

Testing for carriers of *Aeromonas salmonicida* in goldfish

Healthy goldfish can carry “atypical” *Aeromonas salmonicida* (GUD) with no disease signs. This strain has a high-risk disease potential and has not been isolated in Tasmania. Determining freedom from this pathogen is important to safeguard the salmonid aquaculture industry.

PURPOSE OF TEST

Carriage levels of *Aeromonas salmonicida* in asymptomatic fish can be determined using a selective enrichment-PCR test (SEC-PCR).

TEST FORMAT

Mucus from the skin and/or kidney of the fish is collected and placed in a selective enrichment medium designed to encourage the growth of *A. salmonicida*. The medium after inoculation is incubated and tested for the presence of *A. salmonicida* by PCR, a DNA molecular detection test.

MATERIALS REQUIRED

- The selective enrichment medium for *A. salmonicida* (SEC) is supplied by the Fish Health Unit of the Animal Health Laboratory as 10ml volumes. On receipt, keep the medium refrigerated between 2-8°C for up to 4 days or freeze immediately at -20°C until use.
- Cotton swabs

NUMBER OF ANIMALS TO BE TESTED

To obtain meaningful data, the number of fish to be tested must take into account any known carriage levels previously determined for the population under test, the size of population and the number of tanks under investigation. To reduce costs, pooling of samples may be possible. The Fish

Health Unit can provide advice about sample size required for a particular investigation.

SAMPLING PROCEDURE

If skin sampling only is appropriate, sedation and revival may be possible. For kidney sampling euthanasia will be necessary. This procedure must be done with supervision from a veterinarian and must take into account such factors as size of fish; feeding habits; water temperature; and health status of the stock.

Collect the mucus from a fish’s skin with a swab. Collect from the periphery of any visible lesion or from around the pelvic or pectoral fins. Place the swab in one volume of SEC medium. Aseptically open fish and using a swab collect a blood sample from the fish kidney. Place the swab in the same volume of SEC medium.

TRANSPORTING SAMPLES

After inoculation, keep the samples cool but do not refrigerate. Holding at room temperature of 22°C or less is acceptable.

Make sure the date of inoculation is recorded and arrange to return the inoculated media to the Fish Health Unit as soon as possible. Samples must arrive at the laboratory within 5 days of inoculation

SUBMITTING SAMPLES

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