Deteksi gen resistan chloramphenicol dan erythromycin pada plasmid bakteri asam laktat dari pangan fermentasi tradisional indonesia = detection of chloramphenicol and erythromycin resistance genes on plasmid of lactic acid bacteria isolated from indonesian traditional fermented foods

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Abstrak

Penelitian bertujuan untuk mendeteksi gen resistan chloramphenicol dan erythromycin pada plasmid bakteri asam laktat (BAL) yang diisolasi dari pangan fermentasi tradisional Indonesia. Sebanyak 120 isolat bakteri asam laktat diuji resistansinya terhadap chloramphenicol 2 g/ml dan erythromycin 1 g/ml.

Hasil penapisan menunjukkan sebanyak 49 isolat resistan terhadap chloramphenicol dan 16 isolat resistan terhadap erythromycin. Isolasi plasmid dilakukan pada isolat yang resistan dan diketahui plasmid terdapat pada isolat D2, T8, dan S34. Plasmid tersebut selanjutnya dideteksi dengan menggunakan lima pasang primer, yaitu cat, catpIP501, ermB, ermC, dan Tn554.

Hasil menunjukkan gen resistan chloramphenicol (cat) berhasil dideteksi pada plasmid BAL dari pangan fermentasi tradisional Indonesia, sedangkan gen resistan erythromycin (ermB) tidak berhasil dideteksi.
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The research investigated to detect the chloramphenicol and erythromycin resistance genes on plasmid of lactic acid bacteria (LAB) isolated from Indonesian traditional fermented foods. A total 120 isolates were screened for resistance to 2 g/ml chloramphenicol and 1 g/ml erythromycin.

The result showed that 49 isolates were resistance to chloramphenicol and 16 isolates were resistance to erythromycin. Plasmids from potential isolates then isolated and has been known there were in isolate D2, T8, and S34. Plasmids then has been detected with 5 pairs of specific primers: cat, catpIP501, ermB, ermC, and Tn554.

The result showed that chloramphenicol resistance gene (cat) has successfully detected on plasmid of LAB from Indonesian traditional fermented foods, however the erythromycin resistance gene (ermB) has not detected.