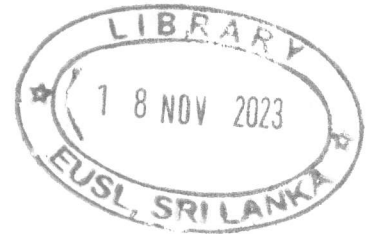


**EFFECT OF DIFFERENT GRINDING TECHNIQUES AND PRE-GRIND CONDITIONS ON THE QUALITY OF CINNAMON POWDER (*Cinnamomum zeylanicum* Blume)**



**BY**

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## ABSTRACT

The cinnamon powder comes from the inner bark of cinnamon trees. Among the commonly used strategies, hammer mill and pin mill are the grinding methods that are mostly practiced. The pre-grind moisture content and temperature affect the quality of cinnamon powder. It is caused a decrement in; taste, aroma, and colour, and it affects the quality of the final product. Therefore analysis of the mentioned quality parameters in national (SLS) and international standards for cinnamon powder is required to evaluate its quality. To study the effect of different grinding techniques and pre-grind conditions on the quality of the cinnamon powder, Cinnamon with different moisture content (12%, 14% and 16%) and pre-heated at different temperatures (35°C, 40°C, 45°C) were used before grinding. According to the result selected the pin mill grinder's best cinnamon powder sample is, pre-grind moisture content of 14%, a temperature level of 40°C and the Hammer mill grinder's best cinnamon powder sample was, pre-grind moisture content of 12%, temperature level 45°C. The selected sample two grinding methods grinder, their quality parameters are moisture content of ground cinnamon powder are arranged 11.45% and 8.26%, the oil contents are 1.42% and 1.75%, water activity 0.633 and 0.599, 500µm particle size are 85.68% and 65.24%, total ash content are 5.39% and 2.72% and acid insoluble ash content are shown 0.14% and 0.23%. The moisture content, oil content, ash content, and acid-insoluble ash content were affected by the quality of cinnamon powder when compared with the SLS standard. Therefore, this grinding technique and pre-grinding conditions are most effective in the cinnamon powder processing industry.

Key word: Cinnamon powder, Grinding techniques, Pre-grind condition, Pin mill, Hammer mill

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