

Optimalisasi biotransformasi total sterol limbah tahu menggunakan mycobacterium phlei DSM 43286 menjadi 1,4-androstadien-3, 17-dion, dengan pengaruh variasi konsentrasi inhibitor A, A' - dipiridil

Maryati Kurniadi, author

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Abstrak

Isolation of total sterol from waste product of soy bean cake has been conducted, followed by biotransformation to 1,4-androstadien-3,17-dione (ADD). The waste product consist of; β -sitosterol, stigmasterol, kaempferol, which are isolated by column chromatography technique using silica gel as stationary phase and chloroform as mobile phase. Biotransformation was conducted by using Mycobacterium phlei DSM 43286 in the present of β , γ -dipiridil as an inhibitor with concentration of 0,5; 1; 1,5; 2,0 mM. The main product of biotransformation were ADD and pregnenolon. The optimum yield of ADD 0,48% is achieved by adding 1,5 mM β , γ -dipiridil are two hours after addition of substrate and 72 hours of incubation time.