

# Lipid production from three *Aspergillus* strains propagated on factory wastes

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Three species of *Aspergillus* strains were tested for their ability to produce lipid that might turn into suitable material for processing wastes. The results indicated that, as a medium, malt sprouts extract performed better than wheat bran medium insofar as a higher lipid production was concerned, especially by propagation of *A.asperecens* (10.00 and 4.64%) compared with *A.asperecens* (8.72 and 7.86%). Further experiments therefore suggested the cultivation of these fungi on the better-extracted factory waste containing different concentrations of carbon and nitrogen sources, as well as a presence of potassium dihydrogen phosphate. Addition of 4% lactose to malt sprouts medium increased the lipid percentage in dry biomass of *A.asperecens* after 8 days, and *A.niger* after 6 days, by 109.1 and 68.5%, respectively, compared with control. Using 0.1% of each ammonium nitrate and ammonium chloride for both fungi as a nitrogen source in malt sprouts medium increased the percentage of lipids by 67.3 and 34.3% and 76.4 and 40.4%, respectively. While addition of 0.05% potassium dihydrogen phosphate to the same medium raised the lipid percentage produced by *A.asperecens* and *A.niger* up to control by 15.4 and 10.1%, respectively. Accordingly, this modified malt sprouts extract was used as the best medium for maximum lipid production by *A.asperecens* (22.18%) and *A.niger* (18.02%).

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