

**Production of mannan-degrading enzymes from *Aspergillus niger* and *Sclerotium rolfsii* using palm kernel cake as carbon source.**

ABSTRACT

The aim of this study is to produce and profile the mannan-degrading enzymes from local fungal isolates by submerged fermentation and saccharification of PKC. Results showed that *Aspergillus niger* and *Sclerotium rolfsii* can produce mannan-degrading enzymes. The fungi were grown in submerged fermentation of PKC to produce mannan-degrading enzymes. The highest alpha-galactosidase was obtained on day 13 of fermentation (0.128 U mL<sup>-1</sup>) when using *A. niger* and on day 18 (0.126 U mL<sup>-1</sup>) when using *S. rolfsii*. Analysis also showed that enzyme activities for beta-mannanase using *S. rolfsii* were the highest at day 17 (3.166 U mL<sup>-1</sup>) and for *A. niger* (2.482 U mL<sup>-1</sup>) at day 8. Meanwhile the highest beta-mannosidase were obtained at day 16 for *A. niger* (0.128 U mL<sup>-1</sup>) and for *S. rolfsii* at day 16 (0.116 U mL<sup>-1</sup>).

**Keyword:** Mannan-degrading enzymes; *Aspergillus niger*; *Sclerotium rolfsii*; Palm kernel cake (PKC); Carbon source.