

## Bacterial Contamination of Current Banknotes and Coins

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### ABSTRACT

**Background and Objectives:** Since paper currency is widely exchanged for goods and services, money could play a role in spreading bacteria through contact. This study was performed to survey the bacterial contamination of paper money in Iran, and the potential to spread organisms from person to person.

**Materials and Methods:** In this study 100 bills (500, 1000, 2000, 5000, 10000 rials) and 150 coins (50, 100, 250 rials) were collected from different parts of general community in Mashhad. Pathogenic or potentially pathogenic organisms were isolated and identified by broth wash and culture on appropriate media.

**Results:** Bacterial contaminations were as follows: 46% *Bacillus* species, 18.8% coagulase-negative staphylococci, 11.2% *Enterobacter* species, 7.6% *E. coli*. In this study coagulase-positive staphylococci (2%), *Klebsiella* species (0.8%), *Pseudomonas* species, *Citrobacter* and *Arizona* species (0.4%) were the least isolated bacteria. Twenty percent of banknotes and 1% of coins had no significant contamination detected by our methods. Bacterial contaminations on coins are similar but it isn't so in banknotes.

**Conclusion:** Our results and information from other studies do suggest that paper currency is commonly contaminated with bacteria and this may play a role in the transmission of potentially harmful organisms. According to our results cash should not be handed by children and should be kept away from food and cosmetics.

**Key words:** Coins, Paper money, Bacterial contamination.