Handbook on Fine Chemicals, Vitamins, Amino Acids and Proteins

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About the Book

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 gulatic 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 vita min c and microbial sterility of canned drumstic (moringa oleifera), conversion of provitamins d to vitamins d, compound and speces 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.

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