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COMPARISON OF DIFFERENT PRESERVATION METHODS IN MICROBIOLOGICAL STABILITY OF HARUAN CAPSULES

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ABSTRACT

Haruan or *Channa striatus* is a fresh water fish belonging to the *Channidea* family. Haruan has been used as valuable source of biochemical compounds especially for the wound healing purpose¹ thus, making it a mainstay for many extensive studies on wound healing and anti-nociceptive properties². 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. Haruan capsules are prepared from the powdered wild fish. All capsules are prepared aseptically, packed in sterile plastic containers and kept in desiccators with controlled humidity. Samples are Gamma sterilized with Cobalt-60 at 3.2 kG for 3 hours 30 minutes. The preservatives used are a combination of methyl paraben 0.1% and propyl paraben 0.02%. The anti-oxidant used is sodium metabisulfite 0.125%. Autoclaved, non-pyrogenic Milli-Q was used for serial dilution of the sample at 10^{-2} , 10^{-3} and 10^{-4} . Tryptic soy agar was used as a medium for growth whereby samples were inoculated using pour plate method. Eosine methylene blue agar (EMB) was used for bacterial identification purpose. The prepared samples were incubated at 37°C. All samples were observed at 24 hours and 48 hours interval and were documented using digital camera. Gamma radiated samples showed no bacterial or fungal growth in comparison with all other samples nonetheless it showed alteration on the packaging and the gelatin capsules. Samples with a combination of preservatives and anti-oxidant showed acceptable minimal range of growth in comparison with non treated samples making it the most compatible preservation method.

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