

Handbook on Fermented Foods and Chemicals



AN ISO 9001 : 2015 CERTIFIED COMPANY

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About the Book

Numerous foods are prepared by fermentation processes in which one or more kinds of microorganisms are responsible for the characteristic flavour or texture, and sometimes for the keeping quality of the product. The manufacture of fermented food products is carried out on a small scale in homes in every country. Fermented products are more palatable and are not as easily spoiled as the natural products. The microorganisms that produce the desirable changes may be the natural flora on the material to be fermented, or may be added as starter cultures.

The yield of organic acids principally lactic, serve as a preserving agents. Lactic acid fermentation is an anaerobic intramolecular oxidation reduction process. Both homofermentative and heterofermentative lactic acid bacteria participate in food fermentations. In some fermented food products, yeasts and moulds also participate along with lactic acid bacteria.

Most of the reactions in living organisms are catalyzed by protein molecules called enzymes. Enzymes can rightly be called the catalytic machinery of living systems. The real break through of enzymes occurred with the introduction of microbial proteases into detergents.

Most of the enzymes are produced by microorganisms in submerged cultures in large reactors called fermentors. In choosing the production strain several aspects have to be considered. Industrial enzyme market is growing steadily. The reason for this lies in improved production efficiency resulting in cheaper enzymes, in new application fields. Tailoring enzymes for specific applications will be a future trend with continuously improving tools and understanding of structure-function relationships and increased search for enzymes from exotic environments. This field deals with how are the enzymes used and applied in practical processes. A lot of fungal, bacterial and actinomycete strains with potential for producing novel industrial enzymes have been identified.

This book contains sterilization, fermentation processes, aeration and agitation, use of yeast, yeast production, fermentation raw materials, production of bacterial enzymes, bread making methods, effluent treatment, production of actinomycete protease, lactic acid, citric acid. This handbook will be very helpful to its readers who are just beginners in this field and will also find useful for upcoming entrepreneurs, existing industries, food technologist, technical institution etc.

Contents

1. The Development of Inocula for Industrial Fermentations

Introduction

The development of inocula for yeast processes

Brewing

Baker's Yeast

The development of inocula for bacterial processes

The development of inoculum for fungal processes

Sporulation on Solidified Media

Sporulation on Solid Media

Sporulation in Submerged Culture

The Use of the Spore Inoculum

Inoculum Development for Vegetative Fungi

The Effect of the Inoculum on the Morphology of Fungi in Submerged Culture

The development of inoculum for streptomycete processes

The aseptic inoculation of plant fermenters

Inoculation from a Laboratory Fermenter or a Spore Suspension Vessel

Inoculation from a Plant Fermenter

2 An Introduction to Fermentation Processes

Lactate

Acetaldehyde

Acetalactate

Butanediol

Ethanol

The range of fermentation processes

Microbial Biomass

Microbial Enzymes

Microbial Metabolites

Transformation Processes

The chronological development of the fermentation industry

The component parts of a fermentation process

3. Sterilization

Introduction

Medium sterilization

Advantages of Continuous Sterilization over Batch Sterilization

Advantages of Batch Sterilization over Continuous Sterilization

The design of batch sterilization processes

Calculation of the Del Factor during Heating and Cooling

Calculation of the Holding Time at Constant Temperature (121°C)

Richards' Rapid Method for the Design of Sterilization Cycles

The Scale Up of Batch Sterilization Processes

Method of Batch Sterilization

The design of continuous sterilization processes

Sterilization of the fermenter

Sterilization of the feeds

Sterilization of Air

The Theory of Fibrous Filters

Filter design

4. Media for Industrial Fermentations

Introduction

Typical media

Medium formulation

Water
Energy sources
Carbon sources
Examples of Commonly Used Carbon Sources
Factors Influencing the Choice of Carbon Source
The Influence of the Carbon Source on Product Formation
Nitrogen sources
Examples of Commonly Used Nitrogen Sources
Factors Influencing the Choice of Nitrogen Source
Vitamin sources
Nutrient recycle
Buffers
The addition of precursors and metabolic regulators to media
Precursors
Inhibitors
Inducers
Oxygen requirements
Fast Metabolism
Rheology
Restricted nutrient levels
Antifoams

5. Aeration and Agitation

Introduction
The oxygen requirements of industrial fermentations
Glucose
Oxygen supply
Determination of K_La values
Gassing-out techniques
The static method of gassing out
The dynamic method of gassing out
Fluid rheology
Bingham Plastic Rheology
Pseudoplastic Rheology
Dilatant Rheology
Casson Body Rheology
Factors affecting K_La values in fermentation vessels
The Effect of Air-Flow Rate on K_La
The Effect of the Degree of Agitation on K_La
The relationship between K_La and power consumption
The relationship between power consumption and operating variables
The Effect of Medium and Culture Rheology on K_La
Medium rheology
The effect of microbial biomass on K_La
The effect of microbial products on aeration efficiency
The Effect of Foam and Antifoams on Oxygen Transfer

