

## Comparison of Classical and Ultrasound-Assisted Extractions of Hyphaene thebaica Fruit and Evaluation of Its Extract as Antibacterial Activity in Reducing Severity of Erwinia carotovora

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**Abstract :** Erwinia carotovora var. carotovora is the main cause of soft rot in potatoes. Hyphaene thebaica was studied for biocontrol of E. carotovora which inhibited growth of E. carotovora on solid medium, a comparative study of classical and ultrasound-assisted extractions of Hyphaene thebaica fruit. The use of ultrasound decreased significantly the total time of treatment and increase the total amount of crude extract. The crude extract was subjected to determine the in vitro, by a bioassay technique revealed that the treatment of paper disks with ultrasound extraction of Hyphaene thebaica reduced the growth of pathogen and produced inhibition zones up to 38mm in diameter. The antioxidant activity of ultrasound-ethanolic extract of Doum fruits (Hyphaene thebaica) was determined. Data obtained showed that the extract contains the secondary metabolites such as Tannins, Saponin, Flavonoids, Phenols, Steroids, Terpenoids, Glycosides and Alkaloids.

**Keywords :** ultrasound, classical extract, biological control, Erwinia carotovora, Hyphaene thebaica

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