



VETERINARY GENETICS LABORATORY  
 SCHOOL OF VETERINARY MEDICINE  
 ONE SHIELDS AVENUE  
 DAVIS, CALIFORNIA 95616-8744

TELEPHONE: (530) 752-2211  
 FAX: (530) 752-3556

**HORSE COAT COLOR TEST RESULTS**

CHERIE WASSON PO BOX 64 6500 RATNER RD BERRYTON, KS 66409	<b>Case:</b> DT22567 <b>Date Received:</b> 31-Aug-2009 <b>Report Date:</b> 04-Sep-2009 <b>Report ID:</b> 7011-7578-1652-8115
--	---

<b>Horse:</b> CHAMPAGNE STONE <b>YOB:</b> <b>Breed:</b> QH <b>Sex:</b> M	<b>Reg:</b> 5069611 <b>Alt. ID:</b>
<b>Sire:</b> THE STONE CUTTER <b>Dam:</b> SPRAT ON SPUR	<b>Reg:</b> 4635649 <b>Reg:</b> 3281708

RED FACTOR	Not requested.
AGOUTI	Not requested.
CREAM DILUTION	Heterozygous, dilute, one copy of Cream gene. Typical colors are palomino, buckskin and smoky black in the absence of other modifying genes.
<b>N/Cr</b>	
PEARL DILUTION	Not requested.
SILVER DILUTION	Not requested.
LETHAL WHITE OVERO	Not requested.
SABINO 1	Not requested.
TOBIANO	Not requested.
CHAMPAGNE	Not requested.

# Horse Coat Color Results with Explanations

## Red Factor

**e/e** - Only the red factor detected. Basic color is sorrel or chestnut in the absence of other modifying genes.

**E/e** - Both black and red factors detected. Either E or e transmitted to offspring. Basic color is black, bay or brown in the absence of other modifying genes.

**E/E** - No red factor detected. Horse 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

**A/A** - Black pigment distributed in points pattern. Basic color is bay or brown in the absence of other modifying genes.

**A/a** - Black pigment distributed in points pattern. Basic color is bay or brown in the absence of other modifying genes.

**a/a** - Only recessive allele detected. Black pigment distributed uniformly. Basic color is black in the absence of other modifying genes.

## Cream

**N/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/Cr** - Double dilute (two copies of Cream gene). Typical colors are cremello, perlino and smoky cream in the absence of other modifying genes.

## Pearl

**N/N** - No evidence of the altered sequence detected.

**N/Pr1** - One copy of the altered sequence detected. If Cream dilution is also present, a pseudo-double Cream dilute phenotype will result.

**Pr1/Pr1** - Two copies of the altered sequence detected. On a chestnut base color, a uniform apricot color of body hair, mane and tail will result.

## Tobiano

**N/N** - No evidence of altered sequence detected. Horse is not Tobiano.

**N/TO** - One copy of altered sequence. Approximately 50% of the offspring will inherit Tobiano.

**TO/TO** - Two copies of altered sequence. Horse is homozygous for Tobiano. All offspring will inherit Tobiano.

## Silver

**N/N** - No evidence of the altered sequence detected.

**N/Z** - One copy of the altered sequence detected. Black-based horses will be chocolate with flaxen or lightened mane and tail. Bay-based horses will have lightened black pigment on lower legs, mane and tail. No effect on chestnut color.

**Z/Z** - Two copies of altered sequence detected. Black-based horses will be chocolate with flaxen or lightened mane and tail. Bay-based horses will have lightened black pigment on lower legs, mane and tail. No effect on chestnut color.

## Lethal White Overo

**N/N** - No evidence for the altered sequence detected.

**N/O** - One copy of the altered sequence detected. If bred to another N/O horse, there is a 25% chance of producing a lethal white overo foal. The N/O type has been detected in Paints (including breeding stock), Pintos, Thoroughbreds, Miniatures, Quarter Horses and Tennessee Walking Horses.

**O/O** - Only the altered sequence in the EDNRB gene detected. This result has only been obtained with samples from lethal white overo foals.

## Sabino 1

**N/N** - No evidence of altered sequence detected.

**N/SB1** - One copy of the Sabino 1 gene detected. Horse typically may have 2 or more white legs, blaze, spots or roaning in the midsection and jagged margins around white areas.

**SB1/SB1** - Two copies of the Sabino 1 gene detected. Complete or nearly complete white phenotype expected.

## Champagne

**N/N** - No evidence of altered sequence detected.

**N/Ch** - One copy of the altered sequence detected. Chestnut color (red) is diluted to gold, bay to tan with brown points and black to darker tan with brown points.

**Ch/Ch** - Two copies of the altered sequence detected. All offspring are expected to be Champagne diluted.

## Gray

**N/N** - No copies of the gray gene. Horse will not turn gray.

**N/G** - One copy of the gray gene. Horse will turn gray and approximately 50% of offspring will be gray.

**G/G** - Two copies of the gray gene. Horse will turn gray and all offspring will be gray.