PROFIL PROTEIN DAGING SAPI, KAMBING DAN KERBAU YANG DILUMURI SERBUK BUAH NANAS (*Ananas comosus (L.) Merr*)

Erni Rachmawati[1], Sri Darmawati[2], Endang Tri Wahyuni Maharani[3]

[1.] Program Studi Diploma IV Analis Kesehatan Fakultas Ilmu Keperawatan dan Kesehatan Universitas muhammadiyah Semarang
[2.] Laboratorium Biologi Molekuler Fakultas Ilmu Keperawatan dan Kesehatan Universitas Muhammadiyah Semarang
[3.] Laboratorium Kimia Fakultas Matematika dan Ilmu Pengetahuan Universitas Muhammadiyah Semarang

ABSTRAK

Daging mengandung protein yang tinggi, terdapat pula asam amino esensial yang lengkap, seimbang, beberapa jenis mineral dan vitamin. Buah nanas mengandung enzim bromelin yang merupakan bagian dari enzim protease *sulfidril* yang mampu menghidrolisis peptida menjadi molekul yang lebih sederhana yaitu asam amino. Tujuan penelitian ini untuk menganalisis profil protein daging sapi, kambing dan kerbau yang dilumuri serbuk buah nanas dengan konsentrasi 5%, 10%, 15% dan 20% selama 20 menit, 40 menit dan 60 menit dengan metode SDS-PAGE. Desain penelitian ini adalah eksperimen dan deskriptif dengan objek penelitian adalah daging sapi, kambing dan kerbau yang dilumuri serbuk buah nanas dengan variasi konsentrasi dan lama inkubasi 20, 40 dan 60 menit. Hasil penelitian ini berdasarkan elektroforesis SDS-PAGE menunjukkan daging kontrol sapi, kambing dan kerbau terdapat banyak pita protein mayor. Sedangkan daging yang dilumuri serbuk buah nanas menunjukkan semakin tinggi konsentrasi serbuk buah nanas dan lama inkubasi maka semakin banyak protein mayor yang terhidrolisis, seperti pada pelumuran daging dengan konsentrasi serbuk buah nanas 20% daging kambing dan daging kerbau terdapat 1 pita protein mayor dan daging sapi tidak terdapat pita protein mayor. Berdasarkan hasil penelitian menunjukkan enzim bromelin dalam serbuk buah nanas mampu menghidrolisis ikatan peptida menjadi asam amino yang lebih sederhana.

Kata Kunci : Daging, buah nanas, profil protein, SDS-PAGE

PROTEIN PROFILE MEAT OF COW, GOAT AND BUFFALO SMEARED OF PINEAPPLE POWDER (Ananas comosus (L.) Merr)

Erni Rachmawati[1], Sri Darmawati[2], Endang Tri Wahyuni Maharani[3]

[1.] Medical Laboratori tecnichal D IV study programme of health and Nursing University of Muhammadiyah Semarang
[2.] Laboratory of Molecular Biology Faculty of Nursing and Health University of Muhammadiyah Semarang
[3.] Chemistry Laboratory Faculty of Mathematics and Science University of Muhammadiyah Semarang

ABSTRAK

Meat contains a high protein, there are also essential amino acids are complete, balanced, several types of minerals and vitamins. Pineapple contains bromelin enzyme which is part of *sulfidril* protease enzyme capable of hydrolyzing peptides become a simpler molecules that is amino acids. The purpose of this research was to analyze the protein profiles meat of cow, goat and buffalo with pineapple powder concentrate 5%, 10%, 15% and 20% for 20, 40 and 60 minutes with SDS-PAGE method. The design this research is experimental and descriptive with the object of research are meat of cow, goat and buffalo which smeared pineapple powder with variation of concentration and incubation time 20, 40 and 60 minutes. The results of this study based on electrophoresis SDS-PAGE showed control meat of cow, goat and buffalo there are many protein major band. While the meat was smeared pineapple powder showed a higher concentration of pineapple powder and longer incubation time, the more hydrolyzed major proteins, such as the meat with pineapple powder concentration of 20% meat of goat and buffalo contained 1 major protein and beef there is a nothing major protein band. Based on the results of the study showed that the bromelin enzyme in pineapple powder is able to hydrolyze the peptide become a simpler amino acid.

Keywords: Meat, pineapple, protein profile, SDS-PAGE