Molecular Characterization of Rhizobacteria (Isolate EO-4) as Potential Solvent of Phosphate in-vitro from the Mangrove Ecosystem of Teluk Awur, Jepara-Indonesia

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Abstract	Rejuvenation and conservation of mangrove ecosystems, especially the Teluk Awur mangrove ecosystem, Jepara Regency, can be done by using bacteria that are capable of supporting plant growth or called Plant Growth Promoting Rhizobacteria (PGPR). One of the mechanisms that support plant growth by the PGPR group is phosphate dissolving activity, because the phosphate in the soil is in the form of a compound that is difficult for plants to absorb. This study aims to determine the character of Rhizobacter isolates as a superior phosphate solvent in dissolving phosphates in-vitro from the Teluk Awur mangrove ecosystem, namely isolates coded EO-4. These isolates have similar microbiological and biochemical characters to the genus Enterobacter. Molecular characterization of isolates was carried out using the Polymerase Chain Reaction (PCR) method - 16S rRNA sequence analysis (comparing with 16S rRNA sequences in gene banks). The results showed that the phosphate-solubilizing rhizobacteria that were isolated had the same base pair percentage of 48% with Enterobacter pyrinus (access number NR_028875).
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