6. Mushrooms

Mushrooms and single-cell (microbial) protein
Production of the oyster mushroom, *Pleurotus* Species
Methods of Cultivation

Economics of Industrial Production
Growth of *Pleurotus Ostreatus* on Waste Paper
Growth of *Pleurotus ostreatus* on waste paper
Production of *volvariella volvacea*: straw mushrooms
Description
Patterns of Production and Consumption
Steps in Production
Factors Controlling Mushroom Production
Harvesting and Preservation
Discussion of Processing Steps
Preservation of Straw Mushrooms
Nutritional Content
New Microbial Strains
Expansion of Straw Mushroom Production
Edible *termitomyces* and their culture in the laboratory
Collection and Identification of *Termitomyces* Species
Culture of the Edible Species
Effect of Culture Media on Mycelia Growth
Effect of Light, Temperature, and pH on Mycelial Growth
Spawn Formation
Fruiting Body Formation
Results and Discussion
Isolation in Pure Culture
Effect of Culture Media
Effect of Temperature
Effect of Light
Effect of pH
Spawn and Fruiting Body Formation

7. Use of Yeast in Baking

Historical Introduction
Function of yeast in baking
Leavening
Effect of Yeast on Dough Development
Flavour Development
Forms of yeast used in baking
Compressed Yeast
Active Dry Yeast
Yeast for Home Baking
Yeast of Enrichment
Behaviour of yeast in dough systems
Use of Yeast in Various Dough Systems
Growth of Yeast in Doughs
Accelerated Processing of Yeast-raised Products
Yeast-leavened, Unbaked, Frozen Doughs
Sour Doughs

8. Distillersâ€™ Yeast

Introduction
Raw materials
Yeast preparation

Distillersâ€™™ Yeast
Inoculation of Yeast Mash from Preceding Mash
Inoculation of Yeast Mash with Laboratory Pure Cultures
Use of Compressed or Active Dry Bakersâ€™™ Yeast
Distillersâ€™™ fermentations
Contaminants
Distillation
Composition of distilled spirits

9. Brewersâ€™™ Yeast
Introduction
General characteristics of brewersâ€™™ yeasts
Specific characteristics of brewersâ€™™ yeasts
Flocculation
Wild Yeasts
Yeasts Cultivation and Pitching
Nitrogen Metabolism of Brewers; Yeast
Vitamin Requirements
Mineral Requirements
Fermentation of Wort Sugars
Effect of Temperature and Other Variables on Rate and Time of Fermentation
Growth of Yeast
By-products of alcoholic fermentation
Higher Alcohols (Fusel Oils)
Esters
Diacetyl, Acetoin, 2, 3-Butanediol, and 2, 3-Pentanedione
Aldehydes
Glycerol
Acids
Sulfur Compounds
Processing
Generation of Heat
Batch Fermentations and Modified Batch Fermentations
Continuous Fermentation
Microbial Stability of Beer
Adsorption of Isohumolone and Anthocyanins by Yeast

10. Wine Yeasts
History
Wine yeast terminology
Description of species
Natural yeasts and their occurrence in grapes and musts
Fermentation by natural yeasts and by wine yeasts
Production of wine yeast starters
Compressed wine yeast and active dry wine yeast
Biochemistry of wine yeast fermentations
Rate of Fermentation
Effect of Temperature
Fermentable Sugars in Musts and Yield of Ethanol
Effect of Carbon Dioxide Pressure on Fermentation
Effect of Ethanol on Fermentation Rate

Effect of pH on Rate of Fermentation

Sulfur Dioxide

Diethyl Pyrocarbonate (DEPC)

Sorbic Acid and p-hydroxybenzoic Acid Esters

Tannins

Ion-exchange Resins, Antibiotics and Fungicides

By-products of the alcoholic fermentation, flavor compounds, acids and yeast nutrients

Introduction

Alcohols

Aldehydes

Glycerol, 2,3-Butylene Glycol, Acetoin and Diacetyl

Esters

Malic Acid and the Malo-lactic Fermentations

Acids

Nitrogenous Compounds

Sulfur Compounds

Vitamin Requirements of Wine Yeasts

Production of wines

Introduction

Red and White Table Wines

Sherry

Sparkling Wines

Fermentation of Uncrushed Grapes (Maceration Carbonique)

