointments, OPVC, OPP and oriented and non oriented pet containers, blister trays for ampoules, cartridge tubes etc., shrink packaging and stretch wrapping, conducting health based risk assessments of medical materials, performance properties of metallocene polyethylene, EVA, and flexible PVC films, polyurethane thin film welding for medical device applications, polyurethane film as an alternative to PVC and latex, opportunities for PVC replacement in medical solution containers, thermoplastic silicone urethane copolymers : a new class of biomedical elastomers, selecting materials for

medical products : from PVC to metallocene polyolefins, injection molding engineering plastics, assessing the performance and suitability of parylene coating etc. The present book contains the important information of plastics in medical field and their uses in various ways. This is very useful book for entrepreneurs, researchers, technocrats and technical institutions.

# [The Complete Book on Biotechnology Based Bulk Drugs](#)

**Author:** NPCS Board of Consultants & Engineers

**Format:** Paperback

**Book Code:** NI194

**Pages:** 488

**ISBN:** 9788190439879

**Price:** Rs. 1,050.00 **US\$** 125.00

Biotechnology has played an essential role in the development of the healthcare chemical industries. The range of product includes diagnostic, prophylactic and therapeutic agents. The discovery of a potentially active compound starts a sequence of exhaustive chemical and biological testing that may culminate in manufacture of the agent or an improved analog. The role of biotechnology in this complex path to regulatory approval and marketing is diverse. Biotechnology is a field of applied biology that involves the use of living organisms and bioprocesses in engineering, technology, medicine and other fields requiring bio products. Biotechnology also utilizes these products for manufacturing purpose. Some of the examples of drugs produced through biotechnology are penicillin, lincomycin, streptomycin, tylosin, peptide antibiotics, cephalosporins, etc. Modern use of similar terms includes genetic engineering as well as cell and tissue culture technologies. Biotechnology draws on the pure biological sciences and in many instances is also dependent on knowledge and methods from outside the sphere of biology. Conversely, modern biological sciences are intimately entwined and dependent on the methods developed through biotechnology and what is commonly thought of as the life sciences industry. The development of biotechnology is taking place in almost all fields of human life. The recent advances in the field of basic genetics have opened up new vistas, potentials and possibilities. Some of the fundamentals of the book are the pharmaceutical industries, marketing strategy, common features in the evolution of products and processes, process technology fermentation, product recovery, new trends in biotechnology, penicillins, biosynthesis and regulation of thienamycin, olivanic acids and epithienamycins, aminoglycoside antibiotics, streptidine and deoxystreptomycin, streptomycin, neomycin, paromomycin, ribostamycin and butirosin gentamicin, micronomicin and sisomicin, tylosin, peptide antibiotics, current applications of peptides, blasticidin S: an agricultural antibiotic bleomycin and bestatin: peptides used in anticancer therapy etc. The present book contains process of biotechnology based bulk drugs like penicillin, B lactam antibiotics, aminoglycoside antibiotics, peptide antibiotics, anti cancer agents, lincomycin etc. This is very resourceful book for entrepreneurs, technocrats, research scholars, libraries etc.

## [Directory / Database of Corporate/Leading Companies in Indian Pharmaceutical & Drug Products \(with Financial Figures\) 7th Edition \[.xlsx, excel format\]](#)

**Format:** CD-Rom

**Book Code:** NID140

**Price:** Rs. 4,838.00 **US\$** 150.00

Offline Business directory is the best thing in today's business world. If you are searching for Buyers, then this Directory/Database is the perfect tool for you. By having the right business leads, you would be able to have immediate communication with prospective businesses, partners and customers through this boundless list of All India Companies in csv excel editable format (easy sorting and filtering). We offer an extensive suite of Directories/ database to assist you in reaching the right and targeted businesses and people quickly and easily. Business, B2B&Irm;, Industrial Directories, Mailing List are used for sales planning, finding Buyers, Sector, Business House and marketing research to perform business analysis. With our company database/Directory, you will have access to company list, Corporate/Leading Companies, Small & Medium Enterprises (SME), you will find a business list consisting of company contact details. We compiled list of companies in excel format to give you access to over hundred thousands of major & minor businesses and companies. From small business to Corporate Houses, our data is complete with business contact information to help you connect with the right companies or buyers. This database collection is a great resource for Buyers and those suppliers who offer their goods and services to Trade, Manufacturing industry, Companies, Corporate Houses & Industries in India. Contains: 1154 records with following Information: Name of Company, Address, City, Pin Code, Phone, Fax, Email (830), Website (445). Name of Directors, Location of Plants, Project Capacity, Production, List of Major Raw Materials, Name of Products, Turnover, Major Raw Materials with their consumption quantity & Raw material value, credit ratings. Financial Comparison amongst companies assets, Net worth, Cash flow, Cost as % of sales, Raw material turnover, Selling & distribution expenses, growth of assets, liabilities Income & expenditure, Liquidity Ratios, Profitability Ratio, Profits, Return Ratios, Structure of Assets & Liabilities (%), Working Capital & Turnover Ratios) (\*Wherever available) Note: All Records does not contain all fields of information. However, maximum information has been incorporated. Format: MS Excel, .xlsx

