

ABSTRAK

Refina Ginting, NIM 4172220003 (2021). Identifikasi Bakteri *Coliform* dan *Escherichia coli* pada Sambal Bakso di Kelurahan Sei Kera Hilir I Kecamatan Medan Perjuangan

Sambal merupakan pelengkap makanan yang banyak diminati oleh berbagai golongan. Sambal tidak hanya hadir dalam bakso dan mie ayam, juga hadir pada aneka makanan *fast food*. Sambal kerap terkontaminasi oleh kontaminan biologi. Salah satu kontaminan biologi yang sering ditemukan pada sambal yaitu bakteri golongan *Coliform*, ialah *Escherichia coli*. Penelitian ini bertujuan untuk mengidentifikasi bakteri *Coliform* dan *Escherichia coli* pada sambal bakso yang disajikan di Kelurahan Sei Kera Hilir I. Sampel penelitian di ambil berdasarkan kriteria yang dekat dengan jalan raya dan pedagang bakso yang mengolah sambal cabai sendiri. 5 sampel tersebut di ambil dari Jalan Pimpinan, Jalan M.Yakub, Jalan Taud serta Jalan Perjuangan, kemudian diuji menggunakan metode *Most Probable Number* (MPN) di Laboratorium Kesehatan Provinsi Sumatera Utara. Untuk mengetahui cemaran bakteri *Coliform* dan *Escherichia coli* dilakukan tahap uji pendahuluan, uji penguat dan uji kelengkapan serta pewarnaan Gram. Setelah itu dilakukan uji IMVIC untuk memastikan keberadaan bakteri *Escherichia coli*. Hasil penelitian menunjukkan bahwa seluruh sampel sambal bakso dengan kode sampel S1, S2, S3, S4 dan S5 positif tercemar bakteri *Coliform*. Melalui uji penguat didapatkan hasil bahwa kelima sampel sambal bakso tercemar bakteri *Coliform* yang masih di bawah ambang batas dan tercemar bakteri *Escherichia coli* di atas ambang batas yang telah ditentukan, hasil positif *Escherichia coli* pada sambal bakso juga diperkuat melalui hasil uji pewarnaan Gram dan uji IMVIC. Maka, hasil dari kelima sampel sambal bakso yang di uji dinyatakan tidak memenuhi persyaratan mutu mikrobiologi makanan karena tercemar bakteri *Escherichia coli*.

Kata kunci: Sambal bakso, *Most Probable Number* (MPN), *Coliform*, *Escherichia coli*



ABSTRACT

Refina Ginting, NIM 4172220003 (2021) Identification Of *Coliform* bacteria and *Escherichia Coli* at Meatballs Chill Sauce in Sei Kera Hilir I Village, District Medan Perjuangan

Sambal is a complementary food that is in great demand by various groups. Sambal is not only present in meatballs and chicken noodles, it is also present in various fast food foods. Sambal is often contaminated by biological contaminants. One of the biological contaminants that are often found in chili sauce is *Coliform* bacteria, namely *Escherichia coli*. This study aims to identify *Coliform* and *Escherichia coli* bacteria in meatball sauce served in Sei Kera Hilir I Village. The research sample was taken based on criteria that are close to the highway and meatball traders who process chili chili themselves. The 5 samples were taken from Jalan Leadership, Jalan M.Yakub, Jalan Taud and Jalan Perjuangan, then tested using the *Most Probable Number* (MPN) method at the Health Laboratory of North Sumatra Province. To determine the contamination of *Coliform* and *Escherichia coli* bacteria, preliminary tests, verification and completeness tests and Gram staining were carried out. After that, the IMVIC test was carried out to confirm the presence of *Escherichia coli* bacteria. The results showed that all samples of meatball sauce with sample codes S1, S2, S3, S4 and S5 were positively contaminated with *Coliform* bacteria. Through the reinforcement test, it was found that the five samples of meatball sauce were contaminated with *Coliform* bacteria which were still below the threshold and contaminated with *Escherichia coli* bacteria above the predetermined threshold, the positive results of *Escherichia coli* in meatball sauce were also strengthened through the results of the Gram staining test and IMVIC test. Thus, the results of the five samples of meatball sauce tested were declared not to meet the microbiological quality requirements of food because they were contaminated with *Escherichia coli* bacteria.

Keywords: Meatball Chili Sauce, *Most Probable Number* (MPN), *Coliform*, *Escherichia coli*.