



Office-Principal

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Towards Excellence...

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Report

Title of the Programme: 15 Days Certificate Course on “Food Adulteration”

The 15 Days Certificate Course was organized by the Department of Home Science under the guidance of the organizer of the programme Dr. Aradhna Dubey (Associate Professor, Home Science). The honorable Principal of the institution, Dr. S.N. Khare was present on the inauguration day of the certificate course. He mentioned in his introductory speech that the topic is food adulteration is very useful for our day-to-day life. He also added how we can be safe by avoiding the consumption of adulterated food stuffs. Further during the course, the trainer Dr. Aradhna Dubey explained the following areas:

- Definition and types of Food Adulteration.
- Historical context and significance.
- Legal and regulatory frameworks.
- Chemical Analysis Techniques.
- Microbiological Methods.
- Physical Examination Methods.
- Emerging technologies in detection.
- Quality assurance and control measures.
- Food safety management system.
- Consumer awareness and education campaigns.
- Regulatory enforcement and penalties.

LIST OF FOOD ADULTRANTS

ADULTERANTS

- Unhygenic water
- Chalk powder
- Soap powder
- Hydrogen peroxide
- Urea

MILK



HARMFUL EFFECTS

- Food poisoning
- Heart problems
- Cancer
- Vomiting
- Nausea

BLACK PEPPER



- Papaya seeds

- Liver disorders
- Stomach disorders

OIL



- Argemone seeds

- Epidemic dropsy
- Severe glaucoma

GHEE



- Vegetable oil
- Animal body fats

- Anaemia
- Enlargment of Heart

CHILLY POWDER



- Brick powder
- Saw dust

- Stomach problems
- Artificial colors can cause cancer

TURMERIC POWDER



- Yellow aniline dye
- Non-permitted colourants like metanil yellow

- Carcinogenic
- Stomach disorders

Food Products	Adulterant	Harmful Effects
Milk and Curd	Water and starch powder.	Stomach disorders.
Ghee, Cheese and Butter	Mashed potatoes, Vanaspati and starch powder.	Gastro-intestinal disturbances and other stomach disorders.
Grains	Dust, Pebbles, Stones, Straw, weed seeds, damaged grain, etc.	Liver disorders, Toxicity in the body, etc.
Pulses	Dyes, chemical and Lead Chromate.	Stomach disorders.
Coffee powder	Chicory, tamarind seeds powder.	Diarrhoea.
Tea	Artificial colouring agents.	Liver disorders.
Sugar	Chalk powder, Washing soda, Urea, etc.	Stomach disorders and kidney failure.
Pepper	Dried papaya seeds and blackberries.	Severe allergic reactions including stomach and skin irritations.
Mustard seeds	Argemone seeds.	Abdominal contractions, sluggishness and increased excretion.
Edible Oils	Mineral oil, Karanja oil, castor oil and artificial colours.	Gallbladder cancer, allergies, paralysis, cardiac arrest, and increased LDL cholesterol.

Food Products	Adulterant	Harmful Effects
Turmeric Powder	Pesticide residues, sawdust, chalk dust, industrial dyes, metanil yellow dye arsenic, lead metal etc.	Cancer and Stomach disorders.
Chilli and Coriander powder	Redbrick powder, Rhodamine B dye, Red lead, dung powder, soluble salts, water-soluble synthetic colours and other common salts.	Metal toxicity, Cancer, lead poisoning, tumour, variations in blood pressure and other stomach related disorders.
Cinnamon sticks	Cassia bark.	Liver Damage, Low Blood Sugar, Mouth Sores and increased risk of cancer.
Cumin seeds	Coloured grass seeds, sawdust and charcoal dust	Stomach disorders.
Jam, Juice and Candies	Non-permitted dyes including metanil yellow and other artificial food dyes.	These dyes are highly carcinogenic that have the potential to cause different types of cancer.
Jaggery	Washing soda, chalk powder	Vomiting and other Stomach disorders
Honey	Molasses, dextrose, sugar and corn syrups	Stomach disorders
Fruits and Vegetables	Chemical dyes, Malachite green, calcium carbide, copper sulphate and oxytocin saccharin wax.	Stomach disorders, vomiting, and dyes used are highly carcinogenic.
Tomato sauces	Pumpkin pulp, non-edible artificial colours and flavours.	Gastritis and inflammation of vital organs.
Ice Cream	Pepper oil, ethyl acetate, butyraldehyde, nitrate, washing powder. The kind of gum is added which is prepared by boiling different animal parts including the tail, udder, nose, etc.	Dreadful diseases that affect organs including lungs, kidneys, and heart.

