



WEATHERBYS

SCIENTIFIC

Reasons that Hair Follicle Samples are Unsuitable or Fail SNP Genotyping.

Hair root follicles are an excellent source of DNA for SNP Parentage Testing, however, it is VITAL to submit hair follicle samples of suitable quality for analysis.

SNP technology tests 1,000s of DNA markers in the animal's sample and requires high quality hair follicle samples to generate a usable SNP profile.

There are 2 points in the process where samples do not pass the requirements for producing a usable SNP genotype.

A. Sample receipt – Sample are visually inspected by our highly trained staff on receipt at the laboratory.

Samples may be deemed unsuitable for processing for the following reasons:

1. Too few hair root samples submitted (40-60 hair follicle samples are requested).
2. Sample has been cut not plucked from the mane or tail of the animal.
3. Hair samples are broken with no intact hair follicles visible for processing.
4. Hair samples may be wet or contaminated with dirty material.

If samples are deemed unsuitable at sample receipt it is not charged for and a new sample is requested to be submitted.

Deeming samples unsuitable at the beginning of the process avoids unnecessary expense and customers are informed as soon as possible so a new sample can be submitted in time for registration purposes.

B. After processing the sample – Samples fail to generate a usable SNP genotype.

Samples may fail the genotyping process for the following reasons:

1. Samples do not provide sufficient quality DNA to produce a usable genotype.
2. Substances may be present on the hair follicle which affect the SNP genotyping assay, e.g., shampoo residue, powder residues, grooming product residues.
3. The DNA in the hair follicle has been destroyed by exposure to sunlight or high temperatures.

If samples are deemed suitable on visual inspection and travel through the genotyping process they are charged for, so it is imperative that every effort is made to submit a high-quality sample to avoid unnecessary expense, re-sampling and re-testing.

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