



كلية الزراعة

ABSTRACT

قسم الوراثة



جامعة الفيوم

Laila R. Abd Al Halim, **Nada F. Hemeda**, Ahmed M. Serag (2023). Isolation, Characterization, and Screening of Yeast Biodiversity for Multi- Hydrolytic Enzymes. Journal of Umm Al-Qura University for Applied Sciences. **Accepted to publication.**

البحث الثامن

مشارك مع آخر من داخل و آخر من خارج التخصص - مقبول للنشر

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Title	Isolation, Characterization, and Screening of Yeast Biodiversity for Multi-Hydrolytic Enzymes.
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ABSTRACT

The current investigation was conducted with the objective of identifying yeasts that possess the ability to secrete a range of hydrolytic enzymes. Yeast isolates were collected from various samples, and the morphological characteristics of both the colony and yeast cells were examined. The capacity for enzyme production was assessed in multiple isolates by inoculating them in different media and quantifying their activities in terms of pectinase, amylase, urease, lipase, β -galactosidase, and protease. Out of a total of 42 yeast isolates, 30 displayed enzymatic activity. It is plausible that the yeast isolates obtained in this study hold potential for the production of industrial enzymes. Molecular identification techniques were employed to identify two isolates that exhibited multi-enzyme production and the highest enzyme activities. It was determined that these isolates belonged to two genera of yeasts, namely *Pichia* and *Hanseniaspora*. Specifically, isolate Y 16 was identified as *Pichia kudriavizvii* OL621856, while isolate Y 26 was identified as *Hanseniaspora guillermondii* OL621857 strains.