Common Causes for Failed DNA Tests

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GENERAL ISSUES:

Biological Contamination

a. Cross contamination between samples/animals.
b. Faecal matter or dirt – any foreign material in the sample may interfere with genotyping.

Chemical Contamination

a. Dye/Pigment from animal markers.
b. Insect repellent.
c. Cleaning agents.

Improper Storage

a. Heat exposure, including leaving samples in vehicle or in hot sun.
b. Exposure to foreign material, such as mould.
c. Improper frozen storage – the freeze/thaw cycle of a self-defrosting unit can degrade DNA.
d. Extended sample storage – DNA degrades over time.

Insufficient sample

CONCERNS SPECIFIC TO SAMPLE TYPE:

Hair cards

a. Too few or no follicles (less than 30) – DNA only occurs in the 'root' of the hair. The actual strands do not contain DNA.
b. Small follicles taken from young calves – Hair samples should not be taken from calves younger than 6 months of age.

AllFlex TSUs (Tissue Sampling Units)

a. No sample in TSU vial.
b. Sample is trapped in cap/does not enter tube – sample will not be preserved if it is not in the liquid.
c. TSUs should be kept at room temperature to prevent DNA degradation.
d. Long term storage – TSUs are viable for 12 months after collection.
e. TSU samples should **NOT** be stored in the freezer.

Semen

a. Semen samples should be kept at room temperature or in a refrigerator.
b. Semen straws can easily be damaged in shipping. Proper packaging is especially important – an empty ball point pen tube is recommended.
c. Empty straw – Straws that have been used, or partially used, are not viable.

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