

2.12 30812 THEORY OF LEATHER MANUFACTURE-2

UNIT-1 CHROME TANNING

- 1.1 Werner's coordination theory of chrome compounds, Chemistry of chromium complexes,
- 1.2 Preparation of chrome liquors, Self-basifying chrome powder-Hydrolysis, Olation, Oxolation,
- 1.3 Polymerization, and Theory of Valancey.
- 1.4 Factors influencing chrome tanning like pH, concentration time, temperature and neutral salts.
- 1.5 Basification and Basicity principles and chemistry of various chrome tanning methods, mechanism of chrome tanning.
- 1.6 Mechanism of chrome tanning, Basic knowledge and chrome recovery and its use.
- 1.7 Toxicological aspect and Hazards of chrome tanning, Defects Caused by chrome tanning. Standards for wet-blue.

UNIT-2 VEGETABLE TANNING

- 2.1 Classification, identification, physical and chemical properties-Study of vegetable tanning materials.
- 2.2 Preparation of tanning liquors by leaching and preparation of extract,

UNIT-3 BACTERIOLOGY

- 3.1 Fundamentals of Bacteriology: Microscopic forms of life, recognition under microscope their culture, preparation of various culture media-
- 3.2 Sterilization morphological characteristics of bacteria, staining of bacteria and classification-
- 3.3 Biochemical properties of bacteria-bacteria count.
- 3.4 Action of Bacteria on hides and skins: Damage caused by bacterial infestation, hair slip, liberation of ammonia,
- 3.5 Halophilic bacteria, problem of mold heat and its cure-
- 3.6 Bacterial analysis of various tannery substrates in the prevention of growth by use of preservatives as bacteriostatic and bacteriocidal agents,
- 3.7 Determination of productive activity of bacteria.

UNIT-4 MOULDS

- 4.1 Moulds and their difference from bacteria-damages that can be produced by moulds to leather, tan liquor, pickled skins and mould prevention.
- 4.2 Mould growth to finished vegetable tanned leather/bed blue chrome.
- 4.3 Study of preservative in leather science,
- 4.4 Action of fungus on leather,
- 4.5 Different types of fungus.

Reference Books:

1. Introduction to the Principles of Leather Manufacture - S. S. Dutta, 4th edition, ILTA, Calcutta.
2. Chemistry & Technology of Leather - Roddy, O' Flaherty & Lollar – Robert E. Krieger Publishing Co. N. Y.