PENGARUH SUBSTITUSI HATI SAPI PADA BAKSO SAPI TERHADAP KUALITAS FISIKOKIMIA DAN SENSORIS

EFFECT OF BEEF LIVER SUBSTITUTION ON BEEF MEATBALLS ON PHYSICOCHEMICAL AND SENSORY QUALITY

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SEMARANG

2025

RINGKASAN

Hewan ternak seperti sapi menghasilkan produk samping berupa organ seperti jantung, hati, ginjal, paru-paru, otak, lidah, dan lainnya yang memiliki kandungan protein, vitamin, dan mineral yang tinggi dan berkualitas. Penambahan hati sapi dalam pembuatan bakso sapi tidak hanya meningkatkan kandungan zat besi produk, tetapi juga dapat memengaruhi karakteristik fisik, kimia, organoleptiknya. Penelitian ini bertujuan untuk mengetahui pengaruh substitusi hati sapi dan jumlah tepung tapioka terhadap kualitas fisikokimia dan sensoris bakso daging. Penelitian ini berupa penelitian faktorial yang terdiri dari dua macam perlakuan, yaitu proporsi substitusi hati sapi terhadap daging sapi pada lima tingkat (20%, 40%, 60%, 80%, dan 100%) dan proporsi tepung tapioka pada 2 tingkat (15% dan 20%). Variabel kualitas dalam penelitian ini adalah parameter fisik, yaitu warna (nilai L*, a*, b*), daya ikat air, dan profil tekstur (*hardness* dan *springiness*); parameter kimia, yaitu kadar air, kadar protein, kadar lemak, kadar abu, kadar karbohidrat, kadar zat besi; dan parameter sensoris berupa warna, aroma, tekstur, rasa, dan keseluruhan yang diuji dengan uji *rating* hedonik. Hasil penelitian menunjukkan bahwa substitusi hati sapi menyebabkan perbedaan nyata pada warna, tekstur, kadar proksimat, dan kadar zat besi pada bakso sapi. Secara sensoris, bakso dengan substitusi hati sapi 20% masih dapat diterima oleh konsumen.

SUMMARY

Cattle produce various by-products in the form of internal organs such as the heart, liver, kidneys, lungs, brain, and tongue. These organs are recognized as rich sources of high-quality protein, essential vitamins, and minerals. The utilization of beef liver in the production of beef meatballs not only contributes to increasing the product's iron content but may also alter its physical, chemical, and sensory properties.This study was conducted to investigate the influence of beef liver substitution and tapioca flour proportion on the physicochemical and sensory quality of beef meatballs. A factorial experimental design was employed, consisting of two factors: the proportion of beef liver substitution for beef at five levels (20%, 40%, 60%, 80%, and 100%), and the proportion of tapioca flour at two levels (15% and 20%).The parameters assessed included physical characteristics (color attributes L, a*, b*, water-holding capacity, texture profile—hardness and springiness), chemical composition (moisture, protein, fat, ash, carbohydrate, and iron content), and sensory attributes (color, aroma, texture, taste, and overall acceptability), evaluated using a hedonic rating test.The results demonstrated that the substitution of beef liver significantly affected the meatballs' color, texture, proximate composition, and iron content. Sensory evaluation revealed that meatballs containing up to 20% beef liver substitution were still acceptable to consumers, suggesting potential for liver incorporation in functional meat product development.*