Journal of Molecular Pharmaceutics & Organic Process

6th International Congress on Pharmaceutics & Drug Delivery

March 23-24, 2023 | Rome, Italy

ISSN: 2329-9053

Volume 11 | ISSUE 2

**Abstract**

Grains, cereals, or legumes which are animal feed ingredients, contain phytate which cannot be digested by the digestive tract of monogastric animals. This is because phytate (C6H18O24P6) can bind about 80% phosphorus, also binds to proteins, vitamins and minerals (Mg++, Fe++, Zn++, Mn++, Ca ++) in feed. Then one option to overcome this problem is the application of the enzyme phytase from a variety of sources, including those produced by bacteria. Phytase enzymes can hydrolyze phytic acid in feed. This study aimed to determine the growth phytase of *Burkholderia* sp. HF.7 strains as well as optimization of production and phytase activity using a variety of Phitate Production Media (PPM) media. This study uses a descriptive approach. The study design used a completely randomized design (CRD) with factorial pattern consisting of two factors, each of the various sources of phytate: calcium (Ca) phytate, rice bran, corn bran, and soy. Nitrogen source: (NH4) 2SO4, yeast extract, and peptone. *Bukholderia* sp. HF.7 strains growth phase as the basis for determining the phytase production period, which is the 62 hour stationary phase with an OD value of 2,060 logs / cell. The optimum phytase production in the variation of PPM media with soy-peptone combination, which contains 46.5 mg / mL protein and 8.20 U / mL activity value under pH 7 with 37oC incubation for 62 hours. The optimum phytase production in the variation of PPM media with soy-peptone combination, which contains 46.5 mg / mL protein and 8.20 U / mL activity value under pH 7 with 37oC incubation for 62 hours. Thus, phytase activity produced by PPM with added soybeans has a higher active value compared to Ca-phytate PPM media.

**Biography**

Hafsan has completed her PhD at the age of 37 years from Hasanuddin University of Makassar in Indonesia. She is the lecturer (assistant professor) that pursued of biotechnology at biology department, faculty of Science and Technology, Universitas Islam Negeri Alauddin Makassar, a higher education institutions. He has published more than 15 papers in reputed journals and has been serving as an editorial board member of repute. She also wrote a number of published textbooks and actively carried out community service with the team in her institution.

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