

Isolation, Screening and Identification of *Hyphopichiaburtonii* for Pectinolytic Activity

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Abstract—Pectinolytic enzymes break down pectin a polysaccharide molecule and an important component of fruit cell wall. Preparations containing pectin-degrading enzymes have been extensively used in the clarification of fruit juices and wines. Currently, they are widely used in industry for retting of natural fibers and extraction of oils from vegetable and citrus peels. In the present investigation, a yeast was isolated and tested for pectinolytic activity by plate assay, pectin lyase assay and polygalacturonase assay. Zone of clearance was observed in plate assay as an indicator of pectin lysis. Effect of carbon sources, nitrogen sources, pH and temperature were analyzed. The organism showed optimum pH and temperature at 7.0 and 40 °C, respectively. Maximum activity was observed with 1% pectin, 0.1% glucose and 0.2% peptone. The isolate was identified by 26S rDNA sequencing as *Hyphopichiaburtonii*. To the best of our knowledge this is the first report of isolation of *Hyphopichiaburtonii* from papaya fruit for pectinolytic activity. Yeasts have advantages compared to other filamentous fungi in the production of pectinases owing to their unicellular nature.