SIFAT FISIKOKIMIA EMULSI GEL MINYAK BIJI BUNGA MATAHARI DAN *VIRGIN COCONUT OIL* SEBAGAI *ANIMAL FAT REPLACER* PADA SOSIS SAPI

INTISARI

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Emulsi gel berbasis protein-polisakarida dengan minyak nabati digunakan sebagai pengganti lemak hewani pada produk sosis sapi. Emulsi gel dibuat dengan dua jenis minyak yang berbeda (*Sunflower Oil, Virgin Coconut Oil*), *soy protein concentrate* (SPC) (5,5%b/b), kappa-karagenan (1%b/b), dan GDL (2%b/b). Sosis dibuat dengan lima persentase emulsi gel (0%, 25%, 50%, 75%, 100%). Jenis minyak pada emulsi gel berpengaruh terhadap ukuran droplet dan kekerasan emulsi gel, namun tidak berpengaruh terhadap pH emulsi gel. Hasil penelitian menunjukan bahwa emulsi gel dengan *sunflower oil* memiliki ukuran droplet yang lebih kecil yakni, 3,69 ± 0,21 µm dan nilai yang lebih tinggi, yakni sebesar 0,53 ± 0,04 N. Hasil pengujian sosis yang dibuat dengan menggunakan emulsi gel menghasilkan sifat fisik dan kimia yang berbeda. Sampel SEV memiliki nilai yang lebih rendah pada parameter pH, kadar lemak, dan tekstur, tetapi memiliki nilai yang lebih tinggi pada parameter kadar air dibandingkan dengan sampel SES. Peningkatan persentase emulsi gel akan menurunkan pH, kadar lemak, dan nilai *hardness, cohesiveness, gumminess, chewiness*, dan *springiness* sosis, namun meningkatkan kadar air, kadar protein, dan kadar abu. Berdasarkan hasil uji sensoris, sampel kontrol lebih disukai pada aspek rasa, sampel SEV100 lebih disukai pada aspek aroma, dan sampel SES100 lebih disukai panelis dari aspek *hardness*, *springiness*, dan *juiciness.*

Kata kunci: sosis, emulsi gel, *fat replacement*, *sunflower oil, virgin coconut oil*

PHYSICOCHEMICAL PROPERTIES OF SUNFLOWER SEED OIL AND VIRGIN COCONUT OIL GEL EMULSION AS ANIMAL FAT REPLACER IN BEEF SAUSAGE

ABSTRACT

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Protein-polysaccharide based gel emulsion with vegetable oil was used as a substitute for animal fat in beef sausage products. Emulsion gel was made with two different types of oil (Sunflower Oil, Virgin Coconut Oil), soy protein concentrate (SPC) (5.5% w/w), kappa-carrageenan (1% w/w), and GDL (2% w/w). Sausages were prepared with emulsion gel (0%, 25%, 50%, 75%, 100%). The type of oil in the emulsion gel affected the droplet size and hardness of the emulsion gel, but did not affect the pH of the emulsion gel. Based on the result of the study, emulsion gel with sunflower oil had a smaller droplet size (3,69 ± 0,21 μm) and a higher hardness (0,53 ± 0,04 N). The physicochemical properties of the sausage produced with emulsion gel were also significantly influenced. The SEV sample had lower values in pH, fat content, and texture parameters, but had higher values in water content parameters compared to the SES. Increasing the percentage of emulsion gel would decrease the pH, fat content, and hardness, cohesiveness, gumminess, chewiness, and springiness values of the sausage, but increase the water content, protein content, and ash content. Based on the sensory evaluation, control was preferred in terms of taste, SEV100 was preferred in terms of aroma, and SES100 was preferred by the panelists in terms of hardness, springiness, and juiciness.

Keywords: sausage, gel emulsion, fat replacement, sunflower oil, virgin coconut oil