

## **Kandidat Probiotik Dengan Kemampuan Adsorpsi Metilmerkuri Yang Diisolasi Dari Penduduk Sekotong - Lombok Barat**

**Oleh : Satriya abrian**

Bakteri asam laktat (BAL) resisten metilmerkuri yang diisolasi dari feces dan air susu ibu penduduk sekotong telah dikonfirmasi sifat probiotiknya yang meliputi kemampuan tumbuh pada kondisi asam dan garam empedu, serta kemampuan penghambatan pertumbuhan patogen. Selanjutnya, kandidat probiotik diuji kemampuan adsorpsi metilmerkurnya. Penelitian memperoleh 10 kandidat probiotik pengadsorpsi metilmerkuri yang terdiri dari 9 isolat berasal dari feces dan 1 isolat dari air susu ibu mempunyai kemampuan adsorpsi metilmerkuri. Tiga isolat dengan kemampuan adsorpsi metilmerkuri tertinggi yaitu isolat AG03 52A, FG11 75B, dan FG11 85F mampu mengadsorpsi metilmerkuri berturut-turut sebanyak 47,701; 54,961; dan 64,329 ( $\mu\text{g/g}$  biomassa (wb)). Selanjutnya, tiga isolat terpilih diuji adsorpsi metilmerkuri pada jam ke 0, 2, 4, 6, 12, 24, dan 48. Hasil uji adsorpsi metilmerkuri tiap satuan waktu memperlihatkan ketiga isolat kandidat probiotik mampu mengadsorpsi metilmerkuri selama 24 jam. Setelah 24 jam inkubasi, metilmerkuri terdesorpsi keluar sel.

**Kata kunci: Bakteri Asam Laktat, Probiotik, Bioadsorpsi, Metilmerkuri**

**Probiotic Candidates With The Ability To Adsorp Methylmercury Isolated From  
Sekotong Resident – West Lombok**

**By : Satriya abrian**

Methylmercury resistance Lactic Acid Bacteria (LAB) isolated from human feces and breast milk in Sekotong has been confirmed for their probiotic characters including acid and bile salt tolerance, and antimicrobial activity. Afterward, isolates were analyzed their ability to adsorp methylmercury in MRS broth media. Nine isolates from feces and 1 isolate from breast milk have probiotic characters and could adsorp methylmercury. Three isolates with the highest methylmercury adsorption were AG03 52A, FG11 75B, and FG11 85F and could adsorp 47.701, 54.961, and 64.329  $\mu\text{g}$  methylmercury each gram cell biomass ( $\mu\text{g}/\text{g}$  cell biomass (wb)), respectively. Then, three selected isolates were studied for their character on methylmercury adsorption every 0, 2, 4, 6, 12, 24, 48 hours. The probiotics candidates could adsorp methylmercury for 24 hours. After 24 hours, methylmercury would be desorpted outside from the cell.

**Key word: Lactic Acid Bacteria, Probiotics, Biosorption, Methylmercury.**