

## **Meat Science 3(2-1)**

### **Theory**

Meat: Types, chemical and biochemical aspects Muscle: Muscle proteins, intramuscular fat, muscle function in vivo, post-mortem glycolysis, onset of rigor mortis. Factors reflected in specialized muscle function and constitution: Species, breed, sex, age, anatomical location of muscles and myofibrils. Conversion of muscle to meat: pre-slaughtering handling, moisture loss, glycogen loss, stunning and bleeding, dressing and cutting. Ageing of meat: Protein denaturation, proteolysis and other chemical changes. Meat spoilage: Endogenous and exogenous infections. Factors affecting the growth of meat spoilage microorganisms. Use of Bacteriocins against meat borne pathogens. Propleylaxis: Hygiene, biological control, antibiotics, ionizing radiations.

### **Practical**

Determination of chemical composition of red meat. Protein profile of various meats. Determination of minerals, vitamins, fatty acids and toxins.

### **Books Recommended**

1. Lawrie, R.A. 1998. Lawrie's Meat Science, 6<sup>th</sup> Ed. Woodhead Pub. Ltd. Cambridge.
2. Nollet, L.M.L. and Toldra, F. 2006. Advanced Technologies for Meat Processing. CRC, Taylor and Francis, New York.
3. Aushurst, P.R. and Dennis, M.J. 1996. Food Authentication. Blackie Academic & Profession, London.
4. Marwaha, K. 2007. Meat Hygiene. Gene-Tech Books, 4762-63/2. Ansari road, Daya. Ganj. New Delhi-110002.

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