

**DETERMINATION OF CELLULASE ACTIVITIES FROM  
*Aspergillus niger* USING AGRO-WASTES AS  
SUBSTRATES**

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## ABSTRACT

### **DETERMINATION OF CELLULASE ACTIVITIES FROM *Aspergillus niger* USING AGRO-WASTES AS SUBSTRATES**

Peels of selected fruit from the Cucurbitaceae family were utilized as substrates for their ability to enhance the production of cellulase enzymes activities by *Aspergillus niger*. Agar mediums from the fruit peels of *Cucurbita moschata*, *Citrullus lanatus* and *Cucumis melo* with different substrates concentration of 1%, 3% and 5% each respectively were used to determine the activities of the cellulases by plate assay. All the mediums were incubated with the *A. niger* for 5 days and screened the clear zone formation after staining with Congo Red following by NaCl washing. The diameter of the clear zone indicates the degree of cellulases actions in hydrolysing the cellulose from fruit peels medium. Among all of the mediums tested, *C. moschata* mediums appeared to be the most suitable for producing yield of cellulase enzymes. The best concentration for the medium based on results shown was 5% substrate concentration under 28 °C incubation temperature.