

FOOD SUPPLEMENT WITH RECOMBINANT PROTEIN

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Animal food manufacturing cost is increased by addition of high biological value protein products, as meat or fish powder. Yeasts are unicellular beings of easy and cheap production. They are able to produce all amino acids, including those called essentials. In order to produce a cheap food supplement with high biological value we propose genomic alteration of *Pichia pastoris* adding a chicken myosin DNA fragment. RESULTS: Total RNA was extracted from a *Gallus gallus* muscle and using the RT-PCR reaction and we amplify a 1200 bp myosin from cDNA. This fragment code a protein rich in isoleucine, leucine and valine. The amplification product was cloned in pGEMT-Easy vector and transfected in *Escherichia coli*. After extraction, the plasmidial DNA was analyzed through restriction assay and sequencing. Target DNA was isolated through endonuclease digestion and after purification it was sub-cloned in a plasmidial expression vector pPIC9. SMD 1168 *P. pastoris* was transformed through electroporation. Positives clones was isolated in selective medium and analyzed by yeast genomic DNA extraction followed by PCR amplification.