DETERMINATION OF BACTERIOSTATIC ACTIVITY OF ETHANOL EXTRACTS FROM *PLEUROTUS PULMONARIUS* AND *POLYPORUS ARCULARIUS* AGAINST SELECTED ANTIBIOTIC RESISTANT BACTERIA.

Bachelor of Technology dissertation

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ABSTRACT

This research study was undertaken to determine the Bacteriostatic activity of ethanol extracts from *Pleurotus pulmonarius* and *Polyporus arcularius* against antibiotic resistant bacteria species, *Staphylococcus aureus* (gram +ve), *Enterococcus faecals* (gram –ve) *and Salmonella typhi* (gram –ve).

Bacteriostatic activity was tested by using the disc diffusion method. Preliminary test was done with 100 mg/ml concentration, where 100 mg of the extract was dissolved in 1ml of acetone. This was done to three different bacteria separately. Concentration series were made and the minimum inhibitory concentrations were found for three different bacteria.

It was found; with the decreasing of concentrations MIC was decreased. MIC for ethanol extracts of both fungi species was found to be 12.5mg/ml. *P. pulmonarius* and *P. arcularius* can be successfully used to inhibit the three selected antibiotic resistant bacteria. *P. pulmonarius* was found to be more effective than *P. arcularius* against all three antibiotic resistant bacteria tested. It was showed that, with the increasing of incubation period (more than 72 hours) inhibition zone diameters were getting decreased. According to that Effect of ethanol extracts of *Pleurotus pulmonarius* and *Polyporus arcularius* seems to be Bacteriostatic rather than bactericidal.

Key Words: Bacteriostatic activity, *Pleurotus pulmonarius, Polyporus arcularius, Salmonella typhi, Staphylococcus aureus, Enterococcus faecals*, Disc diffusion method.