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Isolation and identification of Streptococcus spp. from diseased red tilapia (*Oreochromis niloticus*) / Basiriah Mohideen Kutty.

PERPUSTAKAAN SULTANAH NUR ZAHIRAH  
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PERPUSTAKAAN SULTANAH NUR ZAHIRAH UMT

**ISOLATION AND IDENTIFICATION OF *Streptococcus* spp. FROM DISEASED  
RED TILAPIA (*Oreochromis niloticus*)**

**BASIRIAH BT MOHIDEEN KUTTY**

**This project report is submitted in partial fulfillment of the requirement of the  
degree of Bachelor of Applied Science (Fisheries)**

**FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE  
UNIVERSITI MALAYSIA TERENGGANU**

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## Abstract

This study was conducted to isolate and identify *Streptococcus* sp. from diseased red tilapia (*Oreochromis niloticus*) from freshwater ponds in Malaysia. The fish infected with *Streptococcus* spp. showed symptoms such as inflammation of eye, brain, liver, kidney and intestine, an enlarged reddened spleen, pale liver, and in some cases, the fish might show no obvious signs before death. A total of 70 samples of biological materials, namely 10 brains, 10 livers, 10 kidney samples, 10 skin scrapings, 10 ascite liquids, 10 eyes and 10 intestines of red tilapia were isolated on blood agar (agar base with 5% human blood) and TSA agar. The isolates were priorly identified using several biochemical tests such as catalase test, oxidase test and gram staining, followed with commercial identification kit (BBL Crystal Gram-Positive ID Kit). *Streptococcus* spp. were isolated from 3 biological samples which were liver, eyes and intestine. *Streptococcus agalactiae* and three *Streptococcus pyogenes* were successfully isolated. The gained data from morphological and biochemical test were transferred to numerical analysis to grouping strain of *Streptococcus* sp. which have similar phenotype characteristics.

**Key word:** Isolation, biochemical test, *Streptococcus* sp.