# Effect of Different Types of Wood Chips on the Sensory Properties and Microbial Status of Smoked Emulsion-Type Chicken Sausages

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This study investigated the effects of different wood chip types, respectively Cinnamon (*Cinnamomum verum*), Mahogany (*Swietenia macrophylla*), Acacia (*Acacia auriculiformis*), and Teak (*Tectona grandis*), on the colour, sensory characteristics (appearance, colour, aroma, flavour, texture, and overall satisfaction), and microbial reducing percentage of smoked emulsion type chicken sausages. A non-smoked sample was used as a control. Sensory evaluation was tested by 31 panellists (trained and untrained) using a seven-point hedonic. After the chamber process, the microbial reducing percentage was tested using the Total Plate Count test. All smoked samples did not significantly differ in microbial reducing percentage after the chamber process. The lightness value (L\*) of the smoked sample with Mahogany (57.25 ± 0.57) and Acacia (58.43 ± 0.97) displayed a significant difference from the control (59.73 ± 0.70), and also the highest L\* value revealed in Cinnamon (60.30 ± 0.89). The redness value (a\*) and the yellowness value (b\*) of the smoked sample with Mahogany (20.05 ± 0.58, 27.38 ± 0.57), Acacia (18.83 ± 0.97, 28.38 ± 1.02), and Teak (20.27 ± 0.59, 28.30 ± 0.67) showed a significant difference from the control (16.80 ± 0.67, 25.65 ± 0.53). In the sensory evaluation, all samples did not show significant aroma or flavour differences. Also, appearance and colour did not significantly differ from samples that were smoked with Mahogany, Acacia, and Cinnamon (0.05<p). The highest overall satisfaction was shown in the smoked sample with Acacia, which differed from the control and Teak (0.05>p). Therefore, the overall results suggested that the Acacia, Cinnamon, and Mahogany wood chips could be potentially utilized as local woodchips for smoking sausage in the meat industry. However, further studies need to be done to compare the microbial effect that occurred due to smoking for commercial application of the used wood chips.

**Keywords:** *acacia, mahogany, smoked sausage, type of wood, woodchips*