



BASELIUS COLLEGE KOTTAYAM

Food Safety and Quality Control

Supporting Documents

- 1. Brochure**
- 2. Syllabus**
- 3. Attendance**
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- 5. Certificate**



BASELIUS COLLEGE

Kottayam, Kerala, India - 686001 ESTD.1964
NAAC accredited @ A++ Grade with CGPA of 3.51

Dept. of Chemistry & Center for Research

Certificate course in
FOOD SAFETY
&
QUALITY CONTROL
in association with IQAC

★ *High lights* ★

Basic knowledge of food chemistry
Preservation of food
Food safety and hygiene
Hands-on training in the laboratory

★ *Scope and Relevance* ★

An opportunity to become a food analyst
To learn quality control of food products

Admission started

Duration: 45 Hours
Course fee: Rs. 1000/-
No. of seats: 30

For additional information, contact

Dr. Mity Thambi (Course Coordinator)
Ph.No.9446234059
Email: chemistry@baseliuscollege.ac.in

Interested candidates with Science Background can apply
Last date of Registration is 30th November 2022
Classes begin on 4th December 2022

BASELIUS COLLEGE, KOTTAYAM
DEPARMENT OF CHEMISTRY & CENTRE FOR RESEARCH
Certificate Course in
Food Safety and Quality Control
(InCollaboration with AGMARK, Govt. of Kerala)

Aim: Skill development: Exposure to specification used in Food Industries and learn quality control of food products.

OBJECTIVES: To impart basic knowledge of the chemistry of foods - composition of food, role of each component and their interaction, Preservation of foods, Pesticides in foods, Packaging Materials, Food Packaging system, different methods of fruits and vegetable processing, Food safety and hygiene, Types of hazards associated with food, Food regulations, Design and implementation of food safety management systems such as ISO series, HACCP, AGMARK and AOAC.

Syllabus

Total hours: 45 (Theory – 35; Practical: 10)

UNIT 1: FOOD ADDITIVES AND ADULTERATION:

5 hours

Food additives, antioxidants, sequestrants, Food colours - permitted and non-permitted, emulsifiers, stabilizers and thickening agents, sweeteners, leavening agents, humectants and anti-caking agents, and flavoring substance

Food adulteration: Types of adulterants- intentional and incidental adulterants, methods of detection. Health hazards and risks.

UNIT II :FOOD QUALITY AND EVALUATION

8 hrs

Evaluation of foods-physical (taste, volume, texture, viscosity) and chemical methods (pH, acidity, alkalinity, sugar concentration). Food spoilage- spoilage of fruits and vegetables, grains, milk and milkproducts, meat, poultry and sea foods, sources of microbial contamination of foods.

Preservation of foods: physical methods: cold and heat treatment, ultra sound and microwave.chemical methods: organic acids, sodium chloride, sulfites, nitrites, antimicrobial compounds: lactoperoxidase system, lactoferrin, avidin,spices and their essential oils.

UNIT III: PESTICIDES IN FOODS

6 hrs

Various pesticides used in agriculture and post-harvest storage, uses of pesticides for food grain application. Pesticide residues in grains, fruits and vegetables, meat, milk and milk products Fumigation techniques, various fumigants such as phosphene, ethylene dichloride, methylene chloride, etc. Estimation of pesticides and fumigants by GLC, TLC and Spectrophotometric methods.

UNIT IV: FOOD PACKAGING

8 hrs

Definitions, objectives and functions of packaging and packaging materials. Packaging requirements and selection of packaging materials; Types of packaging materials. Different packaging system for (a) dehydrated foods (b) frozen foods (c) dairy products (d) fresh fruits and vegetables (e) meat, poultry and sea foods.

UNIT V : FOOD QUALITY ASSURANCE

8 hrs

Importance and functions of quality control. Methods of quality assessment of food materials-fruits, vegetables, cereals, dairy products, meat, poultry, egg and processed food products. Food laws and standards.

Food Safety and Standards Act 2006. HACCP, ISO system – 9001, 14001, 17025 and 22000. AGMARK Certification, AOAC standards.