Continuous Fermentation

Cider and Other Fruit Wines

11. Bakersâ€™™ Yeast Production

History

Outline of the manufacturing process

Raw materials

Molasses

Minerals

Vitamins

Nitrogen

Fermentation Activators

Fermentation Inhibitors

Principles of aerobic growth of bakersâ€™™ yeast

Introduction

Concentration of Fermentable Sugars

Limitation of Yeast Growth Rate

Oxygen Requirements and Aeration

Effect of pH

Temperature

Yield Energy, and the Development of Heat

Osmotic Pressure

Yeast Concentration in the Fermenter

Periodicity and Budding

Practice of the aerobic growth of bakersâ€™™ yeast

Fermentation Tanks

Cooling

Aeration Systems

Feed Rates
Sequence of Fermentations
Defoaming
Utilization of Ethanol
Automatic Process Control
Continuous Aerobic Propagation of Bakersâ€™™ Yeast
Harvesting of Yeast Cells
Mixing, Extruding and Packaging Compressed Yeast
Contamination
Stability of Compressed Yeast
Active Dry Yeast

12. Lactic Acid $\text{CH}_3\text{CHOHCOOH}$

From whey by Fermentation

Reaction

Material Requirements

Process

From Lactonitrile

Use Pattern

Miscellaneous

Economic Aspects

13 Citric Acid

From Molasses by Fermentation

Reaction

Material Requirements

Process

By Submerged Fermentation

Use Pattern

Miscellaneous

Economic Aspects

14. A Milk-Bottle Fermentation

15. The Fermentor: An Elaborate Milk Bottle

16. Fermentation Raw Materials

17. A Typical Industrial Fermentation

18. Production of Actinomycete Protease by Solid-State Fermentation and its Application in Dehairing of Goatskin

Introduction

Materials and methods

Isolation of Proteolytic Soil Actinomycetes

Dehairing of Goatskins

Analyses

Determination of Protein

Protease Assay

Results

Isolation of Proteolytic Soil Actinomycetes

Discussion

19. Fermented Vegetables

Introduction

Theory behind fermented vegetables

Indian or oriental fermented vegetables

Fermented vegetables of the west

Advantages of Fermented Vegetables: Disadvantages of Fermented Vegetables

20 Production of Bacterial Extracellular Enzymes by Solid State Fermentation

Introduction

Materials and methods

Bacterial Strains

Enzyme Production in SSF

Amylase Production vs. Incubation Period

Effect of Moisture Level

Effect of Various Additives

Solid State Cultivation in Trays

Enzyme Assays

Results and discussion

21. Fermented Products

General procedure

Tips

Simple Bread

Method

Round bread

Method

Tiger Skin Bread

Method

Seasoned Bread

Method

Malteser Bread

Method

French Bread

Method

Tips

Rich bread

Method

Cinnamon Sugar bread

Method

Other bread

Method

Potato barm bread

Method

Bread (sponge & Dough Method)

Method

Toast/ Rusk

Method

Rusk

Method

Tip
Bun / Roll
Method
Soup Stick
Method
Plaited Bun: Winston
Method
Plaiting with 2-strings
Plaiting with 3-strings
Plaiting with 5-strings
Plaiting with 4-strings
Plaited with 6-strings
Winstone
Tip
Seli Bun
Method
Basic sweet dough
Method
Butterfly bun
Method
Nutty Rolls
Method
Jam filled buns
Method
Cheese cake
Method
Hot cross bun
Method
Dutch bread
Method
German coffee cake
Method
German Coffee Cake (Coconut)
Method
Yeast raised fruit cake
Method
Doughnut
Raised doughnut
Method
Cake doughnut
Method
Combination doughnut
Method
Variation
Fruit finger doughnut
Jam ball doughnut
Masala doughnut
Pitza
Pitza base
Method
Vegetable Pitza

Method
Gravy Pitza
Method
Variations
Chanou Pitza
Method
Assembling (Base and Filling)
Surti Butter
Method
Stuffed Products
Burger
Tip
Variation
Tips
Sandwich
Method
Tips
Variations
Tips
Stuffed rolls
Method
Danish Pastry
Method
Filling Preparation
Variety “ 1
Variety-2
Danish comb
Method
Cinnamon roll
Method
Croissant
Method
Pinwheel
Method

22. Bread Characteristics

Introduction
External characteristic
Volume
Bloom
Crust Colour
Factors Affecting the Crust Colour
Evenness of Bake
Factors Affecting Evenness of Bake
Oven Break
Factors Affecting Oven Break
Internal characteristics
Crumb Colour
Factors Affecting Crumb Colour
Crumb Structure
Factors Affecting Crumb Structure

