AQUI-S®

case study: New Zealand shortfin eel

AQUI-S® EFFICACY

THE NEW ZEALAND SHORTFIN EEL

Shortfin eels (*Anguilla australis*) are one of the three Anguillidae species found in New Zealand. The eels are found throughout New Zealand and southern Australia, as well as many south pacific islands. Generally shortfin eels are found at lower elevations and not as far inland as longfin eels, but they are still able to climb large obstacles such as waterfalls whey they are young. They are often very numerous in lowland lakes, wetlands, and streams, and shortfin eels form the basis of the commercial eel fishery that has existed for over 20 years in New Zealand.

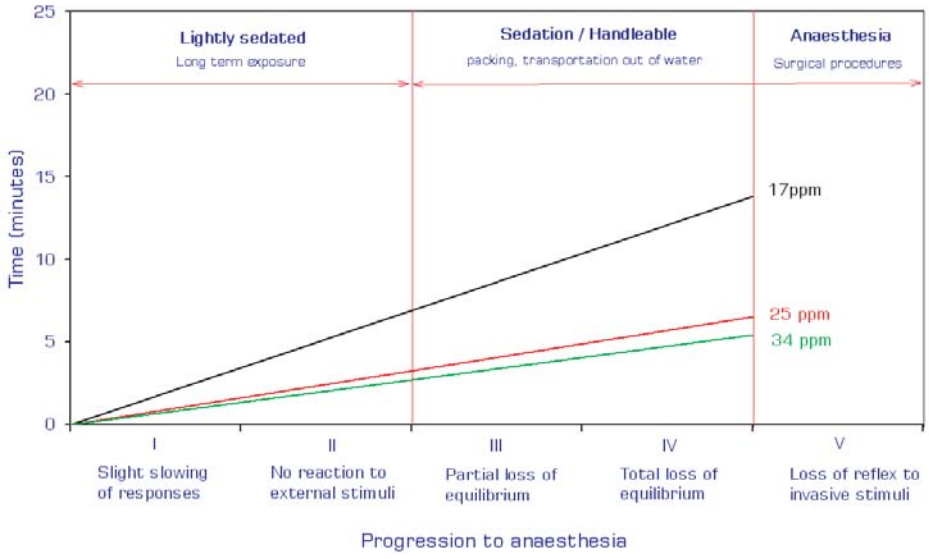
AQUI-S® RESPONSE

Information on the efficacy of AQUI-S® for shortfin eel can be used to assist you with determining the most appropriate AQUI-S® concentration required for a particular handling situation, such as sedating eels prior to a transport event. It is important to be aware that different environmental and biological factors may affect the progression of eels 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 500g were transferred to tanks at 5°C. Various concentrations of AQUI-S® were then dispersed in seperate freshwater baths and the animals were exposed for a 20 minute period. The animals were observed for the progression through sedation to anaesthesia.

TREND GRAPH



RESULTS

* At an AQUI-S® concentration between 17 and 34ppm (mL per 1000L of water) eels were suitable for transport and handling procedures in 1 to 6 minutes.

* Eels in AQUI-S® at 17ppm eels became suitable for handling procedures twice as fast as eels in AQUI-S® at 34 ppm.

* All eels made a full recovery showing normal behaviour within 10 minutes of being placed in clean water.