Thermostable Peroxidase in *Leptadenia pyrotechnica* (Forsk.) Decne - A Plant of Arid Environment

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ABSTRACT

Indian Thar Desert harbors abiotic stress tolerant plants of economic importance. These plants can sustain under extreme temperature and acute drought conditions of arid environment. *Leptadenia pyrotechnica* is one of the multipurpose and drought tolerant plants of the arid environment. *Leptadenia pyrotechnica* belongs to family Asclepiadaceae and locally known as Kheemp in Indian Thar Desert. Molecular characterization of this plant is important due to its high abiotic stress tolerant ability that can be a source of genes for prospects. The present investigation was aimed at analysis of effect of various temperatures and pH on the activity of peroxidase extracted from the shoot tips of *L. pyrotechnica*. The crude peroxidase was incubated for different time and temperature intervals and at different pH. Among all the pH range (3.0-8.0) tested, maximum 72% peroxidase activity was observed at pH 6.0 and minimum 8% activity was observed at pH 3.0. The maximum 82% activity of the peroxidase was observed at 40^0C for 25 min and minimum 2% activity was observed at 80^0C for 30 min. These observations can be correlated with the presence of thermostable peroxidase in the *L. pyrotechnica*.