

PROFIL PROTEIN, SIFAT KIMIA, FISIK, DAN SENSORIS SOSIS SAPI YANG DISUBSTITUSI DENGAN *TEXTURIZED VEGETABLE PROTEIN*

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ABSTRAK

Texturized vegetable protein (TVP) merupakan produk tepung kedelai teksturasi yang dibuat menyerupai daging hewan. Dalam pengembangan produk, TVP sudah menjadi salah satu bahan pengganti daging pada produk-produk olahan daging, salah satunya sosis. Penelitian ini bertujuan untuk mengidentifikasi profil protein dan mengetahui pengaruh substitusi daging sapi dengan TVP terhadap sifat kimia, fisik, dan sensoris sosis sapi serta menentukan level substitusi optimal.

Penelitian ini dilakukan dengan tahapan: pembuatan sosis sapi dengan dan tanpa substitusi TVP kemudian dilakukan pengujian profil protein dengan metode SDS-PAGE, sifat kimia, fisik, dan sensoris. Variasi level substitusi daging sapi dengan TVP sebesar 0% (kontrol), 10%, 20%, 30%, dan 40% dari bobot total daging sapi.

Hasil penelitian menunjukkan substitusi daging sapi dengan TVP cenderung menurunkan konsentrasi protein berberat molekul besar ($\geq 45,70$ kDa) kecuali 112,50 kDa, sebaliknya protein berberat molekul kecil ($\leq 41,53$ kDa) cenderung mengalami kenaikan konsentrasi. Substitusi daging sapi dengan TVP dapat meningkatkan kadar air, nilai L^* dan b^* (warna), *water holding capacity*, dan *cooking yield*, sedangkan menurunkan kadar lemak, *hardness*, dan kepadatan sosis sapi. Substitusi ini juga menurunkan kualitas flavor sosis sapi dengan meningkatkan intensitas *off flavor* pada sosis sapi. Substitusi ini tidak berpengaruh pada kadar protein, nilai pH, nilai a^* (warna), *juiciness*, *springiness*, warna (sensoris), dan intensitas flavor sapi. Dari hasil uji organoleptik, diperoleh level substitusi optimal pada 30% karena pada level tersebut belum ada penurunan kesukaan panelis terhadap parameter kenampakan, flavor, dan tekstur, maupun secara keseluruhan sosis sapi.

Kata kunci: *Texturized Vegetable Protein*, sosis sapi, substitusi, SDS-PAGE

PROTEIN PROFILE, CHEMICAL, PHYSICAL, AND SENSORY PROPERTIES OF BEEF SAUSAGE SUBSTITUTED BY TEXTURIZED VEGETABLE PROTEIN

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ABSTRACT

Texturized vegetable protein (TVP) is soy flour product that texturized in order to form texture similar to animal meat. In product development, TVP used to be animal meat substitution applied in meat products, sausage is the one of them. This research aims to identify protein profile and investigate the effects of beef substitution with TVP on the chemical, physical, and sensory properties, and to determine optimal substitution level according to sensory analysis results.

This research was conducted by making sausages with five different treatments in various substitution levels (0% (control), 10%, 20%, 30%, and 40%) then be analyzed the protein profile with SDS-PAGE method, chemical, physical, and sensory properties.

The results show that beef substitution with TVP tend to reduce the protein concentration with high molecular weight ($\geq 45,7$ kDa) except 112,50 kDa, while low molecular weight protein ($\leq 41,53$ kDa) concentration tend to increasing. Beef substitution with TVP could increase water content, L^* and b^* (color) values, water holding capacity, and cooking yield, while could significantly reduce fat content, hardness, and beef sausage fullness. This substitution also decrease beef sausage flavor quality by increase the off flavor intensity. This substitution was not influence protein content, pH value, a^* value (color), juiciness, springiness, color (sensory), and beef flavor intensity. According to sensory test results, optimal substitution was in 30%, because in this level there was no significant decline in panelists acceptability towards appearance, flavor, texture, and overall of beef sausages.

Keywords: Texturized Vegetable Protein, beef sausage, substitution, SDS-PAGE