**Title:** BACTERIAL ISOLATION PATTERN FROM TILAPIA INFECTED WITH STREPTOCOCCUS AGALACTIAE

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**Objective:** Attempts were made to study the bacterial isolation pattern from tilapia sampled at sites with a history of Streptococcus agalactiae outbreaks. Method & Materials: A total of 1,947 tilapia fish of various sizes were sampled from rivers and 1,479 from lakes during the 18-month study period between October 2002 and March 2003. The brain, kidney and eye were collected for bacterial isolation on blood agar. All isolates were stained with Gram stain before the Gram-positive isolates were subjected to catalase test. Those that were catalase-positive were subjected to API 20 STAPH Detection Kit while the catalase-negative were subjected to API 20 STREP Detection Kit for identification. Results & Conclusion: Outbreaks of S. agalactiae infection in tilapia kept in rivers were recorded between October and December 2002 and between May and August 2003. Outbreaks of S. agalactiae infection among tilapia kept in lakes were recorded between May and September 2002. Streptococcus agalactiae was isolated only during disease outbreaks at the rate of between 7 and 35% of the sampled fish, mainly from those weighing between 200 and 300 grams. Beside S. agalactiae, other Streptococcus sp. isolated includes Lactococcus lactis, S. acidominimus and Streptococcus dysgalactiae. For Staphylococcus sp., more varied species were isolated which include Staphylococcus aureus, Staphylococcus xylosus, Staphylococcus epidermidis, Staphylococcus cohnii, Spathylococcus hominis, Staphylococcus saprophyticus and Staphylococcus warneri. Some Gram-negative bacteria were also isolated. The frequency of Streptococcus sp. and Staphylococcus sp. isolations were significantly reduced during the S. agalactiae outbreaks. It is, therefore, concluded that tilapia rearing in Malaysia should be managed to ensure that harvesting is being done prior to May to avoid deaths due to S. agalactiae infection.

**Keywords:** Tilapia, Streptococcus agalactiae, isolation pattern

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