

The Use of Clove Oil and Tricaine Methansulfonate for Inducing Anaesthesia and Their Effects on Stress Parameters in Sea Bass (*Dicentrarchus labrax* L.) and Gilthead Sea Bream (*Sparus aurata* L.)

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Abstract

*Sub adult and adult specimens of sea bass (*Dicentrarchus labrax* L.) and gilthead sea bream (*Sparus aurata* L.) were exposed to various concentrations of two anaesthetics (MS-222 and clove oil) to investigate their effects on the cortisol stress response, the hydro mineral status, and glycaemia. An additional aim was to provide practical information on the lowest effective dose for routine procedures in aquaculture such as weighing or measuring. The clove oil efficacy as anaesthetic, together with the suppression of stress-induced activation of the hypothalamo-pituitary-interrenal axis and the non-toxicity to fish and humans could represent good requirements for its use in aquaculture and for becoming part of best practices for organic fish rearing.*

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² Ibid.

³ Ibid.