# Pengaruh Penambahan Ekstrak Kunyit (*Curcuma longa L.*) dan Lama Penyimpanan Secara Aerobik Terhadap Kualitas Suplemen Protein Fermentasi, Fortifikasi, dan Proteksi

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## INTISARI

Protein pakan merupakan salah satu nutrien untuk ternak yang penting, oleh karena itu kualitas pakan perlu diperhatikan, untuk meningkatkan kualitas pakan dilakukan dengan cara Fermentasi, Fortifikasi, dan Proteksi (PF2P), sehingga pakan memiliki kualitas yang unggul dari segi nutrien, palatabel, dan mudah dicerna, akan tetapi PF2P mudah rusak ketika disimpan terlalu lama karena oksidasi, maka diperlukan bahan antioksidan untuk menghambat proses oksidasi yaitu menggunakan kunyit. Penelitian ini bertujuan mengetahui pengaruh penambahan ekstrak kunyit (*Curcuma longa*) sebagai pengawet PF2P selama penyimpanan. Penelitian ini mempunyai 2 perlakuan. Perlakuan pertama penambahan kunyit 3% dan tanpa penambahan kunyit, perlakuan kedua lama penyimpanan secara aerobik pada suhu kamar pada 0 dan 20 hari. Variabel yang diamati meliputi pengamatan organoleptik meliputi warna, bau, tekstur, dan kontaminan jamur dibahas secara deskriptif, sedangkan pengamatan kualitas kimia meliputi nilai pH, kadar aflatoksin, *free fatty acid* (FFA) serta analisis proksimat. Data yang diperoleh dilakukan analisis variansi dengan rancangan faktorial. Hasil penelitian menunjukkan bahwa penambahan kunyit 3% mampu mempertahankan kualitas fisik warna, bau, dan kontaminan jamur tetapi tidak untuk tekstur, sedangkan dilihat dari kandungan kimianya penambahan kunyit mampu mengurangi penurunan kandungan bahan kering, lemak kasar, protein kasar, cemaran aflatoksin dan FFA ($P<0,05$), namun tidak berpengaruh terhadap pH dan bahan organik ($P>0,05$). Penambahan kunyit 3% dapat mempertahankan kualitas kimia dan fisik, serta berpengaruh dalam mengurangi cemaran aflatoksin pada PF2P sampai dengan 20 hari sehingga kualitas pakan terjaga selama penyimpanan.

Kata kunci : Protein fermentasi, Kunyit, Lama penyimpanan, Kualitas kimia fisik

# Effect of Turmeric Extract Addition (*Curcuma longa L.)* and Storage Time Aerobically on Quality of Fermented, Protected and Fortified Protein Supplement

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## ABSTRACT

Protein feed is an important nutrient for livestock production, therefore the protein feed for livestock needs to be considered, but those feed is easily spoiled if it is not handled properly. This study aimed to determine the effect duration of aerobically storage and turmeric (*Curcuma longa*) addition on chemical and physical properties of protein feed fermented, protected and fortified (PF2P) as supplement feed. This study had 2 treatments, the frist treatment was the addition of 3% turmeric and without turmeric, the second treatment was difference of storage time at 0 and 20 days. Feed fermentation was done at room temperatur and treatment had 6 replications. The variables observed included organoleptic parameters consisting of color, odor, texture, and fungal contaminants. Chemical quality consists of pH value, afflatoxin, proximate analysis (dry matter, organic matter, crude protein, and extract ether). Physical parameters including color, odor, texture, and fungal contaminants were discussed descriptively, while chemical quality consists of value of pH, afflatoxin, free fatty acid (FFA) were discussed variance analysis with factorial design. The result of this study showed that addition of turmeric did not change physical quality (color, odor, and fungal contaminants) but not for texture, while chemical content significantly effected ($P<0.05$) on the content of organic matter, crude fat, crude prtein, afflatoxin, and FFA contamination, but the addition of turmeric did not effect on pH and organic matter content ($P>0.05$). The addition of 3% turmeric can maintain chemical and physical quality, as well influence in reducing aflatoxin contamination in PF2P in storage for 20 days so that the quality of feed maintained during storage.

Key words : Protein fermented, Turmeric, Storage time, Chemical and physical quality.