

Isolation and Identification of Phosphorus Solubilizing Fungi in Forest Soils around Koh-Sepid Lar Using ITS-PCR Method

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Abstract

The present study was conducted to isolate and identify phosphorus solubilizing fungi and to evaluate their ability through a qualitative and quantitative experiment. An experiment was carried out with 5 soil samples of Koh- Sepid Lar, Kohguylooyeh and Boyer Ahmad province. The ability of isolates was studied in solid and liquid cultures. Quantitative experiment consisted of blank, four fungi isolates and *Aspergillus niger*, with 3 replications. Two fungi that showed the highest potential in P solubilization were used for identification by ITS- PCR methods. Four of the fungi produced very clear zone on the Pikovskaya culture. The order of soluble P content in the liquid culture was: blank < fungi 4 < fungi 3 < fungi 2 < *Aspergillus niger* < fungi 1. Two high potential isolates, 1 and 2, were *Cladosporium cladosporioides* and *Eupenicillium rubidurum*, respectively. This is the first report about the potential of these fungi to solubilize P.

Keywords: Isolation, Phosphorus solubilizing Fungi, PVK, Liquid culture.

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