

INTISARI

ISOLASI DAN IDENTIFIKASI JAMUR PENGHASIL ACC DEAMINASE DARI RHIZOSFER DAN AKAR TANAMAN YANG TUMBUH SEHAT DI LAHAN SALIN

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Mikroorganisme penghasil ACC Deaminase mampu membantu tanaman untuk dapat tumbuh sehat pada lahan salin. ACC Deaminase dapat disintesis oleh mikroorganisme tanah seperti jamur, bakteri dan khamir. Penelitian ini bertujuan untuk mengisolasi, mengidentifikasi dan mengukur aktivitas enzim jamur penghasil ACC deaminase dari akar dan rhizosfer tanaman yang tumbuh sehat di lahan salin, Isolasi dilakukan dengan metode *spread plating* pada medium PDA. Jamur hasil isolasi diseleksi secara kualitatif dan kuantitatif untuk mendapatkan isolat jamur penghasil ACC Deaminase. Seleksi kualitatif didasarkan pada pertumbuhan isolat jamur pada medium DF salt + AIB. Seleksi kuantitatif didasarkan pada pengujian aktivitas enzim ACC Deaminase. Jamur terseleksi selanjutnya diidentifikasi berdasarkan morfologi jamur dan sekuen DNA daerah ITS1-ITS4. Hasil penelitian diperoleh isolat JG2, JG9, JG10 dan KT3, yang berturut-turut memiliki aktivitas enzim ACC Deaminase 762.18; 475.41; 542.47 dan 752.16 nmol/mg.jam. Isolat JG2, JG9, JG10 dan KT3 diidentifikasi memiliki kemiripan yang tinggi dengan *Trichoderma asperellum*, *Trichoderma striqosum*, *Penicillium chrysogenum* dan *Pyrenochaeta sp.*

Kata kunci : Lahan salin, Jamur, ACC deaminase, ITS1-ITS4

ABSTRACT

ISOLATION AND IDENTIFICATION OF ACC DEAMINASE-PRODUCING FUNGI FROM RHIZOSPHERE AND ROOTS OF HEALTHY CROPS IN THE SALINE LAND

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The ACC Deaminase-producing microorganism are able to help the plants to to grow healthy in the saline land. ACC Deaminase can be synthesized by soil microorganisms such as fungi, bacteria and yeasts. This study aims to isolate, identify and measures the enzyme activity of ACC deaminase-producing fungi from roots and rhizosphere of healthy crops in the saline land. Isolation was done by spread plating on PDA medium. The isolated fungi were selected qualitatively dan quantitatively to obtain fungal isolates producing ACC Deaminase. Qualitative selection was based on the growth of fungal on DF Salt + AIB medium. Quantitative selection was based on measurement the ACC Deaminase enzyme activity. The selected fungi were identified based on the morphology and ITS1-ITS4 region DNA sequence. The result of research obtained JG2, JG9 , JG10 and KT3 fungal isolates, which have ACC Deaminase activity of JG2, JG9 , JG10 and KT3 respectively 762.18; 475.41; 542.47 and 752.16 nmol/mg.h. JG2, JG9, JG10 and K T3 isolates have high similarity with *Trichoderma asperellum*, *Trichoderma striqosum*, *Penicillium chrysogenum* and *Pyrenochaeta sp.*

Keyword : Saline land, Fungi ACC Deaminase, ITS1-ITS4