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EFICACY OF GAMMA STERILIZATION ON THE STABILITY OF HARUAN CAPSULES

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ABSTRACT

Preservation methods are vital in increasing stability of a natural product. In determining the suitable method of preservation, consideration should be given on the compatibility of the preservation methods used on the product. This ensures the product stability and viability for safe consumption. The Haruan fish or *Channa striatus* is a fresh water fish which has been traditionally used to heal wounds¹. Study has been carried out to evaluate the efficacy of Gamma radiation treatment in comparison to addition of combined preservatives on the microbiological stability of Haruan capsules. Haruan capsules were prepared from the powdered wild Haruan fish filled into the halal gelatin capsules. Aseptic measures are carried out on all steps of processing. Samples are Gamma sterilized with Cobalt-60 at 3.2 kyG for 3 hours 30 minutes at 5°C. The preservatives used are a combination of methyl paraben 0.1% and propyl paraben 0.02%. Milli-Q was used for serial dilution of the sample. Samples are serially diluted and dilutions of 10^{-2} and 10^{-4} are used for inoculation. Tryptic soy agar was used as a medium for growth whereby samples were inoculated using pour plate method. Eosine methylene blue agar was used as to ensure no specific bacteria being present in the samples. The inoculated samples were kept in an incubator to be incubated at 37°C. Observations are carried out at 24 hours and 48 hours interval using colony counter and digital camera. Gamma radiated samples showed high level of efficacy whereby no bacterial or fungal growth was observed in comparison with all other samples.

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