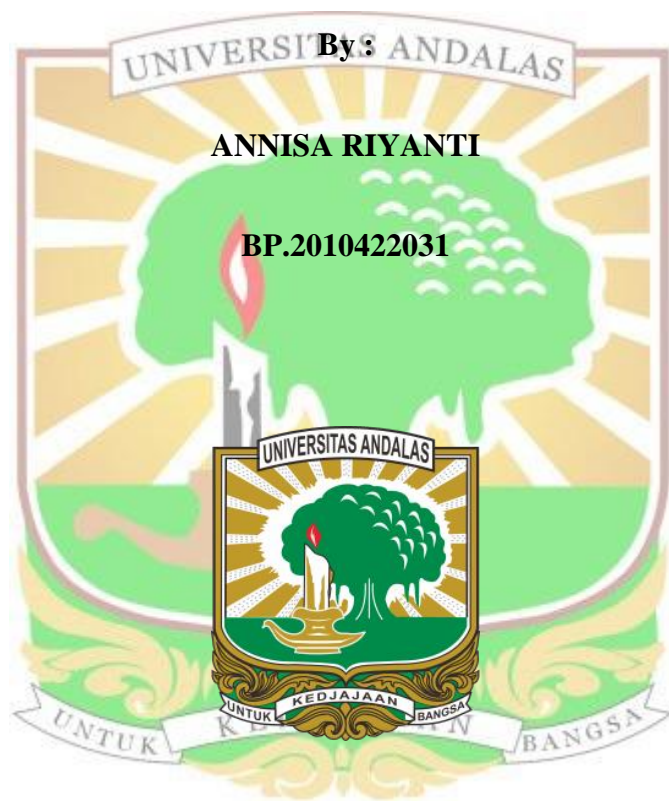


**ISOLATION AND PARTIAL CHARACTERIZATION OF *Pseudomonas*
aeruginosa FROM PALM OIL MILL EFFLUENT DIGESTATE (POMED)
AND CHICKEN MANURE**

UNDERGRADUATE THESIS



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ABSTRAK

Penelitian mengenai Isolasi dan Karakterisasi Parsial *Pseudomonas aeruginosa* dari Limbah Cair Pabrik Kelapa Sawit (LCPKS) dan Kotoran Ayam telah dilakukan di Pusat Perkhidmatan Penyelidikan & Lapangan (PPPL), Microbiology Laboratory, Universiti Malaysia Terengganu, Kuala Terengganu, Malaysia dan di Biotechnology Laboratory, Universitas Andalas, Padang pada bulan Februari sampai Juli 2024. Penelitian ini bertujuan untuk mengetahui bagaimana keberadaan bakteri *Pseudomonas aeruginosa* pada Limbah Cair Pabrik Kelapa Sawit (LCPKS) dan kotoran ayam pada media Cetrimide Agar, untuk mengetahui bagaimana karakter parsial bakteri *Pseudomonas aeruginosa* pada Limbah Cair Pabrik Kelapa Sawit (LCPKS) dan kotoran ayam. Penelitian ini menggunakan metode deskriptif dalam menentukan morfologi dan karakteristik parsial secara makroskopis dan mikroskopis serta uji biokimia dan motility dari sample. Hasil penelitian menunjukkan bahwa ketiga sampel yaitu Pencernaan Segar, Pencernaan Lama, dan Kotoran ayam terindikasi mengandung dan tumbuhnya *Pseudomonas aeruginosa* dalam isolasi menggunakan media Cetrimide Agar. Uji karakteristik parsial dilakukan secara makroskopis dan mikroskopis dari ketiga sampel tersebut ditemukan pertumbuhan *Pseudomonas aeruginosa* dan didapatkan semua koloni berwarna kekuningan, berbentuk bulat memanjang, tepian rata dan sedikit bergelombang, serta elevasi rata. Uji pewarnaan Gram didapatkan hasil Gram negatif dan berbentuk batang/basil. Uji biokimia yang dilakukan didapatkan hasil katalase positif dan oksidase positif. Uji motilitas didapatkan hasil positif motil.

Kata Kunci : *Pseudomonas aeruginosa*, LCPKS, Kotoran Ayam, Isolasi, Karakterisasi Parsial



ABSTRACT

Research on Isolation and Partial Characterization of *Pseudomonas aeruginosa* from Palm Oil Mill Effluent Digestate (POMED) and Chicken Manure. It has been conducted at Pusat Perkhidmatan Penyelidikan & Lapangan (PPPL), Microbiology Laboratory, Universiti Malaysia Terengganu, Kuala Terengganu, Malaysia and at Biotechnology Laboratory, Universitas Andalas, Padang from February to July 2024. This study aims to determine how the presence of bacteria in Palm Oil Mill Effluent Digestate (POMED) and chicken manure on Cetrimide Agar media, to determine how the partial character of *Pseudomonas aeruginosa* bacteria in Palm Oil Mill Effluent Digestate (POMED) and Chicken manure. This study uses descriptive methods in determining the morphology and partial characteristics macroscopically and microscopically as well as biochemical and motility tests of samples. The results showed that the three samples, namely Fresh Digestate, Old Digestate, and Chicken manure, were indicated to contain and grow *Pseudomonas aeruginosa* in isolation on Cetrimide Agar media. Partial characteristic tests were carried out macroscopically and microscopically from the three samples found the growth of *Pseudomonas aeruginosa* and obtained all yellowish colonies, elongated round shape, flat and slightly wavy edges, and flat elevations. Gram staining test obtained Gram negative results and rod/bacill shape. Biochemical tests carried out obtained positive catalase and positive oxidase results. Motility test obtained positive motile results.

Keywords : *Pseudomonas aeruginosa*, POMED, Chicken Manure, Isolation, Partial Characterization

