

## Uji koliform non-fekal dan fekal pada makanan dan minuman siap saji di kantin FMIPA UI menggunakan medium kromogenik dan fluorogenik = Non-fecal and fecal coliform tests of ready-to-eat food and drinks from the faculty of mathematics and natural science canteen using fluorogenic and chromogenic media

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### Abstrak

Standar Kementerian Kesehatan menyatakan bahwa setiap makanan dan minuman tidak boleh mengandung *Escherichia coli*. Tujuan penelitian adalah menentukan kualitas mikrobiologis dari makanan siap saji dan minuman yang diujikan di kantin kampus FMIPA UI Depok. Sebanyak 15 sampel, terdiri dari 10 jenis makanan siap saji, empat jus yang berbeda, dan air keran diperkaya dalam medium Buffered Peptone Water BPW sebelum diuji koliform. Uji koliform dari setiap sampel dilakukan pada medium kromogenik Chromocult Coliform Agar - Enhanced Selectivity CCA - ES dan Harlequin *E. coli* Coliform Agar HEC dan medium fluorogenik Readycult Coliform 100 RC 100 pada suhu 37°C. Hasil menunjukkan bahwa semua sampel mengandung bakteri koliform non-*E. coli* dan 12 di antaranya mengandung *Escherichia coli*. Isolasi dari sampel memperoleh 12 strain *E. coli* dan 15 isolat koliform non-*E. coli*. Uji koliform fekal dilakukan dengan menggunakan medium RC 100 pada suhu 44,5°C serta diperkuat dengan uji indol menggunakan reagen Kovac's. Hasil uji menunjukkan bahwa *E. coli* yang terdapat pada 12 sampel berasal dari fekal. Hanya 7 dari 15 isolat koliform non-*E. coli* merupakan koliform fekal non-*E. coli*. Berdasarkan hasil penelitian yang diperoleh dapat disimpulkan bahwa kualitas mikrobiologis dari makanan dan minuman siap saji kantin FMIPA UI tidak memenuhi standar dari Kementerian Kesehatan.

.....The standards from the Ministry of Health state that food and drinks should be free of *Escherichia coli*. The aim of this research was to assess the microbiological quality of ready to eat foods and drinks that were offered at a canteen in the Faculty of Mathematics and Natural Sciences, Universitas Indonesia, Depok. Fifteen samples comprising of 10 different foods, four different juices, and tap water were enriched in buffered peptone water BPW before tested for the presence of coliforms using two chromogenic media Chromocult Coliform Agar Enhanced Selectivity CCA ES and Harlequin *E. coli* agar HEC and a fluorogenic medium Readycult Coliform 100 RC 100 at 37°C. Results showed that all samples contained non *E. coli* coliforms and 12 of them contained *Escherichia coli*. Twelve *E. coli* strains and 15 non *E. coli* coliform isolates were isolated. Fecal coliform tests were conducted for the *E. coli* strains and coliform isolates by performing a coliform test with Readycult coliform 100 at 44.5°C. The tests were strengthened with an indole test that uses a Kovac's reagent. The tests showed that the isolated *E. coli* from 12 samples were of fecal origin while only 7 out of 15 coliform isolates were fecal non *E. coli* coliforms. It was concluded that the microbiological quality of the canteen's ready to eat food and drinks did not fulfill the standards from the Ministry of Health.