



**Veterinary Genetics
Laboratory**

Faculty of Veterinary Science
University of Pretoria
Private Bag X04
Onderstepoort
0110
Tel: (012) 529 8240
Fax: (012) 529-8310
vgl@up.ac.za

**SAMPLE SUBMISSION FORM
HORSE COLOUR TESTING**

(Valid 01/01/17 to 31/12/17)
F0010A08



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

OWNER DETAILS:

Submitter (Name of person submitting the sample (Owner / Stud), who must receive 1 copy of the report): _____

Address: _____

Tel: _____ Fax: _____ Cell: _____

E-mail: _____

Veterinarian / Veterinary Clinic: _____

ANIMAL DETAILS:

Please indicate clearly the test required. If parentage testing is also required, please complete the additional section and include the parent information.

NAME OF HORSE (as indicated on the sample)	BLACK (AA, A/a, a/a)	RED FACTOR (E/E, E/e, e/e)	TOBIANO (TO/TO, TO/N, NN)	CREAM DILUTION (CR/CR, CR/N, N/N)	LABORATORY USE ONLY

PARENTAGE DETAILS:

NAME OF HORSE (as indicated on the sample)	NAME and DNA Nr of SIRE (if previously tested)	NAME and DNA Nr of DAM (if previously tested)

COST OF TEST (vat incl.) (Please note the price difference depending on the sample type):**All colours / Full colour panel (No DNA profile): R340****Individual colours per colour (No DNA profile): R170****Individual colours per colour with a full DNA profile: R385 (Blood) or R355 (Hair)****All colours with a full DNA profile: R550 (Blood) or R520 (Hair)**

Parentage verification is performed at no additional cost. Both parents must be profiled for parentage verification and their profiles must be available on the VGL database. Previously profiled animals need not be retested.

The colour test certificate will be sent to the owner as indicated above**COLLECTION OF SAMPLES:****Blood samples:** Collect 1 sample from each horse. Please use EDTA (purple stopper tubes) and label clearly with the horse name as indicated on the form.**Hair samples (Preferred sample):** Locate the coarsest hairs you can find (preferably mane or tail). Hold the hairs close to the skin and pull. Important: **DO NOT CUT HAIRS.** Visually inspect the hairs for intact roots. Enclose at least 20-40 strands of dry hair in an envelope. Label each individual envelope with the name of the animal sampled.

ACCOUNT INFORMATION:

Owner/ Company _____

Address: _____

Tel: _____ Fax: _____ Cell: _____

E-mail: _____

VAT number: _____

NO TESTING WILL BE DONE UNTIL FULL PAYMENT HAS BEEN RECEIVED.

PLEASE EMAIL PROOF OF PAYMENT TO: vglpayments@gmail.com

Direct deposits may be made into the following account (Please send the proof of payment with the samples or via email – the samples will not be tested without proof of payment):

Bank:	ABSA
Account number:	2140000038
Branch:	335545 (Hatfield)
Reference:	Owner's name and AB916

Stored samples: The samples will be stored indefinitely in the reference library of the VGL. Every effort will be made to ensure that the samples are maintained in the condition submitted. All samples are kept on behalf of the "owner" as specified in the space provided. Samples will only be used as specified by the "owner" on this form unless ceded to the VGL or other party in writing by the owner. If a request for use of the samples arises in the future or the owner requests further testing, this request must be made in writing and the permission of the "owner" obtained.

DISPATCH OF SAMPLES:

Samples should be sent in by the most rapid means possible. Avoid sending samples late in the week or prior to statutory holidays. Samples can be sent by:

Courier to: Veterinary Genetics Laboratory
Faculty of Veterinary Science
University of Pretoria
Soutpan Road
Onderstepoort

Speed Service to: Veterinary Genetics Laboratory
Private Bag x04
Onderstepoort
0110

Coat Colour Test Information:

BLACK

A/A or A/a: Black pigment in the coat occurs in the points, mane, tail, lower limbs and tips of the ears. The “black” gene (or locus), known as the agouti gene, works together with the extension or “red” gene (that distributes red pigment in the coat). A dominant E allele must be present in the extension gene for the black pigment to appear in the coat. This means that a horse that is homozygous for the recessive e allele at the Red or Extension locus (e/e) will not have black pigment in the coat and will, therefore, be chestnut. A combination of E/e or E/E and A/A, A/a will produce a bay horse and

a/a: E/e or E/E together with a/a will produce a black horse where the black coat pigment is distributed throughout the coat.

RED

E/E or E/e: The dominant E allele at the red or extension gene allows black pigment in the coat and the distribution pattern of this black pigment is controlled by the Black or Agouti gene as described above.

e/e: A homozygous recessive e at the red or extension gene produces a chestnut horse.

Shading that occurs in liver chestnut and dark bay is not controlled by these genes.

CREAM DILUTION

The cream dilution gene is responsible for the dilution of red pigment in the coat in palomino, buckskin, cremello, perlino and smoky black and smoky cream horses. There are 2 alleles, given as CR (carrying the dilution factor) and N (the wild type that does not carry the dilution factor).

CR/N: Palomino, Buckskin and smoky black.

CR/CR: Cremello, Perlino and smoky cream

N/N: Non dilute or dilute colour caused by another gene and not the cream dilution gene.

TOBIANO

Tobiano paint pattern is controlled by a dominant gene. The pattern is generally characterized by white that crosses the spine, white on the limbs, normal facial markings and a mixed tail with the edges of the white pattern being regular and not mottled.

Test results are as follows:

TO/TO: Homozygous for the tobiano gene. The horse will have a tobiano pattern and will produce offspring that are always tobiano.

TO/N: The horse will have a tobiano pattern but only 50% of offspring with a non-tobiano mate will be tobiano.

N/N: The horse is not a tobiano. If it is a paint horse, the pattern is produced by another gene.