Handbook on Fine Chemicals, Vitamins, Amino Acids and Proteins

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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.

Contents

1. THE CONSTITUTION AND SYNTHESIS OF THE AMINO ACIDS
i. Significance of the Term, Amino Acid
ii. Relation of amino acids to proteins
iii. Classification of the accepted amino acids
iv. Constitutions of the accepted amino acids
v. Laboratory Syntheses of the Accepted Amino Acids
vi. Amino Acid Reported but not verified
2. THE ISOLATION OF THE AMINO ACIDS FROM PROTEINS
1. Introduction
2. Hydrolysis
3. Selective Liberation of Amino Acids
4. THE FISCHER ESTERIFCATION METHOD
5. DAKINs BUTYL ALCOHOL METHOD
6. The Electrical Transport Method
7. SPECIAL ACIDS USED FOR THE PREPARATION OF AMINO ACIDS
8. THE RACEMIZATION OF PROTEINS AND AMINO ACIDS
9. THE RESOLUTION OF AMINO ACIDS
3. THE PREPARATION OF AMINO ACIDS AND PROTEINS
1. PROTEINS
4. METHODS OF ANALYSIS AND REACTIONS OF THE AMINO ACIDS AND PROTEINS
1. COLOR REACTIONS
2. GENERAL QUANTITATIVE METHODS FOR THE ESTIMATION OF THE AMINO ACIDS AND PROTEINS
3. RETROSPECT
5. THE RELATION OF THE AMINO ACIDS TO PRODUCTS OF BIOCHEMICAL IMPORTANCE
1. DEAMINATION OF AMINO ACIDS
2. FORMATION OF GLUCOSE FROM AMINO ACIDS
3. FORMATION OF ACETONE FROM AMINO ACIDS
4. INTERMEDIATE METABOLISM OF THE AMINO ACIDS
5. SYNTHESIS OF UREA
6. RELATIONSHIP OF AMINO ACID TO OTHER COMPOUND FOUND IN THE BODY
7. THE ROLE OF AMINO ACIDS IN DETOXICATION
8. AMINES DERIVED FROM AMINO ACIDS
9. THE BETAINES
10. ADRENALINE AND EPHEDRINE
11. THYROXINE
12. RELATIONSHIP OF CERTAIN AMINO ACIDS TO THE PURINES
6. PEPTIDES, PEPTIDASES, AND DIKETOPIPERAZINES
1. INTRODUCTION
2. THE SYNTHESIS OF PEPTIDES
3. SURVEY OF THE METHODS OF PEPTIDE SYNTHESIS
4. The ISOLATION OF PEPTIDES FROM PROTEINS
5. THE PEPTIDASEs
6. THE SYNTHETIC ACTION OF PROTEASES
7. THE DIKETOPIPER AZINES
8. THE ISOLATION OF DIKETOPIPERAZINES FROM PROTEINS
9. THE ACTION OF PROTEOLYTIC ENZYMES ON DIKETOPIPERAZINES
7. THE CHEMICAL CONSTITUTION OF THE PROTEINS
1. THE CLASSIFICATION OF THE PROTEINS THE PROTEIN
2. METHODS OF ISOLATION

3. THE CHEMICAL CHARACTERISTICS OF SIMPLE AND CONJUGATED PROTEINS
4. INTRODUCTION OF SPECIAL GROUPS INTO THE PROTEIN MOLECULE
5. HYPOTHESES OF THE STRUCTURE OF PROTEINS
6. SUMMARY
7. CONCLUSION
8. PRODUCTION OF PROTEIN ISOLATE FROM GROUNDNUT (PEANUT)
1. STUDY OF SOME OF THE OPERATIONS IN THE INTEGRATED PROCESS FOR ROUNDNUTS
2. TECHNOLOGY OF PROTEIN-RICH NUTRO FOODS
9. STUDIES ON THE NUTRITIVE VALUE OF PROCESSED PROTEIN FOOD BASED ON OIL SEED MEALS FORTIFIED WITH VITAMINS AND MINERALS
DEVELOPMENT OF PRECOOKED BALANCED PROTEIN FOOD SUITABLE FOR WEANED
THE NUTRITIONAL VALUE OF FISH FLOUR
THE GROUP OF VITAMINS A
10. THE GROUP OF VITAMINS A
PROVITAMINS A
CONVERSION OF PROVITAMINS A INTO VITAMINS A
OTHER VITAMIN A FACTORS VITAMIN A3
VITAMIN A2
VITAMINS A
DETERMINATION
11. VITAMIN B1 THIAMIN
1. Nomenclature and Survey
4. Isolation
5. Properties
6. Chemical Constitution and Synthesis
7. Industrial Methods of Preparation
8. Biogenesis
9. Thiochrome
10. Vitamin B1 Pyrophosphate
11. Specificity of the Vitamin B1 Action
12. Determination
13. Standards
14. Physiology of Plants and Microorganisms
15. Animal Physiology
16. Avitaminosis and Hypovitaminosis
17. Hypervitaminosis
18. Requirements
12. VITAMIN B2 RIBOFLAVIN
1. Nomenclature and Survey
2. Chronology
3. Occurrence
4. Isolation
5. Properties
6. Chemical Constitution of Vitamin B2: Degradation Reactions
7. Synthesis of Vitamin. B2 and Other Flavins
8. Industrial Methods of Preparation
9. Flavin-Enzymes
10. Specificity
11. Determination
12. Standards
13. Physiology of Plants and Microorganisms
14. Animal Physiology

