



DNA parentage testing for cattle - How to submit samples:

RSSL can genotype cattle for parentage testing from samples of hair, tissue, semen or blood. For work likely to result in legal proceedings, we recommend that three samples be taken from each animal. One should be sent to RSSL, the remaining two should be held for re-analysis if required. Under these circumstances, we recommend that samples are sealed and delivered by hand to maintain the chain of custody of the samples.

Sending samples Blood, tissue, hair and semen samples should be sent by overnight delivery and arrive during office hours on a working weekday. Blood samples will usually produce the most failsafe results as there is less chance of poor sample quality or test interference.

Blood samples should be delivered in a well-padded envelope in a shatterproof tube containing a suitable anti-coagulant (EDTA or Heparin). These are usually lilac-topped. Samples should **not** be frozen, but may be stored in a fridge for up to 2 weeks.

Hair samples should be placed in labelled zip-lock plastic bags and sent by post to the address below. **It is very important to follow the instructions carefully.** Failure will result in extra cost and delayed results.

1. Pluck hairs from the animal. *Do not* cut hairs (they must have a follicle attached for DNA analysis). Red hairs can cause interference in the test. If the animal is red-coated, blood is recommended as a sample type.
2. Pull around 30 hairs from the withers of the animal (back of neck and shoulder blade area). Please *do not* take tail hairs.
3. Please keep hair samples clean and dry. Avoid exposure of the hair samples to direct sunlight.
4. If sampling more than one animal, take extreme care not to mix the hair samples.

Tissue samples can be stored in a fridge for 1 day. Any longer and samples must be stored frozen at -20 deg C prior to sending. Samples must be sent overnight and not over a weekend.

Semen straws should be sent by post to the address below. Please use padded envelopes and protective covers for the straws so that they do not become damaged during shipping. It is not necessary to ship the straws frozen, assuming preservative has been added to the semen prior to shipping. Pre-paid address labels are available for UK customers.

Failed Analysis – If samples fail analysis (no DNA profile is obtained), it is usually because samples are of poor quality. This can happen if hair samples are either wet/dirty and the follicles are damaged, if blood samples are collected in incorrect tubes/incorrectly stored, or if tissue samples have degraded. Fresh samples can be sent but the original analysis will be invoiced.



Please send samples to the following address:

Samples for Bovine DNA parentage analysis
FAO Barbara Hirst
DNA and Protein Lab
Reading Scientific Services Ltd
Reading science Centre
Whiteknights Campus, Pepper Lane
Reading RG6 6LA
United Kingdom

The following information should be recorded on paperwork accompanying the samples: full contact details for reporting results, name/sex/registration details for the animal (and the equivalent details for the sire and dam for parentage testing). It should also be stated whether a single animal is to be genotyped or a parentage test is to be carried out. Pre-designed forms are available to record this information if they are required.

Duration of analysis

We work to a turnaround time of about **20 working days** from receipt of sample for a cost of £66 per sample. We can analyse samples in a shorter time (**5 working days**) from receipt of sample for a cost of £145 per sample for urgent cases. To assist us in processing your results in the shortest possible time we request that a purchase order number to be supplied with the samples. If a Purchase Order cannot be supplied, please send a cheque with the samples for the full amount (incl. VAT).

Please note that for most cattle parentage testing 2 animals are analysed – the costs stated above are PER ANIMAL and therefore the costs for 20 working day turnaround will usually be 2x £66 = £132 or £151.80 (plus VAT) or for 5 working day turnaround will usually be 2x £145 = £290 or £333.50 (plus VAT).

Any cattle work that is likely to result in legal proceedings: Providing Section 9 Witness Statements will be charged per hour at the RSSL rate of £120 per hour with a minimum charge of 1 hour. Court appearance charges will be £870 per day per person plus expenses. Extra consultancy charges including report writing or pre-court discussions will be charged at £120 per hour.

Post analysis

All samples are stored at RSSL for 1 month in a freezer at -20 deg C following analysis. Blood samples are transferred to plastic tubes. Samples are then disposed of, unless the client has requested specifically to collect them, have them returned or for them to be

stored at RSSL (a monthly charge of £115 will be levied).

Quality Control

Analysis and results are rigorously checked before issue. RSSL is a UKAS accredited laboratory and operates to the ISO 17025 quality standard. RSSL is a member of the International Society for Animal Genetics (ISAG).