IDENTIFIKASI JENIS GULA, ASAM ORGANIK, MINERAL DAN ASAM AMINO BIJI KABAU *(Archidendron microcarpum)* SEGAR DAN REBUS SEBAGAI KOMPONEN FLAVOR

INTISARI

Oleh:

YULI PERWITA SARI

12/329595/TP/10354

Kabau *(Archidendron microcarpum)* merupakan buah sejenis jengkol yang banyak ditemukan di daerah Sumatera. Sebelum diolah, kabau mengalami pemasakan pendahuluan seperti perebusan untuk mengurangi bau dan memperlunak tekstur. Adanya perebusan ini dapat mempengaruhi kandungan asam amino dan komponen non-volatil yang berpengaruh terhadap rasa kabau. Penelitian ini bertujuan untuk mengetahui jenis gula terlarut, asam organik, mineral dan asam amino pada biji kabau segar dan rebus. Selain itu juga untuk mengetahui nilai *Taste Active Value* (TAV) biji kabau segar dan rebus serta potensinya sebagai pembentuk flavor non-volatil. Nilai TAV yang lebih besar dari 1 mengindikasikan bahwa senyawa tersebut berkontribusi terhadap rasa dari bahan pangan.

Pada penelitian ini, kabau direbus selama 14 menit dengan 500 ml air. Kabau segar dan rebus ini selanjutnya mengalami pengeringan beku selama + 48 jam. Analisa gula terlarut, asam organik dan asam amino dilakukan dengan menggunakan *High Performance Liquid Chromatography* (HPLC); kalsium, kalium, natrium, magnesium dan zink ditentukan dengan *Atomic Absorption Spectrophotometer* (AAS) sedangkan UV-Vis *Spectrophotometer* untuk penentuan fosfor.

Kandungan jenis gula (stakiosa, glukosa, galaktosa dan arabinosa), asam organik (asam oksalat, sitrat, suksinat, laktat, asetat dan butirat), mineral (magnesium, natrium, kalsium, zink, dan fosfor) cenderung mengalami penurunan pada kabau rebus. Sedangkan sukrosa, asam propionat dan kalium cenderung mengalami kenaikan pada kabau rebus. Nilai *Taste Active Value* (TAV) dari gula terlarut, asam organik dan mineral pada kabau segar dan rebus masing-masing berkisar 0,19-8,63 dan 0,08-10,06; 14,88-214,06 dan 28,19-125,07; 1,26-583,24 dan 1,76-514,84. Komponen yang berkontribusi terhadap rasa kabau segar dan rebus antara lain sukrosa, arabinosa, asam sitrat, asam suksinat, asam laktat, asam asetat, kalsium, magnesium, natrium, kalium dan fosfor karena memiliki nilai TAV lebih besar dari 1.

Kata kunci: kabau, perebusan, gula terlarut, asam organik, mineral, asam amino, *Taste Active Value* (TAV)

IDENTIFICATION OF SUGAR, ORGANIC ACIDS, MINERALS AND AMINO ACIDS PROFILES IN FRESH AND BOILED KABAU SEED *(Archidendron microcarpum)* AS FLAVOR COMPONENTS

ABSTRACT

BY:

YULI PERWITA SARI

12/329595/TP/10354

Kabau is djengkol-like seed which originally from Sumatera island. Usually, pre-treatment of kabau such as boiling is often used to reduce the odor and to soften the texture of kabau. This pre-treatment can change the amino acid composition and non-volatile compounds of kabau which has responsibility of its taste. The aim of this research was to identification of soluble sugar, organic acids, minerals and amino acid profiles of fresh and boiled kabau. The taste active value (TAV) of fresh and boiled kabau was calculated to observe the potency of chemical composition in kabau as flavor compounds. The compounds whose TAV were greater than 1 were considered as active in food taste.

Kabau was boiled for 14 minutes in 500 mL of water and then, freeze-dried for 48 hours. Soluble sugar, organic acids and amino acid was analyzed using *High* Performance Liquid Chromatography (HPLC). Atomic Absorption Spectrophotometer (AAS) was used to determine calcium, sodium, potassium, magnesium and zinc. Phosphor was determined using UV-Vis Spectrophotometer.

The concentration of sugars (stachyose, glucose, galactose, and arabinose) and organic acids (oxalic, citric , succinic, lactic, acetic and butiric acid) was observed to decrease in boiled kabau. In other hand, the concentration of sucrose and propionic acid were increased in the same sample. The taste active value of dissolved sugars, organic acids and minerals in fresh and boiled kabau was in range 0,19-8,63 dan 0,08-10,06; 14,88-214,06 dan 28,19-125,07; 1,26-583,24 dan 1,76-514,84 respectively. Sucrose, arabinose, citric acid, succinic acid, lactic acid, acetic acid, calcium, magnesium, sodium, potassium and phosphor were considered as active in taste of fresh and boiled kabau because these compounds whose TAV were greater than 1.

Keywords: kabau, boiled, sugars, organic acids, minerals, amino acids, *Taste Active Value* (TAV)