



DETECTION OF TOXIGENIC *Bacillus cereus* IN IRON-FORTIFIED RICE

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ABSTRACT

The detection of *Bacillus cereus* in Iron-fortified rice was determined in this study. One hundred fifty grams (150 g) of Iron-fortified rice and one hundred fifty grams (150 g) of pre-mixed Iron fortified rice were used in the experiment a total of three hundred grams (300 g) was obtained at National Food Authority (NFA). All treatments were done in both raw and cooked, fifteen (15) times. Each sample was immediately subjected to bacteriological analysis. *Bacillus cereus* was placed on tryptic soy broth (TSB), incubated at 30° for 24 hrs., after 24 hrs, a loopful of culture was streaked into mannitol egg yolk polymixin agar for identification of bacteria. The plates were incubated at 30° for 24hrs, yellow colonies were re-isolated and placed in TSB. After 24 hrs the bacteria were subjected to genomic DNA extraction, the re-isolated bacteria were centrifuge at 8000 rpm for 5 mins, pellets were suspended in 600µL nuclei lysis solution and incubated at 80°C for 5 mins, the suspension were centrifuge or 5 mins at 13, 000 rpm. An iced cold isopropanol was added for DNA precipitation and centrifuge for 5 mins at 14,000 rpm and then washed twice with 70% ethanol then rehydrated in 1 00µL rehydration solution. For the detection of toxigenic *Bacillus cereus* a master mixed was made and a primer (BCJH) was used and analyzed with UVP DigiDic-IT imaging system. Result showed that the prevalence of culturable *Bacillus cereus* in iron fortified rice was 33% while 0% for *Bacillus cereus* toxigenic gene.



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