EXPERIMENT 6 IDENTIFICATION OF MEAT

Structure

6.1 Objectives

6.2 Introduction

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6.4 Guideline

6.5 Identification of Meat

6.1 OBJECTIVES

After going through this practical you will be able to:

- identify different species meats like, mutton, chevon, beef, pork, chicken etc; and
- detect adulteration or substitution of meat.

6.2 INTRODUCTION

Meats from different species of animals are very important to be identified for their taste and quality for which consumer pay. Freshness, bloom, colour, flavour, tenderness of meat in each species of animals are different. Meat can be identified depending upon the colour, marbling, texture, flavour and tenderness etc. Adulteration of meat involves substitution of costly or superior quality with cheaper, undesirable or inferior quality meat. Substitution of meat can be detected to check fraudulent practice of replacing beef for buffalo meat; sheep for goat meat; buffalo veal for mutton and so on. Substitution can be identified carefully in raw meat and also in cooked meat. The sensory methods of identifications also can be done by trained panelist. There are various physical, chemical, anatomical, histological, and serological/immunological methods for identification meats. Here you will learn to identify the meats depending upon different physical methods.

6.3 REQUIREMENT

1) Buffalo meat

2) Buffalo veal

3) Lamb meat /Sheep meat

4) Goat meat

5) Pork

6) Chicken

6.4 GUIDELINE

Beef/buffalo Meat: Young bull meat is light red and in aged animals muscle becomes dark in colour and shows little intramuscular fat. Bull beef has good binding properties to hold water and this is suitable for manufactured meat products. Bullock flesh is light red to dark in colour with well marked marbling. In young animals fat is whitish yellow and in older cows fat is yellowish and loose in consistency. Buffalo meat is coarser compared to beef meat and marbling is absent.

Veal: In advanced countries the calves are fed milk. Therefore the colour of the flesh is white as well as the fat. In India veal flesh is obtained from male calves allowed to graze and consume grass. Normally veal is firm in consistency and pale to white in colour. Body fat in veal carcass is white and firm.

Lamb Meat/Mutton: Lamb meat is pale red and fine in texture compared to dark red colour with firm fibres in aged sheep meat (mutton). Fat gets deposited in well nourished animals around kidneys and pelvic region and it is white in colour. There is abundant intermuscular fat in mutton. Mutton fat is firm white/ yellow in colour depending on feed.

Goat Meat (Chevon): It resembles mutton but courser in texture. The subcutaneous fat is less where as kidney fat is abundant. This fat is pure white. There is practically no fat between the muscles. Goat meat has a goaty smell.

Pork: The pork meat is less firm compared to other meat. Fat is white and subcutaneous in layers. The meat colour is pale. Dark muscle is seen in some carcass. Pig flesh looks white on cooking compared to dark meat colour in other animals.

Chicken: Chicken (poultry meat) is pale to white in colour. It is firm in consistency with loose yellow fat. Mostly the fat is subcutaneous in nature.

Marbling: The fat in the meat influence odour and flavour of meat. The deposition of fat between muscle fibres is called marbling which occurs in young well nourished cattle and in older animals fat deposits subcutaneously on the hip and pin bones of fat cows and buffaloes.

Firmness: Too firm or too soft meat is not desirable. Fat gives desired firmness. Pork fat is soft and watery. Meat from young animals is usually soft. Firmness can be detected by pressing the meat with fingers.

Colour: It is indicator of meat quality which may be pale pink to dark red. Colour can be rough indicator of age. Dark red colour is seen in grown up animals. Dark yellow colour is seen in older animals (Jelly like).

Flavour: It is pronounced after cooking. Meat flavour can also be detected by smell peculiar to species such as goaty odour in goat meat, mutton flavour in sheep meat. Off odour can be detected by smell in spoiled meat.

Texture: Meat may be smooth or coarse due o size of muscle bundles. Small size bundles give smooth texture and large muscle bundles results into coarse texture.

6.5 IDENTIFICATION OF MEAT

Six samples of different species meats are placed for identification.

Identify random samples 1, 2, 3, 4, 5, 6 considering the following criteria and put the identified number below the specific meat.

Criteria	**Buffalo Meat**	**Veal**	**Mutton**	**Goat Meat**	**Pork**	**Chicken**	**Remarks**
Colour of Meat							
Flavour							
Texture							
Firmness							
Fat Colour							
Fat Consistency							
Sample no.							