15. Avitaminosis and Hypovitaminosis
16. Hypervitaminosis
17. Requirements
13. VITAMIN B6 - PYRIDOXIN
1. Nomenclature and Survey
2. Chronology
3. Occurrence
4. Isolation
5. Properties
Constitution
7. Synthesis
8. Industrial Methods of Preparation
9. Biogenesis
10. Specificity
11. Determination
12. Standard
13. Physiology of Plants and Microorganisms
14. Animal Physiology
15. Avitaminosis and Hypovitaminosis
16. Hyper vitaminosis
17. Requirements
14. VITAMIN C - ASCORBIC ACID
Nomenclature and Survey
Occurrence
Isolation
Constitution
Synthesis
Industrial Methods of Preparation
Biogenesis
Specificity
Determination
Standards
Physiology of Plants and Microorganisms
Animal Physiology
Avitaminosis and Hypovitaminosis
Hypervitaminosis
Requirements
15. EFFECT OF DIFFERENT TREATMENTS ON VITA MIN C AND MICROBIAL STERILITY OF CANNED DRUMSTIC (MORINGA OLEIFERA)
16. THE GROUP OF VITAMINS D
Nomenclature and Survey
THE CONCEPT OF PROVITAMINS D AND OF VITAMINS
PROVITAMINS D
Occurrence
Isolation
Properties
Chemical Constitution
Synthesis
Industrial Methods of Preparation
Biogenesis
Determination
(a) Physical Methods
(b) Chemical Methods

CONVERSION OF PROVITAMINS D TO VITAMINS D
Process of Activation
Mechanism of Activation
Chemistry of Activation Products
Vitamins D
Occurrence
Isolation
Properties
Chemical Constitution
Synthesis
Industrial Methods of Preparation
Biogenesis
Specificity
Compound Specificity
Compound And Speces Specificity of Known Vitamins D
Species Specificity
Determination
Standards
Metabolism
Physiological Action
Relation to Other Vitamins and Hormones
Hypovitaminosis and Avitaminosis
Hypovitaminosis
Requirements
17. THE GROUP OF VITAMINS E
Nomenclature and Survey
Occurrence
Isolation
Properties
Chemical Constitution
Synthesis
Industrial Methods of Preparation
Biogenesis
Specificity
Determination
Standards
Physiology of Plants and Microorganisms
Animal Physiology
Avitaminosis and Hypovitaminosis
Hypervitaminosis
Requirements
18. VITAMIN H -BIOTIN
Nomenclature
Occurrence
Isolation
Properties
Chemistry9
Industrial Methods of Preparation
Specificity
Determination
Standards
Physiology of Plants and Microorganisms
Animal Physiology

Avitaminosis
Requirements
19. THE GROUP OF VITAMINS K
Nomenclature and Survey
The Group of Vitamins K
Occurrence
Isolation
Properties
Chemical Constitution
Synthesis
Industrial Methods of Preparation
Biogenesis
Specificity
Determination
Standards
Physiology of Plants and Microorganisms
Animal Physiology
Hypovitaminosis and Avitaminosis
Hypervitaminosis
Requirements

20. VITAMIN P
Nomenclature and Survey
Occurrence
Isolation
Properties
Constitution
Biogenesis
Specificity
Determination
Standards
Physiology of Plants
Animal Physiology
Avitaminosis
Requirements

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