INTISARI

PENGARUH PENAMBAHAN BAWANG PUTIH SEBAGAI SUMBER ANTIOKSIDAN TERHADAP KUALITAS KIMIA, FISIK, SENSORIS DAN MIKROSTRUKTUR KEBAB DAGING DOMBA

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Penelitian ini bertujuan untuk mengetahui pengaruh penambahan bawang putih sebagai antioksidan terhadap kualitas kimiawi, fisik, sensoris dan mikrostruktur kebab daging domba. Kebab daging domba terbuat dari daging domba, bawang putih sebagai sumber antioksidan dan bahan tambahan lainnya seperti tepung tapioka, angkak, gula merah, garam dan lada. Penambahan bawang putih segar 2% dan 4%, sedangkan bawang putih bubuk 0,2% dan 0,4% pada adonan kebab. Proses pembuatan kebab dengan cara mencampur daging giling dan bumbu-bumbu kemudian adonan dibentuk bulat dan disusun pada batang alumunium kemudian dipanggang pada posisi vertikal mengunakan *burner* kebab. Kebab yang telah dimarinasi dan kemudian dimasak kemudian dianalisa komposisi kimia, fisik, sensoris dan mikrostruktur. Data yang diperoleh di analisis statistik menggunakan analisis variansi dan perbedaan diantara rerata dianalisis menggunakan *Duncans New Multiple Range Test*. Hasil penelitian menunjukkan bahwa penambahan bawang putih segar dan tepung tidak mempengaruhi kualitas kimia, fisik dan sensoris pada parameter warna, rasa, tekstur dan keseluruhan kebab (P>0,05). Penambahan bawang putih secara signifikan dapat meningkatkan aktivitas antioksidan kebab masak (P<0,05) selain itu bawang putih meningkatkan aroma sensori kebab (P<0,05) dan meningkatkan kualitas mikrostruktur dengan membentuk ronga-rongga lebih sedikit dan kompak. Aktivitas antioksidan dengan nilai inhibisi pada kontrol sebesar 43,98%, bawang putih segar 2% dan 4% sebesar 45,03% dan 45,03% sedangkan penambahan bawang putih tepung 0,2% dab 0,4% sebesar 47,09% dan 48,44%. Kualitas sensoris kebab pada variabel aroma dengan nilai kontrol 5,35 (antara suka dan tidak suka), bawang putih segar 2% dan 4% sebesar 5,75 (sedikit suka) dan 6,40 (sedikit suka) sedangkan penambahan bawang putih tepung 0,2% dan 0,4% sebesar 6,20 (sedikit suka) dan 6,60 (agak suka). Kesimpulannya, penambahan bawang putih segar sampai level 4% dan penambahan bawang putih tepung sampai level 0,4% mempengaruhi aktivitas antioksidan, aroma dan mikrostruktur kebab daging domba. Penambahan bawang putih tepung level 0,4% memiliki kualitas tertinggi dan dapat digunakan sebagai sumber antioksidan. Kandungan nutrisi kebab daging domba diantaranya protein 25,71%, lemak 7,48%, kolagen 2,19%, *Saturated Fatty Acids* (SFA) 33,78%, *Unsaturated Fatty Acids* 70,91% (UFA), *Mono Unsaturated Fatty Acids* (MUFA) 57,91 dan *Poly Unsaturated Fatty Acids* (PUFA) 9,18%.

Kata kunci: Kebab daging domba, bawang putih, kimia, fisik, sensoris, mikrostruktur.

ABSTRACT

THE EFFECT OF GARLIC ADDITION AS ANTIOXIDANT SOURCES ON CHEMISTRY, PHYSICAL, SENSORY AND MICROSTRUCTURE QUALITIES OF LAMB MEAT KEBABS

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This study was aimed to evaluate the effect of garlic addition on the chemical, physical, sensory and microstructure qualities of lamb meat kebabs. Lamb meat kebabs were made of lamb meat, garlic, tapioca flour, angkak, brown sugar, salt and pepper. The addition of fresh garlic were 2% and 4%, there were the level of addition of garlic powder 0.2% and 0.4% of the dough kebabs. Kebab manufacture with mixing ground meat and spices were mixed and form round and arranged on alumunium skewer after that baked in a vertical position using a burner kebab. Marinated and cooked kebabs were then analyzed for their chemical, physical, sensory and microstructure quality. The collected data were statistically analyzed using analysis of variance and the differences between means were analyzed by Duncans New Multiple Range Test. The results showed that the addition of fresh garlic and garlic powder did not affect quality of chemical, physical and sensory in parameters color, taste, texture and overall acceptance of kebabs ($P>0.05$). The addition of garlic significantly increased the antioxidant activity of cooked kebabs ($P<0.05$) beside that garlic increase the sensory kebab aroma ($P<0.05$) and improved the microstructure quality by forming cavities less and compact. Antioxidant activity with inhibitory value for control 43.98%, 2% and 4% of fresh garlic were 45.03% and 45.03%, while the addition 0.2% and 0.4% of garlic powder were 47.09% and 48.44%. The sensory quality of the kebab aroma variable with control value 5.35 (neither like nor dislike), 2% and 4% of fresh garlic were 5.75 (light slightly) and 6.40 (light slightly) while the addition 0.2% and 0.4% of garlic powder were 6.20 (light slightly) and 6.60 (like moderately). In conclusion, the addition fresh garlic to the level of 4% and garlic powder to the level of 0.4% affected antioxidant activity, aroma and microstructure of lamb meat kebabs. The addition garlic powder level of 0.4% had the highest quality and can be used as a source of antioxidants. Nutrient conttent of lamb meat kebab were 25.71% protein, 7.48% fat, 2.19% collagen, 33.78% Saturated Fatty Acids (SFA), 70.91% Unsaturated Fatty Acids (UFA), 57.91% Mono Unsaturated Fatty Acids (MUFA) and 9.18% Poly Unsaturated Fatty Acids (PUFA).

Keywords: Lamb meat kebab, garlic, chemical, physical, sensory, microstructure.