Attached is the Arabic text of the document. The content is as follows:

 objectives

The study aimed to investigate the occurrence of E. coli O157:H7 in drinking water in Al-Khidad Governorate, JBI.

A total of 157 samples of drinking water were collected from different sources. The samples were cultured on sorbitol MacConkey agar and E. coli O157:H7 agar. The isolation rate of E. coli O157:H7 from the samples was 7.4%.

The predominant isolates were Enterobacter cloacae (19.3%), E. sakazakii (5.9%), Citrobacter freundii (8.8%), and Shigella sonnia (0.7%).

The study also investigated the presence of other bacterial species such as Citrobacter BRAAKII (15.2%), Proteus mirabilis (15.2%), Citrobacter freundii (3.6%), Pseudomonas aeruginosa (10.4%), and Enterococcus faecalis (10.4%).

The results showed that the predominant bacterial species were E. coli, Enterobacter cloacae, and E. sakazakii. The study also highlighted the potential health risks associated with the presence of E. coli O157:H7 in drinking water.

The study concluded that further research is needed to determine the source of E. coli O157:H7 in drinking water and to develop effective strategies to prevent its contamination.
Detection of *E. coli* O157:H7 Strain Among Bacteria Contaminated Drinking Water in Nineveh Province

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**ABSTRACT**

This research, was dealt with the isolation and identification of bacteria caused contamination in drinking water, and detection on the virulent pathogen *E. coli* O157: H7 strain in contaminated drinking water samples, the results indicated that most isolated bacteria belong to Enterobacteriaceae and the higher percent was *E. coli* (%32), in addition to other bacteria, found among there were *Enterobacter cloacae* (%19.3), *E. sakazakii* (%5.9), *Citrobacter braakii* (%8.8), *Citrobacter freundii* (%3.0), *Proteus mirabilis* (%7.4), *Shigella sonni* (%0.7), *Salmonella* (%5.2), *Serratia plymuthica* (%1.5), *pseudomonae aeruginosa* (%5.2) and *Enterococcus faecalis* (%10.4).

*E. coli* serotypes were diagnosed in drinking water samples, to detect O157: H7 strain the result showed that (47.7 %) from all *E. coli* strains and (%15.6) from all other bacteria, while O157 strain formed (%22.7) percent and (%7.40) were most bacteria isolated from drink water.