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Abstract

The present study reports the temperature tolerance, estimated using dynamic and static methodologies, and preferred temperature range, based on oxygen consumption rate (OCR), of juvenile meagre (*Argyrosomus regius*) (Asso, 1801) (3.4 ± 0.9 g) after 30 days of acclimation at 18, 22, 26 and 30 °C. Meagre has dynamic and static thermal tolerance zones of 551 $°C^2$ and 460 $°C^2$, respectively and is a low resistance fish species, with a resistance zone area of 87 $°C^2$. The OCR of juvenile meagre at the above acclimation temperatures was 370, 410, 618 and 642 mg h^{-1} kg^{-1}, respectively, and is significantly different ($P < 0.0001$, n=20). The fact that OCR increases by rising temperatures and gradually decreases after 26 °C indicates that the preferred temperature range of juvenile meagre is between 26 and 30 °C. Our study suggests that meagre is unable to respond to low and high temperature variation in aquaculture facilities or its natural habitats.

Keywords: *Argyrosomus regius*, temperature tolerance, preferred temperature

1. Introduction

Global mean temperature is predicted to increase by 1-7 °C over the next hundred years (Ficke et al., 2007). Therefore, the occurrence of extreme climate events is inevitable (Doney