

case study: southern rock lobster

AQUI-S® EFFICACY

THE SOUTHERN ROCK LOBSTER

The southern rock lobster, Jasus edwardsii, is a clawless marine crustacean found throughout coastal waters of New Zealand, Southern Australia and South Africa. The lobsters are carnivorous and live in and around rocky reefs at depths ranging from 5 to 275 metres. They are very important commercial fisheries in each country. Southern rock lobsters are caught and transported live to processing factories along the coastline, where the vast majority (> 95%) of them are exported live, mostly to Asia, particularly Japan, Hong Kong and Taiwan.



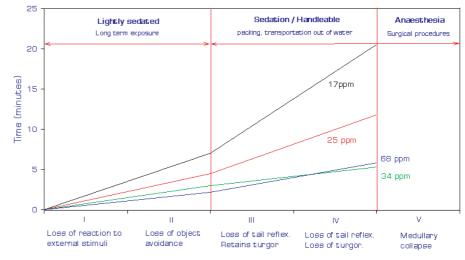
AQUI-S® RESPONSE

Information on the efficacy of AQUI-S® for southern rock lobster can be used to assist you with determining the most appropriate AQUI-S® concentration required for a particular handling situation such as sedating lobster prior to a dry transport. It is important to be aware that different environmental and biological factors may affect the progression of lobster through to anaesthesia. Biological factors include species, stage of the life cycle, fish size and health. Environmental factors include oxygen levels, water temperature and external disturbances. All these factors affect the metabolic rate of fish and therefore the pharmacokinetics and pharmacodynamics of a fish sedative.

METHOD

Five animals of approximately 550g were transferred to tanks at 12°C. Various concentrations of AQUI-S® were then dispersed in seperate baths and the animals were exposed for a 20 minute period. The animals were observed for the progression through sedation to anaesthesia.

TREND GRAPH



Progression to anaesthesia

RESULTS

- * At an AQUI-S $^{\otimes}$ concentration between 17 and 68 ppm (mL per 1000L of water) lobster were suitable for transport and handling procedures in 1 to 6 minutes.
- * Lobster in AQUI-S® at 34 ppm became handleable approximately twice as fast as lobster in AQUI-S® at 17 ppm.
- * All lobster made a full recovery showing normal behaviour within 10 minutes of being placed in clean water.