# Handbook on Drugs from Natural Sources

**Author:** H. Panda

**Format:** Paperback

**Book Code:** NI229

**Pages:** 480

**ISBN:** 9788178331331

**Price: Rs. 1,175.00 US\$ 125.00**

Natural products have played an important role throughout the world in treating and preventing human diseases. Natural product medicines have come from various materials including terrestrial plants, terrestrial microorganisms, organisms etc. Historical experiences with plants as therapeutic tools have helped to introduce single chemical entities in modern medicine. About 40% of the drugs used are derived from natural sources. Most are pure substances which are isolated from various organisms & used directly or after chemical modification. Natural products will continue to be important in three areas of drug discovery: as targets for production by biotechnology as a source of new lead compounds of novel chemical structure and as the active ingredients of useful treatments derived from traditional systems. Biotechnology will contribute more new natural products for medicinal use. Plants provide a fertile source of natural products many of which are clinically important medicinal agents. Natural products have traditionally provided most of the drugs in use. Despite the achievements of synthetic chemistry and the advances towards rational drug design, natural products continue to be essential in providing medicinal compounds and as starting points for the development of synthetic analogues. With the increasing power of screening programs and the increasing interest in the reservoir of untested natural products, many future drug developments will be based, at least in part, on natural products. The major contents of the book are plant products produced in cell culture, application of genetic engineering to the production of pharmaceuticals, anti transpirants and plant growth regulators based, the potential and the problems of marine natural products, marine sterols, plants as a source of anti-inflammatory substances, anti hepatotoxic principles in oriental medicinal plants, immune stimulants of fungi and higher plants, amanita muscaria in medicinal chemistry, ergot alkaloids and their derivatives in medicinal chemistry and therapy, development of drugs from cannabinoids, etc. This book contains development of new drugs from plants, work on some Thai medicinal plants, plant growth based on Jasmonates, marine sterols, bleomycin and its derivatives, drugs from cannabinoids, bioactive compounds from nature, fungi and higher plants, biological active compounds from British Marine, microbial phytotoxins as herbicides and many

more. This book will be very helpful to its readers, upcoming entrepreneurs, scientists, existing industries, technical institutions, druggist etc.

# Handbook on Milk and Milk Proteins

**Author:** H. Panda

**Format:** Paperback

**Book Code:** NI241

**Pages:** 448

**ISBN:** 9788178331485

**Price:** Rs. 1,275.00 US\$ 125.00

Proteins play an important role in nutrition, taste, allergies, texture, structure, processing and yield performance. In the food industry, proteins are a key element of our diet and an important ingredient for food technologists. The total protein component of milk is composed of numerous specific proteins. Isolated milk protein products represent an important and valuable source of protein ingredients due to their recognized superior nutritional, organoleptic and functional properties. Milk protein is a rich source of essential amino acids and they have been the subject of intensive research for an effort to unravel their molecular structure and interactions, relationship between structure and functional attributes, interactions of proteins during processing and, more recently, their physiological functions. Free fatty acids (FFA) in fresh milk normally amount to less than 1% of the total milk fat, yet they are important because of their effect on milk flavour. Now a day, the processing of milk is part of a highly organized and controlled dairy industry, which produces and markets a multitude of dairy products. Functional milk proteins are perfectly suited for use in the dairy sector of food production and the modern food processing industry is placing more and more emphasis upon the utilization of protein ingredients to provide specific functional properties to a wide range of formulated foods. In recent years, there has been a great deal of progress in the understanding and management of milk proteins across the production chain. Some of the fundamentals of the book are surface tension of milk, lactose chemistry, milk proteins, phosphorylation of milk proteins, comparative aspects of milk proteins, utilization of milk proteins, heat stability of milks, heat stability of homogenized concentrated milk, lysinoalanine in milk and milk products, heat coagulation of type a milk, syneresis of heated milk, fatty acids in milk, milk gel assembly, mechanical agitation of milk, natural, leucocyte and bacterial milk, grass and legume diets and milk production. This book provides a complete overview and offers insights into topics for more in-depth reading on milk and milk proteins. The book covers chapters on milk proteins, biosynthesis & secretion of milk proteins, utilization, types of milk proteins, phosphorylation, milk glycoproteins and many more. It is hoped that this book will be very helpful to all its readers, students, new entrepreneurs, food technologist,

technical institution and scientists.

# About NIIR

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

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

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

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