



VETERINARY GENETICS LABORATORY
 SCHOOL OF VETERINARY MEDICINE
 TELEPHONE: (530) 752-2211
 FAX: (530) 752-3556

ONE SHIELDS AVENUE
 DAVIS, CALIFORNIA 95616-8744

NANCY KLAUS
 14567 GOODWIN AVENUE
 HASTINGS, MN 55033

Case Number:	DT13040
Report Date:	10/27/2005
Date Received:	10/19/2005

Horse: ONE HOT CHOCOLATE	Reg #: 4004124	YOB: 00	Breed: QH	Sex: S*
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COAT COLOR TEST RESULTS

RED FACTOR	AGOUTI (BAY/BLACK)	CREAM DILUTION	LETHAL WHITE OVERO
E	Aa		

Interpretation of Result Code

Red Factor:

- e** Only the red factor detected. Horse can be assumed to be homozygous for red (ee). Basic color is sorrel or chestnut in the absence of other modifying genes.
- Ee** Both black and red factors detected. Horse can be assumed to be heterozygous for the red factor (Ee); either E or e transmitted to offspring. Basic color is black, bay or brown in the absence of other modifying genes.
- E** **No red factor detected. Horse can be assumed to be homozygous for black pigment (EE). It cannot have red foals regardless of the color of mate. Basic color is black, bay or brown in the absence of other modifying genes.**

Agouti (Bay/Black): The Agouti gene affects the distribution of black pigment ("E" in the red factor test).

- A or Aa** **Black pigment distributed in points pattern. Basic color is bay or brown in the absence of other modifying genes.**
- a** Only recessive allele detected. Black pigment distributed uniformly. Basic color is black in the absence of other modifying genes.

Cream Dilution:

- N** No evidence for the Cream dilution altered sequence detected. Basic color is sorrel or chestnut, bay or black in the absence of other modifying genes.
- N/Cr** Heterozygous, dilute, one copy of Cream gene. Typical colors are palomino, buckskin and smoky black in the absence of other modifying genes.
- Cr** Double dilute (two copies of Cream gene). Typical colors are cremello, perlino and smoky cream in the absence of other modifying genes.

Lethal White Overo:

- N** No evidence for the altered sequence detected.
- N/O** One copy of the altered sequence detected. Horse is at risk to produce a lethal white overo foal if bred to another N/O horse. Usually these horses have a spotting pattern described as overo, or they may have a combination of spotting patterns, such as tobiano and overo. The N/O type has been detected in overo Paint, Pinto, Thoroughbred and Miniature horses. Occasionally N/O horse will not show the overo pattern due to suppression of the body spotting action of the altered EDNRB gene. The N/O type has been detected in solid Quarter Horses and breeding stock Paints.
- O** Only the altered sequence in the EDNRB gene detected. This result has only been obtained with samples from lethal white overo foals.

This test is performed under a license agreement with Roche molecular Systems, Inc.

* M = Mare; S = Stallion; G = Gelding;