

Identification of Goats and Cows Milk Protein Profile in Banyumas Regency by Sodium Dodecyl Sulphate Gel Electrophoresis (Sds-Page)

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| Abstract | <p>Protein is one of the nutrient components in milk that is related to product quality. The components of milk protein are divided into casein alpha-s1, beta, alpha-s2, kappa, and whey fractions such as alpha lactalbumin and beta lactoglobulin. There are no existing data of milk protein fraction in dairy cow and goats in Banyumas Regency. This study aimed to determine the profile in form of protein fractions of cow and goat milk in Banyumas. Milk sample from fifty cows and thirty dairy goats was taken by random sampling in some areas. The milk protein profile was identified by the technique of sodium dodecyl sulphate gel electrophoresis (SDS-PAGE) and protein quantity prediction by software. The data obtained were analyzed statistically by Mann-Whitney between cows and goats. The results were significantly different ($p < 0.05$) between cows and goats in molecular weight of protein alpha-S1 casein (29.66 vs 33.37 kDa), alpha-S2 (27.76 vs 29.49 kDa), beta (24 , 48 vs 25.59 kDa) and beta lactoglobulin (15.75 vs 15.97 kDa). The quantity of casein alpha-S1 (7.88 vs 4.16 g/l), alpha-S2 (1.31 vs. 4.02 g/l), beta (8.74 vs 14.24 g/l), kappa (2.41 vs. 4.28 g/l) and alpha lactalbumin (0.91 vs 0.7 g / l) was significantly different ($p < 0.05$) between cow's and goat's milk, respectively. In conclusion, milk protein profile of cows and goats in Banyumas Regency is different.</p> |
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| Author | AFDUHA NURUS SYAMSI, S.Pt, M.P |