Quick fish sampling guide for disease diagnostics

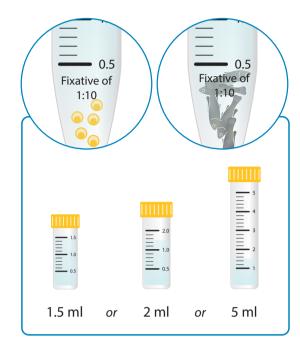
Histology sampling guide

Step 1: Sample collection



For fry or eggs < 1cm:

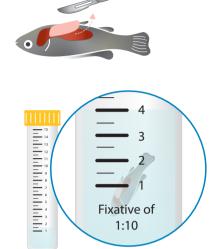
For swim-up fry or fertilized eggs < 1 cm: Place 3–5 whole fry and/or eggs in 10% neutral buffered formalin (NBF) fixative at a ratio of fish to fixative of 1:10.



Avoid the use of tubes with narrow bottoms, especially conical, as tissues do not mix adequately

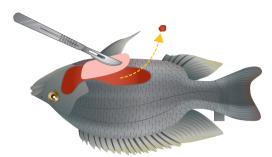
For fingerlings 1–5 cm:

Cut off gill opercula. Open abdomen. Pull out viscera to protrude slightly from opening to expose internal organs. Place fish in 10% NBF fixative at a ratio of fish to fixative of 1:10. Caution: Do not to cut the intestines.

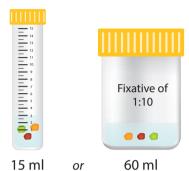


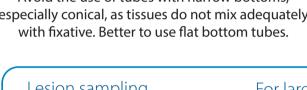
For fish > 5 cm:

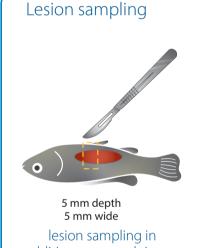
Dissect a 5 x 5 mm section (clean cuts) for each organ (take whole organ if < 5 mm thick). For standard histology, collect from brain, gill, eye, heart, pyloric caeca, stomach, intestine, spleen, liver, kidney and a representative lesion if any (see below for more details).



Place organ specimens in 10% NBF fixative at a ratio of fish to fixative of 1:10.

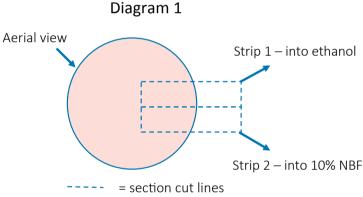








For large lesion:



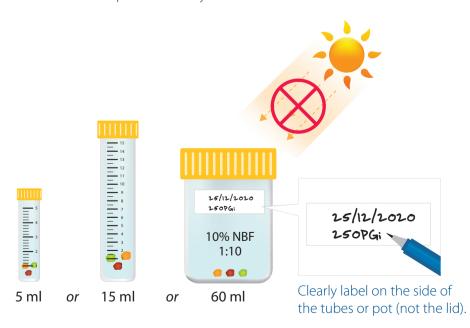
15 ml

Diagram 2 Aerial view of Strip 1 – into ethanol Strip 2 – into 10% NBF ---- = section cut lines

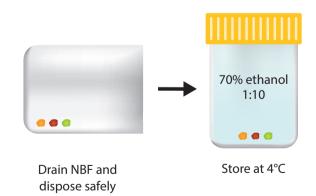
Place a strip into into 95%–100% ethanol ethanol for molecular diagnostic or in case of confirmed presence of epizootic ulcerative syndrome.

Step 2: Fixation

Immerse 5 x 5 mm tissue sections in 10% NBF fixative at a 1:10 ratio. Store at room temperature away from sun for 24–48 hours.



Step 3: End of fixation



For small lesion:

Note: Proceed with 70% ethanol for long-term storage or when doing specialist stains such as immunohistochemistry (IHC). For immediate processing, the 70% is not needed. Please note it is also harder to ship samples in alcohol, as it may require dangerous goods paperwork.





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