
PW 02: Observation of the structure of red meat and its transformations

Objective: The aim of this practical work is to observe the microscopic and macroscopic structure of red meat and to study the physical and chemical changes that occur during its transformation from fresh meat to oxidized and cooked meat.

Materials and reagents

- Samples of fresh red meat
- Samples of oxidized meat (exposed to air for several hours or days)
- Samples of cooked meat.
- Microscope and prepared slides
- Scalpel and forceps
- Staining reagents (methylene blue)
- pH indicator strips
- Petri dishes

3. Procedure

1. Macroscopic observation

- Observe the color, texture, and odor of each meat sample.
- Record differences in appearance and surface characteristics.

2. Measurement of pH

- Take a small portion of each sample (fresh, oxidized, cooked).
- Place a few drops of extracted meat juice on pH paper.
- Record the pH value for each sample.
- Compare how the pH changes between fresh, oxidized, and cooked meat.

3. Microscopic observation

- Prepare thin slices of each sample using a scalpel.
- Stain the tissue to observe the muscle fiber structure.
- Examine under the microscope and note visible differences in fiber arrangement and color.