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Effect of Conventional and Microwave Cooking Methods on Some Nutritive Contents and Quality Properties of Chicken Meat

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Abstract: Chicken leg and breast meat samples were cooked in a microwave oven, electric oven and boiling water, and cooking loss, yield, nutritive contents and their retentions after cooking, thiobarbituric acid (TBA) value, total mesophile aerobic bacterial (TMAB) counts and sensory properties were determined. Cooking losses of leg and breast meat were 29.20% and 24.80% respectively. The highest yield (79.69%) was in a breast meat cooked in a microwave oven (P<0.01). Moisture retentions of leg meat cooked in an electric oven and breast meat cooked in water were the lowest (P<0.01). While the fat retention of leg meat was not affected by the cooking methods, microwave cooking caused the highest retention in breast meat (P<0.05). Thiamin content in meat was the most affected by the boiling method and the lowest thiamin retention calculated was in meat cooked in water. All cooking methods affected the malonaldehyde content of cooked meat compared with the malonaldehyde content of raw meat (P<0.01) and was increased 5.5 fold. Microwave cooking did not reduce the TMAB counts of meat significantly. In sensory evaluation, while color and general acceptability scores of leg meat cooked in a microwave oven were lower than of those cooked in en electric oven, the color and flavor scores of breast meat cooked in a microwave oven were lower than of those cooked in an electric oven.

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