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## COMMON REASONS FOR SAMPLE FAILURES

### General Issues:

1. Biological Contamination
  - a) Cross contamination between animals/samples
  - b) Mouldy, wet or dirty samples will cause genotyping failures.
2. Chemical Contamination
  - a) Dye/Pigment from animal markers or veterinary/animal health management products
  - b) Insect repellent
  - c) Cleaning agents
3. Improper Storage
  - a) Heat exposure (example leaving samples in a vehicle or in direct sunlight)
  - b) Exposure to foreign material including mould
  - c) Improper frozen storage – the freeze/thaw cycle of a self-defrosting unit will degrade DNA
  - d) Extended sample storage – DNA degrades over time

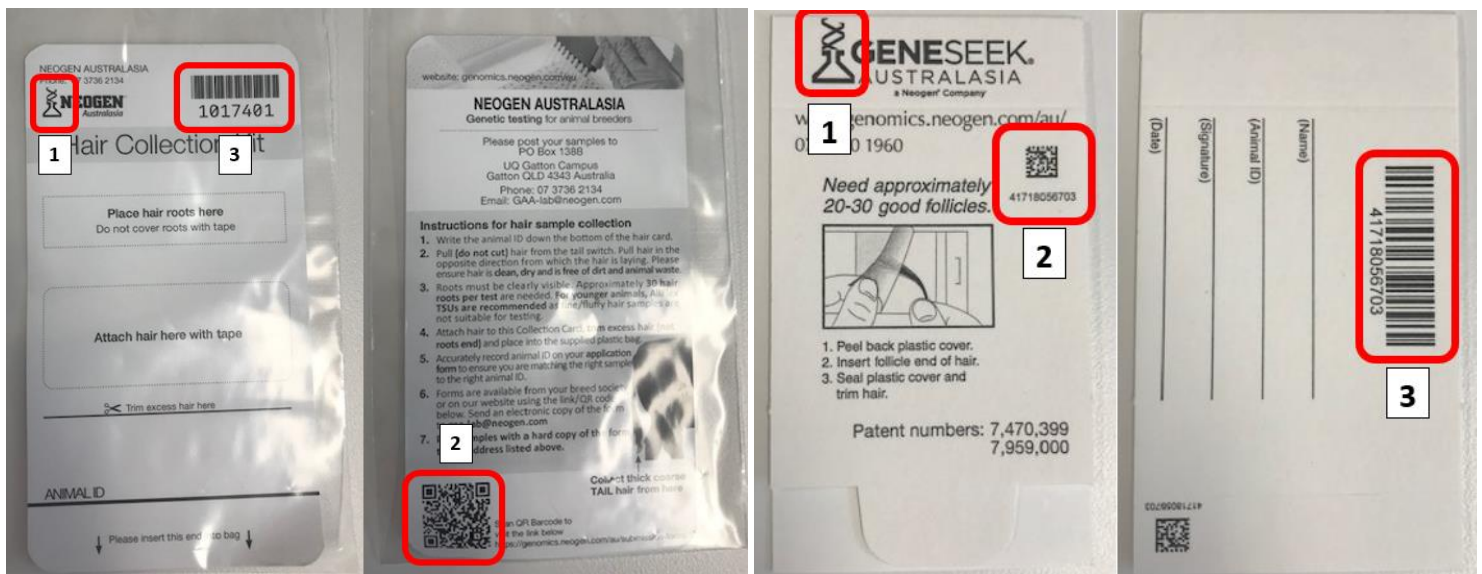
### ALLFLEX TSUs – Tissue Sampling Unit

- No sample in tube
- Sample is trapped in cap/does not enter tube – sample needs to be sitting in the buffer (liquid) in order to remain viable.
- AllFlex tubes should be kept at room temperature to prevent DNA degradation
- Long term storage
  - AllFlex recommend testing within 12 months of collection
- Incorrect collection can cause the sample to fail.
  - Instructions are available from [naa-lab@neogen.com](mailto:naa-lab@neogen.com) or 07 3736 2134
- Hair sticking out of the TSU means the TSU hasn't sealed therefore the buffer can leak and samples will dry out.
- Red cap needs to be flush/pushed down
- Tube needs to be sealed; sample sitting in buffer.
- Best practice is to send TSUs in racks, please see NAA for details.

AllFlex TSUs can be ordered from Neogen Australasia – [naa-lab@neogen.com](mailto:naa-lab@neogen.com) or your local rural store.

### Hair Cards

- Hair cut off
  - DNA is only present in the root of the hair; the hair shaft does not contain DNA.
- Too few or no follicles (<30 per test)
  - Due to the increased complexity of SNP genotyping, more hair follicles are required per test.
- Small follicles taken from young calves – For calves younger than 6 months of age, Allflex Tags are the preferred sample type.
- Packaging surcharges will apply if hair is received without being in an approved Neogen Hair Card.
  - There is a three-part checklist for determining whether it is an approved Neogen kit:
    - Neogen Flask,
    - Barcode
    - Linear Barcode.



a) For hair card orders please call the office on 07 3736 2134 or [naa-lab@neogen.com](mailto:naa-lab@neogen.com)

### Semen Straws

1. Store any semen samples for DNA testing at room temperature or a refrigerator
2. Semen straws must be full and unused to be eligible for testing
3. Semen straw can easily be damaged in shipping. Proper packaging is especially important.
  - a. NAA recommends sending straws in pen cases, travel tooth brush holders, between two sheets of robust cardboard or individual ziplock bags with bubble wrap.

### Blood Cards – Sheep Only

1. Insufficient blood spotted on card – ensure the circle is filled and the blood is visible on both sides of the paper.
2. When spotting cards from stored blood, make sure to invert the tubes 4-5 times before spotting – blood settles/separates over time.
3. DO NOT speed dry the card using a hair dryer as heat may damage the DNA.

### Whole Blood – Beef Only

1. Neogen Australasia will only accept purple top EDTA tubes. This process will need to be carried out by a vet.
2. Please call NAA office for further details before samples are collected.

Please call the office for further enquiries