The Influence of Environmental Factors on Growth of Penicillium sp.

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ABSTRACT: This investigation was carried out to determine the physicochemical conditions were varied for maximum Fungus production that is, effects of pH, salinity, Molecular Oxygen, Osmotic Pressure, UV rays & sources of carbon and nitrogen were tested in solid state fermentation (SSF) process for characterization and identification of a fungal strain belonging to the genus of Penicillium was isolated from potato leaf sample. Effect of pH, mostly Penicillium is grown on acidic media pH not on the basic media pH in the experimental; growth is present in 4.5 to 8.5 pH medium. Effect of salinity, Optimum growth are present on 0.5% (maximum) and 10% (minimum), that means Penicillium required low concentration of sodium chloride to the medium. Effect of molecular oxygen, Penicillium is obligate aerobic organism because this is grown on the top of sabouraud dextrose agar media. Effect of osmotic pressure ,different glucose concentration media, Penicillium is maximum grow on 5% glucose concentration media that means Penicillium required the minimum sugar concentration media for their growth. Effect of UV rays on Penicillium, maximum grow on higher exposure time of UV rays that is 3 min and 5 min. Effect of Nitrogen and carbon sources, mostly Penicillium is grow on sodium nitrate (nitrogen source) and mannitol (carbon source) that means these sources are more useful for maximum growth of Penicillium. © 2014 iGlobal Research and Publishing Foundation. All rights reserved.