Crumb Clarity and Elasticity
Crumb Clarity
Crumb Elasticity
Sheen and Texture
Sheen
Texture
Taste and Aroma
Factors Affecting Taste and Aroma
Moistness
Factors Affecting Moistness
Cleanliness
Bread faults
Introduction
External faults
Faults in Volume
Lack of Volume
Excessive Volume
Faults in Crust
Lack of Crust Colour
Dark Crust Colour
Cracking of Crust
Leathery Crust
Hard Crust
Thick Crust
Blisters
Lack of Bloom
Shell Top
Irregularity of Shape
Lack of Cleanliness
Internal faults
Holes and Tunnels
Core, Seams, Streaks & Condensation Mark
Damp, Clamy & Closed Crumb
Dryness and Rapid Staling
Crumbliness of the Crumb
Defects in Taste and Aroma
Summary of bread faults and their causes
Bread diseases
Introduction
Rope
Bacteria Responsible
Symptoms
Sources of Contamination
Moulds
Types
Causes
Preventive Measures
Chemical Inhibitors
Germicidal Ultraviolet Rays
Recommended Bread Making Practices
Cleaning

Raw Material
Fermentation
Baking
Cooling
Contact Surface
Packing
Storage
Re-entry of Stale Bread
Customers
Bleeding Bread
Food Poisoning
Salmonella
Sources
Symptoms
Prevention
Streptococcus
Staphylococci
Variety bread
Introduction
French Bread
Italian Bread
Vienna Bread
Dutch Bread
Raisin Bread
Rye Bread
Egg Twist Bread
Cracked Bread
Process control
Fermentation
Proofing
Staleness in bread
Introduction
What is Staleness?
Characteristics of stale bread
Types
Crust Staling
Causes
Preventive Measures
Crumb Staling
Causes
Improper Quality Raw Material
Improper Bread Processing
Improper Packing and Storage
Retardation
Ingredients
Processing
Freezing
Use of Additives
Bake shop emergencies
Introduction
Yeast problem

Shortage of Yeast
No Yeast in the Dough
Too Much Yeast
Salt problem
Dough without Salt
Too Much Salt
Too Much Sugar, Shortening or Milk
Overweight of Flour or Water
Late Mixing

23. Other Fermented Products

Introduction
Bun goods
Raw Material
Processing
Prepared Mixtures
Pitza base/crust
Raw Material
Processing
Doughnut
Raw Material
Procesing

24. Bread Ingredient

Introduction
Raw material
Flour
Colour
Strength
Tolerance
Water Absorption Power
Uniformity
Diastetic Activity
Effect of Low and High Diastetic Activity on Bread
Preventive Measures

25. Bread Making Methods

Introduction
Conventional methods
Straight Dough Method
Advantages and Disadvantages
Sponge and Dough Method
Advantages and Disadvantages
Salt Delayed Method
Advantages and Disadvantages
No Dough Time Method
Advantages and Disadvantages
Ferment and Dough Process
Mechanical dough development method
Liquid Brew

26. Bread Processing

Introduction

Ingredient selection and formula balancing

Mixing/Kneading

Purpose

Flying Ferment

Process

Importance

Other Preparation

Dough Temperature

Mixing Process

Hand Mixing

Machine Mixing

Slow speed mixing

High speed mixing

Spiral mixing

Mixing Stages

Mixing Time

Flour Quality

Bread Making Method

Dough Temperature and Consistency

Fat and Salt Quantity and Stage of its Addition

Over or Under Mixed Dough

Over Mixed Dough

Under Mixed Dough

Physical and Chemical Changes During Mixing

Physical Changes

Chemical Changes

Bulk fermentation

Physico-chemical Reactions

Under or Over Ferment Dough

Under Ferment Dough

Over Ferment Dough

Knock back

Dough make-up

Scaling

Rounding

Intermediate Proofing

Moulding

Hand Moulding

Machine Moulding

Panning

Tempering the Pan

Greasing/Glazing the Pan

Bread Pan

Proofing

Factor Affecting the Final Proof

Temperature

Relative Humidity

Diastetic Activity of the Flour

Fermentation

Under or Over Proofing
Over Proofing
Under Proofing
Baking
Time and Temperature
Physico-chemical Changes
Oven Rise and Oven Spring
Yeast Activity
Enzyme Activity
Starch Gelatinization
Protein Denaturation
Protein Coagulation
Browning Reaction
Oven Problems
Insufficient Oven Heat
Excessive Oven Heat
Excess Steam
Insufficient Steam
Improper Heat Distribution
Incorrect Pan Spacing
Depanning
Cooling
Slicing
Packing/Wrapping

27. Effluent Treatment

Introduction
Dissolved oxygen concentration as an indicator of water quality
Factory surveys
The strengths of fermentation effluents
Treatment and disposal of effluents
Disposal
Seas and Rivers
Lagoons
Spray Irrigation
Well Disposal
Disposal of Effluents to Sewers
Treatment processes
Physical Treatment
Chemical Treatment
Biological Treatment
Aerobic Processes
Tricking Filters
Towers
Rotating Discs
Rotating Drums
Activated Sludge
Anaerobic Treatment
Anaerobic Digestion
Anaerobic Filters
By-products

Distilleries
Breweries
Amino Acid Wastes

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