

**Temperature induced variation in oxygen consumption of juvenile and adult stage of the dog conch *Laevistrombus canarium* (Linnaeus 1758)**

ABSTRACT

*Laevistrombus canarium* Linnaeus, 1758 is one of the important edible sea snail within the western Johor Straits, Malaysia. In this study, the impact of temperature on oxygen consumption (MO<sub>2</sub>) of *L. canarium* based on their ontogenetic changes (juvenile and adult) was measured in the laboratory condition at 22.0, 26.0, 30.0 and 34.0°C. Measurement of MO<sub>2</sub> were taken every 1 s for 60 min on 4.20 ó 34.00 g dog conch using respirometry chamber. All experiments were carried out in static conditions in five replicates with one snail per chambers. The results of oxygen consumption showed that juvenile dog conch respired at the rate of 0.163 ml h<sup>-1</sup> and adult respired at the rate of 0.119 ml h<sup>-1</sup>. Consequently, the oxygen consumption in juvenile and adult dog conch was expressed as a total energy spends. The results indicates that total energy spend for oxygen consumed (ml h<sup>-1</sup>) of *L. canarium* at different temperature regimes (22.0 to 34.0°C) slightly increased over time period ( $0.63 \pm 0.12$  to  $3.24 \pm 0.05$  J h<sup>-1</sup>) respectively. This finding of the present study suggested *L. canarium* is well adapted for life in high temperature environment.

**Keyword:** Adult; Juvenile; *Laevistrombus canarium*; Oxygen consumption; Temperature regimes