



University of AL-Muthanna

College of Science

Biology

Effect of Black seed and Neem extracts on  
*Candida albicans* yeast isolated from women  
suffering from Vaginitis in the province of  
AL-Muthanna

*A thesis*

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## Summary

These study includes two aspects:-

**First:-** The Bacteriological aspect

In this part detected the appearance of the Yeast *Candida albicans* in 200 specimens were taken during the period of 25 of June 2011 till the 25of December 2011, vaginal swabs which are collected from women suffering from Vaginitis15-57 years old. Depending on the morphological and cultural characteristics, 56 isolates from 80 isolates were identified as infection, samples under the supervision of specialized gynecologist in Hospital childbirth education/Muthanna.

The results showed isolated several species of *Candida* and represented by : *C.albicans* %42.5, *C.krusei* %17.5, *C.galabrata* %7.5, *C.albicans* & *C.tropicalis* %17.5, *C.albicans* & *C.galabrata* %5, *C.albicans* & *C.krusei* %5, *C.tropicalis* & *C.krusei* %5.

**Second:-** in this part the effects of extracts of Black cumin (*Nigella sativa*) , Neem (*Azadirachta indica*) were studied in respect to their Yeast growth inhibition. Alcoholic and water cold and hot extracts of the plant. The preliminary chemical tests revealed acidic pH of all extracts. Where was pH for watery cold, hot and alcoholic extracts of Neem (4.83, 5.47, 4.47) respectively, While Black seed (5.22, 5.87, 4.68) respectively.

The Watery and alcoholic extract of *Nigella sativa* contained resins, Flavonoides, fenoles, Saponines and steroids. Alkaloids and tannins only found in watery extracts. Coumarines found in alcoholic extracts but glycosides found in alcoholic and cold water extracts.

The extracts of *Neem* contained Flavonoides, fenoles, Coumarines, Saponines and steroids, and alcoholic extract contained glycosides, and watery extracts contained tannins.

The best inhibition effect was to alcoholic extract of *Neem* (31.33mm) and hot water extract of *Nigella sativa* (29.37mm).

The minimum inhibitory concentration (MIC) and minimum fungicidal concentration (MFC) of plant extract were measured in this study and the results varied according to different kinds of plant extracts. In respect of Neem the value of MIC %2.5 mg/ml, the value of MFC %5 mg/ml for alcoholic extract and the value of MIC %5 mg/ml, MFC %10 mg/ml for aqueous hot and cold extracts, while Black seed the value of MIC %25 mg/ml, MFC %50 mg/ml for alcoholic extract and the value of MIC %10 mg/ml, MFC %12.5 mg/ml for aqueous hot and cold extracts.