The other domains related with food adulteration discussed during the certificate course were:

Food is essential for sustenance of life. We all eat food and gain energy for different metabolic activities. All living organisms need food for growth, work, repair and maintaining life processes.

There are different types of food available today in the market, and daily, we all depend on various food sources, including vegetables, fruits, cereals, pulses, legumes, etc.

As we buy fresh veggies and other groceries, we might have come across small pebbles in cereals and grains, darkly stained vegetables like cabbage, broccoli, fruits, dark red meat and a lot more.

Adulteration or contamination of natural food products is one of the major challenges today. Despite various actions and penalties, the practice of adding adulterant is quite common in developing countries. There are various methods used for adulterating natural products.

Food Adulteration can be defined as the practice of adulterating food or contamination of food materials by adding a few substances, which are collectively called adulterants.

Adulterants are the substance or poor-quality products added to food items for economic and technical benefits. Addition of these adulterants reduces the value of nutrients in food and contaminates the food, which is not fit for consumption. These adulterants can be available in all food products which we consume daily, including dairy products, cereals, pulses, grains, meat, vegetables, fruits, oils, beverages, etc.

The process of contaminating food or adding to the food components is a common phenomenon in developing countries.

For instance: Milk can be diluted by adding water to increase its quantity and starch powder is often added to increase its solid content.

Listed below are the main reasons for adulterating food products:

- Practiced as a part of the business strategy.
- An imitation of some other food substance.
- Lack of knowledge of proper food consumption.
- To increase the quantity of food production and sales.
- Increased food demand for a rapidly growing population.
- To make maximum profit from food items by fewer investments.

**Govt. J.M.C. Mahila
Mahavidyalaya, Mandla, M.P.**



**Department of Home Science
organizes**

**15 days Skill Based Certificate Course
on "Food Adulteration"**

**Under the Guidance of Internal
Quality Assurance Cell**

Date: 13/01/2021-30/01/2021 Time: 12:00 Hrs-14:00 Hrs Venue: Classroom
(Room No. 16)



Coordinator & Organizer:
Dr. Aradhna Dubey
IQAC Coordinator



Principal:
Dr. S.N. Khare



Adulteration is an illegal practice of adding raw and other cheaper ingredients to excellent quality products to increase the quantity. Having this

adulterated food is highly toxic and leads to several health issues, including certain nutrition deficiency diseases, kidney disorders, and failure of an individual's organ systems, including heart, kidney and liver.

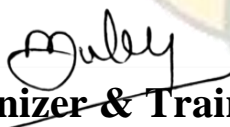
Prevention from Food Adulteration:


According to the National Health Service and Food Research Institute, several food products have been adulterated to increase the quantity and make more profit. This practice of adding adulterants to food products are quite common in all in developing countries and other backward countries.

Every year, the 7th of April is celebrated as the **World Health Day** globally and as per the reports, WHO aims to bring a general awareness about the adulterations of food products, motivate and inspire everybody to have a healthy and balanced diet.

- i. Avoid dark colored, junk and other processed foods.
- ii. Make sure to clean and store all the grains, pulses and other food products.
- iii. Wash fruits and vegetables thoroughly in running water before they are used.
- iv. Check if the seal is valid or not, before buying food products like milk, oil and other pouches.
- v. Always make sure to check and buy products having an FSSAI-validated label, along with the license number, list of ingredients, manufactured date, and its expiration.

The course wrapped up with the certificate distribution ceremony in which the certificates were distributed among the 52 students enrolled in the course by the honorable Principal, Dr. S.N. Khare and Dr. Aradhna Dubey, Organizer of the course.


Organizer & Trainer:
Dr. Aradhna Dubey
Coordinator, Internal
Quality Assurance Cell


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