PRACTICALS (Any 10 experiments)

10 hrs

- 1) Determination of moisture by air oven method
- 2) Determination of aqueous acidity and alcoholic acidity of foods and measure of pH
- 3) Estimation of fat by Soxhlet extraction method (Demonstration)
- 4) Refractive index of fats and oils.
- 5) Saponification value and unsaponifiable matter of fats and oils.
- 6) Determination of total and acid insoluble ash
- 7) Determination of reducing and total reducing sugars (volumetric method).
- 8) Determination of vitamin C (volumetric)
- 9) Determination of benzoic acid in foods (volumetric)
- 10) Determination of SO₂ (total) in foods (colorimetric)
- 11) Determination of nitrate and nitrite in foods (volumetric)
- 12) Determination of anthocyanin content in foods
- 13) Detection of adulteration in food (AGMARK)

References:

1. B. Sreelakshmi, *Food Science*, New Age International, New Delhi, 2015.

2. Gazette of Food Safety and Standards Act, (2006) Food Safety regulations and food safety management. Food Safety and Standards Authority of India. New Delhi
3. The training manual for Food Safety Regulators. (2011) Vol.III, Food Safety regulations and food safety management. Food Safety and Standards Authority of India. New Delhi.
4. Mortimore, S., and Wallace, C., (2005) HACCP: A practical approach, 2nd Ed, Aspen Publication 4. Surak, J.G., and Wilson, S. (2007) American Society for Quality, 2nd Ed., Quality Press
5. Branen, A.L., Davidson, P.M. & Salminen, S. (2007) Food Additives, 2nd Ed., Marcel Dekker.
6. George, A.B. (2006) Encyclopedia of Food and Color Additives, Vol. III, CRC Press, LLC. Boca Raton, FL
7. George, A.B. (2008) Fenaroli's Handbook of Flavor Ingredients, 5th Ed, CRC Press, LLC. Boca Raton, FL 4. Madhavi, D.L., Deshpande, S.S., & Salunkhe, D.K. (2006) Food Antioxidants: Technological, Toxicological and Health Perspective, Marcel Dekker
8. Morton, I.D., & MacLeod, A.J. (2008) Food Flavors, Part A, B & C. Elsevier.
9. Nakai, S., & Modler, H.W. (2007) Food Proteins. Processing Applications. Wiley VCH.
10. Kirk, R.S and Sawyer, R. (2005) Pearson's Composition and Analysis of Foods, Longman Scientific and Technical. 9th Edition, England.
11. FAO (2006) Manuals of Food Quality Control. 2-Additives Contaminants Techniques, Rome.
12. Pomeroy, Y. and McLoone, C.E. (2008) Food Analysis: Theory and Practice, CBS publishers and Distributor, New Delhi

ATTENDANCE REGISTER

FOR THE MONTH OF February 2023

Serial No.	Name and Designation	DATE																															REMARKS
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
1	Arshad S.	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
2	Arshad S.	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
3	Arshad S. Ragh.	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4	Arshad S.	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
5	Arshad S. DLP	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
6	Arshad S. Bja	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
7	Arshad S. Gahad.	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
8	Arshad S. CT	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
9	Arshad S. Vaghar	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
10	Arshad S. P.	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
11	Arshad S. T	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
12	Arshad S. Tashua	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
13	Arshad S. Tharay	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
14	Arshad S. K. Shaj	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
15	Arshad S. P.	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D

Station :
Date :

Signature

Food Safety and Quality Control Certificate Course - 2022-23

List of Students

Sl.No	Name of the student	Class
1	Adithya K. Sumesh	D2 Chemistry
2	Akhila S	D3 Chemistry
3	Anzal S	D3 Chemistry
4	Ashkar C. Razak	D3 Chemistry
5	Binisree P.S	D3 Chemistry
6	Daya S Dilip	D3 Chemistry
7	Devika Biju	D3 Chemistry
8	Elizabeth Gabriel	D3 Chemistry
9	Fasna C.I	D3 Chemistry
10	Liya Varughese	D3 Chemistry
11	Nayanadas P	D3 Chemistry
12	Parvathy KT	D3 Chemistry
13	Rashmi Joshua	D3 Zoology
14	Riyamol Kuriakose	D3 Chemistry
15	Sneha Thomas	D3 Chemistry
16	Sojin Saji	D3 Chemistry
17	Sreedharsana P	D3 Chemistry
18	Sreekanth Sarma	D3 Chemistry
19	Anju Cherian	D2 Chemistry
20	Akshaya Philip	D2 Chemistry
21	Ashisha Bobby	D2 Chemistry
22	Christy Shaji	D2 Chemistry

DEPARTMENT OF CHEMISTRY
&
CENTRE FOR RESEARCH
BASELIUS COLLEGE, KOTTAYAM

10/9/2022

CERTIFICATE

This is to certify that the following teachers of the department actively participated in the design of curriculum for the Certificate course started in association with AGMARK, Kottayam “Food Safety and Quality Control”.

1. Dr. Suma Bino Thomas
2. Smt. Jinu Mathew
3. Dr. Priya Thambi T
4. Smt. Shetal Elizabeth Thomas
5. Dr. Anju Linda Varghese
6. Dr. Mity Thambi
7. Smt. Christina Mariam Mathew
8. Dr. Jintha Thomas
9. Dr. Sherin Joy



Dr. Sumo Bino Thomas
(Head of the Department)