

## **Evaluation of The Effect of Aqueous Garlic Extract Against Candida Albicans and Candida Krusei Isolated From The Vagina**

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**Abstract.** The research sought to identify a plant-based antifungal alternative that demonstrates an anti-candida effect. The study focused on isolating and identifying vaginal candida while also testing garlic aqueous extracts for their effectiveness against the pathogenesis of Candida infections. Twenty Candida isolates were collected from 25 vaginal swabs taken at private clinics. The diagnostic results indicated a 60% infection rate for Candida albicans and 40% for Candida krusei. The garlic aqueous extracts demonstrated varying levels of inhibition that rose with higher concentrations (100, 500, 1000 µg/ml), with the maximum inhibition diameter observed at 1000 µg/ml, measuring 33mm for C. albicans and 29mm for C. krusei. The inhibitory effective concentrations of the aqueous extracts were similar to those of widely used antifungals (fluconazole and nystatin).

### **Highlights:**

1. Identified Candida albicans (60%) and Candida krusei (40%) from vaginal swabs.
2. Garlic aqueous extract showed dose-dependent antifungal activity against Candida species.
3. 1000 µg/ml extract had inhibition comparable to fluconazole and nystatin.

**Keywords:** Aqueous garlic extract, vaginal candida, antifungal

## **Introduction**

The Candida genus is a component of the normal human flora. Numerous studies show that Candida yeast colonies can be found in the mouths of 20% to 40% of healthy individuals, as well as in the vagina, respiratory tract, and other areas [1] The yeast changes from a beneficial organism to an opportunistic pathogen due to the virulence factors that Candida has, which include adherence to epithelial cell surfaces, enzyme production that breaks down fats and proteins, and the development of the germ tube[2]. It exploits the body's compromised immune system to become pathogenic, which is referred to as an opportunistic fungus.