Identification of the ultisol land indigenus bacteria from Banyumas Regency based on the characteristics of morphology, physiology and biochemistry

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Abstract	This study aims to identify SR2 and TG4 isolates based on the characteristics of morphology, physiology, and biochemistry. Morphological characters are known through gram and endospore staining tests and microscopy observations. Physiological and biochemical characters are known based on a series of tests such as motility, catalase, sugar (glucose, mannitol, sucrose, lactose) fermentation ability, hydrolysis of starch, urease, methyl-red (MR), voges-prostekuer (VP), simons citrate, H2S production, oxidase, paraffin, and indole. The results showed that SR2 isolates were rod-shaped, gram-positive bacteria. TG4 isolates include rod-shaped, gram-negative bacteria. SR2 and TG4 are endospores-forming bacteria. The results of physiological and biochemical tests showed SR2 isolates were motile, had catalase activity, can ferment sugars (glucose, sucrose, and mannitol), unable to ferment lactose, hydrolyze starch, cannot hydrolyze urea, positive results for MR and indole test, but negative for VP test, simmons citrate, H2S production, and oxidase. TG4 isolates were motile, showed positive results for catalase test, sugar fermentation (glucose, sucrose, and mannitol), starch hydrolysis, MR test, but negative results for lactose fermentation, urease, VP, simmons citrate, H2S production, oxidase, and indole. SR2 and TG4 isolates include facultative aerobic / anaerobic bacteria. SR2 Isolates are probably Bacillus sp. and TG4 are Serratia liquefacieus.
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