Journal homepage: http://www.journalijar.com
INTERNATIONAL JOURNAL OF ADVANCED RESEARCH

RESEARCH ARTICLE

Isolation &Identification of Catalase Producing *Bacillus spp:* A Comparative Study

Babiker Mohamed Babiker[1] Mohamed Abd Elmahamoud Ahmed[2] and HananMoawia Ibrahim[3]

1. Alnahda University, Faculty of Pharmacy, Sudan
2. Elrebat University, Faculty of Pharmacy, Sudan
3. Central Lab. Ministry of Higher Education & Scientific Research, Sudan

Manuscript History:

Received: 18 December 2015
Final Accepted: 22 January 2016
Published Online: February 2016

Key words:
Catalase activity, B. Subtilis, Hydrogen peroxide.

Corresponding Author

HananMoawia Ibrahim.

Manuscript Info

Abstract

Catalase, an oxidoreductase enzyme, works as a detoxification system inside living cells against reactive oxygen species formed as a by-product of different metabolic reactions. This study was carried on 50 samples collected from different locations in Khartoum State for catalase production. Twenty nine out of fifty sample (58%) showed a typical characteristics of Bacillus species, fifteen out of twenty nine (51%) showed catalase positive reaction, Five out of fifteen (33%) gave highest catalase activity using hydrogen peroxide method. The strains with higest activity were identified as B. subtilis, B. pasteurii, B. coagulans, B. sphaericus and B. alvei according to chemical and morphological characteristic. The activity of the enzyme measuring spectrophotometrically according to the decrease in the absorbance of hydrogen peroxide. B. subtilis gave highest catalase activity of 135.2 µM/ml in 48hr. incubation, which could be a promising isolate for catalase production for commercial scale.

Introduction:-