# SOLID STATE FERMENTATION FOR CITRIC ACID PRODUCTION BY ASPERGILLUS SP $UV_2$

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When the production medium [(50 ml) containing (g $l^{-1}$) glucose 140; $NH_4NO_3$, 0.5; $KH_2PO_4$, 0.5; $MgSo_4$, 0.1; peptone, 7.0; $ZnSo_4$, 0.1 x $10^{-3}$ ; ferrous ammonium sulphate, 0.1 x $10^{-3}$; $CuSo_4.5H_2O$, 0.06 x $10^{-3}$; ($ml^{-1}$) methanol 30 and gingilly oil, 2 and paddy husk, 42.5 gl was inoculated with spore suspension of Aspergillus sp $UV_2$ and inoculated at room temperature (30°c), maximum citric acid (5.45g $kg^{-1}$ Moldy Husk) was produced at 3rd day. Therefor fermentation time was shortened by 12 days when the fungus was grown in solid medium than in liquid surface culture. Hexa cyanoferrate (0.5g $l^{-1}$) supplementation has decreased the citric acid production to 5.17g $kg^{-1}$ Mould Husk. The effect of parboiled paddy husk and raw paddy husk on citric acid production were compared. Citric acid production was 4.03 and 4.14g $kg^{-1}$ Mouldy Husk respectively on 3 and 2 days in the media containing parboiled paddy husk and raw paddy husk. As the citric acid production was decreased when the parboiled husk and the raw husk were used, the to husk preparations were washed and the citric acid production were compared. Maximum citric acid production with unwashed and washed parboiled husks preparations were 4.03 and 5.22g $kg^{-1}$ Mouldy Husk at 3 days respectively, whereas with unwashed raw husk and wased raw husk were 4.14 and 4.36g $kg^{-1}$ Mouldy Husk at 2 and 3 day respectively. Therefore it can be assumed that washing has removed the undesirable substances from parboiled husk and essential nutrients present in raw paddy husk. Maintenance of humidity (50%) has improved the citric acid production. The citric acid production in the test and control were 6.4 and 4.0g $kg^{-1}$ Mouldy Husk at 2 days and 3 days.

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