Measuring the pH value of meat

Measuring the pH value is a measure of the acidity or alkalinity in solutions or water containing substances. pH values lower than 7 are considered acidic, while pH values higher than 7 are considered alkaline. a pH of 7 indicates neutrality. pH values are related to the concentration of hydrogen ions (h+) in the substance. The flesh of animals prior to slaughter has a pH value of 6.9. After 24h from slaughtering, some of the glycogen in the meat turns into lactic acid. As a result, the pH value is lowered to 6. To measure the pH value of meat, a piece of meat free of blood, fat, and connective tissue should be taken after 24h from slaughtering.

Measuring pH of meat using pH meter

Requirement: digital pH meter, distilled water, beaker, electrolyte solution.

Procedure:

1. Calibrate the pH meter using pH 7 standardization buffers

2. Cut meat sample into small pieces and weight approximately 10 grams

3. Add 10 ml of distilled water

3. Read the pH after 10 min.



Measuring pH of meat using nitrazine-yellow indicator

Requirements: Nitrazine-yellow indicator, glass rod, petri plate

Procedure:

1. Take a piece of meat (2 gram) free of blood, fat, and connective tissue in a petri dish

2. Add nitrazine yellow indicator (1:10000) sufficient to cover the meat piece.

3. Mix with glass rod

Note the colour change with standard chart provided.

pH	colour	inference
6.0	yellow	good keeping quality
6.4	olive green	not having same good keeping quality (suspect)
6.8	bluish violet	suspect on signs of incipient spoilage