

**EFFECTS OF PROCESS TIME ON THE TEXTURAL AND SENSORY
CHARACTERISTICS OF EDIBLE BAMBOO SHOOTS**

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ABSTRACT

EFFECTS OF PROCESS TIME ON THE TEXTURAL AND SENSORY CHARACTERISTICS OF EDIBLE BAMBOO SHOOTS

Effects of process time on the textural and sensory characteristics on selected edible bamboo shoots were ascertained. Four species of edible bamboo shoots namely *buluh brang*, *buluh betong*, *buluh semantan* and *buluh beting* were used. All of them were cut into top and bottom portions. All samples were canned and processed at 25, 35 and 45 minutes at 121⁰C and 15 psi. The results showed that for top and bottom portions, it was found that *buluh semantan* showed the hardest texture for fresh bamboo shoots, while *buluh beting* showed the most softening after being processed at 45 minutes. For sensory characteristics, there were no outstanding preferences for any particular specie. Overall, instrumental texture analysis data showed that the top portion of *buluh brang* was the hardest or second hardest when fresh or processed at 25 or 35 minutes. No significant preference for hardness was noted, but for fibrousness, *buluh brang* was significantly preferred to *buluh beting* and/or *buluh betong* or *buluh semantan*. For the bottom portion, *buluh brang* was either the second hardest or softest based on instrumental texture analysis results. When compared to the sensory data on fibrousness, *buluh brang* was shown to be significantly preferred at only 25 minutes of process time and no preference was indicated for hardness.

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CHAPTER 1

INTRODUCTION

Botanists classify the bamboos, together with several groups of herbaceous grasses as a subfamily (*Bambusoideae*) of the grass family (*Gramineae*). They are not only varied in size, growth habit and behavior, but are also useful in great numbers of ways. Yet, the estimated 1200-1500 species of bamboo (the accepted general term for the woody bambusoid grasses) the world over all share certain basic similarities that place them apart from other grasses: they have segmented, typically hollow and somewhat woody stems (called culms) that sprout from the underground stem portions (or rhizome), a complex system of branching; leaf blades that have a distinctive internal organization of the tissues and which are basally narrowed to form a stalk-like connection with the leaf sheath; and flowers that typically each have three perianth-like structures (lodicules) and six stamens (Wong, 1995).

Currently, due to rapid expansion of bamboo-based industries, bamboos have become the second most important non-timber forest produce in Malaysia after rattan. It is viewed as a multipurpose plant with a wide range of uses which include construction, paper, joss-sticks, barbecue sticks, chopsticks and also as a source of food (Razak et al., 1995).