Learning activity 2

Test for the amount of wastage in some poultry cuts

**Objective**

To investigate the proportion of wastage in chicken cuts.

**Principle**

Upon thawing, trimming and cooking, meat will shrink. Cooking temperature and time affect the amount of shrinkage. Protein, when subjected to excess heat, continues to toughen, shrink, and lose moisture until cooking is finished.

The weight loss that occurs during thawing, trimming and cooking are referred to as wastage. The yield percentage compares the resulting weight after cooking to the original purchase weight. Yield percentage helps to determine the amount of meat to purchase, taking into consideration the losses that occur both before and after cooking.

Yield percentage can be calculated with the following formula:

$$Yield percentage =\frac{original weight – all losses}{original weight} x 100\%$$

**Equipment & materials**

|  |  |
| --- | --- |
| **Equipment** | **Materials** |
| ScaleRefrigeratorChopping boardKnifePaper towelSteamer | Sample A frozen chicken leg, whole 1 pieceSample B frozen chicken wing, mid joint 1 pieceSample C frozen chicken wing, drummette 1 pieceSample D frozen chicken breast, with skin 1 piece |

**Procedure**

1. Record the selling price of each sample.
2. Measure the weight of each sample while still frozen.
3. Thaw samples in refrigerator overnight. Remove excess liquid by a paper towel. Record their weight.
4. Trim the skin and fat from the meat. Measure the weight of each sample after removing skin and fat.
5. Remove the bones for sample A, B, and C. Measure the weight of each sample after removing the bones.
6. Steam the samples until cooked. Remove excess liquid by a paper towel. Measure the weight of each sample after cooking.
7. Calculate the yield percentage for each sample. Compare the results.

**Results**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **A** | **B** | **C** | **D** |
| Step 1Selling price ($/100g) |  |  |  |  |
| Step 2Weight at frozen state (weight as purchase) (g) |  |  |  |  |
| Step 3Weight after thawing (g) |  |  |  |  |
| Step 4Weight after removing skin and fat (g) |  |  |  |  |
| Step 5Weight after removing bones (g) |  |  |  |  |
| Step 6Weight after cooking (edible portion) (g) |  |  |  |  |
| Step 7Yield percentage (%) |  |  |  |  |
| Selling price of cooked meat ($/100g)Selling price (from Step 1) ÷ Yield percentage (from Step 7) |  |  |  |  |

**Questions**

1. Which cut is the best value for money? Why?

**Answers**

1. The yield percentages reflect the cost of net meat that provides protein, and other useful nutrients, and exclude the fatty portion and the inedible portion, such as bones.